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**ANNEXATION
ZONE MAP AMENDMENT
STAGE I & II PLANNED
DEVELOPMENT REVIEW
SITE DESIGN REVIEW
WAIVER REQUESTS
TYPE C TREE PLAN DRB
REVIEW
CLASS 3 SIGN PERMIT**

To
City of Wilsonville

For
Coffee Creek Logistics Center

Dated
February 27, 2020
(Revised: June 29, 2020)
(Revised: September 4, 2020)

Project Number
2190382.00



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City of Wilsonville
Exhibit B1 DB20-0019 et al

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ATTACHMENTS

1. Land Use Application Form
2. Annexation Petition Form, Deed/Legal Description and Map
3. Certifications: Ownership, Voter Registrations at Subject Property
4. Map: Proposed Zone Map Amendment
5. Perspective Renderings
6. Drawing Set: Existing Conditions, Proposed Site Plan, Grading, Utilities, Elevations, Landscaping, and associated drawings/details
7. Arborist's Report
8. Preliminary Storm Report including Preliminary Geotechnical Report
9. Waste Hauler (Republic Systems) Correspondence
10. Lighting Fixtures Data Sheets
11. Traffic Impact Study (DKS Associates)
12. Colors and Materials Board (Images)



I. PROJECT SUMMARY

Applicant:	Panattoni Development Company, Inc. Attn: Brendan Mason 1821 Dock Street (Suite 100) Tacoma, WA 98402 bmason@panattoni.com P: 206-838-3843
Owner:	Chris Bickford and Sonya Bickford 10680 SW Clutter Street Sherwood, OR 97140
Site Address:	10680 SW Clutter Street Sherwood, OR 97140
Tax Map/Lot:	3S 1 03D 02100
Assessor Site Acreage:	5.9 acres
Comprehensive Plan Designation:	Industrial
Current Zoning:	Washington County: Future Development 20-Acre District (FD-20)
Proposed Zoning:	Wilsonville Planned Development Industrial – Regionally Significant Industrial Area (PDI-RSIA) with Coffee Creek Industrial Design Overlay District
Adjacent Zoning:	Wilsonville PDI to the east; Washington County FD-20 to the north and west; and Clackamas County Rural Industrial (RI) to the south
Existing Structures:	Residence with accessory agricultural/equestrian buildings
Request:	Land use approvals for construction of an approximately 110,366 SF warehouse/manufacturing building with ancillary office space: <ul style="list-style-type: none">▪ Annexation & Zone Map Amendment▪ Stage I & Stage II Planned Development Review▪ Site Design Review▪ Waiver Requests▪ Type C Tree Plan DRB Review▪ Class 3 Sign Permit
Project Contact:	Mackenzie, Attn: Lee Leighton, AICP 1515 SE Water Avenue, Suite 100 Portland, Oregon 97214 LLeighton@mcknze.com P: 503-224-9560 (direct: 971-346-3727)

II. INTRODUCTION

Description of Request

This request includes applications for the following land use approvals in a consolidated/concurrent process:

- **Annexation and Zone Map Amendment** to apply the City’s Planned Development – Regionally Significant Industrial Area / Coffee Creek Industrial Design Overlay District designation to the property immediately upon annexation.
- **Stage I and Stage II Planned Development Review.**
- **Site Design Review** for a new approximately 110,366 square-foot speculative industrial building (anticipated to be warehouse/distribution and manufacturing), including associated Modifications, in a single-phase development.
- **Waivers** from specific Code standards, for approval under Guidelines in the Coffee Creek Industrial Design Overlay District Pattern Book:
 1. **Loading Locations:** more than one at-grade loading berth and 19 recessed dock-height loading berths are located on the front façade of the building.
 2. **Vehicle Parking Areas:** two vehicle parking areas, containing a total of 4 ADA spaces and 5 standard spaces, are located between the Addressing Street and the building (rather than only one area with capacity for up to 16 vehicles, per the standard).
 3. **Building Base, Body and Top Dimensions:** the proportion of the “Body” part of the front façade is less than 75% of the overall building height.
 4. **Primary Building Entrance/Required Canopy:** to maintain the horizontal banding that defines the building base and extends all the way across the primary building façade, office entrances have canopy height of less than 15 feet and canopy depth of less than 8 feet. *[WC Section 4.134 Coffee Creek Design Overlay District Table CC-4 Building Design 2. Primary Building Entrance – Required Canopy]*
 5. **Overall Building Massing/Ground Floor Height:** to maintain the horizontal banding that defines the building base and extends all the way across the primary building façade, proposed ceiling heights in the office areas (at entrances) are less than 15 feet high so they will align with the outdoor canopy height and form a coherent interior/exterior relationship of surfaces. *[WC Section 4.134 Coffee Creek Design Overlay District Table CC-4 Building Design 3. Overall Building Massing – Ground Floor Height]*
 6. **Size of Waste Storage Enclosure:** based on the applicant’s familiarity with typical warehouse/distribution operations, the applicant proposes an outdoor waste storage enclosure measuring 10’ by 21’, containing 210 square feet, with tall waste enclosures within. This is smaller than the standard requirement, which would be 662 square feet for the proposed 110,366 square-foot building.
- **Type C Tree Plan DRB Review** for proposed tree conservation, removal and mitigation replanting consistent with the above development plans.
- **Class 3 Sign Permit** to identify locations and sizes/proportions of proposed nonexempt signs; actual sign permitting will be deferred until tenanting of the building.

Following the introductory sections, the recitation of Code provisions and applicant’s responses are organized based on the sequence presented above.

Existing Site and Surrounding Land Use

The subject property has been used as a personal residence and an equestrian facility by the property owners since they acquired it on March 24, 1986. In addition to a residence, the property has agricultural and/or equestrian facilities such as stables and a barn, all concentrated in the western roughly one-third of the property. The eastern approximately two-thirds of the site is unimproved. All existing improvements will be razed as part of the redevelopment plan.

Surrounding the site, a Tarr Oil branded commercial fueling facility is abutting to the east, Republic Services operates a waste/recycling facility farther to the east (across SW Ridder Road), and Hartung Glass Industries (HGI) is adjacent to the southeast. Just west of HGI, other property immediately to the south is unimproved, but partial agricultural use for row crop cultivation is visible in the eastern portion of the property.

Industrial development and activities are located adjacent to the west as well as to the northwest, across SW Clutter Street.

The property directly across SW Clutter Street, north of the subject property, appears to be in a rural residential use, with some utility buildings also on the property. A small, independent automotive garage, "Oak Tree Auto Service," is located farther to the north on the west side of SW Garden Acres Road.

The subject property's southern boundary is coterminous with the County jurisdictional boundary. Parcels to the south of that line, extending also east and west of the subject property, are in Clackamas County, whereas the subject property and its neighbors to the east, west, and north are in Washington County.

Description of Proposed Development

The Coffee Creek Logistics Center is a proposed warehouse/distribution and manufacturing facility with ancillary office space, suitable for one or two tenants. The 5.85-acre project site is in the Coffee Creek Industrial Design Area Overlay District, on the south side of SW Clutter Street just west of the Garden Acres Road "T" intersection (SW Ridder Road forms the eastern leg of that three-legged intersection).

The proposal will involve demolition of the existing house, horse stables and other accessory buildings on the property. The site plan orients the new building, access, and circulation to protect and preserve a small stand of five mature Douglas fir trees in the northwestern quadrant of the property, integrating the trees into the overall landscaping/screening plan along SW Clutter Street.

The proposed building contains an estimated 110,366 square feet (SF) of floor area; however, the applicant's traffic study is based on total building size of up to 115,000 SF to allow for design flexibility, including the option to add mezzanines within portion(s) of the building's two office areas.

The site plan proposes two driveways on SW Clutter Street, to support employee parking located east and west of the building, and to provide sufficient access and circulation for trucks. The site plan includes 72 auto parking spaces, 20 dock doors, and two (2) drive-in loading doors.

To complement the group of mature Douglas fir trees to be retained, the proposed landscaping plan along the SW Clutter Street frontage uses dense plantings of native-species trees, shrubs and ground covers (consistent with appropriate spacing for their long-term growth habits and survival needs) to maintain a naturalistic appearance along the road corridor. Pedestrian paths and usable spaces further contribute to



the public realm, consistent with the goals of the Coffee Creek Industrial Design Overlay Pattern Book and Design Guidelines.

TABULATION OF SITE PLAN FEATURES (from Sheet C1.10, Attachment 6):

Total Site Area:	254,826 SF +/- (5.85 acres)		
Less: Right-of-Way Dedication:	11,486 SF +/- (0.26 acres)		
Net Buildable Site Area:	243,340 SF +/- (5.59 acres)	<u>100.0%</u>	
Building Area:	110,366 SF +/- (2.50 acres)	45.4%	
Parking and Paving Coverage:	93,824 SF +/- (2.19 acres)	38.6%	
Landscape (LS) Area:	39,150 SF +/- (0.89 acres)	16.1%	
Minimum Landscape Area Requirement:	36,501 SF +/- (0.84 acres)	15.0%	
 Parking Area Landscaping			
Parking Areas:	45,457 SF +/- (1.04 acres)	18.7%	<u>100.0%</u>
Parking Area Landscaping:	8,953 SF +/- (0.21 acres)	3.7%	19.7% *
Minimum Parking Area LS Requirement:	4,548 SF +/- (0.10 acres)	1.9%	10.0% *

* 8,953 SF = 19.7% of the 45,457 SF of site area in Parking Areas; this exceeds the 10% minimum requirement in § 4.155(.03)B.1.



Aerial Image – Project Site (with 2' contour topography)

Public Improvements and Transportation

Right-of-Way Dedication and Public Improvements

The subject property is located on the south side of SW Clutter Street, just west of the SW Garden Acres Road intersection, where the roadway's name changes to SW Ridder Road as it continues to the east. These roadways have the following designations:

Roadway	Transportation System Plan (TSP Designation)	Coffee Creek Industrial Design Overlay District Regulating Plan Designation
Clutter Street	Collector (between Grahams Ferry Road and Garden Acres Road)	Addressing Street
Garden Acres Road	Minor Arterial	Addressing Street
Ridder Road	Minor Arterial (between Garden Acres Road and future Kinsman Road extension)	N/A – outside Coffee Creek Industrial Plan boundary

Currently, Clutter Street extends west to intersect and cross SW Grahams Ferry Road. In the Coffee Creek Light Industrial Pattern Book, the Addressing Street Typology diagram for Clutter Road (sic) includes final curb-to-curb width of 58 feet within an overall 77-foot right-of-way easement, containing two travel lanes and a center left turn lane, bike lanes, planting strips and sidewalks. Because the applicant does not control property on the north side of Clutter Street, the applicant is unable to make a right-of-way dedication except along the subject property south-side frontage. The applicant’s design team has worked closely with City staff to prepare a feasible interim configuration for street improvements in conjunction with the proposed development. The proposed roadway construction is found in the R-series drawing sheets (R0.00 through R1.51). Construction within the right-of-way will include:

- An approximately 23-foot dedication of public right-of-way to widen the existing 40-foot right-of-way to 63 feet, consistent with a future overall width of 77 feet and the full Collector street design section (see Street Section on Sheet R0.02)
- Saw-cutting to match the existing pavement
- Construction of widened pavement surface and the southern curb at final line and grade
- Striping of the eastbound bicycle lane, including buffer striping west of the proposed eastern driveway (where the lane confirmation changes to form three lanes at the Garden Acres intersection to the east)
- Curbside planter strip
- Sidewalk
- Street lights
- Street signs

This configuration is designed to provide capacity and safe operations on an interim basis with two travel lanes and no center turn lane until development occurs on property to the north, when matching improvements can be constructed on the north side of the street.

Notably, in the future, City of Wilsonville Transportation System Plan (TSP) Project UU-08 will terminate Clutter Street in a cul-de-sac east of Grahams Ferry Road at a future time. Because no through traffic will then be allowed, that change will significantly reduce trips on Clutter Street.

Extensions of public utilities (water, sanitary sewer and storm drainage) are included in the applicant’s proposed construction plans for the Clutter Street frontage.

Transportation Impact Analysis

The City’s traffic engineering consulting firm, DKS Associates, prepared a Traffic Impact Study (TIS), included as Attachment 11. The analysis studied two intersections in the vicinity, Boones Ferry Road/95th

Avenue and 95th Avenue/Ridder Road, and concluded that both will achieve Level of Service (LOS) C with the proposed development, which exceeds the minimum operating standard, LOS D.

The TIS recommends providing a minimum 100' eastbound left turn pocket at the Garden Acres Road intersection.

Site Access

Two driveways are proposed for access to the Addressing Street, SW Clutter Street. The DKS Traffic Impact Study (TIS) noted that Clutter Street will function as a Local Street (in the future cul-de-sac configuration). Although the TSP does not provide a minimum access spacing standard for Local Streets, the spacing for Collector Streets is 150', and the TIS recommends moving the east driveway farther to the west to increase spacing from the left turn lane at the intersection with Garden Acres.

Internal to the site, the TIS noted that the City's Public Works Construction Standards call for a minimum 100' clear drive aisle length for driveways with more than 100 Average Daily Trips (ADT), based on the following City of Wilsonville Public Works Construction Standards:

PWCS § 201.2.23 Driveways

Access to private property shall be permitted with the use of driveway curb cuts. The following specifies the minimum requirements for driveways:

...

d. For commercial or industrial developments, driveway access shall be a minimum of 100 feet from the nearest intersection (as measured from near edge of driveway drop to near face of curb at intersection), unless otherwise approved in writing by the City's authorized representative.

...

m. Parking lot drive aisles shall align with the approved access driveway. A clear drive aisle, containing no parking spaces or intersecting drive aisles, shall be provided at all parking lot access driveways in accordance with Detail No. RD-1105 of these standards and as follows:

...

2. Within 100 feet of the back of sidewalk or right-of-way boundary, whichever is greater, for access driveways with 100 or more Average Daily Trips (ADT).

...

4. The City Engineer may reduce the clear drive aisle length to not less than 20 feet from the back of sidewalk or right-of-way boundary, whichever is greater. The City Engineer may require submission of additional information, including but not limited to a traffic study prepared and certified by a registered professional Traffic Engineer in the State of Oregon. Any reduction in the required clear drive aisle length shall be based on the following:

(a) Queuing areas are designed such that vehicles do not obstruct a driveway, fire access lane, walkway, or public right-of-way.

(b) On-site circulation is designed in such a way as to not create a safety hazard by reducing the clear drive aisle length.

The western driveway meets the clear drive aisle standard (§ 201.2.23.m.2), passing by the landscape area in which the grove of five Douglas fir trees will be protected, with no parking spaces along it. The eastern driveway also does not have parking spaces along it, but it is shorter: the curb of the passenger vehicle drive aisle for parking along the east side of the building is about 26' from the proposed right-of-way (front

property line). There are no parking spaces alongside the driveway approach. Significantly, the driveway is situated such that westbound incoming vehicles have a clear view into the driveway as they approach, to ascertain that there is no congestion before making the left turn into the site, and the driveway is completely west of the 109' long eastbound left turn pocket provided at the Garden Acres intersection.

III. NARRATIVE

A. Annexation and Zone Map Amendment

Section 4.700. Procedures Relating To The Processing Of Requests For Annexation And Urban Growth Boundary Amendments

(.01) *The City of Wilsonville is located within the Portland Metropolitan Area, and is therefore subject to regional government requirements affecting changes to the city limits and changes to the Urban Growth Boundary (UGB) around Wilsonville. The City has the authority to annex properties as prescribed in State law, but the City's role in determining the UGB is primarily advisory to Metro, as provided in Oregon Revised Statutes. The following procedures will be used to aid the City Council in formulating recommendations to those regional entities. [Amended by Ordinance No. 538, 2/21/02.]*

- A. *Proponents of such changes shall provide the Planning Director with all necessary maps and written information to allow for review by city decision-makers. The Planning Director, after consultation with the City Attorney, will determine whether each given request is quasi-judicial or legislative in nature and will make the necessary arrangements for review based upon that determination.*

Response: The applicant has submitted a request for annexation of a single parcel into Wilsonville City Limits. Given the small size and single ownership, this will likely be deemed a quasi-judicial application.

- B. *Written information submitted with each request shall include an analysis of the relationship between the proposal and the City's Comprehensive Plan, applicable statutes, as well as the Statewide Planning Goals and any officially adopted regional plan that may be applicable.*

Response: The following responses provide information as the annexation and zone change request relates to the Comprehensive Plan and the Statewide Planning Goals.

Comprehensive Plan

The applicant has reviewed the Comprehensive Plan for applicable policies that demonstrate the project's compliance with annexation-related approval criteria. As demonstrated in this submittal package, this project is consistent with the City's adopted zoning and development standards and will serve to implement the goals, policies and objectives of the comprehensive plan.

The annexation of the property and subsequent development as proposed will further the city's goals for Coffee Creek Industrial Area and align with specific city annexation policies:

Policy 2.2.1. *The City of Wilsonville shall plan for the eventual urbanization of land within the local planning area, beginning with land within the Urban Growth Boundary.*

Implementation Measure 2.2.1.a. *Allow annexation when it is consistent with future planned public services and when a need is clearly demonstrated for immediate urban growth.*

Response: The subject site is located within the UGB and in the Coffee Creek Industrial Area. This area has been identified for industrial development such as this proposal. The applicant is proposing to construct public services extensions including roadway

improvements, necessary infrastructure and utility services to the site in accordance with City of Wilsonville standards.

Implementation Measure 2.2.1.e *Changes in the City boundary will require adherence to the annexation procedures prescribed by State law and Metro standards. Amendments to the City limits shall be based on consideration of:*

1. *Orderly, economic provision of public facilities and services, i.e., primary urban services are available and adequate to serve additional development or improvements are scheduled through the City's approved Capital Improvements Plan.*
2. *Availability of sufficient land for the various uses to insure choices in the marketplace for a 3 to 5 year period.*
3. *Statewide Planning Goals.*
4. *Applicable Metro Plans;*
5. *Encouragement of development within the City limits before conversion of urbanizable (UGB) areas.*
6. *Consistency with legislative Master Plans and other applicable provisions of the Comprehensive Plan and Development Code.*

Response: Metro and the City of Wilsonville has identified the Coffee Creek sub-area for industrial and employment land uses, and the City has gone through years of planning work to adopt zoning and other regulations to guide and direct such annexation, development and use. This submittal package responds to applicable approval standards, guidelines and criteria, to demonstrate that the proposal is consistent with all of those policies, plans and regulations. The project will be developed with public facilities and services as identified in the City's Capital Improvement Plan, and which are adequate to serve the site. The project type and use matches the goals and objectives of the city within the Coffee Creek Industrial Area.

Implementation Measure 3.1.2.a *Urban development will be allowed only in areas where necessary facilities and services can be provided.*

Response: The applicant's design team has worked closely with City staff to verify that utility service systems have capacity to serve the site, and to design extensions of utility services (in Clutter Street right-of-way) that will serve not only the subject property, but allow further connections and extensions to serve other properties in the Coffee Creek Industrial Area.

Statewide Planning Goals

Goal 1: Citizen Involvement

Objective: *To develop a citizen involvement program that insures the opportunity for citizens to be involved in all phases of the planning process.*

Response: The City's acknowledged Comprehensive Plan & Development Code includes citizen involvement procedures with which the review of this application will comply. This process allows for citizens to communicate their input into the annexation and zoning map amendment review conducted by the City at public hearings or by submitting written comments. The Development Review Board will review and comment on the proposed annexation and zoning map amendment to make a recommendation to the City Council. The City Council will hold a hearing on the matter. Notice of the hearing is posted on site and elsewhere, the City mails notices to nearby property owners, and notice is published in the newspaper. This process complies with Goal 1.

Goal 2: Land Use Planning

Objective: *To establish a land use planning process and policy framework as a basis for all decision and actions related to use of land and to assure an adequate factual base for such decisions and actions.*

Response: The procedural requirements for annexation and zone changes are contained in the Development Code, which involve assessment of the application’s merits, notice to affected parties, and public hearings. The proposal is to annex and change the zoning designation of urban land within the Urban Growth Boundary, in compliance with Goal 2. Notice of the annexation and zoning map amendment will be provided by the City to the Oregon Department of Land Conservation and Development (DLCD) and Metro as required, and the City’s decision will be based on findings of fact.

Goal 3: Agricultural Lands

Objective: *To preserve and maintain agricultural lands.*

Response: This Goal is not applicable because the site is within the Metro Urban Growth Boundary and no identified agricultural resources are located on site.

Goal 4: Forest Lands

Objective: *To conserve forest lands by maintaining the forest land base and to protect the state's forest economy by making possible economically efficient forest practices that assure the continuous growing and harvesting of forest tree species as the leading use on forest land consistent with sound management of soil, air, water, and fish and wildlife resources and to provide for recreational opportunities and agriculture.*

Response: This Goal is not applicable because the site is within the Metro Urban Growth Boundary and no identified forest resources are located on site.

Goal 5: Open Spaces, Scenic and Historic Areas and Natural Resources

Objective: *To protect natural resources and conserve scenic and historic areas and open spaces.*

Response: The subject site is not designated as open space, or a scenic or historic resource area by the City, and it does not contain any known significant open space, scenic, or historic areas. The proposed development will be evaluated by the City for compliance with Development Code provisions to limit impacts to natural resources and to provide protection for inventoried Goal 5 resources. Therefore, the proposed annexation and zone change are consistent with this Goal.

Goal 6: Air, Water and Land Resources Quality

Objective: *To maintain and improve the quality of the air, water and land resources of the state.*

Response: The site is currently planned for industrial uses. If the annexation is approved, the site would be subject to City regulations seeking to minimize off-site impacts from noise, vibration, odors, glare, or other “nuisance” effects, consistent with the types of economic activities allowed within the zone. The potential harmful effects on air, water and land resource quality are therefore limited. The annexation and zone change proposal will therefore have no significant impact with respect to this Goal.

Goal 7: Areas Subject to Natural Disasters and Hazards

Objective: *To protect people and property from natural hazards.*

Response: According to data from the Oregon Department of Geology and Minerals,¹ the subject site is not located within a landslide hazard area, and there are no known active fault lines in the immediate vicinity. According to the Federal Emergency Management Agency’s Flood Insurance Rate Map 41067C0608E, effective 11/4/16, the subject property is not located in a regulated flood hazard area. The development proposal will be required to document compliance with the applicable standards for development at the time of building permit review. The proposal to annex and zone the subject property for industrial development is consistent with avoidance of natural disasters and hazards under Goal 7.

Goal 8: Recreational Needs

Objective: *To satisfy the recreational needs of the citizens of the state and visitors and, where appropriate, to provide for the siting of necessary recreational facilities including destination resorts.*

Response: The annexation area is presently designated Industrial on the Comprehensive Plan Map and will be zoned Planned Development Industrial – Regionally Significant Industrial Area (PDI-RSIA) upon annexation. The site is not identified as a resource site suitable for park and recreation use in any adopted City resource inventories or plans. Consequently, the proposed annexation and zone change will have no effect on the City’s recreational land supply.

Goal 9: Economic Development

Objective: *To provide adequate opportunities throughout the state for a variety of economic activities vital to the health, welfare, and prosperity of Oregon’s citizens.*

Response: The 2012 Economic Opportunities Analysis (EOA) identifies the Coffee Creek Master Plan Area as containing approximately 174 acres of industrial land area, 50 acres of which could be served with adequate public facilities in the next four years. The proposed project is within this area and aligns with the EOA’s intentions of ensuring the City has adequate industrial lands to provide jobs and economic opportunity. The proposed annexation and zoning map amendment set the stage for a proposed development that will contribute to the state and local economy by providing industrial employment and associated benefits. Therefore, the proposed annexation, rezoning and development are consistent with this Goal.

Goal 10: Housing

Objective: *To provide for the housing needs of citizens of the state.*

Response: The property proposed for annexation is designated Industrial on the Comprehensive Plan map. The proposed annexation and zone change to Planned Development Industrial – Regionally Significant Industrial Area (PDI-RSIA) will have no effect on the housing supply within City Limits. Goal 10 is not applicable to this request.

Goal 11: Public Facilities and Services

Objective: *To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban and rural development.*

¹ <https://gis.dogami.oregon.gov/maps/hazvu/>

Response: The subject property lies within the Urban Growth Boundary (UGB) and therefore requires the extension of public facilities and services as urban development occurs. Public extensions of water, sanitary sewer and storm sewer services are proposed to be constructed as illustrated in Attachment 6; therefore, this goal will be furthered by annexation and implementation of the proposed project.

Goal 12: Transportation

Objective: *To provide and encourage a safe, convenient and economic transportation system.*

Response: Statewide Planning Goal 12 is implemented by the state Transportation Planning Rule (TPR). The City adopted a Transportation System Plan (TSP) in 2013 and adopted amendments to it in April 2019. The transportation impacts associated with future industrial development of the subject site were analyzed as part of the TSP, which based its analysis on the site's Industrial Comprehensive Plan designation. The proposed zoning is consistent with the land designation and trip generation assumptions used to develop the TSP, and therefore complies with OAR 660-012-0060(9). For these reasons, the proposed annexation and rezoning are consistent with the TPR.

Goal 13: Energy Conservation

Objective: *To conserve energy.*

1. *Land use plans should be based on utilization of the following techniques and implementation devices which can have a material impact on energy efficiency:*
 - a. *Lot size, dimension, and siting controls;*
 - b. *Building height, bulk and surface area;*
 - c. *Density of uses, particularly those which relate to housing densities;*
 - d. *Availability of light, wind and air;*
 - e. *Compatibility of and competition between competing land use activities; and*
 - f. *Systems and incentives for the collection, reuse and recycling of metallic and nonmetallic waste.*

Response: Clustering industrial activities near each other facilitates carpooling and allows for convenient access to principal roadways designated for truck traffic. The subject property is adjacent to land designated for industrial uses. Therefore, the proposal will contribute to a more energy-efficient land use pattern within the City's Urban Growth Boundary and is consistent with this Goal.

Goal 14: Urbanization

Objective: *To provide for an orderly and efficient transition from rural to urban land use.*

Response: The subject property is within the Metro Urban Growth Boundary (UGB) and no expansion of the UGB is proposed. The proposed annexation and zone change will achieve the transition from rural to urbanized land as foreseen in the Comprehensive Plan. Development of the site triggers requirements for the applicant to provide infrastructure, including necessary water lines, sewer lines, storm drainage lines, and street improvements. Therefore, the application is consistent with this Goal.

Goal 15: Willamette River Greenway

Response: The site is not located near the Willamette River. This Goal is not applicable.

Goal 16: Estuarine Resources

Response: The site is not located in or near an estuary. This Goal is not applicable.

Goal 17: Coastal Shorelands

Response: The site is not located near the Coast. This Goal is not applicable.

Goal 18: Beaches and Dunes

Response: The site is not located near beaches or dunes. This Goal is not applicable.

Goal 19: Ocean Resources

Response: The site is not located near the Ocean. This Goal is not applicable.

- C. *The Planning Director shall review the information submitted by the proponents and will prepare a written report for the review of the City Council and the Planning Commission or Development Review Board. If the Director determines that the information submitted by the proponents does not adequately support the request, this shall be stated in the Director's staff report.*

Response: This provision provides procedural guidance for implementation and requires no evidence from the applicant. The applicant has endeavored to provide adequate information to allow the City to approve the annexation and zone change proposal.

- D. *If the Development Review Board, Planning Commission, or City Council determine that the information submitted by the proponents does not adequately support the request, the City Council may oppose the request to the regional entity having the final decision-making authority.*

Response: This provision provides procedural guidance for implementation and requires no evidence from the applicant. The applicant has endeavored to provide adequate information to allow the City to approve the annexation and zone change proposal.

(.02) Each quasi-judicial request shall be reviewed by the Development Review Board, which shall make a recommendation to the City Council after concluding a public hearing on the proposal.

Response: The applicant has submitted a quasi-judicial annexation request for review by the Development Review Board and adoption by the City Council. This provision provides procedural guidance for implementation and requires no evidence from the applicant.

(.03) Each legislative request shall be reviewed by the Planning Commission, which shall make a recommendation to the City Council after concluding a public hearing on the proposal.

Response: The applicant has submitted a quasi-judicial annexation request. This standard does not apply because this is not a legislative proposal introduced by the City.

(.04) The City Council shall consider the information in the record of the Development Review Board or Planning Commission and shall, after concluding a public hearing on the request, determine the appropriate course of action. That course of action may be:

- A. *In the case of a proposed amendment to the Regional Urban Growth Boundary: forward its recommendation in the form of a Resolution to the Metro Council.*

Response: The applicant is not proposing an amendment to the UGB. This standard does not apply.

- B. *In the case of a proposed annexation to the City, select from the following as allowed by State law (ORS 222):*

1. *Take no action;*
2. *Declare the subject property, or some portion thereof, to be annexed;*
3. *Set the matter for election of the voters residing within the affected territory; or*
4. *Set the matter for election of City voters.*

Response: The applicant requests that the City Council declare the property identified in Attachment 2 to be annexed to the City in accordance with option “2” above.

(.05) The City Council may adopt a development agreement with the owners of property that is proposed for annexation to the City, and such agreement may include an agreement to annex at a future date. A development agreement with an agreement to annex shall be subject to the same procedural requirement as other annexations in terms of staff report preparation, public review, and public hearings.

Response: The applicant requests annexation of the subject property, which is within the City’s UGB. The proposed annexation is consistent with the Wilsonville Comprehensive Plan, and the Coffee Creek Master Plan. This submittal includes a written description of the request and the following supporting documents:

- Land Use Application Form,
- Annexation Petition Form,
- Deed/Legal Description and Map,
- Ownership Certification,
- Voter Registrations at Subject Property, and
- Proposed Zone Map Amendment.

The applicant has also submitted applications for a proposed industrial development project for consolidated review and approval. The applicant is not aware of development issues requiring the use of a development agreement, but is amenable to entering into such an agreement to the extent it would facilitate the requested permit approvals.

Section 4.197. Zone Changes and Amendments To This Code – Procedures

(.01) The following procedure shall be followed in applying for an amendment to the text of this Chapter: [detailed provisions omitted for brevity]

Response: The applicant is not requesting an amendment to the text of the Development Code. These provisions do not apply.

(.02) In recommending approval or denial of a proposed zone map amendment, the Planning Commission or Development Review Board shall at a minimum, adopt findings addressing the following criteria:

- A. *That the application before the Commission or Board was submitted in accordance with the procedures set forth in Section 4.008, Section 4.125 (.18)(B)(2) or, in the case of a Planned Development, Section 4.140; and [Amended by Ord 557, adopted 9/5/03]*

Response: The applicant has submitted this request for Annexation, Zone Map Amendment, Stage I & II Planned Development Review, Site Design Review, Waivers, Type C Tree Plan DRB Review, and Class 3 Sign Permit in accordance with the City’s procedural requirements, including utilization of City forms, payment of application fees, and submission of supporting evidence. This standard is met.

- B. *That the proposed amendment is consistent with the Comprehensive Plan map designation and substantially complies with the applicable goals, policies and objectives, set forth in the Comprehensive Plan text; and*

Response: The site is designated Industrial on the Comprehensive Plan map and has been identified by Metro as a Regionally Significant Industrial Area. The proposed Planned Development Industrial – Regionally Significant Industrial Area (PDI-RSIA) zone is consistent with the Comprehensive Plan map designation. Compliance with applicable Comprehensive Plan provisions is demonstrated above in the response to Section 4.700(.01)(B). This standard is met.

C. *In the event that the subject property, or any portion thereof, is designated as “Residential” on the City's Comprehensive Plan Map; specific findings shall be made addressing substantial compliance with Implementation Measures 4.1.4.b, d, e, q, and x of Wilsonville's Comprehensive Plan text; and [Amended by Ordinance No. 538, 2/21/02.]*

Response: The subject property is designated Industrial, (not Residential) in the Comprehensive Plan Map. This provision does not apply.

D. *That the existing primary public facilities, i.e., roads and sidewalks, water, sewer and storm sewer are available and are of adequate size to serve the proposed development; or, that adequate facilities can be provided in conjunction with project development. The Planning Commission and Development Review Board shall utilize any and all means to insure that all primary facilities are available and are adequately sized; and*

Response: The proposal includes the construction and upgrades to public facilities to ensure they meet city standards and are adequate for the proposed development. The applicant’s engineering team has coordinated with city staff to ensure that system capacities are available to serve the site, and that the sizing and construction of public infrastructure extensions will meet the city’s design standards and planned capacity needs.

The following upgrades and new construction are proposed:

Frontage improvements (See the R-series of civil engineering drawing sheets):

Roads: The existing roadway will be widened and improved consistent with ultimate future construction of Clutter Street consistent with the applicable Collector design section in the Coffee Creek plan, including two travel lanes and a center turn lane, bike lanes with buffer striping, curb and landscape strip. Two travel lanes will be provided as an interim configuration, pending urban development of property on the north side of Clutter Street.

Sidewalks: A new 6' sidewalk will be installed with a 7' planter strip separating the sidewalk from the south-side curb and paved surface.

Water: An 18" public water line extension is proposed in Clutter Street.

Sewer: A 15" sanitary sewer line extension is proposed in Clutter Street .

Stormwater: A 12" stormwater line extension is proposed in Clutter Street .

Driveways: Two 40' site access driveways are proposed on Clutter Street, which is an Addressing Street in the Coffee Creek District Plan.

E. *That the proposed development does not have a significant adverse effect upon Significant Resource Overlay Zone areas, an identified natural hazard, or an identified geologic hazard. When Significant Resource Overlay Zone areas or natural hazard, and/or geologic hazard are located on or about the proposed development, the Planning Commission or Development Review Board shall use appropriate measures to mitigate and significantly reduce conflicts between the development and identified hazard or Significant Resource Overlay Zone and*

Response: The proposed development is not located in a Significant Resource Overlay Zone as shown in the City of Wilsonville Significant Resource Overlay Zone Map, or in an identified natural- or geologic hazard area. Therefore, the proposed development will not have a significant adverse effect on any of those resources or hazard conditions.

F. *That the applicant is committed to a development schedule demonstrating that development of the property is reasonably expected to commence within two (2) years of the initial approval of the zone change; and*

Response: The applicant intends to begin construction as soon as the necessary permits are approved. This criterion is met.

G. *That the proposed development and use(s) can be developed in compliance with the applicable development standards or appropriate conditions are attached that insure that the project development substantially conforms to the applicable development standards.*

Response: The land use submittal package and accompanying civil plans show that the proposed development can be completed in compliance with the applicable development standards. The applicant's engineers have worked with city staff and have revised plans responding to comments, to achieve compliance with the city's standards. This criterion is met.

H. *Adequate public facilities, services, and transportation networks are in place, or are planned to be provided concurrently with the development of the property. The applicant shall demonstrate compliance with the Transportation Planning Rule, specifically by addressing whether the proposed amendment has a significant effect on the transportation system pursuant to OAR 660-012-0060. A Traffic Impact Analysis (TIA) shall be prepared pursuant to the requirements in Section 4.133.05.(01).*

Response: The application contains site plans (Attachment 6) demonstrating how the applicant proposes to connect to public utilities and streets, which have been designed based on the understanding that the site would be developed with an industrial use.

The proposed annexation and zone change from the Washington County: Future Development 20-Acre District (FD-20) to the City of Wilsonville Planned Development Industrial – Regionally Significant Industrial Area does not significantly affect the transportation system pursuant to OAR 660-012-0060(9), which states the following:

660-012-0060

(9) Notwithstanding section (1) of this rule, a local government may find that an amendment to a zoning map does not significantly affect an existing or planned transportation facility if all of the following requirements are met.

(a) The proposed zoning is consistent with the existing comprehensive plan map designation and the amendment does not change the comprehensive plan map;

(b) The local government has an acknowledged TSP and the proposed zoning is consistent with the TSP; and

(c) The area subject to the zoning map amendment was not exempted from this rule at the time of an urban growth boundary amendment as permitted in OAR 660-024-0020(1)(d), or the area was exempted from this rule but the local government has a subsequently acknowledged TSP amendment that accounted for urbanization of the area.

As noted above, the proposed zoning is consistent with the Acknowledged Comprehensive Plan Map and the applicant has not requested an amendment to the Comprehensive Plan designation. The City's TSP has been acknowledged by the Oregon Department of Land Conservation and Development and the proposed zoning is consistent with the TSP, which analyzed the site based on its Industrial Comprehensive Plan designation. Furthermore, the site was not exempted from the Transportation Planning Rule as part of a prior UGB amendment. Based on these conditions, the proposed zoning complies with OAR 660-012-0060(9).

The TIA in Attachment 11 has been prepared by the City’s transportation consultant (DKS Associates) in accordance with the provisions of Section 4.133.05.(01), and has also been reviewed and accepted by the City’s professional engineering staff. This standard is met.

(.03) If affirmative findings cannot be made for all applicable criteria listed above the Planning Commission or Development Review Board shall recommend that the proposed text or map amendment, as the case may be, be denied.

Response: The applicant has provided sufficient information to support City approval of the annexation and zone change proposal.

(.04) City Council action approving a change in zoning shall be in the form of a Zoning Order.

Response: This provision provides procedural guidance for implementation and requires no evidence from the applicant.

(.05) In cases where a property owner or other applicant has requested a change in zoning and the City Council has approved the change subject to conditions, the owner or applicant shall sign a statement accepting, and agreeing to complete the conditions of approval before the zoning shall be changed.

Response: The subject site is currently in Washington County, but its annexation into the City of Wilsonville has been anticipated. The site will be annexed and then immediately zoned as a Regionally Significant Industrial Area with the Coffee Creek Industrial Overlay District. No conditions of approval are anticipated for the zone change itself, as conditions will instead be applied to the associated development proposal approvals, such as Stage I & II Planned Development Review and Site Design Review. The applicant acknowledges that the City Council may require a development agreement if Council finds that doing so would be appropriate in this circumstance. This criterion is met.

B. Stage I & Stage II Planned Development Plan

Section 4.117. Standards Applying To Industrial Developments In Any Zone

(.01) All industrial developments, uses, or activities are subject to performance standards. If not otherwise specified in the Planning and Development Code, industrial developments, uses, and activities shall be subject to the performance standards specified in Section 4. 135 (.05) (PDI Zone).

Response: The proposal is for an industrial development and will comply with the performance standards. These standards are addressed more specifically in this narrative under Section 4.135.5. This standard is met.

Section 4.118. Standards Applying to all Planned Development Zones

(.01) Height Guidelines: In “S” overlay zones, the solar access provisions of Section 4.137 shall be used to determine maximum building heights. In cases that are subject to review by the Development Review Board, the Board may further regulate heights as follows:

- A. *Restrict or regulate the height or building design consistent with adequate provision of fire protection and fire-fighting apparatus height limitations.*
- B. *To provide buffering of low density developments by requiring the placement of three or more story buildings away from the property lines abutting a low density zone.*
- C. *To regulate building height or design to protect scenic vistas of Mt. Hood or the Willamette River.*

Response: The proposal is not located in an “S” overlay zone. This standard does not apply.

(.02) Underground Utilities shall be governed by Sections 4.300 to 4.320. All utilities above ground shall be located so as to minimize adverse impacts on the site and neighboring properties.

Response: All underground utilities will comply with City of Wilsonville standards as detailed in the responses to Sections 4.300 to 4.320, below.

(.03) Notwithstanding the provisions of Section 4.140 to the contrary, the Development Review Board, in order to implement the purposes and objectives of Section 4.140, and based on findings of fact supported by the record may:

- A. *Waive the following typical development standards:*
1. *minimum lot area;*
 2. *lot width and frontage;*
 3. *height and yard requirements;*
 4. *lot coverage;*
 5. *lot depth;*
 6. *street widths;*
 7. *sidewalk requirements;*
 8. *height of buildings other than signs;*
 9. *parking space configuration and drive aisle design;*
 10. *minimum number of parking or loading spaces;*
 11. *shade tree islands in parking lots, provided that alternative shading is provided;*
 12. *fence height;*
 13. *architectural design standards;*
 14. *transit facilities; and*
 15. *On-site pedestrian access and circulation standards; and*
 16. *Solar access standards, as provided in section 4.137.*

Response: The applicant is proposing six waivers to the Coffee Creek Design Overlay requirements. A description of those waivers can be found in Section III.D of this narrative.

- B. *The following shall not be waived by the Board, unless there is substantial evidence in the whole record to support a finding that the intent and purpose of the standards will be met in alternative ways:*
1. *open space requirements in residential areas...;*
 2. *minimum density standards of residential zones...;*
 3. *minimum landscape, buffering, and screening standards;*

Response: Not applicable; this proposal is not located in a residential area and the applicant is not proposing waivers to these standards.

- C. *The following shall not be waived by the Board, unless there is substantial evidence in the whole record to support a finding that the intent and purpose of the standards will be met in alternative ways, and the action taken will not violate any applicable federal, state, or regional standards:*
1. *maximum number of parking spaces;*
 2. *standards for mitigation of trees that are removed;*
 3. *standards for mitigation of wetlands that are filled or damaged; and*
 4. *trails or pathways shown in the Parks and Recreation Master Plan.*

Response: Not applicable; the applicant is not proposing waivers to these standards.

- D. *Locate individual building, accessory buildings, off-street parking and loading facilities, open space and landscaping and screening without reference to lot lines; and*

Response: As shown in Attachment 6, the applicant is proposing buildings, parking, loading areas, and landscape areas that comply with applicable setback standards. The applicant is not requesting different setbacks as part of the Planned Development application. This standard does not apply.

- E. *Adopt other requirements or restrictions, inclusive of, but not limited to, the following:*
1. *Percent coverage of land by buildings and structures in relationship to property boundaries to provide stepped increases in densities away from low-density development.*
 2. *Parking ratios and areas expressed in relation to use of various portions of the property and/or building floor area.*
 3. *The locations, width and improvement of vehicular and pedestrian access to various portions of the property, including portions within abutting street or private drive. [amended by Ord. 682, 9/9/10]*
 4. *Arrangement and spacing of buildings and structures to provide appropriate open spaces around buildings.*
 5. *Location and size of off-street loading areas and docks.*
 6. *Uses of buildings and structures by general classification, and by specific designation when there are unusual requirements for parking, or when the use involves noise, dust, odor, fumes, smoke, vibration, glare or radiation incompatible with present or potential development of surrounding property. Such incompatible uses may be excluded in the amendment approving the zone change or the approval of requested permits.*
 7. *Measures designed to minimize or eliminate noise, dust, odor, fumes, smoke, vibration, glare, or radiation which would have an adverse effect on the present or potential development on surrounding properties.*
 8. *Schedule of time for construction of the proposed buildings and structures and any stage of development thereof to insure consistency with the City's adopted Capital Improvements Plan and other applicable regulations.*
 9. *A waiver of the right of remonstrance by the applicant to the formation of a Local Improvement District (LID) for streets, utilities and/or other public purposes.*
 10. *Modify the proposed development in order to prevent congestion of streets and/or to facilitate transportation.*
 11. *Condition the issuance of an occupancy permit upon the installation of landscaping or upon a reasonable scheduling for completion of the installation of landscaping. In the latter event, a posting of a bond or other security in an amount equal to one hundred ten percent (110%) of the cost of the landscaping and installation may be required.*
 12. *A dedication of property for streets, pathways, and bicycle paths in accordance with adopted Facilities Master Plans or such other streets necessary to provide proper development of adjacent properties.*

Response: The applicant acknowledges that the Development Review Board may impose other requirements or restrictions, including but not limited to those specified above. However, given the nature of the proposed warehouse/distribution use, the applicant believes it is unnecessary to impose special restrictions or conditions of approval on the development.

(.04) The Planning Director and Development Review Board shall, in making their determination of compliance in attaching conditions, consider the effects of this action on availability and cost. The provisions of this section shall not be used in such a manner that additional conditions, either singularly or cumulatively, have the effect of unnecessarily increasing the cost of development. However, consideration of these factors shall not prevent the Board from imposing conditions of approval necessary to meet the minimum requirements of the Comprehensive Plan and Code.

Response: The applicant acknowledges that the Development Review Board must consider the effects of availability and cost when considering the attachment of conditions as described in Section 4.118 of the WDC. If imposition of conditions depends on consideration of cost factors, the applicant will participate

in development cost estimates to inform that discussion; however, the applicant is not aware of any such issues at the time of submitting a complete application package.

(.05) The Planning Director, Development Review Board, or on appeal, the City Council, may as a condition of approval for any development for which an application is submitted, require that portions of the tract or tracts under consideration be set aside, improved, conveyed or dedicated for the following uses:

- A. Recreational Facilities: The Director, Board, or Council, as the case may be, may require that suitable area for parks or playgrounds be set aside, improved or permanently reserved for the owners, residents, employees or patrons of the development consistent with adopted Park standards and Parks and Recreation Master Plan.*
- B. Open Space Area: Whenever private and/or common open space area is provided, the City shall require that an association of owners or tenants be established which shall adopt such Articles of Incorporation, By-Laws or other appropriate agreement, and shall adopt and impose such Declaration of Covenants and Restrictions on such open space areas and/or common areas that are acceptable to the Development Review Board. Said association shall be formed and continued for the purpose of maintaining such open space area. Such an association, if required, may undertake other functions. It shall be created in such a manner that owners of property shall automatically be members and shall be subject to assessments levied to maintain said open space area for the purposes intended. The period of existence of such association shall be not less than twenty (20) years and it shall continue thereafter and until a majority vote of the members shall terminate it, and the City Council formally votes to accept such termination.*
- C. Easements: Easements necessary to the orderly extension of public utilities, and the protection of open space, may be required as a condition of approval. When required, such easements must meet the requirements of the City Attorney prior to recordation.*

Response: The applicant acknowledges that the Planning Director and Development Review Board have this authority. However, establishment of recreational facilities or open space areas would be inconsistent with the City's planned use of this property. The applicant will provide public utility easements to adjoining public streets as necessary, as depicted in the R-series drawing sheets in Attachment 6. This standard is met.

(.06) Nothing in this Code shall prevent the owner of a site that is less than two (2) acres in size from filing an application to rezone and develop the site as a Planned Development. Smaller properties may or may not be suitable for such development, depending upon their particular sizes, shapes, locations, and the nature of the proposed development, but Planned Developments shall be encouraged at any appropriate location.

Response: The subject property is larger than two acres. This standard does not apply.

(.07) Density Transfers. In order to protect significant open space or resource areas, the Development Review Board may authorize the transfer of development densities from one portion of a proposed development to another. Such transfers may go to adjoining properties, provided that those properties are considered to be part of the total development under consideration as a unit.

Response: The applicant is not proposing a density transfer. This standard does not apply.

(.08) Wetland Mitigation and other mitigation for lost or damaged resources. The Development Review Board may, after considering the testimony of experts in the field, allow for the replacement of resource areas with newly created or enhanced resource areas. The Board may specify the ratio of lost to created and/or enhanced areas after making findings based on information in the record. As much as possible, mitigation areas shall replicate the beneficial values of the lost or damaged resource areas.

Response: The subject property does not contain significant resources such as wetlands, so the proposed development will not contribute to loss of wetlands or other resource areas. Notably, the site plan has been specifically designed to preserve in a landscape area a stand of five large, mature Douglas fir (evergreen) trees located in the western part of the site.

(.09) Habitat-Friendly Development Practices. To the extent practicable, development and construction activities of any lot shall consider the use of habitat-friendly development practices, which include:

- A. *Minimizing grading, removal of native vegetation, disturbance and removal of native soils, and impervious area;*
- B. *Minimizing adverse hydrological impacts on water resources, such as using the practices described in Part (a) of Table NR-2 in Section 4.139.03, unless their use is prohibited by an applicable and required state or federal permit, such as a permit required under the federal Clean Water Act, 33 U.S.C. §§1251 et seq., or the federal Safe Drinking Water Act, 42 U.S.C. §§300f et seq., and including conditions or plans required by such permit;*
- C. *Minimizing impacts on wildlife corridors and fish passage, such as by using the practices described in Part (b) of Table NR-2 in Section 4.139.03; and*
- D. *Using the practices described in Part (c) of Table NR-2 in Section 4.139.03.*

Response: Based on the submitted materials, including retention of the stand of five mature Douglas fir trees and specification of dense plantings of native species in landscape islands, the proposal complies with applicable standards. See in particular the landscaping plans in the L-series sheets in Attachment 6.

Section 4.134. Coffee Creek Industrial Design Overlay District

(.01) Purpose. The Coffee Creek Industrial Design Overlay District (Coffee Creek DOD) is an overlay district within the Planned Development Industrial - Regionally Significant Industrial Area (RSIA) Zone Section 4.135.5. The purpose of this Coffee Creek DOD is to implement the Coffee Creek Industrial Area Master Plan (2007) by establishing standards for street design and connectivity, site design and circulation, building form, and building architecture and landscape for all development located within the master plan area. These standards are intended to result in:

- A. *An industrial district featuring cohesive and high-quality site, landscape, and building design that is well integrated with adjacent streetscapes and other public spaces.*

Response: The proposed development features a high-quality speculative industrial building and site designed to meet the needs of a warehousing/distribution and manufacturing tenant (or possibly two) seeking to locate in Wilsonville's desirable Coffee Creek Industrial Area. The proposed site plan responds to existing site features/opportunities by orienting the building, access/circulation and other features to protect and preserve an existing stand of five Douglas fir trees in the northwestern quadrant of the property, integrating them into a dense landscaping plan along the SW Clutter Street frontage.

This site-sensitive approach is consistent with this and other Purpose statements of the Coffee Creek DOD, because it provides a functional facility for the types of employment desired in the District while conserving existing natural site features and integrating them into landscape design to form a densely planted, naturalistic streetscape environment along SE Clutter Street. For most passers-by, the landscaping will obscure views of the truck maneuvering/dock area and focus attention on the building's office areas, located at the building's northern corners; however, for the facility's users, importantly including west-bound truck drivers approaching the facility, visibility into the site from its two driveways supports destination recognition and way-finding, which contribute to safer and smoother operations on the Addressing Street, SW Clutter Street.

Importantly, the proposed building form emphasizes two prominent office endcaps that bracket the recessed bay of dock doors. This configuration enables management to monitor site activities with views directly into the dock/circulation area from the office corners. This highly functional layout, desired by users in this industrial class, allows the facility to be quickly recognized from vantage points at the two driveways, while being for the most part screened from view from outside the property by the dense landscape plantings adjacent to virtually all of the SW Clutter Street frontage except the driveways themselves.

Pedestrian access, circulation and points of interest, including relationships to integrated surface water quality treatment features, are integrated into the landscape design along the street edge. Well-defined walkways provide pedestrian access between the public sidewalk and each of the building's two office entrances.

These combined features all contribute to the build-out of the Coffee Creek DOD consistent with this Purpose statement and the others listed below. The Applicant has responded below to all of the applicable standards that apply in the Coffee Creek DOD; however, implementing this particular development plan does require approval under Guidelines in the Coffee Creek Pattern Book, for those site features whose design approach needs to differ somewhat from the standards. In those cases, the Applicant presents the case for approval pursuant to a waiver based on satisfaction of the applicable Guidelines.

B. A multi-modal transportation network accommodating pedestrian, bicyclists, transit riders, motorists, and freight in the context of a modern light industrial district.

Response: The project, including street- and other public works improvements, is designed to meet the transportation network standards for Clutter Road as prescribed in the Wilsonville Light Industrial Pattern Book (see image below). The design plans for proposed improvements are found in the R-series of civil engineering drawings in Attachment 6.



The proposal includes a 6' public sidewalk along the frontage. Within the public right-of-way, a 7' planter strip separates the 6' sidewalk from the paved Clutter Road street surface. That landscaping is complemented by on-site landscaping islands with dense plantings and pedestrian amenity features, including a pedestrian wayside with a seating area, that will give the Clutter Road corridor a naturalistic appearance and partially obscure the proposed building. See Attachment 6, Sheets L1.10 and L5.11 for details.

Pedestrians can access the site along two internal pathways, one at the west end of the site and one at the east end of the site. Internal pathways connect between the sidewalk and the primary

building entrances at the two office corners, making the necessary vehicular drive aisle crossings at safe, visible locations outside the central truck maneuvering/dock apron area.

This standard is met.

C. Preservation of trees and natural features.

Response: The eastern part of the site contains open pasture. There are multiple buildings for residential, agricultural and equestrian use in the western part of the property:



The northwestern quadrant of the site contains a stand of five mature Douglas fir trees; the proposed site plan organizes site access/circulation and locates the building and other features to preserve those trees. This standard is met.

D. Minimization of adverse impacts to adjacent properties from development that detracts from the character and appearance of the area.

Response: The site has industrial zoning and the use is allowed. The proposed development will meet the required buffers and screening, thereby minimizing impacts on adjacent properties. This standard is met.

E. Minimization of the off-site visibility of vehicular parking, circulation and loading areas.

Response: Minimization of visibility is provided to the extent feasible based on use and site constraints. Vehicle parking is concentrated on the east and west sides of the building, away from the frontage on SW Clutter Street, with the exception of a total of nine parking spaces close to the two office entrances, four of which are ADA spaces. The loading area is screened by dense plantings adjacent to SW Clutter Street, with the exception of the two driveways. This standard is met.

F. Creation of a pleasant and functional industrial district for employees and visitors.

Response: The proposed landscaping, wayside, pedestrian pathway, and parking predominantly on the sides of the building will contribute, at the site level, to creating a pleasant and functional industrial district. This standard is met.

G. A predictable and timely process for reviewing light industrial development applications.

Response: This provision provides procedural guidance for implementation and requires no evidence from the applicant.

(.02) Applicability. The Coffee Creek DOD shall apply to all properties within the Coffee Creek Industrial Area Master Plan as shown in the Regulating Plan (Figure CC-1). The provisions of this section shall apply to:

- A. All new building construction.*
- B. Any exterior modifications to existing, non-residential buildings, subject to Section 4.134 (.03).*
- C. All development of site improvements including but not limited to new paved parking lots, outdoor storage, display areas, signs, and landscaping.*
- D. All building expansions greater than 1,250 square feet.*

Response: The proposal is for the construction of a new building. This standard applies.

(.03) Exceptions. This section does not apply to the following:

- A. Maintenance of the exterior of an existing industrial/employment structure, such as painting to the approved color palette, reroofing, or residing with the same or similar materials.*
- B. Interior remodeling.*
- C. Maintenance of existing dwellings and accessory buildings.*
- D. Maintenance of agricultural buildings.*

Response: The proposal does not include any activities subject to these exceptions. This standard does not apply.

(.04) Uses that Are Typically Permitted. The uses permitted shall be governed by Section 4.135.5 (.03).

Response: The proposed use is permitted by Section 4.135.5(.03). See details of compliance in the response to Section 4.135 of this narrative. This standard is met.

(.05) Prohibited Uses. The uses prohibited shall be governed by Section 4.135.5 (.04).

Response: The proposed use is not a prohibited use per Section 4.135.5 (.04). This standard does not apply.

(.06) Overview of Coffee Creek DOD Standards.

A. *Section 4.134 (.09) Regulating Plan. The Regulating Plan organizes all existing and future streets, drives, and shared-use paths within the Coffee Creek Industrial Area into a hierarchy of Addressing Streets, Supporting Streets and Through Connections.*

B. *Section 4.134 (.10) Connectivity Standards.*

1. *New Supporting Streets and Through Connections are required within the Coffee Creek DOD to meet Connectivity Requirements as shown on Figure CC-4.*

Response: SW Clutter Street is an Addressing Street, and no Supporting Street or Through Connection corridor is shown on Figure CC-4 within or near the subject property. This standard does not apply.

2. *The Street Types specify the cross sections for each of the street and shared-use path types within the Regulating Plan. These cross section specifications apply to both existing and proposed new streets. A range of cross sections for Supporting Streets and Through Connections is permitted and detailed in Figures CC-2 and CC-3.*

Response: The project will include dedication and improvements along the property's frontage on SW Clutter Street to meet Addressing Street requirements. Staff has advised the Applicant that improvements are not required in the County Road No. 557 right-of-way along the site's eastern boundary. This standard is met.

C. *Section 4.134 (.11) Development Standards Table.*

1. *The Development Standards Table provides an overview of all applicable development standards. The development standards for any given parcel are determined by the existing or future street or shared-use path type on which the parcel fronts, as detailed in Table CC-1.*

Response: The development standards Table CC-1 below provides a summary of compliance with the development standards. The responses in the table also highlight those standards for which the applicant is requesting waivers. This standard is met.

2. *Areas bounded by new Supporting Streets and Through Connections are designated as Parcels and are required to comply with Development Standards governing site design, building orientation and frontage. The development standards for site design, building façade and landscape design are intended to work in tandem with the street types to create a cohesive and unified public realm.*

Response: The subject property is adjacent to (bounded by) an Addressing Street rather than a Supporting Street or a Through Connection, so this application package demonstrates compliance with the appropriate development standards in that context, including waiver requests as needed. Because the subject property is not bounded by a Supporting Street or a Through Connection, this provision is not applicable.

3. *Adjustments to Development Standards may be granted by the Planning Director for quantifiable provisions, as noted in Tables CC-1 through CC-4, if the Planning Director finds that the adjusted Development Standard will perform as well as the Development Standard.*

Response: When feasible the applicant will meet the development standards. Where site conditions or project requirements do not enable the applicant to meet the standards, the applicant has referenced the Coffee Creek DOD Pattern Book to show how the project will satisfy the purposes of the Coffee Creek Development Standards. This standard is met.

- D. *Coffee Creek DOD Pattern Book. The Coffee Creek DOD Pattern Book provides supplemental design guidelines, which are intended to allow more flexibility in design than the Development Standards while satisfying the purpose of the Coffee Creek DOD.*

Response: When applying for a waiver to a development standard, the applicant has relied on the Coffee Creek DOD Pattern Book’s design guidelines to demonstrate how the purposes of the Coffee DOD are satisfied.

(.07) *Review Process. Development applications shall follow the application review process described in:*

- A. *Section 4.197 Zone Changes and Amendments.*
- B. *Section 4.198 Comprehensive Plan Changes.*
- C. *Section 4.700 Annexation and Urban Growth Boundary Amendments*
- D. *Section 4.140 Planned Development Regulations.*

Response: This narrative addresses applicable provisions of Sections 4.197, 4.700, and 4.140. As no Comprehensive Plan Change has been requested, Section 4.198 has not been addressed. This standard is met.

(.08) *Waivers. The Development Review Board may waive standards as listed in Section 4.134 (.11), consistent with the provisions of Section 4.118 (.03).*

- A. *The following standards shall not be waived, unless there is substantial evidence in the whole record to support a finding that the intent and purpose of the standards will be met in alternative ways:*
 - 1. *Required minimum building height as provided in Section 4.134 (.11) Table CC-4;*
 - 2. *Parking location and design along addressing streets in Section 4.134 (.11) Table CC-3; and*
 - 3. *Parcel pedestrian access as listed in Section 4.134 (.11) Table CC-3.*

Response: The applicant is not proposing a waiver from building height or parcel pedestrian access requirements. The applicant is proposing waivers with respect to parking location and design along addressing streets, supported by substantial evidence (in Section III.D below) that the project meets the intent and purpose of the standards in alternative ways. This provision is satisfied.

- B. *In addition to meeting the purposes and objectives of Section 4.140, any waivers granted in the Coffee Creek DOD must be found to be consistent with the intent of the Coffee Creek DOD Pattern Book.*

Response: When applying for a waiver to a development standard, the applicant has relied on the Coffee Creek DOD Pattern Book’s design guidelines to satisfy the purpose of the Coffee DOD. Further discussion is included in Section III.D of this narrative. This standard is met.

(.09) *Coffee Creek DOD Regulating Plan, Figure CC-1.*

- A. *Components of the Regulating Plan Map*
 - 1. *Addressing Streets. Existing and planned streets within the Regulating Plan Area are called Addressing Streets and include Cahalin Road, Day Road, Clutter Street, Grahams Ferry Road, Garden Acres Road, and “Future” Street.*
 - 2. *Overlay District. Land area identified within the Coffee Creek DOD on Figure CC-1 is subject to additional Connectivity Standards as detailed in Figure CC-4 and Table CC-1.*

Response: SW Clutter Street serves as the Addressing Street for the proposal, which includes proposed construction of street improvements along the property frontage consistent with that designation. The subject property is not at a location where additional Connectivity Standards apply.

(.10) Coffee Creek Connectivity Standards

- A. *Street Types, Figure CC-1. Within the land area bounded by Addressing Streets, connectivity shall be provided through new streets or private drives and shared use paths. The location, alignment, and cross-section of required streets or private drives and shared-use paths is flexible, as long as they comply with spacing and minimum cross section standards. New connections may be one of the following types:*
1. *Supporting Streets. Supporting Streets are new public streets or public easements. They shall meet the development standards set out in Figure CC-2.*
 - a. *A Required Supporting Street is one that intersects with an Addressing Street as shown on Figure CC-1. The exact location and design of these connections will be determined at the time of development review.*
 - b. *Planned Intersections are locations where Existing and Planned Addressing Streets intersect with required Supporting Streets, and Planned Pathways, as generally shown in Figure CC-1.*



Figure CC-1 - Regulating Plan

2. *Through Connections. Through Connections are new public streets or public easements with multi-use paths, or streets or public easements that combine characteristics of streets and multi-use paths. They shall meet the Development Standards set out in Figure CC-3.*

Response: The applicant will construct frontage improvements on SW Clutter Street. Based on the Subject Property’s location, no additional connectivity standards will apply to the development.

B. Planned Pathways are multi-use paths or pedestrian connections that are planned in the Transportation Systems Plan to occur in the location generally shown in Figure CC-1. A Planned Pathway may be employed to meet required connectivity, if it complies with Through Connection Standards for Connection Spacing and Connection Type, see Figure CC-6.

Response: The Subject Property is not at a location where a pathway or other pedestrian connection is planned. No pedestrian connection construction is required (other than street frontage improvements as discussed above).

C. Maximum Connection Spacing.

- 1. Addressing Streets. When intersecting with an Addressing Street, new Supporting Streets and Through Connections shall meet maximum spacing standards as set out in Table CC-1.*
- 2. Internal Supporting Streets and Through Connections. See Figure CC-4 and Table CC-1.*

Response: Per Figure CC-1, the Subject Property is not at a location where a new Supporting Street or Through Connection is required.

D. Required Connectivity Master Plan. Connectivity Master Plans are required for all development within the Coffee Creek DOD. Development proposals shall show conceptually how the Connectivity Requirements will be met. In addition, the Connectivity Master Plan should generally indicate how parking, driveways, walkways, waysides, etc., will relate or connect to adjacent parcels.

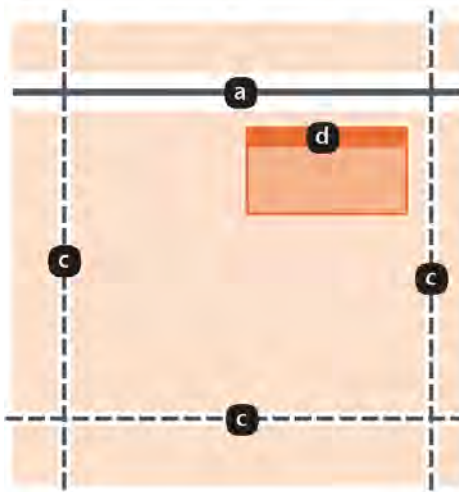
Response: The site plan (Sheet C1.10 of Attachment 6) provides the information required to understand how the proposed development plan meets applicable connectivity requirements. Because this project is the first proposal in this area submitted under the Coffee Creek Industrial Design Overlay District regulations, there are no previously approved driveways, walkways, waysides or other features in the surrounding vicinity.

(.11) Development Standards Table. Areas bounded by Addressing Streets, Supporting Streets and Through Connections shall be designated as a Parcel and subject to the Development Standards in Tables CC-1 through CC-4.

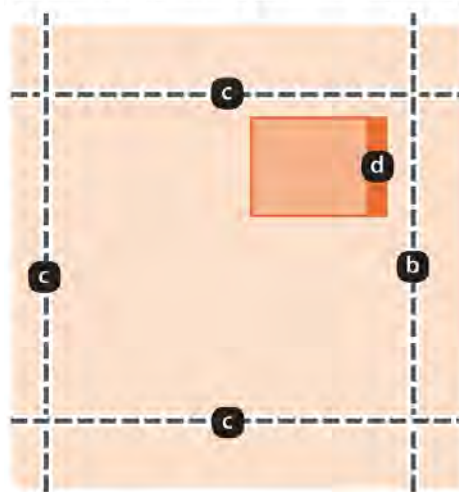
Table CC-1: Street Design and Connectivity			
	Addressing Streets	Supporting Streets	Through Connections
<i>General</i>	<i>Development Standards within this table are not adjustable.</i>		
<i>Connection Spacing</i>	<i>Not applicable, Addressing Streets exist or are planned</i>	<i>600 feet, maximum, centerline to centerline. Supporting Streets and Through Connections shall intersect with Garden Acres Road as shown on Figure CC-1, Regulating Plan; or if the Addressing Street is Day Road, no less than 1,000 feet apart, centerline to centerline.</i>	

Table CC-1: Street Design and Connectivity			
	Addressing Streets	Supporting Streets	Through Connections
<i>Connection Type</i>	<i>Addressing Streets are Day Road, Grahams Ferry Road, Cahalin Road, Garden Acres Road, Clutter Street, and "Future" Street.</i>	<i>Supporting Streets are those meeting Specifications, Figure CC-2. A Required Supporting Street is one that intersects with an Addressing Street. The exact location and design of these connections will be determined at the time of development review.</i>	<i>Through Connections are those meeting Specifications, Figure CC- 3. Through Connections may be multimodal or used exclusively for bicycle and pedestrian access.</i>
Response: SW Clutter Street is an Addressing Street.			
<i>Connection Hierarchy and Primary Frontage</i>	<i>If one of the streets or connections bounding a parcel is an Addressing Street, the Addressing Street shall be the Primary Frontage. If none of the bounding streets or connections is an Addressing Street, a Supporting Street shall be the Primary Frontage. See Figure CC-5.</i>		
Response: SW Clutter Street is the primary frontage and the building faces it.			

Parcel with Addressing Street Frontage



Parcel without Addressing Street Frontage



- a** Addressing Street
- b** Supporting Street
- c** Supporting Street or Through Connection
- d** Primary Frontage / Front Façade of Building

Figure CC-5 - Connection Hierarchy and Primary Frontage

Table CC-2: District-Wide Planning and Landscaping

	Addressing Streets	Supporting Streets	Through Connections
<i>General</i>	<p><i>The following provisions apply:</i></p> <ul style="list-style-type: none"> • <i>Section 4.176 for landscaping standards</i> • <i>Section 4.610.10 for tree removal, relocation or replacement.</i> • <i>Section 4.610.10 (.01) C. for consideration of development alternatives to preserve wooded areas & trees.</i> 		
<p>Response: The project’s planting plan satisfies or exceeds the General Standard along the SW Clutter Street frontage (front property line) and the Low Screen standard at the sides (east and west) and rear (south).</p>			

Table CC-3: Site Design			
	Addressing Streets	Supporting Streets	Through Connections
1. Parcel Access			
<i>General</i>	<p>Unless noted otherwise below, the following provisions apply:</p> <ul style="list-style-type: none"> • Section 4.177 (.02) for street design; • Section 4.177 (.03) to (.10) for sidewalks, bike facilities, pathways, transit improvements, access drives & intersection spacing. <p>The following Development Standards are adjustable:</p> <ul style="list-style-type: none"> • Parcel Driveway Spacing: 20% • Parcel Driveway Width: 10% 		
<i>Parcel Driveway Access</i>	<i>Not applicable</i>	<p>Limited by connection spacing standards Parcel Driveway Access may be employed to meet required connectivity, if it complies with Supporting Street Standards for Connection Spacing and Connection Type, see Figure CC-6. Subject to approval by City Engineer</p>	<p>Limited by connection standards for motorized vehicle access. Parcel Driveway Access may be employed to meet required connectivity, if it complies with Through Connection Standards for Connection Spacing and Connection Type, see Figure CC-6. Subject to approval by City Engineer</p>
<i>Parcel Driveway Spacing</i>	<i>Not applicable</i>	<p>150 feet, minimum See Figure CC-6</p>	<p>150 feet, minimum See Figure CC-6</p>
<i>Parcel Driveway Width</i>	<i>Not applicable</i>	<p>24 feet, maximum or complies with Supporting Street Standards</p>	<p>24 feet, maximum or complies with Through Connection Standards</p>
<p>Response: Two driveways are proposed on SW Clutter Street, which is an Addressing Street. (The site has frontage on a County Road at the east, but City plans do not include its improvement and use as an urban transportation facility.) Each of the driveways is designed with a location, width and configuration suitable to accommodate turning movements by all types of vehicles anticipated at this facility, including semi tractor-trailer rigs.</p>			
2. Parcel Pedestrian Access			
<i>General</i>	<p>Unless noted otherwise below, the following provisions apply:</p> <ul style="list-style-type: none"> • Section 4.154 (.01) for separated & direct pedestrian connections between parking, entrances, street right-of-way & open space • Section 4.167 (.01) for points of access 		
<i>Parcel Pedestrian Access Spacing</i>	<i>No restriction</i>		

Table CC-3: Site Design			
	Addressing Streets	Supporting Streets	Through Connections
<i>Parcel Pedestrian Access Width</i>	<i>8 feet wide minimum</i>		
<i>Parcel Pedestrian Access to Transit</i>	<i>Provide separated & direct pedestrian connections between transit stops and parking, entrances, street right-of-way & open space.</i>		
Response: Walkways between the public sidewalk and main building entrances at office areas located on both sides of the building are provided. Their routing avoids conflict with driveways and the truck maneuvering area, and provides drive aisle crossings at locations near the entrances that have good visibility for safety.			
3. Parcel Frontage			
<i>Parcel Frontage, Defined</i>	<i>Parcel Frontage shall be defined by the linear distance between centerlines of the perpendicular Supporting Streets and Through-Parcel Connections. Where Parcel Frontage occurs on a curved segment of a street, Parcel Frontage shall be defined as the linear dimension of the Chord.</i>		
<i>Primary Frontage, Defined</i>	<i>The Primary Frontage is the Parcel Frontage on an Addressing Street. If the parcel is not bounded by Addressing Streets, it is the Parcel Frontage on a Supporting Street. See Figure CC-5.</i>		
<i>Parcel Frontage Occupied by a Building</i>	<i>A minimum of 100 feet of the Primary Frontage shall be occupied by a building. The maximum Primary Frontage occupied by a building shall be limited only by required side yard setbacks.</i>	<i>No minimum</i>	
Response: The proposed building is sited with its long axis parallel to the Addressing Street. Its front (primary) façade exceeds 100 feet and is designed to create a strong visual relationship with SW Clutter Street (Primary Frontage on the Addressing Street), together with the dense landscaping in the foreground. The proposed building extends the full width of the Subject Property, except to the extent side yard setbacks are needed to provide landscaping and emergency access, parking and circulation around the whole building. The proposed plan complies with these requirements.			
4. Parking Location and Design			
<i>General</i>	<p><i>Unless noted otherwise below, the following provisions apply:</i></p> <ul style="list-style-type: none"> • <i>Section 4.155 (03) Minimum and Maximum Off-Street Parking Requirements</i> • <i>Section 4.155 (04) Bicycle Parking</i> • <i>Section 4.155 (06) Carpool and Vanpool Parking Requirements</i> • <i>Section 4.176 for Parking Perimeter Screening and Landscaping - permits the parking landscaping and screening standards as multiple options</i> <p><i>The following Development Standards are adjustable:</i></p> <ul style="list-style-type: none"> • <i>Parking Location and Extent: up to 20 spaces permitted on an Addressing Street</i> 		

Table CC-3: Site Design			
	Addressing Streets	Supporting Streets	Through Connections
<p>Response: A total of nine parking stalls is proposed in front of the office areas, between the building and the Addressing Street. Four of those nine spaces are ADA-compliant. This is fewer than the allowed maximum of 20 on an Addressing Street. The proposal complies with these provisions.</p>			
<i>Parking Location and Extent</i>	<i>Limited to one double-loaded bay of parking, 16 spaces, maximum, designated for short-term (1 hour or less), visitor, and disabled parking only between right-of-way of Addressing Street and building.</i>	<i>Parking is permitted between right-of-way of Supporting Street and building.</i>	<i>Parking is permitted between right-of-way of Through Connection and building.</i>
<p>Response: Although a total of only nine parking stalls is proposed in front of the office areas, between the building and the Addressing Street, they are located in two small groupings adjacent to the two office entrances rather than in “one double-loaded bay of parking.” Waiver request Number 2 addresses this aspect of the proposal. With approval of the requested waiver, the project complies.</p>			
<i>Parking Setback</i>	<i>20 feet minimum from the right-of-way of an Addressing Street.</i>	<i>15 feet minimum from the right-of-way of a Supporting Street.</i>	<i>10 feet minimum from the right-of-way of a Through Connection.</i>
<p>Response: The project complies because no parking spaces are located within 20 feet of SW Clutter Street.</p>			
<i>Parking Lot Sidewalks</i>	<i>Where off-street parking areas are designed for motor vehicles to overhang beyond curbs, sidewalks adjacent to the curbs shall be increased to a minimum of seven (7) feet in depth.</i>	<i>Where off-street parking areas are designed for motor vehicles to overhang beyond curbs, planted areas adjacent to the curbs shall be increased to a minimum of nine (9) feet in depth.</i>	
<p>Response: Walkways where vehicles may overhang curbs will be at least 7 feet wide, in compliance with this standard.</p>			
<i>Parking Perimeter Screening and Landscaping</i>	<p><i>Screen parking area from view from Addressing Streets and Supporting Streets by means of one or more of the following:</i></p> <ul style="list-style-type: none"> <i>a. General Landscape Standard, Section 4.176 (.02) C.</i> <i>b. Low Berm Standard, Section 4.176 (.02) E., except within 50 feet of a perpendicular Supporting Street or Through Connection as measured from the centerline.</i> 	<p><i>Screen parking area from view from Through Connections by means of</i></p> <ul style="list-style-type: none"> <i>a. Low Screen Landscape Standard, Section 4.176 (.02) D., or</i> <i>b. High Screen Landscaping Standard, Section 4.176 (.02) F., or</i> <i>c. High Wall Standard, Section 4.176 (.02) G., or</i> 	

Table CC-3: Site Design			
	Addressing Streets	Supporting Streets	Through Connections
			d. <i>Partially Sight-obscuring Fence Standard, Section 4.176 (.02) I.</i>
<p>Response: The planting plan is designed to meet or exceed the General Landscape standard, satisfying this requirement. See detailed discussion under Section 4.176.</p>			
<i>Off-Street Loading Berth</i>	<p><i>One loading berth is permitted on the front façade of a building facing an Addressing Street. The maximum dimensions for a loading are 16 feet wide and 18 feet tall. A clear space 35 feet, minimum is required in front of the loading berth.</i></p> <p><i>The floor level of the loading berth shall match the main floor level of the primary building. No elevated loading docks or recessed truck wells are permitted.</i></p> <p><i>Access to a Loading Berth facing an Addressing Street may cross over, but shall not interrupt or alter, a required pedestrian path or sidewalk. All transitions necessary to accommodate changes in grade between access aisles and the loading berth shall be integrated into adjacent site or landscape areas.</i></p> <p><i>Architectural design of a loading berth on an Addressing Street shall be visually integrated with the scale, materials, colors, and other design elements of the building.</i></p>	<p><i>No limitation. Shall meet minimum standards in Section 4.155 (.05).</i></p>	
<p>Response: This application includes waiver request number 1 with respect to this standard. See discussion in the Waivers section below. With approval of the waiver request, the project complies.</p>			
<i>Carpool and Vanpool Parking</i>	<i>No limitation</i>		
5. Grading and Retaining Walls			

Table CC-3: Site Design			
	Addressing Streets	Supporting Streets	Through Connections
<i>General</i>	<p>The following Development Standards are adjustable:</p> <ul style="list-style-type: none"> Retaining Wall Design: 20% 		
<i>Maximum height</i>	<p>Where site topography requires adjustments to natural grades, landscape retaining walls shall be 48 inches tall maximum.</p> <p>Where the grade differential is greater than 30 inches, retaining walls may be stepped.</p>		
<i>Required Materials</i>	<p>Materials for retaining walls shall be unpainted cast-in-place, exposed-aggregate, or board-formed concrete; brick masonry; stone masonry; or industrial-grade, weathering steel plate.</p>		
<i>Retaining Wall Design</i>	<p>Retaining walls longer than 50 linear feet shall introduce a 5-foot, minimum horizontal offset to reduce their apparent mass.</p>		
<p>Response: A retaining wall is located along the south edge of the site. It is necessary to elevate the storm water treatment facility located there enough to achieve gravity flow to the public system in SW Clutter Street.</p>			
6. Planting			
<i>General</i>	<p>Unless noted otherwise below, the following provisions apply:</p> <ul style="list-style-type: none"> Section 4.176 Landscaping and Screening Standards 		
<i>Landscaping Standards Permitted</i>	<p>General Landscape Standard, Section 4.176 (.02) C.</p> <p>Low Berm Standard, Section 4.176 (.02) E., except within 50 feet of a perpendicular Supporting Street or Through Connection as measured from the centerline</p>	<p>General Landscape Standard, Section 4.176 (.02) C. Low Screen Landscape Standard, Section 4.176 (.02) D.</p> <p>Screen loading areas with High Screen Landscaping Standard, Section 4.176 (.02) F., and High Wall Standard, Section 4.176 (.02) G.</p>	
<p>Response: The applicant has prepared Landscaping Plans (see L-series sheets in Attachment 6) that comply with or exceed the General Landscape Standard along the SW Clutter Street (Addressing Street) frontage.</p>			
7. Location and Screening of Utilities and Services			
<i>General</i>	<p>Unless noted otherwise below, the following provisions apply:</p> <ul style="list-style-type: none"> Sections 4.179 and 4.430. Mixed Solid Waste and Recyclables Storage in New Multi-Unit Residential and Non-Residential Buildings 		
<i>Location and Visibility</i>	<p>Site and building service, equipment, and outdoor storage of garbage, recycling, or landscape maintenance tools and equipment is not permitted</p>	<p>Site and building service, utility equipment, and outdoor storage of garbage, recycling, or landscape maintenance tools and equipment is not</p>	<p>No limitation</p>

Table CC-3: Site Design			
	Addressing Streets	Supporting Streets	Through Connections
		<i>permitted within the setback</i>	
<i>Required Screening</i>	<i>Not permitted</i>	<i>High Screen Landscaping Standard, Section 4.176 (.02) F. and/ or High Wall Standard, Section 4.176 (.02) G.</i>	
<p>Response: A receptacle for garbage and recycling is proposed at the rear of the property, in the southwest corner of the site. The applicant has provided correspondence from Republic Services supporting the proposed configuration. See Attachment 9.</p>			

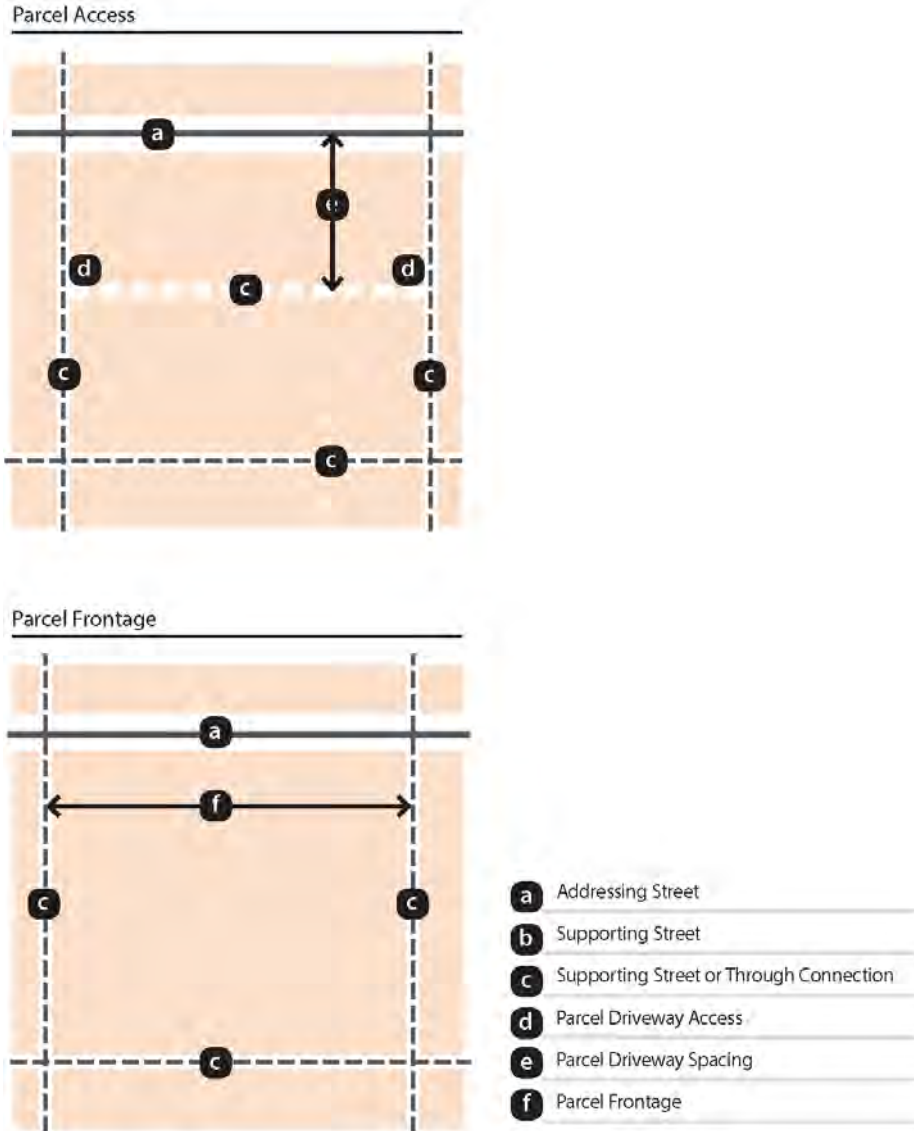


Figure CC-6 - Site Design - Parcel Access

Table CC-4: Building Design			
	Addressing Streets	Supporting Streets	Through Connections
1. Building Orientation			
Front Façade	Buildings shall have one designated front façade and two designated side façades. If one of the streets or connections bounding a parcel is an Addressing Street, the front façade of the building shall face the Addressing Street.		

	<p><i>If two of the streets or connections bounding a parcel are Addressing Streets, the front façade of the building may face either Addressing Street, except when one of the Addressing Streets is Day Road. In that case, the front façade must face Day Road.</i></p> <p><i>If none of the bounding streets or connections is an Addressing Street, the front façade of the building shall face a Supporting Street.</i></p> <p><i>See Figure CC-5.</i></p>
<p>Response: The front façade of the building faces north toward the Addressing Street, SW Clutter Street. Side façades are on the east and west sides of the building.</p>	
<p><i>Length of Front Façade</i></p>	<p><i>A minimum of 100 feet of the Primary Frontage shall be occupied by a building.</i></p> <p><i>The maximum Primary Frontage occupied by a building shall be limited only by required side yard setbacks.</i></p>
<p>Response: Locating the building to allow conservation of the stand of five mature Douglas fir trees, as well as fire access/circulation all the way around the building, makes it impossible to position the building directly adjacent to the SW Clutter Street right-of-way at the minimum setback. However, the building is sited with its long axis parallel to the Addressing Street; moreover, its front (primary) façade exceeds 100 feet and is designed to create a strong visual relationship with the street, together with the dense landscaping in the foreground. The proposed site plan and building design comply with these provisions.</p>	
<p><i>Articulation of Front Façade</i></p>	<p><i>Applies to a Front Façade longer than 175 feet that has more than 5,250 square feet of street-facing façade area:</i></p> <p><i>At least 10% of the street-facing façade of a building facing an Addressing Street must be divided into façade planes that are offset by at least 2 feet from the rest of the façade.</i></p> <p><i>Façade area used to meet this standard may be recessed behind, or project out from, the primary façade plane.</i></p>
<p>Response: The front façade of the building complies with this standard. See architectural plan and elevation drawings, the A series of drawing sheets in Attachment 6.</p>	
<p>2. Primary Building Entrance</p>	
<p><i>General</i></p>	<p><i>The following Development Standards are adjustable:</i></p> <ul style="list-style-type: none"> • <i>Required Canopy: 10%</i> • <i>Transparency: 20%</i>
<p>Response: The proposed primary entrance is at the eastern office area; a second office entrance at the western office area will accommodate a potential second building tenant. Both entrance areas are designed to meet the required horizontal dimensions for canopy coverage (i.e., width and depth) as well as the transparency requirement, without adjustment. (A waiver, discussed below, is requested to allow a lower canopy height.)</p>	
<p><i>Accessible Entrance</i></p>	<p><i>The Primary Building Entrance shall be visible from, and accessible to, an Addressing Street (or a Supporting Street if there is no Addressing Street frontage). A continuous pedestrian pathway shall connect from the sidewalk of an Addressing Street to the Primary Building Entrance with a safe, direct and convenient path of travel that is free from hazards and provides a reasonably smooth and consistent surface consistent with the requirements of Americans with Disabilities Act (ADA).</i></p> <p><i>The Primary Building Entrance shall be 15 feet wide, minimum and 15 feet tall, minimum.</i></p>

<p>Response: Pedestrian pathways extend from public sidewalks along SW Clutter Street to both of the office endcaps on the front façade; however, the building volume is designed to provide canopy covers over the office entrances that are aligned and integrated with the canopy cover over the centrally located loading bays, for a consistent appearance. To achieve that alignment, the office entrances do not meet the 15-foot height standard. This application includes a waiver request with respect to that standard. See discussion in the Waivers section below.</p>		
<i>Location</i>	<i>150 feet, maximum from right-of-way of an Addressing Street, see Figure CC-7.</i>	<i>150 feet, maximum from right-of-way of a Supporting Street, if there is no Addressing Street Frontage, see Figure CC-7.</i>
<p>Response: The eastern (primary) entrance is compliant. The applicant has been advised by staff that because this requirement is satisfied by the eastern entrance location, the proposed separate, additional pedestrian entrance to the western office area is allowed to be located more than 150 feet from the Addressing Street.</p>		
<i>Visibility</i>	<i>Direct line of sight from an Addressing Street to the Primary Building Entrance.</i>	
<p>Response: Both proposed entrances are visible from points along the Clutter Street frontage, particularly at pedestrian path connections to the sidewalk.</p>		
<i>Accessibility</i>	<i>Safe, direct, and convenient path from adjacent public sidewalk.</i>	
<p>Response: Both proposed paths provide a reasonably direct connection from the sidewalk. The western path is aligned within an existing compacted driveway near the western property boundary in order to reduce impacts on the root zones of the five mature Douglas fir trees to be protected and retained. Both path alignments cross the vehicular drive aisle at points near the building entrances that (1) are removed from heavy truck movements and (2) have good visibility for pedestrian safety.</p>		
<i>Required Canopy</i>	<i>Protect the Primary Building Entrance with a canopy with a minimum vertical clearance of 15 feet and an all-weather protection zone that is 8 feet deep, minimum and 15 feet wide, minimum.</i>	
<p>Response: Each of the office entrance canopies covers the minimum 8' by 15' horizontal area; however, the building volume is designed to provide canopy cover over the office entrances that is aligned and integrated with the canopy cover over the loading bays, for a coherent appearance across the whole north frontage of the building. To do so, the office entrance canopies need to be at a 12-foot height rather than the 15-foot height standard. This application includes a waiver request with respect to the vertical clearance requirement. See discussion in the Waivers section below.</p>		
<i>Transparency</i>	<i>Walls and doors of the Primary Building Entrance shall be a minimum of 65% transparent.</i>	
<p>Response: Glazing, including doors, at the office entrances complies with this requirement.</p>		
<i>Lighting</i>	<p><i>The interior and exterior of the Primary Building Entrance shall be illuminated to extend the visual connection between the sidewalk and the building interior from day to night. Pathway lighting connecting the Primary Building Entrance to the adjacent sidewalk on an Addressing Street shall be scaled to the needs of the pedestrian.</i></p> <p><i>Comply with Outdoor Lighting, Section 4.199</i></p>	
<p>Response: The proposed lighting plan is designed to comply with the prescriptive approach, satisfying these requirements.</p>		
<p>3. Overall Building Massing</p>		

<p><i>General</i></p>	<p><i>The following Development Standards are adjustable:</i></p> <ul style="list-style-type: none"> • <i>Required Minimum Height: 10%</i> • <i>Ground Floor Height: 10%</i> • <i>Base, Body, and Top Dimensions: 10%</i> • <i>Base Design: 10%</i> • <i>Top Design: 10%</i> 		
<p>Response: A waiver is requested because the proposed base – middle – top configuration varies from the standard requirement by more than 10%. Please refer to the Waivers section below for detailed findings.</p>			
<p><i>Front Setback</i></p>	<p><i>30 feet, minimum, except as provided below</i></p>	<p><i>30 feet maximum</i></p>	<p><i>30 feet maximum</i></p>
<p>Response: The front building setback exceeds the minimum 30’ requirement.</p>			
<p><i>Allowance of Primary Building Entrance</i></p>	<p><i>Where the Primary Building Entrance is located on an Addressing Street it may extend into the required front yard setback by 15 feet maximum provided that:</i></p> <ol style="list-style-type: none"> <i>a. It has a two-story massing with a minimum height of 24 feet;</i> <i>b. The Parcel Frontage on the Addressing Street is limited to 100 feet;</i> <i>c. The building extension is 65% transparent, minimum;</i> <i>d. The entrance is protected with a weather-protecting canopy with a minimum vertical clearance of 15 feet; and</i> <i>e. The standards for site design and accessibility are met.</i> 	<p><i>Not applicable</i></p>	<p><i>Not applicable</i></p>
<p>Response: Not applicable; no extension into the minimum front setback is requested.</p>			
<p><i>Required Minimum Height</i></p>	<p><i>30 feet minimum.</i></p>		
<p>Response: Proposed building height is 45’ at the office corner parapets. This standard is met.</p>			
<p><i>Ground Floor Height</i></p>	<p><i>The Ground Floor height shall measure 15 feet, minimum from finished floor to finished ceiling (or 17.5 feet from finished floor to any exposed structural member).</i></p>		

Response: The proposed building is not a multi-story building; however, the design for ceiling height within office areas is intended to match the exterior canopy height at about 12 feet, for a consistent transition between exterior and interior areas. This application includes a waiver request with respect to this standard. See discussion in the Waivers section below.

<p><i>Base, Body, and Top Dimensions</i></p>	<p><i>Buildings elevations shall be composed of a clearly demarcated base, body and top.</i></p> <p><i>a. For Buildings 30 feet in height (unless lower by adjustment):</i></p> <ul style="list-style-type: none"> <i>i. The base shall be 30 inches, minimum.</i> <i>ii. The body shall be equal to or greater than 75% of the overall height of the building.</i> <i>iii. The top of the building shall be 18 inches, minimum.</i> <p><i>b. For Buildings between 30 feet and 5 stories in height:</i></p> <ul style="list-style-type: none"> <i>i. The base shall be 30 inches, minimum; 2 stories, maximum.</i> <i>ii. The body shall be equal to or greater than 75% of the overall height of the building.</i> <i>iii. The top of the building shall be 18 inches, minimum.</i> <p><i>c. For Buildings greater than 6 stories in height:</i></p> <ul style="list-style-type: none"> <i>i. The base shall be 1 story, minimum, 3 stories, maximum.</i> <i>ii. The body shall be equal to or greater than 75% of the overall height of the building.</i> <i>iii. The top of the building shall be 18 inches, minimum.</i>
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Response: The proposed building’s height is 45 feet, making it subject to subparagraph b. The front façade design uses the ground floor level as the Base, formed by a uniform canopy/overhang height all the way across the front and wrapping around the office endcaps on both sides. (See Sheet A2.10 in Attachment 6 and materials/colors images in Attachment 12.) This complies with subparagraph b.i, and a cornice cap at the top of the wall meeting the 18" requirement satisfies subparagraph b.iii; however, the resulting proportions are such that the body of the building does not meet the standard in subparagraph b.ii, so this application includes a waiver request with respect to that standard. See discussion in the Waivers section below.

<p><i>Base Design</i></p>	<p><i>The design of the building Base shall:</i></p> <ul style="list-style-type: none"> <i>a. Use a material with a distinctive appearance, easily distinguished from the building Body expressed by a change in material, a change in texture, a change in color or finish;</i> <i>b. Create a change in surface position where the Base projects beyond the Body of the building by 1 -1/2 inches, minimum; and/ or</i> <i>c. Low Berm Landscape Standard, Section 4.176 (.02) E.</i>
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Response: The side elevation of the building (at points behind the office endcaps, which are consistent with the front façade treatment) use a different approach for defining the Base, Body and Top. The applicant has not proposed a base-middle-top configuration on the south elevation (rear wall of the building) because it is not visible from the public right-of-way or from activity areas within the site, such as access and parking. The only site features at the south are the stormwater facility and landscaping along the rear property line, and a paved drive aisle to meet emergency access requirements.

<p><i>Top Design</i></p>	<p><i>Building Tops define the skyline.</i></p> <p><i>The design of the Building Top shall:</i></p> <ul style="list-style-type: none"> <i>a. Use a material with a distinctive appearance, easily distinguished from the building Body expressed by a change in material, a change in texture, a change in color or finish; and/ or</i>
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	b. Create a change in surface position where the Top projects beyond, or recesses behind, the Body of the building by 1 -1/2 inches, minimum.
Response: Both the front façade treatment and the side façade treatment comply with this standard.	
<i>Required Screening of Roof-mounted Equipment</i>	Screen roof-mounted equipment with architectural enclosures using the materials and design of the building Body and/ or the building Top. No roof-mounted equipment shall be visible from an Addressing Street or Supporting Street.
Response: The parapet wall height will screen rooftop mechanical equipment. The structural design of the roof provides tenants with flexibility to install rooftop mechanical equipment at locations meeting their needs. Specific proposed locations and specifications for such equipment will be incorporated in tenant improvement plans. The height of the parapet wall is designed to effectively screen units from view, based on typical dimensions/sizes of equipment suitable for this type of industrial building.	

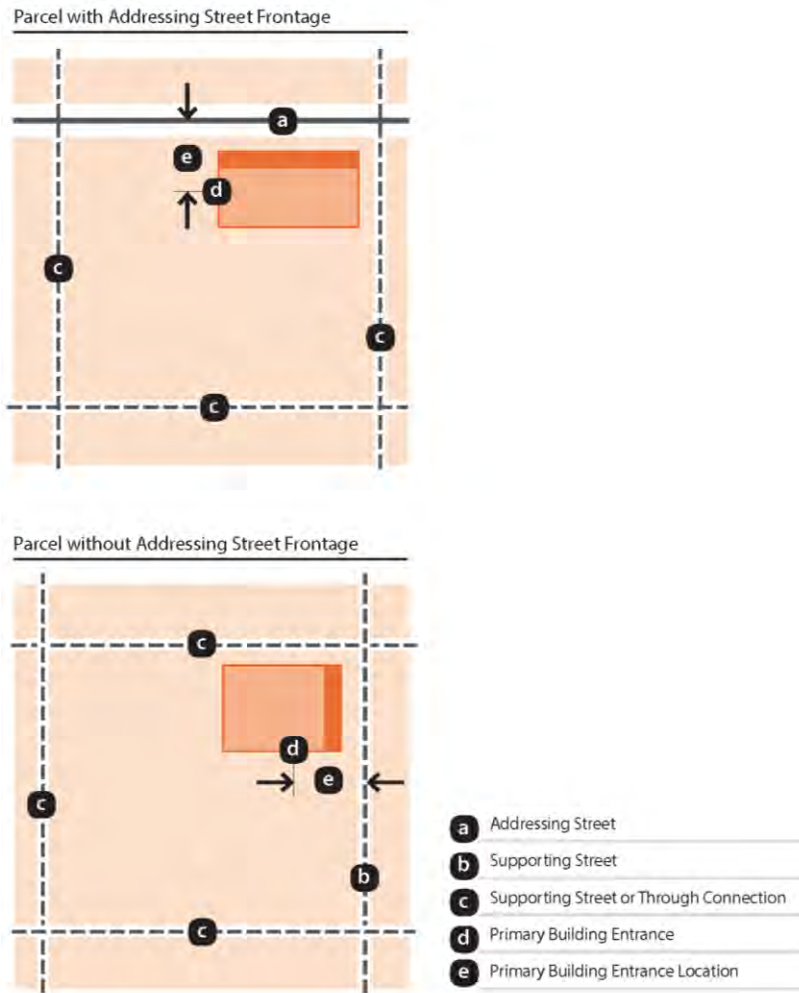


Figure CC-7 - Building Design - Primary Building Entrance

(.12) *Waysides.*

B. Applicability. All projects in the Coffee Creek Master Plan Area shall provide waysides according to the standards in Table CC-5.

Response: The site is located in the Coffee Creek Master Plan Area. This section applies.

C. General. The following development standards apply to all Waysides:

- 1. Required Wayside Area is exclusive of required landscape screening.*
- 2. Required Minimum Dimension of 20 feet (either width or depth).*

Response: The proposed wayside is exclusive of the required landscape screening (but integrated within it) and has at least one minimum dimension of 20 feet. Please refer to the detailed description in the response to subsection D.1 immediately below.

D. Criteria. Waysides shall meet the following criteria:

- 1. Perimeter Landscaping. In addition to the minimum size and dimensions, landscape three sides of the Industrial Wayside to a depth of 20 feet, minimum according to Section 4.176 (.02). Permitted screening includes: Section 4.176 (.02) D. Low Screen Landscaping Standard; Section 4.176 (.02) E. Low Berm Standard; or Section 4.176 (.02) E. High Screen Landscaping Standard. Perimeter landscaping shall not obscure visual access to the Industrial Wayside. Unscreened surface parking lots, chain link fencing, or service yards are prohibited adjacent to Industrial Waysides.*

Response: To be integrated with the naturalistic character desired along SW Clutter Street, the industrial wayside is proposed as an irregular, organically curving paved path that forms a loop attached at both ends to the public sidewalk. The eastern end of the path provides an ADA-accessible slope that descends to a small plaza with a curved bench on its west edge, and the shorter west end of the loop extends north to connect to the sidewalk by way of a short staircase. The ADA-accessible eastern part of the loop measures about 65 feet long from the edge of the sidewalk to the bench.

The approximately 10' wide curving bench is located about 15 feet from the edge of the public sidewalk. (See detail on Sheet 5.11 in Attachment 6.) Seating positions on the bench face generally east, northeast and southeast, providing views toward the path/plaza itself, planter islands with boulders and dense vegetation, and seasonal/occasional water flowing through the surface water quality management pond along the southern edge of the central planter island. The landscape area meets or exceeds a 20-foot perimeter around the path/plaza on its west, south and southeast sides, i.e., everywhere other than the public sidewalk, to which it is adjacent and closely related to provide an inviting configuration.

Illumination will be provided by a streetlight located in the landscape strip near the western loop path connection, together with three illuminated bollards spaced along the north side of the loop itself. One bollard is at the west end to cast light on the low side of the staircase and the stairs. (See detail on Sheet 5.11 in Attachment 6.) A trash receptacle is proposed between the sidewalk and the bench, on the west side of the path near the staircase.

Based on the submitted materials, the proposal complies with the standards of this section.

- 2. Visibility. Industrial Waysides shall be visible from and accessible to Addressing Streets.*

Response: The Industrial Wayside is directly adjacent to and visible from SW Clutter Street, which is an Addressing Street.

3. *Accessible Pathway. A paved walking surface, width: 5 feet, minimum, meeting ADA standards is required to connect Industrial Wayside with Addressing Street.*

Response: As shown on Sheet L1.10, a paved surface meeting the required width connects the Wayside to Clutter Street, which is an Addressing Street.

4. *Accessible Surface. Industrial Waysides shall have an accessible surface, 100 square feet, minimum; dimensions 10 feet, minimum meeting ADA standards.*

Response: As shown on Sheet L1.10, the plaza area on the east side of the bench is large enough for a 10' by 10' square (100 SF) to fit comfortably within its curving edges.

5. *Required Amenities.*

a. *Seating. Outdoor seating shall be provided. Publicly accessible plazas, courtyards, and pocket parks shall include at least one linear foot of seating per each 40 square feet of plaza, courtyard or pocket park space on site. Outdoor seating shall be in the form of:*

1. *Free standing outdoor benches consistent with the standards; or*
2. *Seating incorporated into low walls, berms, or raised planters.*

b. *Landscaping. The landscaping must be planted and maintained according to Section 4.176 (.02) C.*

c. *Lighting.*

d. *Recycling/ Waste Receptacle. Locate waste and recycling stations nearest to the accessible path and away from stormwater facilities.*

Response: As explained above under subparagraph 1 and illustrated on Sheet L1.10, all of the required features have been provided in the proposed Wayside.

6. *Installation and Maintenance. Industrial Waysides shall be programmed, planned, constructed, and maintained at the expense of the applicant. The landscaping must be planted and maintained according to Section 4.176 (.07). Recycling, waste receptacles, and pet waste stations shall be serviced at an acceptable professional interval to prevent being over filled or creating unsanitary or visually messy appearances.*

Response: The applicant acknowledges these responsibilities and intends not to fall by the Wayside in fulfilling them.

7. *Solar Access. Exposure to sunlight. Southern exposure is encouraged. Design facilities to permit direct sunlight to enter the Industrial Wayside and strike the required accessible surface between the hours of 10:00 am and 2:00 pm local time.*

Response: Because the Wayside is located within the central landscape island on the south side of SW Clutter Street, the plantings that surround and form it must strike a balance between competing objectives: on the one hand, forming a dense, naturalistic screen along SW Clutter Street; on the other, providing solar access to the Wayside. Responding to this challenging context, the planting plan uses a combination of evergreen and deciduous trees, locating the deciduous specimens around the bench/plaza itself. Additionally, the row of evergreen trees that will form an all-season visual screen between the street and the site is interrupted by substitution of a deciduous tree immediately south of the plaza, which will provide winter-time solar access to the plaza during the mid-day period (10 am to 2 pm). The plaza will therefore enjoy mid-day

sunshine on those fall, winter and spring days when it is not cloudy or rainy, and comfortable shade during the summer.

8. *Lighting. Lighting for Industrial Waysides is required to permit reasonable use, utility, security, and nighttime safety. Lighting installed in Industrial Waysides shall conform to the requirements of Section 4.199. All outside lighting shall be so arranged and shielded so as not to shine into adjacent areas and to prevent any undue glare or reflection and any nuisance, inconvenience, and hazardous interference of any kind on adjoining streets or property.*

Response: As noted above in the response to subparagraph 1, Illumination will be provided by a streetlight located in the landscape strip near the western loop path connection, together with three illuminated bollards spaced along the north side of the loop itself. One bollard is located at the west end to cast light on the low side of the staircase and the stairs.

E. *Optional Amenities include the following:*

1. *Picnic tables and benches. Locate picnic tables and benches on the Accessible Surface;*
2. *Arbors or trellises;*
3. *Drinking Fountains. Locate drinking fountains and benches on the Accessible Surface;*
4. *Sculpture and other works of art;*
5. *Bicycle repair stations;*
6. *Exercise stations; or*
7. *Pet waste stations. Locate pet waste stations nearest to the accessible path and away from stormwater facilities.*

Response: The edge of the west side of the plaza is formed by a curving bench, as described above. (See detail on Sheet 5.11 in Attachment 6.)

Table CC-5: Waysides (excerpt)			
Parcel Area	Required Wayside Area	Number of Waysides	Enhanced Transit Plaza ‡
<i>Less than or equal to 5.0 acres</i>	<i>Not required</i>	<i>n/a</i>	<i>n/a</i>
<i>Greater than 5.0 acres, less than or equal to 8.0 acres</i>	<i>400 square feet, minimum</i>	<i>One</i>	<i>Not permitted</i>
<p>Response: The site contains 5.9 acres, so these provisions require one Wayside containing at least 400 square feet. The proposed Wayside is designed in the form of a looping detour path on the south side of the SW Clutter Street frontage’s public sidewalk, with a southwesterly small plaza and bench seating as focal point. The paved surface of the Wayside path/plaza contains approximately 600 square feet, which exceeds the minimum 400 square foot requirement.</p>			

‡ *In the future when SMART serves Coffee Creek, Industrial Waysides may comply with the standards for Enhanced Transit Plazas, as follows:*

**Up to 400 square feet of the space requirement for Industrial Waysides may be satisfied by installation of an enhanced transit stop. An enhanced transit stop must provide weather protection, paved surface, and seating, as approved by SMART Transit.*

***Up to 800 square feet of the space requirement for Industrial Waysides may be satisfied by installation of an enhanced transit stop, provided parcel fronts on two or more Addressing Streets. An enhanced transit stop must provide weather protection, paved surface, and seating, as approved by SMART Transit.*

****For Parcel Frontage greater than 1,500 feet, and area greater than 51.0 acres, up to fifty percent of the space requirement for Industrial Waysides may be satisfied by restoration of wetlands, riparian zones, or other habitat because of the significant passive recreation opportunities provided.*

(.13) Signs.

- A. *Applicability. PDI Zone requirements of Section 4.156.01 through 4.156.11 apply to the Coffee Creek DOD with the following modifications and adjustments.*
- B. *General.*
 - 1. *Site Frontage as described in Section 4.156.08 is the Primary Frontage.*
 - 2. *Monument-style signs are required. Pole-style freestanding signs are not permitted.*
 - 3. *Maximum area for signs on buildings is based on linear length (in feet) of the façade adjacent to the Primary Frontage.*
 - 4. *Directional and Wayfinding Signs shall be placed at the intersection of Supporting Streets and Through Connections.*

Response: The proposed complement of site signage includes one monument sign, located in the northeastern landscape area near the Clutter Street-Ridder Road/Garden Acres intersection, and up to two wall-mounted signs to identify building tenants, located high on the front building façade, near the northeast and northwest corners of the office areas, facing Clutter Street.

The proposed sign area for the monument sign is up to 80 square feet.

The proposed sign area for the wall signs is a total of up to 381 square feet of wall-mounted signs, to be allocated between the two potential signage locations on the basis of the relative share occupancy of space along the building’s front façade length.

Section 4.135.5. Planned Development Industrial – Regionally Significant Industrial Area

(.02) The PDI-RSIA Zone shall be governed by Section 4.140, Planned Development Regulations, and as otherwise set forth in this Code.

Response: Responses to Section 4.140 and other applicable sections of the Code are provided in this narrative. This standard is met.

(.03) Uses that are typically permitted:

- A. *Wholesale houses, storage units, and warehouses.*
- C. *Assembly of electrical equipment, including the manufacture of small parts.*
- D. *The light manufacturing, simple compounding or processing packaging, assembling and/or treatment of products, cosmetics, drugs, and food products, unless such use is inconsistent with air pollution, excess noise, or water pollution standards.*
- K. *Accessory uses, buildings and structures customarily incidental to any of the aforesaid principal permitted uses.*
(remaining items omitted for brevity)

Response: The proposed development is a speculative industrial building site whose intended use is light industrial warehouse and manufacturing with accessory office. These uses are consistent with the above list and are therefore allowed uses. This standard is met.

(.04) Prohibited uses.

- A. *Retail operations exceeding 3,000 square feet of area for sales, service area or storage area for retail inventory in a single building, or 20,000 square feet of sales, service or*

storage area for multiple buildings, except training facilities whose primary purpose is to provide training to meet industrial needs.

- B. *Any use or activity that violates the performance standards specified in Subsection 4.135.5(.06), below.*

Response: The proposed use is allowed light industrial warehouse with accessory office. This application does not request approval for any prohibited use. This standard is met.

(.05) Block and Access Standards. The PDI-RSIA Zone shall be subject to:

- A. *The same block and access standards as the PDC Zone [Section 4.131(.02) and (.03)] for properties located outside of the Coffee Creek Industrial Design Overlay District; or*
- B. *The access and block size standards in Section 4.134 for those properties located within the Coffee Creek Industrial Design Overlay District.*

Response: The subject property is in the Coffee Creek Design Overlay District and therefore subject to the Regulating Plan in Figure CC-1, which identifies Clutter Street as an “Existing/Planned Addressing Street,” and also identifies appropriate corridors for future “Required Supporting Streets.” No such Required Supporting Street is identified in or abutting the subject property. Therefore, no additional streets are required at this location to satisfy the applicable block and access requirements. This standard is met.

(.06) Performance Standards. The following performance standards apply to all industrial properties and sites within the PDI-RSIA Zone, and are intended to minimize the potential adverse impacts of industrial activities on the general public and on other land uses or activities. They are not intended to prevent conflicts between different uses or activities that may occur on the same property or site.

- A. *All uses and operations except storage, off-street parking, loading and unloading shall be confined, contained and conducted wholly within completely enclosed buildings, unless outdoor activities have been approved as part of Stage II, Site Design or Administrative Review.*
- B. *Vibration: Every use shall be so operated that the ground vibration inherently and recurrently generated from equipment other than vehicles is not perceptible without instruments at any boundary line of the property or site on which the use is located.*
- C. *Emission of odorous gases or other odorous matter in quantities detectable at any time and at any point on any boundary line of the property or site on which the use is located are prohibited.*
- D. *Any open storage shall comply with the provisions of Section 4.176 and this Section.*
- E. *No building customarily used for night operation, such as a bakery, bottling and distribution plant or other similar use, shall have any opening, other than stationary windows or required fire exits, within one hundred (100) feet of any residential district and any space used for loading or unloading commercial vehicles in connection with such an operation shall not be within one hundred (100) feet of any residential district.*
- F. *Heat and Glare.*
 - 1. *Operations producing heat or glare shall be conducted entirely within an enclosed building.*
 - 2. *Exterior lighting on private property shall be screened, baffled, or otherwise directed away from adjacent residential properties. This is not intended to apply to street lighting.*
- G. *Dangerous Substances: Any use which involves the presence, storage or handling of any explosive, nuclear waste product or any other substance in a manner which would cause a health or safety hazard on any adjacent land use or site shall be prohibited.*
- H. *Liquid and Solid Wastes:*

1. *Any storage of wastes which would attract rodents or insects or otherwise create a health hazard shall be prohibited.*
 2. *Waste products which are stored outside shall be concealed from view from any property line by a sight-obscuring fence or planting as required by Section 4.176.*
 3. *No connection with any public sewer shall be made or maintained in violation of applicable City or State standards.*
 4. *No wastes conveyed shall be allowed to or permitted, caused to enter, or allowed to flow into any public sewer in violation of applicable City or State standards.*
 5. *All drainage permitted to discharge into a street gutter, caused to enter or allowed to flow into any pond, lake, stream or other natural water course shall be limited to surface waters or waters having similar characteristics as determined by the City, County, and State Department of Environmental Quality.*
 6. *All operations shall be conducted in conformance with the city's standards and ordinances applying to sanitary and storm sewer discharges.*
- I. *Noise: Noise generated by the use, with the exception of traffic uses from automobiles, trucks and trains, shall not violate any applicable standards adopted by the Oregon Department of Environmental Quality and W.C. 6.204 governing noise control in the same or similar locations. [Amended by Ord. 631, 7/16/07]*
- J. *Electrical Disturbances. Except for electrical facilities wherein the City is pre-empted by other governmental entities, electrical disturbances generated by uses within the PDI-RSIA Zone which interfere with the normal operation of equipment or instruments within the PDI-RSIA Zone are prohibited. Electrical disturbances which routinely cause interference with normal activity in abutting residential uses are also prohibited.*
- K. *Discharge Standards: There shall be no emission of smoke, fallout, fly ash, dust, vapors, gases or other forms of air pollution that may cause a nuisance or injury to human, plant or animal life or to property. Plans for construction and operation shall be subject to the recommendations and regulations of the State Department of Environmental Quality. All measurements of air pollution shall be by the procedures and with equipment approved by the State Department of Environmental Quality or equivalent and acceptable methods of measurement approved by the City. Persons responsible for a suspected source of air pollution upon request of the City shall provide quantitative and qualitative information regarding the discharge that will adequately and accurately describe operation conditions.*
- L. *Open burning is prohibited.*

Response: These provisions (A through L) are performance standards with which future tenants will be required to comply in the occupancy and use of the property on an ongoing basis. This application does not include a request for exemption from any of the above standards. Based on the submitted materials, the proposal complies with applicable standards and it will be feasible for future tenants to maintain compliance over time.

- M. *Storage.*
1. *Outdoor storage must be maintained in an orderly manner at all times.*
 2. *Outdoor storage areas shall be gravel surfaced or better and shall be sufficient for the materials being handled and stored. If a gravel surface is not sufficient to meet the performance standards for the use, the area shall be suitably paved.*
 3. *Any open storage that would otherwise be visible at the property line shall be concealed from view at the abutting property line by a sight obscuring fence or planting not less than 6' in height.*

Response: These provisions are not applicable because the proposed development does not include any areas designated for use as outdoor storage. Any future such activity by a tenant will be required to obtain approvals as necessary, and must comply with the above standards.

N. Landscaping.

1. *Unused property, or property designated for expansion or other future use shall be landscaped and maintained as approved by the Development Review Board. Landscaping for unused property disturbed during construction shall include such materials as plantings of ornamental shrubs, lawns, native plants, and mowed, seeded fieldgrass.*
2. *Contiguous unused areas of undisturbed fieldgrass may be maintained in their existing state. Large stands of invasive weeds such as Himalayan blackberry, English ivy, cherry laurel, reed canary grass or other identified invasive species shall be removed and/or mowed at least annually to reduce fire hazard. These unused areas, located with a phased development project or a future expansion cannot be included in the area calculated to meet the landscape requirements for the initial phase(s) of the development.*
3. *Unused property shall not be left with disturbed soils that are subject to siltation and erosion. Any disturbed soil shall be seeded for complete erosion cover germination and shall be subject to applicable erosion control standards.*

Response: These provisions are not applicable because the proposed development does not include any surplus “unused” area or property reserved for future expansion.

(.07) Other Standards.

A. Lot Size:

1. *Parcels less than 50 acres in size at the time of adoption of this amended Section: Land divisions may occur in conformance with an approved Master Plan consistent with the requirements of this section. No lot size limit, save and except as shall be consistent with the other provisions of this code.*

Response: The site is smaller than 50 acres but no land division is proposed. This provision is not applicable.

2. *Parcels 50 acres or greater in size existing on October 25, 2004 may be divided into any number of parcels or lots pursuant to an approved Master Plan provided that at least one lot or parcel of at least 50 acres in size remains. Provided further however, at least forty percent (40%) of the lot or parcel so created has been developed or planned for industrial uses and associated accessory uses and no portion has been developed or planned for the uses listed in Section 4.135.5(03)(l.)(1.) through (3).*

Response: The parcel is smaller than 50 acres. This standard does not apply.

3. *Uses not subject to the foregoing lot size provisions:*
 - a. *Public facilities and services*
 - b. *Separation of a lot or parcel in order to protect a natural resource, to provide a public amenity, or to implement a remediation plan for a site identified by DEQ pursuant to ORS 465.225.*
 - c. *Separation of a lot or parcel containing a nonconforming use from the remainder of the site in order to improve the utility of the remainder site for the intended industrial uses*

- d. *Separation for the purposes of financing when the new lot or parcel is consistent with the approved Master Plan.*
- e. *Division of lots or parcels consistent with a Master Plan approved by the City prior to July 1, 2004.*

Response: The applicant is not proposing any of these uses or seeking approval pursuant to this Section. These provisions do not apply.

- B. *Maximum Lot Coverage. No limit save and except as shall be consistent with the other provisions of this code.*

Response: The proposed site plan satisfies minimum requirements for site landscaping and other factors limiting site coverage.

- C. *Front Yard Setback. Thirty (30) feet. Structures on corner or through lots shall observe the minimum front yard setback on both streets. Setbacks shall also be maintained from the planned rights-of-way shown on any adopted City street plan.*

Response: The proposed building is set back more than 30 feet from the front property line, which is the Clutter Street frontage.

- D. *Rear and Side Yard Setback. Thirty (30) feet. Structures on corner or through lots shall observe the minimum rear and side yard setback on both streets. Setbacks shall also be maintained from the planned rights-of-way shown on any adopted City street plan.*

Response: The proposed building is set back more than 30 feet from the side and rear property lines, none of which abuts a planned future street right-of-way in the TSP or Coffee Creek Industrial District Plan.

- E. *No setback is required when rear or side yards abut a railroad siding.*

Response: Not applicable; the property does not abut a railroad siding.

- F. *Corner Vision. Corner lots shall have no lot obstruction to exceed the vision clearance standards of Section 4.177.*

Response: The northeast property corner abuts the Clutter Street – Ridder Road/Garden Acres Road intersection; however, City plans do not include improvements to extend Garden Acres Road south of that intersection. Landscape plantings and maintenance practices at that location will ensure that adequate sight distances are maintained for safe operations at that intersection.

- G. *Off-street Parking and Loading. As required in Section 4.155.*

Response: Parking and loading meet minimum requirements; see detailed responses below in Section 4.155.

- H. *Signs. As required in Sections 4.156.01 through 4.156.11.*

Response: Signage locations and sizes/proportions are proposed for approval as part of this integrated submittal. See the applicable responses below.

Section 4.140. Planned Development Regulations

(.02) Lot Qualification.

- A. *Planned Development may be established on lots which are suitable for and of a size to be planned and developed in a manner consistent with the purposes and objectives of Section 4.140.*
- B. *Any site designated for development in the Comprehensive Plan may be developed as a Planned Development, provided that it is zoned "PD." All sites which are greater than two (2) acres in size, and designated in the Comprehensive Plan for commercial, residential, or industrial use shall be developed as Planned Developments, unless approved for other uses permitted by the Development Code. Smaller sites may also be developed through the*

City's PD procedures, provided that the location, size, lot configuration, topography, open space and natural vegetation of the site warrant such development.

Response: The site exceeds two acres and is designated Industrial in the Comprehensive Plan; it is therefore designated for a planned development. This standard applies.

(.03) Ownership.

- A. *The tract or tracts of land included in a proposed Planned Development must be in one (1) ownership or control or the subject of a joint application by the owners of all the property included. The holder of a written option to purchase, with written authorization by the owner to make applications, shall be deemed the owner of such land for the purposes of Section 4.140.*
- B. *Unless otherwise provided as a condition for approval of a Planned Development permit, the permittee may divide and transfer units or parcels of any development. The transferee shall use and maintain each such unit or parcel in strict conformance with the approval permit and development plan.*

Response: The site is a single lot with one owner. This standard is met.

(.04) Professional Design.

- A. *The applicant for all proposed Planned Developments shall certify that the professional services of the appropriate professionals have been utilized in the planning process for development.*
- B. *Appropriate professionals shall include, but not be limited to the following to provide the elements of the planning process set out in Section 4.139:*
 - 1. *An architect licensed by the State of Oregon;*
 - 2. *A landscape architect registered by the State of Oregon;*
 - 3. *An urban planner holding full membership in the American Institute of Certified Planners, or a professional planner with prior experience representing clients before the Development Review Board, Planning Commission, or City Council; or*
 - 4. *A registered engineer or a land surveyor licensed by the State of Oregon.*
- C. *One of the professional consultants chosen by the applicant from either 1, 2, or 3, above, shall be designated to be responsible for conferring with the planning staff with respect to the concept and details of the plan.*
- D. *The selection of the professional coordinator of the design team will not limit the owner or the developer in consulting with the planning staff.*

Response: The applicant certifies that appropriate professionals have been utilized including Oregon-licensed/registered architects, landscape architects, an AICP planner, and professional engineer. More particularly, the design team leadership includes the following Mackenzie staff:

- Architect/Project Manager: Scott Moore, AIA
- Landscape Architect: Steven Tuttle, PLA
- Planner: Lee Leighton, AICP
- Civil Engineer: Chad Lawrence, PE

This standard is met.

(.05) Planned Development Permit Process.

- A. *All parcels of land exceeding two (2) acres in size that are to be used for residential, commercial or industrial development, shall, prior to the issuance of any building permit:*
 - 1. *Be zoned for planned development;*
 - 2. *Obtain a planned development permit; and*
 - 3. *Obtain Development Review Board, or, on appeal, City Council approval.*
- B. *Zone change and amendment to the zoning map are governed by the applicable provisions of the Zoning Sections, inclusive of Section 4.197*

- C. *Development Review Board approval is governed by Sections 4.400 to 4.450*
- D. *All planned developments require a planned development permit. The planned development permit review and approval process consists of the following multiple stages, the last two or three of which can be combined at the request of the applicant:*
 - 1. *Pre-application conference with Planning Department;*
 - 2. *Preliminary (Stage I) review by the Development Review Board. When a zone change is necessary, application for such change shall be made simultaneously with an application for preliminary approval to the Board; and*
 - 3. *Final (Stage II) review by the Development Review Board*
 - 4. *In the case of a zone change and zone boundary amendment, City Council approval is required to authorize a Stage I preliminary plan.*

Response: The site meets the criteria for a planned development, and with this application the applicant is simultaneously applying for a Zone Map Amendment, Stage I & II Planned Development Review, Site Design Review including waivers, Type C Tree Plan Review, and Class C Sign Permit. These provisions allow applicants to combine approval requests in this manner. These provisions are satisfied.

(.06) Staff Report:

- A. *The planning staff shall prepare a report of its findings and conclusions as to whether the use contemplated is consistent with the land use designated on the Comprehensive Plan. If there is a disagreement as to whether the use contemplated is consistent, the applicant, by request, or the staff, may take the preliminary information provided to the Development Review Board for a use interpretation.*
- B. *The applicant may proceed to apply for Stage I - Preliminary Approval - upon determination by either staff or the Development Review Board that the use contemplated is consistent with the Comprehensive Plan.*

Response: The applicant is requesting both Stage I and Stage II approvals as part of this application, and requests prompt review of the complete application package.

(.07) Preliminary Approval (Stage One):

- A. *Applications for preliminary approval for planned developments shall:*
 - 1. *Be made by the owner of all affected property or the owner's authorized agent; and*
 - 2. *Be filed on a form prescribed by the City Planning Department and filed with said Department.*
 - 3. *Set forth the professional coordinator and professional design team as provided in subsection (.04), above.*
 - 4. *State whether the development will include mixed land uses, and if so, what uses and in what proportions and locations.*

Response: This application package includes the required information to meet these evidence requirements.

- B. *The application shall include conceptual and quantitatively accurate representations of the entire development sufficient to judge the scope, size, and impact of the development on the community; and, in addition to the requirements set forth in Section 4.035, shall be accompanied by the following information:*
 - 1. *A boundary survey or a certified boundary description by a registered engineer or licensed surveyor.*
 - 2. *Topographic information as set forth in Section 4.035*
 - 3. *A tabulation of the land area to be devoted to various uses, and a calculation of the average residential density per net acre.*

4. *A stage development schedule demonstrating that the developer intends receive Stage II approval within two (2) years of receiving Stage I approval, and to commence construction within two (2) years after the approval of the final development plan, and will proceed diligently to completion; unless a phased development schedule has been approved; in which case adherence to that schedule shall be considered to constitute diligent pursuit of project completion.*
5. *A commitment by the applicant to provide in the Final Approval (Stage II) a performance bond or other acceptable security for the capital improvements required by the project.*
6. *If it is proposed that the final development plan will be executed in stages, a schedule thereof shall be provided.*
7. *Statement of anticipated waivers from any of the applicable site development standards.*

Response: This application package meets the criteria listed above. Regarding items 1-3, Civil Engineer Chad Lawrence supervised the preparation of the C-series and R-series drawing sheets in Attachment 6, which provide the required data. Regarding item 4, the applicant has submitted for concurrent approval of Stage I and Stage II Planned Development requests, together with Site Design Review and related requests, to allow full development of the project in a single phase, to commence within two years following approvals. Regarding item 5, the applicant will provide acceptable form(s) of surety prior to construction of public works elements. Item 6 is not applicable because a single phase of construction is proposed. Regarding item 7, this application package includes requests for six waivers, which are discussed in detail in Section D below.

- C. *An application for a Stage I approval shall be considered by the Development Review Board as follows:*
 1. *A public hearing as provided in Section 4.013.*
 2. *After such hearing, the Board shall determine whether the proposal conforms to the permit criteria set forth in this Code, and may approve or disapprove the application and the accompanying preliminary development plan or require such changes therein or impose such conditions of approval as are in its judgment, necessary to ensure conformity to said criteria and regulations. In so doing, the Board may, in its discretion, authorize submission of the final development plan in stages, corresponding to different units or elements of the development. It shall do so only upon evidence assuring completion of the entire development in accordance with the preliminary development plan and stage development schedule.*
 3. *A final decision on a complete application and preliminary plan shall be rendered within one hundred and twenty (120) days after the application is deemed complete unless a continuance is agreed upon by the applicant and the appropriate City decision-making body.*
 4. *The determination of the Development Review Board shall become final at the end of the appeal period for the decision, unless appealed to the City Council in accordance with Section 4.022 of this Code.*

Response: This provision provides procedural guidance for implementation and requires no evidence within the applicant's narrative.

(.09) *Final Approval (Stage Two):*

[Note: Outline Number is incorrect.]

- A. *Unless an extension has been granted by the Development Review Board, within two (2) years after the approval or modified approval of a preliminary development plan (Stage*

l), the applicant shall file with the City Planning Department a final plan for the entire development or when submission in stages has been authorized pursuant to Section 4.035 for the first unit of the development, a public hearing shall be held on each such application as provided in Section 4.013.

- B. After such hearing, the Development Review Board shall determine whether the proposal conforms to the permit criteria set forth in this Code, and shall approve, conditionally approve, or disapprove the application.*
- C. The final plan shall conform in all major respects with the approved preliminary development plan, and shall include all information included in the preliminary plan plus the following:*
- 1. The location of water, sewerage and drainage facilities;*
 - 2. Preliminary building and landscaping plans and elevations, sufficient to indicate the general character of the development;*
 - 3. The general type and location of signs;*
 - 4. Topographic information as set forth in Section 4.035;*
 - 5. A map indicating the types and locations of all proposed uses; and*
 - 6. A grading plan.*
- D. The final plan shall be sufficiently detailed to indicate fully the ultimate operation and appearance of the development or phase of development. However, Site Design Review is a separate and more detailed review of proposed design features, subject to the standards of Section 4.400.*

Response: The applicant is requesting approval of both Stage I and Stage II approval, together with Site Design Review, as part of this application. Accordingly, the final plan provides sufficient information regarding conformance with both the preliminary development plan and Site Design Review. This standard is met.

- E. Copies of legal documents required by the Development Review Board for dedication or reservation of public facilities, or for the creation of a non-profit homeowner's association, shall also be submitted.*

Response: As the applicant is requesting both Stage I and Stage II approvals as part of this application, the Development Review Board has not yet required dedication or reservation of public facilities. The proposed development does not anticipate locating any public utility facilities outside the Clutter Street public right-of-way, and there is no reason to form a homeowner's association or other entity to support this development. This standard does not apply.

- F. Within thirty (30) days after the filing of the final development plan, the Planning staff shall forward such development plan and the original application to the Tualatin Valley Fire and Rescue District, if applicable, and other agencies involved for review of public improvements, including streets, sewers and drainage. The Development Review Board shall not act on a final development plan until it has first received a report from the agencies or until more than thirty (30) days have elapsed since the plan and application were sent to the agencies, whichever is the shorter period.*

Response: This provision provides procedural guidance for implementation and requires no evidence from the applicant.

- G. Upon receipt of the final development plan, the Development Review Board shall conduct a public hearing and examine such plan and determine:*
- 1. Whether it conforms to all applicable criteria and standards; and*
 - 2. Whether it conforms in all substantial respects to the preliminary approval; or*

3. *Require such changes in the proposed development or impose such conditions of approval as are in its judgment necessary to insure conformity to the applicable criteria and standards.*
- H. *If the Development Review Board permits the applicant to revise the plan, it shall be resubmitted as a final development plan within sixty (60) days. If the Board approves, disapproves or grants such permission to resubmit, the decision of the Board shall become final at the end of the appeal period for the decision, unless appealed to the City Council, in accordance with Sections 4.022 of this Code.*

Response: As the applicant is requesting both Stage I and Stage II approvals as part of this application, the final development plan is integrally consistent with the preliminary development plan. Therefore, the applicant does not need to revise the final plan to comply with a prior Stage I approval. The applicant's narrative and accompanying plans and reports demonstrate conformance with applicable approval standards for the Planned Development and Site Design Review. This standard is met.

- I. *All Stage II Site Development plan approvals shall expire two years after their approval date, if substantial development has not occurred on the property prior to that time. Provided, however, that the Development Review Board may extend these expiration times for up to three (3) additional periods of not more than one (1) year each. Applicants seeking time extensions shall make their requests in writing at least thirty (30) days in advance of the expiration date. Requests for time extensions shall only be granted upon (1) a showing that the applicant has in good faith attempted to develop or market the property in the preceding year or that development can be expected to occur within the next year, and (2) payment of any and all Supplemental Street SDCs applicable to the development. Upon such payment, the development shall have vested traffic generation rights under 4.140 (.10), provided however, that if the Stage II approval should expire, the vested right to use trips is terminated upon City repayment, without interest, of Supplemental Street SDCs. For purposes of this Ordinance, "substantial development" is deemed to have occurred if the required building permits or public works permits have been issued for the development, and the development has been diligently pursued, including the completion of all conditions of approval established for the permit. [Amended by Ord 561, adopted 12/15/03.]*

Response: The applicant intends to construct the proposed building in one implementation phase promptly after land use approval, and well within the allotted time period. To that end, the applicant is requesting both Stage I and Stage II approvals, together with Site Design Review and other land use requests, as part of this consolidated application. This standard is met.

- J. *A planned development permit may be granted by the Development Review Board only if it is found that the development conforms to all the following criteria, as well as to the Planned Development Regulations in Section 4.140:*
1. *The location, design, size and uses, both separately and as a whole, are consistent with the Comprehensive Plan, and with any other applicable plan, development map or Ordinance adopted by the City Council.*

Response: The City of Wilsonville has worked for many years to plan and prepare for light industrial development in the Coffee Creek Regionally Significant Industrial Area (RSIA). As documented in the applicant's submitted materials, the proposed speculative development for warehousing or light manufacturing tenants with supporting office areas is consistent with the planned economic uses/activities as well as the forms of development that all of the City's planning work has been designed to foster and support.

Significantly, this project will be one of the first – if not THE first – actual development proposals to realize the benefits of the planning work.

2. *That the location, design, size and uses are such that traffic generated by the development at the most probable used intersection(s) can be accommodated safely and without congestion in excess of Level of Service D, as defined in the Highway Capacity Manual published by the National Highway Research Board, on existing or immediately planned arterial or collector streets and will, in the case of commercial or industrial developments, avoid traversing local streets. Immediately planned arterial and collector streets are those listed in the City's adopted Capital Improvement Program, for which funding has been approved or committed, and that are scheduled for completion within two years of occupancy of the development or four year if they are an associated crossing, interchange, or approach street improvement to Interstate 5.*
 - a. *In determining levels of Service D, the City shall hire a traffic engineer at the applicant's expense who shall prepare a written report containing the following minimum information for consideration by the Development Review Board:*
 - i. *An estimate of the amount of traffic generated by the proposed development, the likely routes of travel of the estimated generated traffic, and the source(s) of information of the estimate of the traffic generated and the likely routes of travel; [Added by Ord. 561, adopted 12/15/03.]*
 - ii. *What impact the estimate generated traffic will have on existing level of service including traffic generated by (1) the development itself, (2) all existing developments, (3) Stage II developments approved but not yet built, and (4) all developments that have vested traffic generation rights under section 4.140(.10), through the most probable used intersection(s), including state and county intersections, at the time of peak level of traffic. This analysis shall be conducted for each direction of travel if backup from other intersections will interfere with intersection operations. [Amended by Ord 561, adopted 12/15/03.]*
 - b. *The following are exempt from meeting the Level of Service D criteria standard:*
 - i. *A planned development or expansion thereof which generates three (3) new p.m. peak hour traffic trips or less;*
 - ii. *A planned development or expansion thereof which provides an essential governmental service.*
 - c. *Traffic generated by development exempted under this subsection on or after Ordinance No. 463 was enacted shall not be counted in determining levels of service for any future applicant. [Added by Ord 561, adopted 12/15/03.]*
 - d. *Exemptions under 'b' of this subsection shall not exempt the development or expansion from payment of system development charges or other applicable regulations. [Added by Ord 561, adopted 12/15/03.]*
 - e. *In no case will development be permitted that creates an aggregate level of traffic at LOS "F". ([Added by Ord 561, adopted 12/15/03.]*

Response: The City's traffic engineering consulting firm, DKS Associates, prepared a Traffic Impact Study (TIS), included as Attachment 11. The analysis studied two intersections in the vicinity, Boones Ferry Road/95th Avenue and 95th Avenue/Ridder Road, and concluded that both will achieve Level of Service (LOS) C with the proposed development, which exceeds the minimum operating standard, LOS D. This standard is met.

3. *That the location, design, size and uses are such that the residents or establishments to be accommodated will be adequately served by existing or immediately planned facilities and services.*

Response: Currently, Clutter Street extends west to intersect and cross SW Grahams Ferry Road. In the Coffee Creek Light Industrial Pattern Book, the Addressing Street Typology diagram for Clutter Road (sic) includes final curb-to-curb width of 58 feet within an overall 77-foot right-of-way easement, containing two travel lanes and a center left turn lane, bike lanes, planting strips and sidewalks. Because the applicant does not control property on the north side of Clutter Street, the applicant is unable to make a right-of-way dedication except along the subject property south-side frontage. The applicant's design team has worked closely with City staff to prepare a feasible interim configuration for street improvements in conjunction with the proposed development. The proposed roadway construction is found in the R-series drawing sheets (R0.00 through R1.51). Construction within the right-of-way will include:

- An approximately 23-foot dedication of public right-of-way to widen the existing 40-foot right-of-way to 63 feet, consistent with a future overall width of 77 feet and the full Collector street design section (see Street Section on Sheet R0.02)
- Saw-cutting to match the existing pavement
- Construction of widened pavement surface and the southern curb at final line and grade
- Striping of the eastbound bicycle lane, including buffer striping west of the proposed eastern driveway (where the lane confirmation changes to form three lanes at the Garden Acres intersection to the east)
- Curbside planter strip
- Sidewalk
- Street lights
- Street signs

This configuration is designed to provide capacity and safe operations on an interim basis with two travel lanes and no center turn lane until development occurs on property to the north, when matching improvements can be constructed on the north side of the street.

Notably, in the future, City of Wilsonville Transportation System Plan (TSP) Project UU-08 will terminate Clutter Street in a cul-de-sac east of Grahams Ferry Road at a future time. Because no through traffic will then be allowed, that change will significantly reduce trips on Clutter Street.

Extensions of public utilities (water, sanitary sewer and storm drainage) are included in the applicant's proposed construction plans for the Clutter Street frontage.

For all the above reasons, the “establishments to be accommodated will be adequately served by existing or immediately planned facilities and services” as required by this standard. This standard is met.

- K. *Mapping: Whenever a Planned Development permit has been granted, and so long as the permit is in effect, the boundary of the Planned Development shall be indicated on the Zoning Map of the City of Wilsonville as the appropriate “PD” Zone.*

Response: This provision provides procedural guidance to staff for implementation and requires no evidence from the applicant.

- L. *Adherence to Approved Plan and Modification Thereof: The applicant shall agree in writing to be bound, for her/himself and her/his successors in interest, by the conditions prescribed for approval of a development. The approved final plan and stage development schedule shall control the issuance of all building permits and shall restrict the nature, location and design of all uses. Minor changes in an approved preliminary or final development plan may be approved by the Director of Planning if such changes are consistent with the purposes and general character of the development plan. All other modifications, including extension or revision of the stage development schedule, shall be processed in the same manner as the original application and shall be subject to the same procedural requirements.*

Response: The applicant fully intends to comply with the City’s approval and intends to sign the necessary agreements. This standard is met.

- M. *In the event of a failure to comply with the approved plan or any prescribed condition of approval, including failure to comply with the stage development schedule, the Development Review Board may, after notice and hearing, revoke a Planned Development permit. General economic conditions that affect all in a similar manner may be considered as a basis for an extension of a development schedule. The determination of the Board shall become final thirty (30) days after the date of decision unless appealed to the City Council.*

Response: This provision provides procedural guidance for implementation and requires no evidence from the applicant. The applicant fully intends to comply with the City’s approval.

(.10) *Early Vesting of Traffic Generation. Applicants with Stage I or Master Plan approvals occurring after June 2, 2003 may apply to vest the right to use available transportation capacity at the intersections of Wilsonville Road with Boone’s Ferry Road and with Town Center Loop West, and/or the I-5 interchange. Vesting for properties with such approvals shall occur upon execution of a vesting agreement satisfactory to the city, which agreement shall include a proposed development schedule or phasing plan and either provide for the payment of any and all Supplemental Street SDCs or provide other means of financing public improvements. Vesting for properties pending such approvals shall occur upon such agreement and the date the approvals are final.*

The number of trips vested is subject to modification based upon updated traffic analysis associated with subsequent development approvals for the property. A reduction in vested trips shall attend repayment of vesting fees by the City. An increase in available vested trips shall occur upon payment of necessary vesting fees.

Vesting shall remain valid and run with the property, unless an approval that is necessary for vesting to occur is terminated or a vesting agreement is terminated. If the vested right to use certain trips is lost or terminated, as determined by the Community Development Director with the concurrence of City Council,

such trips shall be made available to other development upon City repayment, without interest, of associated vesting fees.

Response: The applicant is not proposing to vest trips or utilize vested trips. This standard does not apply.

C. Site Design Review

Section 4.154. On-site Pedestrian Access and Circulation

(.01) On-site Pedestrian Access and Circulation

- A. *The purpose of this section is to implement the pedestrian access and connectivity policies of the Transportation System Plan. It is intended to provide for safe, reasonably direct, and convenient pedestrian access and circulation.*
- B. *Standards. Development shall conform to all of the following standards:*
1. *Continuous Pathway System. A pedestrian pathway system shall extend throughout the development site and connect to adjacent sidewalks, and to all future phases of the development, as applicable.*
 2. *Safe, Direct, and Convenient. Pathways within developments shall provide safe, reasonably direct, and convenient connections between primary building entrances and all adjacent parking areas, recreational areas/playgrounds, and public rights-of-way and crosswalks based on all of the following criteria:*
 - a. *Pedestrian pathways are designed primarily for pedestrian safety and convenience, meaning they are free from hazards and provide a reasonably smooth and consistent surface.*
 - b. *The pathway is reasonably direct. A pathway is reasonably direct when it follows a route between destinations that does not involve a significant amount of unnecessary out-of-direction travel.*
 - c. *The pathway connects to all primary building entrances and is consistent with the Americans with Disabilities Act (ADA) requirements.*
 - d. *All parking lots larger than three acres in size shall provide an internal bicycle and pedestrian pathway pursuant to Section 4.155(.03)(B.)(3.)(d.).*

Response: As illustrated on sheet C1.10 of Attachment 6, a continuous pathway system will connect from the proposed public sidewalk improvements on SW Clutter Street. There will be two pedestrian paths, one from the western portion of the site and one from the east side of the site. The proposed pathways provide direct access to the building entrances. Both access paths are consistent with ADA requirements. The parking area is less than three acres in size and therefore an internal bicycle and pedestrian pathway is not required. This standard is met.

3. *Vehicle/Pathway Separation. Except as required for crosswalks, per subsection 4, below, where a pathway abuts a driveway or street it shall be vertically or horizontally separated from the vehicular lane. For example, a pathway may be vertically raised six inches above the abutting travel lane, or horizontally separated by a row of bollards.*

Response: As illustrated on sheet C1.10 of Attachment 6, a portion of the eastern sidewalk abuts the vehicle parking and maneuvering area in front of the east entrance of the building. This pathway will be elevated. (See detail 2 on Sheet C5.10 of Attachment 6.) This standard is met.

4. *Crosswalks. Where a pathway crosses a parking area or driveway, it shall be clearly marked with contrasting paint or paving materials (e.g., pavers, light-color concrete inlay between asphalt, or similar contrast).*

Response: As illustrated by detail 8 on Sheet C1.10 of Attachment 6, both the east and west walkways cross a parking area. These crossings will be clearly marked using contrasting material (concrete) and striping. The standard is met.

5. *Pathway Width and Surface. Primary pathways shall be constructed of concrete, asphalt, brick/masonry pavers, or other durable surface, and not less than five (5) feet wide. Secondary pathways and pedestrian trails may have an alternative surface except as otherwise required by the ADA.*
6. *All pathways shall be clearly marked with appropriate standard signs.*

Response: Internal pathways will be constructed of concrete and have a minimum width of 6'. This standard is met.

Section 4.155. General Regulations - Parking, Loading and Bicycle Parking

(.02) General Provisions:

A. *The provision and maintenance of off-street parking spaces is a continuing obligation of the property owner. The standards set forth herein shall be considered by the Development Review Board as minimum criteria.*

1. *The Board shall have the authority to grant variances or planned development waivers to these standards in keeping with the purposes and objectives set forth in the Comprehensive Plan and this Code.*
2. *Waivers to the parking, loading, or bicycle parking standards shall only be issued upon a findings that the resulting development will have no significant adverse impact on the surrounding neighborhood, and the community, and that the development considered as a whole meets the purposes of this section.*

Response: The applicant acknowledges the continuing obligation to provide and maintain parking for site users. One of the requested waivers is to allow a total of nine parking spaces (four of which are ADA-accessible) in two pods directly in front of the two office entrances, in lieu of a single bay with up to 16 parking spaces, which the Code would allow. (See detailed findings in the Waivers section below.) With approval of that waiver request, this standard is met.

B. *No area shall be considered a parking space unless it can be shown that the area is accessible and usable for that purpose, and has maneuvering area for the vehicles, as determined by the Planning Director.*

Response: As illustrated on Sheet C1.10 in Attachment 6, all parking spaces are proposed to be hard-surfaced as required, and off-street maneuvering space is provided in drive aisles that comply with the City's dimensional requirements. This standard is met.

C. *In cases of enlargement of a building or a change of use from that existing on the effective date of this Code, the number of parking spaces required shall be based on the additional floor area of the enlarged or additional building, or changed use, as set forth in this Section. Current development standards, including parking area landscaping and screening, shall apply only to the additional approved parking area.*

Response: No building enlargement or change of use is proposed, since this is a proposal for a new building. This standard does not apply.

D. *In the event several uses occupy a single structure or parcel of land, the total requirement for off-street parking shall be the sum of the requirements of the several uses computed separately, except as modified by subsection "E," below.*

Response: The proposed building is speculative. However, based on understanding of market demand for industrial space, the applicant anticipates that the building will be leased by tenants

for approximately 75% warehouse/distribution use and 25% manufacturing uses. Parking has been provided to meet minimum requirements for both uses in that relationship of relative shares. This standard is met.

- E. Owners of two (2) or more uses, structures, or parcels of land may utilize jointly the same parking area when the peak hours of operation do not overlap, provided satisfactory legal evidence is presented in the form of deeds, leases, or contracts securing full and permanent access to such parking areas for all the parties jointly using them.*

Response: The applicant does not propose to share parking with nearby uses. This standard does not apply.

- F. Off-street parking spaces existing prior to the effective date of this Code may be included in the amount necessary to meet the requirements in case of subsequent enlargement of the building or use to which such spaces are necessary.*

Response: The site will be completely redeveloped and no existing parking spaces will remain. This standard does not apply.

- G. Off-Site Parking. Except for single-family dwellings, the vehicle parking spaces required by this Chapter may be located on another parcel of land, provided the parcel is within 500 feet of the use it serves and the DRB has approved the off-site parking through the Land Use Review. The distance from the parking area to the use shall be measured from the nearest parking space to the main building entrance, following a sidewalk or other pedestrian route. The right to use the off-site parking must be evidenced in the form of recorded deeds, easements, leases, or contracts securing full and permanent access to such parking areas for all the parties jointly using them.*

Response: The applicant does not propose any off-site parking. This standard does not apply.

- H. The conducting of any business activity shall not be permitted on the required parking spaces, unless a temporary use permit is approved pursuant to Section 4.163.*

Response: The applicant is not requesting authorization to perform business activities within required parking spaces. This standard does not apply.

- I. Where the boundary of a parking lot adjoins or is within a residential district, such parking lot shall be screened by a sight-obscuring fence or planting. The screening shall be continuous along that boundary and shall be at least six (6) feet in height.*

Response: The parking lot is not within a residential lot. Adjacent zoning includes City of Wilsonville PDI to the east; Washington County Future Development 20-Acre (FD-20) to the north and west; and Clackamas County Rural Industrial (RI) to the south. None of these zones is a residential district. Accordingly, no parking lot screening is required under this provision. This standard does not apply.

- J. Parking spaces along the boundaries of a parking lot shall be provided with a sturdy bumper guard or curb at least six (6) inches high and located far enough within the boundary to prevent any portion of a car within the lot from extending over the property line or interfering with required screening or sidewalks.*

Response: As illustrated on Sheet C1.10 in Attachment 6, all parking spaces have a six-inch curb at the front to ensure adequate space for landscaping and sidewalks and to prevent vehicles from crossing the property line. This standard is met.

- K. *All areas used for parking and maneuvering of cars shall be surfaced with asphalt, concrete, or other surface, such as pervious materials (i. e. pavers, concrete, asphalt) that is found by the City's authorized representative to be suitable for the purpose. In all cases, suitable drainage, meeting standards set by the City's authorized representative, shall be provided. [Amended by Ord. # 674 11/16/09]*

Response: As noted on Sheet C1.10 in Attachment 6, all parking and maneuvering areas are proposed to be paved. Sheet C1.30 illustrates the required stormwater management system. This standard is met.

- L. *Artificial lighting which may be provided shall be so limited or deflected as not to shine into adjoining structures or into the eyes of passers-by.*

Response: As illustrated on Sheet C8.10 in Attachment 6, the applicant intends to comply using the prescriptive approach. This standard is met.

- M. *Off-street parking requirements for types of uses and structures not specifically listed in this Code shall be determined by the Development Review Board if an application is pending before the Board. Otherwise, the requirements shall be specified by the Planning Director, based upon consideration of comparable uses.*

Response: Minimum parking standards for the proposed warehouse/distribution and manufacturing uses are listed in this Code. This standard does not apply.

- N. *Up to forty percent (40%) of the off-street spaces may be compact car spaces as identified in Section 4.001 - "Definitions," and shall be appropriately identified.*

Response: As illustrated on Sheet C1.10 in Attachment 6, no compact parking spaces are proposed. This standard is met.

- O. *Where off-street parking areas are designed for motor vehicles to overhang beyond curbs, planting areas adjacent to said curbs shall be increased to a minimum of seven (7) feet in depth. This standard shall apply to a double row of parking, the net effect of which shall be to create a planted area that is a minimum of seven (7) feet in depth.*

Response: Landscape islands and pedestrian walkways abutting parking spaces have been designed to provide adequate width to meet standards, assuming a two-foot bumper overhang. This standard is met.

(.03) *Minimum and Maximum Off-Street Parking Requirements:*

- A. *Parking and loading or delivery areas shall be designed with access and maneuvering area adequate to serve the functional needs of the site and shall:*

1. *Separate loading and delivery areas and circulation from customer and/or employee parking and pedestrian areas. Circulation patterns shall be clearly marked.*
2. *To the greatest extent possible, separate vehicle and pedestrian traffic.*

Response: As illustrated on Sheet C1.10 in Attachment 6, parking areas are primarily proposed along the east and west boundaries of the site, while loading and delivery facilities are located in the center of the site, providing sufficient separation between trucks and passenger vehicles. Pedestrian pathways and crossings are provided from the public street and the parking areas to the primary building entrances at the office-area corners. This standard is met.

- B. *Parking and loading or delivery areas shall be landscaped to minimize the visual dominance of the parking or loading area, as follows:*

1. *Landscaping of at least ten percent (10%) of the parking area designed to be screened from view from the public right-of-way and adjacent properties. This*

landscaping shall be considered to be part of the fifteen percent (15%) total landscaping required in Section 4.176.03 for the site development.

Response: As illustrated on Sheets C.1.10 and L1.10 of Attachment 6, virtually all of the site's landscaping seeks to "minimize the visual dominance of the parking or loading area" with the exception of the water quality facility and landscaping along the south property line, where no parking or loading is located. As reported on Sheet C1.10 in Attachment 6, overall site landscaping of 39,150 SF is provided, or 16.09% of net site area after right-of-way dedication. Parking area landscaping is provided at 8,953 SF, which is 19.7% of the 45,457 SF of site area devoted to parking areas. Parking area landscape areas have also been counted as contributing to overall site landscaping, consistent with this provision. This standard is met.

2. *Landscape tree planting areas shall be a minimum of eight (8) feet in width and length and spaced every eight (8) parking spaces or an equivalent aggregated amount.*

a. *Trees shall be planted in a ratio of one (1) tree per eight (8) parking spaces or fraction thereof, except in parking areas of more than two hundred (200) spaces where a ratio of one (1) tree per six (six) spaces shall be applied as noted in subsection (.03)(B.)(3.). A landscape design that includes trees planted in areas based on an aggregated number of parking spaces must provide all area calculations.*

b. *Except for trees planted for screening, all deciduous interior parking lot trees must be suitably sized, located, and maintained to provide a branching minimum of seven (7) feet clearance at maturity.*

Response: As illustrated on Sheet L1.10 of Attachment 6, landscape tree plantings occur at a maximum of every (8) parking spaces, and planter islands are at least eight feet in width and length. Interior parking lot trees will be Autumn Blaze Maple (*Acer Xfreemanii*); these trees have a mature height of 60' and mature width of 40'. This standard is met.

3. *Due to their large amount of impervious surface, new development with parking areas of more than two hundred (200) spaces that are located in any zone, and that may be viewed from the public right of way, shall be landscaped to the following additional standards:*

Response: As illustrated on Sheet C1.10 of Attachment 6, 73 parking spaces are proposed, which is fewer than 200 parking spaces. This standard does not apply.

C. *Off Street Parking shall be designed for safe and convenient access that meets ADA and ODOT standards. All parking areas which contain ten (10) or more parking spaces, shall for every fifty (50) standard spaces., provide one ADA-accessible parking space that is constructed to building code standards, Wilsonville Code 9.000.*

Response: As illustrated on Sheet C1.10 of Attachment 6, 73 parking spaces are proposed, and four accessible spaces are proposed to comply with provisions of the ADA and Oregon Structural Specialty Code. This standard is met.

D. *Where possible, parking areas shall be designed to connect with parking areas on adjacent sites so as to eliminate the necessity for any mode of travel of utilizing the public street for multiple accesses or cross movements. In addition, on-site parking shall be designed for efficient on-site circulation and parking.*

Response: As illustrated on Sheets C0.10 and C1.10 of Attachment 6, the site is not adjacent to other industrial or commercial uses that would provide opportunity for interconnecting parking areas. The on-site parking utilizes two driveway approaches and appropriately-sized drive aisles to achieve efficient vehicle circulation and parking. This standard is met.

E. *In all multi-family dwelling developments, there shall be sufficient areas established to provide for parking and storage of motorcycles, mopeds and bicycles. Such areas shall be clearly defined and reserved for the exclusive use of these vehicles.*

Response: No multi-family residences are proposed as part of this development. This standard does not apply.

F. *On-street parking spaces, directly adjoining the frontage of and on the same side of the street as the subject property, may be counted towards meeting the minimum off-street parking standards.*

Response: No on-street parking is proposed in SW Clutter Street along the property's frontage. The applicant has not proposed to count on-street parking to satisfy the minimum parking standard. This standard does not apply.

G. *Table 5 shall be used to determine the minimum and maximum parking standards for various land uses. The minimum number of required parking spaces shown on Tables 5 shall be determined by rounding to the nearest whole parking space. For example, a use containing 500 square feet, in an area where the standard is one space for each 400 square feet of floor area, is required to provide one off-street parking space. If the same use contained more than 600 square feet, a second parking space would be required. Structured parking and on-street parking are exempted from the parking maximums in Table 5.*

Response: The proposed building is speculative. However, based on understanding of market demand for industrial space, the applicant anticipates that the building will be leased by tenants for approximately 75% warehouse/distribution use and 25% manufacturing uses. Table 5 indicates that warehouse uses require between 0.3 spaces and 0.5 spaces per 1,000 SF, while manufacturing uses require at least 1.6 spaces per 1,000 SF but have no maximum. Based on the proposed building size of 110,366 SF and the anticipated mix of uses, the development is required to have at least 69 spaces, with no maximum limit. As illustrated on Sheet C1.10 of Attachment 6, the applicant is proposing 73 parking spaces. This standard is met.

H. *Electrical Vehicle Charging Stations:*

1. *Parking spaces designed to accommodate and provide one or more electric vehicle charging stations on site may be counted towards meeting the minimum off-street parking standards.*
2. *Modification of existing parking spaces to accommodate electric vehicle charging stations on site is allowed outright.*

Response: No electrical vehicle charging stations are proposed. This standard does not apply.

I. *Motorcycle parking:*

1. *Motorcycle parking may substitute for up to 5 spaces or 5 percent of required automobile parking, whichever is less. For every 4 motorcycle parking spaces provided, the automobile parking requirement is reduced by one space.*
2. *Each motorcycle space must be at least 4 feet wide and 8 feet deep. Existing parking may be converted to take advantage of this provision.*

Response: No motorcycle parking is proposed. This standard does not apply.

(.04) *Bicycle Parking:*

A. *Required Bicycle Parking - General Provisions.*

1. *The required minimum number of bicycle parking spaces for each use category is shown in Table 5, Parking Standards.*
2. *Bicycle parking spaces are not required for accessory buildings. If a primary use is listed in Table 5, bicycle parking is not required for the accessory use.*

3. *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.*
4. *Bicycle parking space requirements may be waived by the Development Review Board per Section 4.118(.03)(A.)(9.) and (10.).*

Response: The proposed building is speculative and has no committed tenants at this time. However, based on understanding of market demand for industrial space, the applicant anticipates that the building will be leased by tenants for approximately 75% warehouse/distribution use and 25% manufacturing uses. Table 5 indicates that warehouse uses require one bicycle parking space per 20,000 SF with a minimum of two spaces, while manufacturing uses require one bicycle parking space per 10,000 SF with a minimum of six spaces. Based on the proposed building size of 110,366 SF and the anticipated mix of uses, the development is required to have at least seven bicycle parking spaces. As illustrated on Sheets A1.11, A5.06 and C1.10 of Attachment 6, the applicant is providing a total of eight bicycle spaces, four at each of the two office entrances. This standard is met.

B. Standards for Required Bicycle Parking

1. *Each space must be at least 2 feet by 6 feet in area and be accessible without moving another bicycle.*
2. *An aisle at least 5 feet wide shall be maintained 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. *When bicycle parking is provided in racks, there must be enough space between the rack and any obstructions to use the space properly.*
4. *Bicycle lockers or racks, when provided, shall be securely anchored.*
5. *Bicycle parking shall be located within 30 feet of the main entrance to the building or inside a building, in a location that is easily accessible for bicycles. For multi-tenant developments, with multiple business entrances, bicycle parking may be distributed on-site among more than one main entrance.*

Response: As illustrated on Sheets A1.11, A5.06 and C1.10 in Attachment 6, all required bicycle parking will be provided as exterior spaces near the two primary (office) entrances to the building, to comply with the design standards above. This standard will be met.

C. Long-term Bicycle Parking

1. *Long-term bicycle parking provides employees, students, residents, commuters, and others who generally stay at a site for several hours a weather-protected place to park bicycles.*
2. *For a proposed multi-family residential, retail, office, or institutional development, or for a park and ride or transit center, where six (6) or more bicycle parking spaces are required pursuant to Table 5, 50% of the bicycle parking shall be developed as long-term, secure spaces. Required long-term bicycle parking shall meet the following standards:*
 - a. *All required spaces shall meet the standards in subsection (B.) above, and must be covered in one of the following ways: inside buildings, under roof overhangs or permanent awnings, in bicycle lockers, or within or under other structures.*
 - b. *All spaces must be located in areas that are secure or monitored (e.g., visible to employees, monitored by security guards, or in public view).*
 - c. *Spaces are not subject to the locational criterion of (B.)(5.).*

Response: The proposed warehouse/distribution use is industrial, not multi-family residential, retail, office, institutional, or a park and ride or transit center. Therefore, the long-term bicycle parking standards do not apply to this project.

Note: In considering proposed waivers to the following standards, the City will consider the potential uses of the site and not just the uses that are currently proposed. For waivers to exceed the maximum standards, applicants shall bear the burden of proving that Metro, State, and federal clean air standards will not be violated.

TABLE 5: PARKING STANDARDS (excerpt)			
Use	Parking Minimums	Parking Maximums	Bicycle Minimums
f. Industrial			
1. Manufacturing establishment	1.6 per 1000 sq. ft.	No Limit	1 per 10,000 sq. ft. Min. of 6
2. Storage warehouse, wholesale establishment, rail or trucking freight terminal	.3 per 1000 sq. ft.	.5 per 1000 sq. ft.	1 per 20,000 sq. ft. Min. of 2

(.05) *Minimum Off-Street Loading Requirements:*

A. Every building that is erected or structurally altered to increase the floor area, and which will require the receipt or distribution of materials or merchandise by truck or similar vehicle, shall provide off-street loading berths on the basis of minimum requirements as follows:

1. Commercial, industrial, and public utility uses which have a gross floor area of 5,000 square feet or more, shall provide truck loading or unloading berths in accordance with the following tables:

<i>Square feet of Floor Area</i>	<i>Number of Berths Required</i>
<i>Less than 5,000</i>	<i>0</i>
<i>5,000 - 30,000</i>	<i>1</i>
<i>30,000 - 100,000</i>	<i>2</i>
<i>100,000 and over</i>	<i>3</i>

2. Restaurants, office buildings, hotels, motels, hospitals and institutions, schools and colleges, public buildings, recreation or entertainment facilities, and any similar use which has a gross floor area of 30,000 square feet or more, shall provide off-street truck loading or unloading berths in accordance with the following table:

<i>Square feet of Floor Area</i>	<i>Number of Berths Required</i>
<i>Less than 30,000</i>	<i>0</i>
<i>30,000 - 100,000</i>	<i>1</i>
<i>100,000 and over</i>	<i>2</i>

3. A loading berth shall contain space twelve (12) feet wide, thirty-five (35) feet long, and have a height clearance of fourteen (14) feet. Where the vehicles generally

used for loading and unloading exceed these dimensions, the required length of these berths shall be increased to accommodate the larger vehicles.

4. *If loading space has been provided in connection with an existing use or is added to an existing use, the loading space shall not be eliminated if elimination would result in less space than is required to adequately handle the needs of the particular use.*
5. *Off-street parking areas used to fulfill the requirements of this Ordinance shall not be used for loading and unloading operations except during periods of the day when not required to meet parking needs.*

Response: The proposed industrial building exceeds 100,000 square feet. Per the table above, at least three loading berths are required. As depicted on Attachment 6 Sheet C1.10, the proposed building will provide 20 loading docks that meet or exceed the dimensional standards of criterion (3). The existing residential use will be eliminated as part of the development, and loading operations are not proposed within required off-street parking spaces. This standard is met.

B. Exceptions and Adjustments.

1. *The Planning Director or Development Review Board may approve a loading area adjacent to or within a street right-of-way where it finds that loading and unloading operations:*
 - a. *Are short in duration (i.e., less than one hour);*
 - b. *Are infrequent (less than three operations daily);*
 - c. *Do not obstruct traffic during peak traffic hours;*
 - d. *Do not interfere with emergency response services or bicycle and pedestrian facilities; and*
 - e. *Are acceptable to the applicable roadway authority.*

Response: The applicant is not proposing to perform loading operations adjacent to or within the street. This standard does not apply.

(.06) Carpool and Vanpool Parking Requirements:

- A. *Carpool and vanpool parking spaces shall be identified for the following uses:*
 1. *New commercial and industrial developments with seventy-five (75) or more parking spaces,*
 2. *New institutional or public assembly uses, and*
 3. *Transit park-and-ride facilities with fifty (50) or more parking spaces.*
- B. *Of the total spaces available for employee, student, and commuter parking, at least five percent, but not fewer than two, shall be designated for exclusive carpool and vanpool parking.*
- C. *Carpool and vanpool parking spaces shall be located closer to the main employee, student or commuter entrance than all other parking spaces with the exception of ADA parking spaces.*
- D. *Required carpool/vanpool spaces shall be clearly marked "Reserved - Carpool/Vanpool Only."*

Response: As illustrated on Attachment 6 Sheet C1.10, the proposed development will provide 73 parking spaces. Since this is lower than the threshold of 75 spaces., the carpool and vanpool provisions do not apply.

(.07) Parking Area Redevelopment. *The number of parking spaces may be reduced by up to 10% of the minimum required parking spaces for that use when a portion of the existing parking area is modified to accommodate or provide transit-related amenities such as transit stops, pull-outs, shelters, and park and ride stations.*

Response: The applicant is not proposing transit-related amenities. This standard does not apply.

Section 4.167. General Regulations - Access, Ingress and Egress

(.01) Each access onto streets or private drives shall be at defined points as approved by the City and shall be consistent with the public's health, safety and general welfare. Such defined points of access shall be approved at the time of issuance of a building permit if not previously determined in the development permit. [Amended by Ord. 682, 9/9/10]

Response: As illustrated on sheet C1.10 of Attachment 6, two driveways to Clutter Street are proposed in order to provide adequate access to the site for trucks, passenger vehicles, and emergency vehicles. The applicant is seeking approval of the sizes and locations of the two access points as part of this development permit. This standard is met.

Section 4.169. General Regulations – Double-Frontage Lots

(.01) Buildings on double frontage lots (i.e., through lots) and corner lots must meet the front yard setback for principal buildings on both streets or tracts with a private drive. [Amended by Ord. 682, 9/9/10]

Response: The site is a corner lot because it has frontage both on SW Clutter Street and on SW Garden Acres Road (although staff has advised the applicant that improvements and urban use of the Garden Acres Road right-of-way south of the Ridder Road-Clutter Street intersection is not planned). As illustrated on Sheet C1.10 of Attachment 6, the proposed building exceeds the minimum front setback of 30 feet along both rights-of-way. This standard is met.

(.02) Given that double-frontage lots tend to have one end that is regarded as a rear yard by the owner, the Development Review Board may establish special maintenance conditions to apply to such areas. Such conditions may include the requirement that the subject homeowners association, if any, be responsible for the on-going maintenance of the street frontage areas of double-frontage lots.

Response: The development site is not a double-frontage lot. This standard does not apply.

Section 4.171. General Regulations - Protection of Natural Features and Other Resources

(.02) General Terrain Preparation:

- A. *All developments shall be planned, designed, constructed and maintained with maximum regard to natural terrain features and topography, especially hillside areas, floodplains, and other significant landforms.*
- B. *All grading, filling and excavating done in connection with any development shall be in accordance with the Uniform Building Code*
- C. *In addition to any permits required under the Uniform Building Code, all developments shall be planned, designed, constructed and maintained so as to:*
 1. *Limit the extent of disturbance of soils and site by grading, excavation and other land alterations.*
 2. *Avoid substantial probabilities of: (1) accelerated erosion; (2) pollution, contamination, or siltation of lakes, rivers, streams and wetlands; (3) damage to vegetation; (4) injury to wildlife and fish habitats.*
 3. *Minimize the removal of trees and other native vegetation that stabilize hillsides, retain moisture, reduce erosion, siltation and nutrient runoff, and preserve the natural scenic character.*

Response: According to the Federal Emergency Management Agency's Flood Insurance Rate Map 41067C0608E, effective November 4, 2016, the subject property is not located in a regulated flood hazard area. As illustrated on Sheet C0.10 of Attachment 6, the site is relatively level, with a grade difference of approximately 11 feet over a length of approximately 700 feet (elevation 223 at the northwest and 212 at the southeast), equating to an average slope of 1.6 percent. Accordingly, slopes do not pose a development challenge at this site. The applicant will seek City grading permits prior to any cut or fill

operations, and the design engineer will utilize the recommendations of the geotechnical engineer to inform the grading design. Furthermore, the contractor will utilize appropriate erosion and sedimentation control measures to minimize erosion, as reviewed and permitted by the City and the Oregon Department of Environmental Quality.

Removal of on-site trees that are incompatible with the proposed site plan will not result in unstable slopes or other erosive impacts. As illustrated on Sheet C1.20, a large area in the northwestern part of the site is reserved for the protection and conservation of a stand of five mature Douglas fir trees. This standard is met.

- (.03) *Hillsides: All developments proposed on slopes greater than 25% shall be limited to the extent that:*
- A. *An engineering geologic study approved by the City, establishes that the site is stable for the proposed development, and any conditions and recommendations based on the study are incorporated into the plans and construction of the development. The study shall include items specified under subsection 4.171(.07)(A.)(2.)(a-j):*
 - B. *Slope stabilization and re-vegetation plans shall be included as part of the applicant's landscape plans.*
 - C. *Buildings shall be clustered to reduce alteration of terrain and provide for preservation of natural features.*
 - D. *Creation of building sites through mass pad grading and successive padding or terracing of building sites shall be avoided where feasible.*
 - E. *Roads shall be of minimum width, with grades consistent with the City's Public Works Standards.*
 - F. *Maintenance, including re-vegetation, of all grading areas is the responsibility of the developer, and shall occur through October 1 of the second growing season following receipt of Certificates of Occupancy unless a longer period is approved by the Development Review Board.*
 - G. *The applicant shall obtain an erosion and sediment control permit from the City's Building and Environmental Services Division's.*

Response: As illustrated on Sheet C0.10 of Attachment 6, the site is relatively level, with a grade difference of approximately 11 feet over a length of approximately 700 feet, equating to an average slope of 1.6 percent. Since this slope is below 25%, these standards do not apply.

- (.04) *Trees and Wooded Areas.*
- A. *All developments shall be planned, designed, constructed and maintained so that:*
 1. *Existing vegetation is not disturbed, injured, or removed prior to site development and prior to an approved plan for circulation, parking and structure location.*
 2. *Existing wooded areas, significant clumps/groves of trees and vegetation, and all trees with a diameter at breast height of six inches or greater shall be incorporated into the development plan and protected wherever feasible.*
 3. *Existing trees are preserved within any right-of-way when such trees are suitably located, healthy, and when approved grading allows.*

Response: The contractor will not begin clearing operations until appropriate erosion and sedimentation control permits and grading permits have been issued by the City and the Oregon Department of Environmental Quality. As illustrated on Sheets C0.10 and C1.20 of Attachment 6, tree removal is being limited to the extent possible; smaller tree specimens that conflict with the development plan will be removed, but an area in the northwestern part of the site is set aside for protection and preservation of a stand of five mature Douglas fir trees located there. Widening/construction plans for SW Clutter Street do not allow any of the trees currently within that improvement corridor to be retained. This standard is met.

- B. *Trees and woodland areas to be retained shall be protected during site preparation and construction according to City Public Works design specifications, by:*
1. *Avoiding disturbance of the roots by grading and/or compacting activity.*
 2. *Providing for drainage and water and air filtration to the roots of trees which will be covered with impermeable surfaces.*
 3. *Requiring, if necessary, the advisory expertise of a registered arborist/horticulturist both during and after site preparation.*
 4. *Requiring, if necessary, a special maintenance, management program to insure survival of specific woodland areas of specimen trees or individual heritage status trees.*

Response: As illustrated on Sheet C1.20 of Attachment 6, a stand of five Douglas fir trees is proposed to be retained in the northwest portion of the site. These trees will be protected during construction by implementing the recommendations of the arborist (Attachment 7). This standard is met.

(.05) *High Voltage Powerline Easements and Rights of Way and Petroleum Pipeline Easements:*

- A. *Due to the restrictions placed on these lands, no residential structures shall be allowed within high voltage powerline easements and rights of way and petroleum pipeline easements, and any development, particularly residential, adjacent to high voltage powerline easements and rights of way and petroleum pipeline easements shall be carefully reviewed.*
- B. *Any proposed non-residential development within high voltage powerline easements and rights of way and petroleum pipeline easements shall be coordinated with and approved by the Bonneville Power Administration, Portland General Electric Company or other appropriate utility, depending on the easement or right of way ownership.*

Response: The site does not have any powerline easements or rights-of-way, and similarly does not have any petroleum pipeline easements. This standard does not apply.

(.06) *Hazards to Safety: Purpose:*

- A. *To protect lives and property from natural or human-induced geologic or hydrologic hazards and disasters.*
- B. *To protect lives and property from damage due to soil hazards.*
- C. *To protect lives and property from forest and brush fires.*
- D. *To avoid financial loss resulting from development in hazard areas.*

Response: The applicant supports the City's desire to protect lives and property and minimize financial loss, and intends to comply with safety-related development standards and approval criteria. This standard is met.

(.07) *Standards for Earth Movement Hazard Areas:*

- A. *No development or grading shall be allowed in areas of land movement, slump or earth flow, and mud or debris flow, except under one of the following conditions:*
 1. *Stabilization of the identified hazardous condition based on established and proven engineering techniques which ensure protection of public and private property. Appropriate conditions of approval may be attached by the City.*
 2. *An engineering geologic study approved by the City establishing that the site is stable for the proposed use and development. The study shall include the following:*
 - a. *Index map.*
 - b. *Project description, to include: location; topography, drainage, vegetation; discussion of previous work; and discussion of field exploration methods.*

- c. *Site geology, to include: site geologic map; description of bedrock and superficial materials including artificial fill; location of any faults, folds, etc.; and structural data including bedding, jointing, and shear zones.*
 - d. *Discussion and analysis of any slope stability problems.*
 - e. *Discussion of any off-site geologic conditions that may pose a potential hazard to the site or that may be affected by on-site development.*
 - f. *Suitability of site for proposed development from geologic standpoint.*
 - g. *Specific recommendations for cut slope stability, seepage and drainage control, or other design criteria to mitigate geologic hazards.*
 - h. *Supportive data, to include: cross sections showing subsurface structure; graphic logs of subsurface explorations; results of laboratory tests; and references.*
 - i. *Signature and certification number of engineering geologist registered in the State of Oregon.*
 - j. *Additional information or analyses as necessary to evaluate the site.*
- B. *Vegetative cover shall be maintained or established for stability and erosion control purposes.*
- C. *Diversion of storm water into these areas shall be prohibited.*
- D. *The principal source of information for determining earth movement hazards is the State Department of Geology and Mineral Industries (DOGAMI) Bulletin 99 and any subsequent bulletins and accompanying maps. Approved site specific engineering geologic studies shall be used to identify the extent and severity of the hazardous conditions on the site, and to update the earth movement hazards database.*

Response: According to data from the Oregon Department of Geology and Minerals (DOGAMI)², the subject site is not located within a landslide hazard area, and there are no known active fault lines in the immediate vicinity. Furthermore, site-specific geotechnical investigation (Attachment 8) did not identify landslide potential. The contractor will not begin clearing operations until appropriate erosion and sedimentation control permits and grading permits have been issued by the City and the Oregon Department of Environmental Quality, to ensure that adequate measures will be in place to minimize erosion potential. The proposed stormwater system, illustrated on Sheet C1.30 of Attachment 6 and further described in Attachment 8, will collect on-site stormwater runoff, direct it through surface water quality treatment facilities to a storm control manhole, and finally discharge it to the existing public storm drain system in the SW Clutter Street right-of-way rather than to landslide-prone areas. This standard is met.

(.08) Standards for Soil Hazard Areas:

- A. *Appropriate siting and design safeguards shall insure structural stability and proper drainage of foundation and crawl space areas for development on land with any of the following soil conditions: wet or high water table; high shrink-swell capability; compressible or organic; and shallow depth-to-bedrock.*

The principal source of information for determining soil hazards is the State DOGAMI Bulletin 99 and any subsequent bulletins and accompanying maps. Approved site-specific soil studies shall be used to identify the extent and severity of the hazardous conditions on the site, and to update the soil hazards database accordingly.

13. **Response:** In Exhibit G of the Preliminary Storm Report (Attachment 8), the applicant has provided documentation of poor soil infiltration characteristics at the subject property

² <https://gis.dogami.oregon.gov/maps/hazvu/>

(*Geotechnical Design Memo on Infiltration Infeasibility*, June 9, 2020). All construction will be based on recommendations by the consulting geological engineer to ensure structural stability. Based on the geological engineer's findings and recommendations, on-site storm drainage systems have been designed to treat and release all stormwater to the public system rather than attempt to infiltrate it on-site.

The applicant's storm report and on-site stormwater management facilities sizing calculations assume zero on-site infiltration. This assumption is based on the geotechnical engineering report's recommendation that on-site infiltration should not be used as a design approach. As a result, the preliminary storm report demonstrates the feasibility of meeting stormwater management requirements with no reliance on on-site infiltration.

(.09) *Historic Protection: Purpose:* [detailed provisions omitted for brevity]

Response: The subject property has not been identified as containing or being adjacent to any significant historic, cultural, or archaeological resources. These provisions are not applicable.

(.10) *Alteration and Development Criteria:*

A. *Demolition or alteration of any structure, or any change in any site or object which has been designated as a cultural resource, is prohibited unless it is determined:*

1. *In the case of a designated cultural resource, the proposed work would not detrimentally alter, destroy or adversely affect any exterior architectural or other identified feature; or*

2. *In the case of any property located within a historic district, the proposed construction, removal, rehabilitation, alteration, remodeling, excavation or exterior alteration conforms to any prescriptive standards as adopted by the City, and does not adversely affect the character of the district; or*

3. *In the case of construction of a new improvement, building or structure upon a cultural resource site, the exterior of such improvements will not adversely affect and will be compatible with the external appearance of existing designated improvements, buildings and structures on said site; or*

4. *That no reasonable use can be made of the property without such approval.*

Response: These provisions are not applicable because the subject property is not a designated cultural resource site and is not within a historic district.

(.11) *Cultural Resource Designation Criteria: A cultural resource may be designated and placed on the Cultural Resources Inventory if it meets the following criteria:*

A. *It exemplifies or reflects special elements of the City's cultural, social, economic, political, aesthetic, engineering or architectural history; or*

B. *It is identified with persons or events significant in local, state, or national history; or*

C. *It embodies distinctive characteristics of a style, type, period, or method of construction, or it is a valuable example of the use of indigenous materials or craftsmanship; or*

D. *It is representative of the notable work of a builder, designer, or architect.*

Response: These provisions are not applicable because the subject property is not a designated cultural resource site, and it is not proposed for such designation.

Section 4.172. Flood Plain Regulations

Response: According to Flood Insurance Rate Map 41067C0608E, effective November 4, 2016, the subject property is not located in a regulated flood hazard area. These provisions are not applicable.

Section 4.175. Public Safety and Crime Prevention

(.01) All developments shall be designed to deter crime and insure public safety.

Response: Although the SW Clutter Street frontage is densely screened by landscaping, the proposed site plan is designed to provide visibility of active use parts of the building from key points in the SW Clutter Street public right-of-way (more particularly, at the two driveways). This facilitates surveillance by law enforcement, and also enables citizens passing by on the public street to observe activity within the site. Site lighting, including in parking/circulation areas and along pedestrian paths to office entrances, will contribute to safety during hours of darkness. This standard is met.

(.02) Addressing and directional signing shall be designed to assure identification of all buildings and structures by emergency response personnel, as well as the general public.

Response: The applicant will prepare and submit plans for address number signage and direction for internal circulation in conjunction with construction permit submittals.

(.03) Areas vulnerable to crime shall be designed to allow surveillance. Parking and loading areas shall be designed for access by police in the course of routine patrol duties.

Response: By locating docking areas centrally in front of the building, the proposed design facilitates routine surveillance by police without requiring them to enter and circulate within the site. Parking areas, located on the sides of the building, can be observed from points within the front part of the site and accessed by way of the emergency access drive that goes all the way around the site perimeter. This standard is met.

(.04) Exterior lighting shall be designed and oriented to discourage crime.

Response: Site lighting will illuminate parking and activity areas, to enable public surveillance and thereby discourage crime.

Section 4.176. Landscaping, Screening, and Buffering

Note: the reader is encouraged to see Section 4.179, applying to screening and buffering of storage areas for solid waste and recyclables.

(.02) Landscaping and Screening Standards.

A. *Subsections "C" through "I," below, state the different landscaping and screening standards to be applied throughout the City. The locations where the landscaping and screening are required and the depth of the landscaping and screening is stated in various places in the Code.*

Response: The landscape plans in Attachment 6 have been designed to conform to the applicable landscaping and screening standards, as described in responses to subsections "C" through "I" below. This standard is met.

B. *All landscaping and screening required by this Code must comply with all of the provisions of this Section, unless specifically waived or granted a Variance as otherwise provided in the Code. The landscaping standards are minimum requirements; higher standards can be substituted as long as fence and vegetation-height limitations are met. Where the standards set a minimum based on square footage or linear footage, they shall be interpreted as applying to each complete or partial increment of area or length (e.g., a landscaped area of between 800 and 1600 square feet shall have two trees if the standard calls for one tree per 800 square feet.*

Response: The applicant's landscaping plan, in the L-series drawing sheets of Attachment 6, demonstrate compliance with the standards in this Section.

C. *General Landscaping Standard.*

1. *Intent. The General Landscaping Standard is a landscape treatment for areas that are generally open. It is intended to be applied in situations where distance is used as the principal means of separating uses or developments and landscaping is required to enhance the intervening space. Landscaping may include a mixture of ground cover, evergreen and deciduous shrubs, and coniferous and deciduous trees.*
2. *Required materials. Shrubs and trees, other than street trees, may be grouped. Ground cover plants must fully cover the remainder of the landscaped area (see Figure 21: General Landscaping). The General Landscaping Standard has two different requirements for trees and shrubs:*
 - a. *Where the landscaped area is less than 30 feet deep, one tree is required for every 30 linear feet.*
 - b. *Where the landscaped area is 30 feet deep or greater, one tree is required for every 800 square feet and two high shrubs or three low shrubs are required for every 400 square feet.*

Response: The front portion of the site, facing SW Clutter Street, is subject to Coffee Creek Design District standards calling for a dense, naturalistic landscape character along that roadway corridor. The applicant has used the General Landscape standard as the starting point for that site edge, while adding amenity features such as dense and varied plantings, art pieces and a pedestrian Wayside. The planting scheme for the front of the property is designed to frame the public realm (street environment), provide shade and shelter for a centrally located Wayside, and screen the building from view from the street (except at the driveway entrances). As a result, the special planting scheme does not closely match any of the City's landscape types, and it significantly exceeds the basic requirements of the General Landscape standard. The sides and rear of the site are landscaped to meet the Low Screen standard.

D. Low Screen Landscaping Standard.

1. *Intent. The Low Screen Landscaping Standard is a landscape treatment that uses a combination of distance and low screening to separate uses or developments. It is intended to be applied in situations where low screening is adequate to soften the impact of one use or development on another, or where visibility between areas is more important than a total visual screen. The Low Screen Landscaping Standard is usually applied along street lot lines or in the area separating parking lots from street rights-of-way.*
2. *Required materials. The Low Screen Landscaping Standard requires sufficient low shrubs to form a continuous screen three (3) feet high and 95% opaque, year-round. In addition, one tree is required for every 30 linear feet of landscaped area, or as otherwise required to provide a tree canopy over the landscaped area. Ground cover plants must fully cover the remainder of the landscaped area. A three (3) foot high masonry wall or a berm may be substituted for the shrubs, but the trees and ground cover plants are still required. When applied along street lot lines, the screen or wall is to be placed along the interior side of the landscaped area. (See Figure 22: Low Screen Landscaping).*

Response: Plantings along the side and rear lot lines, which abut other industrially-zoned properties and are therefore not considered visually sensitive boundaries, are designed in compliance with the Low Screen landscaping standard.

E. Low Berm Landscaping Standard.

1. *Intent. The Low Berm Standard is intended to be applied in situations where moderate screening to reduce both visual and noise impacts is needed to protect*

abutting uses or developments from one-another, and where it is desirable and practical to provide separation by both distance and sight- obscuring materials. This screening is most important where either, or both, of the abutting uses or developments can be expected to be particularly sensitive to noise or visual impacts.

2. *Required materials. The Low Berm Standard requires a berm at least two feet six inches (2' 6") high along the interior side of the landscaped area (see Figure 23: Low Berm Landscaping). If the berm is less than three (3) feet high, low shrubs meeting the Low Screen Landscaping Standard, above, are to be planted along the top of the berm, assuring that the screen is at least three (3) feet in height. In addition, one tree is required for every 30 linear feet of berm, or as otherwise required to provide a tree canopy over the landscaped area. Ground cover plants must fully cover the remainder of the landscaped area.*

Response: As noted above, the applicant has used the General Landscape standard as the starting point for the front site edge, while adding amenity features such as varied intensive plantings, art pieces and a pedestrian Wayside. The overall site grading requirements for access and circulation, together with the tapered triangular shape of the central landscape island, make it impractical to construct a berm of sufficient height to utilize this standard.

F. High Screen Landscaping Standard.

1. *Intent. The High Screen Landscaping Standard is a landscape treatment that relies primarily on screening to separate uses or developments. It is intended to be applied in situations where visual separation is required.*
2. *Required materials. The High Screen Landscaping Standard requires sufficient high shrubs to form a continuous screen at least six (6) feet high and 95% opaque, year-round. In addition, one tree is required for every 30 linear feet of landscaped area, or as otherwise required to provide a tree canopy over the landscaped area. Ground cover plants must fully cover the remainder of the landscaped area. A six (6) foot high masonry wall or a berm may be substituted for the shrubs, but the trees and ground cover plants are still required. When applied along street lot lines, the screen or wall is to be placed along the interior side of the landscaped area. (See Figure 24: High Screen Landscaping).*

Response: No side of the subject property requires High Screen landscaping. These provisions are not applicable.

G. High Wall Standard.

1. *Intent. The High Wall Standard is intended to be applied in situations where extensive screening to reduce both visual and noise impacts is needed to protect abutting uses or developments from one-another. This screening is most important where either, or both, of the abutting uses or developments can be expected to be particularly sensitive to noise or visual impacts, or where there is little space for physical separation.*
2. *Required materials. The High Wall Standard requires a masonry wall at least six (6) feet high along the interior side of the landscaped area (see Figure 25: High Wall Landscaping). In addition, one tree is required for every 30 linear feet of wall, or as otherwise required to provide a tree canopy over the landscaped area. Ground cover plants must fully cover the remainder of the landscaped area.*

Response: No side of the subject property requires High Wall landscaping. These provisions are not applicable.

I. High Berm Standard.

1. *Intent. The High Berm Standard is intended to be applied in situations where extensive screening to reduce both visual and noise impacts is needed to protect abutting uses or developments from one-another, and where it is desirable and practical to provide separation by both distance and sight- obscuring materials. This screening is most important where either, or both, of the abutting uses or developments can be expected to be particularly sensitive to noise or visual impacts.*
2. *Required materials. The High Berm Standard requires a berm at least four (4) feet high along the interior side of the landscaped area (see Figure 26: High Berm Landscaping). If the berm is less than six (6) feet high, low shrubs meeting the Low Screen Landscaping Standard, above, are to be planted along the top of the berm, assuring that the screen is at least six (6) feet in height In addition, one tree is required for every 30 linear feet of berm, or as otherwise required to provide a tree canopy over the landscaped area. Ground cover plants must fully cover the remainder of the landscaped area.*

Response: No side of the subject property requires High Berm landscaping. These provisions are not applicable.

J. Partially Sight-Obscuring Fence Standard.

1. *Intent. The Partially Sight-Obscuring Fence Standard is intended to provide a tall, but not totally blocked, visual separation. The standard is applied where a low level of screening is adequate to soften the impact of one use or development on another, and where some visibility between abutting areas is preferred over a total visual screen. It can be applied in conjunction with landscape plantings or applied in areas where landscape plantings are not necessary and where nonresidential uses are involved.*
2. *Required materials. Partially Sight-Obscuring Fence Standard are to be at least six (6) feet high and at least 50% sight-obscuring. Fences may be made of wood (other than plywood or particle-board), metal, bricks, masonry or other permanent materials (see Figure 27: Partially Sight-Obscuring Fence).*

Response: No side of the subject property requires Partially Sight-Obscuring Fence screening. These provisions are not applicable.

K. Fully Sight-Obscuring Fence Standard.

1. *Intent. The Fully Sight-Obscuring Fence Standard is intended to provide a totally blocked visual separation. The standard is applied where full visual screening is needed to reduce the impact of one use or development on another. It can be applied in conjunction with landscape plantings or applied in areas where landscape plantings are not necessary.*
2. *Required materials. Fully sight-obscuring fences are to be at least six (6) feet high and 100% sight-obscuring. Fences may be made of wood (other than plywood or particle-board), metal, bricks, masonry or other permanent materials (see Figure 28: Totally Sight-Obscuring Fence).*

Response: No side of the subject property requires Fully Sight-Obscuring Fence screening. These provisions are not applicable.

(.03) Landscape Area. Not less than fifteen percent (15%) of the total lot area, shall be landscaped with vegetative plant materials. The ten percent (10%) parking area landscaping required by section 4.155.03(B)(1) is included in the fifteen percent (15%) total lot landscaping requirement. Landscaping shall be located in at least three separate and distinct areas of the lot, one of which must be in the contiguous frontage area. Planting areas shall be encouraged adjacent to structures. Landscaping shall be used to

define, soften or screen the appearance of buildings and off-street parking areas. Materials to be installed shall achieve a balance between various plant forms, textures, and heights. The installation of native plant materials shall be used whenever practicable. (For recommendations refer to the Native Plant List maintained by the City of Wilsonville). [Amended by Ord. # 674 11/16/09]

Response: As reported on Sheet C1.10 in Attachment 6, overall site landscaping of 39,150 SF is provided, or 16.1% of net site area after right-of-way dedication. Parking area landscaping is provided at 8,953 SF, which is 19.7% of the 45,457 SF of site area devoted to parking areas. The landscape plan provides several distinct landscape areas, most of which are concentrated in the front yard, to screen the building, frame the public realm (Clutter Street corridor) punctuated by views into the site, provide the pedestrian Wayside, and protect and preserve the stand of five mature Douglas fir trees. Dense plantings with a variety of predominantly native species, together with boulders, water in functioning storm treatment swales, and art panels all contribute to an interesting and varied landscape composition in the foreground of the proposed industrial building. These requirements are satisfied.

(.04) Buffering and Screening. Additional to the standards of this subsection, the requirements of the Section 4.137.5 (Screening and Buffering Overlay Zone) shall also be applied, where applicable.

- A. All intensive or higher density developments shall be screened and buffered from less intense or lower density developments.*
- B. Activity areas on commercial and industrial sites shall be buffered and screened from adjacent residential areas. Multi-family developments shall be screened and buffered from single-family areas.*
- C. All exterior, roof and ground mounted, mechanical and utility equipment shall be screened from ground level off-site view from adjacent streets or properties.*
- D. All outdoor storage areas shall be screened from public view, unless visible storage has been approved for the site by the Development Review Board or Planning Director acting on a development permit.*
- E. In all cases other than for industrial uses in industrial zones, landscaping shall be designed to screen loading areas and docks, and truck parking.*
- F. In any zone any fence over six (6) feet high measured from soil surface at the outside of fenceline shall require Development Review Board approval.*

Response: The subject property's location in the Coffee Creek Industrial Area, with industrially-zoned neighboring properties, does not require buffering and screening to protect adjacent sensitive uses (i.e., "less intense or lower density developments"). The building's parapet-roof design provides screening of rooftop mechanical equipment from view from adjacent streets or properties, consistent with subparagraph C. The site plan does not include any outdoor storage areas subject to subparagraph D. Subparagraph E is not applicable because the project is an industrial project in an industrial zone. Perimeter fencing is not proposed, so subparagraph F is not applicable.

(.05) Sight-Obscuring Fence or Planting. The use for which a sight-obscuring fence or planting is required shall not begin operation until the fence or planting is erected or in place and approved by the City. A temporary occupancy permit may be issued upon a posting of a bond or other security equal to one hundred ten percent (110%) of the cost of such fence or planting and its installation. (See Sections 4.400 to 4.470 for additional requirements.)

Response: The subject property's location in the Coffee Creek Industrial Area, with industrially-zoned neighboring properties, does not require sight-obscuring fencing or plantings for the anticipated light industrial and warehousing uses. This provision is not applicable to this proposal; however, should a future tenant propose to conduct an activity for which such fencing would be required, they will have to obtain approval for an appropriate screening plan before proceeding.

(.06) Plant Materials.

- A. *Shrubs and Ground Cover. All required ground cover plants and shrubs must be of sufficient size and number to meet these standards within three (3) years of planting. Non-horticultural plastic sheeting or other impermeable surface shall not be placed under mulch. Native topsoil shall be preserved and reused to the extent feasible. Surface mulch or bark dust are to be fully raked into soil of appropriate depth, sufficient to control erosion, and are confined to areas around plantings. Areas exhibiting only surface mulch, compost or barkdust are not to be used as substitutes for plant areas.*
1. *Shrubs. All shrubs shall be well branched and typical of their type as described in current AAN Standards and shall be equal to or better than 2-gallon containers and 10" to 12" spread.*
 2. *Ground cover. Shall be equal to or better than the following depending on the type of plant materials used: gallon containers spaced at 4 feet on center minimum, 4" pot spaced 2 feet on center minimum, 2-1/4" pots spaced at 18 inch on center minimum. No bare root planting shall be permitted. Ground cover shall be sufficient to cover at least 80% of the bare soil in required landscape areas within three (3) years of planting. Where wildflower seeds are designated for use as a ground cover, the City may require annual re-seeding as necessary.*
 3. *Turf or lawn in non-residential developments. Shall not be used to cover more than ten percent (10%) of the landscaped area, unless specifically approved based on a finding that, due to site conditions and availability of water, a larger percentage of turf or lawn area is appropriate. Use of lawn fertilizer shall be discouraged. Irrigation drainage runoff from lawns shall be retained within lawn areas.*
 4. *Plant materials under trees or large shrubs. Appropriate plant materials shall be installed beneath the canopies of trees and large shrubs to avoid the appearance of bare ground in those locations.*
 5. *Integrate compost-amended topsoil in all areas to be landscaped, including lawns, to help detain runoff, reduce irrigation and fertilizer needs, and create a sustainable, low-maintenance landscape.*

Response: Detailed instructions for landscape plants, materials and installation are provided in the Landscaping Plan (L-series sheets in Attachment 6). The specifications have been prepared in compliance with these and other City of Wilsonville requirements.

- B. *Trees. All trees shall be well-branched and typical of their type as described in current American Association of Nurserymen (AAN) Standards and shall be balled and burlapped. The trees shall be grouped as follows:*
1. *Primary trees which define, outline or enclose major spaces, such as Oak, Maple, Linden, and Seedless Ash, shall be a minimum of 2" caliper.*
 2. *Secondary trees which define, outline or enclose interior areas, such as Columnar Red Maple, Flowering Pear, Flame Ash, and Honeylocust, shall be a minimum of 1-3/4" to 2" caliper.*
 3. *Accent trees which, are used to add color, variation and accent to architectural features, such as Flowering Pear and Kousa Dogwood, shall be 1-3/4" minimum caliper.*
 4. *Large conifer trees such as Douglas Fir or Deodar Cedar shall be installed at a minimum height of eight (8) feet.*
 5. *Medium-sized conifers such as Shore Pine, Western Red Cedar or Mountain Hemlock shall be installed at a minimum height of five to six (5 to 6) feet.*

Response: Detailed specifications for landscape plants, materials and installation are provided in the Landscaping Plan (L-series sheets in Attachment 6). The specifications have been prepared in compliance with these requirements.

- C. *Where a proposed development includes buildings larger than twenty-four (24) feet in height or greater than 50,000 square feet in footprint area, the Planning Director or the Development Review Board, as applicable, may require larger or more mature plant materials:*
1. *At maturity, proposed trees shall be at least one-half the height of the building to which they are closest, and building walls longer than 50 feet shall require tree groups located no more than fifty (50) feet on center, to break up the length and height of the façade.*
 2. *Either fully branched deciduous or evergreen trees may be specified depending upon the desired results. Where solar access is to be preserved, only solar- friendly deciduous trees are to be used. Where year-round sight obscuring is the highest priority, evergreen trees are to be used.*
 3. *The following standards are to be applied:*
 - a. *Deciduous trees:*
 - i. *Minimum height of ten (10) feet; and*
 - ii. *Minimum trunk diameter (caliper) of 2 inches (measured at four and one-half [4 1/2] feet above grade).*
 - b. *Evergreen trees: Minimum height of twelve (12) feet.*

Response: Detailed specifications for landscape plants, materials and installation are provided in the Landscaping Plan (L-series sheets in Attachment 6). The specifications have been prepared in compliance with these requirements.

- D. *Street Trees. In order to provide a diversity of species, the Development Review Board may require a mix of street trees throughout a development. Unless the Board waives the requirement for reasons supported by a finding in the record, different types of street trees shall be required for adjoining blocks in a development.*
1. *All trees shall be standard base grafted, well branched and typical of their type as described in current AAN Standards and shall be balled and burlapped (b&b). Street trees shall be planted at sizes in accordance with the following standards:*
 - a. *Arterial streets - 3" minimum caliper*
 - b. *Collector streets - 2" minimum caliper.*
 - c. *Local streets or residential private access drives - 1-3/4" minimum caliper.*
 - d. *Accent or median tree -1-3/4" minimum caliper.*
 2. *The following trees and varieties thereof are considered satisfactory street trees in most circumstances; however, other varieties and species are encouraged and will be considered:*
 - a. *Trees over 50 feet mature height: Quercus garryana (Native Oregon White Oak), Quercus rubra borealis (Red Oak), Acer Macrophyllum (Native Big Leaf Maple), Acer nigrum (Green Column Black Maple), Fraxinus americanus (White Ash), Fraxinus pennsylvannica 'Marshall' (Marshall Seedless Green Ash), Quercus coccinea (Scarlet Oak), Quercus pulustris (Pin Oak), Tilia americana (American Linden).*
 - b. *Trees under 50 feet mature height: Acer rubrum (Red Sunset Maple), Cornus nuttallii (Native Pacific Dogwood), Gleditsia triacanthos (Honey Locust), Pyrus calleryana 'Bradford' (Bradford Pear), Tilia cordata (Little Leaf Linden), Fraxinus oxycarpa (Flame Ash).*

- c. *Other street tree species. Other species may be specified for use in certain situations. For instance, evergreen species may be specified where year-round color is desirable and no adverse effect on solar access is anticipated. Water-loving species may be specified in low locations where wet soil conditions are anticipated.*

Response: Detailed specifications for landscape plants, materials and installation are provided in the Landscaping Plan (L-series sheets in Attachment 6). The specifications have been prepared in compliance with these requirements.

- E. *Types of Plant Species.*
 - 1. *Existing landscaping or native vegetation may be used to meet these standards, if protected and maintained during the construction phase of the development and if the plant species do not include any that have been listed by the City as prohibited. The existing native and non-native vegetation to be incorporated into the landscaping shall be identified.*
 - 2. *Selection of plant materials. Landscape materials shall be selected and sited to produce hardy and drought-tolerant landscaping. Selection shall be based on soil characteristics, maintenance requirements, exposure to sun and wind, slope and contours of the site, and compatibility with other vegetation that will remain on the site. Suggested species lists for street trees, shrubs and groundcovers shall be provided by the City of Wilsonville.*
 - 3. *Prohibited plant materials. The City may establish a list of plants that are prohibited in landscaped areas. Plants may be prohibited because they are potentially damaging to sidewalks, roads, underground utilities, drainage improvements, or foundations, or because they are known to be invasive to native vegetation.*

Response: Detailed specifications for landscape plants, materials and installation are provided in the Landscaping Plan (L-series sheets in Attachment 6). The specifications have been prepared in compliance with these requirements.

- F. *Tree Credit.*
Existing trees that are in good health as certified by an arborist and are not disturbed during construction may count for landscaping tree credit as follows (measured at four and one-half feet above grade and rounded to the nearest inch):

<i>Existing trunk diameter</i>	<i>Number of Tree Credits</i>
<i>18 to 24 inches in diameter</i>	<i>3 tree credits</i>
<i>25 to 31 inches in diameter</i>	<i>4 tree credits</i>
<i>32 inches or greater</i>	<i>5 tree credits</i>

 - 1. *It shall be the responsibility of the owner to use reasonable care to maintain preserved trees. Trees preserved under this section may only be removed if an application for removal permit under Section 4.610.10(01)(H) has been approved. Required mitigation for removal shall be replacement with the number of trees credited to the preserved and removed tree.*
 - 2. *Within five years of occupancy and upon notice from the City, the property owner shall replace any preserved tree that cannot be maintained due to disease or damage, or hazard or nuisance as defined in Chapter 6 of this code. The notice shall be based on complete information provided by an arborist Replacement with the number of trees credited shall occur within one (1) growing season of notice.*
- G. *Exceeding Standards. Landscape materials that exceed the minimum standards of this Section are encouraged, provided that height and vision clearance requirements are met.*

H. Compliance with Standards. The burden of proof is on the applicant to show that proposed landscaping materials will comply with the purposes and standards of this Section.

Response: The arborist's report (Attachment 7) provides recommendations for the preservation of the stand of five mature Douglas fir trees in the northwestern portion of the site. Conservation of those five trees provides a total of 23 Tree Credits in accordance with subsection F, as summarized in the table below:

Common Name & Scientific Name	Tree No.	DBH	Tree Credits
Douglas-fir Pseudotsuga menziesii	10742	28"	4
	10743	26"	4
	10744	53"	5
	10745	36"	5
	10746	37"	5
Retained Trees Count, DBH and Tree Credits	5	180"	23

Please see the applicant’s response to Section 4.620.00(.02) (basis for determining replacement of trees proposed for removal) in this report. To summarize, 23 Tree Credits earned per § 4.176.(.06).F exceed the one-to-one replacement planting requirement that applies to 17 trees greater than 6” DBH proposed for removal. The basis for on-site tree plantings is primarily site aesthetics and compliance with specific standards, such as parking lot landscaping, rather than mitigation for tree removal. An “un-utilized” surplus Tree Credit results and is simply reported here.

(.07) Installation and Maintenance.

- A. *Installation. Plant materials shall be installed to current industry standards and shall be properly staked to assure survival. Support devices (guy wires, etc.) shall not be allowed to interfere with normal pedestrian or vehicular movement.*
- B. *Maintenance. Maintenance of landscaped areas is the on-going responsibility of the property owner. Any landscaping installed to meet the requirements of this Code, or any condition of approval established by a City decision-making body acting on an application, shall be continuously maintained in a healthy, vital and acceptable manner. Plants that die are to be replaced in kind, within one growing season, unless appropriate substitute species are approved by the City. Failure to maintain landscaping as required in this Section shall constitute a violation of this Code for which appropriate legal remedies, including the revocation of any applicable land development permits, may result.*
- C. *Irrigation. The intent of this standard is to assure that plants will survive the critical establishment period when they are most vulnerable due to a lack of watering and also to assure that water is not wasted through unnecessary or inefficient irrigation. Approved irrigation system plans shall specify one of the following:*
 - 1. *A permanent, built-in, irrigation system with an automatic controller. Either a spray or drip irrigation system, or a combination of the two, may be specified.*
 - 2. *A permanent or temporary system designed by a landscape architect licensed to practice in the State of Oregon, sufficient to assure that the plants will become established and drought-tolerant.*
 - 3. *Other irrigation system specified by a licensed professional in the field of landscape architecture or irrigation system design.*
 - 4. *A temporary permit issued for a period of one year, after which an inspection shall be conducted to assure that the plants have become established. Any plants that have died, or that appear to the Planning Director to not be thriving, shall be appropriately replaced within one growing season. An inspection fee and a maintenance bond or other security sufficient to cover all costs of replacing the plant materials shall be provided, to the satisfaction of the Community Development Director. Additionally, the applicant shall provide the City with a*

written license or easement to enter the property and cause any failing plant materials to be replaced.

- D. *Protection. All required landscape areas, including all trees and shrubs, shall be protected from potential damage by conflicting uses or activities including vehicle parking and the storage of materials.*

Response: The landscaping plan (L-series sheets in Attachment 6) demonstrates the feasibility of installing landscape materials in compliance with these requirements. Compliance can be assured through imposition of a condition of approval.

(.08) Landscaping on Corner Lots. All landscaping on corner lots shall meet the vision clearance standards of Section 4.177. If high screening would ordinarily be required by this Code, low screening shall be substituted within vision clearance areas. Taller screening may be required outside of the vision clearance area to mitigate for the reduced height within it.

Response: Technically, the site is a corner lot to the extent that its east frontage is on a dedicated right-of-way, Garden Acres Road extending south of the Clutter Street-Ridder Road intersection. However, the City's TSP and other transportation-related planning, including Coffee Creek, do not include it as a future urban public street. Staff has advised the applicant that road improvements will not be required along the eastern property frontage in conjunction with the proposed project, which is consistent with that policy stance. So, as a practical matter, it does not appear that this property will be a corner lot as that is normally understood, if the abutting right-of-way is not developed as a street or is vacated in the future.

Irrespective of that detail, it is feasible to maintain landscaping at the northeast property corner in order to support visibility along the Clutter Street-Ridder Road corridor, which curves to the south as it proceeds east of the Garden Acres Road intersection.

(.09) Landscape Plans. Landscape plans shall be submitted showing all existing and proposed landscape areas. Plans must be drawn to scale and show the type, installation size, number and placement of materials. Plans shall include a plant material list. Plants are to be identified by both their scientific and common names. The condition of any existing plants and the proposed method of irrigation are also to be indicated. Landscape plans shall divide all landscape areas into the following categories based on projected water consumption for irrigation:

- A. *High water usage areas (+/- two (2) inches per week): small convoluted lawns, lawns under existing trees, annual and perennial flower beds, and temperamental shrubs;*
- B. *Moderate water usage areas (+/- one (1) inch per week): large lawn areas, average water-using shrubs, and trees;*
- C. *Low water usage areas (Less than one (1) inch per week, or gallons per hour): seeded fieldgrass, swales, native plantings, drought-tolerant shrubs, and ornamental grasses or drip irrigated areas.*
- D. *Interim or unique water usage areas: areas with temporary seeding, aquatic plants, erosion control areas, areas with temporary irrigation systems, and areas with special water-saving features or water harvesting irrigation capabilities.*

These categories shall be noted in general on the plan and on the plant material list.

Response: As indicated in the planting plan (L-series sheets of Attachment 6), all landscape areas of the site fall into category C, Low water usage areas. The proposed plant palate is 95% native and 100% drought tolerant once established.

(.10) Completion of Landscaping. The installation of plant materials may be deferred for a period of time specified by the Board or Planning Director acting on an application, in order to avoid hot summer or cold winter periods, or in response to water shortages.

In these cases, a temporary permit shall be issued, following the same procedures specified in subsection (.07)(C)(3), above, regarding temporary irrigation systems. No final Certificate of Occupancy shall be granted until an adequate bond or other security is posted for the completion of the landscaping, and the City is given written authorization to enter the property and install the required landscaping, in the event that the required landscaping has not been installed. The form of such written authorization shall be submitted to the City Attorney for review.

Response: This application does not request deferral of plant material installation; however, depending on the seasonality of construction, the applicant may work with City staff to utilize these provisions to plant at the appropriate time(s), as allowed under this provision.

(.11) Street Trees Not Typically Part of Site Landscaping. Street trees are not subject to the requirements of this Section and are not counted toward the required standards of this Section. Except, however, that the Development Review Board may, by granting a waiver or variance, allow for special landscaping within the right-of-way to compensate for a lack of appropriate on-site locations for landscaping. See subsection (.06), above, regarding street trees.

Response: Based on the submitted materials, the proposal complies with applicable standards.

(.12) Mitigation and Restoration Plantings. A mitigation plan is to be approved by the City's Development Review Board before the destruction, damage, or removal of any existing native plants. Plantings intended to mitigate the loss of native vegetation are subject to the following standards. Where these standards conflict with other requirements of this Code, the standards of this Section shall take precedence. The desired effect of this section is to preserve existing native vegetation.

- A. Plant Sources. Plant materials are to be native and are subject to approval by the City. They are to be non-clonal in origin; seed source is to be as local as possible, and plants must be nursery propagated or taken from a pre-approved transplantation area. All of these requirements are to be addressed in any proposed mitigation plan.*
- B. Plant Materials. The mitigation plan shall specify the types and installation sizes of plant materials to be used for restoration. Practices such as the use of pesticides, fungicides, and fertilizers shall not be employed in mitigation areas unless specifically authorized and approved.*
- C. Installation. Install native plants in suitable soil conditions. Plant materials are to be supported only when necessary because of extreme winds at the site. Where support is necessary, all stakes, guy wires or other measures are to be removed as soon as the plants can support themselves. Protect from animal and fowl predation and foraging until establishment.*
- D. Irrigation. Permanent irrigation systems are generally not appropriate in restoration situations, and manual or temporary watering of new plantings is often necessary. The mitigation plan shall specify the method and frequency of manual watering, including any that may be necessary after the first growing season.*
- E. Monitoring and Reporting. Monitoring of native landscape areas is the on-going responsibility of the property owner. Plants that die are to be replaced in kind and quantity within one year. Written proof of the survival of all plants shall be required to be submitted to the City's Planning Department one year after the planting is completed.*

Response: The subject property is an existing residential site that does not contain an established native plant community, with the exception of the stand of five mature Douglas fir trees to be preserved. These provisions are not applicable.



Figure 21: General Landscaping



Figure 22: Low Screen Landscaping



Figure 23: Low Berm Landscaping

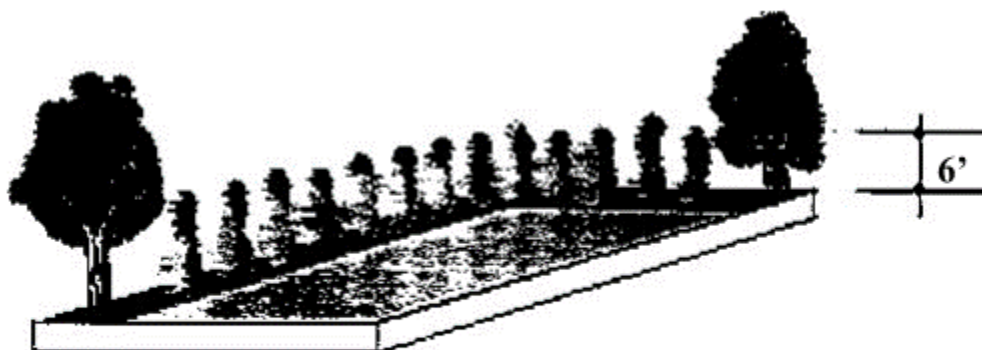


Figure 24: High Screen Landscaping

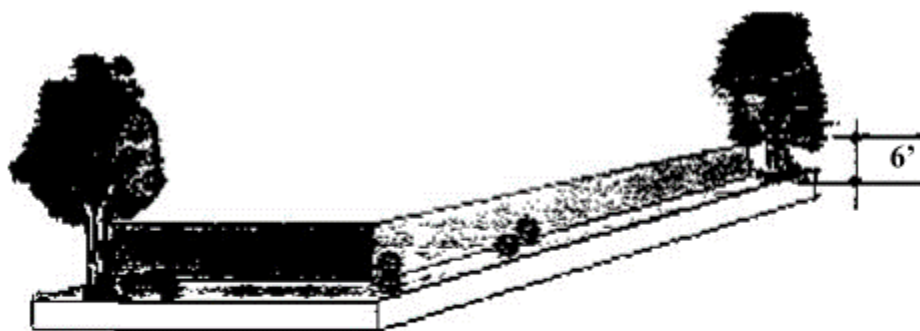


Figure 25: High Wall Landscaping

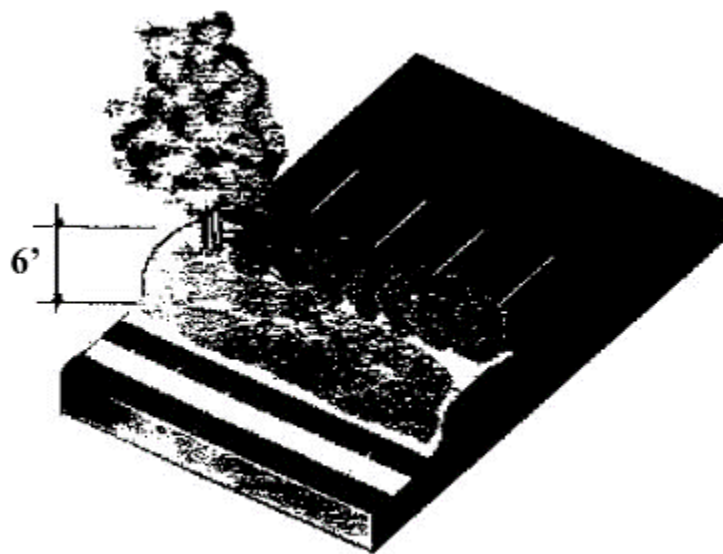


Figure 26: High Berm Landscaping

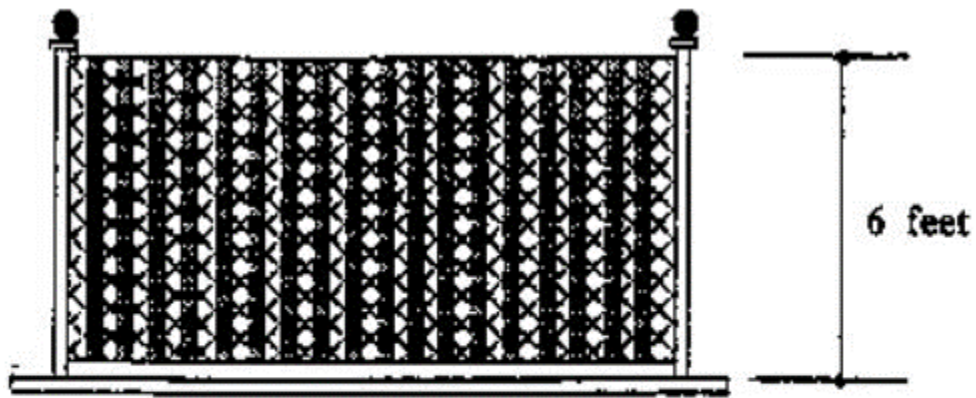


Figure 27: Partially Sight-Obscuring Fence

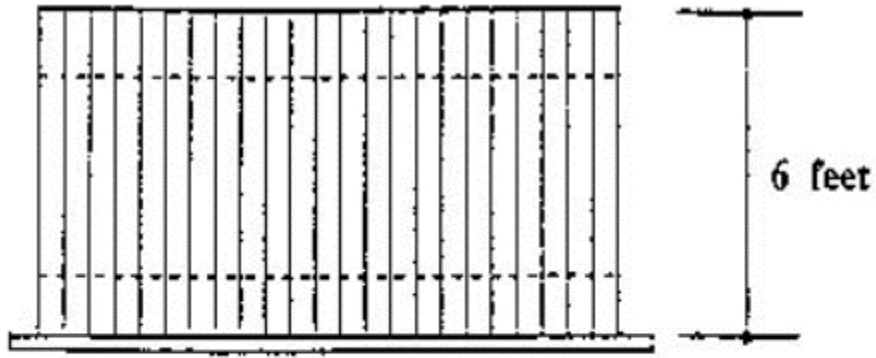


Figure 28: Totally Sight-Obscuring Fence

TREE CLEARANCES

The Landscaping Graphics

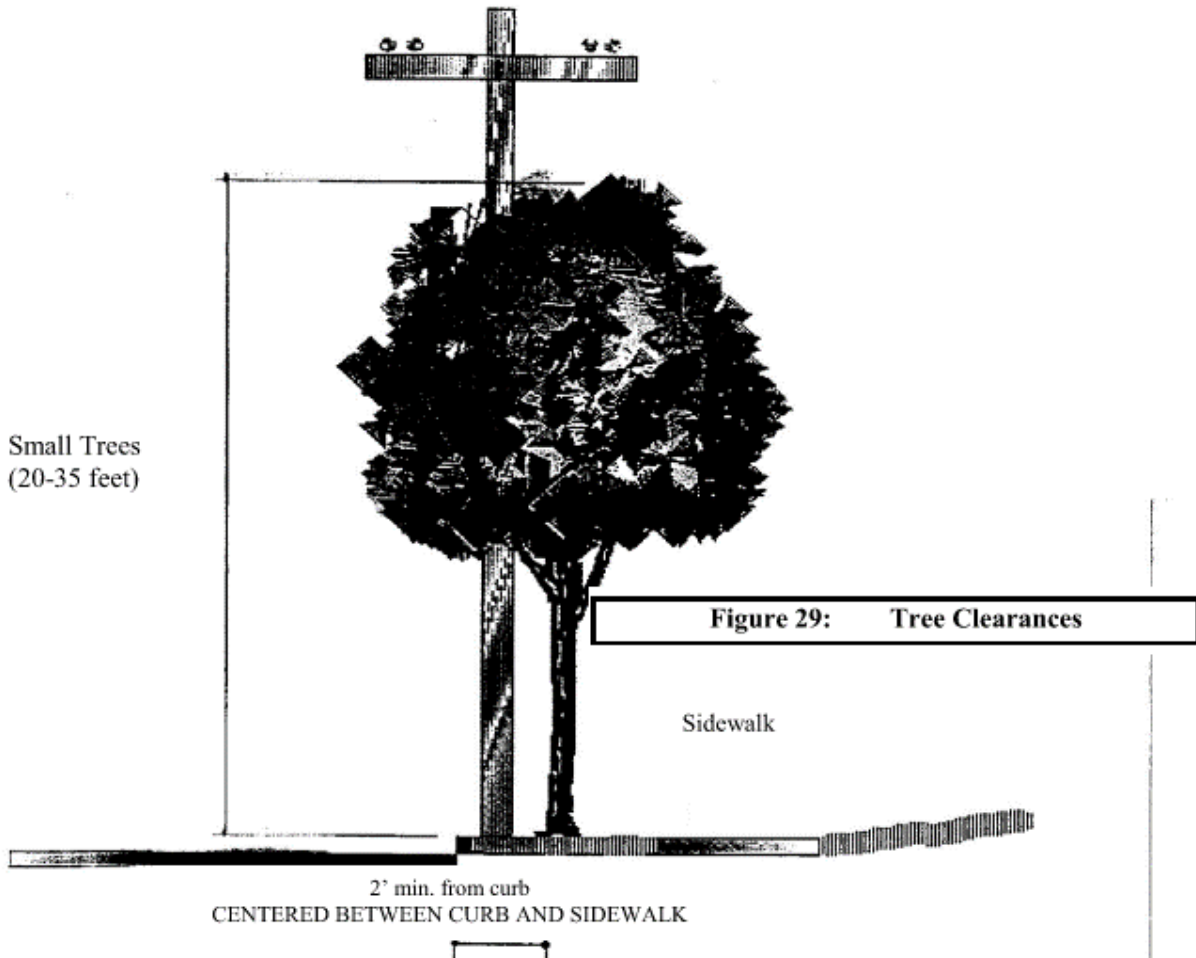


Figure 29: Tree Clearances

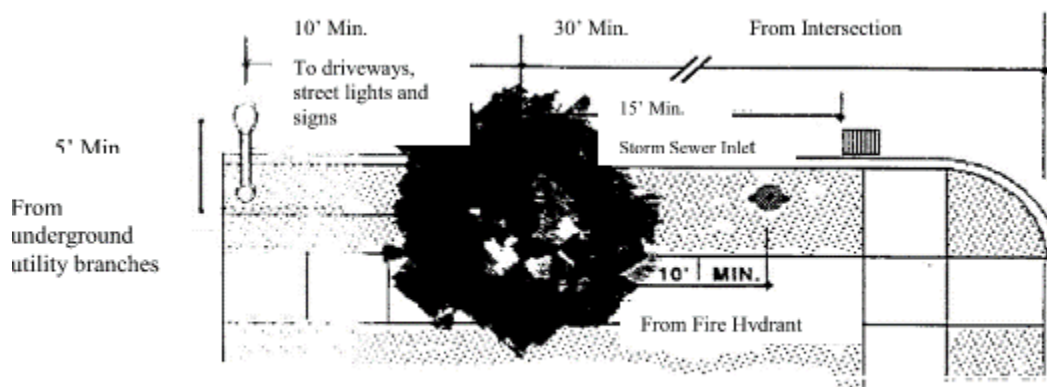


Figure 30: Tree Clearances

Section 4.177. Street Improvement Standards

This section contains the City's requirements and standards for pedestrian, bicycle, and transit facility improvements to public streets, or within public easements. The purpose of this section is to ensure that development, including redevelopment, provides transportation facilities that are safe, convenient, and adequate in rough proportion to their impacts.

(.01) *Development and related public facility improvements shall comply with the standards in this section, the Wilsonville Public Works Standards, and the Transportation System Plan, in rough proportion to the potential impacts of the development. Such improvements shall be constructed at the time of development or as provided by Section 4.140, except as modified or waived by the City Engineer for reasons of safety or traffic operations.*

Response: The applicant has proposed to construct improvements in SW Clutter Street along the full length of the property frontage, including urban street improvements and water, sewer and storm drainage system extensions consistent with Public Works plans and standards. See the R-series sheets in Attachment 6. Staff has advised the applicant that no public street improvements are warranted in the existing public right-of-way on the east side of the subject property because that segment is not identified in adopted plans for urban transportation use. This provision is satisfied.

(.02) *Street Design Standards.*

- A. *All street improvements and intersections shall provide for the continuation of streets through specific developments to adjoining properties or subdivisions.*
1. *Development shall be required to provide existing or future connections to adjacent sites through the use of access easements where applicable. Such easements shall be required in addition to required public street dedications as required in Section 4.236(.04).*

Response: The subject property's location on the south side of SW Clutter Street does not require reservation of a corridor for future street connectivity through the site. Moreover, there is an existing public right-of-way along the eastern property boundary that is not intended for future urban use; city staff has advised the applicant that no urban improvements are required in that right-of-way.

- B. *The City Engineer shall make the final determination regarding right-of-way and street element widths using the ranges provided in Chapter 3 of the Transportation System Plan and the additional street design standards in the Public Works Standards.*

Response: The applicant's consultant team has coordinated directly with the City's Development Engineering Manager and have designed the right-of-way and street improvements on the R-series sheets in Attachment 6 based on his direction. This standard is met.

C. *Rights-of-way.*

1. *Prior to issuance of a Certificate of Occupancy Building permits or as a part of the recordation of a final plat, the City shall require dedication of rights-of-way in accordance with the Transportation System Plan. All dedications shall be recorded with the County Assessor's Office.*
2. *The City shall also require a waiver of remonstrance against formation of a local improvement district, and all non-remonstrances shall be recorded in the County Recorder's Office as well as the City's Lien Docket, prior to issuance of a Certificate of Occupancy Building Permit or as a part of the recordation of a final plat.*
3. *In order to allow for potential future widening, a special setback requirement shall be maintained adjacent to all arterial streets. The minimum setback shall be 55 feet from the centerline or 25 feet from the right-of-way designated on the Master Plan, whichever is greater.*

Response: The applicant proposes to dedicate public right-of-way to widen and construct the south side of Clutter Street consistent with future construction to meet the applicable Collector design section and lane configuration. This standard is met.

D. *Dead-end Streets. New dead-end streets or cul-de-sacs shall not exceed 200 feet in length, unless the adjoining land contains barriers such as existing buildings, railroads or freeways, or environmental constraints such as steep slopes, or major streams or rivers, that prevent future street extension and connection. A central landscaped island with rainwater management and infiltration are encouraged in cul-de-sac design. No more than 25 dwelling units shall take access to a new dead-end or cul-de-sac street unless it is determined that the traffic impacts on adjacent streets will not exceed those from a development of 25 or fewer units. All other dimensional standards of dead-end streets shall be governed by the Public Works Standards. Notification that the street is planned for future extension shall be posted on the dead-end street. [Amended by Ord. # 674 11/16/09]*

Response: No new dead-end streets or cul-de-sac are proposed as part of this project. This standard does not apply.

E. *Corner or clear vision area.*

1. *A clear vision area which meets the Public Works Standards shall be maintained on each corner of property at the intersection of any two streets, a street and a railroad or a street and a driveway. However, the following items shall be exempt from meeting this requirement:*
 - a. *Light and utility poles with a diameter less than 12 inches.*
 - b. *Trees less than 6" d.b.h., approved as a part of the Stage II Site Design, or administrative review.*
 - c. *Except as allowed by b., above, an existing tree, trimmed to the trunk, 10 feet above the curb.*
 - d. *Official warning or street sign.*
 - e. *Natural contours where the natural elevations are such that there can be no cross-visibility at the intersection and necessary excavation would result in an unreasonable hardship on the property owner or deteriorate the quality of the site.*

Response: Landscape plantings at the two proposed driveways are designed to provide adequate visibility in both directions for safe operations. Landscape maintenance practices will ensure visibility on an ongoing basis.

F. *Vertical clearance - a minimum clearance of 12 feet above the pavement surface shall be maintained over all streets and access drives.*

Response: As illustrated on the L-series sheets in Attachment 6, no structural elements are proposed over streets and drives. Trees planted in proximity to streets will be trimmed to provide adequate vertical clearance as required. This standard is met.

G. *Interim improvement standard. It is anticipated that all existing streets, except those in new subdivisions, will require complete reconstruction to support urban level traffic volumes. However, in most cases, existing and short-term projected traffic volumes do not warrant improvements to full Master Plan standards. Therefore, unless otherwise specified by the Development Review Board, the following interim standards shall apply.*

1. *Arterials - 24 foot paved, with standard sub-base. Asphalt overlays are generally considered unacceptable, but may be considered as an interim improvement based on the recommendations of the City Engineer, regarding adequate structural quality to support an overlay.*
2. *Half-streets are generally considered unacceptable. However, where the Development Review Board finds it essential to allow for reasonable development, a half-street may be approved. Whenever a half-street improvement is approved, it shall conform to the requirements in the Public Works Standards:*
3. *When considered appropriate in conjunction with other anticipated or scheduled street improvements, the City Engineer may approve street improvements with a single asphalt lift. However, adequate provision must be made for interim storm drainage, pavement transitions at seams and the scheduling of the second lift through the Capital Improvements Plan.*

[Amended by Ord. 610, 5/1/06]

Response: The applicant has worked closely with City of Wilsonville Engineering staff to come up with an interim improvements plan for SW Clutter Street. The plan includes improvements on the south side of Clutter Street meeting the applicable Collector standard, which will safely accommodate traffic immediately as well as set the stage for similar improvements on the north side of Clutter Street when development of the neighboring property occurs in the future. This approach is appropriate because (1) the applicant does not control the property on the north side of the street and cannot dedicate additional right-of-way from it, (2) that property is not included in this development application, and (3) it is feasible to design an interim configuration that meets the Public Works Standards on the south side of the street and provides sufficient operational capacity to serve until the full street configuration can be constructed in the future. Future completion on the north side is likely to occur as part of a private development project on the abutting site as development continues to occur in the Coffee Creek Industrial Area. Significantly, this applicant is bearing more than half the costs of the required road improvements because they must include all three underground public utility system extensions – water, sanitary sewer, and storm drainage. The applicant therefore requests approval of the proposed public street improvement plan, as described in the R-series sheets in Attachment 6, pursuant to subparagraph 2.

(.03) Sidewalks. Sidewalks shall be provided on the public street frontage of all development. Sidewalks shall generally be constructed within the dedicated public right-of-way, but may be located outside of the right-of-way within a public easement with the approval of the City Engineer.

- A. *Sidewalk widths shall include a minimum through zone of at least five feet. The through zone may be reduced pursuant to variance procedures in Section 4.196, a waiver pursuant to Section 4.118, or by authority of the City Engineer for reasons of traffic operations, efficiency, or safety.*
- B. *Within a Planned Development, the Development Review Board may approve a sidewalk on only one side. If the sidewalk is permitted on just one side of the street, the owners will be required to sign an agreement to an assessment in the future to construct the other sidewalk if the City Council decides it is necessary.*

Response: As illustrated on the Sheet R1.10 in Attachment 6, the applicant is proposing a 6-foot sidewalk along the south side of Clutter Street. This standard is met.

(.04) Bicycle Facilities. Bicycle facilities shall be provided to implement the Transportation System Plan, and may include on-street and off-street bike lanes, shared lanes, bike boulevards, and cycle tracks. The design of on-street bicycle facilities will vary according to the functional classification and the average daily traffic of the facility.

Response: The proposed construction includes the eastbound bike lane with buffer striping on the south side of Clutter Street at all points west of the eastern proposed driveway. The eastbound bike lane striping terminates at a point approximately 158' west of the Garden Acres Road intersection, where the lane configuration transitions to shared use of two eastbound lanes at that intersection (left turn to Garden Acres Road and right turn to Ridder Road). This configuration is consistent with the design section for Clutter Road, and it will not require reconstruction when north-side full improvements are completed in the future. This requirement is met.

(.05) Multiuse Pathways. Pathways may be in addition to, or in lieu of, a public street. Paths that are in addition to a public street shall generally run parallel to that street, and shall be designed in accordance with the Public Works Standards or as specified by the City Engineer. Paths that are in lieu of a public street shall be considered in areas only where no other public street connection options are feasible, and are subject to the following standards.

- A. *Paths shall be located to provide a reasonably direct connection between likely pedestrian and bicyclist destinations. Additional standards relating to entry points, maximum length, visibility, and path lighting are provided in the Public Works Standards.*
- B. *To ensure ongoing access to and maintenance of pedestrian/bicycle paths, the City Engineer will require dedication of the path to the public and acceptance of the path by the City as public right-of-way; or creation of a public access easement over the path.*

Response: No multiuse pathways are proposed as part of this development, as Clutter Street will accommodate motor vehicles and bicycles, the sidewalk will accommodate pedestrians, and the property is not situated where an off-street pedestrian pathway is warranted to meet pedestrian access needs. This standard does not apply.

(.06) Transit Improvements

Development on sites that are adjacent to or incorporate major transit streets shall provide improvements as described in this section to any bus stop located along the site's frontage, unless waived by the City Engineer for reasons of safety or traffic operations. Transit facilities include bus stops, shelters, and related facilities. Required transit facility improvements may include the dedication of land or the provision of a public easement.

- A. *Development shall at a minimum provide:*
 - 1. *Reasonably direct pedestrian connections, as defined by Section 4.154, between building entrances and the transit facility and between buildings on the site and streets adjoining transit stops.*

2. *Improvements at major transit stops. Improvements may include intersection or mid-block traffic management improvements to allow for pedestrian crossings at major transit stops.*
- B. *Developments generating an average of 49 or more pm peak hour trips shall provide bus stop improvements per the Public Works Standards. Required improvements may include provision of benches, shelters, pedestrian lighting; or provision of an easement or dedication of land for transit facilities.*
- C. *In addition to the requirements of 4.177(.06)(A.)(2.), development generating more than 199 pm peak hour trips on major transit streets shall provide a bus pullout, curb extension, and intersection or mid-block traffic management improvements to allow for pedestrian crossings at major transit stops.*
- D. *In addition to the requirements of 4.177(.06)(A.) and (B.), development generating more than 500 pm peak-hour trips on major transit streets shall provide on-site circulation to accommodate transit service*

Response: These provisions are not applicable because the proposed development is not adjacent to a major transit facility.

(.07) Residential Private Access Drives. Residential Private Access Drives shall meet the following standards:

- A. *Residential Private Access Drives shall provide primary vehicular access to no more than four (4) dwelling units, excluding accessory dwelling units.*
- B. *The design and construction of a Residential Private Access Drive shall ensure a useful lifespan and structural maintenance schedule comparable, as determined by the City Engineer or City's Authorized Representative, to a local street constructed in conformance to current public works standards.*
 1. *The design of residential private access drives shall be stamped by a professional engineer registered in the state of Oregon and shall be approved by the City Engineer or City's Authorized Representative to ensure the above requirement is met.*
 2. *Prior to issuing a certificate of occupancy for any residential dwelling unit whose primary vehicular access is from a Residential Private Access Drive the City Engineer or City's Authorized Representative shall certify construction of the Residential Private Access Drive substantially conforms the design approved by the City Engineer or City's Authorized Representative.*
- C. *Residential Private Access Drives shall be named for addressing purposes. All Residential Private Access Drives shall use the suffix "Lane", i.e. SW Oakview Lane.*
- D. *Residential Private Access Drives shall meet or exceed the standards for access drives and travel lanes established in Subsection (.08) of this Section.*
[Amended by Ord. 682, 9/1/10]

Response: The proposed development is industrial, not residential. This standard does not apply.

(.08) Access Drive and Driveway Approach Development Standards.

- A. *An access drive to any proposed development shall be designed to provide a clear travel lane free from any obstructions.*

Response: The two proposed driveways are located to allow safe turning movements to and from the site, and to minimize conflicting movements within the site as well. Large semi-tractor-trailer rig movements are centralized between the two driveways, passenger vehicle movements occur primarily adjacent to the east and west edges of the truck maneuvering/docking area, and pedestrian paths are separated from the entrance/exit driveway corridors for safety. This provision is met.

- B. *Access drive travel lanes shall be constructed with a hard surface capable of carrying a 23-ton load.*
- C. *Where emergency vehicle access is required, approaches and driveways shall be designed and constructed to accommodate emergency vehicle apparatus and shall conform to applicable fire protection requirements. The City may restrict parking, require signage, or require other public safety improvements pursuant to the recommendations of an emergency service provider.*
- D. *Secondary or emergency access lanes may be improved to a minimum 12 feet with an all-weather surface as approved by the Fire District. All fire lanes shall be dedicated easements.*

Response: The proposed site plan demonstrates feasibility to comply with these structural and emergency access requirements. Detailed specifications will be included in plans submitted for site construction.

- E. *Minimum access requirements shall be adjusted commensurate with the intended function of the site based on vehicle types and traffic generation.*

Response: The two-driveway configuration, including proposed driveway widths, is appropriate to accommodate the anticipated mix of vehicles at the site, based on its intended use for light manufacturing and warehousing activities.

- F. *The number of approaches on higher classification streets (e.g., collector and arterial streets) shall be minimized; where practicable, access shall be taken first from a lower classification street.*

Response: Although it is designated a Collector in the TSP, Clutter Street is designated as an Addressing Street in the Coffee Creek Industrial Design Overlay District, which makes it the appropriate street on which to take access. In the case of the subject property, it is also the only urban street frontage available for driveway access.

- G. *The City may limit the number or location of connections to a street, or impose access restrictions where the roadway authority requires mitigation to alleviate safety or traffic operations concerns.*

Response: The two-driveway configuration is appropriate for this project because it is the best approach available for minimizing conflicts between different user groups (trucks/passenger cars/pedestrians). For example, because the building is designed to accommodate two potential tenants with separate office spaces at the east and west, having a single driveway would require some passenger vehicle trips (employees and site visitors) to either traverse the truck maneuvering area or travel all the way around the back of the building to reach their destination. The DKS Traffic Impact Study (Attachment 11) supports the two-driveway configuration, while suggesting that the eastern driveway be shifted west to be farther from the Garden Acres Road intersection; however, the eastern intersection's proposed position is more than the required 100 feet from that intersection.

- H. *The City may require a driveway to extend to one or more edges of a parcel and be designed to allow for future extension and inter-parcel circulation as adjacent properties develop. The City may also require the owner(s) of the subject site to record an access easement for future joint use of the approach and driveway as the adjacent property(ies) develop(s).*

Response: Realigning driveways to the property corners is inappropriate at this site for the following reasons. At the northeast corner, the driveway would form an offset-aligned fourth leg of the Garden Acres intersection, which is already constrained by the angular relationship of

Ridder Road as its eastern leg. This would create an awkward and confusing situation for motorists. At the northwest corner, locating the driveway farther west than the proposed alignment would compromise the root zones of the five mature Douglas fir trees in the northwestern part of the site, which the site plan is specifically designed to protect and retain as an amenity feature. For those specific reasons, the City should not impose requirements under this provision in this case.

- I. *Driveways shall accommodate all projected vehicular traffic on-site without vehicles stacking or backing up onto a street.*
- J. *Driveways shall be designed so that vehicle areas, including but not limited to drive-up and drive-through facilities and vehicle storage and service areas, do not obstruct any public right-of-way.*

Response: The driveways and internal circulation are configured to allow exiting vehicles to queue as necessary within the site without congesting incoming vehicle movements. This provision is satisfied. The site includes no drive-up, drive-through, or vehicle storage or service areas. These provisions are met.

- K. *Approaches and driveways shall not be wider than necessary to safely accommodate projected peak hour trips and turning movements, and shall be designed to minimize crossing distances for pedestrians.*

Response: The proposed driveway widths have been based on movement patterns and turning radii associated with the anticipated mix of vehicles, to minimize potential for conflicting movements within the public right-of-way.

- L. *As it deems necessary for pedestrian safety, the City, in consultation with the roadway authority, may require traffic-calming features, such as speed tables, textured driveway surfaces, curb extensions, signage or traffic control devices, or other features, be installed on or in the vicinity of a site.*

Response: The DKS TIS for the project does not identify any need for traffic-calming features to be installed in public streets in the vicinity.

- M. *Approaches and driveways shall be located and designed to allow for safe maneuvering in and around loading areas, while avoiding conflicts with pedestrians, parking, landscaping, and buildings.*

Response: As noted above, the two proposed driveways are located to allow safe turning movements to and from the site, and to minimize conflicting movements within the site as well. Large semi-tractor-trailer rig movements are centralized between the two driveways, passenger vehicle movements occur primarily adjacent to the east and west edges of the truck maneuvering/docking area, and pedestrian paths are separated from the entrance/exit driveway corridors for safety. Driveway widths are designed to allow turning movements by large vehicles without conflicting movements in the public street. This provision is met.

- N. *Where a proposed driveway crosses a culvert or drainage ditch, the City may require the developer to install a culvert extending under and beyond the edges of the driveway on both sides of it, pursuant applicable Public Works standards.*

Response: This provision is not applicable because this project will construct a public storm drain system line extension along the SW Clutter Street frontage. See R-series sheets in Attachment 6 for details.

O. *Except as otherwise required by the applicable roadway authority or waived by the City Engineer, temporary driveways providing access to a construction site or staging area shall be paved or graveled to prevent tracking of mud onto adjacent paved streets.*

Response: Following land use approval, the applicant will provide construction plans that comply with this requirement.

P. *Unless constrained by topography, natural resources, rail lines, freeways, existing or planned or approved development, or easements or covenants, driveways proposed as part of a residential or mixed-use development shall meet local street spacing standards and shall be constructed to align with existing or planned streets, if the driveway.*

1. *Intersects with a public street that is controlled, or is to be controlled in the planning period, by a traffic signal;*
2. *Intersects with an existing or planned arterial or collector street; or*
3. *Would be an extension of an existing or planned local street, or of another major driveway.*

Response: This provision is not applicable because the proposed project is not a residential or mixed-use development.

(.09) *Minimum street intersection spacing standards.*

- A. *New streets shall intersect at existing street intersections so that centerlines are not offset. Where existing streets adjacent to a proposed development do not align properly, conditions shall be imposed on the development to provide for proper alignment.*
- B. *Minimum intersection spacing standards are provided in Transportation System Plan Table 3-2.*

Response: This provision is not applicable because no new street intersection is proposed as part of this project.

(.10) *Exceptions and Adjustments. The City may approve adjustments to the spacing standards of subsections (.08) and (.09) above through a Class II process, or as a waiver per Section 4.118(.03)(A.), where an existing connection to a City street does not meet the standards of the roadway authority, the proposed development moves in the direction of code compliance, and mitigation measures alleviate all traffic operations and safety concerns. Mitigation measures may include consolidated access (removal of one access), joint use driveways (more than one property uses same access), directional limitations (e.g.,*

Response: This provision is not applicable because subsections (.08) and (.09) are not applicable for the reasons stated above.

Section 4.179. Mixed Solid Waste and Recyclables Storage in New Multi-Unit Residential and Non-Residential Buildings

(.01) *All site plans for multi-unit residential and non-residential buildings submitted to the Wilsonville Development Review Board for approval shall include adequate storage space for mixed solid waste and source separated recyclables. [Amended by Ordinance No. 538, 2/21/02.]*

Response: As shown on Sheets C1.32 and A5.06 of Attachment 6, solid waste facilities are proposed at the southwest corner of the site, with sufficient linear approach area and turning radii for service vehicles. Correspondence from Republic Services in Attachment 9 confirms the trash hauler’s assessment that the waste facilities are appropriate for the proposed use. This standard is met.

(.02) *The floor area of an interior or exterior storage area shall be excluded from the calculation of building floor area for purposes of determining minimum storage requirements.*

Response: The area of the waste storage facilities has not been included in the computation of floor area requiring waste storage. This standard is met.

(.03) The storage area requirement shall be based on the predominant use(s) of the building. If a building has more than one of the uses listed herein and that use occupies 20 percent or less of the floor area of the building, the floor area occupied by that use shall be counted toward the floor area of the predominant use(s). If a building has more than one of the uses listed herein and that use occupies more than 20 percent of the floor area of the building, then the storage area requirement for the whole building shall be the sum of the requirement for the area of each use.

Response: The building is proposed to have industrial uses, consisting primarily of warehouse and distribution with up to 25% manufacturing. While there will be incidental office area, it falls below the 20% threshold and the waste storage areas are thus computed based on those industrial use categories. The applicant's method of calculation complies with this provision.

(.04) Storage areas for multiple uses on a single site may be combined and shared.

Response: As shown on Sheet A5.06 of Attachment 6, the applicant is proposing a single waste storage area. This standard is met.

(.05) The specific requirements are based on an assumed storage height of four feet for solid waste/recyclables. Vertical storage higher than four feet but no higher than seven feet may be used to accommodate the same volume of storage in a reduced floor space. Where vertical or stacked storage is proposed, the site plan shall include drawings to illustrate the layout of the storage area and dimensions for the containers.

Response: The applicant is proposing to use waste bins not exceeding seven feet in height, consistent with these standards, to accommodate anticipated waste volume in a smaller space.

(.06) The specific requirements for storage area are as follows:

- A. *Multi-unit residential buildings containing five-ten units shall provide a minimum storage area of 50 square feet. Buildings containing more than ten residential units shall provide an additional five square feet per unit for each unit above ten.*
- B. *Non-residential buildings shall provide a minimum storage area of ten square feet, plus:*
 - 1. *Office: Four square feet per 1,000 square feet gross floor area (GFA);*
 - 2. *Retail: Ten square feet per 1,000 square feet GFA;*
 - 3. *Wholesale / Warehouse / Manufacturing: Six square feet per 1,000 square feet GFA; and*
 - 4. *Other: Four square feet per 1,000 square feet GFA.*

Response: Based on the proposed 110,366 square feet of warehouse/distribution and manufacturing use, this standard would require a nominal area of 662 square feet for waste storage. However, based on the applicant's knowledge of warehouse/distribution operations, this area would be much larger than needed to accommodate most users. Accordingly, the applicant is proposing an exterior waste storage enclosure at the southwestern corner of the site (rear of the building) containing an area of 210 square feet, and requesting Waiver #6 to allow it. The proposed waste enclosure location and configuration have been reviewed and approved by the trash hauler, Republic Services, anticipating weekly service (see Attachment 9). Notably, Republic Services routinely provides service more frequently than once a week for some customers in its service area, so frequent service is available at this site to meet waste handling needs in the event a future tenant generates more waste than anticipated. With approval of the requested waiver, the proposed development complies.

(.07) The applicant shall work with the City's franchised garbage hauler to ensure that site plans provide adequate access for the hauler's equipment and that storage area is adequate for the anticipated volumes, level of service and any other special circumstances which may result in the storage area exceeding its capacity. The hauler shall notify the City by letter of their review of site plans and make recommendations for changes in those plans pursuant to the other provisions of this section.

Response: Attachment 9 is a letter from the trash hauler agreeing that the waste storage facility is appropriate for the proposed warehouse/distribution and manufacturing use, and that adequate circulation is available on site. This standard is met.

(.08) Existing multi-unit residential and non-residential developments wishing to retrofit their structures to include storage areas for mixed solid waste and recycling may have their site plans reviewed and approved through the Class I Administrative Review process, according to the provisions of Section 4.035. Site plans for retrofitting existing developments must conform to all requirements of this Section, "Mixed Solid Waste and Recyclables Storage In New Multi-Unit Residential and Non-Residential Buildings," and 4.430, "Location, Design and Access Standards for Mixed Solid Waste and Recycling Areas," of the Wilsonville City Code.

Response: The applicant is not proposing to retrofit existing solid waste facilities. This standard does not apply.

(.09) When applicable, the applicant must comply with Wilsonville Code Section 8.010. [Added by Ordinance #837 – August 5, 2019]

Response: Wilsonville Code Section 8.010 states in its entirety that "The regulation of disposal and hauling, including both hauler and customer requirements, for solid waste, recycling, yard debris, organic materials, and other materials shall be adopted by City ordinance." The applicant intends to comply with the applicable standards set by the City and the hauler.

Section 4.180. Exceptions and Modifications - Projections into Required Yards

(.01) Certain non-structural architectural features are permitted to project into required yards or courts, without requiring the approval of a Variance or Reduced Setback Agreement, as follows:

- A. *Into any required yard:*
 - 1. *Architectural features may project into the required yard not more than two (2) inches for each foot of required setback.*
 - 2. *Open, unenclosed fire escapes may project a distance not exceeding forty-eight (48) inches.*
- B. *Into any required yard, adjoining a street or tract with a private drive: [Amended by Ord. 682, 9/9/10]*
 - 1. *Architectural features may project a distance not exceeding forty (40) inches.*
 - 2. *An uncovered porch, terrace, or patio extending no more than two and one-half (2 1/2) feet above the finished elevation may extend within three (3) feet of an interior side lot line, or within ten (10) feet of a front lot line or of an exterior side lot line.*

Response: As illustrated on Sheet C1.10 in Attachment 6, the proposed structure complies with the required setbacks; no projections into setbacks are proposed. This standard does not apply.

Section 4.181. Exceptions & Modifications - Height Limits

Except as stipulated in Sections 4.800 through 4.804, height limitations specified elsewhere in this Code shall not apply to barns, silos or other farm buildings or structures on farms; to church spires; belfries; cupolas; and domes; monuments; water towers; windmills; chimneys; smokestacks; fire and hose towers; flag poles; above-ground electric transmission, distribution, communication and signal lines, towers and poles; and properly screened mechanical and elevator structures.

Response: As shown on Sheet A2.10 in Attachment 6, the proposed building will have a height of 45 feet, which complies with the minimum 30-foot requirement as well as the maximum allowed height, which in Coffee Creek Industrial Design Overlay can exceed six stories. This height measurement excludes any future mechanical equipment. None of the other structure types noted above are proposed as part of this development. This standard is met.

Section 4.182. Exceptions and Modifications - Setback Modifications

In any residential zone where the average depth of at least two (2) existing front yards on adjoining lots or within one hundred fifty (150) feet of the lot in question and within the same block front is less or greater than the minimum or maximum front yard depth prescribed elsewhere in this Code, the required depth of the front yard on such lot shall be modified. In such case, the front yard depth shall not be less than the average depth, nor more than the greater depth, of existing front yards on at least two (2) adjoining lots within one hundred and fifty (150) feet. In the case of a corner lot, the depth of the front yard may be reduced to that of the lot immediately adjoining, provided, however, that the depth of a front yard on any corner lot shall be at least ten (10) feet.

Response: This site is not in a residential zone. This standard does not apply.

Section 4.191. Non-Conforming Site Conditions

(.01) A property with non-conforming site conditions that is in use may continue to be used.

(.02) If a property with non-conforming site conditions is abandoned, as defined herein, for a period of eighteen (18) months, it may not again be used unless brought into conformity with the requirements of this ordinance. Except, however, that an abandoned property with non-conforming site conditions may be re-occupied if a Variance is approved per the requirements of Section 4.196.

(.03) Normal maintenance of a property with non-conforming site conditions is permitted, provided that the site conditions do not become even less conforming as a result.

(.04) Any application for a change of occupancy, as determined by the City's Building Official, or any application for discretionary review by the City shall justify conditions of approval that will bring the site into conformity with site improvement standards.

(.05) A structure with non-conforming site conditions may be expanded or enlarged, provided that there is a proportional decrease in the non-conforming site conditions. For example, an application to expand the floor area of a building by 10%, on a site that has 20% shortage of required parking, will be permitted, provided that at least a 10% increase in parking is also provided.

Response: The site is currently operating as a personal residence and an equestrian facility. When the proposed development is constructed, the existing use will cease to operate on this site and the entire site will be developed to meet current development requirements. No non-conforming site conditions will remain.

Section 4.192. Non-Conforming Lots

(.01) A non-conforming lot may be used for any purpose allowed by zoning, provided that any structure built or located upon a non-conforming lot must meet all of the lot development standards of the zone, or be approved through the Variance procedures of Section 4.196. Except, however, if the non-conforming lot is contiguous to other property under legal control of the same owner or owners, no variance shall be granted for a structure or use that could be accommodated on that contiguous lot, or combination of lots, without a Variance.

(.02) A lot line adjustment between nonconforming lots may be approved where either:

- A. Both lots involved in the adjustment will be conforming to zoning standards as a result of the adjustment; or*
- B. The Planning Director or Development Review Board finds, based on information in the record, that each of the lots involved in the adjustment will be suitable for development as allowed in the zone, as a result of the adjustment.*

Response: Upon annexation, the proposed development site will be a conforming lot. These standards do not apply.

Section 4.199 Outdoor Lighting

Section 4.199.20. Applicability.

(.01) This Ordinance is applicable to:

- A. Installation of new exterior lighting systems in public facility, commercial, industrial and multi-family housing projects with common areas.*
- B. Major additions or modifications (as defined in this Section) to existing exterior lighting systems in public facility, commercial, industrial and multi-family housing projects with common areas.*

Response: The proposed development is for an industrial building; therefore, this section applies.

(.02) Exemption. The following luminaires and lighting systems are EXEMPT from these requirements:

- A. Interior lighting.*
- B. Internally illuminated signs.*
- C. Externally illuminated signs.*
- D. Temporary lighting for theatrical, television, and performance areas.*
- E. Lighting in swimming pools and other water features governed by Article 680 of the National Electrical Code.*
- F. Building Code required exit path lighting.*
- G. Lighting specifically for stairs and ramps.*
- H. Temporary and seasonal lighting provided that individual lamps are 10 watts or less.*
- I. Lighting required and/or regulated by the City (i.e. construction related activities), Federal Aviation Administration, U.S. Coast Guard or other Federal or State agency.*
- J. Single-family residential lighting.*
- K. Code Required Signs.*
- L. American flag.*
- M. Landscape lighting.*
- N. Lights approved by the City through an Administrative Review Temporary Use Permit process.*
- O. Public street lights.*
- P. ATM security lighting.*
- Q. Those “Exceptions” listed in the “Exterior Lighting Power Allowance” provisions of the Oregon Energy Efficiency Specialty Code.*

Response: The applicant is seeking approval of those lighting systems which do not fall into the exemptions listed above.

Section 4.199.30. Lighting Overlay Zones.

(.01) The designated Lighting Zone as indicated on the Lighting Overlay Zone Map for a commercial, industrial, multi-family or public facility parcel or project shall determine the limitations for lighting systems and fixtures as specified in this Ordinance.

- A. Property may contain more than one lighting zone depending on site conditions and natural resource characteristics.*

Response: As illustrated in Figure 30 (in Section 4.199.60 below), this site and neighboring properties on all sides are entirely in Lighting Zone LZ 2. This standard is met.

(.02) The Lighting Zones shall be:

- A. LZ 1. Developed areas in City and State parks, recreation areas, SROZ wetland and wildlife habitat areas; developed areas in natural settings; sensitive night environments; and rural areas. This zone is intended to be the default condition for rural areas within the City.
- B. LZ 2. Low-density suburban neighborhoods and suburban commercial districts, industrial parks and districts. This zone is intended to be the default condition for the majority of the City.
- C. LZ 3. Medium to high-density suburban neighborhoods and districts, major shopping and commercial districts as depicted on the Lighting Overlay Zone Map.
- D. LZ 4. Reserved for limited applications with special lighting requirements. This zone is appropriate for users who have unique site or operating circumstances that warrant additional light. This zone shall not be applied to residential or agricultural areas.

[Section 4.199.30(.02) amended by Ord. 688, 11/15/10]

Response: Based on the descriptions above, this site is in Lighting Zone LZ 2 (as confirmed by the City's Lighting Overlay Zones map).

(.03) Modification of Lighting Zones.

- A. *The City Council may modify the designated Lighting Zones of one or more parcels if the City Council finds that the original Lighting Zone was in error, a change in circumstances has occurred warranting the change since the designation was established or the purposes of this section are better served.*
- B. *The Development Review Board (DRB) may modify the designated Lighting Zones as part of the Stage II, Site Design Review Process if the DRB finds that the original Lighting Zone was in error, or a change in circumstances has occurred warranting the change since the designation was established or the purposes of this section are better served.*
- C. *This ordinance establishes a Lighting Overlay Zone Map. The Planning Division shall maintain the current Lighting Overlay Zone Map.*

Response: The applicant is not seeking any modifications from the City's Lighting Overlay Zones map. This standard does not apply.

Section 4.199.40. Lighting Systems Standards for Approval.

(.01) Non-Residential Uses and Common Residential Areas.

- A. *All outdoor lighting shall comply with either the Prescriptive Option or the Performance Option below.*

Response: The applicant is utilizing the Prescriptive Option for outdoor lighting.

- B. *Prescriptive Option. If the lighting is to comply with this Prescriptive Option, the installed lighting shall meet all of the following requirements according to the designated Lighting Zone.*
 - 1. *The maximum luminaire lamp wattage and shielding shall comply with Table 7.*
 - 2. *Except for those exemptions listed in Section 4.199.20(.02), the exterior lighting for the site shall comply with the Oregon Energy Efficiency Specialty Code, Exterior Lighting.*
 - 3. *The maximum pole or mounting height shall be consistent with Table 8.*
 - 4. *Each luminaire shall be set back from all property lines at least 3 times the mounting height of the luminaire:*
 - a. *Exception 1: If the subject property abuts a property with the same base and lighting zone, no setback from the common lot lines is required.*
 - b. *Exception 2: If the subject property abuts a property which is zoned (base and lighting) other than the subject parcel, the luminaire shall be setback*

three times the mounting height of the luminaire, measured from the abutting parcel's setback line. (Any variance or waiver to the abutting property's setback shall not be considered in the distance calculation).

- c. *Exception 3: If the luminaire is used for the purpose of street, parking lot or public utility easement illumination and is located less than 3 mounting heights from the property line, the luminaire shall include a house side shield to protect adjoining property.*
- d. *Exception 4: If the subject property includes an exterior column, wall or abutment within 25 feet of the property line, a luminaire partly shielded or better and not exceeding 60 lamp watts may be mounted onto the exterior column, wall or abutment or under or within an overhang or canopy attached thereto.*
- e. *Exception 5: Lighting adjacent to SROZ areas shall be set back 3 times the mounting height of the luminaire, or shall employ a house side shield to protect the natural resource area.*

Response: Sheet C8.10 in Attachment 6 shows proposed locations for bollard lights, shielded site lights and shielded wall packs that comply with the Prescriptive Option. Manufacturers' data sheets for typical fixtures are provided in Attachment 10. The subject property is in Lighting Overlay Zone 2 and surrounding properties are in Industrial land use designations. The applicant believes this situation falls within the intended meaning of Exception 1. This requirement is met.

- C. *Performance Option. If the lighting is to comply with the Performance Option, the proposed lighting design shall be submitted by the applicant for approval by the City meeting all of the following:*
 - 1. *The weighted average percentage of direct uplight lumens shall be less than the allowed amount per Table 9.*
 - 2. *The maximum light level at any property line shall be less than the values in Table 9, as evidenced by a complete photometric analysis including horizontal illuminance of the site and vertical illuminance on the plane facing the site up to the mounting height of the luminaire mounted highest above grade. The Building Official or designee may accept a photometric test report, demonstration or sample, or other satisfactory confirmation that the luminaire meets the shielding requirements of Table 7. Luminaires shall not be mounted so as to permit aiming or use in any way other than the manner maintaining the shielding classification required herein:*
 - a. *Exception 1. If the property line abuts a public right-of-way, including a sidewalk or street, the analysis may be performed across the street at the adjacent property line to the right-of-way.*
 - b. *Exception 2. If, in the opinion of the Building Official or designee, compliance is impractical due to unique site circumstances such as lot size or shape, topography, or size or shape of building, which are circumstances not typical of the general conditions of the surrounding area. The Building Official may impose conditions of approval to avoid light trespass to the maximum extent possible and minimize any additional negative impacts resulting to abutting and adjacent parcels, as well as public rights-of-way, based on best lighting practices and available lighting technology.*
 - 3. *The maximum pole or mounting height shall comply with Table 8.*

Response: The applicant is utilizing the prescriptive option rather than the performance option. This standard does not apply.

- D. *Curfew. All prescriptive or performance based exterior lighting systems shall be controlled by automatic device(s) or system(s) that:*
1. *Initiate operation at dusk and either extinguish lighting one hour after close or at the curfew times according to Table 10; or*
 2. *Reduce lighting intensity one hour after close or at the curfew time to not more than 50% of the requirements set forth in the Oregon Energy Efficiency Specialty Code unless waived by the DRB due to special circumstances; and*
 3. *Extinguish or reduce lighting consistent with 1. and 2. above on Holidays.*
- The following are exceptions to curfew:*
- a. *Exception 1: Building Code required lighting.*
 - b. *Exception 2: Lighting for pedestrian ramps, steps and stairs.*
 - c. *Exception 3: Businesses that operate continuously or periodically after curfew.*

Response: It is feasible for the applicant to install an automatic device or system meeting these requirements; compliance can be assured through an appropriate condition of approval.

(.02) Special Permit for Specific Lighting Fixtures and Systems and When Exceeding Lighting Requirements.

- A. *This section is intended to apply to situations where more than normal foot candles are required due to a unique circumstance or use or where it is absolutely essential to perform the proposed activities after dark. All special permits shall be reviewed by the DRB.*
- B. *Upon issuance of a special permit by the Development Review Board (DRB), lighting systems not complying with the technical requirements of this Ordinance may be installed, maintained, and replaced for lighting that exceeds the maximums permitted by this Ordinance. This section is intended to be applied to uses such as sports lighting systems including but not limited to, sport fields and stadiums, such as baseball and football field lighting, tennis court lighting, swimming pool area lighting and prisons; other very intense lighting defined as having a light source exceeding 200,000 lumens or an intensity in any direction of more than 2,000,000 candelas; building façade lighting of portions of buildings over two stories high; and public monuments.*
- C. *To obtain such a permit, applicants shall demonstrate that the proposed lighting installation:*
 1. *Is within Lighting Zone 3 or above.*
 2. *Has been designed to minimize obtrusive light and artificial sky glow, supported by a signed statement from a registered civil or electrical engineer describing the mitigation measures. Such statement shall be accompanied by calculations indicating the light trespass levels (horizontal and vertical at ground level) at the property line.*
 3. *Will not create excessive glare, sky glow, or light trespass beyond that which can be reasonably expected by application of best lighting practices, and available technology.*
 4. *Provides appropriate lighting curfew hours based on the use and the surrounding areas.*
- D. *The DRB may impose conditions of approval to mitigate any negative impacts resulting to the abutting parcel, based on best lighting practices and available lighting technology.*

- E. The City may charge a review fee and may, at the Building Official's option, employ the services of a qualified professional civil or electrical engineer to review such submittals and the cost thereof shall be an additional fee charged to the applicant.

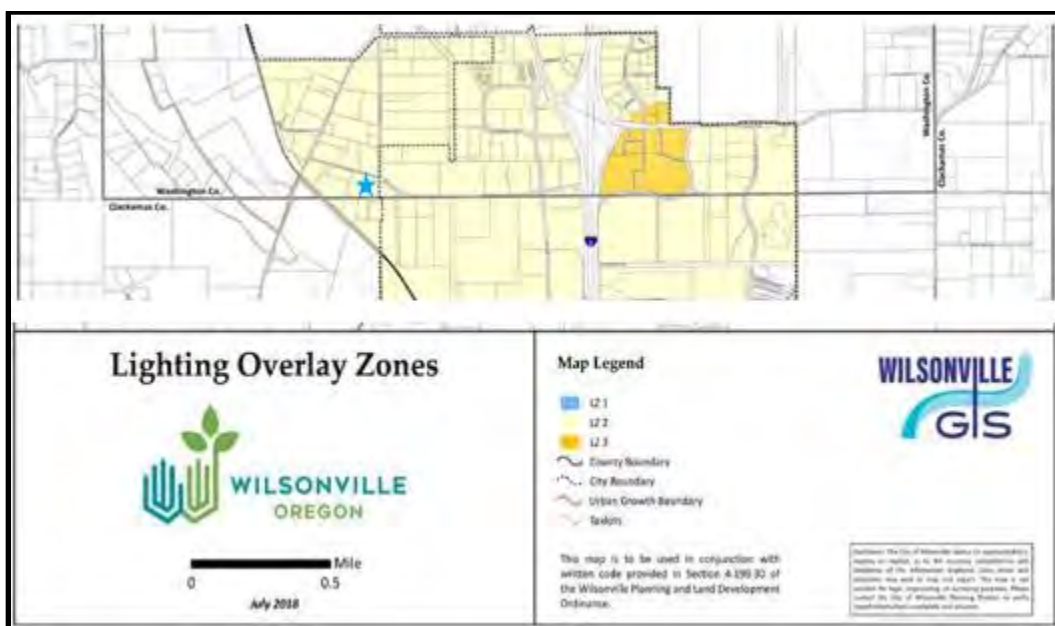
Response: The site does not appear to be eligible for a special lighting permit since it is located in Lighting Overlay Zone 2. The applicant is not seeking approval of a special permit for lighting. This standard does not apply.

Section 4.199.50. Submittal Requirements.

(.01) Applicants shall submit the following information as part of DRB review or administrative review of new commercial, industrial, multi-family or public facility projects:

- A. A statement regarding which of the lighting methods will be utilized, prescriptive or performance, and a map depicting the lighting zone(s) for the property.
- B. A site lighting plan that clearly indicates intended lighting by type and location. For adjustable luminaires, the aiming angles or coordinates shall be shown.
- C. For each luminaire type, Drawings, cut sheets or other documents containing specifications for the intended lighting including but not limited to, luminaire description, mounting, mounting height, lamp type and manufacturer, lamp watts, ballast, optical system/distribution, and accessories such as shields.
- D. Calculations demonstrating compliance with Oregon Energy Efficiency Specialty Code, Exterior Lighting, as modified by Section 4.199.40(.01)(B.)(2.) [Amended by Ord. 688, 11/15/10]
- E. Lighting plans shall be coordinated with landscaping plans so that pole lights and trees are not placed in conflict with one another. The location of lights shall be shown on the landscape plan. Generally, pole lights should not be placed within one pole length of landscape and parking lot trees.
- F. Applicants shall identify the hours of lighting curfew.

Response: The applicant proposes to comply using the Prescriptive Method. The property, identified by a blue star in the excerpt from the City's Lighting Overlay Zones Map below, and surrounding sites are all in Lighting Overlay Zone 2 (LZ 2).



Sheet C8.10 in Attachment 6 shows proposed locations for lighting fixtures, and luminaire specifications (manufacturers’ data sheets for typical fixtures) are provided in Attachment 10. Lighting locations have been coordinated with the landscape planting plan to avoid conflicts. In Lighting Overlay Zone 2, the lighting curfew time is 10:00 p.m. (2200 hours).

The [OR Energy Code] for outdoor illumination establishes maximum energy use figures for building exterior areas, expressed in Watts per Square Foot (W/SF), with reference to Table 9.4.2 Individual Lighting Power Allowances for Building Exteriors [ANSI/ASHRAE/IES Standard 90.1-2019 (I-P)]. For buildings in Zones 1 through 4, those maximum energy consumption standards allow a range between 0.03 W/SF and 0.08 W/SF for Uncovered Parking Areas, and between 0.03 and 0.04 W/SF for Landscaping Areas.

The applicant’s exterior lighting plan includes the following exterior area lighting fixtures (not including five proposed low-intensity bollard lights along the proposed pedestrian paths, including the Wayside, which are exempt):

Power Consumption of Proposed Lighting Fixtures

Shielded Fixture Type	Count	Input Watts/Unit	Total Watts	Watts/Area (132,974 SF parking & landscape)
Pole-Mounted Luminaire (IVELOT Type II IVAT2-100L, 4000K)	4	93 W	372 W	.0028
Wall-Mounted WS LED Wallpack WSLLED120L50U1	19	93.88 W	1,784 W	.0134
Total Proposed Fixtures and Consumption	23		2,156 W	.0162 W/SF
Allowable Maximum Range (Zones 1 – 4)			3,989 W or higher	.030 W/SF or higher
Proposed Power Consumption as % of Lowest Allowable Maximum Per Code			54%	54%

Based on this analysis, power consumption per unit area for the proposed development is only 54% of the lowest allowed power consumption rate per unit of area. This requirement is satisfied.

(.02) *In addition to the above submittal requirements, Applicants using the Prescriptive Method shall submit the following information as part of the permit set plan review:*

- A. *A site lighting plan (items 1 A - F, above) which indicates for each luminaire the 3 mounting height line to demonstrate compliance with the setback requirements. For luminaires mounted within 3 mounting heights of the property line the compliance exception or special shielding requirements shall be clearly indicated.*

Response: Sheet C8.10 provides a Site Lighting Plan. Notably, all the neighboring properties are designated Industrial and are also in the same Lighting Overlay Zone, LZ 2, as the subject property. Luminaire setbacks and other design factors are subject to the Exceptions in Section 4.199.40(.01)B.4.

(.03) In addition to the above submittal requirements, Applicants using the Performance Method shall submit the following information as part of the permit set plan review:

- A. *Site plan showing horizontal isocandle lines, or the output of a point-by-point computer calculation of the horizontal illumination of the site, showing property lines and light levels immediately off of the subject property.*
- B. *For each side of the property, the output of a point-by-point vertical footcandle calculation showing illumination in the vertical plane at the property line from grade to at least 10 feet higher than the height of the tallest pole.*
- C. *Lighting plans shall be prepared by a qualified licensed engineer.*

Response: The applicant is utilizing the prescriptive option rather than the performance option. This standard does not apply.

(.04) In addition to the above applicable submittal requirements, Applicants for Special Permits shall submit the following to the DRB for review:

- A. *Tabulation of International Engineering Society of North America (IESNA) lighting recommendations for each task including area illuminated, recommended illumination level, actual maintained illumination level, and luminaires used specifically to achieve the indicated criteria.*
- B. *Lighting plans shall be prepared by a qualified licensed engineer.*

Response: The applicant is not seeking approval of a special permit for lighting. This standard does not apply.

(.05) For all calculations, the following light loss factors shall be used unless an alternative is specifically approved by the City:

<i>Metal halide</i>	<i>0.6</i>
<i>High pressure sodium</i>	<i>0.8</i>
<i>Compact fluorescent</i>	<i>0.7</i>
<i>Full size fluorescent</i>	<i>0.75</i>
<i>Incandescent</i>	<i>0.9</i>
<i>Halogen</i>	<i>0.95</i>
<i>Other</i>	<i>As approved</i>

Response: The applicant understands these factors to apply to implementation of the Performance Method, which is not used in this application.

Section 4.199.60. Major Additions or Modifications to Pre-Existing Sites.

(01.) Major Additions. If a major addition occurs on a property, all of the luminaires on the site shall comply with the requirements of this Section. For purposes of this sub-section, the following are considered to be major additions:

- A. *Additions of 50 percent or more in terms of additional dwelling units, gross floor area, seating capacity, or parking spaces, either with a single addition or with cumulative additions after July 2, 2008.*
- B. *Modification or replacement of 50 percent or more of the outdoor lighting luminaires' within a 5-year timeframe existing as of July 2, 2008.*

Response: The applicant has submitted requests for a new development, not a major addition. This standard does not apply.

Lighting Zone	Fully Shielded	Shielded	Partly Shielded	Unshielded
LZ 1	70	20	13	Low voltage landscape lighting 50 watts or less
LZ 2	100	35	39	Low voltage landscape lighting 50 watts or less
LZ 3	250	100	70	Landscape and facade lighting 100 watts or less; ornamental lighting on private drives of 39 watts and less
LZ 4	450	150	150	Landscape and facade lighting 250 watts or less; ornamental lights on private drives and lanterns 70 watts or less; marquee lighting not employing medium based lamps

[Table 7 amended by Ord. 682, 9/9/10; Ord. 688, 11/15/10]

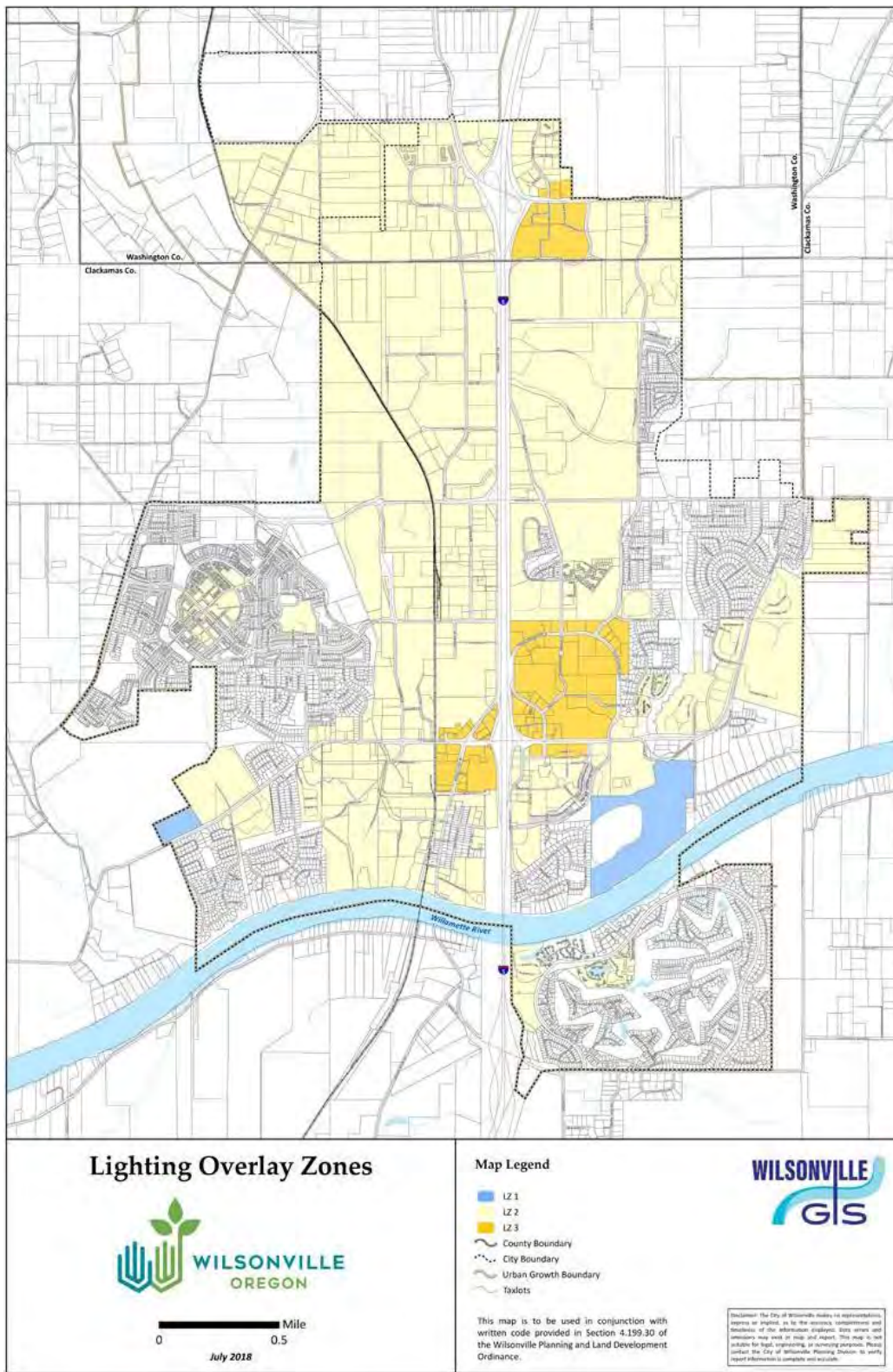
Lighting Zone	Lighting for private drives, driveways, parking, bus stops and other transit facilities	Lighting for walkways, bikeways, plazas and other pedestrian areas	All other lighting
LZ 0	20	8	4
LZ 1	25	12	4
LZ 2	40	18	8
LZ 3	40	18	16
LZ 4	Height limit to be determined by Special Use Permit Only		

Lighting mounted onto buildings or other structures shall not exceed a mounting height greater than 4 feet higher than the tallest part of the building or structure at the place where the lighting is installed, nor higher than 33.33 percent of the horizontal distance of the light from the nearest property line, whichever is less.

Lighting Zone	Maximum percentage of direct upright lumens	Maximum Light Level at Property Line	
		Horizontal plane at grade (foot candles - fc)	Vertical plane facing the site in question, from grade to mounting height of highest mounted luminaire (foot candles – fc)
LZ 0	0	0.01 fc	0.02 fc
LZ 1	1%	0.05 fc	0.1 fc
LZ 2	5%	0.2 fc	0.4 fc
LZ 3	10%	0.4 fc	0.8 fc
LZ 4	20%	0.8 fc	1.6 fc

Table 10: Curfew	
Lighting Zone	Curfew Time
LZ 0	8:00 PM (2000 hours)
LZ 1	
LZ 2	10:00 PM (2200 hours)
LZ 3	Midnight (2400 hours)
LZ 4	

[Tables, above, renumbered by Ord. 688, 11/15/10]



**Figure 30: Lighting Overlay Zone Map
[Amended by Ord. 821 adopted 7/2/2018]**

[Section 4.199 – 4.199.60 added by Ord. No. 649, adopted 6/2/08]

UNDERGROUND UTILITIES

Section 4.300. General

(.01) *The City Council deems it reasonable and necessary in order to accomplish the orderly and desirable development of land within the corporate limits of the City, to require the underground installation of utilities in all new developments.*

(.02) *After the effective date of this Code, the approval of any development of land within the City will be upon the express condition that all new utility lines, including but not limited to those required for power, communication, street lighting, gas, cable television services and related facilities, shall be placed underground.*

(.03) *The construction of underground utilities shall be subject to the City's Public Works Standards and shall meet applicable requirements for erosion control and other environmental protection.*

Section 4.310. Exceptions

Section 4.300 of this Code shall not apply to surface-mounted transformers, surface-mounted connection boxes, wireless communication facilities, and meter cabinets and other appurtenances which are reasonably necessary to be placed above ground, or to temporary utility service facilities during construction, or to high capacity electric and communication feeder lines, or to utility transmission lines operating at 50,000 volts or more.

Response: The applicant's proposed development plans include installation of underground utilities as prescribed by these provisions. These requirements are met.

Section 4.320. Requirements

(.01) *The developer or subdivider shall be responsible for and make all necessary arrangements with the serving utility to provide the underground services (including cost of rearranging any existing overhead facilities). All such underground facilities as described shall be constructed in compliance with the rules and regulations of the Public Utility Commission of the State of Oregon relating to the installation and safety of underground lines, plant, system, equipment and apparatus.*

(.02) *The location of the buried facilities shall conform to standards supplied to the subdivider by the City. The City also reserves the right to approve location of all surface-mounted transformers.*

(.03) *Interior easements (back lot lines) will only be used for storm or sanitary sewers, and front easements will be used for other utilities unless different locations are approved by the City Engineer. Easements satisfactory to the serving utilities shall be provided by the developer and shall be set forth on the plat.*

Response: Proposed utility system extensions and alignments have been prepared in consultation with City staff and service providers. The submitted plans demonstrate the feasibility of achieving compliance. Detailed plans will be submitted for permitting prior to construction. A condition(s) of approval can assure compliance in the permitting and construction process.

SITE DESIGN REVIEW

Section 4.400. Purpose

(.01) *Excessive uniformity, inappropriateness or poor design of the exterior appearance of structures and signs and the lack of proper attention to site development and landscaping in the business, commercial, industrial and certain residential areas of the City hinders the harmonious development of the City, impairs the desirability of residence, investment or occupation in the City, limits the opportunity to*

attain the optimum use in value and improvements, adversely affects the stability and value of property, produces degeneration of property in such areas and with attendant deterioration of conditions affecting the peace, health and welfare, and destroys a proper relationship between the taxable value of property and the cost of municipal services therefor.

(.02) The City Council declares that the purposes and objectives of site development requirements and the site design review procedure are to:

- A. Assure that Site Development Plans are designed in a manner that insures proper functioning of the site and maintains a high quality visual environment.*
- B. Encourage originality, flexibility and innovation in site planning and development, including the architecture, landscaping and graphic design of said development;*
- C. Discourage monotonous, drab, unsightly, dreary and inharmonious developments;*
- D. Conserve the City's natural beauty and visual character and charm by assuring that structures, signs and other improvements are properly related to their sites, and to surrounding sites and structures, with due regard to the aesthetic qualities of the natural terrain and landscaping, and that proper attention is given to exterior appearances of structures, signs and other improvements;*
- E. Protect and enhance the City's appeal and thus support and stimulate business and industry and promote the desirability of investment and occupancy in business, commercial and industrial purposes;*
- F. Stabilize and improve property values and prevent blighted areas and, thus, increase tax revenues;*
- G. Insure that adequate public facilities are available to serve development as it occurs and that proper attention is given to site planning and development so as to not adversely impact the orderly, efficient and economic provision of public facilities and services.*
- H. Achieve the beneficial influence of pleasant environments for living and working on behavioral patterns and, thus, decrease the cost of governmental services and reduce opportunities for crime through careful consideration of physical design and site layout under defensible space guidelines that clearly define all areas as either public, semi-private, or private, provide clear identity of structures and opportunities for easy surveillance of the site that maximize resident control of behavior -- particularly crime;*
- I. Foster civic pride and community spirit so as to improve the quality and quantity of citizen participation in local government and in community growth, change and improvements;*
- J. Sustain the comfort, health, tranquility and contentment of residents and attract new residents by reason of the City's favorable environment and, thus, to promote and protect the peace, health and welfare of the City.*

Response: The applicant's submitted plans in Attachment 6 respond to applicable development standards, including the Coffee Creek Pattern Book. The plans demonstrate that the proposed development will function properly and will contribute to producing the high-quality visual environment desired in the Coffee Creek Industrial area. The proposed development plan reflects the appropriate consideration the applicant's design team has given to all the above purposes and objectives of the Site

Design Review process. For most design issues, the project straightforwardly satisfies the standards the City has adopted to implement the above purposes and objectives; however, the application includes six waiver requests for which the applicant has provided appropriate findings of compliance with the intent of the regulations (in a separate subsection D below).

Section 4.420. Jurisdiction and Powers of the Board

(.01) Application of Section. Except for single-family or two-family dwellings in any residential zoning district, and in the Village zone, row houses or apartments, no Building Permit shall be issued for a new building or major exterior remodeling of an existing building, and no Sign Permit, except as permitted in Sections 4.156.02 and 4.156.05, shall be issued for the erection or construction of a sign relating to such new building or major remodeling, until the plans, drawings, sketches and other documents required for a Sign Permit application have been reviewed and approved by the Board.

Response: The applicant is requesting DRB approval of the proposed signage, as discussed further in the responses to Section 4.156, below. This standard is met.

(.02) Development in Accord with Plans. Construction, site development and landscaping shall be carried out in substantial accord with the plans, drawings, sketches and other documents approved by the Board, unless altered with Board approval. Nothing in this subsection shall be construed to prevent ordinary repair, maintenance and replacement of any part of the building or landscaping which does not involve a substantial change from the purpose of Section 4.400. If the Board objects to such proposed changes, they shall be subject to the procedures and requirements of the site design review process applicable to new proposals.

Response: The applicant intends to construct a project that aligns with the general form and design depicted in the accompanying plans, subject to possible minor alterations that may arise during preparation of construction drawings for permit review. This standard is met.

(.03) Variances. The Board may authorize variances from the site development requirements, based upon the procedures, standards and criteria listed in Section 4.196. Variances shall be considered in conjunction with the site design review process.

Response: This application does not include any request for a Variance.

Section 4.421. Criteria and Application of Design Standards

(.01) The following standards shall be utilized by the Board in reviewing the plans, drawings, sketches and other documents required for Site Design Review. These standards are intended to provide a frame of reference for the applicant in the development of site and building plans as well as a method of review for the Board. These standards shall not be regarded as inflexible requirements. They are not intended to discourage creativity, invention and innovation. The specifications of one or more particular architectural styles is not included in these standards. (Even in the Boones Ferry Overlay Zone, a range of architectural styles will be encouraged.)

A. Preservation of Landscape. The landscape shall be preserved in its natural state, insofar as practicable, by minimizing tree and soils removal, and any grade changes shall be in keeping with the general appearance of neighboring developed areas.

Response: The proposed development site is not in a natural state; the property has been used as a residence for a period of several decades. The site's generally flat topography, sloping generally downhill to the southeast, is not distinctive. Notably, however, within the northwest quadrant of the property there is a distinctive small stand of five mature Douglas fir trees. The applicant has made significant adaptations of the proposed development plan in order to incorporate a significant open space area for the conservation and retention of those trees. This standard is met.

- B. *Relation of Proposed Buildings to Environment. Proposed structures shall be located and designed to assure harmony with the natural environment, including protection of steep slopes, vegetation and other naturally sensitive areas for wildlife habitat and shall provide proper buffering from less intensive uses in accordance with Sections 4.171 and 4.139 and 4.139.5. The achievement of such relationship may include the enclosure of space in conjunction with other existing buildings or other proposed buildings and the creation of focal points with respect to avenues of approach, street access or relationships to natural features such as vegetation or topography.*

Response: As noted above, the site is generally flat and its principal environmental feature is the stand of five mature Douglas fir trees that will be protected and retained in the northwestern part of the site. Additionally, the site plan achieves harmony with the natural environment using dense landscape plantings to create a naturalistic character along the SW Clutter Street corridor, provide a pedestrian Wayside adjacent to the street, and visually screen the proposed building. This standard is met.

- C. *Drives, Parking and Circulation. With respect to vehicular and pedestrian circulation, including walkways, interior drives and parking, special attention shall be given to location and number of access points, general interior circulation, separation of pedestrian and vehicular traffic, and arrangement of parking areas that are safe and convenient and, insofar as practicable, do not detract from the design of proposed buildings and structures and the neighboring properties.*

Response: The applicant has proposed a two-driveway configuration because it achieves efficient access and circulation while minimizing conflicting movements among the different vehicle types that will access the site (semi tractor-trailer rigs, delivery vans, passenger vehicles), pedestrians and cyclists. Concentrating large truck maneuvering and docking in the central part of the site, between the two driveways, allows passenger vehicles to travel safely along the outer edges to and from office entrances and parking areas, located at the sides of the proposed building. Pedestrian walkways are separated from vehicular driveways for safety, crossing drive aisles at locations with good visibility near the building's two office entrances. These standards are met.

- D. *Surface Water Drainage. Special attention shall be given to proper site surface drainage so that removal of surface waters will not adversely affect neighboring properties of the public storm drainage system.*

Response: The proposed plans (see Attachment 6) include site grading for positive on-site drainage to surface facilities for water quality treatment and detention, with discharge to the public system in SW Clutter Street. Additionally, improvements in SW Clutter Street right-of-way will include extending the public storm drain system line. This standard is met.

- E. *Utility Service. Any utility installations above ground shall be located so as to have a harmonious relation to neighboring properties and site. The proposed method of sanitary and storm sewage disposal from all buildings shall be indicated.*

Response: Utility service plans, including installation of underground utility facilities, are provided in the C- (on-site) and R-series (Clutter Street public improvements) drawing sheets in Attachment 6. Utility service connections will be made underground.

- F. *Advertising Features. In addition to the requirements of the City's sign regulations, the following criteria should be included: the size, location, design, color, texture, lighting and materials of all exterior signs and outdoor advertising structures or features shall not detract from the design of proposed buildings and structures and the surrounding properties.*

Response: This application incorporates the locations, general configurations and sizing of a proposed monument sign and wall signage to identify future building tenants, as part of the overall composition and project design. This requirement is met in a way that will set the stage for future tenants to obtain over-the-counter permits to install tenant-specific compliant signs in the future.

G. *Special Features. Exposed storage areas, exposed machinery installations, surface areas, truck loading areas, utility buildings and structures and similar accessory areas and structures shall be subject to such setbacks, screen plantings or other screening methods as shall be required to prevent their being incongruous with the existing or contemplated environment and its surrounding properties. Standards for screening and buffering are contained in Section 4.176.*

Response: As noted above and discussed in detail under other Section headings, materials in Attachment 6 including the site plan and in particular the landscape planting plan, show how a dense landscaping treatment along the SW Clutter Street frontage will effectively screen views from the public realm into the truck loading area. Those technical plans are supplemented by perspective rendering drawings in Attachment 5, providing representative images to characterize future build-out conditions. No outdoor storage area or exposed machinery installation is proposed. The submitted materials meet this requirement.

(.02) The standards of review outlined in Sections (a) through (g) above shall also apply to all accessory buildings, structures, exterior signs and other site features, however related to the major buildings or structures.

Response: The submitted plans include all known features of the proposed development project, to support analysis consistent with this provision.

(.03) The Board shall also be guided by the purpose of Section 4.400, and such objectives shall serve as additional criteria and standards.

Response: The applicant has responded to the Purpose statements in Section 4.400 above.

(.04) Conditional application. The Planning Director, Planning Commission, Development Review Board or City Council may, as a Condition of Approval for a zone change, subdivision, land partition, variance, conditional use, or other land use action, require conformance to the site development standards set forth in this Section.

Response: The applicant is seeking Site Design Review approval as part of this application package, so these approval standards are already applicable. This standard does not apply.

(.05) The Board may attach certain development or use conditions in granting an approval that are determined necessary to insure the proper and efficient functioning of the development, consistent with the intent of the Comprehensive Plan, allowed densities and the requirements of this Code. In making this determination of compliance and attaching conditions, the Board shall, however, consider the effects of this action on the availability and cost of needed housing. The provisions of this section shall not be used in such a manner that additional conditions either singularly or accumulatively have the effect of unnecessarily increasing the cost of housing or effectively excluding a needed housing type.

Response: The applicant recognizes the DRB's authority to impose conditions of approval necessary to ensure conformance to adopted Code standards. However, the proposed use and development are consistent with the subject property's proposed PDI-RSIA zoning and compatible with the adjoining industrial zoning. For these reasons, no imposition of additional conditions over and above Code standards is necessary or warranted to meet the intent of the Comprehensive Plan or to protect the best interests of the surrounding properties and neighborhoods, the City as a whole, and the intent of this Code. This criterion is met without additional conditions.

(.06) *The Board or Planning Director may require that certain paints or colors of materials be used in approving applications. Such requirements shall only be applied when site development or other land use applications are being reviewed by the City.*

- A. *Where the conditions of approval for a development permit specify that certain paints or colors of materials be used, the use of those paints or colors shall be binding upon the applicant. No Certificate of Occupancy shall be granted until compliance with such conditions has been verified.*
- B. *Subsequent changes to the color of a structure shall not be subject to City review unless the conditions of approval under which the original colors were set included a condition requiring a subsequent review before the colors could be changed.*

Response: The applicant requests DRB approval of the general color scheme illustrated in Attachment 5 – Perspective Renderings and Attachment 12, Colors and Materials Board (Images). However, to allow flexibility to tailor final color selections to best meet the intent of the proposal while responding to the site’s real-world natural daylight conditions, and in recognition of the DRB’s discretion provided by this standard, the applicant requests that the DRB not impose conditions mandating use of those specific colors. This standard is met.

Section 4.430. Location, Design and Access Standards for Mixed Solid Waste and Recycling Areas

(.01) *The following locations, design and access standards for mixed solid waste and recycling storage areas shall be applicable to the requirements of Section 4.179 of the Wilsonville City Code.*

Response: The proposed trash enclosure meets the requirements of Section 4.179 of the Wilsonville City Code. The applicant’s responses to individual criteria are provided in this narrative under Section 4.179.

(.02) *Location Standards:*

- A. *To encourage its use, the storage area for source separated recyclables shall be co-located with the storage area for residual mixed solid waste.*
- B. *Indoor and outdoor storage areas shall comply with Uniform Building and Fire Code requirements.*
- C. *Storage area space requirements can be satisfied with a single location or multiple locations and can combine with both interior and exterior locations.*
- D. *Exterior storage areas can be located within interior side yard or rear yard areas. Minimum setback shall be three (3) feet. Exterior storage areas shall not be located within a required front yard setback, including double frontage lots.*
- E. *Exterior storage areas shall be located in central and visible locations on a site to enhance security for users.*
- F. *Exterior storage areas can be located in a parking area if the proposed use provides at least the minimum number of parking spaces required for the use after deducting the area used for storage. Storage areas shall be appropriately screened according to the provisions of Section 4.430 (.03), below.*
- G. *The storage area shall be accessible for collection vehicles and located so that the storage area will not obstruct pedestrian or vehicle traffic movement on the site or on public streets adjacent to the site.*

Response: The proposal includes a single storage area for recyclables and mixed solid waste. The storage area complies with Uniform Building and Fire Code requirements; see details in Attachment 6, Sheet A5.1. The storage area is not located in a setback or in a parking area. The storage area is in a visible location. The trash hauler, Republic Services, has provided a letter (Attachment 9) stating “The trash and recycle enclosure design location and traffic pattern plans sent 6/9/2020 will allow access for our trucks to safely service this location.”

(.03) *Design Standards.*

- A. *The dimensions of the storage area shall accommodate containers consistent with current methods of local collection.*
- B. *Storage containers shall meet Uniform Fire Code standards and be made of or covered with waterproof materials or situated in a covered area.*
- C. *Exterior storage areas shall be enclosed by a sight obscuring fence, wall or hedge at least six (6) feet in height. Gate openings for haulers shall be a minimum of ten (10) feet wide and shall be capable of being secured in a closed or open position. In no case shall exterior storage areas be located in conflict with the vision clearance requirements of Section 4.177.*
- D. *Storage area(s) and containers shall be clearly labeled to indicate the type of materials accepted.*

Response: The design of the storage area was provided to Republic Services who is the local hauler for review. They have provided their approval of the storage area. Storage containers will meet Uniform Fire Code standards and be clearly labeled to indicate the type of materials. Individual storage containers will be covered. The storage area will be enclosed by tilt up concrete walls. See storage area details on Sheet A5.06 of Attachment 6. These standards are met.

(.04) Access Standards.

- A. *Access to storage areas can be limited for security reasons. However, the storage area shall be accessible to users at convenient times of the day and to collect service personnel on the day and approximate time they are scheduled to provide collection service.*
- B. *Storage areas shall be designed to be easily accessible to collection trucks and equipment, considering paving, grade and vehicle access. A minimum of ten (10) feet horizontal clearance and eight feet of vertical clearance is required if the storage area is covered.*
- C. *Storage areas shall be accessible to collection vehicles without requiring backing out of a driveway onto a public street. If only a single access point is available to the storage area, adequate turning radius shall be provided to allow collection vehicles to safely exit the site in a forward motion.*

Response: The storage area will be accessible to users, and to collection personnel. The location and design of the storage area was provided for review to the trash hauler, Republic Services. Republic Services has provided a letter (Attachment 9), stating "The trash and recycle enclosure design location and traffic pattern plans sent 6/9/2020 will allow access for our trucks to safely service this location."

Section 4.440. Procedure

(.01) Submission of Documents. A prospective applicant for a building or other permit who is subject to site design review shall submit to the Planning Department, in addition to the requirements of Section 4.035, the following:

- A. *A site plan, drawn to scale, showing the proposed layout of all structures and other improvements including, where appropriate, driveways, pedestrian walks, landscaped areas, fences, walls, off-street parking and loading areas, and railroad tracks. The site plan shall indicate the location of entrances and exits and direction of traffic flow into and out of off-street parking and loading areas, the location of each parking space and each loading berth and areas of turning and maneuvering vehicles. The site plan shall indicate how utility service and drainage are to be provided.*
- B. *A Landscape Plan, drawn to scale, showing the location and design of landscaped areas, the variety and sizes of trees and plant materials to be planted on the site, the location and design of landscaped areas, the varieties, by scientific and common name, and sizes of trees and plant materials to be retained or planted on the site, other pertinent landscape features, and irrigation systems required to maintain trees and plant materials.*

An inventory, drawn at the same scale as the Site Plan, of existing trees of 4" caliper or more is required. However, when large areas of trees are proposed to be retained undisturbed, only a survey identifying the location and size of all perimeter trees in the mass is necessary.

- C. *Architectural drawings or sketches, drawn to scale, including floor plans, in sufficient detail to permit computation of yard requirements and showing all elevations of the proposed structures and other improvements as they will appear on completion of construction. Floor plans shall also be provided in sufficient detail to permit computation of yard requirements based on the relationship of indoor versus outdoor living area, and to evaluate the floor plan's effect on the exterior design of the building through the placement and configuration of windows and doors.*
- D. *A Color Board displaying specifications as to type, color, and texture of exterior surfaces of proposed structures. Also, a phased development schedule if the development is constructed in stages.*
- E. *A sign Plan, drawn to scale, showing the location, size, design, material, color and methods of illumination of all exterior signs.*
- F. *The required application fee.*

Response: The required documents listed above have been included in this application package as Attachments 6, with the exception of the fee which was paid separately. This standard is met.

(.02) As soon as possible after the preparation of a staff report, a public hearing shall be scheduled before the Development Review Board. In accordance with the procedures set forth in Section 4.010(2) and 4.012, the Development Review Board shall review and approve, approve with conditions, or deny the proposed architectural, site development, landscaping or sign plans of the applicant. If the Board finds that additional information or time are necessary to render a decision, the matter may be continued to a date certain. The applicant shall be immediately notified in writing of any such continuation or delay together with the scheduled date of review.

Response: This provision provides procedural guidance for implementation and requires no evidence within the applicant's narrative.

Section 4.441. Effective Date of Decisions

A decision of the Board shall become effective fourteen (14) calendar days after the date of the decision, unless the decision is appealed to, or called up by, the Council. If the decision of the Board is appealed to, or called up by, the City Council, the decision of the Council shall become effective immediately.

Response: This provision provides procedural guidance for implementation and requires no evidence from the applicant.

Section 4.442. Time Limit on Approval

Site design review approval shall be void after two (2) years unless a building permit has been issued and substantial development pursuant thereto has taken place; or an extension is granted by motion of the Board.

Response: The applicant intends to seek a building permit and begin construction within the timeframes outlined by Code. This standard is met.

Section 4.443. Preliminary Consideration

An applicant may request preliminary consideration by the Board of general plans prior to seeking a building permit. When seeking preliminary consideration, the applicant shall submit a site plan showing the proposed structures, improvements and parking, together with a general description of the plans. The Board shall approve or reject all or part of the applicant's general plan within the normal time

requirements of a formal application. Preliminary approval shall be deemed to be approval of the final plan to the extent that the final design contains the characteristics of the preliminary design.

Response: The applicant has submitted for concurrent Stage I and Stage II Planned Development Review pursuant to this Section.

Section 4.450. Installation of Landscaping

(.01) All landscaping required by this section and approved by the Board shall be installed prior to issuance of occupancy permits, unless security equal to one hundred and ten percent (110%) of the cost of the landscaping as determined by the Planning Director is filed with the City assuring such installation within six (6) months of occupancy. "Security" is cash, certified check, time certificates of deposit, assignment of a savings account or such other assurance of completion as shall meet with the approval of the City Attorney. In such cases the developer shall also provide written authorization, to the satisfaction of the City Attorney, for the City or its designees to enter the property and complete the landscaping as approved. If the installation of the landscaping is not completed within the six-month period, or within an extension of time authorized by the Board, the security may be used by the City to complete the installation. Upon completion of the installation, any portion of the remaining security deposited with the City shall be returned to the applicant.

(.02) Action by the City approving a proposed landscape plan shall be binding upon the applicant. Substitution of plant materials, irrigation systems, or other aspects of an approved landscape plan shall not be made without official action of the Planning Director or Development Review Board, as specified in this Code.

(.03) All landscaping shall be continually maintained, including necessary watering, weeding, pruning, and replacing, in a substantially similar manner as originally approved by the Board, unless altered with Board approval.

(.04) If a property owner wishes to add landscaping for an existing development, in an effort to beautify the property, the Landscape Standards set forth in Section 4.176 shall not apply and no Plan approval or permit shall be required. If the owner wishes to modify or remove landscaping that has been accepted or approved through the City's development review process, that removal or modification must first be approved through the procedures of Section 4.010.

Response: The applicant acknowledges the City's authority under these provisions to require installation and maintenance of landscape features in accordance with construction plans after approval, and applicant accepts responsibility for care, maintenance, and procedures for approval of non-additive modifications to landscape features.

D. Waivers

This application includes requests for **waivers** from specific Code standards. Most (5 of 6) are eligible for approval under Guidelines in the Coffee Creek Industrial Design Overlay District Pattern Book, pursuant to WDO Section 4.134(.08)B; however, Waiver #2, a request to provide limited vehicle parking between the proposed building and SW Clutter Street (an Addressing Street) is subject to the additional evidence requirements of WDO Section 4.134(.08)A.

The applicable approval criteria for waivers are found in Section 4.134(.08) and referenced other Sections of the WDO:

WDO 4.134(.08) Waivers. The Development Review Board may waive standards as listed in Section 4.134(.11), consistent with the provisions of Section 4.118 (.03).

- A. *The following standards shall not be waived, unless there is substantial evidence in the whole record to support a finding that the intent and purpose of the standards will be met in alternative ways:*
 - 1. *Required minimum building height as provided in Section 4.134 (.11) Table CC-4;*
 - 2. *Parking location and design along addressing streets in Section 4.134 (.11) Table CC-3; and*
 - 3. *Parcel pedestrian access as listed in Section 4.134 (.11) Table CC-3.*
- B. *In addition to meeting the purposes and objectives of Section 4.140, any waivers granted in the Coffee Creek DOD must be found to be consistent with the intent of the Coffee Creek DOD Pattern Book.*

Section 4.140. Planned Development Regulations.

(.01) Purpose.

- A. *The provisions of Section 4.140 shall be known as the Planned Development Regulations. The purposes of these regulations are to encourage the development of tracts of land sufficiently large to allow for comprehensive master planning, and to provide flexibility in the application of certain regulations in a manner consistent with the intent of the Comprehensive Plan and general provisions of the zoning regulations and to encourage a harmonious variety of uses through mixed use design within specific developments thereby promoting the economy of shared public services and facilities and a variety of complimentary activities consistent with the land use designation on the Comprehensive Plan and the creation of an attractive, healthful, efficient and stable environment for living, shopping or working.*
- B. *It is the further purpose of the following Section:*
 - 1. *To take advantage of advances in technology, architectural design, and functional land use design:*
 - 2. *To recognize the problems of population density, distribution and circulation and to allow a deviation from rigid established patterns of land uses, but controlled by defined policies and objectives detailed in the comprehensive plan;*
 - 3. *To produce a comprehensive development equal to or better than that resulting from traditional lot land use development.*
 - 4. *To permit flexibility of design in the placement and uses of buildings and open spaces, circulation facilities and off-street parking areas, and to more efficiently utilize potentials of sites characterized by special features of geography, topography, size or shape or characterized by problems of flood hazard, severe soil limitations, or other hazards;*

5. *To permit flexibility in the height of buildings while maintaining a ratio of site area to dwelling units that is consistent with the densities established by the Comprehensive Plan and the intent of the Plan to provide open space, outdoor living area and buffering of low-density development.*
6. *To allow development only where necessary and adequate services and facilities are available or provisions have been made to provide these services and facilities.*
7. *To permit mixed uses where it can clearly be demonstrated to be of benefit to the users and can be shown to be consistent with the intent of the Comprehensive Plan.*
8. *To allow flexibility and innovation in adapting to changes in the economic and technological climate.*

In the context of this proposal for speculative industrial development of one roughly 6-acre site, consistent with its land use designation on the Comprehensive Plan Map, the most salient Purpose statement is #4, which allows flexibility in site design to respond to site-specific features and conditions at the project level. The other Purpose statements apply more broadly within the community at large, or concern flexibility not required for approval of this application (such as #5, allowing flexibility with respect to building height).

Each of the waivers requested by the Applicant is described below, followed by a discussion about why the proposed development is consistent with the intent of the Planned Development Regulations, and how the proposed alternative development approach is consistent with the intent of relevant elements of the Coffee Creek DOD Pattern Book.

Waiver 1. Loading Locations

More than one at-grade loading berth, and 19 recessed dock-height loading berths, are located on the front façade of the building. The proposed configuration requires a waiver from the following applicable standards:

WDO Chapter 4.134(11.) / Table CC-3 / 4. Parking Location and Design / Off-Street Loading Berth / Addressing Streets:

- *One loading berth is permitted on the front façade of a building facing an Addressing Street.*
- *No elevated loading docks or recessed truck wells are permitted.*

Response: The proposed site plan and building design do not comply with the standard because two loading berths (configured as at-grade drive-in/drive-out overhead door locations) are on the front façade of the building, one adjacent to each of the two office corner projections, and also because a total of 19 elevated loading docks are located between the two office corners. This configuration is proposed for these specific reasons:

1. The site plan allows a stand of five mature Douglas fir trees in the northwestern part of the site to be retained in place and integrated into a naturalistic landscape treatment of the site's frontage on SW Clutter Street. This is the only notable natural feature of scale within the site, making it a priority for conservation to the extent it is feasible to do so.

2. The site plan and building orientation provide efficient use of the site, accommodating a building of sufficient size to meet needs of users in the target group of prospective tenants, which are predominantly industrial warehousing and distribution businesses.
3. The applicant explored alternative site plan concepts with truck docks/loading bays oriented away from the street; however, a building of comparable size and capacity with circulation for trucks and other vehicles could not be accommodated in an alternate orientation consistent with conserving the stand of mature Douglas fir trees.
4. Fundamentally, this design approach is frank about allowing the building's industrial function to be partially visible to the public, while making a significant contribution to the naturalistic landscape character desired along the frontage of the Addressing Street, SW Clutter Street.
5. The applicant has paid special attention to the landscaping and features along SW Clutter Street, to screen views into the property and to provide Waysides consistent with WDO 4.134.(.12)A through E.
6. Visual access into the site will be limited to two proposed driveways on SW Clutter Street, which is the only available vehicular access location. These openings will punctuate travel along the densely-landscaped SW Clutter Street, allowing the building and loading facilities to be seen clearly only at those two points.
7. Allowing visibility into the site at its two driveways onto SW Clutter Street facilitates destination identification by visitors to the site, including drivers of trucks arriving and seeking to maneuver to docking positions. For tenants, this is preferable to having truck access drives loop around a building to access docks at the rear; that configuration: (a) would require additional signage at the street edge to identify turn-in locations for drivers, contributing to visual clutter³, (b) tends to require that more site area be devoted to truck access/circulation corridors, and (c) would produce more points of conflict between truck circulation and passenger vehicle routing/parking than the proposed configuration, because trucks and passenger vehicles both would need to circulate between the Addressing Street frontage and the rear of the site.
8. Materials and design of the building's street-facing façade will draw the eye to the attractive office corners and the upper portions/roofline of the building. Perceptually, this is designed to embed the loading dock level in the Base of the building, reducing its visual significance.
9. Tenants in this industry desire office locations positioned to give management direct views of operations in the truck access/circulation and docking area; the proposed prominent office endcaps on the north façade support that functional visual relationship while also positioning the building's principal entrance nearest to the Addressing Street. (By contrast, a building that would locate offices adjacent to the street and docking/loading operations on the opposite side of the building cannot achieve that functional visual relationship.)

The proposed configuration is consistent with the Intent Statement for Street Design and Connectivity, as well as numerous guidelines in the *Pattern Book – Design Guidelines for Coffee Creek Industrial Design Overlay District (the Pattern Book)*:

³ No pun intended.

- *“Where new development includes planning and construction of an Addressing Street, the design must reinforce the distinctive regional landscape and support the intent of high-quality urban design for the public realm with a park-like atmosphere.”* (p. 13)
- In addition to road and curb construction consistent with the future final alignment and lane configuration for an Addressing Street, the proposed “half-street” improvements include planter strip with street trees, sidewalk, lighting and signage within the public right-of-way, including dedication to meet applicable width requirements.
- Within the property adjacent to the public street, a series of three densely planted landscape beds deepens the landscaped corridor environment. They provide screening of the building and facilities with a naturalistic character, using native species of trees, shrubs and groundcovers. They also incorporate surface water facilities and Wayside features, consistent with the standards in Subsection 4.134(.12).
- With the exception of the two proposed driveways needed for access and circulation, these landscape areas occupy the whole SW Clutter Street frontage of the property and define the streetscape environment for pedestrians and motorists.
- The westernmost planter area incorporates conservation and protection of the stand of five mature Douglas fir trees. To minimize root damage, the western pedestrian walkway from the public sidewalk to the western office entrance is aligned within an existing compacted gravel driveway corridor along the western edge of the property.
- The above features create a *“park-like character”* consistent with *Section A Design Guideline 2.1.*, as well as furthering the intent of *Section B, District-Wide Site Planning and Landscaping: “The public realm of Addressing Streets provides unity to the district by establishing a pastoral character of place with the regular planting of street trees, sidewalks, and front yard setbacks. Trees help to define place, and enhance the public realm by giving context and scale to the Coffee Creek Industrial Area.”* (p. 19)
- Conservation of the existing stand of five Douglas fir trees, including routing of the pedestrian path to the western building entrance within an existing compacted gravel driveway along the western edge of the site, is consistent with *Section B Natural Landscape Guidelines 1.2 Natural Landscape as Visual Unifier; 1.3 Naturalistic Landscape, Native Planting; 1.6 Tree Preservation within Setbacks; and 1.7 Informal Park-Like Landscaping; and Special Landscape Features Guidelines 2.2, Existing Tree Groves at Points of Access.*
- The composition of plantings, stormwater treatment facilities, and man-made objects as Wayside features in the planter areas along SW Clutter Street is consistent with *Section B Special Landscape Features Guidelines 2.3 water features and 2.5 intentional aesthetic use of industrial materials.*
- For the above reasons, the proposed development plan provides landscape screening, water features, Waysides and other amenities along the site’s Addressing Street frontage that is sufficient to mitigate for the proposed building orientation, including locations of loading docks and overhead doors visible where the driveways punctuate the SW Clutter Street frontage.

Waiver 2. Vehicle Parking Areas

Two vehicle parking areas, containing a total of 4 ADA spaces and 5 standard spaces, are located between the Addressing Street and the building, rather than in only one area with capacity for up to 16 vehicles, per the standard, or up to 20 vehicles subject to an adjustment.

The proposed development requires a waiver from the following applicable standards:

WDO Chapter 4.134(11.) / Table CC-3 / 4. Parking Location and Design / General:

Unless noted otherwise below, the following provisions apply:

- *Section 4.176 for Parking Perimeter Screening and Landscaping - permits the parking landscaping and screening standards as multiple options*

The following Development Standards are adjustable:

- *Parking Location and Extent: up to 20 spaces permitted on an Addressing Street*

WDO Chapter 4.134(11.) / Table CC-3 / 4. Parking Location and Extent / Addressing Street:

- *Limited to one double-loaded bay of parking, 16 spaces, maximum, designated for short-term (1 hour or less), visitor, and disabled parking only between right-of-way of Addressing Street and building.*

Approval Criteria:

WDO 4.134(.08) Waivers. The Development Review Board may waive standards as listed in Section 4.134 (.11), consistent with the provisions of Section 4.118 (.03).

- A. *The following standards shall not be waived, unless there is substantial evidence in the whole record to support a finding that the intent and purpose of the standards will be met in alternative ways:*
1. *Required minimum building height as provided in Section 4.134 (.11) Table CC-4;*
 2. *Parking location and design along addressing streets in Section 4.134 (.11) Table CC-3; and*
 3. *Parcel pedestrian access as listed in Section 4.134 (.11) Table CC-3.*
- B. *In addition to meeting the purposes and objectives of Section 4.140, any waivers granted in the Coffee Creek DOD must be found to be consistent with the intent of the Coffee Creek DOD Pattern Book.*

Response:

- The Intent statement for Parking Design in Section C Site Design of the *Pattern Book* states, “Surface parking is permitted in the front yard setback for development along Addressing Streets with limitations. Surface parking lots are limited in scale and designated for short-term parking for visitors, people with disabilities, and deliveries.”
- The proposed parking configuration splits the allocation of short-term, visitor, and ADA-accessible parking between the two office entrances. As a result, although the proposed total of nine parking spaces is well below the allowed maximum of 16 (or 20 with allowable modification), having two discrete parking sub-areas differs from the specific language of the standard, which is “Limited to one double-loaded bay of parking, 16 spaces, maximum...”
- While the proposed site plan locates most of the site’s parking at the sides of the building, along the east and west property boundaries, it does provide a limited number of ADA-

accessible/visitor/short-term parking spaces close to each of the building’s two office areas/formal entrances. These are suitable locations for those designated parking spaces because no crossing of vehicular service aisles/corridors is necessary between parked vehicles and the adjacent main entrance locations.

- The scale of the proposed parking locations is much smaller than would be an allowed double-loaded parking bay with up to 16 or 20 parking spaces. As a result, the two parking areas by the office entrances are less significant as a visual component of the streetscape/frontage design than the standard would allow; the property’s configuration does not make it practical to consolidate all the short-term/visitor/ADA-accessible parking in a single parking area, as the Code seems to prescribe.
- For the above reasons, the waiver request to allow the proposed parking configuration is consistent with the purposes of the Coffee Creek Design Guidelines and should be approved.

Waiver 3. Building Base, Body and Top Dimensions

The proportion of the “Body” part of the front façade is less than 75% of the overall building height.

The proposed development requires a waiver from the following applicable standards:

WDO Chapter 4.134(11.) / Table CC-4 / 3. Overall Building Massing / Base, Body and Top Dimensions:

Buildings (sic) elevations shall be composed of a clearly demarcated base, body and top.

...

- b. For Buildings between 30 feet and 5 stories in height:*
 - i. The base shall be 30 inches, minimum; 2 stories, maximum.*
 - ii. The body shall be equal to or greater than 75% of the overall height of the building.*
 - iii. The top of the building shall be 18 inches, minimum.*

WDO Chapter 4.134(11.) / Table CC-4 / 3. Overall Building Massing / Base Design:

The design of the building Base shall:

- a. Use a material with a distinctive appearance, easily distinguished from the building Body expressed by a change in material, a change in texture, a change in color or finish;*
- b. Create a change in surface position where the Base projects beyond the Body of the building by 1-1/2 inches, minimum; and/ or*
- c. Low Berm Landscape Standard, Section 4.176 (.02) E.*

Response: The proposed building design is fundamentally consistent with the Base-Body-Top concept; however, the composition of those elements has been adapted to create an attractive, coherent form designed for partial visibility from the Addressing Street while meeting the operating needs of the proposed warehousing facility.

Because all of the active areas of the site are on the north (front) side of the building, the design visually emphasizes the two prominent office corner projections, wrapping around both front corners. Please refer to Sheet A2.10, Building Elevations, in Attachment 6. The delineation of Base, Body and Top is designed to provide a set of horizontal structural and visual elements that perceptually tie the two office end-caps together to form a coherent and cohesive whole.

The concrete tilt-up walls include a pattern of horizontal and vertical reveals (recessed grooves) that break up the appearance of large wall surface areas into smaller rectangular and square sub-panels. This, together with paint colors, creates an interesting visual interplay of simple geometric elements to reduce the perceived mass and scale of the building.

At the top of the building walls, a horizontal reveal and color changes effectively define the Top at the upper edge of the building walls, meeting the 18” minimum height requirement for that feature.

On the front façade, the base level of the building is defined by the canopy covers over the office entrances, at about 12 feet above grade. The horizontal line of that canopy level is then carried all the way across the central part of the building (at about 16 feet above exterior grade at the recessed truck-height loading bays), forming the appearance of a unified linear platform extending between the two office corners. In effect, the whole ground floor level of the building functions as its Base.

Because the building’s overall height is about 45 feet at the office corner parapets and 40 feet above grade at other points⁴, the remaining Body area measures about 26.5 feet vertically, or 66.25% of the total building height. An adjustment would be allowed to vary the 75% minimum standard by up to 10%, but 66.25 divided by 75 is 0.883, or a reduction of 11.7%, so a waiver is required.

Total Wall Height:	40.0 feet
Less: Top (reveal)	- 1.5 feet (18 inches)
Less: Base (ground floor height)	<u>-12.0 feet</u>
Remainder = Body Height	26.5 feet (66.25%)

Additionally, a different Base-Body-Top configuration and graphic treatment are proposed behind the two office areas, on the sides behind the office projections and on the rear wall of the building. A combination of horizontal and vertical reveals continues to reduce the perceived scale of large wall panels, with the Top and Base defined by horizontal reveals and paint color changes.

The proposed building configuration is fundamentally consistent with the Base-Body-Top concept; however, it adapts the concept for this particular site and building function so as to draw attention upward to the Body/Top parts of the building above the central loading area, and downward to the prominent office end-caps at the building’s front corners. At the heart of this strategy is the treatment of the ground-

⁴ This measurement is based on finish grade at the office corners, not at the truck docks, where grade is depressed four feet. The height as measured from grade at the truck docks would be 44 feet.

floor level of the building as a Base, which is consistent with the applicable standard for Base height (up to 2 stories for a minimum 30-foot tall building), but the resulting relative height of the Body component is less than 75% of overall building height.

For the above reasons, the proposed building design is consistent with the intent of the development standards and the waiver should be approved.

Waiver 4. Primary Building Entrance/Required Canopy

Office entrances are less than 15 feet high, with canopy height of less than 15 feet.

The proposed development requires a waiver from the following applicable standards:

WDO Chapter 4.134(11.) / Table CC-4 / 2. Primary Building Entrance / Accessible Entrance

- *The Primary Building Entrance shall be 15 feet wide, minimum and 15 feet tall, minimum.*

WDO Chapter 4.134(11.) / Table CC-4 / 2. Primary Building Entrance / Required Canopy

- *Protect the Primary Building Entrance with a canopy with a minimum vertical clearance of 15 feet and an all-weather protection zone that is 8 feet deep, minimum and 15 feet wide, minimum.*

Response: The prominent corner offices combine recessed glazing and entrance doors at the ground-floor level with an overhead cantilevered canopy-cover extension to provide a sheltered space at the main entrances (one at each front corner). The overall depth of the protected zone is eight feet: four feet under the canopy and an additional four-foot recess relative to the upper part of the front building wall. (See North Wall Section at Glazing, #3 on Sheet A3.19 in Attachment 6.)

However, for consistency with the Base-Body-Top design strategy discussed above, the design sets the canopy height at 12 feet above grade at the entrances, matching the elevation of the cover over the truck loading docks (16 feet above grade adjacent to 4-foot high depressed loading docks). This allows the canopy level to form the Base as a consistent horizontal line that runs the full width of the building. By making the Base mimic the horizon at the canopy level, the design tends to draw the viewer's eye upward.

From the standpoint of weather protection, solar shade is of limited concern because the doorways are on the north side of the building and will be in mid-day shade year-round. However, under rainy conditions, and particularly under windy rainy conditions, the proposed 12-foot canopy height will reduce the extent of rain penetration under the protected area, relative to a 15-foot high canopy.

For the above reasons, the proposed 12-foot canopy height is a reasonable deviation from the 15-foot standard. It is consistent with an overall design concept for the building that will contribute to the overall character of Coffee Creek, while providing comparable weather protection for pedestrians and focusing attention on the building's primary entrances. This waiver should be approved.

Waiver 5. Overall Building Massing/Ground Floor Height

Ceiling height in office areas will match the height of the exterior entrance canopy cover, at less than 15 feet.

The proposed development requires a waiver from the following applicable standards:

WDO Chapter 4.134(11.) / Table CC-4 / 3. Overall Building Massing / Ground Floor Height:

- *The Ground Floor height shall measure 15 feet, minimum from finished floor to finished ceiling (or 17.5 feet from finished floor to any exposed structural member).*

Response: The proposed building is a single-story structure; the office end-caps are made prominent as a visual appearance/massing feature, but not to accommodate upper floors. The proposed interior treatment is to install a ceiling within the space that matches the exterior canopy height, creating a consistent interior-exterior relationship across the plane of the doorway and exterior windows.

As noted above for Waiver #5, the exterior canopy height at the office entrances is at 12 feet. Setting the interior ceiling at the 15-foot level would not only create an arbitrary difference, but it would make the internal ceiling line run through window glazing that is part of the visual design of the Body of the building. At higher ceiling levels, other design issues arise, such as achieving acoustical control of an enlarged resonant space, and efficient heating and cooling (where warm air tends to collect in the upper part of the space without active recirculation systems).

Allowing the interior ceiling height to match the exterior canopy height harmonizes and aligns the interior-exterior relationship, adding to the overall coherence of the structure, and further contributing to the Coffee Creek industrial area. Given interior location and the building’s setback distance from the public street, the 12-foot ceiling height in the building interior will have no significant effect on the building’s overall external appearance. This waiver merits approval.

Waiver 6. Size of Waste Storage Enclosure

Based on the applicant’s familiarity with typical warehouse/distribution operations, the applicant proposes an outdoor waste storage enclosure measuring 10’ by 21’, containing 210 square feet, with tall waste enclosures within. This is smaller than the standard requirement, which would be 662 square feet for the proposed 110,366 square-foot building. The proposed development requires a waiver from the following applicable standards:

WDO Section 4.179. Mixed Solid Waste and Recyclables Storage in New Multi-Unit Residential and Non-Residential Buildings

(.06) The specific requirements for storage area are as follows:

...

- B. *Non-residential buildings shall provide a minimum storage area of ten square feet, plus:*
 1. *Office: Four square feet per 1,000 square feet gross floor area (GFA);*
 2. *Retail: Ten square feet per 1,000 square feet GFA;*
 3. *Wholesale / Warehouse / Manufacturing: Six square feet per 1,000 square feet GFA; and*
 4. *Other: Four square feet per 1,000 square feet GFA.*

Response: The applicant’s design team has communicated with the franchise waste hauler, Republic Services, to confirm that the proposed configuration, including its size, location and access/circulation, are satisfactory. (See letter from Republic Services in Attachment 9.) The proposed waste enclosure location, at the back of the site near its southwest corner, ensures that it will not be visible from SW Clutter Street. Perimeter landscaping, including the proposed stormwater facility along the southern boundary, will effectively screen views of the waste enclosure from neighboring sites (which are also in industrial zoning).

If it happens that a future building tenant produces waste at a significantly higher rate than typical tenants do, they will be able to successfully utilize the proposed facility by increasing the frequency of service by Republic Services, whose facility is actually located just blocks away, at 10295 SW Ridder Road.

Waiver #6 is consistent with the intent of the standards, which are designed to provide sufficient capacity to meet users' needs and to avoid unsightly waste material accumulations or containment problems. This request allows a compact waste storage facility at a low-visibility location behind the building to meet anticipated needs with a smaller footprint.

E. Type C Tree Plan DRB review

Section 4.600.20. Applicability of Subchapter

(.01) The provisions of this subchapter apply to the United States and the State of Oregon, and to their agencies and subdivisions, including the City of Wilsonville, and to the employees and agents thereof.

(.02) By this subchapter, the City of Wilsonville regulates forest practices on all lands located within its urban growth boundary, as provided by ORS 527.722.

(.03) The provisions of this subchapter apply to all land within the City limits, including property designated as a Significant Resource Overlay Zone or other areas or trees designated as protected by the Comprehensive Plan, City zoning map, or any other law or ordinance; except that any tree activities in the Willamette River Greenway that are regulated by the provisions of WC 4.500 - 4.514 and requiring a conditional use permit shall be reviewed by the DRB under the application and review procedures set forth for Tree Removal Permits.

Response: Upon annexation, the subject site will be located within Wilsonville city limits. This section applies.

Section 4.600.30. Tree Removal Permit Required

(.01) Requirement Established. No person shall remove any tree without first obtaining a Tree Removal Permit (TRP) as required by this subchapter.

(.02) Tree Removal Permits will be reviewed according to the standards provided for in this subchapter, in addition to all other applicable requirements of Chapter 4.

(.03) Although tree activities in the Willamette River Greenway are governed by WC 4.500 - 4.514, the application materials required to apply for a conditional use shall be the same as those required for a Type B or C permit under this subchapter, along with any additional materials that may be required by the Planning Department. An application for a Tree Removal Permit under this section shall be reviewed by the Development Review Board.

Response: This application includes a request for a Type C Tree Removal Permit.

Section 4.600.40. Exceptions

(.01) Exception from requirement. Notwithstanding the requirement of WC 4.600.30(1), the following activities are allowed without a Tree Removal Permit, unless otherwise prohibited:

- A. *Agriculture, Commercial Tree Farm or Orchard. Tree removal or transplanting occurring during use of land for commercial purposes for agriculture, orchard(s), or tree farm(s), such as Christmas tree production.*

- B. *Emergencies. Actions made necessary by an emergency, such as tornado, windstorm, flood, freeze, utility damage or other like disasters, in order to prevent imminent injury or damage to persons or property or restore order and it is impractical due to circumstances to apply for a permit.*
1. *When an emergency has occurred, a Tree Removal Permit must be applied for within thirty (30) days following the emergency tree removal under the application procedures established in this subchapter.*
 2. *In addition to complying with the permit application requirements of this subchapter, an applicant shall provide a photograph of any tree removed and a brief description of the conditions that necessitated emergency removal. Such photograph shall be supplied within seven days of application for a permit. Based on good cause shown arising out of the emergency, the Planning Director may waive any or all requirements of this section.*
 3. *Where a Type A Permit is granted for emergency tree removal, the permittee is encouraged to apply to the City Tree Fund for replanting assistance.*
- C. *City utility or road work in utility or road easements, in utility or road right-of-ways, or in public lands. However, any trees removed in the course of utility work shall be mitigated in accordance with the standards of this subchapter.*
- D. *Nuisance abatement. The City is not required to apply for a Tree Removal Permit to undertake nuisance abatement as provided in WC 6.200 et seq. However, the owner of the property subject to nuisance abatement is subject to all the provisions of this subchapter in addition to the requirements of WC 6.200 et seq.*
- E. *The removal of filbert trees is exempt from the requirements of this subchapter.*
- F. *The Charbonneau District, including its golf course, is exempt from the requirements of WC 4.600.30(1) on the basis that by and through the current CC&R's of the Charbonneau Country Club, the homeowners' association complies with all requirements of WC 4.610.30(1)(C)(1). This exception has been based upon the Tree Maintenance and Protection Plan that has been submitted by the Charbonneau Country Club and approved by the Planning Director. Tree removal activities remain subject to all applicable standards of this subchapter. Unless authorized by the City, this exception does not include tree removal upon any public easements or public property within the district. In the event that the CC&R's are changed relative to the effect of the Tree Maintenance and Protection Plan, then the Planning Director shall review whether such effect is material, whether it can be mitigated, and if not, may disallow the exemption.*

Response: The applicant is not requesting an exemption.

Section 4.600.50. Application For Tree Removal Permit

(.01) Application for Permit. A person seeking to remove one or more trees shall apply to the Director for a Tree Removal Permit for a Type A, B, C, or D permit, depending on the applicable standards as provided in this subchapter.

(A) An application for a tree removal permit that does not meet the requirements of Type A may be submitted as a Type B application.

(.02) Time of Application. Application for a Tree Removal Permit shall be made before removing or transplanting trees, except in emergency situations as provided in WC 4.600.40 (1)(B) above. Where the site is proposed for development necessitating siteplan or plat review, application for a Tree Removal Permit shall be made as part of the site development application as specified in this subchapter.

(.03) Fees. A person applying for a Tree Removal Permit shall pay a non-refundable application fee; as established by resolution of the City Council.

- A. *By submission of an application, the applicant shall be deemed to have authorized City representatives to have access to applicant's property as may be needed to verify the information provided, to observe site conditions, and if a permit is granted, to verify that terms and conditions of the permit are followed.*

Response: The development proposal identifies a stand of five mature Douglas fir trees for preservation, and another 16 on-site trees for removal. Proposed tree removal is shown on Sheet CO.10 and Sheet LO.02 of Attachment 6. The applicant is requesting a Type C tree removal permit.

Section 4.610.00. Application Review Procedure

(.01) The permit applicant shall provide complete information as required by this subchapter in order for the City to review the application.

Response: The applicant has submitted a complete application for the city's review.

(.02) Departmental Review. All applications for Tree Removal Permits must be deemed complete by the City Planning Department before being accepted for review. When all required information has been supplied, the Planning Department will verify whether the application is complete. Upon request of either the applicant or the City, the City may conduct a field inspection or review meeting. City departments involved in the review shall submit their report and recommendations to the Planning Director who shall forward them to the appropriate reviewing authority.

Response: The applicant acknowledges the procedure for the determination of completeness and Departmental Review.

(.03) Reviewing Authority.

- B. *Type C. Where the site is proposed for development necessitating site plan review or plat approval by the Development Review Board, the Development Review Board shall be responsible for granting or denying the application for a Tree Removal Permit, and that decision may be subject to affirmance, reversal or modification by the City Council, if subsequently reviewed by the Council. For site development applications subject to a Class II administrative review process in the Coffee Creek Industrial Design Overlay District, the Planning Director shall be responsible for the granting or denial of the Tree Removal Permit application.*

Response: The proposed development is located within the Coffee Creek Industrial Design Overlay District. The applicant has requested consolidated review with a development proposal that requires action by the Development Review Board (DRB).

(.04) Notice. Before the granting of a Type C Tree Removal Permit, notice of the application shall be sent by regular mail to all owners within two hundred fifty feet (250') of the property where the trees are located as provided for in WC 4.010. The notice shall indicate where the application may be inspected and when a public hearing on the application will be held.

Response: This is procedural direction and requires no evidence from the applicant. A notice of application will be sent out to all owners within two hundred fifty feet.

(.05) Denial of Tree Removal Permit. Whenever an application for a Tree Removal Permit is denied, the permit applicant shall be notified, in writing, of the reasons for denial.

Response: This is procedural direction and requires no evidence from the applicant. The applicant understands they will be notified if the tree removal permit is denied.

(.06) Grant of a Tree Removal Permit. Whenever an application for a Type B, C or D Tree Removal Permit is granted, the reviewing authority shall:

- A. *Conditions. Attach to the granting of the permit any reasonable conditions considered necessary by the reviewing authority including, but not limited to, the recording of any plan or agreement approved under this subchapter, to ensure that the intent of this Chapter will be fulfilled and to minimize damage to, encroachment on or interference with natural resources and processes within wooded areas;*
- B. *Completion of Operations. Fix a reasonable time to complete tree removal operations; and*
- C. *Security. Require the Type C permit grantee to file with the City a cash or corporate surety bond or irrevocable bank letter of credit in an amount determined necessary by the City to ensure compliance with Tree Removal Permit conditions and this Chapter.*
 - 1. *This requirement may be waived by the Planning Director if the tree removal must be completed before a plat is recorded, and the applicant has complied with WC 4.264(1) of this Code.*

Response: The applicant acknowledges that the reviewing authority will apply conditions, or other requirements when granting a Tree Removal Permit.

Section 4.610.10. Standards For Tree Removal, Relocation Or Replacement

(.01) Except where an application is exempt, or where otherwise noted, the following standards shall govern the review of an application for a Type A, B, C or D Tree Removal Permit:

- A. *Standard for the Significant Resource Overlay Zone. The standard for tree removal in the Significant Resource Overlay Zone shall be that removal or transplanting of any tree is not inconsistent with the purposes of this Chapter.*

Response: The subject site is not located in a Significant Resource Overlay Zone; this standard does not apply.

- B. *Preservation and Conservation. No development application shall be denied solely because trees grow on the site. Nevertheless, tree preservation and conservation as a design principle shall be equal in concern and importance to other design principles.*

Response: The site layout was designed to preserve a stand of five mature Douglas fir trees in the northwest corner of the parcel while meeting the operational needs of prospective industrial tenants in wholesale/distribution and manufacturing businesses. See the Tree Protection and Mitigation Plan landscape sheet, L0.02 of Attachment 6 and the Arborist Report (Attachment 7) for details.

- C. *Developmental Alternatives. Preservation and conservation of wooded areas and trees shall be given careful consideration when there are feasible and reasonable location alternatives and design options on-site for proposed buildings, structures or other site improvements.*

Response: Preservation and conservation of wooded areas and trees was given careful consideration in site planning and design. Based on the recommendations in the Arborist's report, several design changes were made to preserve five mature Douglas firs and two Spruce trees located in the northwest corner of the parcel. For example, the proposed building is set back from the street frontage, and the western driveway was shifted eastward to protect root zones and preserve the trees. As a result of shifting the driveway, and also to take advantage of an existing compacted gravel driveway corridor along the west property edge, the western pedestrian access

has been routed through the landscape area, providing a naturalistic path from the sidewalk to the western office corner entrance. This standard is met.

D. Land Clearing. Where the proposed activity requires land clearing, the clearing shall be limited to designated street rights-of-way and areas necessary for the construction of buildings, structures or other site improvements.

Response: Clearing and grading on the site will be limited to the extents of site improvement. Construction on the site will also be in alignment with the recommendations in the Arborist's report (Attachment 7) to protect trees during the construction process. See the Tree Protection and Mitigation Plan on Sheet LO.02 of Attachment 6. This standard is met.

E. Residential Development. Where the proposed activity involves residential development, residential units shall, to the extent reasonably feasible, be designed and constructed to blend into the natural setting of the landscape.

Response: The proposed development is not residential. This standard does not apply.

F. Compliance With Statutes and Ordinances. The proposed activity shall comply with all applicable statutes and ordinances.

Response: The applicant has submitted this application and narrative to show compliance with all applicable statutes and ordinances.

G. Relocation or Replacement. The proposed activity shall include necessary provisions for tree relocation or replacement, in accordance with WC 4.620.00, and the protection of those trees that are not to be removed, in accordance with WC 4.620.10.

Response: Per the Arborist's report (Attachment 7), no tree relocation is proposed; 17 trees are subject to Code provisions for mitigation/replacement planting. Trees to remain on site and directly adjacent to the site are to be protected by measures as outlined in the Arborist's report.

H. Limitation. Tree removal or transplanting shall be limited to instances where the applicant has provided completed information as required by this Chapter and the reviewing authority determines that removal or transplanting is necessary based on the criteria of this subsection.

- 1. Necessary For Construction. Where the applicant has shown to the satisfaction of the reviewing authority that removal or transplanting is necessary for the construction of a building, structure or other site improvement, and that there is no feasible and reasonable location alternative or design option on-site for a proposed building, structure or other site improvement; or a tree is located too close to existing or proposed buildings or structures, or creates unsafe vision clearance.*
- 2. Disease, Damage, or Nuisance, or Hazard. Where the tree is diseased, damaged, or in danger of falling, or presents a hazard as defined in WC 6.208, or is a nuisance as defined in WC 6.200 et seq., or creates unsafe vision clearance as defined in this Code.*
 - (a) As a condition of approval of Stage II development, filbert trees must be removed if they are no longer commercially grown or maintained.*
- 3. Interference. Where the tree interferes with the healthy growth of other trees, existing utility service or drainage, or utility work in a previously dedicated right-of-way, and it is not feasible to preserve the tree on site.*
- 4. Other. Where the applicant shows that tree removal or transplanting is reasonable under the circumstances.*

Response: Alternative site layouts were considered to preserve as many mature trees as feasible, while maintaining a functional site layout. Special considerations were made to preserve a stand of mature Douglas firs. The trees proposed for removal per the Arborist's recommendations are either in poor health, non-native/invasive, or in conflict with proposed construction.

I. Additional Standards for Type C Permits.

1. *Tree survey. For all site development applications reviewed under the provisions of Chapter 4 Planning and Zoning, the developer shall provide a Tree Survey before site development as required by WC 4.610.40, and provide a Tree Maintenance and Protection plan, unless specifically exempted by the Planning Director or DRB, prior to initiating site development.* 2. *Platted Subdivisions. The recording of a final subdivision plat whose preliminary plat has been reviewed and approved after the effective date of Ordinance 464 by the City and that conforms with this subchapter shall include a Tree Survey and Maintenance and Protection Plan, as required by this subchapter, along with all other conditions of approval.*
3. *Utilities. The City Engineer shall cause utilities to be located and placed wherever reasonably possible to avoid adverse environmental consequences given the circumstances of existing locations, costs of placement and extensions, the public welfare, terrain, and preservation of natural resources. Mitigation and/or replacement of any removed trees shall be in accordance with the standards of this subchapter.*

Response: A Tree Survey and Tree Maintenance and Protection plan has been submitted as part of the arborist report. Sheet L0.02 of Attachment 7.

J. Exemption. Type D permit applications shall be exempt from review under standards D, E, H and I of this subsection.

Response: This application is not for a Type D permit; this exemption does not apply.

Section 4.610.40. Type C Permit

(.01) Approval to remove any trees on property as part of a site development application may be granted in a Type C permit. A Type C permit application shall be reviewed by the standards of this subchapter and all applicable review criteria of Chapter 4. Application of the standards of this section shall not result in a reduction of square footage or loss of density, but may require an applicant to modify plans to allow for buildings of greater height. If an applicant proposes to remove trees and submits a landscaping plan as part of a site development application, an application for a Tree Removal Permit shall be included. The Tree Removal Permit application will be reviewed in the Stage II development review process. The DRB shall review all Type C permits, with the exception of Class II development review applications located within the Coffee Creek Industrial Design Overlay District, where the Planning Director shall have review authority. Any plan changes made that affect trees after Stage II review of a development application shall be subject to review by the original approval authority. Where mitigation is required for tree removal, such mitigation may be considered as part of the landscaping requirements as set forth in this Chapter.

Tree removal shall not commence until approval of the required Stage II application and the expiration of the appeal period following that decision. If a decision approving a Type C permit is appealed, no trees shall be removed until the appeal has been settled.

Response: The applicant is requesting a Type C permit. These standards and procedure apply.

- (.02) The applicant must provide ten copies of a Tree Maintenance and Protection Plan completed by an arborist that contains the following information: A. A plan,*

including a topographical survey bearing the stamp and signature of a qualified, registered professional containing all the following information:

1. *Property Dimensions.* The shape and dimensions of the property, and the location of any existing and proposed structure or improvement.
2. *Tree survey.* The survey must include:
 - a. *An accurate drawing of the site based on accurate survey techniques at a minimum scale of one inch (1") equals one hundred feet (100') and which provides a) the location of all trees having six inches (6") or greater d.b.h. likely to be impacted, b) the spread of canopy of those trees, (c) the common and botanical name of those trees, and d) the approximate location and name of any other trees on the property.*
 - b. *A description of the health and condition of all trees likely to be impacted on the site property. In addition, for trees in a present or proposed public street or road right-of-way that are described as unhealthy, the description shall include recommended actions to restore such trees to full health. Trees proposed to remain, to be transplanted or to be removed shall be so designated. All trees to remain on the site are to be designated with metal tags that are to remain in place throughout the development. Those tags shall be numbered, with the numbers keyed to the tree survey map that is provided with the application.*
 - c. *Where a stand of twenty (20) or more contiguous trees exist on a site and the applicant does not propose to remove any of those trees, the required tree survey may be simplified to accurately show only the perimeter area of that stand of trees, including its drip line. Only those trees on the perimeter of the stand shall be tagged, as provided in "b," above.*
 - d. *All Oregon white oaks, native yews, and any species listed by either the state or federal government as rare or endangered shall be shown in the tree survey.*
3. *Tree Protection.* A statement describing how trees intended to remain will be protected during development, and where protective barriers are necessary, that they will be erected before work starts. Barriers shall be sufficiently substantial to withstand nearby construction activities. Plastic tape or similar forms of markers do not constitute "barriers."
4. *Easements and Setbacks.* Location and dimension of existing and proposed easements, as well as all setbacks required by existing zoning requirements.
5. *Grade Changes.* Designation of grade changes proposed for the property that may impact trees.
6. *Cost of Replacement.* A cost estimate for the proposed tree replacement program with a detailed explanation including the number, size and species.
7. *Tree Identification.* A statement that all trees being retained will be identified by numbered metal tags, as specified in subsection "A," above in addition to clear identification on construction documents.

Response: The Tree Maintenance and Protection Plan is part of the arborist report. See Attachment 7, and Sheet L0.02 of Attachment 6.

Section 4.620.00. Tree Relocation, Mitigation, Or Replacement

(.01) Requirement Established. A Type B or C Tree Removal Permit grantee shall replace or relocate each removed tree having six (6) inches or greater d.b.h. within one year of removal.

Response: Trees proposed for removal are subject to on-site replacement planting requirements. See Sheet L0.02 Tree Protection and Mitigation Plan in Attachment 6, which shows trees to be removed and location and species of mitigation trees. This standard is met.

(.02) Basis For Determining Replacement. The permit grantee shall replace removed trees on a basis of one (1) tree replanted for each tree removed. All replacement trees must measure two inches (2") or more in diameter. Alternatively, the Planning Director or Development Review Board may require the permit grantee to replace removed trees on a per caliper inch basis, based on a finding that the large size of the trees being removed justifies an increase in the replacement trees required. Except, however, that the Planning Director or Development Review Board may allow the use of replacement Oregon white oaks and other uniquely valuable trees with a smaller diameter.

Response: Seventeen trees are proposed for removal that are greater than 6" DBH. No Oregon White Oaks or other uniquely valuable trees are proposed for removal. Although this Code provision calls for replacement of removed trees at a 1 to 1 value using 2" caliper replacement trees, Section 4.176(.06)F provides Tree Credits for conservation of large specimens. The applicant calculates that 23 Tree Credits accrue from the protection and conservation of the five Douglas fir trees within the site, whose DBH sizes range from 26" to 53". Therefore, in this case the replacement planting requirement is satisfied by the Tree Credits arising from conservation; nevertheless, the applicant has proposed tree plantings at site perimeter locations and enhanced, dense tree planting along the SW Clutter Street frontage to create a naturalistic character. These requirements are met.

(.03) Replacement Tree Requirements. A mitigation or replacement tree plan shall be reviewed by the City prior to planting and according to the standards of this subsection.

- A. *Replacement trees shall have shade potential or other characteristics comparable to the removed trees, shall be appropriately chosen for the site from an approved tree species list supplied by the City, and shall be state Department of Agriculture Nursery Grade No. 1 or better.*
- B. *Replacement trees must be staked, fertilized and mulched, and shall be guaranteed by the permit grantee or the grantee's successors-in-interest for two (2) years after the planting date.*
- C. *A "guaranteed" tree that dies or becomes diseased during that time shall be replaced.*
- D. *Diversity of tree species shall be encouraged where trees will be replaced, and diversity of species shall also be maintained where essential to preserving a wooded area or habitat.*

Response: Replacement trees will be used to enhance the plantings along the frontage of the site. Trees are to be staked, fertilized, mulched, and guaranteed. See L0.02 Tree preservation and Mitigation Plan, Attachment 6.

(.04) All trees to be planted shall consist of nursery stock that meets requirements of the American Association of Nurserymen (AAN) American Standards for Nursery Stock (ANSI Z60.1) for top grade.

Response: All trees will meet the ANSI Z60.1 standard. This standard will be met.

(.05) Replacement Tree Location.

- A. *City Review Required. The City shall review tree relocation or replacement plans in order to provide optimum enhancement, preservation and protection of wooded areas. To the extent feasible and desirable, trees shall be relocated or replaced on-site and within the same general area as trees removed.*
- B. *Relocation or Replacement Off-Site. When it is not feasible or desirable to relocate or replace trees on-site, relocation or replacement may be made at another location approved by the City.*

Response: All proposed tree planting is located on-site and in the Clutter Street right-of-way along the site frontage. The mitigation trees will be planted around perimeter areas of the site and will be used to enhance the pedestrian wayside.

(.06) City Tree Fund. Where it is not feasible to relocate or replace trees on site or at another approved location in the City, the Tree Removal Permit grantee shall pay into the City Tree Fund, which fund is hereby created, an amount of money approximately the value as defined by this subchapter, of the replacement trees that would otherwise be required by this subchapter. The City shall use the City Tree Fund for the purpose of producing, maintaining and preserving wooded areas and heritage trees, and for planting trees within the City.

- A. *The City Tree Fund shall be used to offer trees at low cost on a first-come, first-serve basis to any Type A Permit grantee who requests a tree and registers with the City Tree Fund.*
- B. *In addition, and as funds allow, the City Tree Fund shall provide educational materials to assist with tree planting, mitigation, and relocation.*

Response: All mitigation planting will occur on site. The applicant will not use the City Tree Fund to mitigate for removed trees.

(.07) Exception. Tree replacement may not be required for applicants in circumstances where the Director determines that there is good cause to not so require. Good cause shall be based on a consideration of preservation of natural resources, including preservation of mature trees and diversity of ages of trees. Other criteria shall include consideration of terrain, difficulty of replacement and impact on adjacent property.

Response: The proposal includes the preservation of a mature stand of 5 Douglas Firs with DBHs ranging from 25- to 52-inches. See the Arborist Report, Attachment 7 for more information on preserving high value trees.

Section 4.620.10. Tree Protection During Construction

(.01) Where tree protection is required by a condition of development under Chapter 4 or by a Tree Maintenance and Protection Plan approved under this subchapter, the following standards apply:

- A. *All trees required to be protected must be clearly labeled as such.*
- B. *Placing Construction Materials Near Tree. No person may conduct any construction activity likely to be injurious to a tree designated to remain, including, but not limited to, placing solvents, building material, construction equipment, or depositing soil, or placing irrigated landscaping, within the drip line, unless a plan for such construction activity has been approved by the Planning Director or Development Review Board based upon the recommendations of an arborist.*
- C. *Attachments to Trees During Construction. Notwithstanding the requirement of WC 4.620.10(1)(A), no person shall attach any device or wire to any protected tree unless needed for tree protection.*
- D. *Protective Barrier. Before development, land clearing, filling or any land alteration for which a Tree Removal Permit is required, the developer shall erect and maintain suitable barriers as identified by an arborist to protect remaining trees. Protective barriers shall remain in place until the City authorizes their removal or issues a final certificate of occupancy, whichever occurs first. Barriers shall be sufficiently substantial to withstand nearby construction activities.
Plastic tape or similar forms of markers do not constitute "barriers." The most appropriate and protective barrier shall be utilized. Barriers are required for all trees designated to remain, except in the following cases:*

1. *Right-of-Ways and Easements. Street right-of-way and utility easements may be cordoned by placing stakes a minimum of fifty (50) feet apart and tying ribbon, plastic tape, rope, etc., from stake to stake along the outside perimeters of areas to be cleared.*
2. *Any property area separate from the construction or land clearing area onto which no equipment will venture may also be cordoned off as described in paragraph (D) of this subsection, or by other reasonable means as approved by the reviewing authority.*

Response: Tree protection measures are specified in the Arborist's report, and will be implemented at the site. See the Arborist's Report, Attachment 7.

Section 4.620.20. Maintenance And Protection Standards

(.01) The following standards apply to all activities affecting trees, including, but not limited to, tree protection as required by a condition of approval on a site development application brought under this Chapter or as required by an approved Tree Maintenance and Protection Plan.

- A. *Pruning activities shall be guided by the most recent version of the ANSI 300 Standards for Tree, Shrub, and Other Woody Plant Maintenance. Information on these standards shall be available upon request from the Planning Department.*
- B. *Topping is prohibited.*
 1. *Exception from this section may be granted under a Tree Removal Permit if necessary for utility work or public safety.*

Response: Maintenance and protection standards will follow ANSI 300 standards. This standard will be met.

Section 4.630.00. Appeal

(.01) The City shall not issue a Tree Removal Permit until approval has been granted by either the Planning Director or the DRB. Any applicant denied a Type A or B permit may appeal the decision as provided for in review of Class I Development Applications, or Class II Development Applications, whichever is applicable. Decisions by the Planning Director may be appealed to the DRB as provided in WC 4.022. Decisions by the DRB may be appealed to the City Council as provided in WC 4.022.

Response: The applicant acknowledges this process and their right to appeal a denied permit.

(.02) The City shall not issue a Tree Removal Permit approved by the Development Review Board until fifteen (15) calendar days have passed following the approval. The grant or denial of a Tree Removal Permit may be appealed to the City Council in the same manner as provided for in WC 4.022. An appeal must be filed in writing, within the fifteen (15) calendar day period following the decision being appealed. The timely filing of an appeal shall have the effect of suspending the issuance of a permit pending the outcome of the appeal. The City Council, upon review, may affirm, reverse or modify the decision rendered by the Development Review Board based upon the same standards of review specified for the DRB in the Wilsonville Code.

Response: The applicant acknowledges there is a 15-day appeal period between granting or denying a Tree Removal permit and issuance for an approved permit.

Section 4.630.10. Display Of Permit; Inspection

The Tree Removal Permit grantee shall conspicuously display the permit on-site. The permit grantee shall display the permit continuously while trees are being removed or replaced or while activities authorized under the permit are performed. The permit grantee shall allow City representatives to enter and inspect

the premises at any reasonable time, and failure to allow inspection shall constitute a violation of this subchapter.

Response: The permit will be conspicuously displayed on the jobs site. This standard will be met.

Section 4.630.20. Variance For Hardship

Any person may apply for a variance of this subchapter as provided for in Section 4.196 of this Chapter.

Response: A variance is not requested.

Section 4.630.30. Severability

If any part of this ordinance is found by a court of competent jurisdiction to be invalid, that part shall be severable and the remainder of this ordinance shall not be affected.

Response: This provision requires no evidence from the applicant.

Section 4.640.00. Violation; Enforcement

(.01) The cutting, damaging, or removal of any individual tree without a permit as required by this ordinance constitutes a violation punishable as a separate infraction under WC 1.013. In addition, each violation of a condition or a violation of any requirement of this Chapter shall constitute a separate infraction.

Response: The tree removal plan shall be followed. This standard will be met.

(.02) Retroactive Permit. A person who removes a tree without obtaining a Type A or Type B permit may apply retroactively for a permit. In addition to all application requirements of this Chapter, the person must be able to demonstrate compliance with all requirements of this subchapter, in addition to paying a triple permit fee and a penalty per tree in an amount established by resolution of City Council. Mitigation requirements of this subchapter apply to all retroactive permits.

Response: Understood. This provision requires no evidence from the applicant.

(.03) Nuisance Abatement. Removal of a tree in violation of this Chapter is a nuisance and may be abated as provided in Sections 6.230 to 6.244, 6.250, and 6.260 of the Wilsonville Code.

Response: Understood. This provision requires no evidence from the applicant.

(.04) Withholding Certificate of Occupancy. The City Building Official has the authority to issue a stop-work order, withhold approval of a final plat, or withhold issuance of a certificate of occupancy, permits or inspections until the provisions of this Chapter, including any conditions attached to a Tree Removal Permit, have been fully met.

Response: Understood. This provision requires no evidence from the applicant.

(.05) Fines. Fines for a violation shall be imposed according to WC 1.012.

Response: Understood. This provision requires no evidence from the applicant.

(.06) Mitigation. The City shall require the property owner to replace illegally removed or damaged trees. The City may also require a combination of payment and tree replacement.

- A. *The City shall notify the property owner in writing that a violation has occurred and mitigation is required. Within thirty (30) days of the date of mailing of the notice, the property owner shall provide a mitigation plan to the City. The plan shall provide for replacement of a tree of similar species and size taking into account the suitability of the site and nursery stock availability.*

- B. Replacement will be on an inch-for-inch basis computed by adding the total diameter measured at d.b.h. in inches of the illegally removed or damaged trees. The City may use any reasonable means to estimate the tree loss if destruction of the illegally removed or damaged trees prevents exact measurement. All replaced trees must be a minimum two-inch (2") caliper. If the mitigation requirements cannot be completed on the property, the City may require completion at another approved location. Alternatively, the City may require payment into the City Tree Fund of the value of the removed tree as established by the Planning Department.

Response: This application is for a Type III Tree Removal permit. Details on which trees to be removed can be found in the Landscape plans, Attachment 6 and the Arborist Report, Attachment 7. If additional trees need to be removed the applicant will modify or apply for a new permit. No trees will be removed illegally.

Section 4.640.10. Alternative Enforcement

(.01) In the event that a person commits more than one violation of WC 4.600.30 to WC 4.630.00, the following alternative sentence may be imposed:

- A. *If a person has gained money or property through the commission of an offense under this section, then upon conviction thereof, the court, in lieu of imposing a fine, may sentence the person to pay an amount, fixed by the court, not to exceed double the amount of the gain from the commission of the offense.*
- B. *"Gain" is defined as the amount of money or value of property derived from the commission of the violation, less the amount of money or value of property seized by or surrendered to the City. "Value" shall be the greater of the market value or replacement cost as determined by a licensed professional in the tree, nursery, or landscape field.*
- C. *Any fines collected by the City under this section shall accrue to the City Tree Fund.*

Response: Understood. This provision requires no evidence from the applicant.

Section 4.640.20. Responsibility For Enforcement.

Compliance with this Chapter shall be enforced by the City Attorney, the City Attorney's designee, and Clackamas County or Washington County law enforcement officers.

Response: This provision provides procedural guidance for implementation and requires no evidence from the applicant.

F. Class C Sign Permit

Section 4.156. Sign Regulations

Section 4.156.02. Sign Review Process and General Requirements.

(.01) Permit Required. Unless exempt under Section 4.156.05, no sign, permanent or temporary, shall be displayed or installed in the City without first obtaining a sign permit.

Response: This application includes a request for a Class III sign permit. Proposed signage includes one ground mounted monument sign and building mounted signs on the front (north) and side (east and west) façades at the prominent office corners, allowing one or two for each of two potential tenants.

The applicant's intent is to have all future particular signs comply, through Class I or II review, with the City's applicable regulations regarding sign sizes (dependent in part on the size of future tenants' lease areas), locations, materials, illumination and other characteristics.

For this Class III review, elevation drawings (Sheet A2.10) show approximate positions for potential future tenant signage on the north, east and west walls, near the northeast and northwest building corners. These are basically icons to represent conceptual signage locations, with future permit issuance to be based on demonstration that each sign as well as the proposed full set of signs complies with applicable area limitations.

All wall signs will be made of discrete-element lettering and/or logo art with backlighting for night-time visibility. Internally-illuminated cabinet signs with single translucent face panels are not proposed.

(.02) Sign Permits and Master Sign Plans. Many properties in the City have signs pre-approved through a Master Sign Plan. For the majority of applications where a Master Sign Plan has been approved the applicant need not consult the sign requirements for the zone, but rather the Master Sign Plan, copies of which are available from the Planning Division. Signs conforming to a Master Sign Plan require only a Class I Sign Permit.

Response: This application is not applying for a Master Sign Plan, and no Master Sign Plan was previously approved for the site. This standard does not apply.

(.03) Classes of Sign Permits, Master Sign Plans, and Review Process. The City has three classes of sign permits for permanent signs: Class I, Class II, and Class III. In addition, non-residential developments with three or more tenants require a Master Sign Plan. Class I sign permits are reviewed through the Class I Administrative Review Process as outlined in Subsection 4.030(.01)(A.). Class II sign permits are reviewed through the Class II Administrative Review Process as outlined in Subsection 4.030 (.01)(B.). Class III Sign Permits and Master Sign Plans are reviewed by the Development Review Board (DRB) as outlined in Section 4.031.

Response: This application includes a request for a Class III sign permit.

(.06) Class III Sign Permit. Sign permit requests shall be processed as a Class III Sign Permit when associated with new development, except as noted in Subsection 4.156.02 (.05) C., or redevelopment requiring DRB review, and not requiring a Master Sign Plan; when a sign permit request is associated with a waiver or non-administrative variance; or when the sign permit request involves one or more freestanding or ground mounted signs greater than eight (8) feet in height in a new location. [Section 4.156.02 Section (.06) amended per Ordinance No. 812, 02/22/18]

Response: The applicant is requesting a Class III Sign Permit as part of this application. The applicant is proposing three signs: a ground-mounted monument sign located along Clutter Road near the northeast corner of the site, and two building mounted signs, one at each building entrance. See Sheet C1.10 for the location of the ground mounted sign, and Sheet A5.06 for sign details. Sheet A2.10 shows the sign locations on the building elevations. All sheets are located in Attachment 6.

A. Class III Sign Permit Submission Requirements: Ten (10) paper and electronic copies of the submission requirements for Class II Sign Permits plus information on any requested waivers or variances in addition to all required fees.

Response: This submittal package includes ten paper and an electronic copy.

B. Class III Sign Permit Review Criteria: The review criteria for Class II Sign Permits plus waiver or variance criteria when applicable.

Section 4.156.02.(.05)E. Class II Sign Permit Review Criteria: Class II Sign Permits shall satisfy the sign regulations for the applicable zoning district and the Site Design Review Criteria in Sections 4.400 through 4.421, as well as the following criteria:

1. *The proposed signage is compatible with developments or uses permitted in the zone in terms of design, materials used, color schemes, proportionality, and location, so that it does not interfere with or detract from the visual appearance of surrounding development;*
2. *The proposed signage will not create a nuisance or result in a significant reduction in the value or usefulness of surrounding development; and*
3. *Special attention is paid to the interface between signs and other site elements including building architecture and landscaping, including trees.*

Response: The proposed signage plan includes identifying locations, and potential maximum sizes/proportions for one monument sign near the northeast corner of the site and wall signs on the building, providing flexibility for the future accommodation of single- or dual-tenant occupancy. The sign locations and sizes are designed to be integrated with and to complement the form of the building, including its specific approach to expressing the base-middle-top concept. The sign sizes and locations form part of an integrated whole approach to composition of site elements, including the building, site circulation and parking areas, and landscaping features, particularly along the SW Clutter Street frontage, the public realm from which the site will be visible to the public. As a result, the proposed signage plan satisfies the Class II Sign Permit Review Criteria cited above. No waiver or variance is requested with respect to signage. This requirement is met.

(.07) Master Sign Plans. A Master Sign Plan is required for non-residential developments with three (3) or more tenants. In creating a Master Sign Plan thought should be given to needs of initial tenants as well as the potential needs of future tenants. (...)

Response: The building is expected to have not more than two tenants and will therefore not require a Master Sign Plan.

(.08) Waivers and Variances. Waivers and variances are similar in that they allow deviation from requirements such as area, and height from ground. They differ in that waivers are granted by the DRB as part of a comprehensive review of the design and function of an entire site to bring about an improved design and variances are granted by either the Planning Director or DRB to relieve a specific hardship caused by the regulations.

- A. *Waivers. The DRB may grant waivers for sign area, sign height from ground (no waiver shall be granted to allow signs to exceed thirty-five (35) feet in height), number of signs, or use of electronic changeable copy signs in order to better implement the purpose and objectives of the sign regulations as determined by making findings that all of the following criteria are met:*
 1. *The waiver will result in improved sign design, in regards to both aesthetics and functionality.*
 2. *The waiver will result in a sign or signs more compatible with and complementary to the overall design and architecture of a site, along with adjoining properties, surrounding areas, and the zoning district than signs allowed without the waiver.*
 3. *The waiver will result in a sign or signs that improve, or at least do not negatively impact, public safety, especially traffic safety.*
 4. *Sign content is not being considered when determining whether or not to grant a waiver.*
- B. *Variances.*
 1. *Administrative Variance: In reviewing a Sign Permit the Planning Director may grant or deny a variance to relieve a hardship through the Class II Administrative Review process. Such a variance shall only be approved where the variance does not exceed twenty percent (20%) of area, height, or setback requirements. The Planning Director shall approve such a variance only upon finding that the*

application complies with all of the required variance criteria listed in Section 4.196.

2. *Other Variances: In addition to the authority of the Planning Director to issue administrative variances as noted above, the Development Review Board may authorize variances from sign requirements of the Code, subject to the standards and criteria listed in Section 4.196.*

Response: The applicant is not requesting a waiver or variance from the sign standards.

(.09) Temporary Sign Permits. Temporary sign permits shall be reviewed as follows:

- A. *30 days and less- Class I Administrative Review*
- B. *31 days up to 120 days- Class II Administrative Review*
- C. *Submission Requirements: Applications for a temporary sign permit shall include the following in addition to the required application fee:*
 1. *Completed application form prescribed by the City and signed by the property owner or their authorized representative,*
 2. *Two (2) copies of sign drawings or descriptions showing all materials, sign area and dimensions used to calculate areas, number of signs, location and placement of signs, and other details sufficient to judge the full scale of the sign or signs,*
 3. *Information showing the proposed sign or signs conform with all applicable code requirements.*
- D. *Review Criteria: Temporary Sign Regulations in Section 4.156.09*
- E. *When a temporary sign permit request is submitted as part of the broader temporary use permit request of the same duration, the sign request shall not require an additional fee.*

Response: The applicant is not requesting a temporary sign permit.

(.10) Waiver of Documentation. The Planning Director may, in his or her discretion, waive an application document for Class I, Class II, and temporary sign permits where the required information has already been made available to the City, or where the Planning Director determines the information contained in an otherwise required document is not necessary to review the application.

Response: The application is for a Class III permit; a waiver is not requested or allowed.

Section 4.156.03. Sign Measurement

(.01) Sign Area:

- A. *Cabinet Signs and Similar: The area for signs enclosed by cabinet, frame, or other background (including lighted surface) not otherwise part of the architecture of a building or structure shall be the area of a shape drawn around the outer dimension of the cabinet, frame, or background.*
 1. *If the cabinet, frame, or background is an irregular shape the signs perimeter shall be measured the same as an individual element sign under B. below.*
 2. *The sign area does not include:*
 - a. *Foundations, supports, and other essential structures that are not designed to serve as a backdrop or border to the sign;*
 - b. *Architectural elements of a freestanding or ground mounted sign designed to match or complement the architectural design of buildings on the site not and otherwise meeting the definition of a sign;*
 - c. *A pole or other structural support, unless such pole or structural support is internally illuminated or otherwise so designed to constitute a display device.*

- B. *Individual Element Signs: The area for signs constructed of individual elements (letters, figures, etc.) attached to a building wall or similar surface or structure shall be the summed area of up to three squares, rectangles, circles, or triangles drawn around all sign elements.*
1. *The descender on the lower case letters “q, y, p g, or j.” shall not be included in sign area when the letter otherwise matches the font of other letters in the sign, the descender is no more than 1/2 the cap height of the font, and the descender is no wider than the main body of the letter.*
- C. *Round or Three-Dimensional Signs: The area of a round or three-dimensional sign shall be the maximum surface area visible from any one location on the ground measured the same as A. above except if the maximum surface area is an irregular shape the signs perimeter shall be measured the same as an individual element sign under B. above.*
- D. *Awning or Marquee Signs: The area of signs incorporated into awnings or marquees shall be the area of the entire panel containing the sign measured the same as A. above unless it is clear that part of the panel contains no sign-related display or decoration, other than the background color of the awning.*
- E. *Painted Wall Signs: The area of painted wall signs shall be determined as follows:*
1. *If individual elements are painted without a background it shall be calculated in the manner indicated in B. above.*
 2. *If a background is painted it shall be calculated in the manner indicated in A. above.*
- F. *Temporary Signs: The area of temporary signs including banners, lawn signs, and rigid signs shall be calculated in the manner indicated in A. above.*
- G. *Unless otherwise specified, the sign area of a two-sided sign, with two matching sides, shall be considered to be the area of one side. For example, the sign area of a two-sided sign having thirty-two (32) square feet per sign face shall be considered to be thirty-two (32) square feet, unless this code specifies otherwise.*

Response: Specific sign type will be chosen by the future tenants and approved through a Type I sign application that is not part of this application.

(.02) Sign Height above Ground.

- A. *The height above ground of a freestanding or ground-mounted sign is measured from the average grade directly below the sign to the highest point of the sign or sign structure except as follows:*
1. *A freestanding or ground mounted sign on a man-made base, including a graded earth mound, shall be measured from the grade of the nearest pavement or top of any pavement curb to the highest point of the sign or sign structure. In all cases signs on a berm shall be allowed to be eight (8) feet in height from the top of the berm.*
 2. *A freestanding or ground mounted sign placed below the elevation of the right-of-way it fronts shall be measured from the lowest point in the right-of-way along the frontage to the highest point of the sign.*

Response: One ground mounted sign is proposed. The top of the sign will not exceed 8' above finished grade. See sign details, Attachment 6, Sheet A5.06.

(.03) Sign Height and Length.

- A. *Height of a sign is the vertical distance between the lowest and highest points of the sign.*
- B. *Length of a sign is the horizontal distance between the furthest left and right points of the sign.*

Response: How the city determines sign height and length was used to calculate proposed sign height, width, and areas.

(.04) Final Determination of Sign Measurement. The Planning Director shall be responsible for determining the area, height above ground and height and length of a sign, subject to appeal as specified in Section 4.022. Applicants for sign plans and permits shall provide the dimensions needed to calculate the area, height above ground, height, and length.

Response: Sign size, height, and width dimensions are shown on the plans provided and described in this narrative.

Section 4.156.04. Non-Conforming Signs.

(.01) Non-Conforming Signs. Non-conforming signs, which may be non-conforming structures or non-conforming uses, are subject to the standards for non-conforming uses and non-conforming structures delineated in Sections 4.189 through 4.190. Except, however, that a non-conforming sign that is damaged beyond fifty percent (50%) of its value, as determined by the City Building Official, may only be reconstructed if the reconstructed sign meets all applicable zoning, structural, and electrical standards applicable at the time of reconstruction. Nothing in this Section is intended to impair any previously approved sign permit that has been issued by the City of Wilsonville, subject to state or federal law, or to require the removal of any sign that was legally erected or installed prior to the effective date of these regulations. In the event that a previously erected or installed sign no longer meets applicable City zoning standards it may remain in place, subject to the standards for non-conforming uses or nonconforming structures noted above. However, a sign that is required to be moved solely because of a public taking may be replaced on the site, and maintain its non-conforming status, subject to a Class II Sign Permit, provided the replacement sign is found to not increase in non-conformity to current code standards other than required setbacks.

Response: This application is for new development. This standard does not apply.

Section 4.156.05. Signs Exempt From Sign Permit Requirements.

(.01) The following signs are exempt from the permit requirements of this code and do not require sign permits. Unless otherwise specified, the area of the exempted signs shall not be included in the calculations of sign area permitted on a given site:

- A. Traffic or other governmental or directional signs, as may be authorized by the City or other units of government having jurisdiction within the City.*
- B. Signs installed by public utility companies indicating danger, or which serve as an aid to public safety, or which show the location of utilities or public facilities, including underground utilities.*
- C. Flags displayed from permanently-located freestanding or wall-mounted flagpoles that are designed to allow raising and lowering of flags. One site may have up to two (2) exempt flags; no exempt flag may be more than thirty (30) feet in height.*

Response: The proposed signs do not fall into an exempt sign category.

(.02) Other Signs. No sign permit is necessary before placing, constructing or erecting the following signs. However, in all other particulars such signs shall conform to the requirements of applicable Building and Electrical Codes, as well as this Code.

- A. Signs inside a building except for prohibited signs listed in Section 4.156.06.*
- B. Name Plates and Announcements.*
 - 1. A sign identifying the name, street address, occupation and/or profession of the occupant of the premises in the aid of public health and safety. One name plate,*

- not exceeding a total of three (3) square feet shall be allowed for each occupant. The name plate shall be affixed to the building.*
2. *Announcements posted on a given property (e.g., no smoking, no parking, rules of conduct, etc.) and not intended to be read from off-site, are permitted to be located as needed. Such announcements shall not be considered to be part of the sign allotment for the property.*
- C. *Directional Signs. Designed for non-changing messages, directional signs facilitate the safe movement of the traveling public. Such signs are subject to the following standards and conditions:*
1. *The sign area does not exceed three (3) square feet per sign face,*
 2. *The sign location is not within public rights-of-way and meets City vision clearance requirements;*
 3. *No sign lighting;*
 4. *No logo or a logo that does not exceed one (1) square foot in size; and*
 5. *No more than one (1) directional sign is located on the same tax lot.*
- D. *Changes of Copy Only, where the graphics contained on an existing sign are changed, but the sign itself is not structurally altered, and no building or electrical permit is required.*
- E. *Signs not visible from any off-site location.*
- F. *Holiday lights and decorations, in place between November 15 and January 15.*
- G. *Signs on scoreboards or ballfields located on public property.*
- H. *One small decorative banner per dwelling unit placed on site, in residential zones.*
- I. *Lawn Signs meeting the standards of Table S-1 and the following conditions:*
1. *Such signs shall not be intentionally illuminated and shall not display movement.*
 2. *Such signs shall not obscure sight lines of the motoring public, obscure traffic or other government signs, or create a nuisance to the use or occupancy of any property.*
 3. *Lawn signs associated with temporary events may be posted no longer than sixty (60) days before the beginning of an event and must be removed at the event's completion.*
 4. *Lawn signs not associated with temporary events may be posted for one period of up to sixty (60) days in a calendar year.*
 5. *Such signs may be up to six (6) feet in height.*
 6. *Such signs may be one (1) or two (2) sided.*
- J. *Rigid Signs meeting the standards of Table S-1 and the following conditions:*
1. *Such signs shall not be intentionally illuminated and shall not display movement.*
 2. *Such signs shall not obscure sight lines of the motoring public, obscure traffic or other government signs, or create a nuisance to the use or occupancy of any property.*
 3. *Such signs may be up to six (6) feet in height, except signs on lots with an active construction project (active building permit), which may be up to ten (10) feet in height. (Note that signs exceeding six (6) feet in height typically require building permits.)*
 4. *Such signs may be one (1), two (2), or three (3) sided.*
 5. *On Residential and Agriculture zoned lots:*
 - a. *A rigid sign not associated with an ongoing temporary event may be displayed for no more than sixty (60) days each calendar year.*
 - b. *A rigid sign associated with an ongoing temporary event may be displayed for the duration of that event. Note: Section 4.156.06 (.01) Q. of this Code*

prohibits signs associated with temporary events to remain posted after the completion of the event.

6. *On Commercial, Industrial, or Public Facility zoned lots:*
 - a. *A rigid sign not associated with an ongoing temporary event may be displayed for no more than ninety (90) days each calendar year.*
 - b. *A rigid sign associated with an ongoing temporary event may be displayed for the duration of that temporary event. Note: Section 4.156.06(.01)(Q.) of this Code prohibits signs associated with temporary events to remain posted after the completion of the event.*
 - c. *A temporary event must have an end, marked by the occurrence of a specifically anticipated date or happening. A temporary event may not be a part of a broader, continuing event or of related, serial events. Temporary events shall not be defined by content, but may include isolated merchandise sales or discounts, or availability of real estate for sale or lease.*

K. *Signs allowed in Subsections 6.150 (1) and (2) Wilsonville Code for special events.*

Response: The proposed signs do not fall into a class of signs for which no permits are required. The applicant is aware that the sign types listed above do not require a permit.

Section 4.156.06. Prohibited Signs

(.01) Prohibited Signs. The following signs are prohibited and shall not be placed within the City:

- A. *Search lights, strobe lights, and signs containing strobe lights or other flashing lights, unless specifically approved in a sign permit.*
- B. *Obstructing signs, a sign or sign structure such that any portion of its surface or supports will interfere in any way with the free use of any fire escape, exit, hydrant, standpipe, or the exterior of any window; any sign projecting more than twelve (12) inches from a wall, except projecting signs that are specifically permitted through the provisions of this Code.*
- C. *Changing image signs, including those within windows.*
- D. *Changeable copy signs that use lighting changed digitally, unless specifically approved through a waiver process connected with a Class III Sign Permit or Master Sign Plan. In granting a waiver for a digital changeable copy signs the DRB shall ensure the following criteria will be met:*
 1. *The sign shall be equipped with automatic dimming technology which automatically adjusts the sign's brightness in direct correlation with ambient light conditions and the sign owner shall ensure appropriate functioning of the dimming technology for the life of the sign.*
 2. *The luminance of the sign shall not exceed five thousand (5000) candelas per square meter between sunrise and sunset, and five hundred (500) candelas per square meter between sunset and sunrise.*
- E. *Roof signs - signs placed on the top of a building or attached to the building and projecting above the top of that building, unless specifically approved through the temporary sign permit procedures or the architectural design of a building makes the slope of the roof below the peak a practicable location of signs on a building and the general location of signs on the roof is approved by the DRB during Stage II Approval, as applicable, and Site Design Review.*
- F. *Signs obstructing vision clearance areas.*
- G. *Pennants, streamers, festoon lights, balloons, and other similar devices intended to be moved by the wind, unless specifically authorized in an approved sign permit.*

- H. Signs attached to trees, public sign posts, or public utility poles, other than those placed by appropriate government agencies or public utilities.
- I. Signs using bare-bulb illumination or signs lighted so that the immediate source of illumination is visible, unless specifically authorized by the Development Review Board or City Council such as Digital Changeable Copy Signs. This is not intended to prohibit the use of neon or LED's as a source of illumination.
- J. Signs that use flame as a source of light or that emit smoke or odors.
- K. Any sign, including a window sign, which is an imitation of or resembles an official traffic sign or signal; and which may include display of words or graphics that are likely to cause confusion for the public, such as "STOP," "GO," "SLOW," "CAUTION," "DANGER," "WARNING," etc.
- L. Any sign, including a window sign, which by reason of its size, location, movements, content, coloring or manner of illumination may be confused with, or construed as, a traffic control device, or which hides from view any traffic sign, signal, or device.
- M. Portable signs, exceeding six (6) square feet of sign area per side, other than those on vehicles or trailers. The display of signs on a vehicle or trailer is prohibited where the vehicle or trailer is not fully operational for use on public roads or where the primary function of the vehicle or trailer is advertising. Examples where the primary function of the vehicle or trailer is advertising include mobile billboards such as those on which advertising space is rented, sold, or leased.
- N. Signs located on public property in violation of Section 4.156.10.
- O. Signs placed on private property without the property owner's permission.
- P. Signs erected or installed in violation of standards prescribed by the City of Wilsonville, State of Oregon or the U.S. government.
- Q. Signs associated with temporary events, after the temporary event is completed.
- R. Any private signs, including window signs, with a luminance greater than five thousand (5000) candelas per square meter between sunrise and sunset and five hundred (500) candelas per square meter between sunset and sunrise.
- S. Video Signs

Response: The proposed signs are not prohibited signs.

Section 4.156.06. Prohibited Signs. Section 4.156.07. Sign Regulations In Residential Zones.

Response: The site is not in a residential zone. These standards do not apply.

Section 4.156.08. Sign Regulations in the PDC, TC, PDI, and PF Zones.

(.01) Freestanding and Ground Mounted Signs:

- A. One freestanding or ground mounted sign is allowed for the first two-hundred (200) linear feet of site frontage. One additional freestanding or ground mounted sign may be added for through and corner lots having at least two-hundred (200) feet of frontage on one street or right-of-way and one-hundred (100) feet on the other street or right-of-way.

Response: One ground mounted frontage sign is allowed, and one is proposed. This standard is met.

- B. The allowed height above ground of a freestanding or ground mounted sign is twenty (20) feet except as noted in 1-2 below.1. The maximum allowed height above ground for signs along the frontage of Interstate 5, and parallel contiguous portions of streets, as identified in Figure S-4, associated with multiple tenants or businesses may be increased by three (3) feet for each tenant space of ten thousand (10,000) square feet or more of gross floor area up to a maximum of thirty-five (35) feet.

2. *The allowed height above ground for signs in the TC Zone, Old Town Overlay Zone, and PDI Zone is eight (8) feet, except those signs along the frontage of Interstate 5 and parallel contiguous portions of streets identified in Figure S-4.*

Response: The site is located in the PDI Zone and does not have I-5 frontage. Therefore, the sign can be up to 8' high. The proposed sign meets this standard. See sign details, Attachment 6, Sheet A5.06 and sign location sheet C1.10, Attachment 6.

- C. *The maximum allowed area for each freestanding or ground-mounted sign is determined based on gross floor area and number of tenant spaces:*
 1. *For frontages along streets other than those indicated in 2 below sign area allowed is calculated as follows:*

a. *The sign area allowed for signs pertaining to a single tenant:*

Gross Floor Area in a Single Building	Maximum Allowed Sign Area
<i>Less than 11,000 sq. ft.</i>	<i>32 sq. ft.</i>
<i>11,000-25,999 sq. ft.</i>	<i>32 sq. ft. + 2 sq. ft. per 1000 sq. ft. of floor area greater than 10,000 rounded down to the nearest 1,000 sq. ft.</i>
<i>26,000 sq. ft. or more</i>	<i>64 sq. ft.</i>

i. *For PF (Public Facility) zoned properties adjacent to residential zoned land the maximum allowed area is thirty-two (32) square feet.*

b. *The maximum allowed sign area for signs pertaining to multiple tenants or businesses is thirty-two (32) square feet plus the following for each tenant space:*

Gross Floor Area of Tenant Space	Additional Allowed Sign Area for Tenant Space
<i>Less than 1,000 sq. ft.</i>	<i>3 sq. ft.</i>
<i>1,000-10,999 sq. ft.</i>	<i>3 sq. ft. + 3 sq. ft. per 1,000 sq. ft. of floor area rounded down to the nearest 1,000 sq. ft.</i>
<i>11,000 sq. ft. or more</i>	<i>32 sq. ft.</i>

i. *The total sign area shall not exceed two hundred (200) square feet, except in the TC Zone, Old Town Overlay Zone, and PDI Zone the total sign area shall not exceed eighty (80) square feet.*

ii. *Though the maximum allowed sign area is calculated based on number of tenant spaces and their size, the content of the sign and area used for different content is at the discretion of the sign owner, except for required addressing.*

Response: The proposed building is anticipated to have two tenants and each tenant’s Gross Floor Area exceeds 11,000 SF. This should allow for 32 square feet + 32 square feet for each of two tenants, which totals 96 square feet. However, since the site is in the PDI zone, the sign shall not exceed 80 square feet. The proposed sign complies with this standard. See sign details on Sheet A5.06 of Attachment 6.

D. *Pole or sign support placement shall be installed in a full vertical position.*

Response: The sign will be placed on a concrete vertical base. See Sheet A5.06, Attachment 6. This standard is met.

E. *Freestanding and ground mounted signs shall not extend into or above public rights-of-way, parking areas, or vehicle maneuvering areas.*

Response: The sign is not located within a public right of way, parking area or vehicle maneuvering area. See sign location is shown in Attachment 6, Sheet C1.10. This standard is met.

F. *The location of free standing or ground mounted signs located adjacent to or near the Public Right-of-Way shall be in compliance with the City’s Public Works Standards for sight*

distance clearance. Prior to construction, the location of the sign shall be approved by the City of Wilsonville Engineering Division.

Response: The sign has been placed to meet sight distance clearance requirements. See sign location in Attachment 6, Sheet C1.10. This standard is met.

G. *Freestanding and ground mounted signs shall be designed to match or complement the architectural design of buildings on the site.*

Response: Signage will match or complement the architectural design of the building. This standard is met.

H. *For freestanding and ground mounted signs greater than eight (8) feet in height, the width of the sign shall not exceed the height.*

Response: The sign is not greater than 8' in height. This standard is met.

I. *Along street frontages in the TC Zone and Old Town Overlay Zone monument style signs are required.*

Response: The site is not located in the TC Zone or Old Town Overlay Zone. This standard does not apply.

J. *Freestanding and ground mounted signs shall be no further than fifteen (15) feet from the property line and no closer than two (2) feet from a sidewalk or other hard surface in the public right-of-way.*

Response: The ground mounted sign is located about 4' from the north property line and about 11' from the east property line. The sign is located about 4' from the sidewalk. See sign location in Attachment 6, Sheet C1.10. This standard is met.

K. *Except for those signs fronting Interstate 5, freestanding and ground mounted signs shall include the address number of associated buildings unless otherwise approved in writing by the City and the Fire District.*

Response: The ground mounted sign will include the address number of the associated building. This standard will be met.

L. *When a sign is designed based on the number of planned tenant spaces it shall remain a legal, conforming sign regardless of the change in the number of tenants or configuration of tenant spaces.*

Response: The sign is designed based on the building having up to two tenants. The applicant acknowledges this provision.

(.02) Signs on Buildings.

A. *Sign Eligible Facades: Building signs are allowed on a facade of a tenant space or single tenant building when one or more of the following criteria are met:*

1. *The facade has one or more entrances open to the general public;*
2. *The facade faces a lot line with frontage on a street or private drive with a cross section similar to a public street, and no other buildings on the same lot obstruct the view of the building facade from the street or private drive; or*
3. *The facade is adjacent to the primary parking area for the building or tenant.*

Response: The proposed building is anticipated to have up to two tenants and the building design has two entrances on the north (front) facade. It is expected that one or both entrances will be open to the general public. Both entrances face Clutter Street – an Addressing Street. The length of the front façade of the

building measures 447.5'. The primary parking area for each entrance is located adjacent to building entrance. It is anticipated that each tenant will have their own sign.

B. Sign Area Allowed:

1. *The sign area allowed for all building signs on a sign eligible façade is shown in the table below:*

Linear Length of Façade (feet)	Sign Area Allowed*
<i>Less than 16</i>	<i>Area equal to linear length</i>
<i>16 to 24</i>	<i>24 sq. ft.</i>
<i>Greater than 24 to 32</i>	<i>32 sq. ft.</i>
<i>Greater than 32 to 36</i>	<i>Area equal to linear length</i>
<i>Greater than 36 to 72</i>	<i>36 sq. ft.</i>
<i>Greater than 72</i>	<i>36 sq. ft. plus 12 sq. ft. for each 24 linear feet or portion thereof greater than 72 up to a maximum of 200 sq. ft.</i>

**Except as noted in 2. through 5. below*

2. *The sign area allowed for facades with a primary public entrance or with a frontage along a public street dominated by windows or glazing may be increased by transferring to the façade up to one half (1/2) the sign area allowed for adjacent facades up to fifty (50) square feet. In no case shall the allowed sign area exceed an area equal to the linear length of the façade.*
3. *The sign area allowed is increased as follows for signs at separate building entrances:*
 - a. *For building entrances open to the general public located at least fifty (50) feet apart on the same facade, the sign area allowed is increased by fifty (50) percent up to fifty (50) square feet.*
 - b. *For building entrances located less than fifty (50) feet apart on the same facades, the sign area allowed is increased by twenty (20) percent up to twenty (20) square feet.*
6. *Calculating linear length of a façade for the purpose of determining maximum sign area allowed. For facades of a single tenant building the length the facade measured at the building line, except as noted in a. and b. below. For multi-tenant buildings the width of the façade of the tenant space shall be measured from the centerline of the party walls or the outer extent of the exterior wall at the building line, as applicable, except as noted in a. and b. below. Applicants shall provide the dimensions needed to calculate the length. Each tenant space or single occupant building shall not be considered to have more than five (5) total facades.*
 - a. *If a façade is curvilinear, stepped, or otherwise not a straight line, the façade shall be measured by drawing a straight line between the edges of the façade as shown in the figure below.*

- b. For an “L” shaped tenant space or single tenant building the longest leg of the interior of the “L” shall be basis for measuring the length of the L-shaped facade. Sign area allowed based on the longest leg can be distributed between legs.
- C. The length of individual tenant signs shall not exceed seventy-five (75) percent of the length of the facade of the tenant space.
- D. The height of building signs shall be within a definable sign band, fascia, or architectural feature and allow a definable space between the sign and the top and bottom of the sign band, fascia, or architectural feature.
- E. Types of signs permitted on buildings include wall flat, fascia, projecting, blade, marquee and awning signs. Roof-top signs are prohibited.

Response: The proposed building is anticipated to have up to two tenants. The building’s front façade measures 447.5’ feet in length and it has two entrances accessible to the public, separated by more than 50’. Both entrances face Clutter Street, the Addressing Street. These characteristics will allow different potential combinations of wall signs that comply with this Section’s standards; examples are characterized below in Table III-1:

Table III-1. Maximum North Façade Wall Sign Area Calculations (Typical)

Scenario	Share of Façade	Length of Façade Lin. Ft.	Maximum Wall Sign SF	Maximum Total North Façade Sign Area SF
Single-Tenant Occupancy	100%	447.5	200	250 *
Two-Tenant Occupancy	West Office Only	51.0	36	236
	Remainder	396.5	200	
Two-Tenant 20/80 Split	20%	89.5	48	228
	80%	358.0	180	
Two-Tenant 30/70 Split	30%	134.3	72	240
	70%	313.3	168	
Two-Tenant 40/60 Split	40%	179.0	96	240
	60%	268.5	144	
Two-Tenant 50/50 Split	50%	223.8	120	240
	50%	223.8	120	

* For a single tenant with signs at both office entrances, an additional increase of up to 50 SF is applicable because the entrances are greater than 50’ apart. [§4.156.08(.02)B.3.a]

The calculations in Table III-1 are based on each tenant having a base sign of 36 square feet, plus additional square footage for their length of frontage. Staff advised the applicant that only multiple signs of a single

tenant are eligible for provisions in §4.156.08(.02)B.3.a allowing a sign area increase of 50% up to a maximum of 50 square feet.

The building has primary parking areas on each side, proximate to the two office entrances. The eastern façade length is 249' and the western façade length is 259', making each façade (adjacent to parking) eligible for signage of up to 132 square feet, based on the following tabular calculation using the provisions of subsection 4.156(.02)A.3 and (.02)B:

Table III-2 Maximum Wall Sign Area Allowed per §4.156.08.(.02)B.1

Length of Façade, Lin. Ft.	Maximum Wall Sign SF
< 16	= linear length
16-24	24
> 24-32	32
> 32-36	= linear length
> 36-72	36
72 - <96	48
96 - <120	60
120 - <144	72
144 - <168	84
168 - <192	96
192 - <216	108
216 - <240	120
240 - <264	132
264 - <288	144
288 - <312	156
312 - <336	168
336 - <360	180
360 - <384	192
384 +	200

The proposed signage locations and maximum sizes comply with applicable Code requirements. Future tenants will be required to obtain Class I sign permits before installing signs, but that permitting can be completed quickly and efficiently when the proposed signs are compliant with this approved program.

(.03) Additional signs. Notwithstanding the signs allowed based on the site in (.01) and (.02) above, the following signs may be permitted, subject to standards and conditions in this Code:

- A. *Directional Signs: In addition to exempt directional signs allowed under Subsection 4.156.05 (.02) C. freestanding or ground mounted directional signs six (6) square feet or less in area and four (4) feet or less in height:*
 1. *The signs shall be designed to match or complement the architectural design of buildings on the site;*
 2. *The signs shall only be placed at the intersection of internal circulation drives; and*
 3. *No more than one (1) sign shall be placed per intersection corner with no more than two (2) signs per intersection.*

- B. *Planned Development Signs.* Up to thirty (32) square feet of the allowed sign area for freestanding signs in a planned development may be used for a separate on-site monument sign or off-site monument sign on an adjacent parcel identifying the Planned Development project.
- C. *Blade Signs.* To aid in pedestrian wayfinding, one (1) blade sign, not to exceed six (6) square feet, per facade eligible for building signs. Blade signs over pedestrian accessible areas shall provide a minimum of eight (8) feet of clearance from the ground.
- D. *Fuel or Service Station Price Signs.* In addition to the freestanding or ground mounted signs allowed, changeable copy signs shall be allowed for the purpose of advertising fuel prices, subject to the following standards and conditions:
 - 1. The signs shall have a maximum of eleven (11) square feet in area per face per type of fuel sold and shall be permanently affixed to the building or a freestanding sign.
 - 2. The signs shall not be considered in calculating the sign area or number of signs allowed.
 - 3. Signs on fuel pumps shall be permitted, providing that they do not project beyond the outer edge of the pump in any direction.

Response: No additional signs are proposed at this time, but future tenants may apply for additional signage.

Section 4.156.09. Temporary Signs In All Zones.

The following temporary signs may be permitted in addition to the permanent signs allowed in different zones and exempt temporary signs unless specifically prohibited in a master sign plan or other sign approval:

(.01) General Allowance. Except as noted in subsection (.02) below up to two (2) temporary signs not exceeding a combined total of twenty four (24) square feet may be permitted per lot or non-residential tenant. Such signs may be banners, rigid signs, lawn signs, portable signs, or other signs of similar construction.

(.02) Opening Banner for a New Business or Housing Development. A banner corresponding with the opening of a new business or housing development may be permitted, subject to the following standards and conditions:

- A. One such banner shall be allowed either from the date of issuance of Building Permits until four (4) weeks after issuance of Certificates of Occupancy, or if no Building Permit is issued, for four (4) weeks after occupancy of a new business.
- B. Such banner may be two-sided but shall not exceed thirty-two (32) square feet per face.
- C. Such signs shall not be permitted at the same time as general allowance signs in (.01) above.

(.03) Annual Event Signs. Up to ten (10) lawn signs may be permitted to be located in the public right-of-way for up to fourteen (14) days if all of the following are met:

- A. Signs will not be located in the areas listed in Subsection 4.156.10 (.01) A. 4.
- B. The applicant or event has not been issued a permit for and placed signs in the public right-of-way in the previous six (6) months;
- C. Not more than one (1) other permit has been issued for lawn signs in the right-of-way during the time period the applicant is requesting;
- D. The event to which the signs pertain is expected to attract two hundred fifty (250) or more people;

- E. *The request is not in addition to exempt lawn signs for large special events allowed for in Section 6.150; and*
- F. *The applicant has indicated on a map the exact locations the signs will be placed and has submitted an application along with the required fee.*

(.04) Inflatable Signs. Inflatable signs may be permitted for a maximum of fifteen (15) days of display use in any calendar year subject to the following standards and conditions:

- A. *Does not exceed ten (10) feet in overall height; and*
- B. *If attached to a building in any manner, it meets applicable building code requirements including consideration of wind loads.*

Response: No additional signs are proposed at this time, but future tenants may apply for temporary signage.

Section 4.156.10. Signs on City and ODOT Right-Of-Way.

Response: No signs are proposed on City of ODOT Right-Of-Way. This standard does not apply.

Section 4.156.11. Sign Enforcement.

Response: This section provides direction for enforcement of sign regulations and requires no evidence submittal by applicant.

IV. CONCLUSION

Based on the information presented and discussed in this narrative and the attached supporting plans and documentation, this application meets applicable standards necessary for land use approval. The proposed development complies with all applicable standards of the Wilsonville Planning and Land Development Ordinance. The applicant respectfully requests approval by the City.



29799 SW Town Center Loop E, Wilsonville, OR 97070
 Phone: 503.682.4960 Fax: 503.682.7025
 Web: www.ci.wilsonville.or.us

**Planning Division
 Development Permit Application**

Final action on development application or zone change is required within 120 days in accordance with provisions of ORS 227.175

A pre application conference is normally required prior to submittal of an application. Please visit the City's website for submittal requirements

Pre-Application Meeting Date: _____

Incomplete applications will not be scheduled for public hearing until all of the required materials are submitted.

Applicant:

Name: Brendan Mason
 Company: Panattoni Development Company, Inc
 Mailing Address: 1821 Dock Street (Suite 100)
 City, State, Zip: Tacoma, WA 98402
 Phone: 206-838-3843 Fax: _____
 E-mail: bmason@panattoni.com

Authorized Representative:

Name: Lee Leighton
 Company: Mackenzie
 Mailing Address: 1515 SE Water Avenue, Suite 100
 City, State, Zip: Portland, OR 97214
 Phone: 971-346-3727 Fax: _____
 E-mail: lleighton@mcknze.com

Property Owner:

Name: Chris Bickford and Sonya Bickford
 Company: _____
 Mailing Address: 10680 SW Clutter Street
 City, State, Zip: Sherwood, OR 97140
 Phone: _____ Fax: _____
 E-mail: _____

Property Owner's Signature:

DocuSigned by: Chris Bickford DocuSigned by: Sonya Bickford
 8C276A71A460442... 529F31A6E011431...
 Printed Name: Chris & Sonya Bickford Date: 2/24/2020 8:25 PM PST

Applicant's Signature: (if different from Property Owner)

Printed Name: _____ Date: _____

Site Location and Description:

Project Address if Available: 10680 SW Clutter St, Sherwood, 97140 Suite/Unit _____
 Project Location: SW corner of SW Clutter Street-SW Garden Acres Road intersection, Coffee Creek Industrial District
 Tax Map #(s): 3S103D Tax Lot #(s): 002100 County: Washington Clackamas

Request:

Annexation and redevelopment with a one- or two-tenant warehouse facility up to 115,000 SF. Improvements include conservation of a group of five mature Douglas fir trees, access/circulation/parking, landscaping and Clutter Street frontage improvements.

Project Type: **Class I** **Class II** **Class III**

Residential Commercial Industrial Other: _____

Application Type(s):

- | | | | |
|--|--|---|---|
| <input checked="" type="checkbox"/> Annexation | <input type="checkbox"/> Appeal | <input type="checkbox"/> Comp Plan Map Amend | <input type="checkbox"/> Parks Plan Review |
| <input type="checkbox"/> Final Plat | <input type="checkbox"/> Major Partition | <input type="checkbox"/> Minor Partition | <input type="checkbox"/> Request to Modify Conditions |
| <input type="checkbox"/> Plan Amendment | <input checked="" type="checkbox"/> Planned Development | <input type="checkbox"/> Preliminary Plat | <input checked="" type="checkbox"/> Site Design Review |
| <input type="checkbox"/> Request for Special Meeting | <input type="checkbox"/> Request for Time Extension | <input checked="" type="checkbox"/> Signs | <input checked="" type="checkbox"/> Stage II Final Plan |
| <input type="checkbox"/> SROZ/SRIR Review | <input type="checkbox"/> Staff Interpretation | <input checked="" type="checkbox"/> Stage I Master Plan | <input type="checkbox"/> Variance |
| <input type="checkbox"/> Type C Tree Removal Plan | <input checked="" type="checkbox"/> Tree Permit (B or C) | <input type="checkbox"/> Temporary Use | <input type="checkbox"/> Other (describe) |
| <input type="checkbox"/> Villebois SAP | <input type="checkbox"/> Villebois PDP | <input type="checkbox"/> Villebois FDP | |
| <input checked="" type="checkbox"/> Zone Map Amendment | <input checked="" type="checkbox"/> Waiver(s) | <input type="checkbox"/> Conditional Use | |



Planning Division
Development Permit Application

Final action on development application or zone change is required within 120 days in accordance with provisions of ORS 227.175

A pre application conference is normally required prior to submittal of an application. Please visit the City's website for submittal requirements

Pre-Application Meeting Date: _____

Incomplete applications will not be scheduled for public hearing until all of the required materials are submitted.

29799 SW Town Center Loop E, Wilsonville, OR 97070
Phone: 503.682.4960 Fax: 503.682.7025
Web: www.ci.wilsonville.or.us

Applicant:

Name: Brendan Mason
Company: Panattoni Development Company, Inc
Mailing Address: 1821 Dock Street (Suite 100)
City, State, Zip: Tacoma, WA 98402
Phone: 206-838-3843 Fax:
E-mail: bmason@panattoni.com

Authorized Representative:

Name: Lee Leighton
Company: Mackenzie
Mailing Address: 1515 SE Water Avenue, Suite 100
City, State, Zip: Portland, OR 97214
Phone: 971-346-3727 Fax:
E-mail: LLeighton@mcknze.com

Property Owner:

Name: Chris Bickford and Sonya Bickford
Company:
Mailing Address: 10680 SW Clutter Street
City, State, Zip: Sherwood, OR 97140
Phone: Fax:
E-mail:

Property Owner's Signature:

Printed Name: Date:

Applicant's Signature: (if different from Property Owner)

Brendan Mason
Printed Name: Brendan Mason Date: 2-24-20

Site Location and Description:

Project Address if Available: 10680 SW Clutter St, Sherwood, 97140 Suite/Unit
Project Location: SW corner of SW Clutter Street-SW Garden Acres Road intersection, Coffee Creek Industrial District
Tax Map #(s): 3S103D Tax Lot #(s): 002100 County: [X] Washington [] Clackamas

Request:

Annexation and redevelopment with a one- or two-tenant warehouse facility up to 115,000 SF. Improvements include conservation of a group of five mature Douglas fir trees, access/circulation/parking, landscaping and Clutter Street frontage improvements.

Project Type: Class I [] Class II [] Class III []

[] Residential [] Commercial [X] Industrial [] Other: _____

Application Type(s):

- [X] Annexation [] Appeal [] Comp Plan Map Amend [] Parks Plan Review
[] Final Plat [] Major Partition [] Minor Partition [] Request to Modify Conditions
[] Plan Amendment [X] Planned Development [] Preliminary Plat [X] Site Design Review
[] Request for Special Meeting [] Request for Time Extension [X] Signs [X] Stage II Final Plan
[] SROZ/SRIR Review [] Staff Interpretation [X] Stage I Master Plan [] Variance
[] Type C Tree Removal Plan [X] Tree Permit (B or C) [] Temporary Use [] Other (describe)
[] Villebois SAP [] Villebois PDP [] Villebois FDP
[X] Zone Map Amendment [X] Waiver(s) [] Conditional Use

PETITION TO ANNEX TERRITORY INTO CITY OF WILSONVILLE

We, the undersigned owner(s) of the property described below and in the attached Legal Description and elector(s) residing at the referenced location hereby petition for and give consent to annexation of the property to the City of Wilsonville. We understand that the City will review this request in accordance with Chapter 4.700 of the City of Wilsonville Planning and Land Development Ordinance, Oregon Revised Statutes (ORS) Chapter 222, and applicable regional and local policies prior to approving or denying the request for annexation.

10680 SW Clutter Street, Wilsonville, OR 97140
Address (See attached Legal Description)

3S 1 03D 02100
Tax Map/Lot Number

DocuSigned by: Chris Bickford
Signature
Chris Bickford
2/24/2020 | 8:25 PM PST
Printed Name Date

I am a:
[X] Property Owner
[] Voter Registered at this Address

DocuSigned by: Sonya Bickford
Signature
Sonya Bickford
2/24/2020 | 8:28 PM PST
Printed Name Date

I am a:
[X] Property Owner
[] Voter Registered at this Address

Signature
Printed Name Date

I am a:
[] Property Owner
[] Voter Registered at this Address

Signature
Printed Name Date

I am a:
[] Property Owner
[] Voter Registered at this Address

1815 NW 169TH PLACE, SUITE 2090
BEAVERTON, OR 97006

TELEPHONE: (503) 848-2127
FAX: (503) 848-2179

PROPERTY DESCRIPTION

March 5, 2020
NWS Project No. 2017
Annexation Description

A tract of land located in the southeast one-quarter of Section 3, Township 3 South, Range 1 West, Willamette Meridian, Washington County, Oregon, being a portion of that property conveyed to Chris Bickford and Sonya Bickford, husband and wife, by deed recorded March 26, 1986 as Document No. 86-012591, Washington County Deed Records, being more particularly described as follows:

Commencing at a an aluminum disk located at the southeast corner of the southeast one-quarter of said Section 3; thence along the south line of said southeast one-quarter, South 89°41'49" West a distance of 20.00 feet to a point on the westerly right-of-way line of County Road No. 557 and the Point of Beginning; thence continuing along the south line of said southeast one-quarter, South 89°41'49" West a distance of 649.21 feet to the southwest corner of said Bickford property; thence along the westerly line of said Bickford property, North 15°34'42" East a distance of 524.01 feet to the northwest corner thereof, said point being on the southerly right-of-way line of SW Clutter Road, 20.00 feet southerly of the centerline thereof, when measured at right angles; thence along said southerly right-of-way line, South 74°37'07" East a distance of 524.68 feet to its intersection with the westerly right-of-way line of that portion of County Road No. 557 being the southerly extension of SW Garden Acres Road (County Road No. 1309), said point being 20.00 feet westerly of the centerline thereof, when measured at right angles; thence along said westerly right-of-way line, South 00°24'33" East a distance of 362.16 feet to the Point of Beginning.

Said described tract of land contains 5.85 acres, more or less.



EXHIBIT MAP

LOCATED IN THE SOUTHEAST
ONE-QUARTER OF SECTION 3,
TOWNSHIP 3 SOUTH,
RANGE 1 WEST, W.M.,
WASHINGTON COUNTY, OREGON
MARCH 5, 2020

REGISTERED
PROFESSIONAL
LAND SURVEYOR

Scott F. Field

OREGON
JUNE 30, 1997
SCOTT F. FIELD
2844

RENEWS: 12-31-2021

SW CLUTTER STREET
(COUNTY ROAD NO. 557)
S74°37'07"E 574.68'

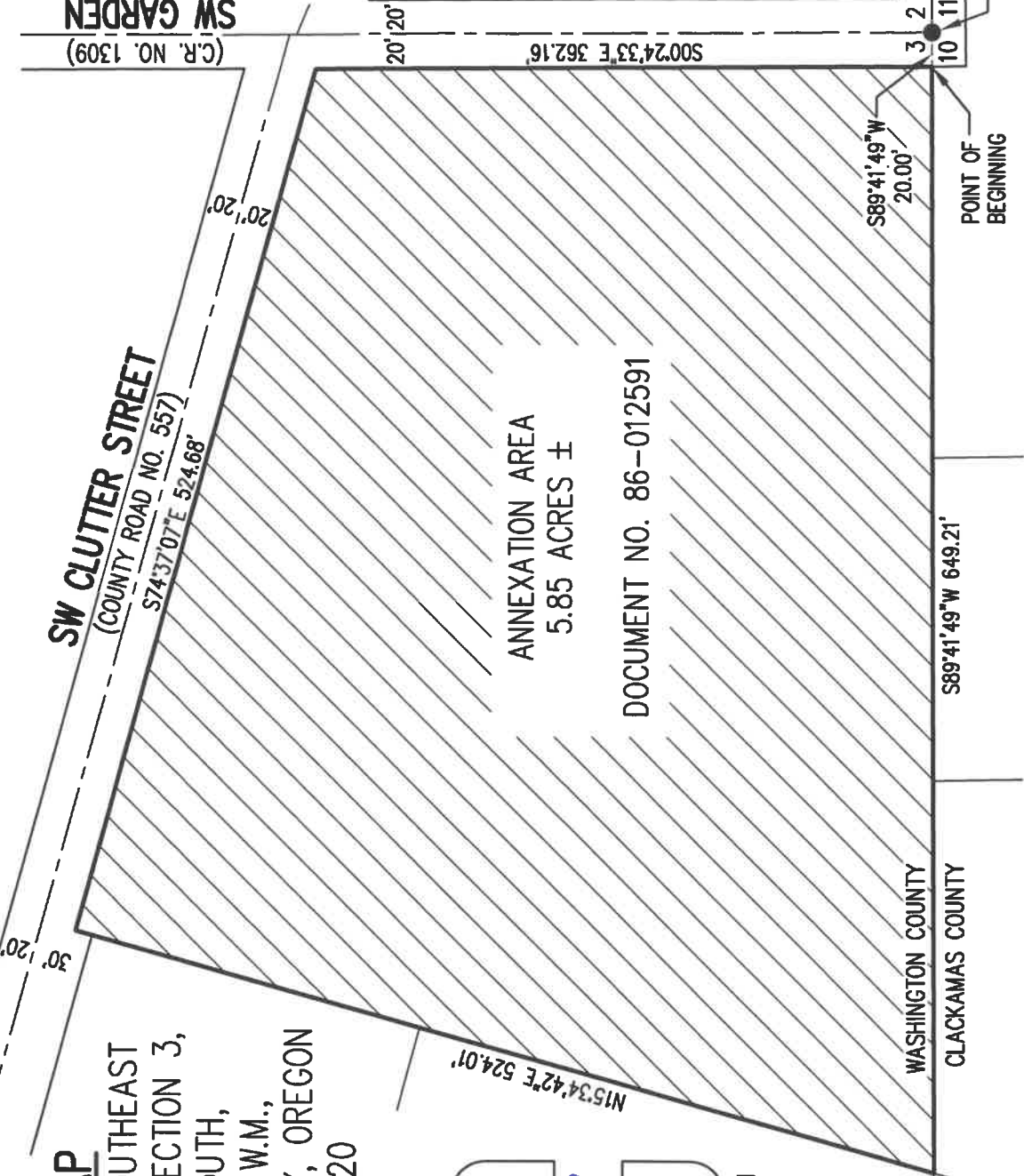
SW GARDEN
(C.R. NO. 1309)

(COUNTY ROAD NO. 557)

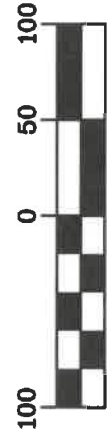
ANNEXATION AREA
5.85 ACRES ±

DOCUMENT NO. 86-012591

WASHINGTON COUNTY
CLACKAMAS COUNTY



GRAPHIC SCALE



(IN FEET)
1 INCH = 100 FT.

1815 NW 169TH PLACE
SUITE 2090
BEAVERTON, OR 97006
PHONE: (503) 848-2127
FAX: (503) 848-2179

NORTHWEST
SURVEYING, Inc.

JOB NAME: PANATTONI - CLUTTER	
JOB NUMBER: 2026	
DRAWING NAME: 2026 DED	
DRAWN BY: SFF	
CHECKED BY: CHS	

MAR 29 1986

FORM No. 501 - WARRANTY DEED (Individual or Corporate)
1-1-74

STEVENS PUBLISHING CO., PORTLAND, OREGON

TITLE
INSURANCE

WARRANTY DEED

86012591

KNOW ALL MEN BY THESE PRESENTS, That William L. Hamm and Marie E. Hamm, husband and wife

hereinafter called the grantor, for the consideration hereinafter stated, to grantor paid by Chris Bickford and Sonya Bickford, husband and wife hereinafter called the grantees, does hereby grant, bargain, sell and convey unto the said grantees and grantees's heirs, successors and assigns, that certain real property, with the tenements, hereditaments and appurtenances therunto belonging or appertaining, situated in the County of Washington and State of Oregon, described as follows, to-wit:

The following described real property located in Section 3, Township 3 South, Range 7 West, Willamette Meridian, Washington County, Oregon and described more particularly as follows:

Beginning at the Section corner common to Sections 2, 3, 10 and 11, Township 3 South, Range 7 West, of the Willamette Meridian; running thence North 0° 20' West, 356.5 feet to an iron pipe; thence North 74° 31' West, 544.92 feet to an iron pipe; thence South 15° 53' West, 529.42 feet; along the Easterly line of that certain parcel of land conveyed to Max J. Ross, et ux, by deed recorded June 30, 1958 in Book 406, Page 301, and along the

(continued on reverse)

THIS INSTRUMENT DOES NOT GUARANTEE THAT ANY PARTICULAR USE MAY BE MADE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT. A BUYER SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY APPROVED USES.

IF SPACE INSUFFICIENT, CONTINUE DESCRIPTION ON REVERSE SIDE

To Have and to Hold the same unto the said grantor and grantor's heirs, successors and assigns forever.

And said grantor hereby covenants to and with said grantee and grantee's heirs, successors and assigns, that grantor is lawfully seized in fee simple of the above granted premises, free from all encumbrances EXCEPT any and all liens, encumbrances, unpaid real property taxes and any other impediments suffered or caused to be placed thereon by grantees from and after the 28th day of February, 1976.

and that grantor will defend and forever defend the said premises and every part and parcel thereof against the lawful claims and demands of all persons whomsoever, except those claiming under the above described encumbrances.

The true and actual consideration paid for this transfer, stated in terms of dollars, is \$ 90,000.00.

However, the actual consideration consists of or includes other property or value given or promised which is part of the consideration (indicate which) (The contents between the brackets, if not applicable, should be deleted. See OREGON 1000.)

In construing this deed and where the context so requires, the singular includes the plural and all grammatical changes shall be implied to make the provisions hereof apply equally to corporations and to individuals.

In Witness Whereof, the grantor has executed this instrument this 24 day of MARCH, 1986; if a corporate grantor, it has caused its name to be signed and seal affixed by its officers, duly authorized thereto by order of its board of directors.

If executed by a corporation, affix corporate seal

William L. Hamm
Marie E. Hamm
STATE OF OREGON, County of _____

STATE OF OREGON,
County of Clackamas } ss.
March 24, 1986

Personally appeared _____ and _____ who, being duly sworn, each for himself and for the other, did say that the former is the _____ president and that the latter is the _____ secretary of _____ a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation and that said instrument was signed and sealed in full of said corporation by authority of its board of directors; and each of them acknowledged said instrument to be its voluntary act and deed.

Personally appeared the above named William L. Hamm and Marie E. Hamm husband and wife and acknowledged the foregoing instrument to be their voluntary act and deed.

William J. Hamm
Notary Public for Oregon
My commission expires: 11/1/89

Notary Public for Oregon
My commission expires:

(OFFICIAL SEAL)

M/M William J. Hamm
1670 Kropf Road
Melalla, Oregon 97038
GRANTOR'S NAME AND ADDRESS

M/M Chris E. Bickford
10680 SW Clutter Road
Sherwood, Oregon 97140
GRANTEE'S NAME AND ADDRESS

M/M Chris E. Bickford
10680 SW Clutter Road
Sherwood, Oregon 97140
NAME, ADDRESS, ETC

M/M Chris E. Bickford
10680 SW Clutter Road
Sherwood, Oregon 97140
NAME, ADDRESS, ETC

STATE OF OREGON,
County of _____

I certify that the within instrument was received for record on the _____ day of _____, 19____, at _____ o'clock _____ M., and recorded in book _____ volume No. _____ of _____ or as document/last file/instrument/recorded by _____ Record of Deeds of said county.
Witness my hand and seal of County aforesaid.

NAME _____ TITLE _____
Deputy

1-2

(Continual from reverse)

Easterly line of that certain tract of land conveyed to Marshal Clutter, by deed recorded August 22, 1924, in Book 127, Page 584, to an iron pipe; thence North 89° 31' East, 570.61 feet along the South line of said Section 3, to the place of beginning.

This is in fulfillment of that Contract of Sale recorded March 11, 1976 in Book 1073, Page 15, Deed Records of Washington County, Oregon.

STATE OF OREGON
County of Washington

10

I, Donald W. Mason, Director of Assessment and Taxation and Ex-Officio Recorder of Conveyances for said county, do hereby certify that the within instrument of writing was received and recorded in book of records of said county.

Donald W. Mason, Director of
Assessment and Taxation, Ex-
Officio County Clerk

1986 MAR 26 PM 1:02

CERTIFICATION OF PROPERTY OWNERSHIP
FOR PETITION TO ANNEX TERRITORY INTO CITY OF WILSONVILLE

10680 SW Clutter Street, Wilsonville, OR 97140
Address (See attached Legal Description)

3S 1 03D 02100
Tax Map/Lot Number

I certify that the attached petition for annexation of the described territory to the City of Wilsonville contains the names of the owners* of a majority of the land area of the territory to be annexed, as shown on the last available complete assessment roll.

*Owner means the owner of the title to real property or the contract purchaser of the real property.

Printed Name

Title

Signature

Date

Department

Washington County, Oregon
County

CERTIFICATION OF REGISTERED VOTERS
FOR PETITION TO ANNEX TERRITORY INTO CITY OF WILSONVILLE

10680 SW Clutter Street, Wilsonville, OR 97140
Address (See attached Legal Description)

3S 1 03D 02100
Tax Map/Lot Number

I certify that the attached petition for annexation of described territory to the City of Wilsonville contains the names of at least a majority of the electors registered in the territory to be annexed.

Printed Name

Title

Signature

Date

Department

Washington County, Oregon
County

PETITION TO ANNEX TERRITORY INTO CITY OF WILSONVILLE

We, the undersigned owner(s) of the property described below and in the attached Legal Description and elector(s) residing at the referenced location hereby petition for and give consent to annexation of the property to the City of Wilsonville. We understand that the City will review this request in accordance with Chapter 4.700 of the City of Wilsonville Planning and Land Development Ordinance, Oregon Revised Statutes (ORS) Chapter 222, and applicable regional and local policies prior to approving or denying the request for annexation.

10680 SW Clutter Street, Wilsonville, OR 97140
Address (See attached Legal Description)

3S 1 03D 02100
Tax Map/Lot Number

DocuSigned by: Chris Bickford
Signature
Chris Bickford
2/24/2020 | 8:25 PM PST
Printed Name Date

I am a:
[X] Property Owner
[] Voter Registered at this Address

DocuSigned by: Sonya Bickford
Signature
Sonya Bickford
2/24/2020 | 8:28 PM PST
Printed Name Date

I am a:
[X] Property Owner
[] Voter Registered at this Address

Signature
Printed Name Date

I am a:
[] Property Owner
[] Voter Registered at this Address

Signature
Printed Name Date

I am a:
[] Property Owner
[] Voter Registered at this Address

PETITION TO ANNEX TERRITORY INTO CITY OF WILSONVILLE

10680 SW Clutter Street

Legal Description

That certain real property located in Section 3, Township 3 South, Range 1 West, Willamette Meridian, Washington County, Oregon, conveyed to Chris Bickford and Sonya Bickford, husband and wife, by deed recorded March 24, 1986 as Document No. 86-012591, Washington County Deed Records, and described more particularly as follows:

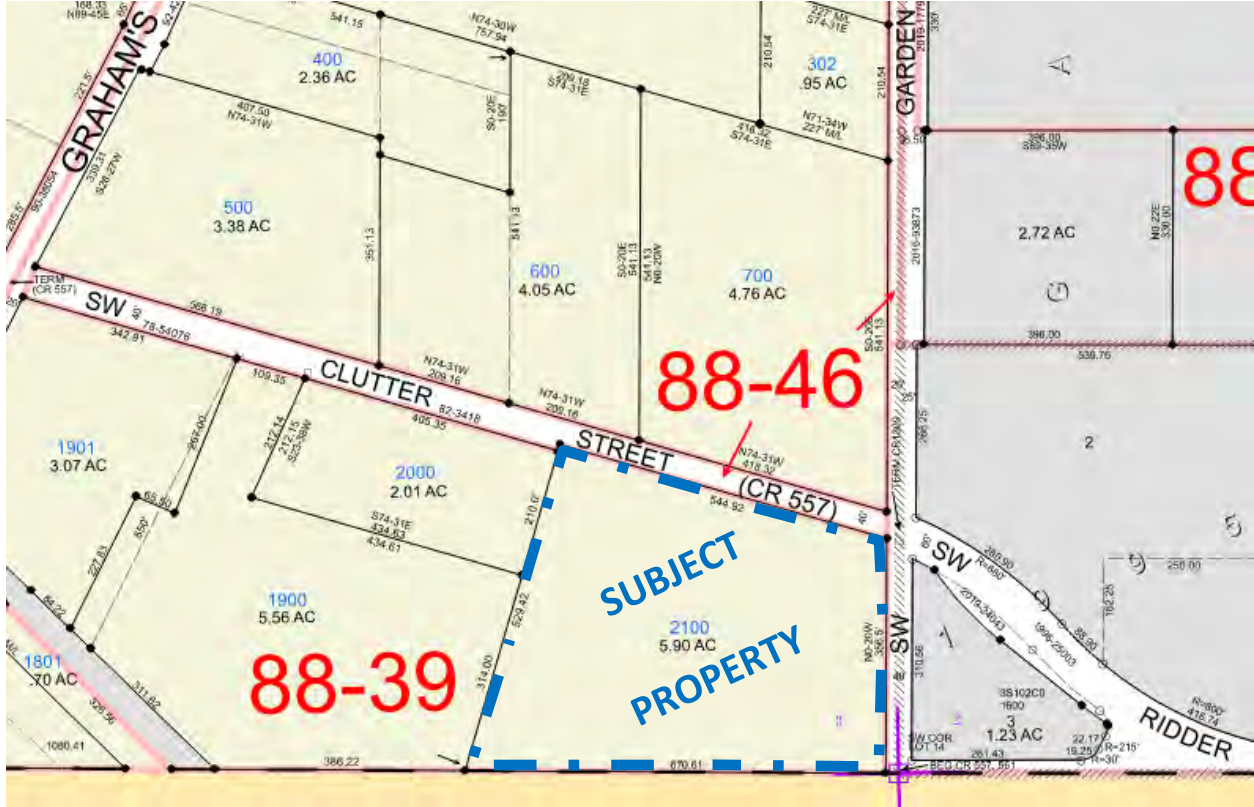
Beginning at the Section corner common to Sections 2, 3, 10 and 11, Township 3 South, Range 1 West, of the Willamette Meridian; running thence North 0° 20' West, 356.5 feet to an iron pipe; thence North 74° 31' West, 544.92 feet to an iron pipe; thence South 15° 53' West, 529.42 feet; along the Easterly line of that certain parcel of land conveyed to Max J. Ross, et ux. by deed recorded June 30, 1958 in Book 406, Page 301, and along the Easterly line of that certain tract of land conveyed to Herschel Clutter, by deed recorded August 22, 1924, in Book 127, Page 584, to an iron pipe; thence North 89° 31' East, 670.61 feet along the South line of said Section 3, to the place of beginning, containing 5.90 acres, more or less.

EXCEPT any dedication or other form of conveyance of right-of-way for SW Garden Acres Road (County Road 557), and

EXCEPT any dedication or other form of conveyance of right-of-way for SW Clutter Street (County Road 557).

Attachment 1: Washington County Tax Map 3S 1 03D (excerpt)

(In the southeast quarter of Section 3, Township 3 South, Range 1 West, Willamette Meridian)



NOT TO SCALE

MAR 29 1986

FORM No. 581 - WARRANTY DEED (Individual or Corporate)
1-1-74

WARRANTY DEED

TITLE
INSURANCE

WARRANTY DEED

86012591

KNOW ALL MEN BY THESE PRESENTS, That William L. Hamm and Marie E. Hamm, husband and wife

hereinafter called the grantor, for the consideration hereinafter stated, to grantor paid by Chris Bickford and Sonya Bickford, husband and wife hereinafter called the grantees, does hereby grant, bargain, sell and convey unto the said grantees and grantees's heirs, successors and assigns, that certain real property, with the tenements, hereditaments and appurtenances thereto belonging or appertaining, situated in the County of Washington and State of Oregon, described as follows, to-wit:

The following described real property located in Section 3, Township 3 South, Range 7 West, Willamette Meridian, Washington County, Oregon and described more particularly as follows:

Beginning at the Section corner common to Sections 2, 3, 10 and 11, Township 3 South, Range 7 West, of the Willamette Meridian; running thence North 0° 20' West, 356.5 feet to an iron pipe; thence North 74° 31' West, 544.92 feet to an iron pipe; thence South 15° 53' West, 529.42 feet; along the Easterly line of that certain parcel of land conveyed to Max J. Ross, et ux, by deed recorded June 30, 1958 in Book 406, Page 301, and along the

(continued on reverse)

THIS INSTRUMENT DOES NOT GUARANTEE THAT ANY PARTICULAR USE MAY BE MADE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT. A BUYER SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY APPROVED USES.

IF SPACE INSUFFICIENT, CONTINUE DESCRIPTION ON REVERSE SIDE

To Have and to Hold the same unto the said grantor and grantor's heirs, successors and assigns forever.

And said grantor hereby covenants to and with said grantee and grantee's heirs, successors and assigns, that grantor is lawfully seized in fee simple of the above granted premises, free from all encumbrances EXCEPT any and all liens, encumbrances, unpaid real property taxes and any other impediments suffered or caused to be placed thereon by grantees from and after the 28th day of February, 1976.

and that grantor will defend and forever defend the said premises and every part and parcel thereof against the lawful claims and demands of all persons whomsoever, except those claiming under the above described encumbrances.

The true and actual consideration paid for this transfer, stated in terms of dollars, is \$ 90,000.00.

However, the actual consideration consists of or includes other property or value given or promised which is part of the consideration (indicate which) (The contents between the brackets, if not applicable, should be deleted. See OREGON 1000.)

In construing this deed and where the context so requires, the singular includes the plural and all grammatical changes shall be implied to make the provisions hereof apply equally to corporations and to individuals.

In Witness Whereof, the grantor has executed this instrument this 24 day of MARCH, 1986; if a corporate grantor, it has caused its name to be signed and seal affixed by its officers, duly authorized thereto by order of its board of directors.

If executed by a corporation, affix corporate seal

William L. Hamm
Marie E. Hamm
STATE OF OREGON, County of _____

STATE OF OREGON,
County of Clackamas } ss.
March 24, 1986

Personally appeared _____ and _____ who, being duly sworn, each for himself and for the other, did say that the former is the _____ president and that the latter is the _____ secretary of _____ a corporation, and that the seal affixed to the foregoing instrument is the corporate seal of said corporation and that said instrument was signed and sealed in full of said corporation by authority of its board of directors; and each of them acknowledged said instrument to be its voluntary act and deed.

Personally appeared the above named William L. Hamm and Marie E. Hamm husband and wife

Notary Public for Oregon
My commission expires: 11/1/89

Notary Public for Oregon
My commission expires:

(OFFICIAL SEAL)

G/M William J. Hamm
1670 Kropf Road
Melalla, Oregon 97038
G/M Chris E. Bickford
10680 SW Clutter Road
Sherwood, Oregon 97140
G/M Chris E. Bickford
10680 SW Clutter Road
Sherwood, Oregon 97140
G/M Chris E. Bickford
10680 SW Clutter Road
Sherwood, Oregon 97140

STATE OF OREGON,
County of _____
I certify that the within instrument was received for record on the _____ day of _____, 19____, at _____ o'clock _____ M., and recorded in book _____ volume No. _____ of _____ or as document/last file/instrument/recorded by _____
Record of Deeds of said county.
Witness my hand and seal of County aforesaid.

1-2

NAME _____ TITLE _____
By _____ Deputy

(Continual from reverse)

Easterly line of that certain tract of land conveyed to Marshal Clutter, by deed recorded August 22, 1924, in Book 127, Page 584, to an iron pipe; thence North 89° 31' East, 570.61 feet along the South line of said Section 3, to the place of beginning.

This is in fulfillment of that Contract of Sale recorded March 11, 1976 in Book 1073, Page 15, Deed Records of Washington County, Oregon.

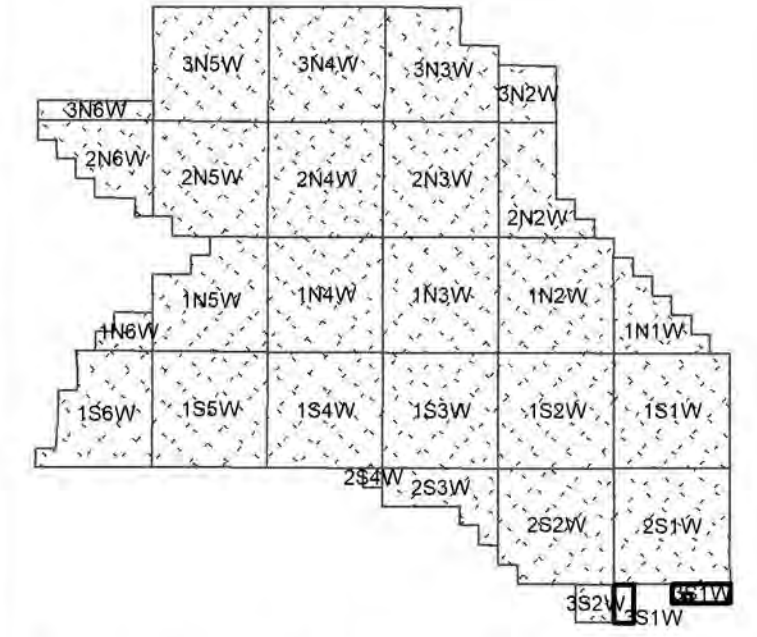
STATE OF OREGON
County of Washington

10

I, Donald W. Mason, Director of Assessment and Taxation and Ex-Officio Recorder of Conveyances for said county, do hereby certify that the within instrument of writing was received and recorded in book of records of said county.

Donald W. Mason, Director of
Assessment and Taxation, Ex-
Officio County Clerk

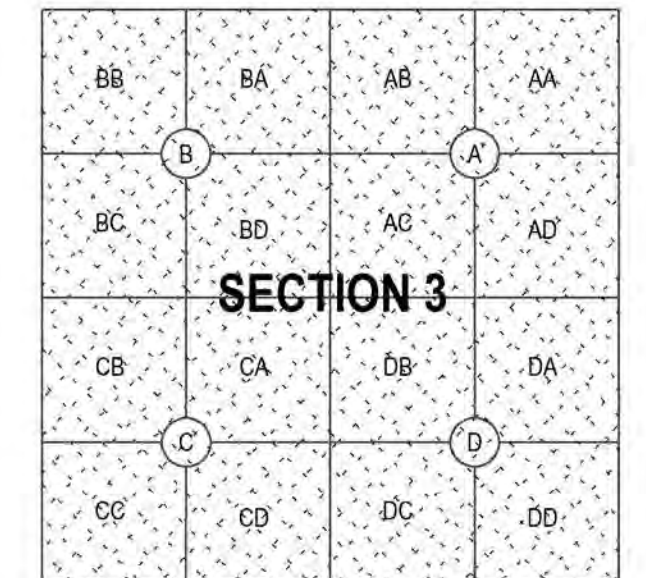
1986 MAR 26 PM 1:02



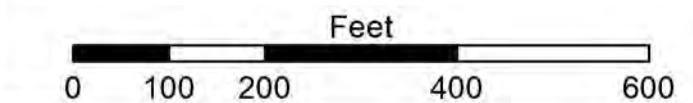
WASHINGTON COUNTY OREGON
SECTION 3 T3S R1W W.M.
SCALE 1" = 200'

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



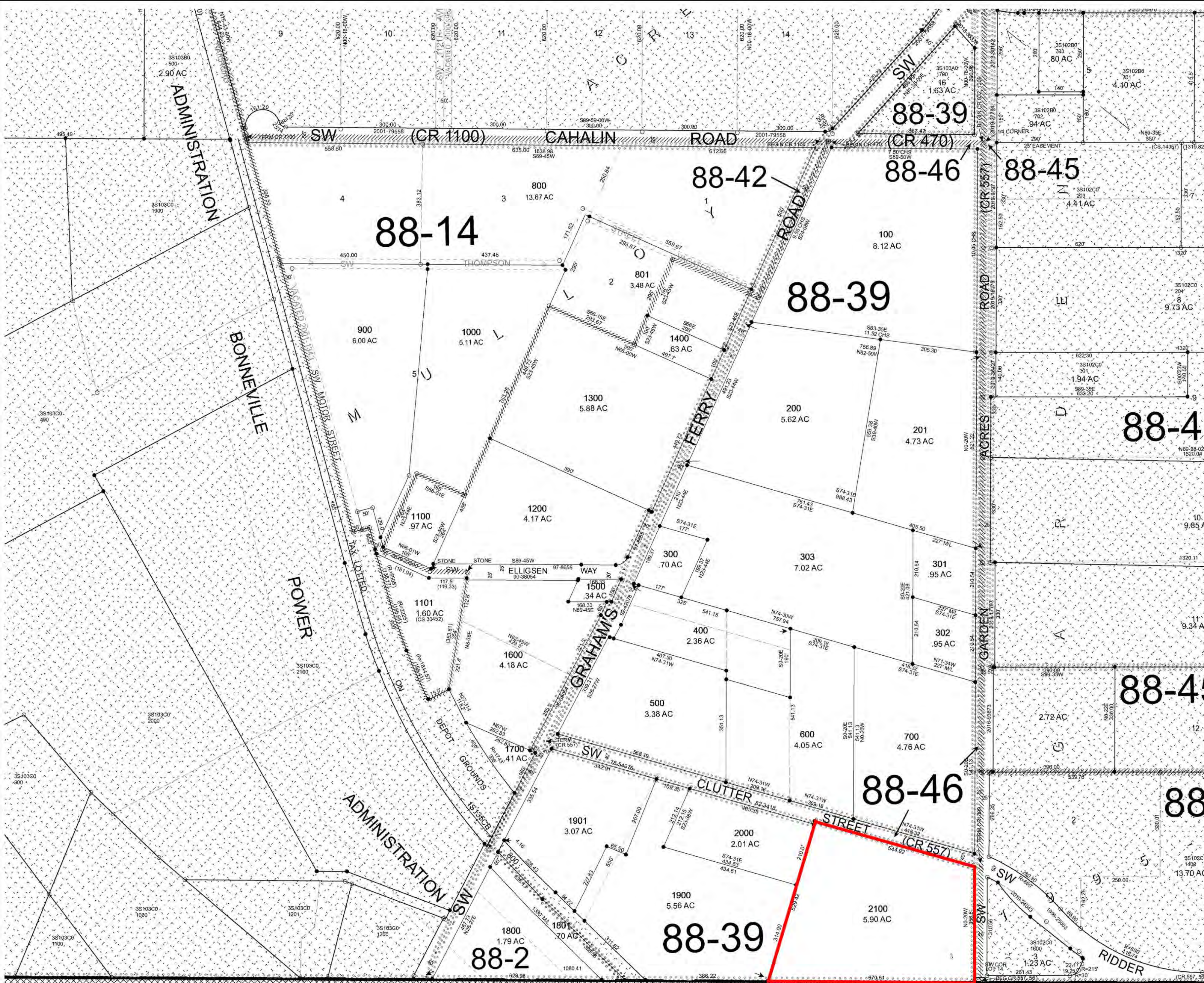
Cancelled Taxlots For: 3S103D
 1601



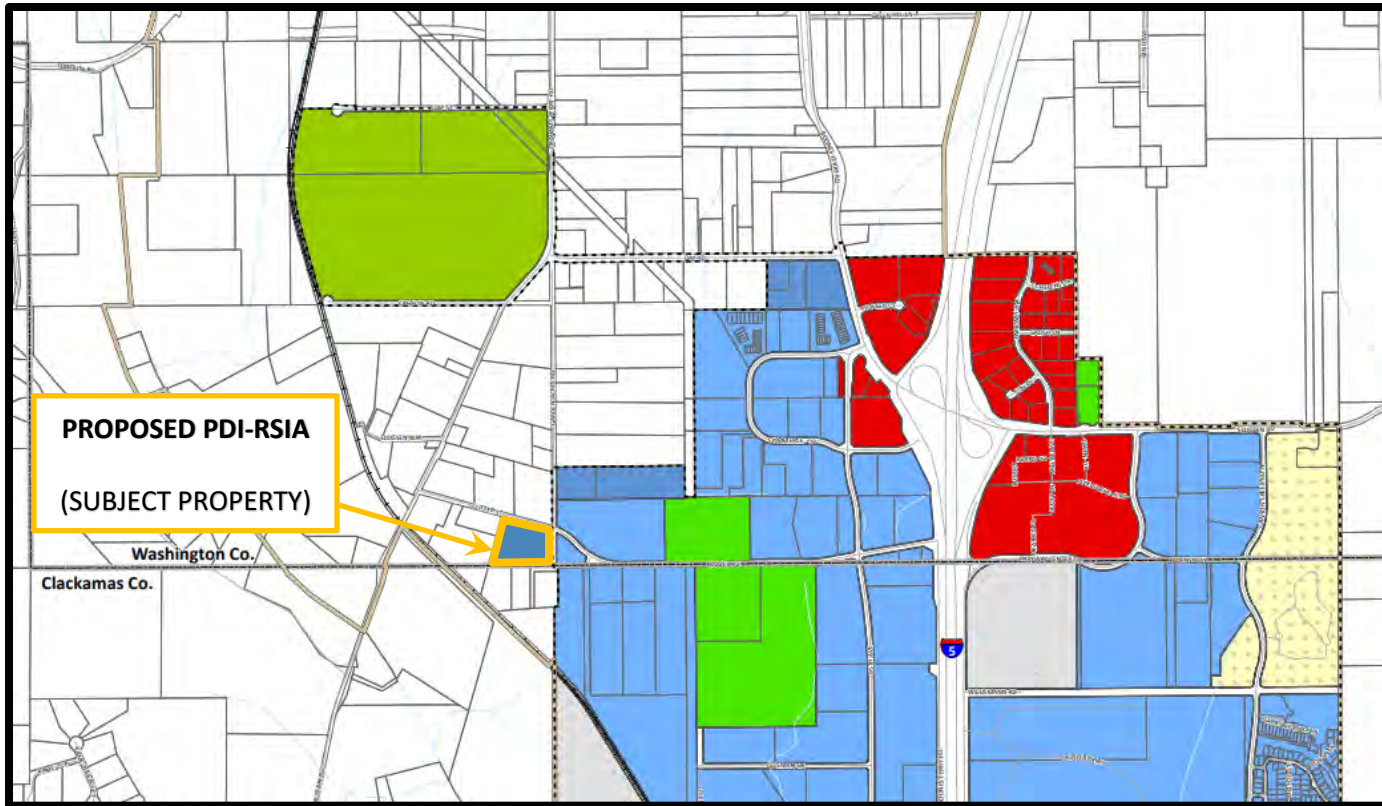
WASHINGTON COUNTY OREGON
Assessment
CARTOGRAPHY
Taxation

PLOT DATE: 7/24/2019
 Rotation: 1.1
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.



CLACKAMAS COUNTY CLACKAMAS



Zoning Map



**WILSONVILLE
OREGON**

EXCERPT - NOT TO SCALE


June 5, 2017

Zoning Designations

 Residential Agricultural Holding (RA-H)	County Boundary
 Residential (R)	City Boundary
 Planned Development Residential (PDR)	Urban Growth Boundary
 Village (V)	Taxlots
 Planned Development Commercial (PDC)	
 Planned Development Commercial Town Center (PDC-TC)	
 Planned Development Industrial (PDI)	
 PDI - Regionally Significant Industrial Area (PDI-RSIA)	
 Public Facility (PF)	
 Public Facility - Corrections (PF-C)	
 Exclusive Farm Use (EFU)	

Note: Refer to individual overlay zone maps for overlay district boundaries

Disclaimer: The City of Wilsonville makes no representations, express or implied, as to the accuracy, completeness and timeliness of the information displayed. Data errors and omissions may exist in map and report. This map is not suitable for legal, engineering, or surveying purposes. Please contact the City of Wilsonville Planning Division to verify report information is complete and accurate.



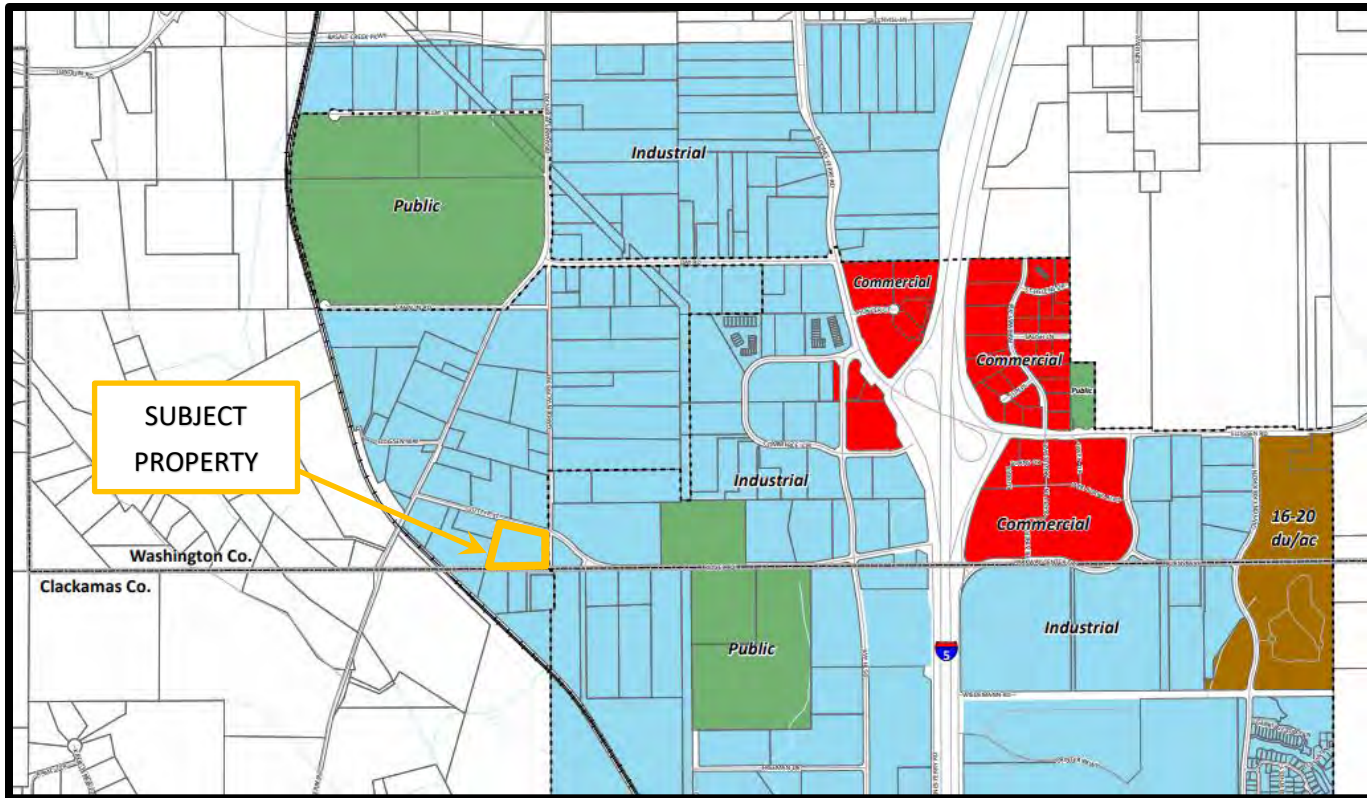
Official Zoning Map

Mayor _____ Date _____

City Recorder _____ Date _____

Resolution Number: _____

Wilsonville Zoning Map (excerpt) and Proposed Zone Change



Comprehensive Plan Map



EXCERPT - NOT TO SCALE

June 2019

Land Use Designations

- Commercial
- Industrial
- Public
- Residential 0-1 dwelling units per acre
- Residential 2-3 dwelling units per acre
- Residential 4-5 dwelling units per acre
- Residential 6-7 dwelling units per acre
- Residential 10-12 dwelling units per acre
- Residential 16-20 dwelling units per acre
- Residential Neighborhood
- Town Center
- Village

- County Boundary
- City Boundary
- Urban Growth Boundary
- Taxlots
- Willamette River Greenway



This map is to be used in conjunction with written text provided in the Wilsonville Comprehensive Plan. When interpreting the intent of the Plan, the text supersedes the map in the event of a conflict.

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Wilsonville Comprehensive Plan Map (excerpt)

MACKENZIE.

DESIGN DRIVEN | CLIENT FOCUSED

COFFEE CREEK LOGISTICS CENTER

LAND USE REVIEW | 09.04.2020



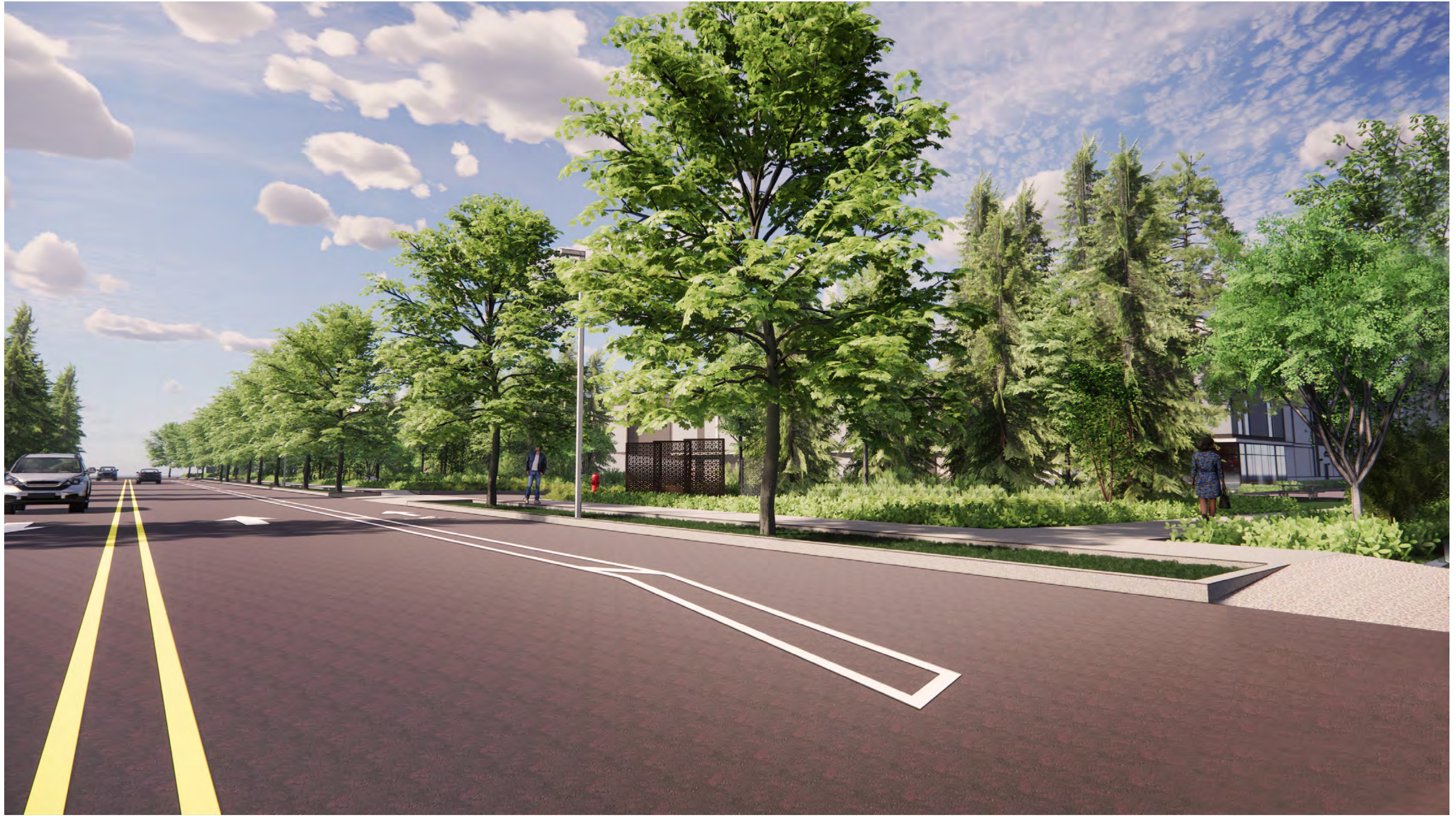
























TERAGAN & ASSOCIATES, INC. ARBORICULTURAL CONSULTANTS

MEMORANDUM

DATE: February 25, 2020

TO: Brendan Mason (Panattoni Development Company, Inc.)

FROM: Todd Prager, RCA #597, ISA Board Certified Master Arborist

RE: Tree Removal and Protection Recommendations for Coffee Creek Logistics Center

Summary

This memorandum provides tree removal and protection recommendations for the Coffee Creek Logistics Center development.

Background

Panattoni Development Company is proposing to construct the Coffee Creek Logistics Center at SW Clutter Road in Wilsonville, Oregon. The existing conditions survey with existing tree locations is provided in Attachment 1 and the proposed site plan with the trees to be retained is provided in Attachment 2.

The assignment requested of our firm for this project was as follows:

1. Provide an assessment of the existing trees;
2. Provide recommendations for tree removal and retention based on the proposed site improvements; and
3. Provide protection recommendations for the trees to be retained.

Tree Assessment

On February 5, 2020, I completed my assessment of the existing trees. The complete inventory data is provided in the tree inventory spreadsheet in Attachment 3. The data collected for each tree includes the tree number, species (common and scientific names), trunk diameter (DBH), crown radius, tree health condition, tree structural condition, pertinent comments, treatment (remove or retain), and applicability of mitigation requirements. The tree numbers in the tree inventory in Attachment 3 correspond to the tree numbers on the plans in Attachments 1 and 2.

Proposed Tree Removal

A typical minimum root protection zone allows encroachments no closer than a radius from a tree of .5 feet per inch of DBH as long as no more than 25 percent of the root protection zone area (estimated at one foot radius per inch of DBH) is impacted. Figure 1 illustrates this concept. This standard may need to be adjusted on a case by case basis due to tree health, species, root distribution, whether the tree will be impacted on multiple sides, and other factors.

Based on the proposed construction and grading footprint shown in Attachment 2, all onsite trees are proposed for removal except for trees 10742 through 10746 (the large Douglas-firs along SW Clutter Road) and trees 10825 and 10827 (two evergreen trees at the rear of the site). All of the offsite trees will also be retained.

Mitigation is recommended for the removal of non-nuisance tree species over 6-inch DBH that are in fair to good health and structural condition. Non-native tree species with the capacity to self propagate and outcompete native species including European birch (*Betula pendula*), Norway maple (*Acer platanoides*), and sweet cherry (*Prunus avium*), are not recommended for mitigation. Also, trees in poor or very poor health and/or structural condition, shrub species such as arborvitae and camellia, and trees that are less than 6-inch DBH are not recommended for mitigation.

Based on these criteria, mitigation is required for 17 trees over 6-inch DBH to be removed at a minimum ratio of 1:1. Attachment 3 includes the applicability of mitigation requirements for each tree. The proposed landscape plan for the project shall indicate the locations of 2-inch caliper mitigation trees in accordance with Section 4.620.00 of the City of Wilsonville Code.

Protection recommendations for the trees to be retained at the site are provided in the next section of this report.

Tree Protection Recommendations

The following recommendations apply to the trees to be retained:

- **Protection Fencing:** Establish tree protection fencing in the locations shown in Attachment 2. The intent of the tree protection fencing is to protect the minimum root protection zones detailed in Figure 1.
- **Modify Grading:** The proposed grading shown inside the tree protection fencing of trees 10742 through 10746, 10825, 10827, and 10922 through 10925 shall be eliminated in the final draft of the grading plan.
- **Onsite Supervision of Project Arborist:** The project arborist shall be onsite to oversee the retaining wall excavation and sidewalk construction within and

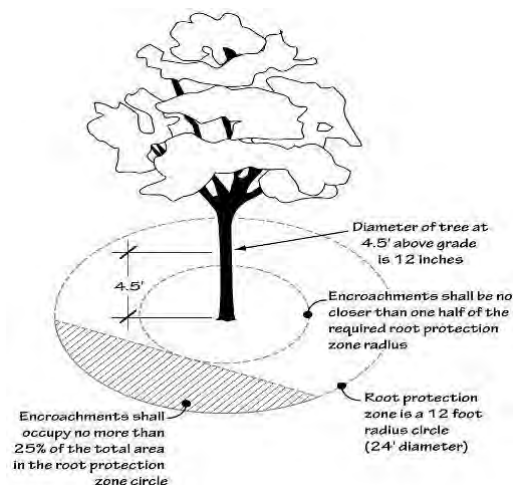


Figure 1: Typical minimum protection zone

adjacent to the tree protection zones of trees 10742 through 10746, 10809, 10825, 10827, and 10922 through 10925.

- **Sidewalk Construction:** The sidewalk to be constructed within the tree protection zone of trees 10742 through 10746 and 10922 through 10925 shall be constructed in the existing gravel driveway without excavating into the underlying soil.
- **Protect Crowns of Trees:** The crowns of the trees may extend beyond the tree protection fencing. Care will need to be taken to not contact or otherwise damage the crowns of the trees during construction activities.
- **Sediment Fencing:** Sediment fencing shall be installed outside the protection zones of the trees to be retained to minimize root disturbances. If erosion control is required inside the root zones, straw wattles shall be used on the soil surface.

Attachment 4 includes additional recommendations to adequately protect the trees during construction.

Conclusion

All onsite trees are proposed for removal except for trees 10742 through 10746 (the large Douglas-firs along SW Clutter Road) and trees 10825 and 10827 (two evergreen trees at the rear of the site). At least 17, 2-inch caliper mitigation trees will be required to be planted. The trees to be retained will be adequately protected by adhering to the recommendations in this report.

Please contact me if you have questions, concerns, or need any additional information.

Sincerely,



Todd Prager

*ASCA Registered Consulting Arborist #597
ISA Board Certified Master Arborist, WE-6723B
ISA Qualified Tree Risk Assessor
AICP, American Planning Association*

Attachment 1:	Existing Conditions Survey with Tree Locations
Attachment 2:	Proposed Site Plan with Trees and Tree Protection
Attachment 3:	Tree Inventory
Attachment 4:	Additional Tree Protection Recommendations
Attachment 5:	Assumptions and Limiting Conditions

LEGEND

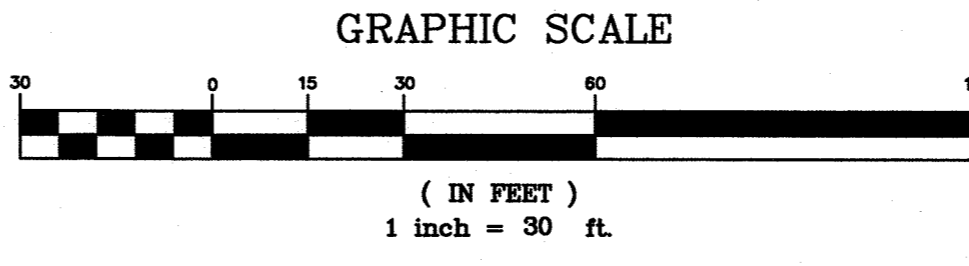
- DECIDUOUS TREE
 - CONIFEROUS TREE
 - FIRE HYDRANT
 - WATER HOSE BIB
 - WELL
 - WATER VALVE
 - WATER MANHOLE
 - SANITARY SEWER MANHOLE
 - STORM SEWER CATCH BASIN
 - STORM SEWER MANHOLE
 - GAS VALVE
 - GUY WIRE ANCHOR
 - UTILITY POLE
 - ELECTRICAL METER
 - POWER JUNCTION BOX
 - STREET LIGHT
 - TELEPHONE/TELEVISION JUNCTION BOX
 - TELECOMM MANHOLE
 - SIGN
 - FOUND SURVEY MONUMENT
-
- RIGHT-OF-WAY LINE
 - BOUNDARY LINE
 - PROPERTY LINE
 - CENTERLINE
 - DITCH
 - CURB
 - EDGE OF PAVEMENT
 - EASEMENT
 - FENCE LINE
 - GRAVEL EDGE
 - POWER LINE
 - OVERHEAD WIRE
 - TELEPHONE LINE
 - GAS LINE
 - STORM SEWER LINE
 - SANITARY SEWER LINE
 - WATER LINE

TREE INFORMATION

- | | |
|--|--|
| 10002 17" MAPLE | 10742 25" FIR |
| 10003 15" CONIFER | 10743 25" FIR |
| 10054 15" PINE | 10744 52" FIR |
| 10055 26" CEDAR | 10745 31" FIR |
| 10063 16" CONIFER | 10746 31" FIR |
| 10064 36" PINE | 10751 SPLIT 4", 5", 6" CEDAR |
| 10328 38" FIR | 10752 SPLIT 4", 8" CEDAR |
| 10336 19" DECIDUOUS | 10776 18" SWEETGUM |
| 10343 37" FIR | 10778 7" DECIDUOUS |
| 10348 32" PINE | 10786 6" BIRCH |
| 10349 39" CEDAR | 10787 10" BIRCH |
| 10355 28" PINE | 10782 7" CEDAR |
| 10380 35" FIR | 10783 8" CEDAR |
| 10365 33" CEDAR | 10794 6" MAPLE |
| 10366 36" FIR | 10785 6" CEDAR |
| 10367 13" DECIDUOUS | 10800 18" BIRCH |
| 10368 32" CEDAR | 10804 SPLIT 6", 7" CEDAR |
| 10440 9" BIRCH | 10807 6" DECIDUOUS |
| 10486 9" BIRCH | 10808 20" FIR |
| 10507 12" BIRCH | 10809 21" DECIDUOUS |
| 10508 15" BIRCH | 10812 18" MAPLE |
| 10520 SPLIT 14", 17" MAPLE | 10813 16" MAPLE |
| 10560 SPLIT (3) 7", 8" (2) 10" DECIDUOUS | 10814 SPLIT 9", 11", 13", 14", 22" MAPLE |
| 10566 SPLIT 8", (2) 9" MAPLE | 10825 12" CONIFER |
| 10573 22" CEDAR | 10827 9" CONIFER |
| 10611 13" PINE | 10846 20" MADRONE |
| 10621 12" PINE | 10919 31" MAPLE |
| 10622 12" PINE | 10922 22" CONIFER |
| 10665 CLUMP | 10923 20" CONIFER |
| 10712 SPLIT 7", 8", 13" DECIDUOUS | 10924 20" CONIFER |
| 10713 10" MAPLE | 10925 22" CONIFER |
| 10714 SPLIT 5", 7", 8" DECIDUOUS | 10949 57" FIR |
| 10717 7" MAPLE | 10969 12" DECIDUOUS |
| 10718 8" SWEETGUM | 10971 33" DECIDUOUS |
| 10724 10" SWEETGUM | 10979 30" DECIDUOUS |
| 10730 6" MAPLE | 10991 15" MAPLE |
| 10736 DECIDUOUS CLUMP (DEAD) | 10995 8" DECIDUOUS |
| 10737 DECIDUOUS CLUMP (DEAD) | 11000 SPLIT (3) 6" CEDAR |
| 10738 DECIDUOUS CLUMP (DEAD) | 11001 SPLIT (2) 6" CEDAR |
| 10739 DECIDUOUS CLUMP (DEAD) | 11002 SPLIT (3) 6" CEDAR |
| 10740 DECIDUOUS CLUMP (DEAD) | 11003 SPLIT (3) 6" CEDAR |
| 10741 DECIDUOUS CLUMP (DEAD) | |

UTILITY STATEMENT

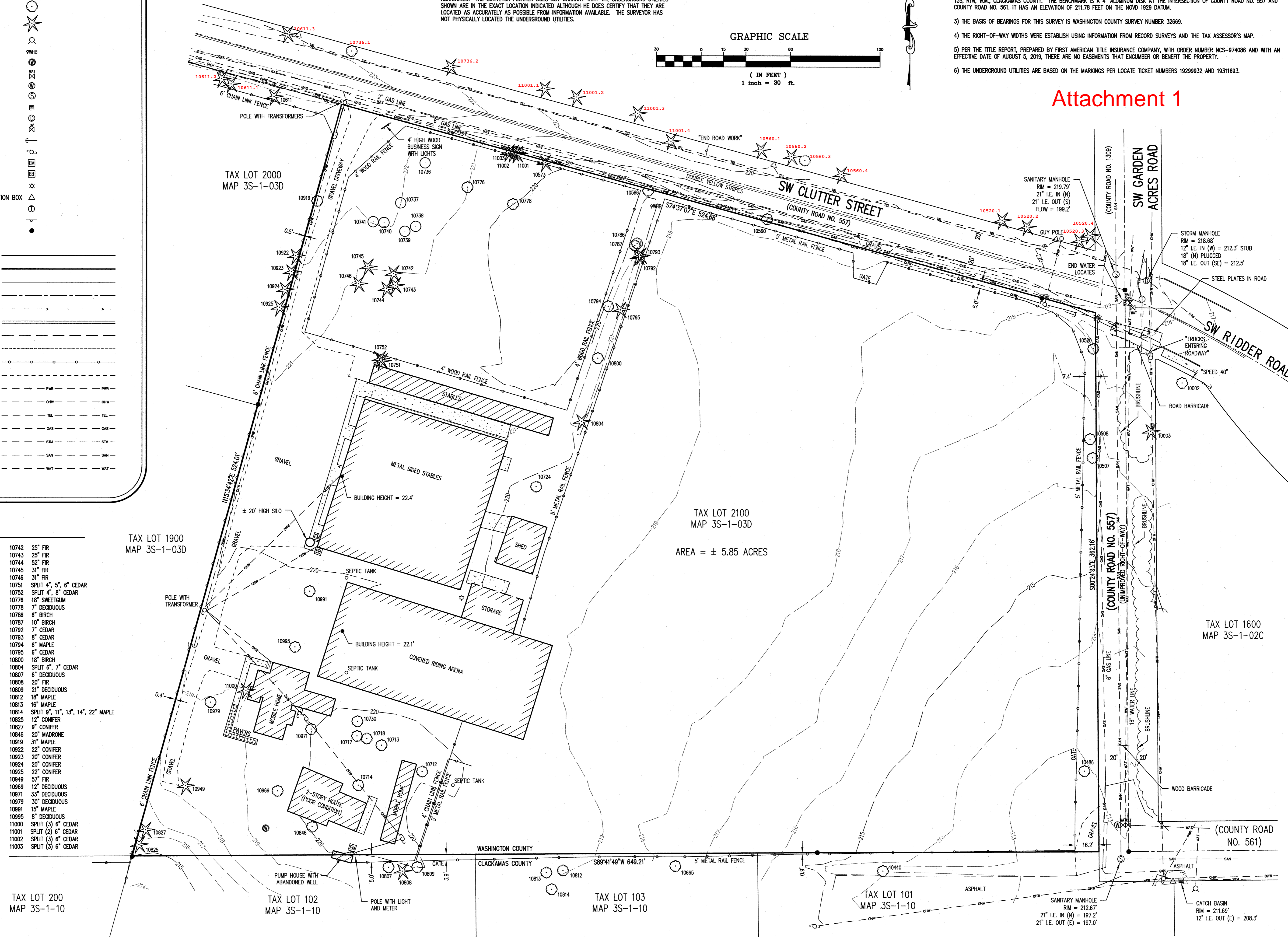
THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES.



NOTES

- 1) THE FIELD SURVEY FOR THIS MAP WAS COMPLETED ON NOVEMBER 22, 2019.
- 2) ELEVATIONS ARE BASED ON THE SECTION CORNER COMMON TO 2 & 3, T3S, R1W, W.M., WASHINGTON COUNTY AND SECTIONS 10 & 11, T3S, R1W, W.M., CLACKAMAS COUNTY. THE BENCHMARK IS A 4" ALUMINUM DISK AT THE INTERSECTION OF COUNTY ROAD NO. 557 AND COUNTY ROAD NO. 561. IT HAS AN ELEVATION OF 211.78 FEET ON THE NGVD 1929 DATUM.
- 3) THE BASIS OF BEARINGS FOR THIS SURVEY IS WASHINGTON COUNTY SURVEY NUMBER 32669.
- 4) THE RIGHT-OF-WAY WIDTHS WERE ESTABLISHED USING INFORMATION FROM RECORD SURVEYS AND THE TAX ASSESSOR'S MAP.
- 5) PER THE TITLE REPORT, PREPARED BY FIRST AMERICAN TITLE INSURANCE COMPANY, WITH ORDER NUMBER NCS-974086 AND WITH AN EFFECTIVE DATE OF AUGUST 5, 2019, THERE ARE NO EASEMENTS THAT ENCUMBER OR BENEFIT THE PROPERTY.
- 6) THE UNDERGROUND UTILITIES ARE BASED ON THE MARKINGS PER LOCATE TICKET NUMBERS 19299932 AND 19311693.

Attachment 1



NORTHWEST SURVEYING, INC.
 1815 NW 169th Place, Suite 2090
 Beaverton, OR 97005
 PH: (503) 848-2179 FAX: (503) 848-2179
 EMAIL: info@northwestsurveying.com

LOCATED IN THE SOUTHEAST ONE-QUARTER OF SECTION 3, TOWNSHIP 3, SOUTH, RANGE 1 WEST, W.M., WASHINGTON COUNTY, OREGON

**TOPOGRAPHIC SURVEY
 WASHINGTON COUNTY, OREGON**

DRAWING NO.: 2026 TOPO
 SCALE: AS NOTED
 DRAWING GENERATED BY: LD2004
 DRAWN BY: BJA
 CHECKED BY: SFT
PREPARED FOR:
 PANATTONI DEVELOPMENT CO.
 1821 DOCK ST., SUITE 100
 TACOMA, WA 98402

REVISIONS:
 INITIAL RELEASE: DEC. 5, 2019

REGISTERED PROFESSIONAL LAND SURVEYOR
Scott Field
 OREGON
 JUNE 30, 1997
 SCOTT F. FIELD
 2844
 12-31-2019
 RENEWAL DATE

JOB NUMBER
2026
 SHEET
1 OF 1

REVISION SCHEDULE		
Delta	Issued As	Issue Date

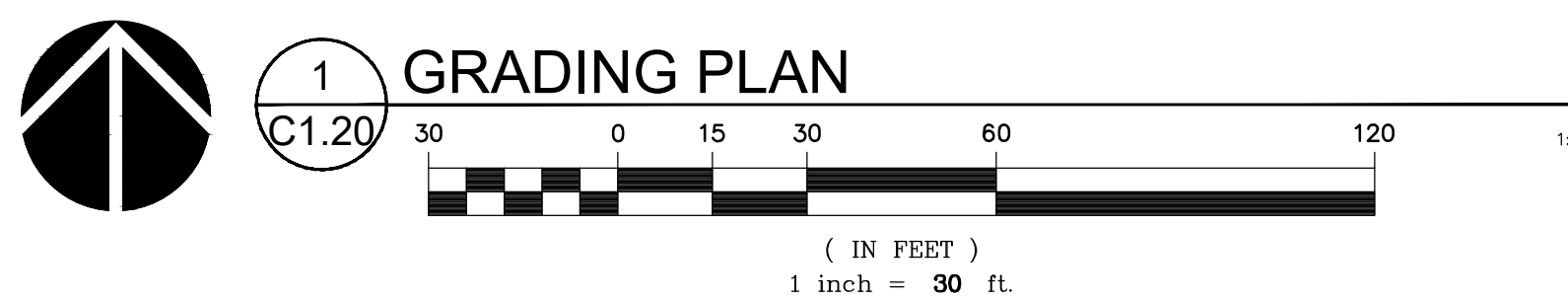
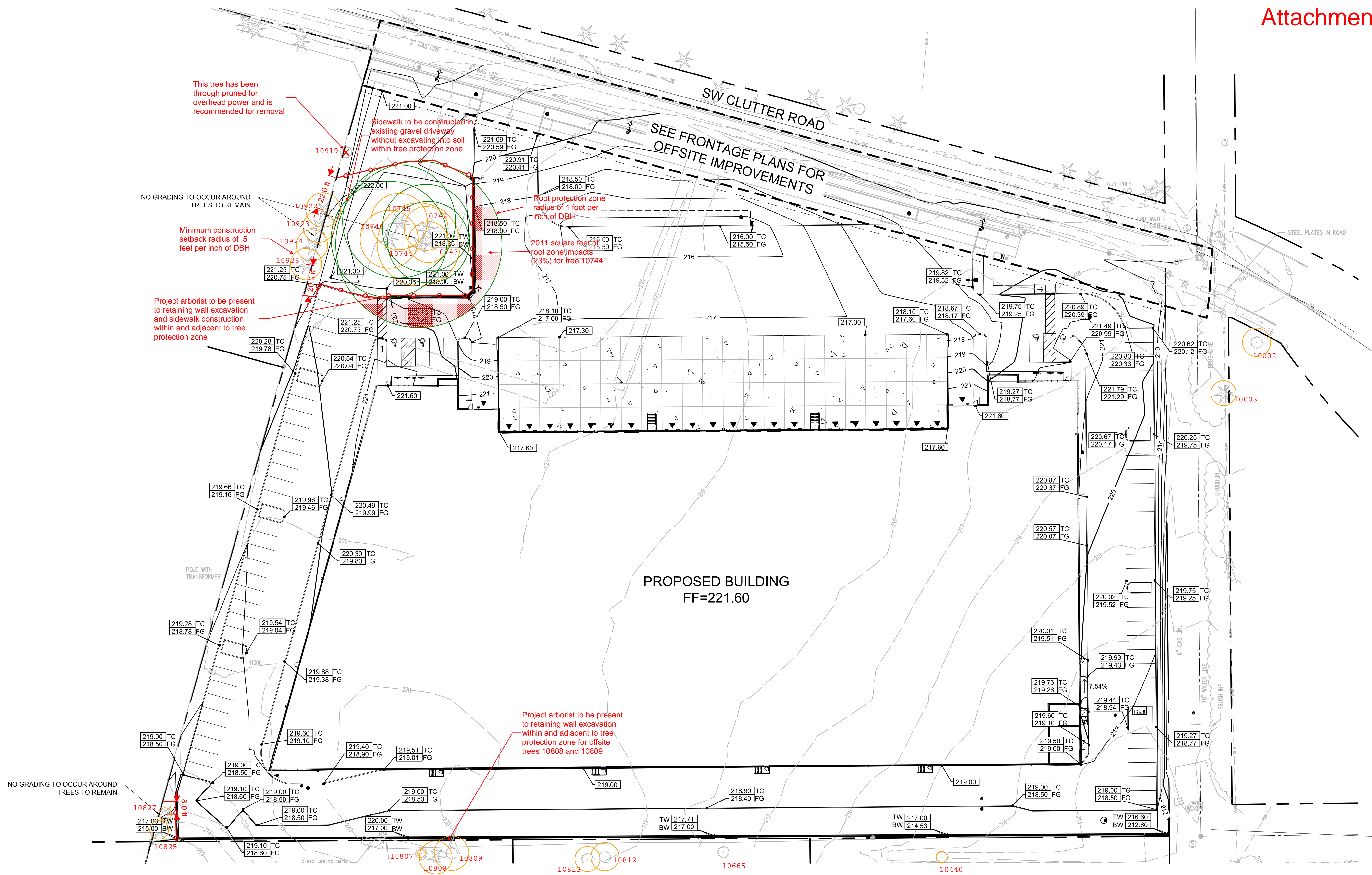
SHEET TITLE:
GRADING PLAN

DRAWN BY: CME
CHECKED BY: CTL
SHEET:

C1.20

JOB NO. **2190382.00**

PRELIMINARY ONLY



CUT/FILL VOLUMES

CUT = 3,700 CY
FILL = 7,050 CY
NET AMOUNT (FILL) = 3,350 CY
1.5' STRIPPING FROM EXISTING GRADE
10% SHRINKAGE FACTOR
SUBGRADE 1' BELOW FINISH GRADE

Attachment 3

Tree No.	Common Name	Scientific Name	DBH ¹	Single DBH ²	C-Rad ³	Condition ⁴	Structure	Comments	Treatment	Mitigation ⁵
10002	Norway maple	<i>Acer platanoides</i>	18	18	25	good	fair	multiple leaders	retain	n/a
10003	spruce	<i>Picea sp.</i>	16	16	12	poor	poor	topped at 15'	retain	n/a
10440	European birch	<i>Betula pendula</i>	7	7	10	very poor	very poor	extensive dieback	retain	n/a
10486	European birch	<i>Betula pendula</i>	7	7	9	very poor	very poor	extensive dieback	remove	no (poor condition/structure) (nuisance species)
10507	European birch	<i>Betula pendula</i>	12	12	10	very poor	very poor	extensive dieback	remove	no (poor condition/structure) (nuisance species)
10508	European birch	<i>Betula pendula</i>	15	15	15	very poor	very poor	extensive dieback	remove	no (poor condition/structure) (nuisance species)
10520	Norway maple	<i>Acer platanoides</i>	27	27	18	fair	fair	codominant at 3' with included bark	remove	no (nuisance species)
10520.1	ponderosa pine	<i>Pinus ponderosa</i>	46	46	30	good	good		retain	n/a
10520.2	spruce	<i>Picea sp.</i>	18	18	10	good	fair	one sided	retain	n/a
10520.3	ponderosa pine	<i>Pinus ponderosa</i>	17	17	12	good	fair	one sided	retain	n/a
10520.4	incense cedar	<i>Calocedrus decurrens</i>	29	29	15	good	fair	one sided	retain	n/a
10560	purpleleaf plum	<i>Prunus cerasifera</i>	10,10,8 ,7,7,7	20	18	fair	fair	multiple leaders at ground level, extensive watersprouts	remove	yes
10560.1	incense cedar	<i>Calocedrus decurrens</i>	36	36	15	good	fair	one sided	retain	n/a
10560.2	Douglas-fir	<i>Pseudotsuga menziesii</i>	46	46	30	good	fair	one sided	retain	n/a
10560.3	black locust	<i>Robinia pseudoacacia</i>	26	26	30	good	fair	one sided, multiple leaders	retain	n/a
10560.4	incense cedar	<i>Calocedrus decurrens</i>	36	36	30	good	fair	moderately one sided	retain	n/a
10566	Japanese maple	<i>Acer palmatum</i>	13,5	13	15	poor	poor	multiple leaders at ground level, history of leader failure	remove	no (poor condition/structure)
10573	incense cedar	<i>Calocedrus decurrens</i>	23	23	20	poor	poor	topped for overhead utilities	remove	no (poor condition/structure)
10611	shore pine	<i>Pinus contorta</i> subsp. <i>contorta</i>	13	13	12	poor	poor	side pruned for overhead power	retain	n/a
10611.1	shore pine	<i>Pinus contorta</i> subsp. <i>contorta</i>	11	11	12	poor	poor	chlorotic, side pruned for overhead power	retain	n/a
10611.2	shore pine	<i>Pinus contorta</i> subsp. <i>contorta</i>	11	11	12	poor	poor	chlorotic, side pruned for overhead power	retain	n/a
10611.3	Douglas-fir	<i>Pseudotsuga menziesii</i>	41	41	25	good	good		retain	n/a
10665	hazelnut	<i>Corylus cornuta</i>	n/a	n/a	n/a	n/a	n/a	not a tree species	retain	n/a

Attachment 3

Tree No.	Common Name	Scientific Name	DBH ¹	Single DBH ²	C-Rad ³	Condition ⁴	Structure	Comments	Treatment	Mitigation ⁵
10712	plum	<i>Prunus sp.</i>	13,8,7	16	15	very poor	very poor	multiple leaders at ground level, multiple failed leaders, decay at base of trunk	remove	no (poor condition/structure)
10713	sweetgum	<i>Liquidambar styraciflua</i>	10	10	10	good	good		remove	yes
10714	camellia	<i>Camellia sinensis</i>	12	12	10	good	good	not a tree species	remove	no (shrub)
10717	sweetgum	<i>Liquidambar styraciflua</i>	6	6	6	good	fair	multiple leaders	remove	yes
10718	sweetgum	<i>Liquidambar styraciflua</i>	7	7	8	good	fair	multiple leaders	remove	yes
10724	sweetgum	<i>Liquidambar styraciflua</i>	8	8	9	good	fair	codominant at 6'	remove	yes
10730	bigleaf maple	<i>Acer macrophyllum</i>	6	6	10	good	fair	codominant at 5'	remove	yes
10736	shrub	n/a	10,10,10	17	0	very poor	very poor	extensive dieback, not a tree species	remove	no (shrub)
10736.1	sweet cherry	<i>Prunus avium</i>	21	21	20	poor	poor	large pruning cuts, history of branch failure	retain	n/a
10736.2	Douglas-fir	<i>Pseudotsuga menziesii</i>	37	37	27	good	good		retain	n/a
10737	shrub	n/a	10,6,6,6	14	0	very poor	very poor	extensive dieback, not a tree species	remove	no (shrub)
10738	shrub	n/a	12,10,6,6	18	0	very poor	very poor	extensive dieback, not a tree species	remove	no (shrub)
10739	shrub	n/a	8,8,6	8,8,7	0	very poor	very poor	extensive dieback, not a tree species	remove	no (shrub)
10740	shrub	n/a	10	11	0	very poor	very poor	extensive dieback, not a tree species	remove	no (shrub)
10741	shrub	n/a	9,4	9,5	0	very poor	very poor	extensive dieback, not a tree species	remove	no (shrub)
10742	Douglas-fir	<i>Pseudotsuga menziesii</i>	28	28	18	good	fair	one sided	retain	n/a
10743	Douglas-fir	<i>Pseudotsuga menziesii</i>	26	26	18	fair	fair	overtopped by adjacent trees, bulge at lower trunk, one sided	retain	n/a
10744	Douglas-fir	<i>Pseudotsuga menziesii</i>	53	53	35	good	fair	large surface roots, one sided	retain	n/a
10745	Douglas-fir	<i>Pseudotsuga menziesii</i>	36	36	30	good	fair	one sided	retain	n/a
10746	Douglas-fir	<i>Pseudotsuga menziesii</i>	37	37	25	good	fair	one sided	retain	n/a
10751	arborvitae	<i>Thuja sp.</i>	11,5	12	5	good	fair	not a tree species	remove	no (shrub)
10752	arborvitae	<i>Thuja sp.</i>	5	5	5	good	fair	not a tree species	remove	no (shrub)
10776	sweetgum	<i>Liquidambar styraciflua</i>	19	19	15	good	fair	multiple leaders	remove	yes
10778	catalpa	<i>Catalpa sp.</i>	6	6	6	good	good		remove	yes

Attachment 3

Tree No.	Common Name	Scientific Name	DBH ¹	Single DBH ²	C-Rad ³	Condition ⁴	Structure	Comments	Treatment	Mitigation ⁵
10786	catalpa	<i>Catalpa sp.</i>	6	6	6	very poor	very poor	top dieback	remove	no (poor condition/structure)
10787	European birch	<i>Betula pendula</i>	10	10	0	very poor	very poor	dead	remove	no (poor condition/structure)
10792	sawara cypress	<i>Chamaecyparis pisifera</i>	6	6	6	good	fair	one sided	remove	yes
10793	sawara cypress	<i>Chamaecyparis pisifera</i>	6	6	6	good	fair	one sided	remove	yes
10794	Norway maple	<i>Acer platanoides</i>	5	5	10	good	fair	multiple leaders	remove	no (<6" DBH)
10795	sawara cypress	<i>Chamaecyparis pisifera</i>	10	10	6	good	fair	one sided, multiple leaders	remove	yes
10800	European birch	<i>Betula pendula</i>	18	18	21	poor	poor	multiple leaders, top dieback	remove	no (poor condition/structure) (nuisance species)
10804	sawara cypress	<i>Chamaecyparis pisifera</i>	9	9	6	good	fair	multiple leaders	remove	yes
10807	sweet cherry	<i>Prunus avium</i>	5	5	10	good	fair	one sided	retain	n/a
10808	Norway spruce	<i>Picea sp.</i>	21	21	12	good	fair	one sided	retain	n/a
10809	sweet cherry	<i>Prunus avium</i>	22	22	30	good	fair	multiple leaders, one sided	retain	n/a
10812	bigleaf maple	<i>Acer macrophyllum</i>	18	18	25	good	fair	one sided, multiple leaders	retain	n/a
10813	bigleaf maple	<i>Acer macrophyllum</i>	16	16	25	good	fair	one sided, multiple leaders	retain	n/a
10814	bigleaf maple	<i>Acer macrophyllum</i>	22,14,1 3,11,9	32	30	poor	poor	multiple leaders at ground level with failed stems and decay	remove	no (poor condition/structure)
10825	Colorado blue spruce	<i>Picea pungens</i>	12	12	6	good	fair	one sided	retain	n/a
10827	spruce	<i>Picea sp.</i>	8	8	9	fair	fair	one sided, chlorotic, moderate branch dieback	retain	n/a
10846	madrone	<i>Arbutus menziesii</i>	20	20	25	good	fair	one sided, multiple leaders	remove	yes
10919	bigleaf maple	<i>Acer macrophyllum</i>	31	31	35	good	fair	through pruned for overhead power	remove	yes
10922	deodar cedar	<i>Cedrus deodara</i>	22	22	20	good	fair	side pruned for overhead power	retain	n/a
10923	deodar cedar	<i>Cedrus deodara</i>	20	20	20	good	fair	side pruned for overhead power	retain	n/a
10924	deodar cedar	<i>Cedrus deodara</i>	20	20	20	good	fair	side pruned for overhead power	retain	n/a
10925	deodar cedar	<i>Cedrus deodara</i>	20	20	20	good	fair	side pruned for overhead power	retain	n/a
10949	Douglas-fir	<i>Pseudotsuga menziesii</i>	56	56	35	fair	fair	moderate branch dieback	remove	yes
10969	sweet cherry	<i>Prunus avium</i>	11	11	15	good	good		remove	no (nuisance species)
10971	sweet cherry	<i>Prunus avium</i>	32	32	30	good	fair	multiple leaders with included bark	remove	no (nuisance species)

Attachment 3

Tree No.	Common Name	Scientific Name	DBH ¹	Single DBH ²	C-Rad ³	Condition ⁴	Structure	Comments	Treatment	Mitigation ⁵
10979	catalpa	<i>Catalpa sp.</i>	24	24	25	very poor	very poor	extensive decay in lower trunk, history of branch failure	remove	no (poor condition/structure)
10991	red maple	<i>Acer rubrum</i>	14	14	15	good	fair	multiple leaders	remove	yes
10995	catalpa	<i>Catalpa sp.</i>	7	7	12	good	good		remove	yes
11000	arborvitae	<i>Thuja sp.</i>	10,10	14	6	good	fair	not a tree species	remove	no (shrub)
11001	arborvitae	<i>Thuja sp.</i>	6,6	8	5	good	fair	not a tree species	remove	no (shrub)
11001.1	ponderosa pine	<i>Pinus ponderosa</i>	30	30	40	fair	fair	moderate vigor, codominant at 40', sequoia pitch mother	retain	n/a
11001.2	incense cedar	<i>Calocedrus decurrens</i>	38	38	25	good	good		retain	n/a
11001.3	ponderosa pine	<i>Pinus ponderosa</i>	26	26	25	fair	fair	moderate vigor, codominant at 25' with included bark	retain	n/a
11001.4	Douglas-fir	<i>Pseudotsuga menziesii</i>	35	35	20	fair	fair	large wound at lower trunk, multiple leaders at 30'	retain	n/a
11002	arborvitae	<i>Thuja sp.</i>	6,6,6	10	5	good	fair	not a tree species	remove	no (shrub)
11003	arborvitae	<i>Thuja sp.</i>	6,6,6	10	5	good	fair	not a tree species	remove	no (shrub)
¹ DBH is the trunk diameter in inches measured per International Society of Arboriculture (ISA) standards.										
² Single DBH is the trunk diameter of a multi-stem tree converted to a single number according to the following formula: square root of the sum of the squared DBH of each stem.										
³ C-Rad is the approximate crown radius in feet.										
⁴ Condition and Structure ratings range from very poor, poor, fair, to good.										
⁵ Mitigation is recommended for the removal of non-nuisance tree species over 6-inch DBH that are in fair to good health and structural condition. Non-native tree species with the capacity to self propagate and outcompete native species including European birch, Norway maple, and sweet cherry, are not recommended for mitigation. Also, trees in poor or very poor health and/or structural condition, shrub species such as arborvitae and camellia, and trees that are less than 6-inch DBH are not recommended for mitigation.										

Attachment 4 Tree Protection Recommendations

Before Construction Begins

1. Notify all contractors of tree protection procedures. For successful tree protection on a construction site, all contractors must know and understand the goals of tree protection.
 - a. Hold a tree protection meeting with all contractors to explain the goals of tree protection.
 - c. Have all contractors sign memoranda of understanding regarding the goals of tree protection. The memoranda should include a penalty for violating the tree protection plan. The penalty should equal the resulting fines issued by the local jurisdiction plus the appraised value of the tree(s) within the violated tree protection zone per the current Trunk Formula Method as outlined in the current edition of the *Guide for Plant Appraisal* by the Council of Tree & Landscape Appraisers. The penalty should be paid to the owner of the property.
2. Fencing
 - a. Tree protection fencing may be set as shown in Attachment 2.
 - b. The fencing should be put in place before the ground is cleared in order to protect the trees and the soil around the trees from disturbances.
 - c. Fencing should be established by the project arborist based on the needs of the trees to be protected and to facilitate construction.
 - d. Fencing should consist of 4-foot high steel fencing on concrete blocks or 4-foot metal fencing secured to the ground with 6-foot metal posts to prevent it from being moved by contractors, sagging, or falling down.
 - e. Fencing should remain in the position that is established by the project arborist and not be moved without approval from the project arborist until final project approval.
3. Signage
 - a. All tree protection fencing should have signage as follows so that all contractors understand the purpose of the fencing:

TREE PROTECTION ZONE

**DO NOT REMOVE OR ADJUST THE LOCATION OF THIS
TREE PROTECTION FENCING**

UNAUTHORIZED ENCROACHMENT MAY RESULT IN FINES

Please contact the project arborist if alterations to the location of the tree protection fencing are necessary.

Todd Prager, Project Arborist, Teragan & Associates, 971-295-4835

- b. Signage should be placed every 75-feet or less.

During Construction

1. Protection Guidelines Within the Tree Protection Zones:
 - a. No new buildings; grade change or cut and fill, during or after construction; new impervious surfaces; or utility or drainage field placement should be allowed within the tree protection zones.
 - b. No traffic should be allowed within the tree protection zones. This includes but is not limited to vehicle, heavy equipment, or even repeated foot traffic.
 - c. No storage of materials including but not limiting to soil, construction material, or waste from the site should be permitted within the tree protection zones. Waste includes but is not limited to concrete wash out, gasoline, diesel, paint, cleaner, thinners, etc.
 - d. Construction trailers should not to be parked/placed within the tree protection zones.
 - e. No vehicles should be allowed to park within the tree protection zones.
 - f. No other activities should be allowed that will cause soil compaction within the tree protection zones.
2. The trees should be protected from any cutting, skinning or breaking of branches, trunks or woody roots.
3. The project arborist should be notified prior to the cutting of woody roots from trees that are to be retained to evaluate and oversee the proper cutting of roots with sharp cutting tools. Cut roots should be immediately covered with soil or mulch to prevent them from drying out.
4. Trees that have woody roots cut should be provided supplemental water during the summer months.
5. Any necessary passage of utilities through the tree protection zones should be by means of tunneling under woody roots by hand digging or boring with oversight by the project arborist.
6. Any deviation from the recommendations in this section should receive prior approval from the project arborist.

After Construction

1. Carefully landscape the areas within the tree protection zones. Do not allow trenching for irrigation or other utilities within the tree protection zones.
2. Carefully plant new plants within the tree protection zones. Avoid cutting the woody roots of trees that are retained.
3. Do not install permanent irrigation within the tree protection zones unless it is drip irrigation to support a specific planting or the irrigation is approved by the project arborist.
4. Provide adequate drainage within the tree protection zones and do not alter soil hydrology significantly from existing conditions for the trees to be retained.
5. Provide for the ongoing inspection and treatment of insect and disease populations that are capable of damaging the retained trees and plants.
6. The retained trees may need to be fertilized if recommended by the project arborist.
7. Any deviation from the recommendations in this section should receive prior approval from the project arborist.

Attachment 5

Assumptions and Limiting Conditions

1. Any legal description provided to the consultant is assumed to be correct. The information provided by Panattoni Development Company and their consultants was the basis of the information provided in this report.
2. It is assumed that this property is not in violation of any codes, statutes, ordinances, or other governmental regulations.
3. The consultant is not responsible for information gathered from others involved in various activities pertaining to this project. Care has been taken to obtain information from reliable sources.
4. Loss or alteration of any part of this delivered report invalidates the entire report.
5. Drawings and information contained in this report may not be to scale and are intended to be used as display points of reference only.
6. The consultant's role is only to make recommendations. Inaction on the part of those receiving the report is not the responsibility of the consultant.
7. The purpose of this report is to:
 - Provide an assessment of the existing trees;
 - Provide recommendations for tree removal and retention based on the proposed site improvements; and
 - Provide protection recommendations for the trees to be retained.

**Preliminary
Drainage Report**

For
Coffee Creek Industrial Park

Submitted
February 28th, 2020

Re-Submitted
June 26th, 2020

Applicant
Panattoni
Contact:
Brendan Mason
206-838-3843
1821 Dock St. Suite 100
Tacoma, WA 98402

Design Engineer
Chad Lawrence

Project Number
2190382.00

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Section A: Project Overview

The Coffee Creek Logistics Center is a proposed warehouse/distribution facility with ancillary office space, suitable for one or two tenants. The 5.9-acre project site is located in the Coffee Creek Industrial Design Area Overlay District, on the south side of SW Clutter Street just west of the Garden Acres Road "T" intersection. (SW Ridder Road forms the eastern leg of that three-legged intersection.)

The proposal will involve demolition of the existing house, horse stables and other accessory buildings on the property. The site plan orients the new building, access and circulation to protect and preserve a small stand of five mature Douglas fir trees in the northwestern quadrant of the property, integrating the trees into the overall landscaping/screening plan along SW Clutter Street.

The proposed building contains an estimated 110,331 square feet of floor area (SF); however, the applicant's traffic study is based on total building size of up to 115,000 SF to allow for design flexibility, including the option to add mezzanines within portion(s) of the building's two office areas.

The site plan proposes two driveways on SW Clutter Street, to support employee parking located east and west of the building, and to provide sufficient access and circulation for trucks. The site plan includes 72 auto parking spaces, 19 dock doors, and two (2) drive-in loading doors.

To complement the group of mature Douglas fir trees to be retained, the landscaping plan along the SW Clutter Street frontage uses dense plantings of native-species trees, shrubs and ground covers (consistent with appropriate spacing for their long-term growth habits and survival needs) to maintain a naturalistic appearance along the road corridor. Pedestrian paths and usable spaces further contribute to the public realm, consistent with the goals of the Coffee Creek Industrial Design Overlay Pattern Book and Design Guidelines. The developed site has stormwater planters and stormwater swales across the site to accommodate the stormwater runoff requirement.

The subject property has been used as a personal residence and an equestrian facility by the property owners since they acquired it on March 24, 1986. In addition to a residence, the property has agricultural and/or equestrian facilities such as stables and a barn, all concentrated in the western roughly 1/3rd of the property. The eastern approximately 2/3rds of the site is unimproved. All existing improvements will be razed as part of the redevelopment plan.

A Tarr Oil branded commercial fueling facility is adjacent to the east of the site, Republic Services operates a waste/recycling facility farther to the east (across SW Ridder Road), and Hartung Glass Industries (HGI) is adjacent to the southeast.

Just west of HGI, other property immediately to the south is unimproved, but in aerial photos, partial agricultural use for row crop cultivation is visible in the eastern portion of the property.

Industrial development and activities are located adjacent to the west as well as to the northwest, across SW Clutter Street.

The property across SW Clutter Street, north of the subject property, appears to be in a rural residential use, with some utility buildings also on the property. A

small, independent automotive garage, "Oak Tree Auto Service," is located farther to the north on the west side of SW Garden Acres Road.

The subject property's southern boundary is coterminous with the County jurisdictional boundary. Parcels to the south of that line, extending also east and west of the subject property, are in Clackamas County, whereas the subject property and its neighbors to the east, west and north are in Washington County.

The existing grades on the site slope from the northwest at approximately elevation 222 to the southeast corner at elevation 212. The existing discharge point is via sheet flow at the south east corner of the site to the adjacent property.

Section B: Impervious Threshold Determination Form

IMPERVIOUS AREA THRESHOLD DETERMINATION FORM

1. TOTAL NEW AND REPLACED IMPERVIOUS AREA, SF: Box 1

2. APPLY IMPERVIOUS REDUCTION METHODS:

2a. Pervious Pavement, SF: Box 2a

2b. Green Roof, SF: Box 2b

2c. Tree Credit - Applies to NON single family residential developments only. NOTE: Maximum total tree credit allowed is 10% of the Impervious Area in BOX 1:

New Trees

To receive credit, trees must be planted in excess of Planning Division (landscaping) requirements. New evergreen trees must be at least 6 feet tall at the time of planting and new deciduous trees must be at least 2-inch caliper (diameter at 4 feet high). Trees must be planted within 25-feet of ground-level impervious surfaces. New trees cannot be credited against rooftop surfaces or pervious pavement. New trees must be selected from tree species included in Appendix A unless otherwise approved.

Number of new trees meeting criteria x 100 sf each, SF: Box 2c

2d. Existing Tree Canopy

To receive credit, existing tree canopy must be preserved during and after construction (recorded on property deed). Existing trees cannot be credited against rooftop surfaces or pervious pavement. Minimum tree size to receive credit is 6-inch caliper. No credit will be given for existing trees located in vegetative buffers or other requirements of the Planning Division. Tree canopy is measured as the area under the tree drip-line and that is within 25 feet of ground-level impervious surfaces.

SF of existing tree canopy that meets criteria: Box 2d

2e. Total Tree Credit (Box 2c + 2d), OR 10% of Box 1, whichever is SMALLER: Box 2e

3. TOTAL IMPERVIOUS AREA REDUCTION, (Sum of Boxes 2a, 2b, and 2e), SF Box 3

4. PROPOSED IMPERVIOUS AREA, (Box 1 minus Box 3), SF (compare to thresholds): Box 4

Impervious Area Threshold Determination Form

CITY OF
WILSONVILLE



PUBLIC WORKS STANDARDS

DRAWING NUMBER: ST-6000

DRAWN BY: SR

SCALE: N.T.S.

FILE NAME: ST-6000.DWG

APPROVED BY: NK

DATE: 10/10/14

Section D: Soil Analysis

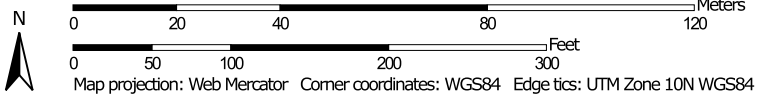
The existing soils on site are Salem silt loam per the USDA Web Soil Survey shown in the following pages. This soil is well drained and is classified in Hydrologic Soil Group: B. Field tests from the Geotechnical Report from Terra Associates, Inc. indicate that there are 12 to 24 inches of organic topsoil/silt overlaying historic flood deposits composed of various layers of sand, gravel, silt, and clay with scattered cobbles and boulders. The geotechnical report indicates that subsurface conditions are generally not favorable for infiltration of site stormwater. Due to the high fines content LID techniques would likely fill up and overtop during rain events. Based on the geotechnical recommendation we are modeling the soils as type D in the BMP Sizing Tool to better reflect the true soil properties. An additional analysis has been provided in the geotechnical report that shows infiltration is not feasible, and our hydraulic analysis assumes facilities with no infiltration capacity.

Soil Map—Clackamas County Area, Oregon, and Washington County, Oregon




Soil Map may not be valid at this scale.

Map Scale: 1:1,460 if printed on A landscape (11" x 8.5") sheet.




MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

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

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Clackamas County Area, Oregon

Survey Area Data: Version 15, Sep 10, 2019

Soil Survey Area: Washington County, Oregon

Survey Area Data: Version 17, Sep 10, 2019

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

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

Date(s) aerial images were photographed: Aug 1, 2019—Sep 12, 2019

MAP LEGEND

MAP INFORMATION

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
76B	Salem silt loam, 0 to 7 percent slopes	0.1	1.5%
Subtotals for Soil Survey Area		0.1	1.5%
Totals for Area of Interest		8.2	100.0%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
62B	Salem silt loam, 0 to 7 percent slopes	8.1	98.5%
Subtotals for Soil Survey Area		8.1	98.5%
Totals for Area of Interest		8.2	100.0%

Section E: Hydrologic Analysis

The proposed development has a stormwater planter at the south of the site, a stormwater swale north of the truck dock, and a stormwater planter in the R.O.W for the public improvements. The southern stormwater planters provides stormwater management for the majority of the site, as the site slopes generally from the north to the south. The surface runoff sheet flows to the proposed southern facility and the runoff from the roof is conveyed via underground pipes. The northern on-site stormwater swale collects runoff from the truck dock and the surrounding area. The stormwater planter in the R.O.W provides stormwater management for the proposed halfwidth improvements. The road is crowned the facility is design for sheet flow from halfwidth improvements.

All three facilities are designed with the “BMP Sizing Tool”. The design for these facilities is included in Appendix H BMP Sizing Tool Report Files. The basin maps for the facilities are included in this section.

Conveyance calculations are for a 25-year storm event using SBUH methodology. The rainfall event is 3.9 inches for a 25-year storm event per the Table 3.3 Rainfall Distribution in the City of Wilsonville Public Works Standards. Conveyance calculations are included in this section. In the event of a 100-year storm the conveyance in the road would be undersized and would be surcharged. The runoff overflow from the development would follow the existing drainage path and discharge at the SE corner of the property. The water would then sheet flow across the neighboring property to the Coffee Lake Wetlands, as shown in Exhibit A4 in the Harper Houf Peterson Righellis Inc. stormwater report.



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Client

**PANATTONI
DEVELOPMENT
COMPANY LLC**

6650 SW REDWOOD LN,
PORTLAND, OR 97224

Project

**COFFEE CREEK
LOGISTICS CENTER**

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REVISION SCHEDULE		
Delta	Issued As	Issue Date

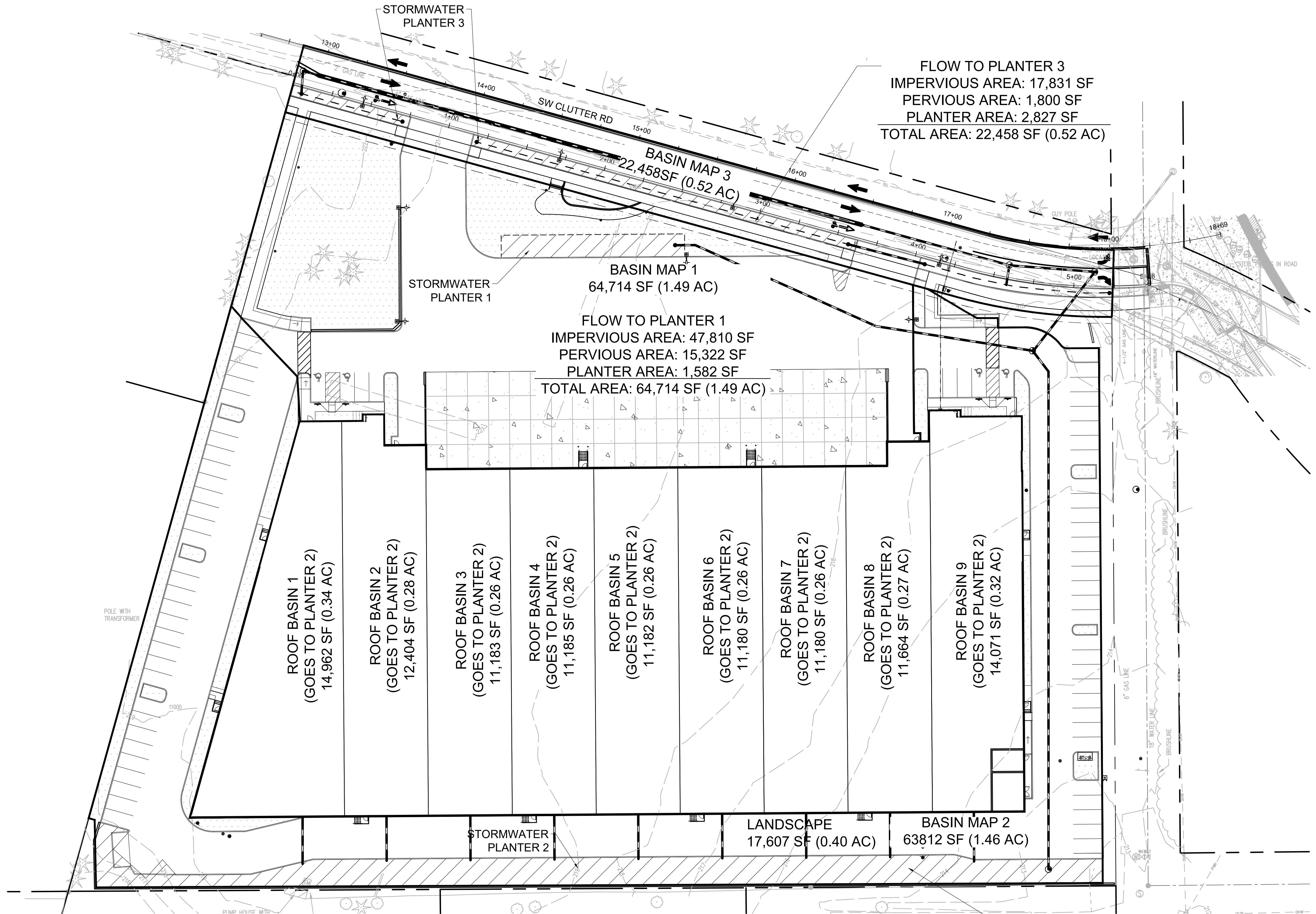
SHEET TITLE:
BASIN MAP

DRAWN BY: CME
CHECKED BY: CTL
SHEET:

EX-1

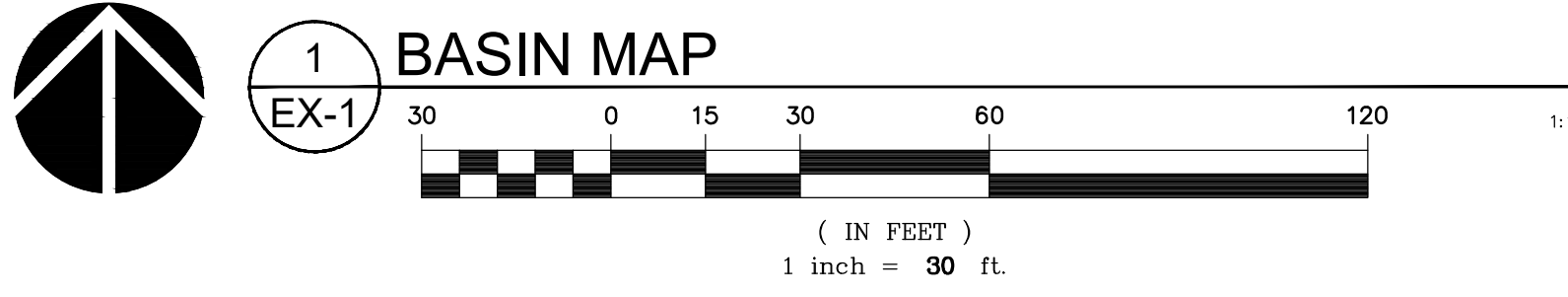
JOB NO. **2190382.00**

REVIEW SET 6-22-2020



LEGEND

LANDSCAPE AREA	
STORMWATER PLANTER AREA	



FLOW TO PLANTER 3
IMPERVIOUS AREA: 17,831 SF
PERVIOUS AREA: 1,800 SF
PLANTER AREA: 2,827 SF
TOTAL AREA: 22,458 SF (0.52 AC)

BASIN MAP 1
64,714 SF (1.49 AC)
FLOW TO PLANTER 1
IMPERVIOUS AREA: 47,810 SF
PERVIOUS AREA: 15,322 SF
PLANTER AREA: 1,582 SF
TOTAL AREA: 64,714 SF (1.49 AC)

FLOW TO PLANTER 2
IMPERVIOUS AREA: 46,171 SF
IMPERVIOUS AREA (ROOFS): 109,011 SF
PERVIOUS AREA: 7,631 SF
PLANTER AREA: 10,009 SF
TOTAL AREA: 172,822 SF (3.97 AC)

- ROOF BASIN 1 (GOES TO PLANTER 2) 14,962 SF (0.34 AC)
- ROOF BASIN 2 (GOES TO PLANTER 2) 12,404 SF (0.28 AC)
- ROOF BASIN 3 (GOES TO PLANTER 2) 11,183 SF (0.26 AC)
- ROOF BASIN 4 (GOES TO PLANTER 2) 11,185 SF (0.26 AC)
- ROOF BASIN 5 (GOES TO PLANTER 2) 11,182 SF (0.26 AC)
- ROOF BASIN 6 (GOES TO PLANTER 2) 11,180 SF (0.26 AC)
- ROOF BASIN 7 (GOES TO PLANTER 2) 11,180 SF (0.26 AC)
- ROOF BASIN 8 (GOES TO PLANTER 2) 11,664 SF (0.27 AC)
- ROOF BASIN 9 (GOES TO PLANTER 2) 14,071 SF (0.32 AC)

LANDSCAPE 17,607 SF (0.40 AC)
BASIN MAP 2 63812 SF (1.46 AC)

DUMP HOLES WITH

POLE WITH TRANSFORMER

(IN FEET)
1 inch = 30 ft.



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Project
**COFFEE CREEK
LOGISTICS CENTER**

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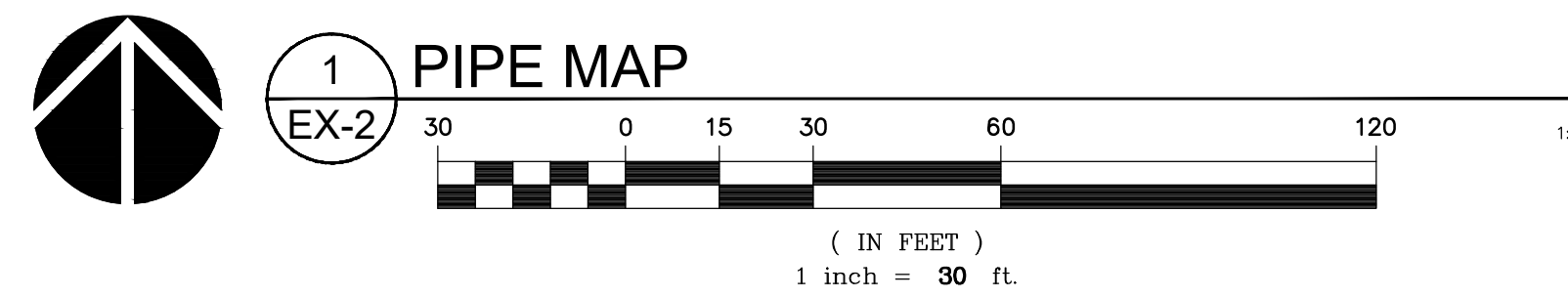
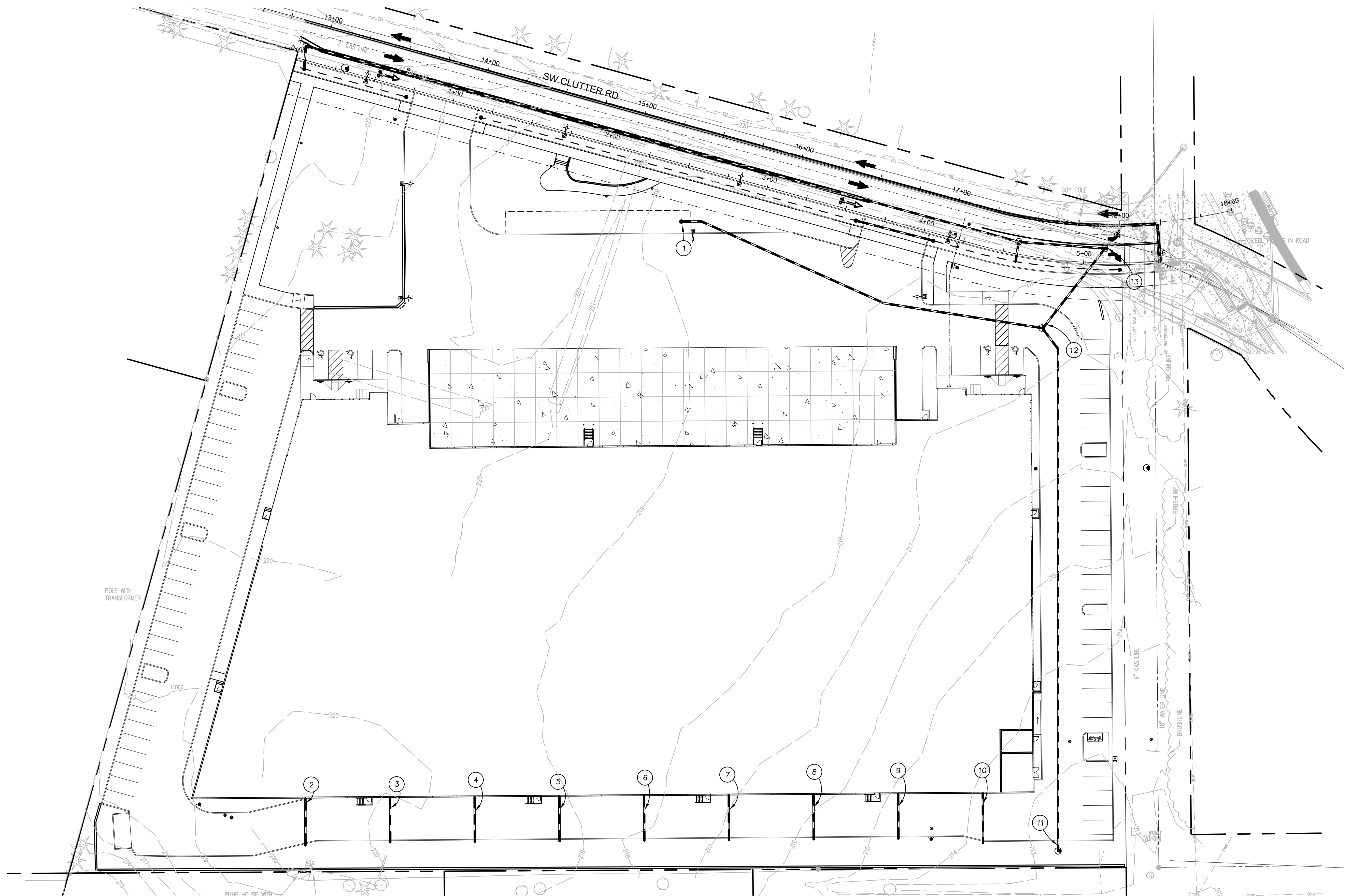
REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
PIPE MAP

DRAWN BY: CME
CHECKED BY: CTL
SHEET:

EX-2

JOB NO. **2190382.00**



Pipe Sizing Calculation

Based on SCS flow inputs
(Flows calculated in "Hydraflow")



Project: Coffee Creek Logistics Center
By: CME
Checked: CTL
Date: 2/26/2020
Job: 2190382.00

Note: Please refer to Appendix B for Basin locations
Refer to Appendix D for 25 peak flow values

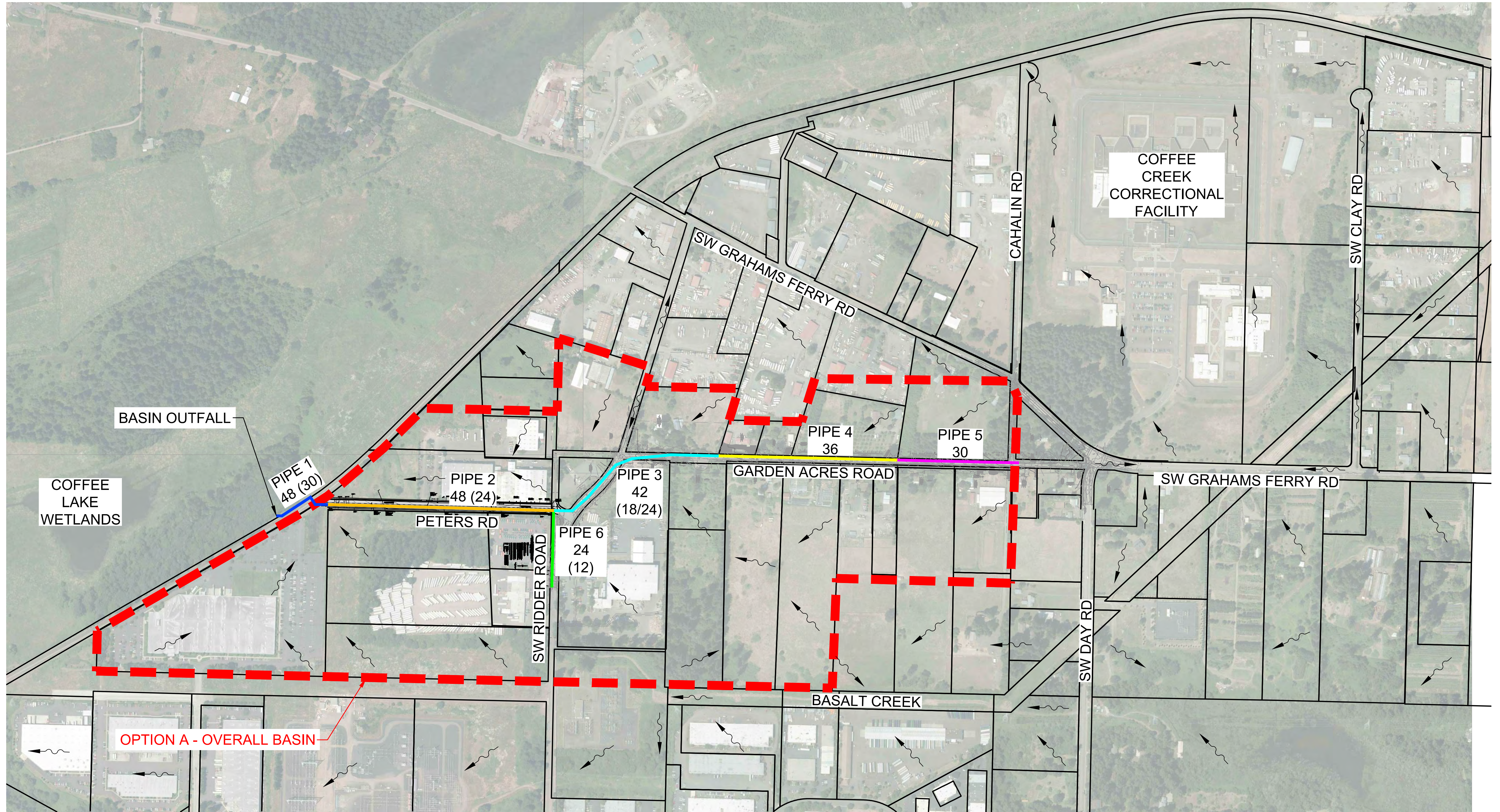
Mannings n= 0.012

Pipe #	Storm Input Descriptions	Incremental Flow (cfs)	Total Flow (cfs)	Pipe Slope (%)	Pipe Diameter (inches)	Pipe Capacity (cfs)	Pipe Velocity (fps)
1	B1	1.204	1.204	0.6	10	1.84	2.21
2	RB1	0.311	0.311	3.23	6	1.09	1.58
3	RB2	0.256	0.256	3.41	6	1.12	1.30
4	RB3	0.238	0.238	3.41	6	1.12	1.21
5	RB4	0.238	0.238	3.41	6	1.12	1.21
6	RB5	0.238	0.238	3.41	6	1.12	1.21
7	RB6	0.238	0.238	3.41	6	1.12	1.21
8	RB7	0.238	0.238	3.41	6	1.12	1.21
9	RB8	0.247	0.247	3.41	6	1.12	1.26
10	RB9	0.293	0.293	3.07	6	1.06	1.49
11	B2+RB1-9	1.141	3.438	1	12	3.85	4.38
12	#1 + #11	NA	4.642	1.57	15	8.76	3.78
12	#12+B3	0.359	5.001	1.57	15	8.76	4.08

Basin	25yr Peak Flow
B1	1.204
B2	1.141
RB1	0.311
RB2	0.256
RB3	0.238
RB4	0.238
RB5	0.238
RB6	0.238
RB7	0.238
RB8	0.247
RB9	0.293
B3	0.359

Section F: Downstream Analysis

A downstream analysis was performed for our site in the Garden Acres Road Project – Stormwater Management Report (April 2019). The proposed development is included in included in exhibit A4 from the report and is included for reference only.

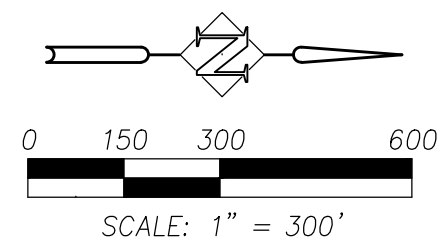


NOTES:

- 1.) FUTURE DEVELOPMENT DRAINAGE BASIN IS ASSUMED TO BE 85% IMPERVIOUS/15% PERVIOUS AREA.
- 2.) HYDROLOGIC SOIL GROUP (PER NRCS DATA) IS ASSUMED TO BE 75% GROUP B/25% GROUP C.
- 3.) PER ASSUMPTIONS IN NOTES 1 AND 2, CURVE NUMBER WAS CALCULATED TO BE 93 FOR OVERALL BASIN.
- 4.) UNDETAINED APPROACH ASSUMES TYPICAL DEVELOPED SITE DESIGN WITH LANDSCAPE/HARDSCAPE SHEET FLOW WITH NO DETENTION

LEGEND:

- FLOW DIRECTION
- DRAINAGE BASIN BOUNDARY
- PIPE X
- P (X) PIPE SEGMENT NUMBER
- (E) (P) PROPOSED PIPE SIZE
- (E) (E) EXISTING PIPE SIZE (IF PIPE AVAILABLE)



DATE	NO.	DESCRIPTION
R E V I S I O N S		

DESIGNED:	HHPR
DRAWN:	HHPR
CHECKED:	DML
DATE:	FEBRUARY 2018

Harper Houf Peterson Righellis Inc.
 ENGINEERS • PLANNERS
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 205 SE Spokane Street, Suite 200, Portland, OR 97202
 phone: 503.221.1131 www.hhpr.com fax: 503.221.1171

DRAINAGE BASIN STUDY - OPTION A / UNDETAINED
GARDEN ACRES ROAD
WILSONVILLE, OREGON

SHEET NO.

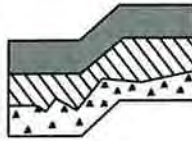
A4

JOB NO.

WSV-12

Section G: Geotechnical Report

DESIGN MEMORANDUM



TERRA ASSOCIATES, Inc.

Consultants in Geotechnical Engineering, Geology
and
Environmental Earth Sciences

To: Mr. Brendan Mason Date: June 9, 2020
Panattoni Development Company Project Number: T-8267
From: Carolyn S. Decker, P.E. Project Name: SW Clutter Rd Industrial
Subject: Infiltration Infeasibility Washington County, OR
Reference: DRAFT Geotechnical Report, SW Clutter Road Industrial, 10680 SW Clutter Road, Washington County, Oregon, Project No. T-8267, prepared by Terra Associates, Inc., dated December 30, 2019

Brendan:

As requested, we have completed additional analysis of the onsite soils to determine the infiltration potential at the SW Clutter Road Industrial site.

The soil conditions observed at the site for the referenced geotechnical report indicate the site is generally underlain by dense to very dense silty sand and sandy silt soils. These materials typically have a high percentage of fines that would impede any downward migration of stormwater. These materials do not have the void space needed that would allow water to flow through the formation. Typically, water will rest on top of these soils before flowing along the top of the layer.

As we understand, the City of Wilsonville has request that an infiltration test be completed at the site to determine if infiltration is feasible. While completing an infiltration test may result in indicating that limited infiltration would be feasible in a pocket of material at the site, the overall geologic formation would not allow water to continue to flow. The result of this would be that over time, the pocket of material would fill up with water and eventually fail causing minor local flooding to occur.

Based on this information it is our opinion that the site is not suitable for support of infiltration facilities as noted in the referenced geotechnical report.

We trust the information presented in this memo is sufficient for your current needs. If you have any questions or require additional information, please call.



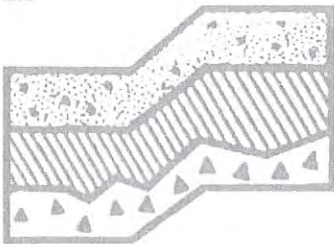
6-9-2020

DRAFT

GEOTECHNICAL REPORT

**SW Clutter Road Industrial
10680 SW Clutter Road
Washington County, Oregon**

Project No. T-8267

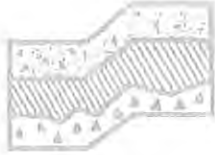


Terra Associates, Inc.

Prepared for:

**Panattoni Development Company
Tacoma, Washington**

December 30, 2019



TERRA ASSOCIATES, Inc.

Consultants in Geotechnical Engineering, Geology
and
Environmental Earth Sciences

December 30, 2019
Project No. T-8267

DRAFT

Mr. Brendan Mason
Panattoni Development Company
1821 Dock Street, Suite 100
Tacoma, Washington 98402

Subject: Geotechnical Report
SW Clutter Road Industrial
10680 SW Clutter Road
Washington County, Oregon

Dear Mr. Mason:

As requested, we have conducted a geotechnical engineering study for the subject project. The attached report presents our findings and recommendations for the geotechnical aspects of project design and construction.

In general, the soil conditions at the site consisted of 12 to 24 inches of organic topsoil/silt overlying historic flood deposits composed of various layers of sand, gravel, silt, and clay with scattered cobbles and boulders to the termination of the test pits. In the upper three feet of the test pits, we generally observed medium dense silt or clay with varying amounts of gravel. This material transitions to a dense silty sand with gravel to sandy silt with gravel to approximate depths of five to ten feet below current site grades. Underlying the silty sand with gravel to sandy silty with gravel, the soils consisted of dense to very dense, sandy clay in the southwest/western portion of the site and very dense, silty sand to silty gravel in the northeast/eastern portion of the site. No groundwater or mottled soils were observed.

In our opinion, the native soils observed at the site will be suitable for support of the structure using conventional spread footing foundations.

We trust the information presented in this report is sufficient for your current needs. If you have any questions or require additional information, please call.

Sincerely yours,
TERRA ASSOCIATES, INC.

Stephanie L. King, E.I.T.
Staff Engineer

DRAFT

Carolyn S. Decker, P.E.
Project Engineer

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3.1 Surface	2
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3.3 Groundwater	2
3.4 Seismic.....	3
4.0 Discussion and Recommendations.....	3
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6.0 Limitations	8

Figures

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Exploration Location Plan	Figure 2
Typical Wall Drainage Detail.....	Figure 3

Appendices

Field Exploration and Laboratory Testing.....	Appendix A
---	------------

Geotechnical Report SW Clutter Road Industrial 10680 SW Clutter Road Washington County, Oregon

1.0 PROJECT DESCRIPTION

The project consists of developing the property with an approximately 109,000 square-foot industrial building along with associated infrastructure improvements. Based on the preliminary site plan, prepared by Mackenzie, dated October 14, 2019, the building will be located in the southern portion of the site with dock high loading on the north side of the building and a retention pond just south of SW Clutter Road on the north property line. Based on current site grades, grading is expected to be minimal with cuts and fills from one to five feet.

We expect the structure will be constructed using precast concrete tilt-up perimeter wall panels with interior columns supporting the roof structure. The floor slab will be constructed at grade with dock high loading on the north side of the structure. Structural loading is expected to be light to moderate, with isolated columns carrying loads of 80 to 150 kips and bearing walls carrying 6 to 8 kips per foot. Maximum product loading on the floors is not expected to exceed 350 pounds per square foot (psf).

The recommendations in the following sections of this report are based on our understanding of the design features outlined above. We should review design drawings as they become available to verify that our recommendations have been properly interpreted and to supplement them, if required.

2.0 SCOPE OF WORK

Our work was completed in accordance with our authorized proposal, dated November 1, 2019. Accordingly, on November 25, 2019, we explored subsurface conditions at the site by excavating 9 test pits to maximum depths of approximately 10.5 feet below existing ground surface using a track-mounted excavator. Using the results of our field study and laboratory testing, we performed analyses to develop geotechnical engineering recommendations for project design and construction. Specifically, this report addresses the following:

- Soil and groundwater conditions.
- Seismic design parameters per the 2015 International Building Code (IBC).
- Site preparation and grading.
- Excavations
- Foundations
- Floor slabs
- Lateral earth pressures for wall design.
- Infiltration feasibility.
- Drainage
- Utilities
- Pavements

It should be noted that recommendations outlined in this report regarding drainage are associated with soil strength, design earth pressures, erosion, and stability. Design and performance issues with respect to moisture as it relates to the structure environment are beyond Terra Associates' purview. A building envelope specialist or contractor should be consulted to address these issues, as needed.

3.0 SITE CONDITIONS

3.1 Surface

The project site consists of a single tax parcel totaling approximately 5.9 acres located at 10680 SW Clutter Road in Washington County, Oregon. The approximate location of the site is shown on Figure 1.

The western portion of the site is currently developed with an unused horse stable, barn, horse pasture, and associated access and landscaping. The eastern portion is undeveloped and covered with grass and weeds. Site topography is relatively flat across the site.

3.2 Soils

In general, the soil conditions at the site consisted of 12 to 24 inches of organic topsoil/silt overlying historic flood deposits composed of various layers of sand, gravel, silt, and clay with scattered cobbles and boulders to the termination of the test pits. In the upper three feet of the test pits, we generally observed medium dense silt or clay with varying amounts of gravel. This material transitions to a dense silty sand with gravel to sandy silt with gravel to approximate depths of five to ten feet below current site grades. Underlying the silty sand with gravel to sandy silt with gravel, the soils consisted of dense to very dense, sandy clay in the southwest/western portion of the site and very dense, silty sand to silty gravel in the northeast/eastern portion of the site.

The *Lidar-Based Surficial Geologic Map of the Greater Portland Area 1:63,360-scale, Oregon*, by Lina Ma, Ina P. Madin, Serin Duplantis, and Kendra J. Williams (2012) maps the site as Missoula Coarse Flood Deposits (Mfc). The soils we observed in our test pits are consistent with this mapped soil unit.

The preceding discussion is intended to be a brief review of the soil conditions observed at the site. More detailed descriptions of the subsurface conditions we recorded are summarized on the Test Pit Logs attached in Appendix A. The approximate location of the test pits are shown on attached Figure 2.

3.3 Groundwater

No groundwater seepage was observed in the test pits. Additionally, no mottling of the soils was observed during the excavation.

3.4 Seismic

Liquefaction is a phenomenon where there is a reduction or complete loss of soil strength due to an increase in water pressure induced by vibrations. Liquefaction mainly affects geologically recent deposits of fine-grained sands underlying the groundwater table. Soils of this nature derive their strength from intergranular friction. The generated water pressure or pore pressure essentially separates the soil grains and eliminates this intergranular friction; thus, eliminating the soil's strength.

Based on the soil and groundwater conditions we observed at the site, it is our opinion that the risk for damage resulting from soil liquefaction or subsidence during a severe seismic event is negligible. Therefore, in our opinion, unusual seismic hazard areas do not exist at the site, and design in accordance with local building codes for determining seismic forces would adequately mitigate impacts associated with ground shaking.

Based on the soil conditions encountered and the local geology, the 2015 International Building Code (IBC) indicates that site class "D" should be used in structural design.

4.0 DISCUSSION AND RECOMMENDATIONS

4.1 General

Based on our study, in our opinion, there are no geotechnical considerations that would preclude development of the site, as currently planned. The building can be supported on conventional spread footings bearing on competent native soils below the organic surficial soils or on structural fill placed and compacted above these native soils. Floor slabs and pavements can be similarly supported.

The native soils encountered at the site contain a significant amount of soil fines that will make compaction as structural fill difficult when too wet. The ability to use the native soil from site excavations as structural fill will depend on its moisture content and the prevailing weather conditions at the time of construction. If grading activities will take place during the wet winter months, the owner should be prepared to import clean granular material for use as structural fill and backfill.

Detailed recommendations regarding these issues and other geotechnical design considerations are provided in the following sections. These recommendations should be incorporated into the final design drawings and construction specifications.

4.2 Site Preparation and Grading

To prepare the site for construction, all vegetation and organic surface soils, and other deleterious material should be stripped and removed from the site. Surface stripping depths of approximately 12 to 24 inches should be expected to remove the organic/disturbed surficial soils. Soil containing organic material will not be suitable for use as structural fill but may be used for limited depths in nonstructural areas. For the existing buildings, demolition should include removal of existing foundations and abandonment of underground septic systems and other buried utilities, as applicable. Abandoned utility pipes that fall outside of new building areas can be left in place provided they are sealed to prevent intrusion of groundwater seepage and soil.

Once stripping and demolition operations are complete, cut and fill operations can be initiated to establish desired building grades. Prior to placing fill, all exposed bearing surfaces should be observed by a representative of Terra Associates, Inc. to verify soil conditions are as expected and suitable for support of new fill or building elements. Our representative may request a proofroll using heavy rubber-tired equipment to determine if any isolated soft and yielding areas are present. If excessively yielding areas are observed, and they cannot be stabilized in place by compaction, the affected soils should be excavated and removed to firm bearing and grade restored with new structural fill. If the depth of excavation to remove unstable soils is excessive, the use of geotextile fabrics, such as Mirafi 500X, or an equivalent fabric, can be used in conjunction with clean granular structural fill. Our experience has shown that, in general, a minimum of 18 inches of a clean, granular structural fill placed and compacted over the geotextile fabric should establish a stable bearing surface.

The site soils will quickly degrade under construction traffic if rainy weather occurs during site clearing and subgrade preparation activities. Where this condition exists, consideration should be given to overexcavating to a depth of 2 feet, placing a geotextile fabric such as Mirafi 500X or equal on the overexcavated subgrade, and replacing with 2- to 4-inch recycled concrete or quarry spalls. Based on our experience, this will provide a stable surface for areas subject to heavy equipment and construction traffic.

Our study indicates that the soils contain a sufficient percentage of fines (silt and clay size particles) that may make them difficult to compact as structural fill if they are too wet or too dry. Accordingly, the ability to use these native soils from site excavations as structural fill will depend on their moisture content and the prevailing weather conditions when site grading activities take place. Native soils that are too wet to properly compact could be dried by aeration during dry weather conditions or mixed with an additive such as cement or lime to stabilize the soil and facilitate compaction. If an additive is used, additional Best Management Practices (BMPs) for its use will need to be incorporated into the Temporary Erosion and Sedimentation Control plan (TESC) for the project. Soils that are dry of optimum should be moisture conditioned by controlled addition of water and blending prior to material placement.

If grading activities are planned during the wet winter months, or if they are initiated during the summer and extend into fall and winter, the owner should be prepared to import wet weather structural fill. For this purpose, we recommend importing a granular soil that meets the following grading requirements:

U.S. Sieve Size	Percent Passing
6 inches	100
No. 4	75 maximum
No. 200	5 maximum*

* Based on the ¾-inch fraction.

Prior to use, Terra Associates, Inc. should observe and test all materials imported to the site for use as structural fill.

Structural fill should be placed in uniform loose layers not exceeding 6 inches and compacted to a minimum of 95 percent of the soil's maximum dry density, as determined by American Society for Testing and Materials (ASTM) Test Designation D-698 (Standard Proctor). The moisture content of the soil at the time of compaction should be within two percent of its optimum, as determined by this ASTM standard. In nonstructural areas, the degree of compaction can be reduced to 90 percent.

4.3 Excavations

All excavations at the site associated with confined spaces, such as utility trenches, must be completed in accordance with local, state, and federal requirements. Based on regulations outlined in the Occupational Safety and Health Administration (OSHA), the soils would be classified as Type B soil.

Accordingly, temporary excavations in Type B soils should have their slopes laid back at an inclination of 1:1 (Horizontal:Vertical) or flatter, from the toe to the crest of the slope. All exposed temporary slope faces that will remain open for an extended period of time should be covered with a durable reinforced plastic membrane during construction to prevent slope raveling and rutting during periods of precipitation. Properly designed and installed shoring trench boxes can be used to support utility trench excavations where required.

Although groundwater was not observed during the field exploration, it is possible that water may be encountered, depending on final grades. If water is encountered, conventional sump pumping procedures, along with a system of collection trenches, if necessary, should be capable of maintaining a relatively dry excavation for construction purposes.

The above information is provided solely for the benefit of the owner and other design consultants and should not be construed to imply that Terra Associates, Inc. assumes responsibility for job site safety. It is understood that job site safety is the sole responsibility of the project contractor.

4.4 Foundations

The industrial building may be supported on conventional spread footing foundations bearing on foundation subgrade prepared as recommended in Section 4.2 of this report. Perimeter foundations exposed to the weather should bear at a minimum depth of 1.5 feet below final exterior grades for frost protection. Interior foundations can be constructed at any convenient depth below the floor slab.

Based on our analysis, we recommend designing foundations for a net allowable bearing capacity of 2,500 pounds per square foot (psf). For short-term loads, such as wind and seismic, a one-third increase in this allowable capacity can be used in design. Based on the structural loading as anticipated and this bearing stress applied, estimated immediate foundation settlements of about 1-inch and differential settlement of ½-inch should be expected.

For designing foundations to resist lateral loads, a base friction coefficient of 0.35 can be used. Passive earth pressures acting on the sides of the footings can also be considered. We recommend calculating this lateral resistance using an equivalent fluid weight of 350 pounds per cubic foot (pcf). We recommend not including the upper 12 inches of soil in this computation because it can be affected by weather or disturbed by future grading activity. This value assumes the foundations will be backfilled with structural fill, as described in Section 4.2 of this report. The values recommended include a safety factor of 1.5.

The native soils that will be exposed at the expected foundation elevations are moisture sensitive and will be easily disturbed by normal construction activity when wet. As a measure to protect the soils from disturbance during construction, consideration should be given to placing a four-inch layer of clean crushed rock or lean mix concrete over the foundation subgrade to serve as a working surface during wet weather.

4.5 Slab-on-Grade Floors

Slab-on-grade floors may be supported on a subgrade as recommended in Section 4.2. Immediately below the floor slab, we recommend placing a four-inch thick capillary break layer composed of clean, coarse sand or fine gravel that has less than three percent passing the No. 200 sieve. This material will reduce the potential for upward capillary movement of water through the underlying soil and subsequent wetting of the floor slab.

The capillary break layer will not prevent moisture intrusion through the slab caused by water vapor transmission. Where moisture by vapor transmission is undesirable, such as covered floor areas, a common practice is to place a durable plastic membrane on the capillary break layer and then cover the membrane with a layer of clean sand or fine gravel to protect it from damage during construction, and to aid in uniform curing of the concrete slab. It should be noted that if the sand or gravel layer overlying the membrane is saturated prior to pouring the slab, it will not be effective in assisting uniform curing of the slab and can actually serve as a water supply for moisture bleeding through the slab, potentially affecting floor coverings. Therefore, in our opinion, covering the membrane with a layer of sand or gravel should be avoided if floor slab construction occurs during the wet winter months and the layer cannot be effectively drained. We recommend floor designers and contractors refer to the current American Concrete Institute (ACI) Manual of Concrete Practice for further information regarding vapor barrier installation below slab-on-grade floors.

4.6 Infiltration Feasibility

Based on our study, it is our opinion that subsurface conditions are generally not favorable for infiltration of site stormwater. The native soils observed at the site contain a high percentage of soil fines that would impede any downward migration of site stormwater. Even low impact development (LID) techniques would likely fill up and overtop during rain events and cause minor local flooding. Based on these soil conditions, it is our opinion that the stormwater should be managed using a conventional system.

4.7 Lateral Earth Pressures

The magnitude of earth pressures developing on below-grade walls will depend on the quality and compaction of the wall backfill. We recommend placing and compacting wall backfill as structural fill, as described in Section 4.2 of this report. To prevent overstressing the walls during backfilling, heavy construction machinery should not be operated within five feet of the back of the wall. Wall backfill in this zone should be compacted with hand-operated equipment. To prevent hydrostatic pressure development, wall drainage must also be installed. A typical wall drainage detail is shown on Figure 3.

With wall backfill placed and compacted as recommended, and drainage properly installed, we recommend designing unrestrained walls for an active earth pressure equivalent to a fluid weighing 35 pounds per cubic foot (pcf). For restrained walls, an additional uniform load of 100 psf should be added to the 35 pcf. To account for typical traffic surcharge loading, the walls can be designed for an additional imaginary height of two feet (two-foot soil surcharge). For evaluation of wall performance under seismic loading, a uniform pressure equivalent to $8H$ psf, where H is the height of the below-grade portion of the wall should be applied in addition to the static lateral earth pressure. These values assume a horizontal backfill condition and that no other surcharge loading, sloping embankments, or adjacent buildings will act on the wall. If such conditions exist, then the imposed loading must be included in the wall design. Friction at the base of foundations and passive earth pressure will provide resistance to these lateral loads. Values for these parameters are provided in Section 4.4 of this report.

4.8 Drainage

Surface

Final exterior grades should promote free and positive drainage away from the site at all times. Water must not be allowed to pond or collect adjacent to foundations or within the immediate building areas. We recommend providing a positive drainage gradient away from the building perimeters. If this gradient cannot be provided, surface water should be collected adjacent to the structures and disposed to appropriate storm facilities.

Subsurface

With positive drainage away from the building provided and with paved surfaces extending to the building perimeter, in our opinion, customary installation of the perimeter foundation drains would not be required. Foundation drains should be installed where positive drainage is not provided or where soft landscaping will occur at the building perimeter. The drains can consist of 4-inch diameter perforated PVC pipe that is enveloped in washed ½- to ¾-inch gravel-sized drainage aggregate. The aggregate should extend six inches above and to the sides of the pipe. The drains can be laid to grade at an invert elevation equivalent to the bottom of footing grade. The foundation drains and roof downspouts should be tight-lined separately to an approved point of controlled discharge. All drains should be provided with cleanouts at easily accessible locations. These cleanouts should be serviced at least once each year.

4.9 Utilities

Utility pipes should be bedded and backfilled in accordance with American Public Works Association (APWA) or local jurisdictional requirements. At a minimum, trench backfill should be placed and compacted as structural fill as described in Section 4.2 of this report. As noted, soils excavated on-site should generally be suitable for use as backfill material. However, the soils observed across the site are fine grained and moisture sensitive; therefore, moisture conditioning may be necessary to facilitate proper compaction. If utility construction takes place during the winter, it may be necessary to import suitable wet weather fill for utility trench backfilling.

4.10 Pavements

Pavement subgrade should be prepared as described in the Section 4.2 of this report. Regardless of the degree of relative compaction achieved, the subgrade must be firm and relatively unyielding before paving. The subgrade should be proofrolled with heavy rubber-tired construction equipment such as a load 10-yard dump truck to verify this condition.

The pavement design section is dependent upon the supporting capability of the subgrade soils and the traffic conditions to which it will be subjected. We expect traffic at the facility will consist of cars and light trucks, along with heavy traffic in the form of tractor-trailer rigs. For design considerations, we have assumed traffic in parking and in car/light truck access pavement areas can be represented by an 18-kip Equivalent Single Axle Loading (ESAL) of 50,000 over a 20-year design life. For heavy traffic pavement areas, we have assumed an ESAL of 500,000 would be representative of the expected loading. These ESALs represent traffic loading equivalent to 3 and 29, loaded (80,000 pound gross vehicle weight) tractor-trailer rigs, respectively, traversing the pavement per day over a 20-year design life.

With a stable subgrade prepared as recommended, we recommend the following pavement sections:

Light Traffic and Parking:

- Two inches of hot mix asphalt (HMA) over six inches of crushed rock base (CRB)
- Four inches of full depth HMA

Heavy Traffic:

- Three inches of HMA over eight inches of CRB
- Six inches of full depth HMA

For exterior Portland cement concrete (PCC) pavement, we recommend the following:

- 6 inches of PCC over two inches of crushed surfacing top course
 - 28-day compressive strength – 4,000 psi
 - Control joints spaced at a maximum of 15 feet

The paving materials used should conform to the Oregon Department of Transportation (ODOT) specifications for ½-inch class HMA, PCC, and CRB.

Long-term pavement performance will depend on surface drainage. A poorly-drained pavement section will be subject to premature failure resulting from surface water infiltrating the subgrade soils and reducing their supporting capability. For optimum performance, we recommend surface drainage gradients of at least two percent. Some degree of longitudinal and transverse cracking of the pavement surface should be expected over time. Regular maintenance should be planned to seal cracks as they occur.

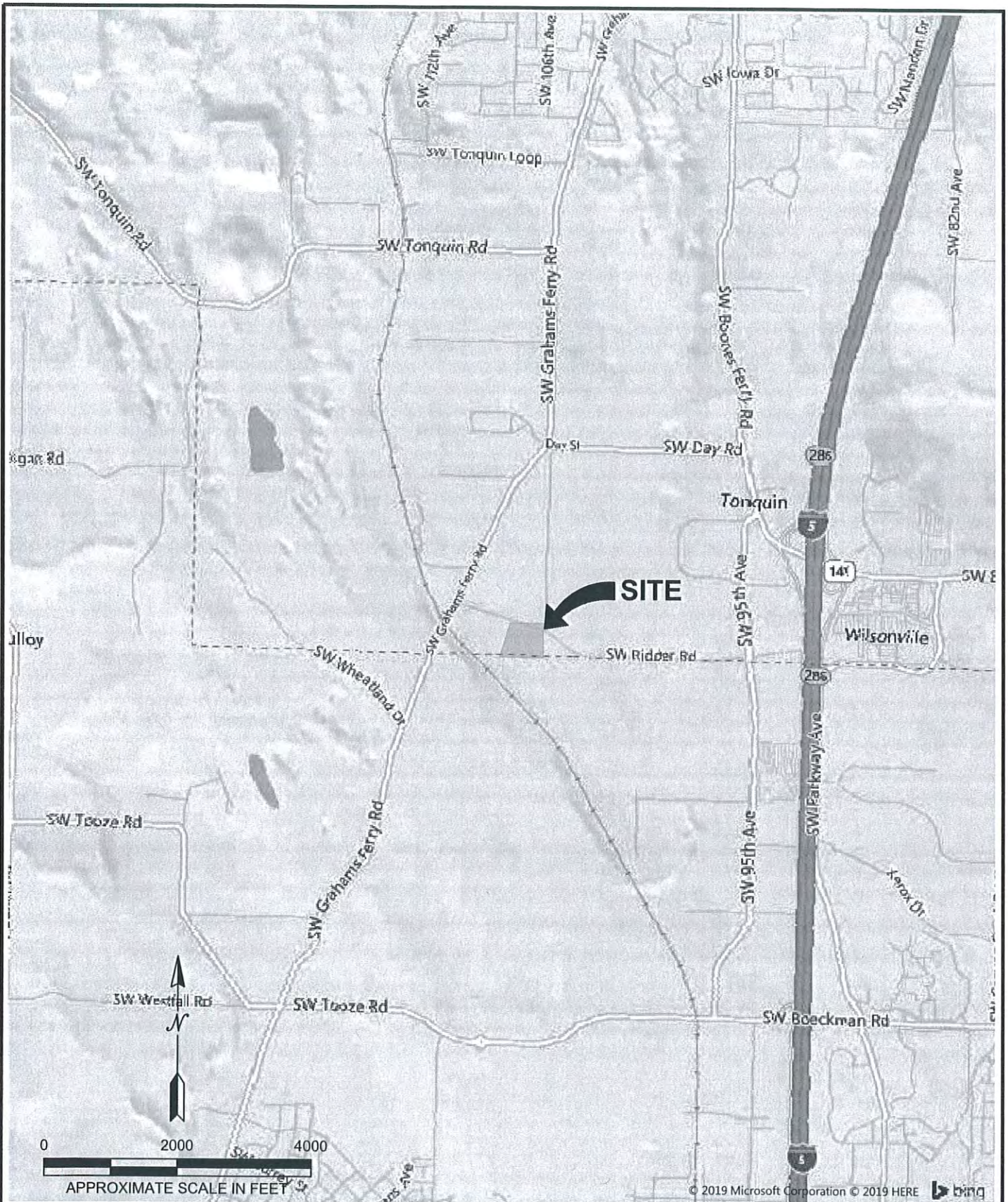
5.0 ADDITIONAL SERVICES

Terra Associates, Inc. should review the final design drawings and specifications in order to verify that earthwork and foundation recommendations have been properly interpreted and implemented in project design. We should also provide geotechnical services during construction to observe compliance with our design concepts, specifications, and recommendations. This will allow for design changes if subsurface conditions differ from those anticipated prior to the start of construction.

6.0 LIMITATIONS

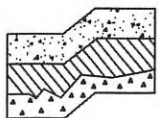
We prepared this report in accordance with generally accepted geotechnical engineering practices. No other warranty, expressed or implied, is made. This report is the copyrighted property of Terra Associates, Inc. and is intended for specific application to the SW Clutter Road Industrial project in Washington County, Oregon. This report is for the exclusive use of Panattoni Development Company and their authorized representatives.

The analyses and recommendations presented in this report are based on data obtained from the subsurface explorations completed on-site. Variations in soil conditions can occur, the nature and extent of which may not become evident until construction. If variations appear evident, Terra Associates, Inc. should be requested to reevaluate the recommendations in this report prior to proceeding with construction.



REFERENCE: <https://www.bing.com/maps>

ACCESSED 12/24/19



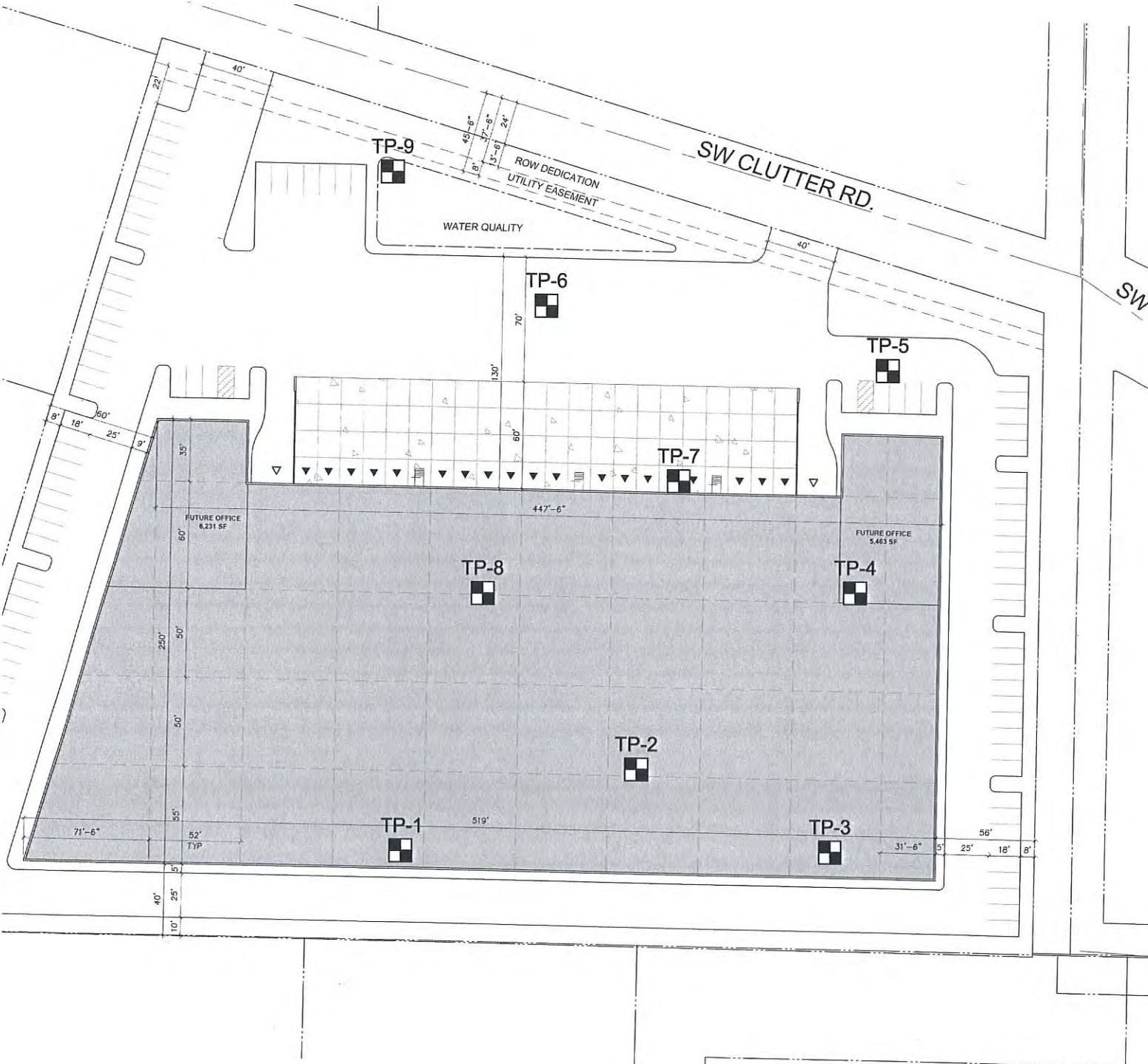
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VICINITY MAP
 SW CLUTTER ROAD INDUSTRIAL
 WASHINGTON COUNTY, OREGON

Proj.No. T-8267

Date: DEC 2019

Figure 1

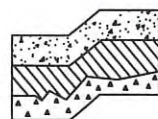


LEGEND:

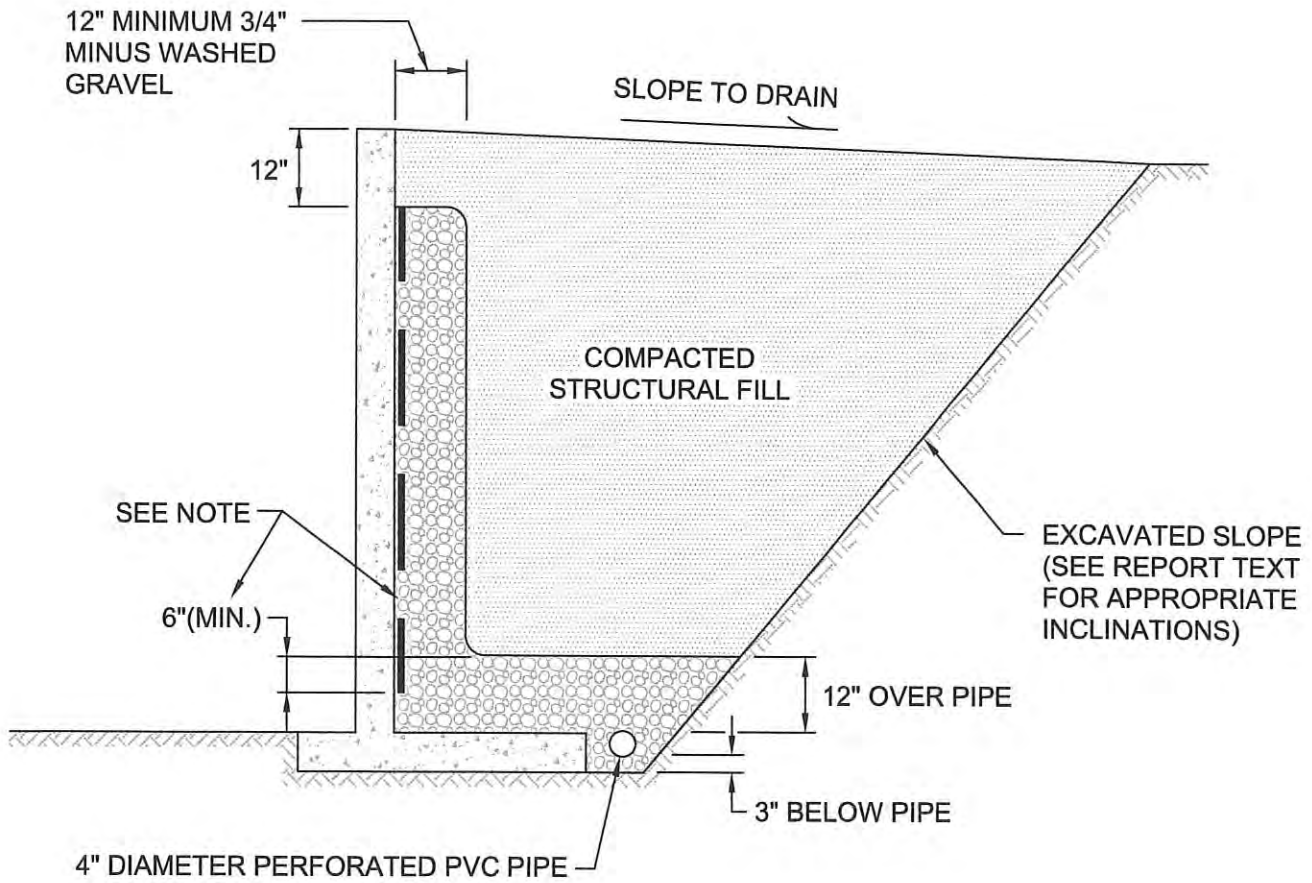
APPROXIMATE TEST PIT LOCATION

0 80 160

APPROXIMATE SCALE IN FEET



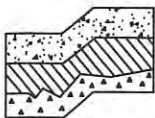
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NOT TO SCALE

NOTE:

MIRADRAIN G100N PREFABRICATED DRAINAGE PANELS OR SIMILAR PRODUCT CAN BE SUBSTITUTED FOR THE 12-INCH WIDE GRAVEL DRAIN BEHIND WALL. DRAINAGE PANELS SHOULD EXTEND A MINIMUM OF SIX INCHES INTO 12-INCH THICK DRAINAGE GRAVEL LAYER OVER PERFORATED DRAIN PIPE.



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TYPICAL WALL DRAINAGE DETAIL
 SW CLUTTER ROAD INDUSTRIAL
 WASHINGTON COUNTY, OREGON

Proj.No. T-8267

Date: DEC 2019

Figure 3

APPENDIX A
FIELD EXPLORATION AND LABORATORY TESTING

SW Clutter Road Industrial
Washington County, Oregon




On November 25, 2019, we completed our site exploration by observing soil and groundwater conditions at 9 test pits. The test pits were excavated using a trackhoe to approximate depths of 8.5 to 10.5 feet below existing site grades. Test pit locations were determined in the field by measurements from existing site features. The approximate location of the test pits is shown on the attached Exploration Location Plan, Figure 2. The Test Pit Logs are attached as Figures A-2 through A-10.

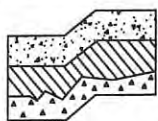
A geotechnical engineer from our office conducted the field exploration. Our representative classified the soil conditions encountered, maintained a log of the test pit, obtained representative soil samples, and recorded water levels observed during excavation. All soil samples were visually classified in accordance with the Unified Soil Classification System (USCS) described on Figure A-1.

Representative soil samples obtained from the test pits were placed in closed containers and taken to our laboratory for further examination and testing. The moisture content of each sample was measured and is reported on the individual Test Pit Logs. Select samples were further classified by performing grain size analyses. The results of the grain size analysis are shown on Figures A-11 and A-12.

MAJOR DIVISIONS			LETTER SYMBOL	TYPICAL DESCRIPTION
COARSE GRAINED SOILS More than 50% material larger than No. 200 sieve size	GRAVELS More than 50% of coarse fraction is larger than No. 4 sieve	Clean Gravels (less than 5% fines)	GW	Well-graded gravels, gravel-sand mixtures, little or no fines.
			GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines.
		Gravels with fines	GM	Silty gravels, gravel-sand-silt mixtures, non-plastic fines.
			GC	Clayey gravels, gravel-sand-clay mixtures, plastic fines.
	SANDS More than 50% of coarse fraction is smaller than No. 4 sieve	Clean Sands (less than 5% fines)	SW	Well-graded sands, sands with gravel, little or no fines.
			SP	Poorly-graded sands, sands with gravel, little or no fines.
		Sands with fines	SM	Silty sands, sand-silt mixtures, non-plastic fines.
			SC	Clayey sands, sand-clay mixtures, plastic fines.
FINE GRAINED SOILS More than 50% material smaller than No. 200 sieve size	SILTS AND CLAYS Liquid Limit is less than 50%	ML	Inorganic silts, rock flour, clayey silts with slight plasticity.	
		CL	Inorganic clays of low to medium plasticity. (Lean clay)	
		OL	Organic silts and organic clays of low plasticity.	
	SILTS AND CLAYS Liquid Limit is greater than 50%	MH	Inorganic silts, elastic.	
		CH	Inorganic clays of high plasticity. (Fat clay)	
		OH	Organic clays of high plasticity.	
HIGHLY ORGANIC SOILS			PT	Peat.

DEFINITION OF TERMS AND SYMBOLS

COHESIONLESS	<u>Density</u>	<u>Standard Penetration Resistance in Blows/Foot</u>	 2" OUTSIDE DIAMETER SPILT SPOON SAMPLER
	Very Loose	0-4	 2.4" INSIDE DIAMETER RING SAMPLER OR SHELBY TUBE SAMPLER
	Loose	4-10	 WATER LEVEL (Date)
	Medium Dense	10-30	Tr TORVANE READINGS, tsf
	Dense	30-50	Pp PENETROMETER READING, tsf
	Very Dense	>50	DD DRY DENSITY, pounds per cubic foot
COHESIVE	<u>Consistency</u>	<u>Standard Penetration Resistance in Blows/Foot</u>	LL LIQUID LIMIT, percent
	Very Soft	0-2	PI PLASTIC INDEX
	Soft	2-4	N STANDARD PENETRATION, blows per foot
	Medium Stiff	4-8	
	Stiff	8-16	
	Very Stiff	16-32	
	Hard	>32	



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UNIFIED SOIL CLASSIFICATION SYSTEM
SW CLUTTER ROAD INDUSTRIAL
WASHINGTON COUNTY, OREGON

Proj.No. T-8267

Date: DEC 2019

Figure A-1

LOG OF TEST PIT NO. TP-1

FIGURE A-2

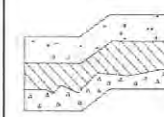
PROJECT NAME: SW Clutter Road Industrial PROJ. NO: T-8267 LOGGED BY: SLK

LOCATION: Washington County, Oregon SURFACE CONDITIONS: Grass APPROX. ELEV: N/A

DATE LOGGED: November 25, 2019 DEPTH TO GROUNDWATER: N/A DEPTH TO CAVING: N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		(3 inches TOPSOIL)		
1		Dark red/brown SILT with sand, fine sand, moist, organic. (ML)	Medium Dense	
2		Red/brown SILT with sand, fine to medium sand, moist, trace gravel. (ML)		
3			Dense	21.6
4				
5		Brown sandy SILT with gravel to silty SAND with gravel, fine to medium sand, fine to coarse gravel, moist, cobbles. (ML/SM)		
6			Very Dense	23.9
7				
8				
9		Test pit terminated at approximately 8.5 feet due to large boulder at base of pit, could not excavate further. No groundwater. No caving.		19.4
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-2

FIGURE A-3

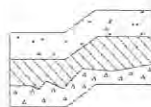
PROJECT NAME: SW Clutter Road Industrial **PROJ. NO.:** T-8267 **LOGGED BY:** SLK

LOCATION: Washington County, Oregon **SURFACE CONDITIONS:** Grass **APPROX. ELEV:** N/A

DATE LOGGED: November 25, 2019 **DEPTH TO GROUNDWATER:** N/A **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		(2 inches TOPSOIL)		
1		Dark red/brown sandy SILT, fine sand, moist, organic. (ML)	Medium Dense	
2		Red/brown CLAY with sand and gravel, fine to medium sand, fine to coarse gravel, moist, cobbles. (CL)	Dense	35.3
3				
4		Red-brown clayey SAND with gravel, fine to coarse sand, fine to coarse gravel, moist, cobbles. (SC)		34
5				
6		Brown sandy SILT with gravel to silty SAND with gravel, fine to medium sand, fine to coarse gravel, moist, cobbles. (ML/SM)	Very Dense	
7		*Scattered boulders and increasing gravel content observed.		
8				
9				
10		Test pit terminated at approximately 10 feet. No groundwater. No caving.		18.8
11				
12				
13				
14				
15				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-3

FIGURE A-4

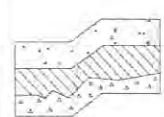
PROJECT NAME: SW Clutter Road Industrial **PROJ. NO:** T-8267 **LOGGED BY:** SLK

LOCATION: Washington County, Oregon **SURFACE CONDITIONS:** Grass **APPROX. ELEV:** N/A

DATE LOGGED: November 25, 2019 **DEPTH TO GROUNDWATER:** N/A **DEPTH TO CAVING:** 0 to 1-Foot

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		(1-inch TOPSOIL)	Medium Dense	
1		Dark red/brown sandy SILT, fine sand, moist, organic. (ML)	Dense	23.9
2		Red/brown SILT with sand, fine to medium sand, moist, trace gravel, cobbles. (ML)		
3		Brown sandy SILT with gravel to silty SAND with gravel, fine to medium sand, fine to coarse gravel, moist, cobbles, trace coal fragments. (ML/SM)		
4			Very Dense	26.9
5		Brown clayey SAND with gravel, fine to coarse sand, fine to coarse gravel, moist, cobbles. (SC)		
6				
7			24.2	
8		Red lean CLAY with sand, fine to medium sand, moist, trace gravel. (CL)		
9				
10		Test pit terminated at approximately 10 feet. No groundwater. Slight caving at 0 to 1-foot.		
11				
12				
13				
14				
15				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-4

FIGURE A-5

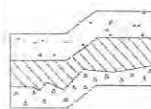
PROJECT NAME: SW Clutter Road Industrial PROJ. NO: T-8267 LOGGED BY: SLK

LOCATION: Washington County, Oregon SURFACE CONDITIONS: Grass APPROX. ELEV: N/A

DATE LOGGED: November 25, 2019 DEPTH TO GROUNDWATER: N/A DEPTH TO CAVING: N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		(1.5 inches TOPSOIL)		
1		Dark red/brown sandy SILT, fine sand, moist, organic. (ML)	Medium Dense	
2		Red/brown SILT with sand, fine to medium sand, moist, trace gravel, cobbles. (ML)	Dense	
3		Brown sandy SILT with gravel to silty SAND with gravel, fine to medium sand, fine to coarse gravel, moist, cobbles, trace cemented coal. (ML/SM)	Very Dense	23.2
4				
5		Brown clayey SAND with gravel, fine to coarse sand, fine to coarse gravel, moist, cobbles. (SC)	Very Dense	21.6
6				
7			Very Dense	
8				
9		Red lean CLAY with sand, fine to medium sand, moist, trace gravel. (CL)	Very Dense	
10		Test pit terminated at approximately 10 feet. No groundwater. No caving.		
11				
12				
13				
14				
15				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-5

FIGURE A-6

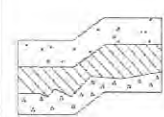
PROJECT NAME: SW Clutter Road Industrial **PROJ. NO:** T-8267 **LOGGED BY:** SLK

LOCATION: Washington County, Oregon **SURFACE CONDITIONS:** Grass **APPROX. ELEV:** N/A

DATE LOGGED: November 25, 2019 **DEPTH TO GROUNDWATER:** N/A **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		(1.5 inches TOPSOIL)		
1		Dark red/brown sandy SILT, fine sand, moist, organic. (ML)	Medium Dense	19
2		Red/brown gravelly SILT with sand, fine to coarse sand, fine to coarse gravel, moist, cobbles. (ML)		
3		*Scattered boulders observed from 3 to 7 feet.		
4		Brown/red sandy SILT with gravel to silty SAND with gravel, fine to medium sand, fine to coarse gravel, moist, cobbles. (ML/SM)	Dense	
5				
6				
7				
8				
9		Red lean CLAY with sand, fine to medium sand, moist, cobbles. (CL)	Very Dense	31.5
10				
11		Test pit terminated at approximately 10.5 feet. No groundwater. No caving.		
12				
13				
14				
15				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-6

FIGURE A-7

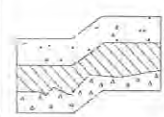
PROJECT NAME: SW Clutter Road Industrial **PROJ. NO:** T-8267 **LOGGED BY:** SLK

LOCATION: Washington County, Oregon **SURFACE CONDITIONS:** Grass **APPROX. ELEV:** N/A

DATE LOGGED: November 25, 2019 **DEPTH TO GROUNDWATER:** N/A **DEPTH TO CAVING:** 1 to 3 Feet

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		(1.5 inches TOPSOIL)		
1		Dark red/brown sandy SILT, fine sand, moist, organic. (ML)		
2		Red/brown gravelly SILT with sand, fine to coarse sand, fine to coarse gravel, moist, cobbles. (ML)	Medium Dense	26.9
3		*Scattered boulders observed from 3 to 10 feet.		
4		Brown/red sandy SILT with gravel to silty SAND with gravel, fine to medium sand, fine to coarse gravel, moist, cobbles. (ML/SM)		
5		Gray/brown and red gravelly SAND with silt, fine to medium sand, fine to coarse gravel, moist. (SP-SM)	Very Dense	21.9
6				
7				
8				
9				
10		Test pit terminated at approximately 10 feet. No groundwater.		
11		Slight sloughing between 1 and 3 feet.		
12				
13				
14				
15				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



LOG OF TEST PIT NO. TP-7

FIGURE A-8

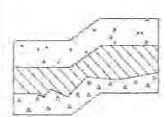
PROJECT NAME: SW Clutter Road Industrial **PROJ. NO:** T-8267 **LOGGED BY:** SLK

LOCATION: Washington County, Oregon **SURFACE CONDITIONS:** Grass **APPROX. ELEV:** N/A

DATE LOGGED: November 25, 2019 **DEPTH TO GROUNDWATER:** N/A **DEPTH TO CAVING:** N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		(1.5 inches TOPSOIL)		
1		Dark red/brown sandy SILT, fine sand, moist, organic. (ML)	Medium Dense	
2		Red/brown sandy SILT with gravel, fine to coarse sand, fine to coarse gravel, moist, cobbles. (ML)	Dense	26.8
3		*Scattered boulders observed from 3 to 10 feet.		
5		Brown/red sandy SILT with gravel to silty SAND with gravel, fine to medium sand, fine to coarse gravel, moist, cobbles. (ML/SM)		
7		Red/brown silty GRAVEL with sand, fine to coarse gravel, fine to coarse sand, moist, cobbles. (GM)	Very Dense	
10		Test pit terminated at approximately 10 feet. No groundwater. No caving.		24
11				
12				
13				
14				
15				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-8

FIGURE A-9

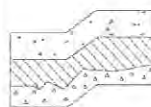
PROJECT NAME: SW Clutter Road Industrial PROJ. NO: T-8267 LOGGED BY: SLK

LOCATION: Washington County, Oregon SURFACE CONDITIONS: Grass APPROX. ELEV: N/A

DATE LOGGED: November 25, 2019 DEPTH TO GROUNDWATER: N/A DEPTH TO CAVING: N/A

Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		(1.5 inches TOPSOIL)		
1		Dark red/brown sandy SILT, fine sand, moist, organic. (ML)	Medium Dense	
2		Red/brown sandy SILT with gravel, fine to coarse sand, fine to coarse gravel, moist, cobbles. (ML)	Dense	25.8
3		*Large boulders observed between 3 to 7 feet.		
4		Brown/red sandy SILT with gravel to silty SAND with gravel, fine to medium sand, fine to coarse gravel, moist, cobbles. (ML/SM)		
5				
6				
7				
8		Red/brown silty GRAVEL with sand, fine to coarse gravel, fine to coarse sand, moist, cobbles. (GM)	Very Dense	26.4
9				
10		Test pit terminated at approximately 10 feet. No groundwater. No caving.		
11				
12				
13				
14				
15				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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LOG OF TEST PIT NO. TP-9

FIGURE A-10

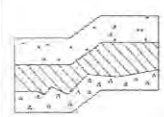
PROJECT NAME: SW Clutter Road Industrial **PROJ. NO:** T-8267 **LOGGED BY:** SLK

LOCATION: Washington County, Oregon **SURFACE CONDITIONS:** Grass **APPROX. ELEV:** N/A

DATE LOGGED: November 25, 2019 **DEPTH TO GROUNDWATER:** N/A **DEPTH TO CAVING:** N/A

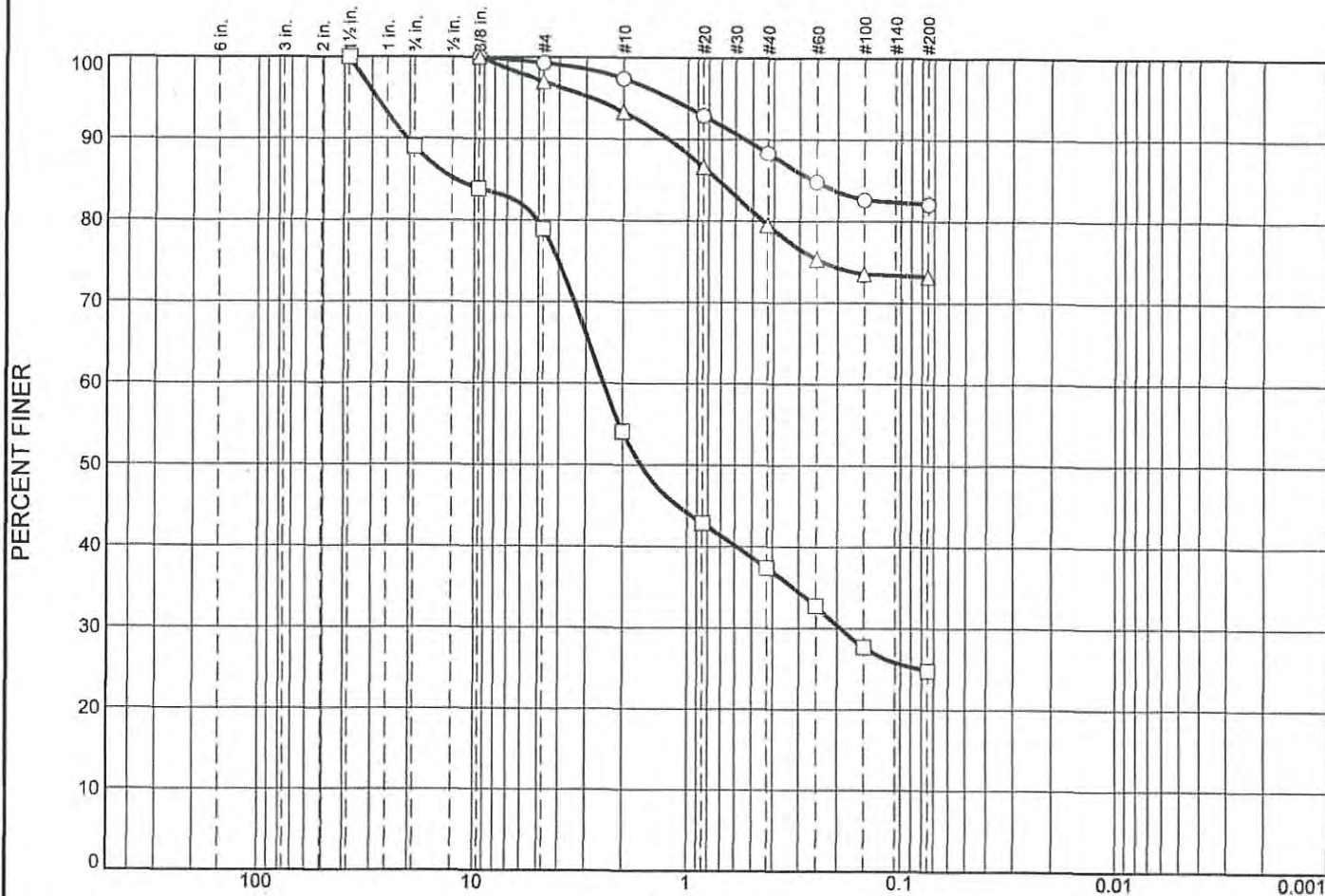
Depth (ft)	Sample No.	Description	Consistency/ Relative Density	W (%)
0		(1.5 inches TOPSOIL)		
1		Dark red/brown sandy SILT, fine sand, moist, organic. (ML)		
2		Brown/red sandy SILT with gravel to silty SAND with gravel, fine to medium sand, fine to coarse gravel, moist, cobbles. (ML/SM)	Medum Dense	
3		*Scattered boulders from 3 to 9 feet.		19
4		Red/brown silty SAND with gravel, fine to coarse sand, fine to coarse gravel, moist, cobbles. (SM)	Dense	
5		*Pocket of white/gray gravel and cobbles observed at 5 feet.		
6		Red/brown silty GRAVEL with sand, fine to coarse gravel, fine to coarse sand, moist, cobbles. (GM)	Very Dense	
7				
8				
9		Test pit terminated at approximately 9 feet. No groundwater. No caving.		21.1
10				

NOTE: This subsurface information pertains only to this test pit location and should not be interpreted as being indicative of other locations at the site.



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 Environmental Earth Sciences

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.7	1.9	9.1	6.2	82.1	
□	0.0	11.0	10.1	24.8	16.7	12.6	24.8	
△	0.0	0.0	3.0	3.7	13.8	6.3	73.2	

	LL	PL	D85	D60	D50	D30	D15	D10	Cc	Cu
○			0.2629							
□			12.3199	2.4648	1.6451	0.1926				
△			0.7254							

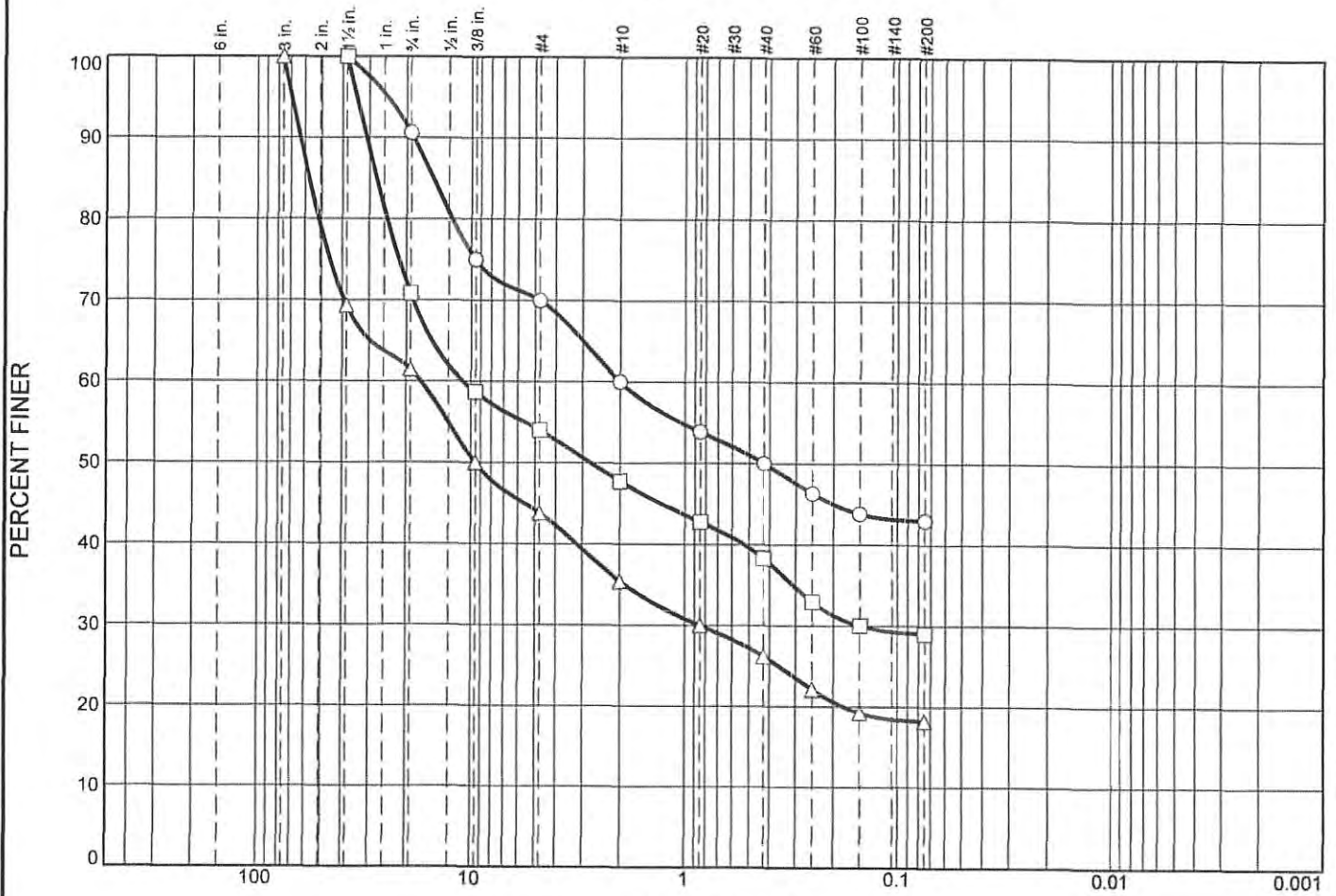
Material Description	USCS	AASHTO
○ SILT with sand	ML	
□ Clayey SAND with gravel	SC	
△ Lean CLAY with sand	CL	

Project No. T-8267 Client: Panattoni Development Company Project: SW Clutter Road Industrial ○ Location: TP-1 Depth: 3 Ft. □ Location: TP-2 Depth: 5 Ft. △ Location: TP-3 Depth: 10 Ft.	Remarks: ○ Tested on December 5, 2019 □ Tested on December 5, 2019 △ Tested on December 5, 2019
Terra Associates, Inc. Kirkland, WA	

Figure A-11

Tested By: FQ

Particle Size Distribution Report



GRAIN SIZE - mm.

	% +3"	% Gravel		% Sand			% Fines			
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay		
○	0.0	9.4	20.6	10.0	10.0	7.0	43.0			
□	0.0	29.2	16.8	6.3	9.4	9.3	29.0			
△	0.0	38.5	17.7	8.4	9.2	8.0	18.2			
×	LL	PL	D ₈₅	D ₆₀	D ₅₀	D ₃₀	D ₁₅	D ₁₀	C _c	C _u
○			14.9891	2.0000	0.4250					
□			27.6340	10.8677	2.7416	0.1500				
△			57.1235	16.9655	9.5250	0.8500				

Material Description	USCS	AASHTO
○ Gravelly SILT with sand	ML	
□ Silty GRAVEL with sand	GM	
△ Silty GRAVEL with sand	GM	

Project No. T-8267 **Client:** Panattoni Development Company
Project: SW Clutter Road Industrial

○ **Location:** TP-5 **Depth:** 3 Ft.
 □ **Location:** TP-7 **Depth:** 10 Ft.
 △ **Location:** TP-9 **Depth:** 9 Ft.

Terra Associates, Inc.
 Kirkland, WA

Remarks:
 ○ Tested on December 5, 2019
 □ Tested on December 5, 2019
 △ Tested on December 5, 2019

Figure A-12

Tested By: FQ

Appendix H: BMP Sizing Tool Report Files

WES BMP Sizing Report

Project Information

Project Name	Clutter Road
Project Type	Commercial
Location	
Stormwater Management Area	64714
Project Applicant	Chad Lawrence
Jurisdiction	OutofDistrict

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
Basin Map 1 Landscape	15,322	Grass	Grass	D	Stormwater Planter 1
Basin 1 Impervious	47,810	Grass	ConventionalConcrete	D	Stormwater Planter 1

LID Facility Sizing Details

LID ID	Design Criteria	BMP Type	Facility Soil Type	Minimum Area (sq-ft)	Planned Areas (sq-ft)	Orifice Diameter (in)
Stormwater Planter 1	FlowControlAndTreatment	Stormwater Planter - Filtration	D1	1,567.6	1,582.0	2.8

Pond Sizing Details

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only
2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).
3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.
4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.

WES BMP Sizing Report

Project Information

Project Name	Clutter Road
Project Type	Commercial
Location	
Stormwater Management Area	22458
Project Applicant	Chad Lawrence
Jurisdiction	OutofDistrict

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
Grass-grass	1,800	Grass	Grass	D	BMP
Grass to Impervious	15,953	Grass	ConventionalConcrete	D	BMP
Impervious to impervious	1,878	Impervious	ConventionalConcrete	D	NA

LID Facility Sizing Details

LID ID	Design Criteria	BMP Type	Facility Soil Type	Minimum Area (sq-ft)	Planned Areas (sq-ft)	Orifice Diameter (in)
BMP	FlowControlAndTreatment	Stormwater Planter - Filtration	D1	494.3	2,827.0	1.5

Pond Sizing Details

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only
2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).
3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.
4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.

WES BMP Sizing Report

Project Information

Project Name	Clutter Road
Project Type	Commercial
Location	
Stormwater Management Area	18520
Project Applicant	Chad Lawrence
Jurisdiction	OutofDistrict

Drainage Management Area

Name	Area (sq-ft)	Pre-Project Cover	Post-Project Cover	DMA Soil Type	BMP
Grass-grass	1,615	Grass	Grass	D	BMP
Grass to Impervious	12,953	Grass	ConventionalConcrete	D	BMP
Impervious to impervious	1,878	Impervious	ConventionalConcrete	D	NA

LID Facility Sizing Details

LID ID	Design Criteria	BMP Type	Facility Soil Type	Minimum Area (sq-ft)	Planned Areas (sq-ft)	Orifice Diameter (in)
BMP	FlowControlAndTreatment	Stormwater Planter - Filtration	D1	402.6	2,074.0	1.3

Pond Sizing Details

1. FCWQT = Flow control and water quality treatment, WQT = Water quality treatment only
2. Depth is measured from the bottom of the facility and includes the three feet of media (drain rock, separation layer and growing media).
3. Maximum volume of the facility. Includes the volume occupied by the media at the bottom of the facility.
4. Maximum water storage volume of the facility. Includes water storage in the three feet of soil media assuming a 40 percent porosity.

Appendix I: Maintenance and Operations Manual

City of Wilsonville

A MANUAL FOR THE OPERATION & MAINTENANCE OF PRIVATELY OWNED STORMWATER FACILITIES

March 2012



Working together...



towards a common goal...



*clean waters and healthy
rivers.*



City of Wilsonville
Natural Resources Program
(503) 682-4960
www.ci.wilsonville.or.us

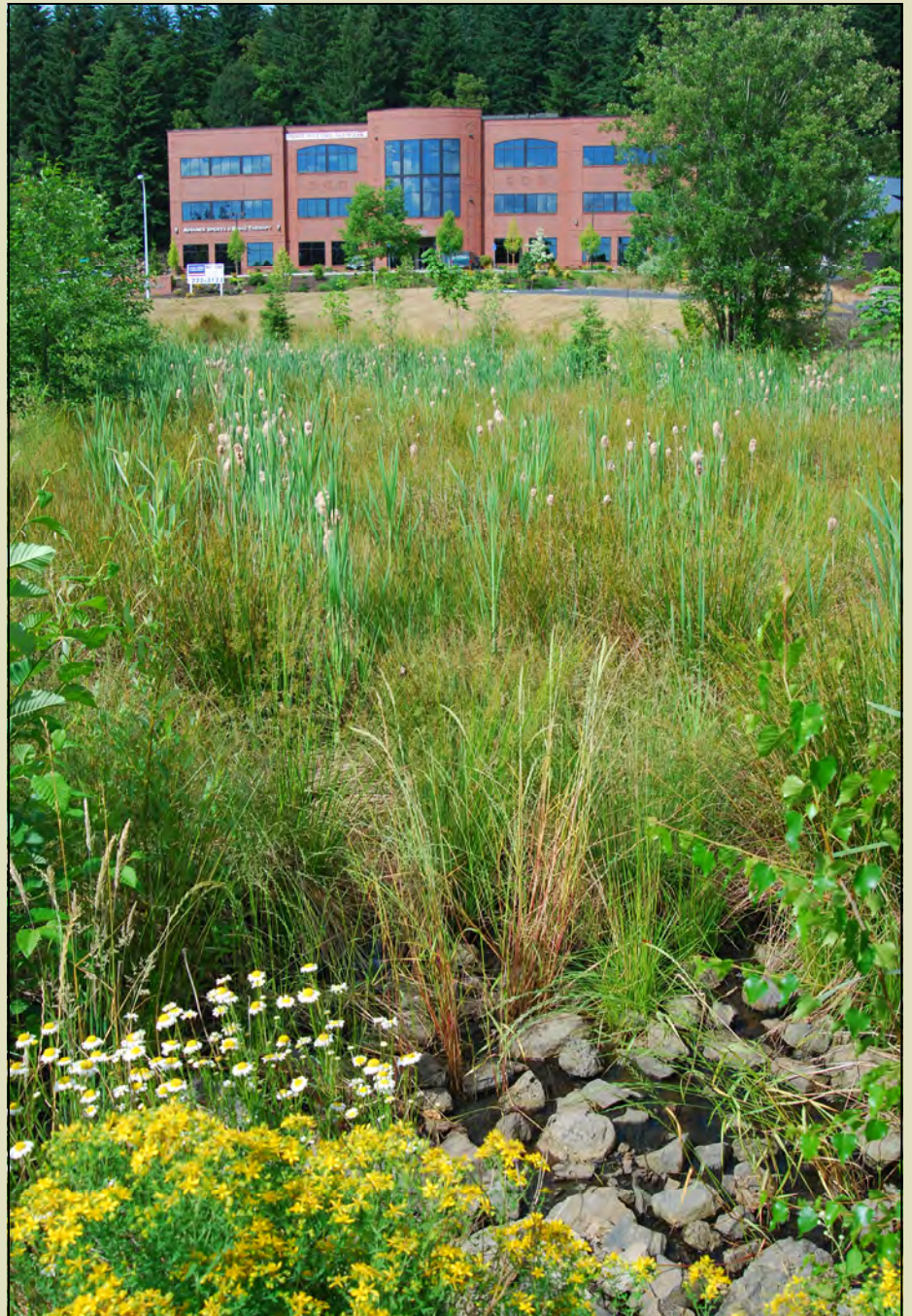


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CARING FOR YOUR STORMWATER FACILITY

THANK YOU

As the owner of a stormwater management facility, you are making a meaningful contribution to the health of Wilsonville's streams, wetlands and the Willamette River. This handbook will help you maintain your facility to make sure it performs the work it is designed to accomplish.



WHAT ARE STORMWATER FACILITIES?



Stormwater facilities are any combination of landscape and structural features that slow, filter, or infiltrate (absorb) runoff on your property after a rainfall. Types of facilities include vegetated systems (planters, swales, ponds, created wetlands, etc.), and structural systems (ecoroofs, porous pavement and manufactured facilities). Piping, inlets and catch basins are also important components that need adequate maintenance to assure facility function. All of these serve a common purpose: controlling the quality and quantity of stormwater runoff from your site to help safeguard our valuable water resources.

PROPERTY OWNER RESPONSIBILITIES

Federal, state and local agencies created management regulations and guidelines so as to improve stormwater quality and protect watersheds, rivers, streams and drinking water resources. The City of Wilsonville has a Stormwater Maintenance and Access Easement that includes the following requirements:

- Annual maintenance on storm drainage facilities in conformance with City of Wilsonville's Public Works Standards. For more information go to: www.ci.wilsonville.or.us/Index.aspx?page=127 Go to Important Links at the bottom of the page and click on Public Works Construction Standards 2006 (section 301.6.00 Operations and Maintenance Req.)
- Removal of debris, leaves and sediment from manholes, detention outlet structures, and catch basins.
- Disposal of all oils, sediment and debris in an approved dumpsite.
- Replacement of all dead or dying plants in ponds and swales. Maintenance of original plantings.
- Removal of trash from ditches, swales, catch basins, or any stormwater conveyance.

The steps we take today will greatly influence Wilsonville's environmental health and quality of life for years to come. Individual actions can make a big difference. Thank you for the significant part you and your stormwater management facility are playing.

* For information or questions about your facility, call the Natural Resources Program at (503) 682-4960

YOUR CONNECTION TO WILSONVILLE'S STREAMS AND THE WILLAMETTE RIVER



THE PROBLEM WITH STORMWATER RUNOFF

When it rains, the stormwater runs off impervious surfaces (such as roofs and paved areas) instead of soaking into the ground.

Conventional stormwater management directs runoff into drains and pipes that carry it offsite and eventually discharge it into a local stream. This approach has a number of harmful effects:

- Impervious areas generate large volumes of runoff relatively quickly. The increased volume and speed of the runoff can cause flooding and erosion and damage natural habitat.
- The runoff picks up a variety of pollutants including oil, pesticides, metals, chemicals, and sediment that negatively impact water quality and fish habitat.
- During warm weather, the runoff absorbs heat from impervious surfaces. This increases the temperature of the receiving waters, with negative impacts on fish and other aquatic life.
- Less water is able to infiltrate into the ground. This reduces groundwater recharge, which reduces summer flows in streams.



For information on the City's stormwater permitting requirements please visit:

www.ci.wilsonville.or.us/Index.aspx?page=693





A BETTER WAY TO FLOW

The City of Wilsonville is actively pursuing a variety of measures to reduce stormwater impacts. One important approach is to manage stormwater on the property where it originates. This is commonly referred to as Low Impact Development. It includes the use of vegetated swales, pervious concrete, rain gardens, eco-roofs, etc. Onsite stormwater management uses processes that mimic nature. Onsite facilities allow runoff to soak into the ground, help filter out pollutants, and slow the flow rate of runoff leaving your site. This significantly reduces the volume and pollution levels in stormwater leaving your property and ending up in local streams and the Willamette River.

WHAT ELSE IS THE CITY DOING?

Onsite management, through the use of Low Impact Development, is just one component of a comprehensive citywide program to limit stormwater runoff impacts. Here are some other steps the City is taking:

- The City requires onsite stormwater management for new construction and redevelopment on public and private property.
- Adhering to and updating the procedures outlined in the Stormwater Master Plan.
- Natural areas, especially riparian areas adjacent to rivers and streams, help filter out pollution, control erosion, and provide shade, food, and habitat for fish and wildlife. The City uses a variety of measures to preserve these critical areas including development and land use zoning requirements and enhancement and restoration efforts.
- In partnership with numerous other organizations, the City provides education and technical assistance aimed at reducing stormwater impacts and promoting watershed health.



INSPECTING AND MAINTAINING YOUR FACILITY

PROTECTING YOUR RESOURCES

It is essential to maintain your facility so it functions as intended and limits off-site environmental impacts. You are required to inspect your facility at a minimum of once a year to determine maintenance needs. Routine inspection and maintenance can help keep overall maintenance costs low by detecting problems early and avoiding large repair or replacement costs. This section identifies general guidelines on what to look for and how to maintain your facility. It also notes non-routine maintenance that may require professional assistance. **If you are unsure of what type of facility you have, call the City of Wilsonville's Natural Resources Program at (503) 682-4960.**



LEGAL REQUIREMENTS: OPERATIONS AND MAINTENANCE PLAN

As a property owner, you are legally required to follow all of the maintenance tasks and schedules outlined in your recorded maintenance and access easement. An Annual Inspection and Maintenance Report must be submitted to the City of Wilsonville no later than May 1 each year (see sample form on page 7). Pictures included with the report are very helpful. Include copies of invoices of work performed by contractors. While inspecting your facility, please keep in mind that it will be necessary for you to refer to your landscape plan in order to maintain your facility as it was originally designed.

INSPECTION SCHEDULE: HOW OFTEN

It is recommended that you inspect your facility at least::

- Quarterly for the first two years
- Once a year there after, and
- Within 48 hours of major rainfall events (more than one inch of rain over a 24-hour period).



SAMPLE REPORTING FORM

Stormwater Annual Inspection and Maintenance Report

- The owner(s) or owner's designee shall be responsible for having inspections conducted and maintenance performed on the above private stormwater facilities annually, in conformance with Section 301.6.00, "Operation and Maintenance," of the City of Wilsonville Public Works Standards. All oils, sediment and debris will be removed and deposited in an approved waste disposal site. Any damaged equipment will be repaired promptly.
- Particular attention will be given to sedimentation and pollution control manholes, and stormwater facility inlet and outlet structures. All debris shall be removed to assure proper functioning.
- The grates of all catch basins shall be kept free of debris and leaves.
- The stormwater facility outlet structure(s) shall be checked to assure that sediment accumulation has not encroached on the required stormwater facility volume. Sediment shall be removed as necessary to maintain that required volume.
- The outlet control manhole shall be inspected to assure that all parts are intact and the orifice is free of any debris that could cause malfunction.
- Inspect all stormwater facilities for survival and viability of plantings. Replace all dead or dying plants with in-kind plantings, and remove sediments and debris. **Maintain all original landscaping in swales, ponds, etc.**
- This includes all stormwater facilities including but not limited to: catch basins, pipes, treatment manholes, manholes, trash racks, and structural controls.

The above inspection and maintenance activities shall be documented annually by sending a signed original letter format report of what was completed to the City of Wilsonville at the mailing address below. **The Annual Inspection and Maintenance Report must be submitted no later than May 1 each year.**

City of Wilsonville
 Stormwater Management Coordinator
 29799 SW Town Center Loop
 Wilsonville, OR 97070

(Stormwater facilities Maintenance Plan Exhibit B Stormwater Maintenance and Access Easement)

Name of Development

Contact _____
 Telephone _____
 Mailing Address _____

Location
 Tax Lot _____
 Street Address _____

Facilities to be maintained
 _____ Trapped catch basin(s) (number of each)
 _____ Pollution control manhole(s) (number of each)
 _____ Outlet control manhole(s) (number of each)
 _____ Detention pond(s); _____ tank(s) (number of each)
 _____ WQ pond(s) swales; _____ MH(s); _____ vault(s); _____
 All other facilities as described on plans _____

Inspection Date _____

Describe inspection, maintenance, repair or replanting _____

(Attach invoices for work performed) (Continue above on additional sheet if needed)

Owner, Owners or their Representative Signature _____
Date _____

SEDIMENT REMOVAL AND DISPOSAL

FACILITIES AND SYSTEM COMPONENTS THIS APPLIES TO

Vegetated Facilities: ecoroofs, infiltration basins, planters, ponds, swales, trees, vegetated filters, and created wetlands.

Structural Facilities: catch basins, curb cuts, inlets, manufactured facilities, piping, sedimentation manholes, and vaults.

Pervious Pavement: porous concrete or asphalt, permeable pavers.

IMPACT ON FACILITY PERFORMANCE

The purpose of a stormwater treatment facility is to remove pollutants, including suspended solids, by capturing sediment. Sediment can include dirt, leaves, and litter. These materials can restrict or clog the facility. Timely removal of sediment will improve infiltration rates, water quality, and help prevent clogging and flooding.

WHAT TO LOOK FOR

Check the depth of accumulated sediments. Sediment markers can be placed in the facility to help identify depths. Remove sediment when:

Vegetated Facilities:

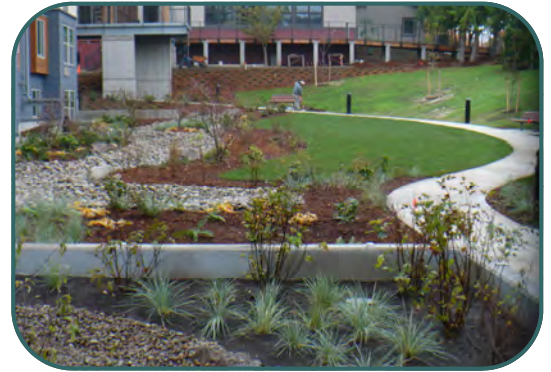
- Sediment is 4" deep,
- Sediment depth is damaging or killing vegetation, or
- Sediment is preventing the facility from draining within a 24-48 hour period.

Structural Facilities:

- At least once a year, or
- When the basin is half full of sediment.

Pervious Pavement:

- Sediment is preventing the facility from draining in 24 hours.



WHAT TO DO

Often sediment can be removed by hand. Large facilities and underground facilities will need to be cleaned with heavy equipment by trained professionals.

- Remove sediment during dry months when it is easier to remove, weighs less, and creates fewer secondary environmental impacts (such as wet sediment running off the site).

NOTE: It is illegal to hose sediments through your system.

Doing it yourself

Vegetated Facilities:

- Use rakes and shovels to dig out accumulated sediment.
- Avoid damage to existing vegetation.
- If sediment is deep, plants may need to be removed in order to excavate sediment.
- Reseed and mulch disturbed areas to prevent erosion.
- Excavate sand or gravel and clean or replace.

*Doing it yourself (continued)***Structural Facilities, Dispersion Trenches and Pervious Pavement:**

- Catch Basins: Clean debris off the grate and bars. Lift the grate and use a bucket to remove water and a shovel to dig out sediment.
- Curb cuts, piping and other conveyance facilities: Use a shovel, router, air hose or other dry method to clear sediment and debris.
- Dispersion Trenches: Excavate sand or gravel and clean or replace.
- Pervious Pavement: Remove accumulated sediment from the surface with a dry broom, vacuum system, or other hand tools.

Hiring Professionals

Cleaning certain facilities will require professional assistance.

- Underground facilities such as manholes, and manufactured facilities must be cleaned by a vactor truck. Do not enter these facilities. They are defined by the Oregon Occupational Safety and Health Division as confined spaces and require proper certification to enter.
- Certain components such as collection basins, piping or pervious pavement systems may require vacuuming with a vactor truck or street sweeping equipment.

**DISPOSAL**

When deciding how to dispose of sediment, you need to consider the types of activities and pollutants on site. Sediment from commercial or industrial sites is usually not considered hazardous waste. However, as the generator of this waste you are responsible for deciding how to properly manage the removed solids.

Contaminated Water and Sediment

Catch basins and stormwater facilities in areas used for chemical or hazardous waste storage, material handling or equipment maintenance may collect the chemicals used in these activities from spills or via stormwater runoff. If you observe an oily sheen, odors, discoloration, or other signs of pollution, hire a professional laboratory or sampling firm to assess whether the material needs specialized hauling, treatment or disposal to comply with Oregon State Department of Environmental Quality (DEQ) rules. If you need assistance deciding whether the solids should be managed as hazardous waste, contact DEQ.

Non-Contaminated Water and Sediment

If the pollutant load is non-hazardous, water may be spread across vegetation onsite. Let the solids dry out, then properly dispose of them. Temporary erosion control measures may be needed to contain the material onsite. Dry materials may be reused elsewhere on your site, may be eligible for reuse by others, or can be disposed of at a designated solid waste facility.

REDUCING SEDIMENT ACCUMULATION AND POLLUTION IN YOUR FACILITY

- Minimize outside sources of sediment, such as eroding soil upstream of your facility.
- Sweep paved areas on your property regularly.
- Make sure chemical and waste storage areas are not exposed to rainfall and stormwater runoff.
- Don't let water from washing vehicles or equipment drain to your stormwater facility.



RESOURCES

City of Wilsonville Public Works Standards: www.ci.wilsonville.or.us/Index.aspx?page=127

Go to *Important Links* at the bottom of the page and click on *Public Works Construction Standards 2006* (section 301.6.00 Operations and Maintenance Req.)

Environmental Protection Agency: www.cfpub.epa.gov/npdes/home.cfm?program_id=6

Department of Environmental Quality: www.oregon.gov/DEQ

Private Maintenance Companies (listed below are just a few examples of companies that provide maintenance services, more companies are available)

- Clearwater Environmental Services in Wilsonville (503) 582-1951
- River City Environmental in Portland (503) 252-6144
- Bravo Environmental NW in Portland (503) 261-9800



Stormwater runoff has substantial impacts on the water quality and habitat that fish depend on. By reducing those impacts, we are taking direct action on behalf of threatened species as well as other fish and wildlife that are under stress.

VEGETATION MANAGEMENT

FACILITIES THIS APPLIES TO

Vegetated Facilities: ecoroofs, infiltration basins, planters, ponds, swales, trees, vegetated filters, and created wetlands.

IMPORTANCE TO FACILITY PERFORMANCE

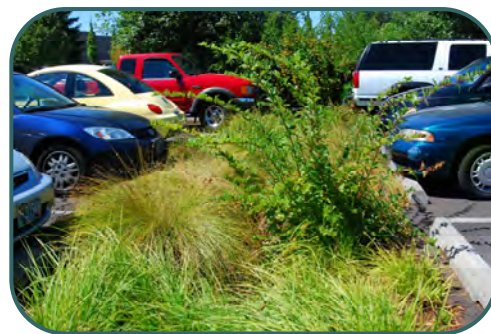
Plants play an important role in stormwater facilities. They absorb water, improve infiltration rates of soil, prevent erosion by stabilizing soil, cool water, and capture pollutants. Plants create habitat for birds and other wildlife and provide aesthetic value to a property. Proper maintenance of vegetation improves the appearance and performance of your facility. Your facility must be kept in accordance with the original landscape design.

WHAT TO LOOK FOR

When identifying maintenance needs it is helpful to have a copy of your landscape plan, this shows the plants you are required to have in your facility. Facilities should be checked for maintenance needs quarterly for the first two years and once a year after that.

Facility needs maintenance when:

- Areas of soil are bare.
- Vegetation is buried by sediment.
- Vegetation appears unhealthy or has died.
- Nuisance and invasive plants are present.
- Vegetation is compromising the facility's structure by blocking inlets or outlets, or roots are intruding into a component of the facility.
- Dropped leaves and other debris are contributing to sediment accumulation or are blocking inlets or outlets.



WHAT TO DO

Maintenance activities can easily be incorporated into existing site landscape maintenance contracts. Vegetation can be maintained with a formal or more natural appearance depending on your preference.

General Maintenance

- Remove dropped leaves, dead plants, and grass and other plant clippings. Plant debris adds nutrient pollution as it breaks down, and can clog facility piping and reduce infiltration.
- Avoid using fertilizers, herbicides, or pesticides in the facility. These products add to the pollution problems the facilities are designed to remedy.
- Use mulch to inhibit weed growth, retain moisture, and add nutrients. Replenish when needed. Ensure mulch does not inhibit water flow.
- Irrigate all new plantings as needed for the first two years.

Caring for wanted vegetation

Facility owners are responsible for maintaining healthy vegetation and must replace any plants that have died or been removed.

- You are required to maintain vegetation to the density approved on your landscape plans or specified in the City's Public Works Standards.
- Replant with vegetation approved for use in the original planting plan or from the recommended plant list in the City's Public Works Standards.

Caring for wanted vegetation (continued)

- Plant in late fall or early spring so plant roots can establish during the cool, rainy seasons, before summer.
- Amend and aerate compacted soils before replanting by adding compost to increase nutrients and enhance soil texture.
- If plants are not surviving, determine the reason for the plant die-off. Survivability may be improved by planting vegetation better suited for the site conditions or by irrigating more. You may need to test planting bed soils for pH, moisture, and other factors such as nutrient levels, soil structure, and organic matter content.



Mowing

- Grassy facilities are designed for routine mowing. Mow at least twice a year.
- Grass should be mowed to keep it 4" to 9" tall. Grass that is at least 4" tall captures more pollutants and is hardier. Do not allow grass to become a fire hazard.

Nuisance and unwanted vegetation

- Remove nuisance and invasive vegetation, such as Himalayan blackberry, English ivy and reed canarygrass, before it goes to seed in the spring. Do additional weeding in the fall. A list of nuisance plants can be found in the Portland Plant List (see below).
- Immediately remove vegetation that is clogging or impeding flow into the facility.
- Remove potentially large and deep-rooted trees or bushes when they might impede the flow path or compromise facility structures.
- Provide ground cover on any dirt exposed by vegetation removal.

Wildlife

Vegetated facilities create habitat, especially for birds. The Migratory Bird Treaty Act protects all native bird species. Birds and other animals will generally adjust to human activity. However, there are simple measures that should be taken to avoid disturbance:

- Avoid maintenance during bird nesting season from early March to late July. Prune and mow during late summer. Many baby birds will spend some time on the ground after leaving a nest.
- Walk the site before you do maintenance. Look for nests, burrows and animals in the facility. Reroute around animal areas by at least a few yards.

RESOURCES

Clackamas County Resources:

Clackamas County Soil and Water Conservation District: www.conservationdistrict.org

Plant Identification:

Native Plant Society: www.npsoregon.org

Master Gardeners: www.extension.oregonstate.edu/mg

Native Plant Nurseries:

Native Plant Nursery: www.plantnative.org

EROSION, BANK FAILURE, CHANNEL FORMATION

FACILITIES THIS APPLIES TO

Vegetated Facilities: ecoroofs, infiltration basins, planters, ponds, swales, trees, vegetated filters, and created wetlands.

IMPORTANCE TO FACILITY PERFORMANCE

Stormwater flowing through a facility can cause erosion. Erosion can increase sediment build up, clog outlets, reduce water quality benefits, add to pollution and cause facility components to fail. Eroded channels create an easy path for water to travel down reducing the ability of the facility to filter pollutants and infiltrate water.

WHAT TO LOOK FOR

Any area with erosion more than two inches deep needs maintenance. Signs of erosion and common locations:

- The formation of flow restricting channels in the bottom of the facility, around inlet pipes and curb cuts, or at overflows.
- Undercutting, scouring, and slumping along banks or berms.
- Channels and undercutting through check dams. (check dams are small berms built across a facility to slow water and create small areas of ponding).

WHAT TO DO

- Fill the eroded area with soil, compact it lightly, and cover with mulch, compost, seed, sod, or other erosion prevention materials.
- Plant banks with deep or heavily rooted plants to permanently stabilize soil.
- Install or repair structures designed to dissipate energy and spread flow, such as splash blocks on downspouts, or riprap around inlet pipes and curb cuts. See the City's Public Works Standards for requirements.
- If erosion continues to be a problem, consult a professional to determine the cause and a solution.
- Replant in accordance with the landscape plan.



STRUCTURAL DEFICIENCIES

FACILITIES THIS APPLIES TO

Most stormwater facilities have some structural components. Some facilities such as vaults, drywells, and sediment manholes are completely structural. In vegetated facilities, structural components often control how water enters, travels through, or exits a facility.

Common structural components include:

- Inflow and outflow pipes, curb cuts, and trenches.
- Valves, orifices, trash racks, and pipes.
- Concrete, metal, and plastic structures and components such as curbs, retaining walls, and manholes.
- Manufactured devices such as filter cartridges.
- Earthworks such as embankments, check dams, dikes, berms and side slopes.
- Riprap and other flow spreading elements.
- Access roads, gates and signs.



IMPORTANCE TO FACILITY PERFORMANCE

These elements need to be in good working order to route flows into a facility and for the facility to function properly.

WHAT TO LOOK FOR

Look at the general condition of these elements. Do they need repair or replacement? Are they still properly aligned? Look for:

- cracks, scratches, dents, rust, or other conditions of wear.
- loose fittings, broken or missing components.
- insufficient oil/grease for moving parts.
- appropriate gravel cover or bedding to support the structures.
- misaligned parts or other impediments to the component's ability to still pass flow.

MAINTENANCE

- Immediately repair or replace any major damage to prevent catastrophic failure. This includes any structural component that is cracked, loose or askew. You may need to consult a professional engineer or hire a trained contractor to design and perform any repairs. Refer to page 10 for a list of resources.
- Minor damage such as dents, or rust spots may not need immediate replacement but should be monitored.
- Maintain access to the facility by keeping the access route open and structurally sound, fence gates and vault lids oiled and locks functioning. Access must be available in an emergency.

PONDING WATER

FACILITIES THIS APPLIES TO

Vegetated Facilities: dry ponds, infiltration basins, planters, rain gardens, sand filters, swales, created wetlands, and vegetated filter strips.

Structural Facilities: manufactured facilities and pervious pavement.

NOTE: Some facilities are specifically designed to always hold water such as: wet ponds, spill control manholes, and sedimentation manholes.

IMPORTANCE TO FACILITY PERFORMANCE

Most facilities are designed to drain in a certain amount of time. This varies from 2 to 48 hours depending on the type of facility. This time is stated in the Operations and Maintenance plan for the type of facility. Ponding water is usually a sign that the facility's outlet is clogged or it is not infiltrating properly.

WHAT TO LOOK FOR

- clogging of overflows or outlets with debris, trash or other obstructions.
- fine sediments filtering into the soil or other filtration media (like sand or gravel) that can prevent proper infiltration.
- water that has remained ponded for more than 48 hours.

MAINTENANCE

- For surface facilities, first try raking the top few inches of soil to break up clogged sections and restore water flow.
- Clean out overflows and outlets with hand tools, if possible. Difficult or hard to access blockages may require a professional contractor.
- Identify sources of sediment and debris to prevent them from entering the facility. Simple actions like sweeping a parking lot regularly can keep sediment out of facilities.
- Make sure the facility has enough vegetation. Vegetation absorbs water and roots help keep soil loose so it can infiltrate water.



For more thorough instructions on removing sediment, see the “Sediment Removal and Disposal” section of this handbook. Sediment accumulated in stormwater facilities may be considered hazardous waste and must be handled and disposed of properly.

If ponding still occurs, contact a landscape architect, professional engineer or trained contractor for more assistance.

PESTS



FACILITIES THIS APPLIES TO

All types of stormwater facilities

IMPORTANCE TO FACILITY PERFORMANCE

Mosquitoes can breed in ponded or other stagnant water. Vegetated areas can be attractive habitat for rats, nutria, beaver, and a variety of birds and amphibians. While some species are desirable, others can be public health or nuisance concerns. In particular, mosquitoes and rats can breed quickly and cause a public health hazard if not removed. The presence of pests does not necessarily impact the ability of your facility to treat and manage stormwater but may indicate maintenance needs, such as lack of proper infiltration.

WHAT TO LOOK FOR

- Check for mosquito larvae in any system with open, slow, or non-moving waters - especially during warmer weather. Larvae look like tiny wiggling sticks floating perpendicular to the water's surface.
- Look for nutria, rat, and other animal droppings year round. Also check for structural indicators such as beaver dams and rodent holes and burrows.

WHAT TO DO

Mosquitos

- The best way to avoid breeding mosquitoes is to prevent ponding water. Mosquitoes need standing water to lay their eggs, and for their larvae and pupae to develop. Most stormwater facilities are designed to drain in at least 48 hours. If your facility is not draining properly see the “Ponding Water” and “Sediment Removal and Disposal” sections of this handbook.
- As a temporary control for mosquitoes, the county or other licensed professionals can apply pesticides to kill mosquito larvae in the water or adult insects in the air.

Rats

Rats need shelter, food and water to survive.

- Remove plant debris that may provide shelter for rats from the facility.
- Remove fruits and nuts that fall to the ground.
- Fill in burrows.
- Trap and remove individual animals.

Other Wildlife Other non-native and invasive animal species may take up residence in your facility. Contact the Oregon Department of Fish and Wildlife (ODFW) to help identify these species and suggest removal processes. Permits from ODFW are required to capture and relocate native wildlife. Some common non-native species are:

- Opossum
- Eastern gray squirrel
- Nutria
- Bullfrog
- Fox squirrel
- Eastern cottontail
- Egyptian goose
- Red-eared slider turtle
- Snapping turtle



PEST RESOURCES

Rats and mosquitoes:

Clackamas County Vector Control (includes Washington County)

www.clackamas.us/vector

(503) 655-8394

Other pest issues:

Look in yellow pages or on the internet under “Pest Control”

Other Wildlife:

Oregon Department of Fish and Wildlife

www.dfw.state.or.us/wildlife/

(503) 947-6000 or (800) 720-6339



POLLUTION YOU CAN SEE OR SMELL

FACILITIES THIS APPLIES TO

All types of stormwater facilities.

IMPORTANCE TO FACILITY PERFORMANCE

Stormwater facilities often collect a variety of trash and debris. Trash and debris, especially floating debris, can clog pipes or treatment media. It can also cause odors through decay or by collecting spilled or dumped materials.

Stormwater facilities are designed to help prevent pollutants from entering rivers and streams. Any visible water quality pollutants may wash out of the facility spreading the pollution problem.

WHAT TO LOOK FOR

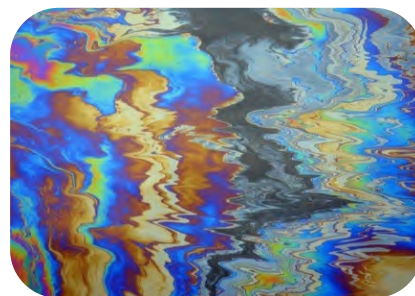
- Check monthly for Trash and debris.

Any unusual or unpleasant smells from sources such as:

- Natural plant decay.
- Dying plants trapped under sediment.
- A spill or a leak (e.g., gasoline or sewage).

Visible pollution such as:

- Sheens
- Turbid (cloudy) water
- Discoloration, or
- Other pollutants on the surface of the water.



*Pollution You Can See And Smell (continued)***WHAT TO DO**

- Regularly remove trash and plant debris.
- Remove accumulated sediment (see “Sediment Removal and Disposal” in this manual).
- Make sure inlets and outlets are not clogged.
- Identify the source of trash, debris or pollutant, such as a spill, leak, or illicit discharge.
- If there is evidence of a spill or leak, contact a professional laboratory or sampling firm to assess whether the material needs specialized removal, treatment, and disposal. Use trained professional staff for any cleanup and remediation.

SAFETY

In addition to keeping the facility in good working order, maintenance should also strive to meet safety and aesthetic goals that benefit the community and protect your site workers. Consider establishing maintenance triggers and practices that respond to the following issues below. Keep in mind the safety of both the employees who maintain your facility and the general public.

WHAT TO LOOK FOR*Site Conditions*

Conditions, such as steep slopes, slick surfaces, and vegetation debris, can create a falling hazard to employees and visitors.

Public Safety

Some stormwater facilities, such as ponds and created wetlands, can be “attractive nuisances” attracting undesirable activity, vandalism, or use that could be harmful to public safety. Consider the safety features now in place at your facility.

WHAT TO DO

- Use barrier plantings or fencing to bar entry into the facility area.
- Install road bollards, lighting, and signage to discourage illegal dumping.
- Avoid maintaining facilities in wet weather to reduce the risk of injuries from slipping. Always make sure that appropriate safety gear (e.g., harness, gloves, face shields, safety line) is used.
- For underground facilities, avoid entering anything defined as a confined space. Vaults, deep ponds, manufactured facilities or manholes are examples of confined spaces. These areas require special permits, training and entry techniques. Some can be inspected and cleaned from above without entering. Always use caution when working with underground facilities. You are legally required to meet Oregon Occupational Safety and Health Division (OR-OSHA) requirements for such activities.

RESOURCES

Confined space entry:

OR-OSHA (confined space entry requirements)

www.orosha.org/subjects/confined_spaces.html

(503) 229-5910



PAYING FOR MAINTENANCE

Specific maintenance costs depend on the characteristics of the facility, the site, and the area draining to the facility. The general rule of thumb is that annual maintenance costs will be 5 to 10% of the facility's total capital cost. Routine, scheduled maintenance can help keep overall costs down by addressing problems before they require major attention. Contact your stormwater system manufacturer for information about your system.

FINANCING MAINTENANCE

You need to determine how you will finance your maintenance needs. A facility maintenance fund is recommended for both capital maintenance procedures (e.g., facility replacement and non-routine maintenance, such as sediment removal, facility component repair or replacement, major replanting, or safety structure construction) and operating maintenance procedures (routine activities such as facility inspection, debris removal, and vegetation management). For homeowner associations, this could be a portion of homeowner fees or a specific assessment.

HOW MUCH TO SAVE

- An average 5 to 10% per year of the facility's capital cost for annual routine maintenance.
- A percentage of the non-routine maintenance costs per year (i.e. for sediment removal, vegetation replacement) based on the needed frequency. For example, if the facility is designed to need mechanical sediment removal every five years, 20% of the total cost should be put aside each year.
- An additional 3 to 5% of the facility's capital cost per year for eventual facility replacement (based on the facility's life expectancy). Most of these facilities have a life expectancy of 25 to 50 years.

VEGETATED FACILITIES

- Most required routine maintenance (excluding major repair and replacement) is estimated to have an annual cost of \$200 to \$600 dollars per acre of facility, above current landscape maintenance costs. Costs can vary depending on the types and level of maintenance practices used.
- The cost and intensity of maintenance activities are usually higher during the two-year plant establishment period. During this time, plants will need additional watering and plants that die will need to be replaced.



WHERE TO GET MORE ASSISTANCE



City of Wilsonville Natural Resources Program

www.ci.wilsonville.or.us/Index.aspx?page=91
(503) 682-4960

City of Wilsonville Public Works Standards:

www.ci.wilsonville.or.us/Index.aspx?page=127 Go to *Important Links* at the bottom of the page and click on *Public Works Construction Standards 2006* (section 301.6.00 Operations and Maintenance Req.)
(503) 682-4092

HIRING CONTRACTORS

Professional maintenance services phone book/internet references:

Vegetation Management:

- “Landscape Contractors”

Sediment Removal and Disposal:

- “Sewage,” or
- “Waste Disposal”

Facility Alterations:

- “Landscape Architects” or
- “Engineers - Civil”

Manufactured Facilities:

- Find the specific manufacturer

CONFINED SPACE ENTRY

Oregon Occupational Safety and Health Division (OR-OSHA):

www.orosha.org/subjects/confined_spaces.html

(503) 229-5910

PEST RESOURCES

Rats and mosquitoes:

Clackamas County Vector Control (includes Washington County)

www.clackamas.us/vector

(503) 655-8394

Other pest issues:

Look in yellow pages or on the internet under “Pest Control”

Other Wildlife:

Oregon Department of Fish and Wildlife

www.dfw.state.or.us/wildlife/

(503) 947-6000 or (800) 720-6339




Portland Audubon Wildlife Care Center

Help with injured animals and animal identification questions:

www.audubonportland.org

(503) 292-0304



The Audubon Wildlife Care Center is the oldest and busiest wildlife rehabilitation facility in Oregon. Each year they treat over 3,000 wild animals for release back to the wild and respond to more than 15,000 wildlife related inquiries.



VEGETATION

Clackamas County Resources:

Clackamas County Soil and Water Conservation District:

www.conservationdistrict.org

Plant Identification:

Native Plant Society:

www.npsoregon.org

Master Gardeners:

www.extension.oregonstate.edu/mg

Native Plant Nurseries:

Native Plant Nursery:

www.plantnative.org



City of Wilsonville

29799 SW Town Center
Loop E

Phone: 503-682-4960
Fax: 503-682-7025

www.ci.wilsonville.or.us



This brochure was prepared by
the City of Wilsonville's Natural
Resources Program staff.

March 2012

NOTE: A considerable amount
of information was obtained
from the City of Portland's
Stormwater Management Facili-
ties Operations and Mainte-
nance for Private Property
Owners guide.

OTHER WAYS TO PROTECT OUR STREAMS AND THE WILLAMETTE RIVER

In Your Home or Business

- Use nontoxic cleaners.
- Properly dispose of hazardous materials.
- Conserve energy: switch to compact fluorescent bulbs, turn down the heat, do the laundry with cold water, purchase energy-efficient appliances.
- Use water wisely: fix leaks, use low-flow showerheads, use only the water you need.

In Your Yard

- Plant native vegetation.
- Consider planting perennials versus annuals.
- Sweep instead of hose.
- Cover bare soil with mulch or plants.
- Compost yard debris.
- Disconnect downspouts (where appropriate).
- Use drip irrigation.

In and Out of Your Car

- Properly maintain vehicles.
- Wash vehicles where water is recycled.
- Drive less: use transit, bike, walk, or carpool.
- Recycle motor oil.
- Clean up spills or leaks.

In Your Community

- Volunteer for tree planting, cleanup, stream restoration, or invasive plant species removal projects.
- Report spills and illegal dumping (call 503-823-7180).
- Don't litter, and pick up litter when you see it.
- Pick up pet waste and put it in the garbage or toilet.

In Parks and Natural Areas

- Stay on designated hiking trails and biking areas.
- Keep dogs on leashes and away from the streambanks and water. Pick up pet

THANK YOU

*for helping keep Wilsonville clean, healthy
and sustainable and for stewarding this
beautiful place that we all share.*

Appendix J: Engineering Plans

PANATTONI - CLUTTER ROAD PROPERTY WILSONVILLE, OR



Architecture • Interiors
Planning • Engineering

Portland, OR
503.224.9560
Vancouver, WA
360.695.7879
Seattle, WA
206.749.9993
www.mcknze.com

MACKENZIE.
DESIGN DRIVEN | CLIENT FOCUSED

Client
**PANATTONI
DEVELOPMENT
COMPANY LLC**

6650 SW REDWOOD LN,
PORTLAND, OR 97224

Project
**COFFEE CREEK
LOGISTICS CENTER**

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OR REPRODUCED IN ANY MANNER,
WITHOUT PRIOR WRITTEN PERMISSION

REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
COVER SHEET

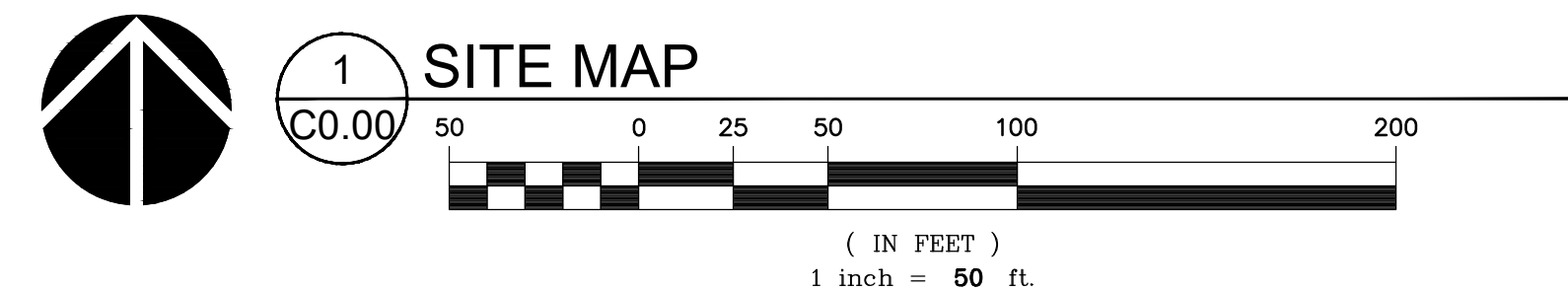
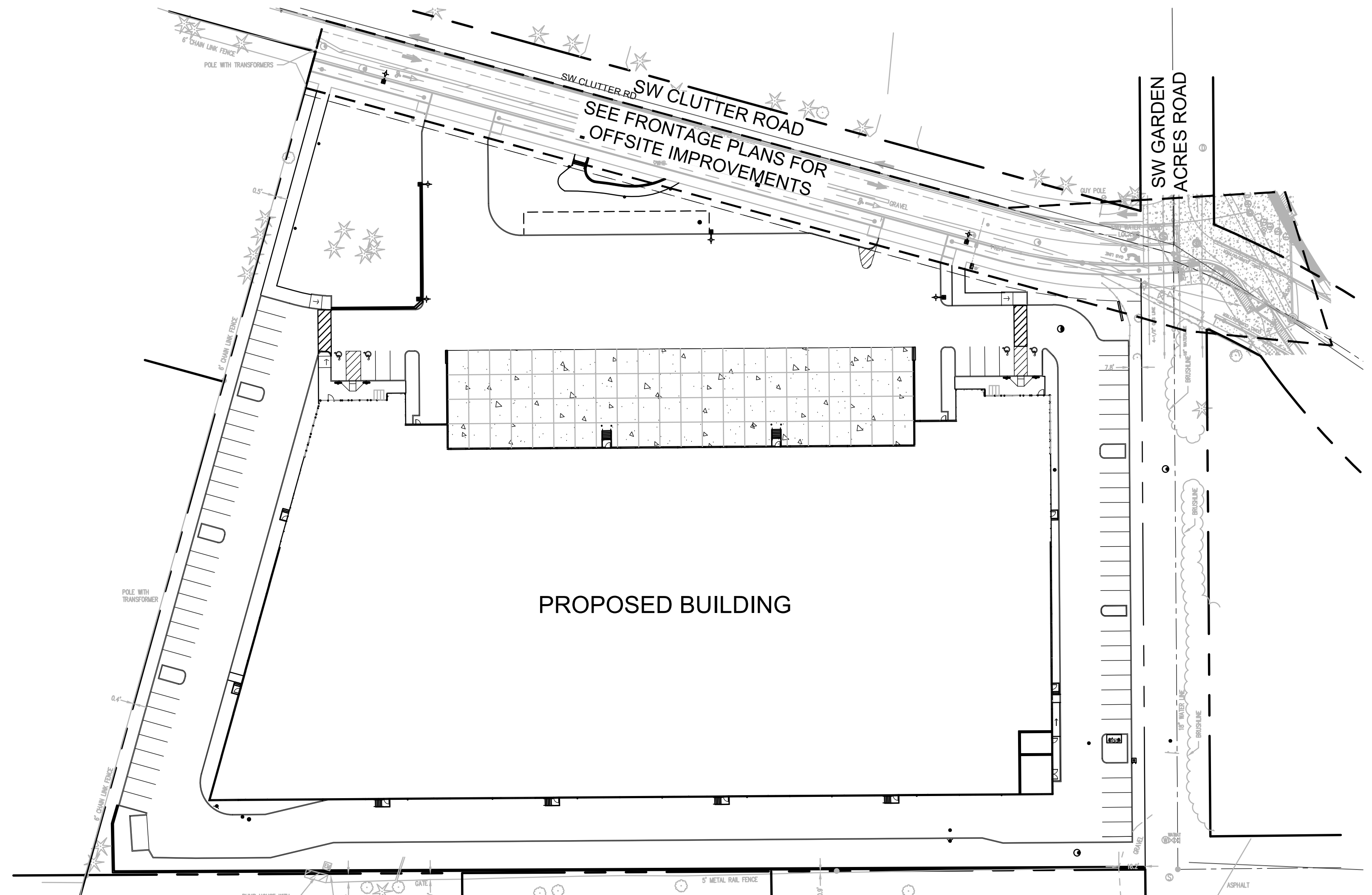
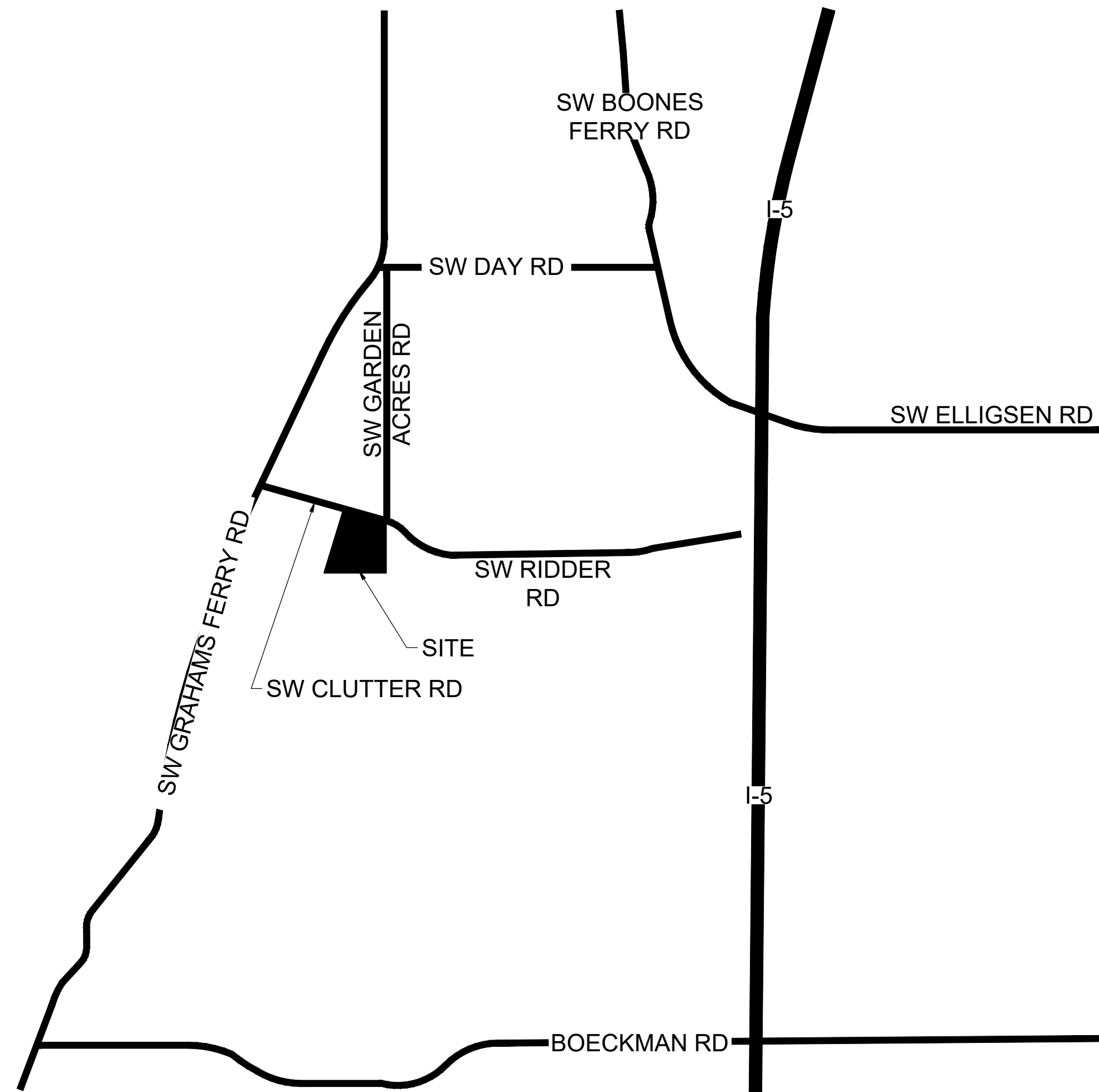
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C0.00

JOB NO. **2190382.00**



SHEET INDEX

- C0.00 CIVIL COVER SHEET
- C0.01 NOTES & LEGENDS
- C1.00 EXISTING CONDITIONS AND DEMOLITION PLAN
- C1.10 SITE PLAN
- C1.20 GRADING PLAN
- C1.21 GRADING ENLARGEMENTS AND CUT SECTIONS
- C1.30 STORM PLAN
- C1.31 SANITARY SEWER AND WATER PLAN
- C1.32 FIRE RESPONSE PLAN
- C1.33 CIRCULATION PLAN
- C5.10 CIVIL DETAILS
- C5.11 CIVIL DETAILS
- C5.12 CIVIL DETAILS
- C5.13 CITY DETAILS
- C8.10 PHOTOMETRIC PLAN

FOR REFERENCE ONLY

- EC1.0 EROSION CONTROL COVER SHEET
- EC2.0 SITE CLEARING AND DEMO EROSION AND SEDIMENT CONTROL
- EC3.0 SITE GRADING, STREET, AND UTILITY CONSTRUCTION EROSION AND SEDIMENT CONTROL PLAN
- EC4.0 EROSION AND SEDIMENT CONTROL DETAILS

- R0.00 COVER SHEET
- R0.01 SITE NOTES
- R0.02 TYPICAL SECTION
- R0.03 ROAD DETAILS
- R1.10 FRONTAGE IMPROVEMENTS PLAN
- R1.20 GRADING PLAN
- R1.30 UTILITY PLAN AND PROFILE
- R1.40 SIGNING AND STRIPING PLAN
- R1.41 SIGNING AND STRIPING DETAILS
- R1.50 LIGHTING AND ILLUMINATION PLAN
- R1.51 LIGHTING AND ILLUMINATION DETAILS

APPLICANT

PANATTONI
ATTN: BRENDAN MASON
1821 DOCK ST, SUITE 100
TACOMA, WA 98402
PH: (206) 838-3843
E-MAIL: bmason@panattoni.com

CIVIL

MACKENZIE
ATTN: MATT BUTTS/CHAD LAWRENCE
1515 SE WATER AVE, SUITE #100
PORTLAND, OR 97214
PH: (503) 224-9560
FAX: (503) 228-1285
E-MAIL: MWB@mcknze.com/CTL@mcknze.com

SURVEYOR

NORTHWEST SURVEYING INC.
ATTN: SCOTT FIELD
1815 NW 169TH PLACE, SUITE 2090
BEAVERTON, OR 97006
PH: (503) 848-2127
FAX: (503) 848-2179
E-MAIL: nwsurveying@nwsrvy.com

ARCHITECT

MACKENZIE
ATTN: SCOTT MOORE
1515 SE WATER AVENUE, SUITE 100
PORTLAND, OREGON 97214
PH: (503) 224-9560
FAX: (503) 228-1285
E-MAIL: SJM@mcknze.com

SITE ADDRESS

10680 SW CLUTTER ST
SHERWOOD, OR
97140-9552
PARCEL# 3S103D002100

LANDSCAPE ARCHITECT

MACKENZIE
ATTN: NICOLE FERREIRA
1515 SE WATER AVENUE, SUITE 100
PORTLAND, OREGON 97214
PH: (503) 224-9560
FAX: (503) 228-1285
E-MAIL: NRF@mcknze.com

HORIZONTAL DATUM

NGVD 1929 DATUM

BENCH MARK

A 4" ALUMINUM DISK AT THE INTERSECTION OF
COUNTY ROAD NO. 557 AND COUNTY ROAD NO.
561
ELEVATION = 211.78', NGVD 1929

NOTICE TO EXCAVATORS:

ATTENTION: OREGON LAW REQUIRES YOU TO FOLLOW RULES ADOPTED BY THE OREGON UTILITY NOTIFICATION CENTER. THOSE RULES ARE SET FORTH IN OAR 952-001-0010 THROUGH OAR 952-001-0090. YOU MAY OBTAIN COPIES OF THE RULES BY CALLING THE CENTER. (NOTE: THE TELEPHONE NUMBER FOR THE OREGON UTILITY NOTIFICATION CENTER IS (503)-232-1987).

POTENTIAL UNDERGROUND FACILITY OWNERS

Dig Safely.

Call the Oregon One-Call Center
DIAL 811 or 1-800-332-2344

EMERGENCY TELEPHONE NUMBERS

NW NATURAL GAS
M-F 7am-6pm 503-226-4211 Ext.4313
AFTER HOURS 503-226-4211
POE 503-464-7777
QWEST 1-800-573-1311
CITY BUREAU OF MAINTENANCE 503-823-1700
CITY WATER 503-823-4874
VERIZON 1-800-483-1000

GENERAL NOTES

- ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND THE REQUIREMENTS OF CITY OF WILSONVILLE AND THE CURRENT AMERICAN PUBLIC WORKS ASSOCIATION STANDARDS FOR PUBLIC WORKS CONSTRUCTION.
- THE WORKING DRAWINGS ARE GENERALLY DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND OR ELBOW REQUIRED FOR INSTALLATION IN THE SPACE PROVIDED. THEY DO NOT SHOW EVERY DIMENSION, COMPONENT PIECE, SECTION, JOINT OR FITTING REQUIRED TO COMPLETE THE PROJECT. ALL LOCATIONS FOR WORK SHALL BE CHECKED AND COORDINATED WITH EXISTING CONDITIONS IN THE FIELD BEFORE BEGINNING CONSTRUCTION. EXISTING UNDERGROUND UTILITIES LAYING WITHIN THE LIMITS OF EXCAVATION SHALL BE VERIFIED AS TO CONDITION, SIZE AND LOCATION BY UNCOVERING, PROVIDING SUCH IS PERMITTED BY LOCAL PUBLIC AUTHORITIES WITH JURISDICTION, BEFORE BEGINNING CONSTRUCTION. CONTRACTOR TO NOTIFY ENGINEER IF THERE ARE ANY DISCREPANCIES.
- EFFECTIVE EROSION CONTROL IS REQUIRED. EROSION CONTROL DEVICES MUST BE INSTALLED AND MAINTAINED TO MEET THE CITY REQUIREMENTS. THE GOVERNING JURISDICTION MAY, AT ANY TIME, ORDER CORRECTIVE ACTION AND STOPPAGE OF WORK TO ACCOMPLISH EFFECTIVE EROSION CONTROL.
- EFFECTIVE DRAINAGE CONTROL IS REQUIRED. DRAINAGE SHALL BE CONTROLLED WITHIN THE WORK SITE AND SHALL BE ROUTED SO THAT ADJACENT PRIVATE PROPERTY, PUBLIC PROPERTY, AND THE RECEIVING SYSTEM ARE NOT ADVERSELY IMPACTED. THE GOVERNING JURISDICTION MAY, AT ANY TIME, ORDER CORRECTIVE ACTION AND STOPPAGE OF WORK TO ACCOMPLISH EFFECTIVE DRAINAGE CONTROL.
- CONTRACTOR SHALL ADJUST ALL STRUCTURES IMPACTED BY CONSTRUCTION IMPROVEMENTS TO NEW FINISH GRADES.
- EXCAVATION: EXCAVATE FOR SLABS, PAVING, AND OTHER IMPROVEMENTS TO SIZES AND LEVELS SHOWN OR REQUIRED. ALLOW FOR FORM CLEARANCE AND FOR PROPER COMPACTION OF REQUIRED BACKFILLING MATERIAL. EXCAVATOR(S) SHALL NOTIFY ALL UTILITY COMPANIES FOR LINE LOCATIONS SEVENTY-TWO (72) HOURS (MINIMUM) PRIOR TO START OF WORK. DAMAGE TO UTILITIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- WHERE CONNECTING TO AN EXISTING PIPE, AND PRIOR TO ORDERING MATERIALS, THE CONTRACTOR SHALL EXPOSE THE END OF THE EXISTING PIPE VERIFY THE LOCATION, SIZE, AND ELEVATION. NOTIFY ENGINEER OF ANY DISCREPANCIES.

ABBREVIATIONS

TC	TOP OF CURB	WM	WATER METER	CL	CENTERLINE
AC	ASPHALT	OH	OVERHEAD WIRE	GPM	GALLONS PER MINUTE
FH	FIRE HYDRANT	SSWR	SANITARY SEWER	FW	FIRE WATER
FG	FINISHED GRADE	MH	MANHOLE	PWS	PUBLIC WORKS STANDARDS
SW	SIDEWALK ELEVATION	IE	INVERT ELEVATION	ELEV	ELEVATION
TS	TOP OF STAIR	CB	CATCH BASIN	CO	CLEAN OUT
BS	BOTTOM OF STAIR	STM	STORM	INV	INVERT
TYP	TYPICAL	RD	ROOF DRAIN	RD	ROOF DRAIN
R.O.W.	RIGHT OF WAY	FF	FINISHED FLOOR ELEVATION	COG	CITY OF GRESHAM
LS	LANDSCAPE				

GRADING NOTES

- ROUGH GRADING: BRING ALL FINISH GRADES TO APPROXIMATE LEVELS INDICATED. WHERE GRADES ARE NOT OTHERWISE INDICATED, FINISH GRADES ARE TO BE THE SAME AS ADJACENT SIDEWALKS, CURBS, OR THE OBVIOUS GRADE OF ADJACENT STRUCTURE. GRADE TO UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE GRADES ARE GIVEN. ROUND OFF SURFACES, AVOID ABRUPT CHANGES IN LEVELS. ROUGH GRADE TO ALLOW FOR DEPTH OF CONCRETE SLABS, WALKS, AND THEIR BASE COURSES. GRADE FOR PAVED DRIVES AND PAVED PARKING AREAS AS INDICATED AND SPECIFIED HEREIN, AND PROVIDE FOR SURFACE DRAINAGE AS SHOWN, ALLOWING FOR THICKNESS OF SURFACING MATERIAL.
FINISH GRADING: AT COMPLETION OF JOB AND AFTER BACKFILLING BY OTHER CRAFTS HAS BEEN COMPLETED, REFILL AND COMPACT AREAS WHICH HAVE SETTLED OR ERODED TO BRING TO FINAL GRADES.
GRADING TOLERANCES:
ROUGH GRADE AT PAVED OR LANDSCAPED AREAS: ±0.1 FT.
FINISH GRADE PRIOR TO PLACING FINAL SURFACING: ±0.03 FT.
- EFFECTIVE EROSION PREVENTION AND SEDIMENT CONTROL IS REQUIRED. EROSION CONTROL DEVICES MUST BE INSTALLED AND MAINTAINED MEETING THE CITY AND DEQ REQUIREMENTS. THE GOVERNING JURISDICTION MAY, AT ANY TIME, ORDER CORRECTIVE ACTION AND STOPPAGE OF WORK TO ACCOMPLISH EFFECTIVE EROSION CONTROL.
- EFFECTIVE DRAINAGE CONTROL IS REQUIRED. DRAINAGE SHALL BE CONTROLLED WITHIN THE WORK SITE AND SHALL BE SO ROUTED THAT ADJACENT PRIVATE PROPERTY, PUBLIC PROPERTY, AND THE RECEIVING SYSTEM ARE NOT ADVERSELY IMPACTED. THE GOVERNING JURISDICTION MAY, AT ANY TIME, ORDER CORRECTIVE ACTION AND STOPPAGE OF WORK TO ACCOMPLISH EFFECTIVE DRAINAGE CONTROL.
- SITE TOPSOIL SHALL BE STOCKPILED DURING CONSTRUCTION AND USED FOR LANDSCAPING.
- THE SURVEY INFORMATION SHOWN AS A BACKGROUND SCREEN ON THIS SHEET IS BASED ON A SURVEY BY MINISTER AND GLACIER, AND IS SHOWN FOR REFERENCE ONLY. NWS TO VERIFY ALL EXISTING CONDITIONS WITH THEIR OWN RESOURCES PRIOR TO START OF ANY CONSTRUCTION.
- CONTRACTOR TO COORDINATE GRADES AT ENTRANCE WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION.
- 2% MAXIMUM CROSS SLOPE AT ALL ADA-COMPLIANT PARKING SPACES AND LOADING ZONES.
- 5% MAX LONGITUDINAL SLOPE (EXCLUDING RAMPS) AT PEDESTRIAN SIDEWALK CONNECTIONS BETWEEN PUBLIC R.O.W. AND BUILDING ENTRANCES.
- WHERE SLOPES ARE STEEPER THAN 3:1, CONTRACTOR SHALL INSTALL JUTE MATTING. SLOPE SHALL BE PREPARED TO ENSURE COMPLETE AND DIRECT CONTACT OF MATTING WITH SOIL. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

UTILITY NOTES

- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF CITY OF WILSONVILLE, DEPARTMENT OF ENVIRONMENTAL SERVICE, AND THE CURRENT EDITION OF THE UNIFORM PLUMBING CODE AND THE INTERNATIONAL BUILDING CODE. ALL WORK WITHIN THE PUBLIC R.O.W. REQUIRES A PUBLIC WORKS PERMIT.
- THE WORKING DRAWINGS ARE GENERALLY DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND OR ELBOW REQUIRED FOR INSTALLATION IN THE SPACE PROVIDED. THEY DO NOT SHOW EVERY DIMENSION, COMPONENT PIECE, SECTION, JOINT OR FITTING REQUIRED TO COMPLETE THE PROJECT. ALL LOCATIONS FOR WORK SHALL BE CHECKED AND COORDINATED WITH EXISTING CONDITIONS IN THE FIELD BEFORE BEGINNING CONSTRUCTION. EXISTING UNDERGROUND UTILITIES LAYING WITHIN THE LIMITS OF EXCAVATION SHALL BE VERIFIED AS TO CONDITION, SIZE AND LOCATION BY UNCOVERING, PROVIDING SUCH IS PERMITTED BY LOCAL PUBLIC AUTHORITIES WITH JURISDICTION, BEFORE BEGINNING CONSTRUCTION. CONTRACTOR TO NOTIFY ENGINEER IF THERE ARE ANY DISCREPANCIES.
- PROVIDE CLEANOUTS AS REQUIRED IN THE CURRENT EDITION OF THE UNIFORM PLUMBING CODE.
- ALL STORM PIPING IS SIZED FOR A MANNING'S "N" VALUE = 0.013. ALL STORM PIPING IS DESIGNED USING CONCENTRIC PIPE TO PIPE AND WYE FITTINGS, UNLESS OTHERWISE NOTED.
- SEE MECHANICAL DRAWINGS FOR UTILITIES LOCATED WITHIN THE BUILDING AND TO 5' OUTSIDE THE BUILDING.
- ALL DOWNSPOUT LEADERS TO BE 4" AT 2.0% MIN, UNLESS NOTED OTHERWISE.
- VERIFY LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES BY POTHOLES PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF DISCREPANCIES.
- THE SURVEY INFORMATION SHOWN AS A BACKGROUND SCREEN ON THIS SHEET IS BASED ON A SURVEY PREPARED BY MINISTER AND GLAESER, INC.
- CONTRACTOR TO PROVIDE POWER TO IRRIGATION CONTROLLER. SEE SPECIFICATIONS AND LANDSCAPE PLANS.
- SEE BUILDING PLUMBING DRAWINGS FOR PIPING WITHIN THE BUILDING AND UP TO 5' OUTSIDE THE BUILDING, INCLUDING ANY FOUNDATION DRAINAGE PIPING.
- CONTRACTOR TO MAINTAIN MINIMUM 3 FT OF COVER OVER ALL WATER LINE.
- PROVIDE CLEANOUTS AS REQUIRED IN THE CURRENT UNIFORM PLUMBING CODE CHAPTER 7, SECTIONS 707 AND 719, AND CHAPTER 11, SECTION 1101.12. NOTE: NOT ALL REQUIRED CLEANOUTS ARE SHOWN ON THE PLANS.

LEGEND

	EXISTING	PROPOSED
FOUND LOT CORNER		
SANITARY SEWER MANHOLE		
SANITARY SEWER CLEANOUT		
STORM DRAINAGE CATCH BASIN		
STORM DRAINAGE MANHOLE		
FIRE HYDRANT		
FIRE DEPARTMENT CONNECTION		
WATER METER		
WATER VALVE		
LIGHT		
UTILITY POLE		
GUY WIRE		
ELECTRIC METER		
POWER JUNCTION BOX		
TELEPHONE JUNCTION BOX		
TELEPHONE MANHOLE		
SIGN		
TREE		
UNDERGROUND STORM DRAINAGE LINE		
UNDERGROUND SANITARY SEWER LINE		
UNDERGROUND WATER LINE		
UNDERGROUND POWER LINE		
OVERHEAD UTILITY LINE		
SPOT GRADE		
RIM=RIM ELEVATION		
TC=TOP OF CURB ELEVATION		
FG=FINISH GRADE ELEVATION		
EX=EXISTING ELEVATION		
SW=SIDEWALK ELEVATION		
BS=BOTTOM OF STAIR ELEVATION		
TS=TOP OF STAIR ELEVATION		
MATCH=MATCH EXISTING ELEVATION		
PARKING COUNT		
FLOW LINE		
SURFACE ELEVATION CONTOUR		
SLOPE ARROW		
CATCH BASIN INLET PROTECTION		
SEDIMENT FENCE		
TREE PROTECTION FENCING		
DRAINAGE FLOW PATTERN		
CONSTRUCTION ENTRANCE		
VERTICAL CURB PAINTED RED W/FIRE LANE SIGNED, COORDINATE WITH FIRE MARSHAL		
VERTICAL CURB		
HEAVY DUTY PAVING SECTION (SEE GEOTECH REPORT AND 3/C5.11)		
LIGHT DUTY PAVING SECTION (SEE GEOTECH REPORT AND 3/C5.11)		
CONCRETE PAVING SECTION (SEE GEOTECH REPORT AND 3/C5.11)		
SIDEWALK (SEE 2/C5.11)		
PUBLIC UTILITY EASEMENT		
PROPERTY LINE		



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Project

COFFEE CREEK
LOGISTICS CENTER

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REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
**NOTES AND
LEGEND**

DRAWN BY:

CHECKED BY:

SHEET:

C0.01

JOB NO. **2190382.00**

REVIEW SET 6-22-2020

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REVISION SCHEDULE		
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**EXISTING
CONDITIONS
AND
DEMOLITION
PLAN**

DRAWN BY: CME

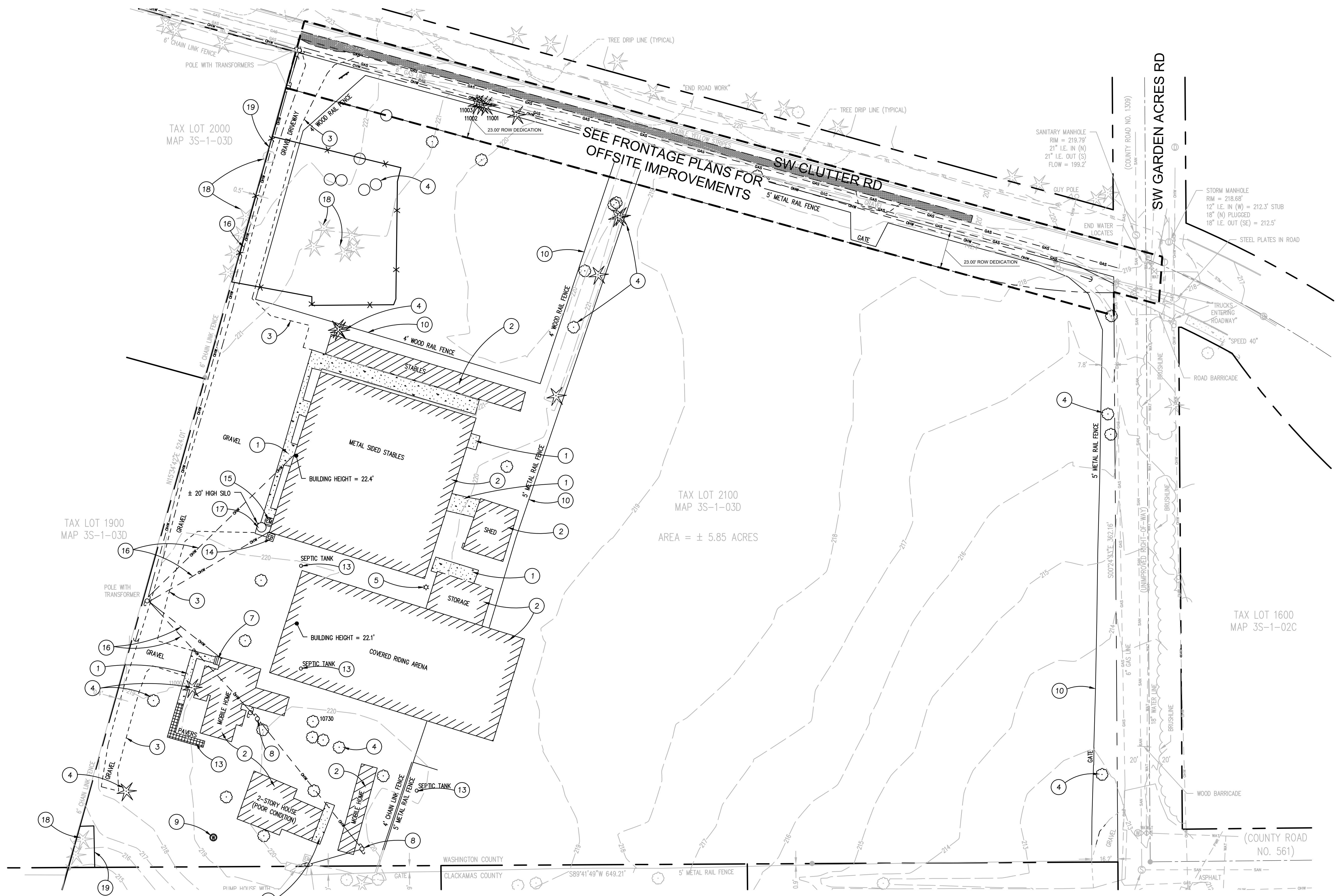
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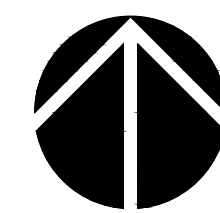
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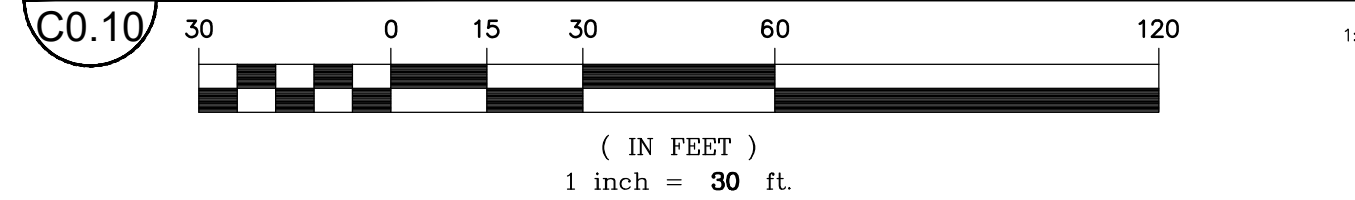


TREE PROTECTION NOTES

1. PLACING CONSTRUCTION MATERIALS NEAR TREE. NO PERSON MAY CONDUCT ANY CONSTRUCTION ACTIVITY LIKELY TO BE INJURIOUS TO A TREE DESIGNATED TO REMAIN, INCLUDING, BUT NOT LIMITED TO, PLACING SOLVENTS, BUILDING MATERIAL, CONSTRUCTION EQUIPMENT, OR DEPOSITING SOIL, OR PLACING IRRIGATED LANDSCAPING, WITHIN THE DRIP LINE, UNLESS A PLAN FOR SUCH CONSTRUCTION ACTIVITY HAS BEEN APPROVED BY THE PLANNING DIRECTOR OR DEVELOPMENT REVIEW BOARD BASED UPON THE RECOMMENDATIONS OF AN ARBORIST.
2. ATTACHMENTS TO TREES DURING CONSTRUCTION. NOTWITHSTANDING THE REQUIREMENT OF WC 4.620.10(1)(A), NO PERSON SHALL ATTACH ANY DEVICE OR WIRE TO ANY PROTECTED TREE UNLESS NEEDED FOR TREE PROTECTION.
3. PROTECTIVE BARRIER. BEFORE DEVELOPMENT, LAND CLEARING, FILLING OR ANY LAND ALTERATION FOR WHICH A TREE REMOVAL PERMIT IS REQUIRED, THE DEVELOPER SHALL ERECT AND MAINTAIN SUITABLE BARRIERS AS IDENTIFIED BY AN ARBORIST TO PROTECT REMAINING TREES. PROTECTIVE BARRIERS SHALL REMAIN IN PLACE UNTIL THE CITY AUTHORIZES THEIR REMOVAL OR ISSUES A FINAL CERTIFICATE OF OCCUPANCY, WHICHEVER OCCURS FIRST. BARRIERS SHALL BE SUFFICIENTLY SUBSTANTIAL TO WITHSTAND NEARBY CONSTRUCTION ACTIVITIES.



1 EXISTING CONDITIONS AND DEMOLITION PLAN



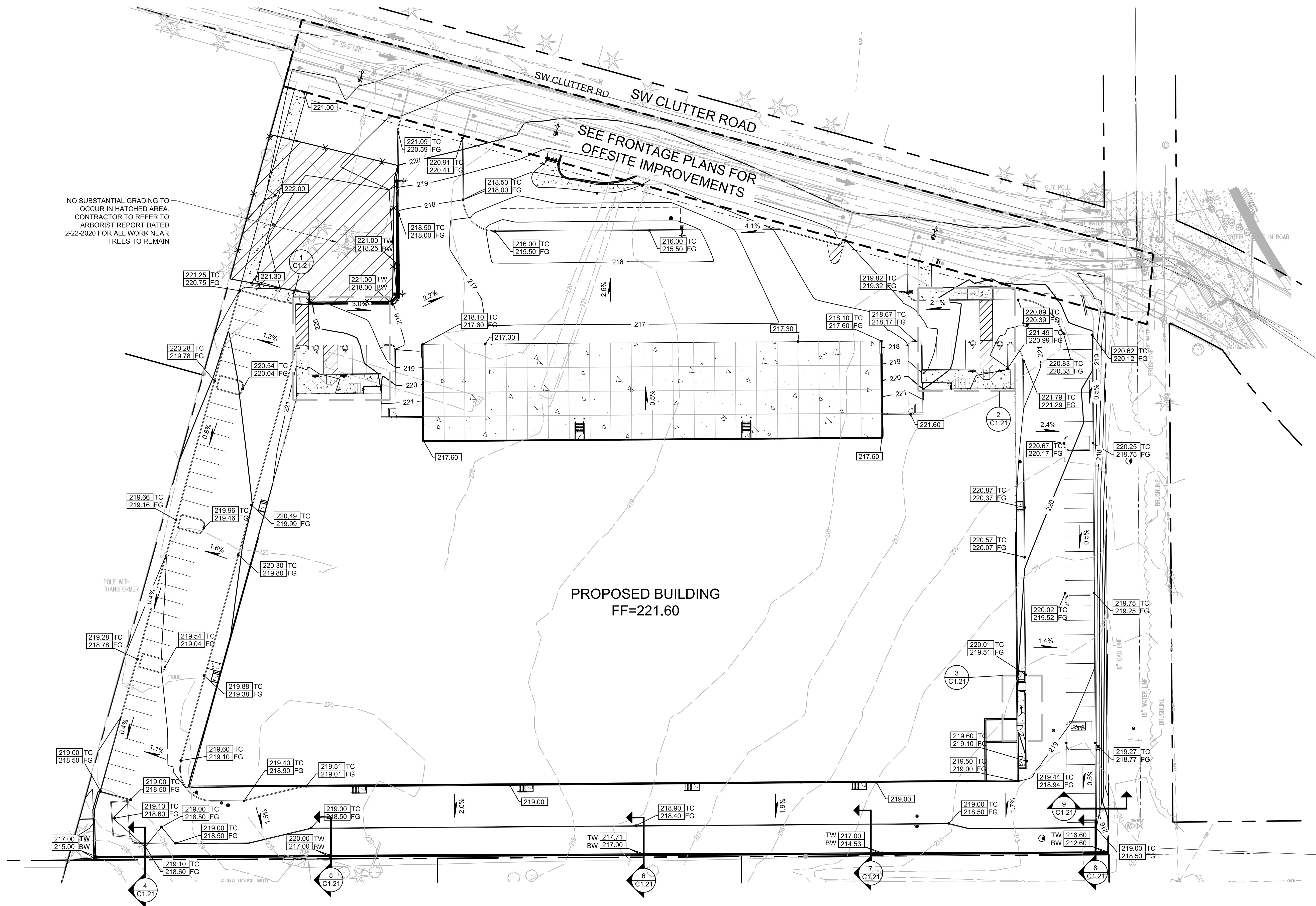
KEYNOTES

1. EXISTING CONCRETE PAD/PATH TO BE REMOVED
2. EXISTING CONCRETE PAD AND BUILDING TO BE REMOVED
3. EXISTING GRAVEL TO BE REMOVED
4. EXISTING TREE TO BE REMOVED
5. EXISTING LIGHT POLE TO BE REMOVED
6. EXISTING SIDEWALK ON PROPERTY TO BE REMOVED
7. EXISTING DECK TO BE REMOVED
8. EXISTING POWER POLE TO BE REMOVED
9. EXISTING WATER CONTROL VALVE AND ASSOCIATED PIPING TO BE REMOVED
10. EXISTING FENCE TO BE REMOVED
11. NOT USED
12. EXISTING PAVERS TO BE REMOVED
13. EXISTING SEPTIC TANK TO BE REMOVED
14. EXISTING POWER JUNCTION BOX TO BE REMOVED
15. EXISTING POWER METER TO BE REMOVED
16. EXISTING OVERHEAD POWER TO BE REMOVED
17. EXISTING SILO TO BE REMOVED
18. EXISTING TREES TO REMAIN. CONTRACTOR TO PROTECT TREES DURING CONSTRUCTION
19. PROPOSED TREE PROTECTION FENCING

DEMOLITION NOTES

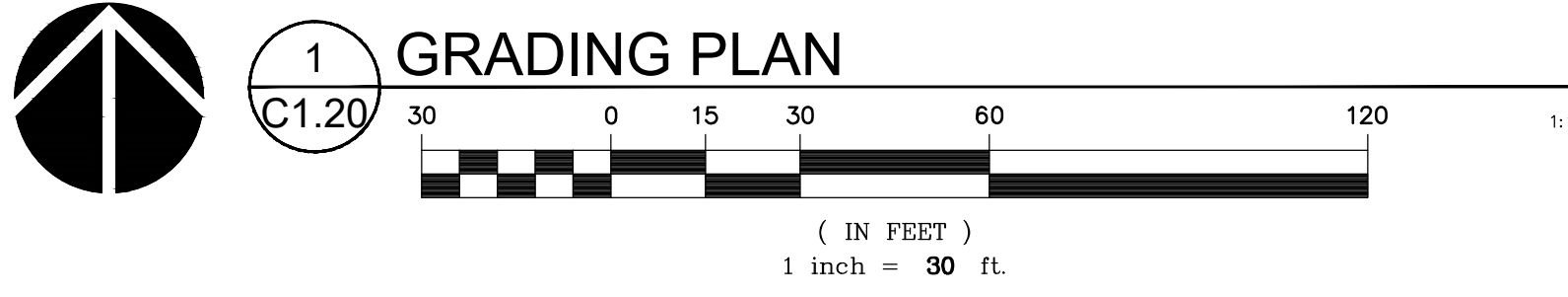
1. INSTALL EROSION CONTROL MEASURES AND TEMPORARY FENCING PRIOR TO ANY DEMOLITION ACTIVITIES.
2. DEMOLISH AND REMOVE ALL STRUCTURES AND ASSOCIATED FEATURES (APPURTENANCES), AS SHOWN.
3. DEMOLISH ALL PAVED AREAS ON SITE AS SHOWN, DOWN TO NATIVE SUBGRADE.
4. ALL VEGETATION AND DELETERIOUS MATERIALS WITHIN THE LIMITS OF WORK SHALL BE STRIPPED AND REMOVED FROM THE SITE PRIOR TO GRADING WORK, UNLESS NOTED OTHERWISE (I.E. PROTECTED TREES).
5. PROTECT ALL EXISTING LANDSCAPING AT AND BEYOND LIMITS OF WORK.
6. PROTECT ALL UNDERGROUND UTILITY SERVICES AND CONDUIT UNLESS NOTED OTHERWISE.
7. WHERE APPLICABLE, VERIFY DISCONNECT OF GAS AND ELECTRIC WITH UTILITY. CUT/CAP UTILITY SERVICES (STORMWATER AND SANITARY WITHIN 5 FEET OF EDGE OF R.O.W.) CAP WATERLINE ON OWNER'S SIDE OF METER AND PERFORM OTHER DEMOLITION TASKS AS REQUIRED. ADDITIONAL REMOVALS MAY BE REQUIRED BY THE AUTHORITIES HAVING JURISDICTION AND THE CONTRACTOR SHALL CONFIRM ACCORDINGLY PRIOR TO BID.

REVISION SCHEDULE		
Delta	Issued As	Issue Date



NO SUBSTANTIAL GRADING TO OCCUR IN HATCHED AREA. CONTRACTOR TO REFER TO ARBORIST REPORT DATED 2-22-2020 FOR ALL WORK NEAR TREES TO REMAIN

PROPOSED BUILDING
FF=221.60



CUT/FILL VOLUMES

CUT = 3,700 CY
FILL = 7,050 CY
NET AMOUNT (FILL) = 3,350 CY

REVISION SCHEDULE		
Delta	Issued As	Issue Date

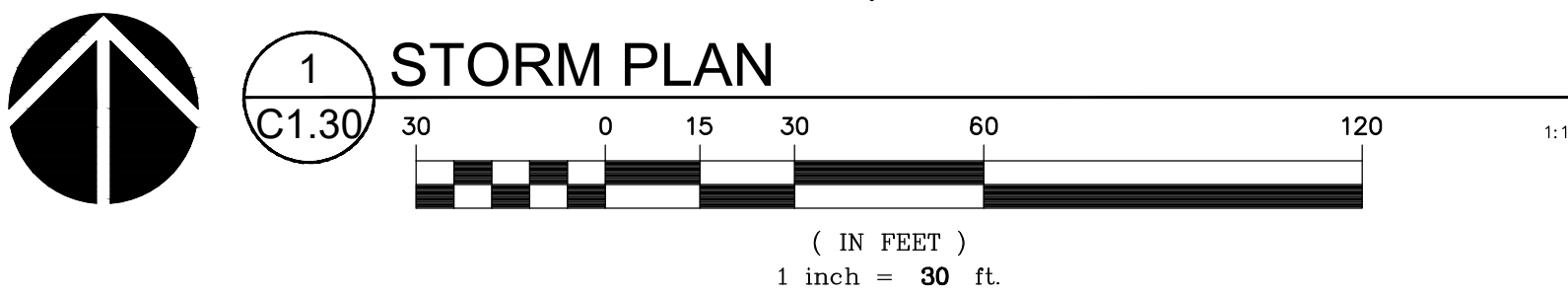
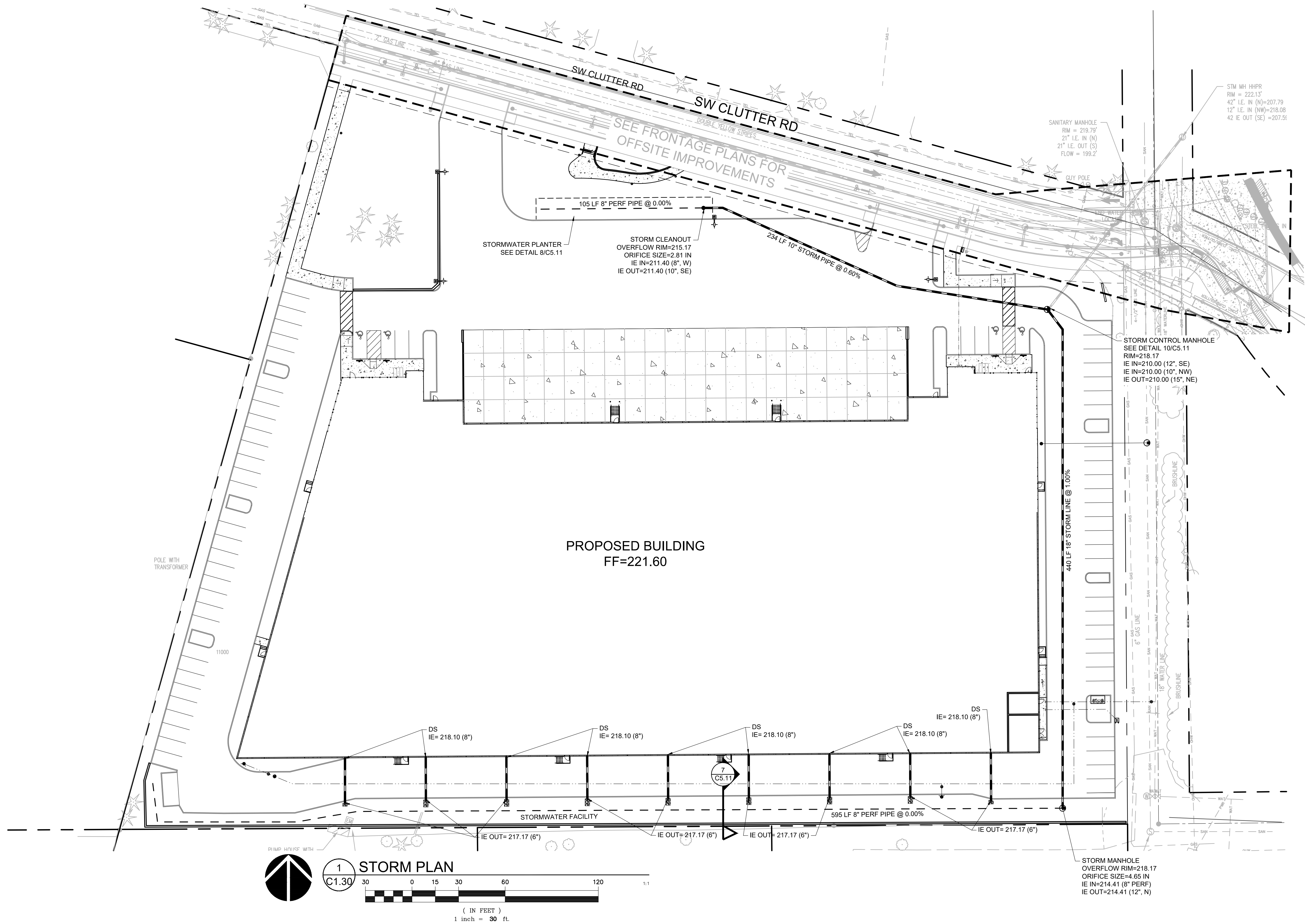
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STORM PLAN

DRAWN BY: CME
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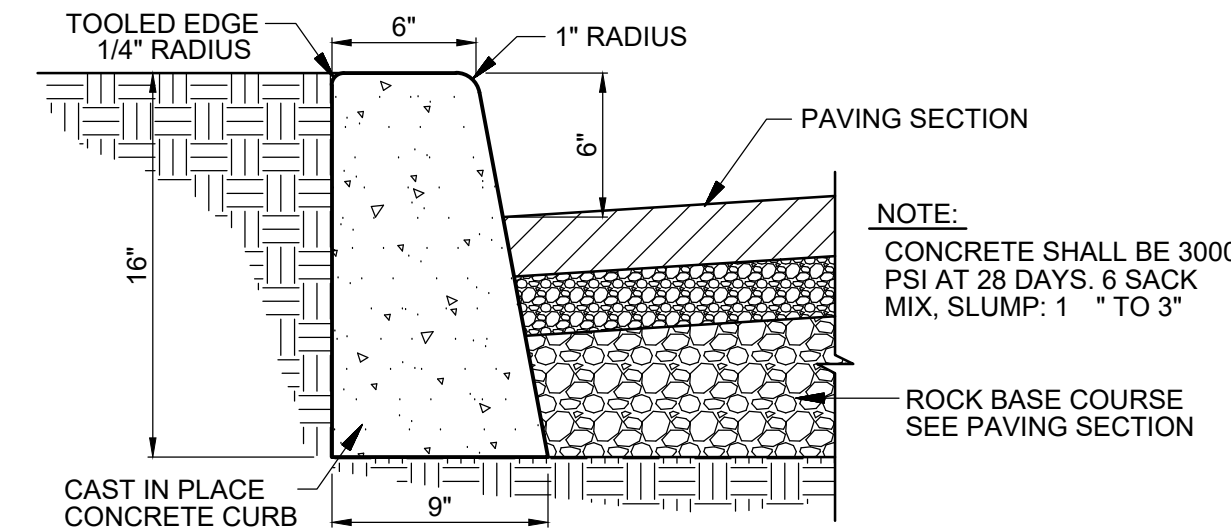
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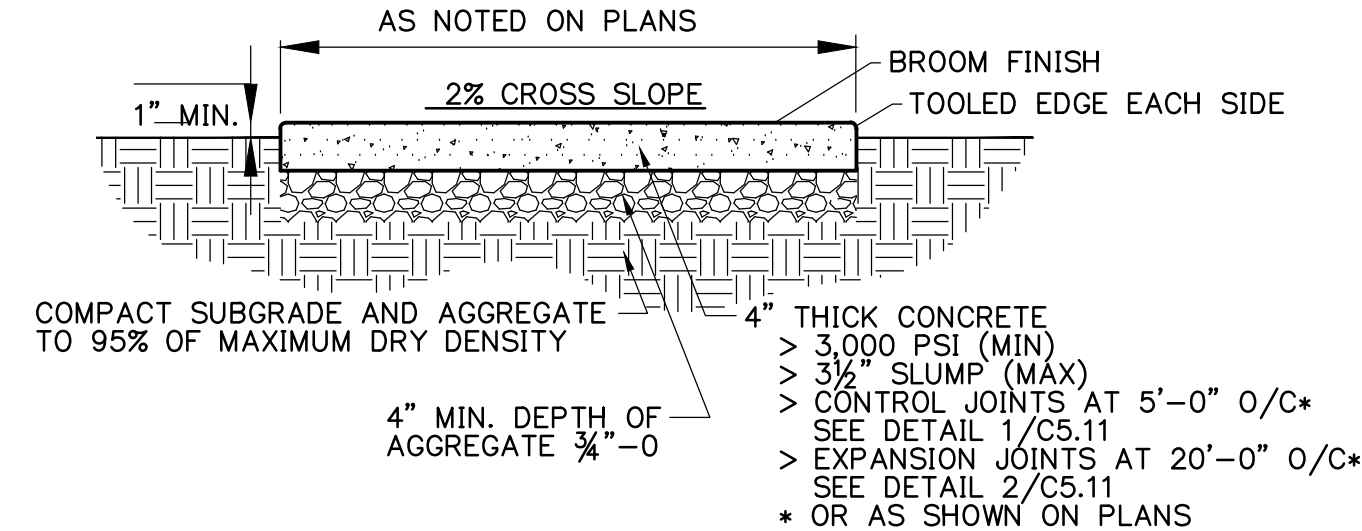


1
C1.30
STORM PLAN

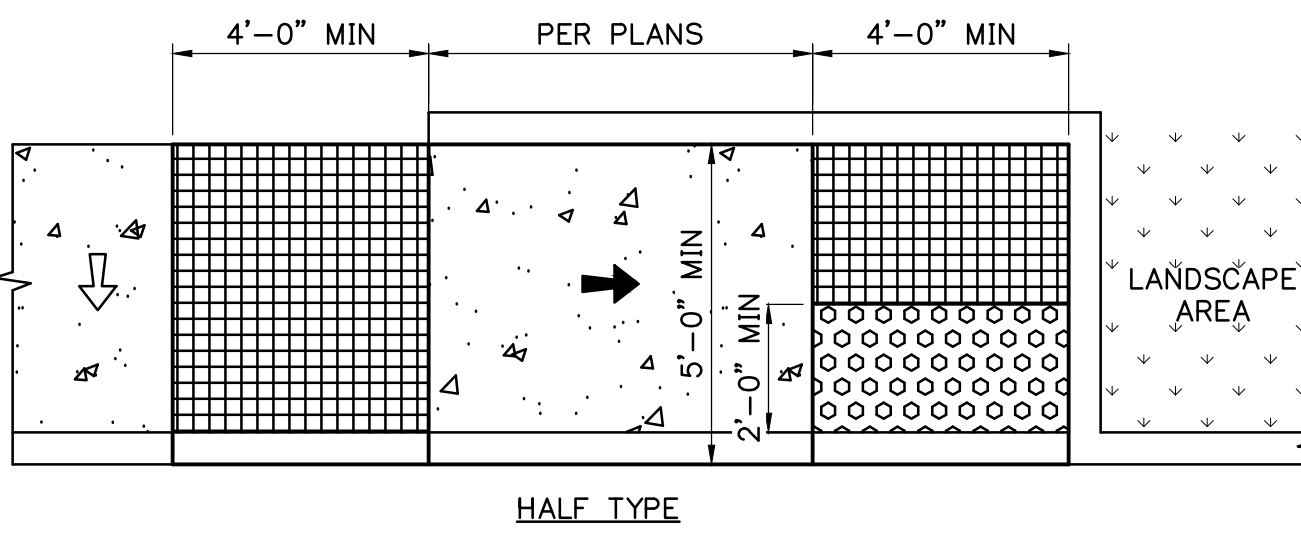
REVISION SCHEDULE		
Delta	Issued As	Issue Date



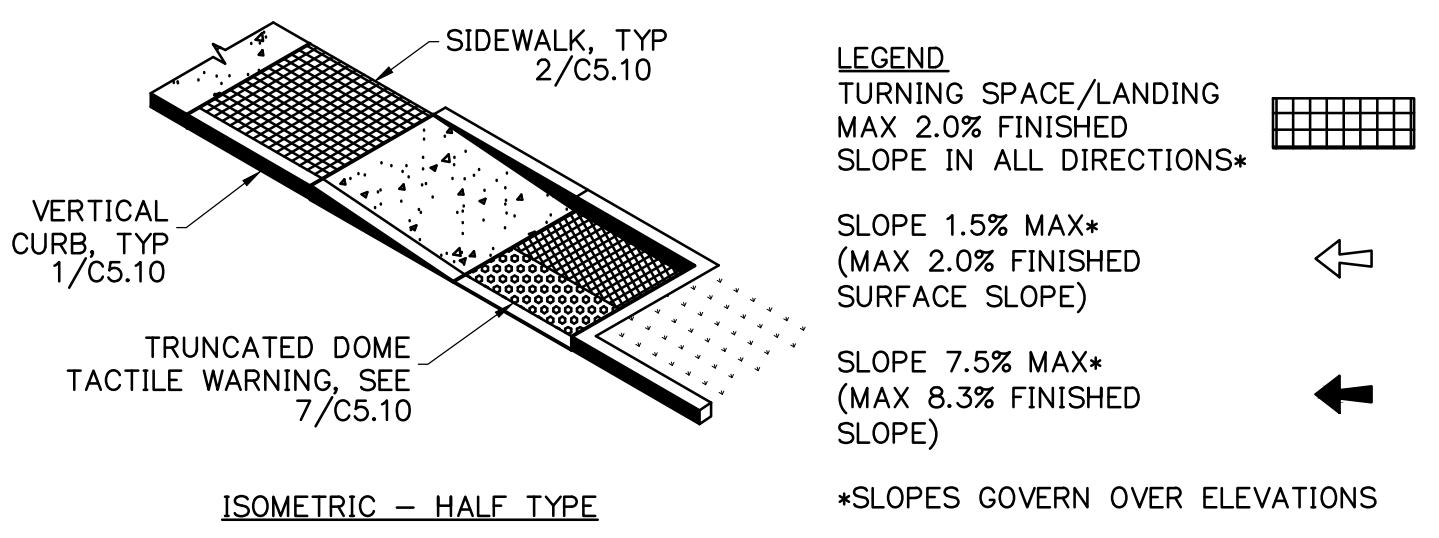
1 CONCRETE VERTICAL CURB
C5.10 N.T.S.



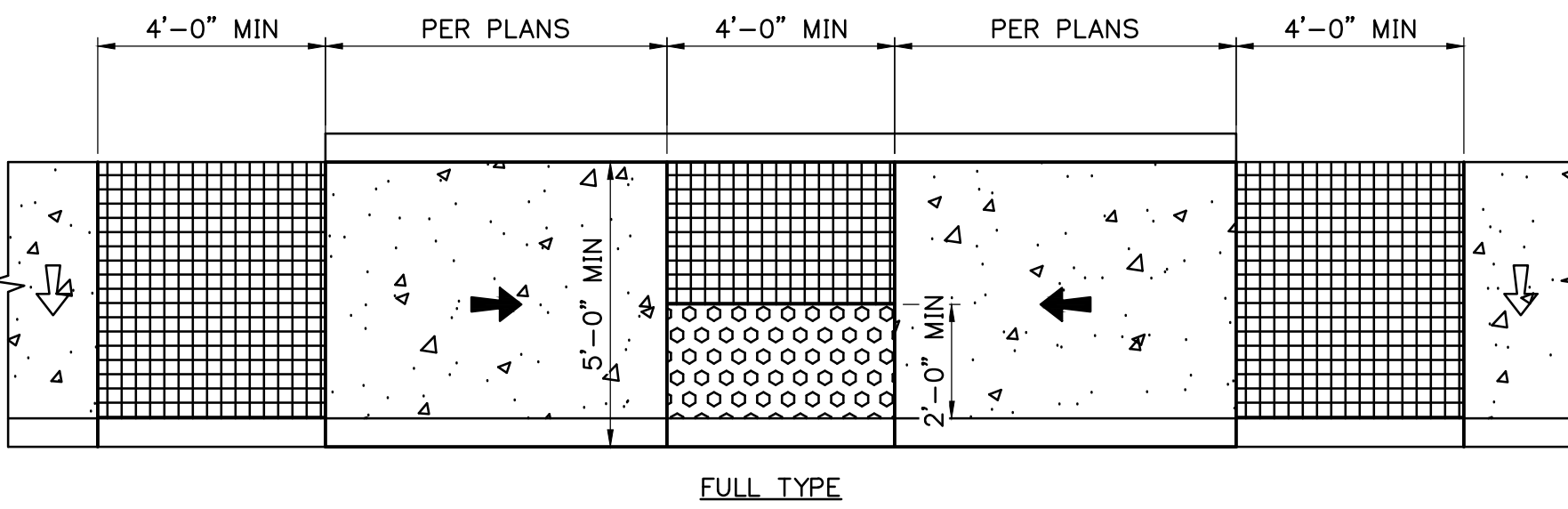
2 CONCRETE SIDEWALK
C5.10 N.T.S.



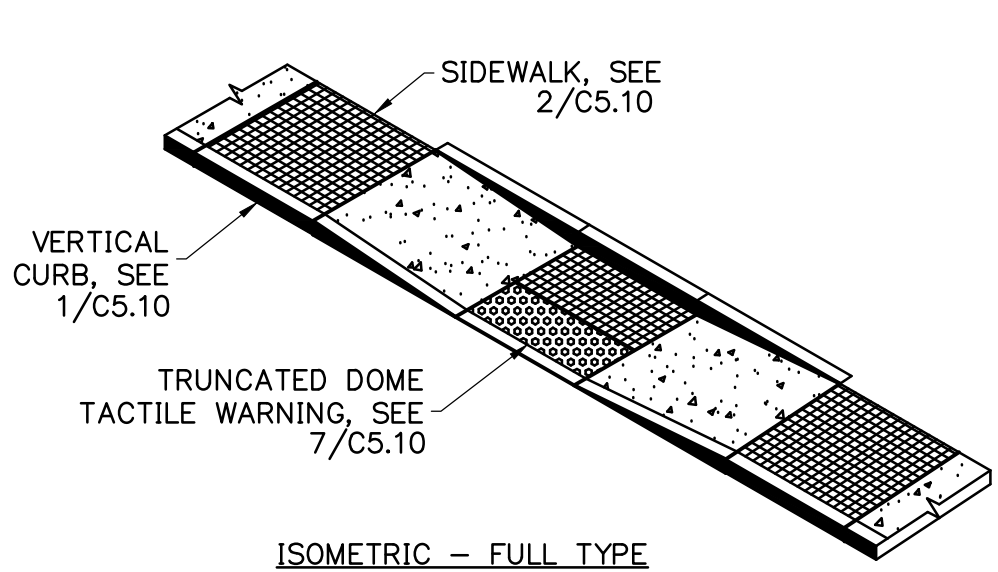
HALF TYPE



ISOMETRIC - HALF TYPE

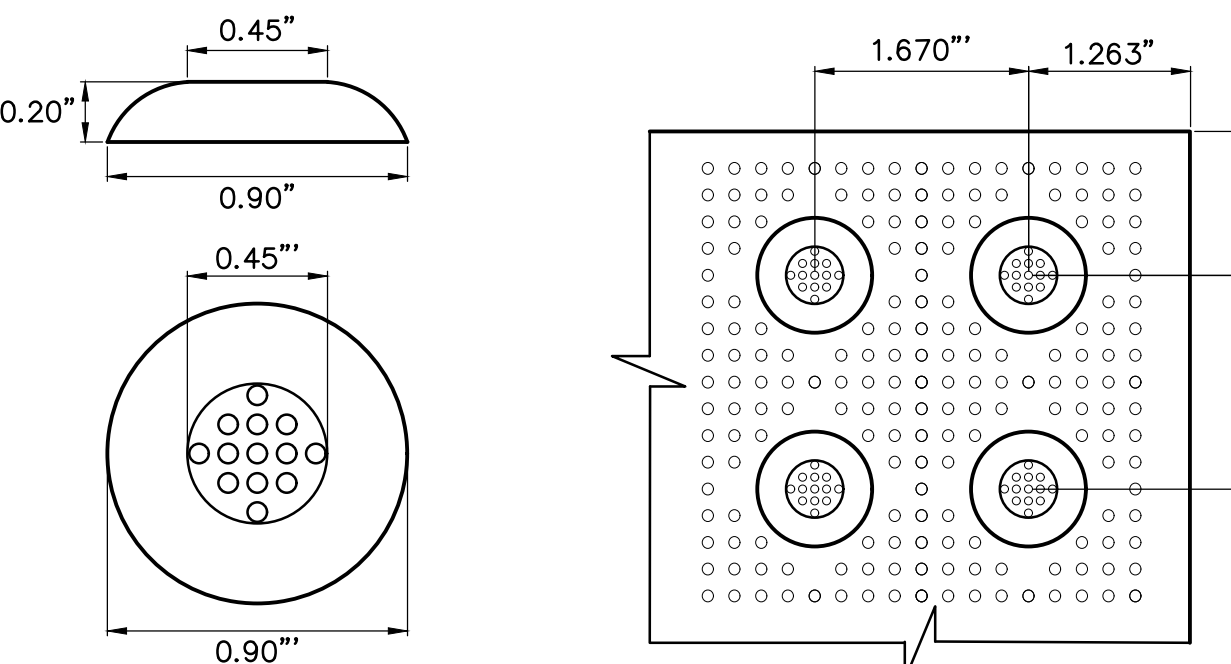


FULL TYPE



ISOMETRIC - FULL TYPE

4 PARALLEL CURB RAMPS
C5.10 N.T.S.

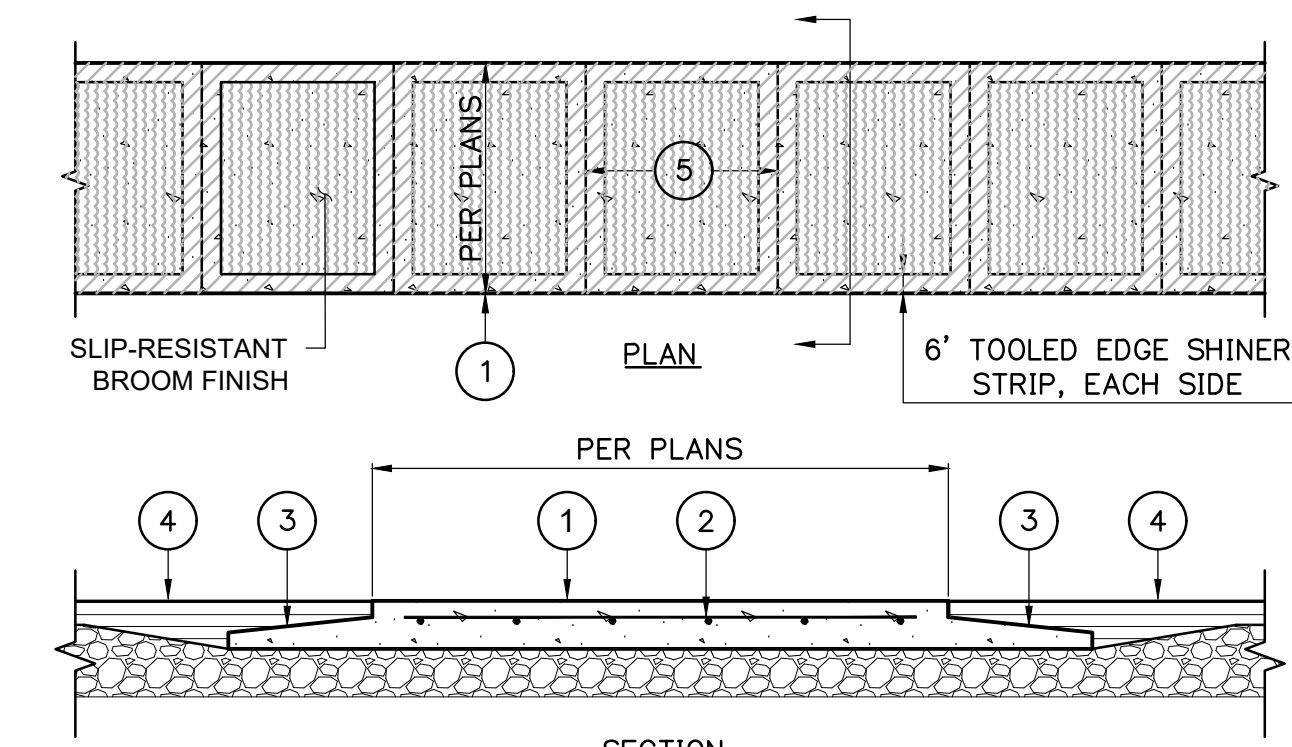


TRUNCATED DOME DETAIL

TRUNCATED DOME PANEL

- NOTES:
1. PLACE TRUNCATED DOME DETECTABLE WARNING TEXTURE (OR CAST-IN-PLACE PANELS) IN THE LOWER 24" FOR THE FULL WIDTH OF THE RAMP
 2. ARRANGE DOMES USING AN INLINE PATTERN AS SHOWN IN THE DETAIL ABOVE
 3. COLOR OF DOME TEXTURE (OR PANELS) TO BE SAFETY YELLOW, UNLESS NOTED OTHERWISE ON PLANS
 4. SURFACE APPLIED PANELS SHALL ONLY BE ALLOWED IN RETROFIT CONDITIONS AND WITH THE PRIOR APPROVAL OF THE ENGINEER

7 TRUNCATED DOMES
C5.10 N.T.S.

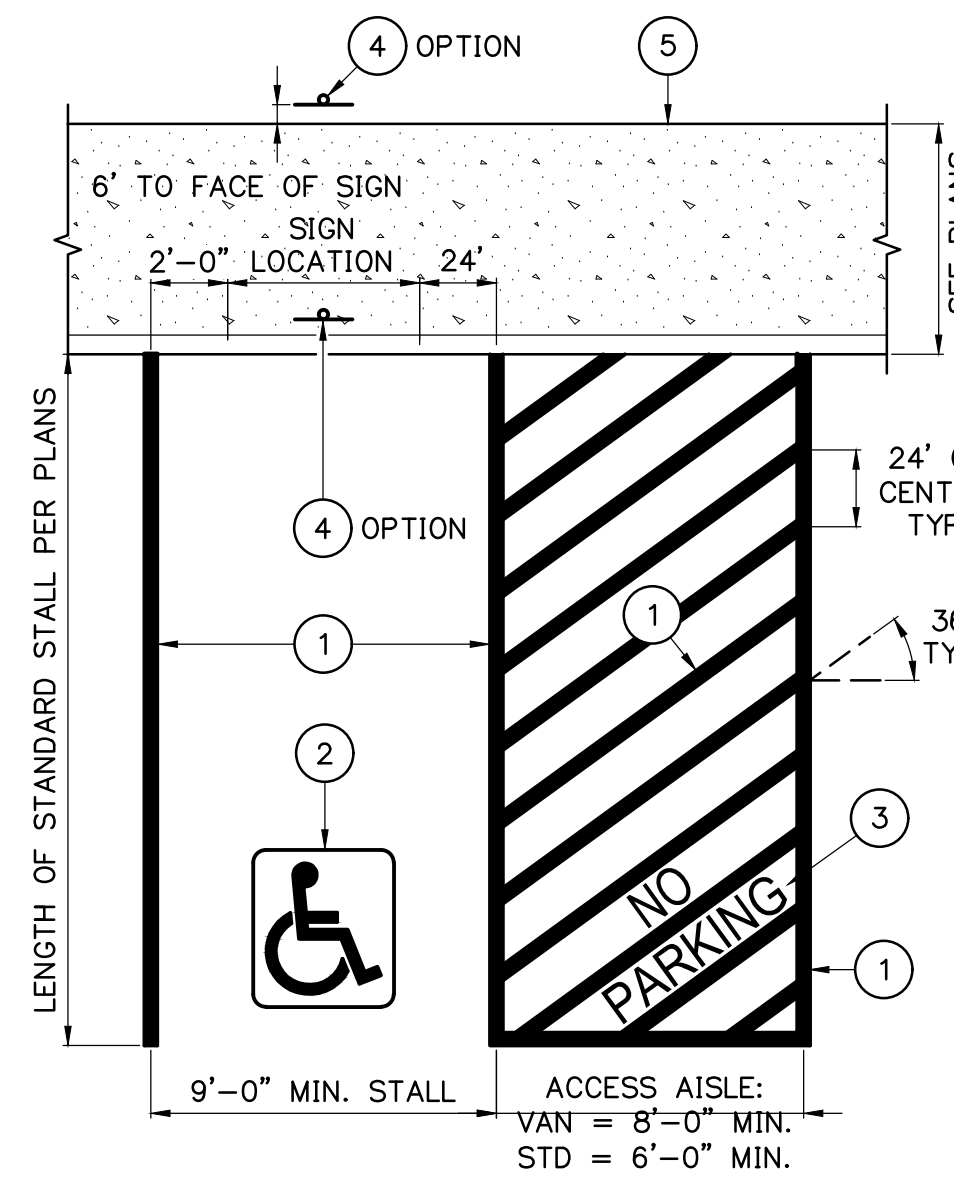


SECTION

- KEYNOTES:
1. CONCRETE CROSSWALK: CONCRETE THICKNESS AND AGGREGATE BASE SECTION TO MATCH HEAVY DUTY VEHICULAR PAVEMENT SECTION PER PLANS
 2. #4 REBAR AT 1'-0" ON CENTER, EACH WAY
 3. ASPHALT TO CONCRETE TRANSITION PER 9/C5.10
 4. ADJACENT PAVEMENT SECTION PER PLANS. APPLY SEALANT AT JOINT
 5. CONTROL AND EXPANSION JOINTS PER SIDEWALK DETAIL 2/C5.10

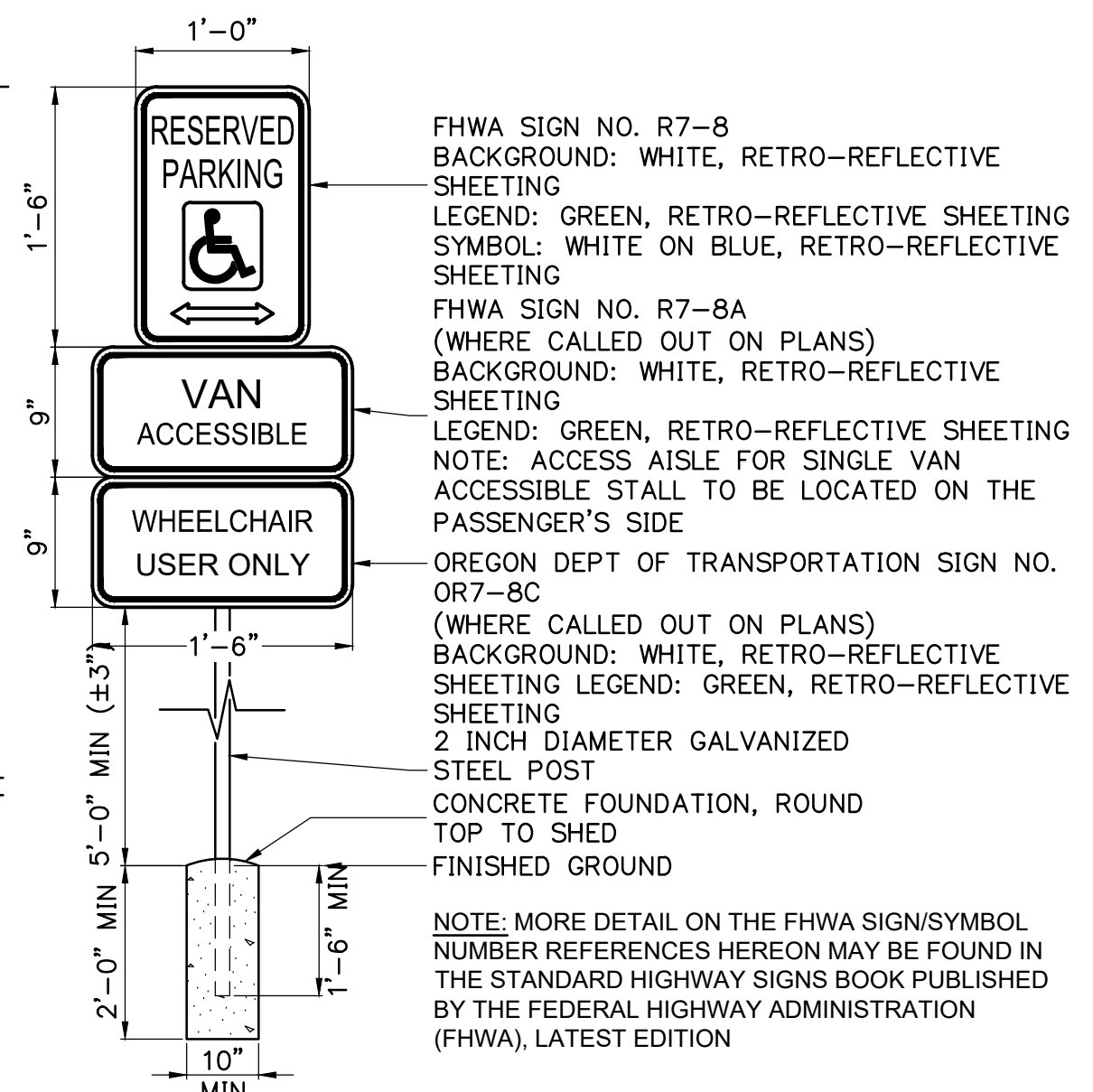
- NOTES:
1. CONCRETE AND REBAR PER PROJECT SPECIFICATIONS

8 CONCRETE CROSSWALK
C5.10 N.T.S.

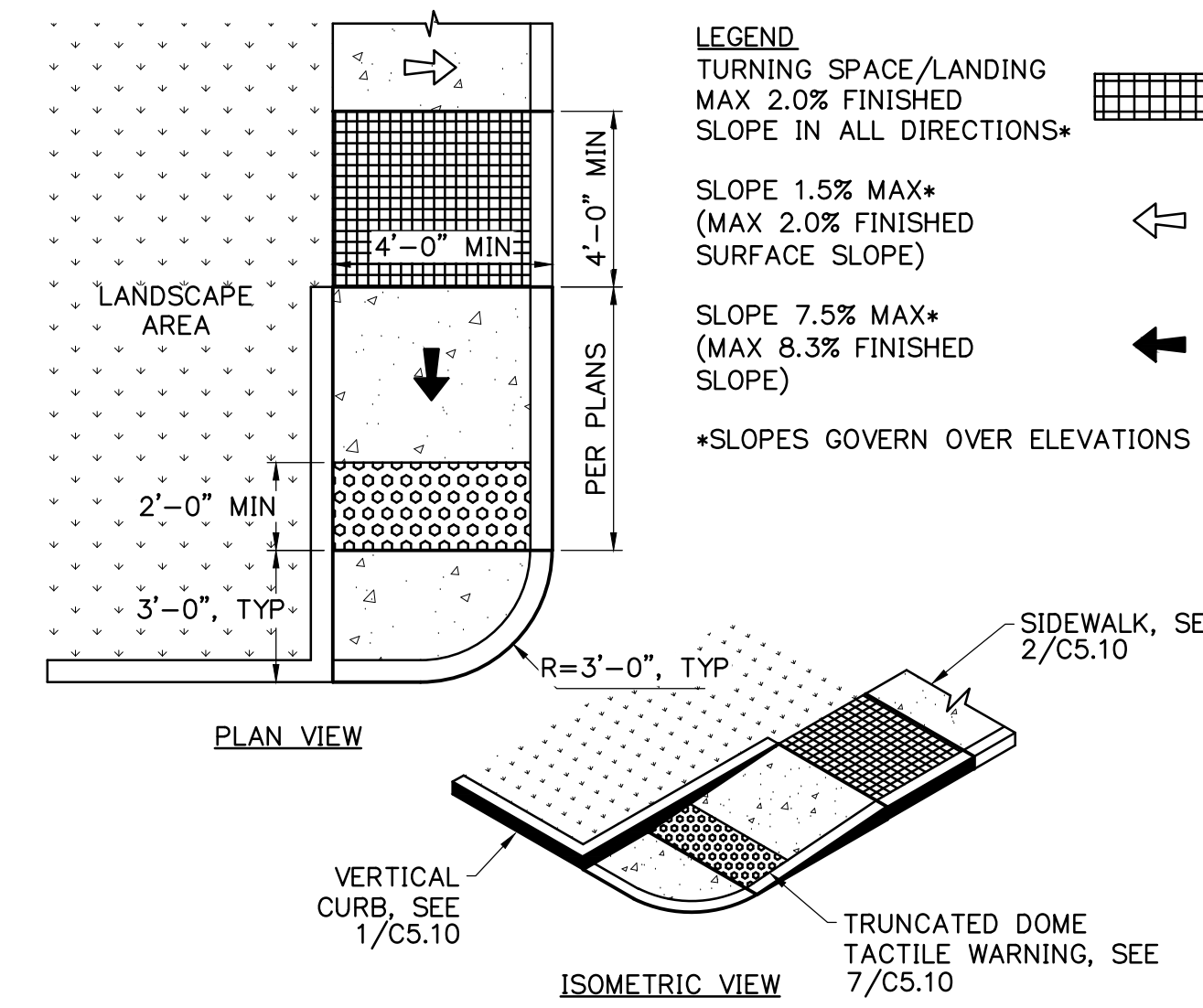


3 ACCESSIBLE PARKING STALL
C5.10 N.T.S.

- KEYNOTES:
1. 4" WIDE WHITE STRIPE
 2. WHITE RETROREFLECTIVE PAVEMENT MARKING SYMBOL (FHWA 3B-22) WITH BLUE RETROREFLECTIVE BACKGROUND (41" TALL x 36" WIDE WITH 4" STROKE WIDTH). OFFSET BACKGROUND LIMIT 4" FROM SYMBOL
 3. YELLOW RETROREFLECTIVE "NO PARKING" PAVEMENT MARKING LEGEND ("NO" SHALL BE 12" TALL x 18" WIDE AND "PARKING" SHALL BE 12" TALL x 60" WIDE)
 4. ACCESSIBLE PARKING SPACE SIGNAGE PER DETAIL HEREON. MAINTAIN 48" CLEAR ACCESS AROUND SIGN. INSURE NO INTERFERENCE WITH PARKING STALL OVERHANG
 5. SEE PLANS FOR PROPOSED CURB/SIDEWALK/RAMPS/ETC IMPROVEMENTS TO ACCOMMODATE ACCESSIBLE PARKING STALL ACCESS



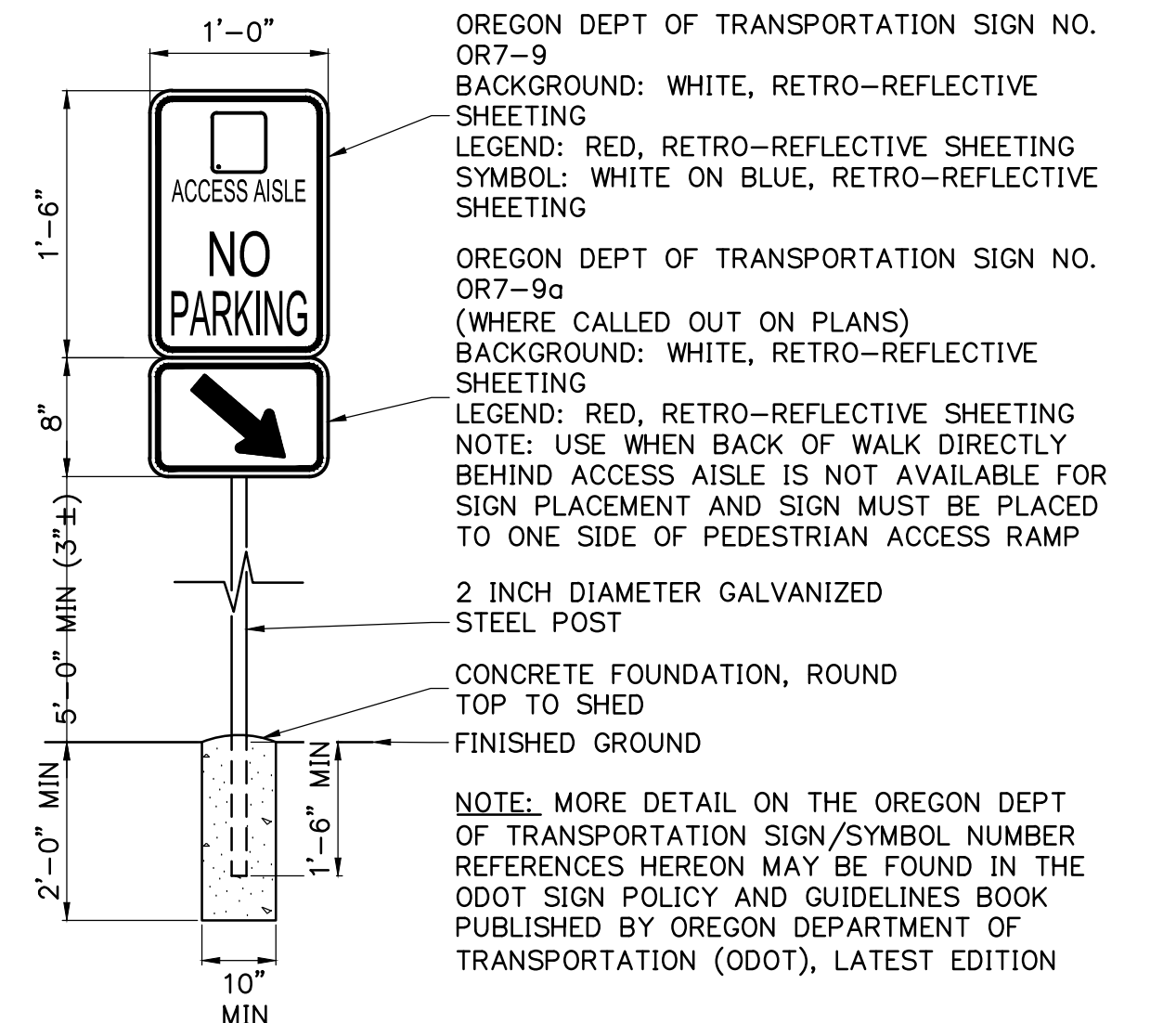
- FHWA SIGN NO. R7-8
BACKGROUND: WHITE, RETRO-REFLECTIVE SHEETING
LEGEND: GREEN, RETRO-REFLECTIVE SHEETING
SYMBOL: WHITE ON BLUE, RETRO-REFLECTIVE SHEETING
- FHWA SIGN NO. R7-8A
(WHERE CALLED OUT ON PLANS)
BACKGROUND: WHITE, RETRO-REFLECTIVE SHEETING
LEGEND: GREEN, RETRO-REFLECTIVE SHEETING
NOTE: ACCESS AISLE FOR SINGLE VAN ACCESSIBLE STALL TO BE LOCATED ON THE PASSENGER'S SIDE
- OREGON DEPT OF TRANSPORTATION SIGN NO. OR7-8C
(WHERE CALLED OUT ON PLANS)
BACKGROUND: WHITE, RETRO-REFLECTIVE SHEETING
LEGEND: GREEN, RETRO-REFLECTIVE SHEETING
2 INCH DIAMETER GALVANIZED STEEL POST
CONCRETE FOUNDATION, ROUND TOP TO SHED
FINISHED GROUND
- NOTE: MORE DETAIL ON THE FHWA SIGN/SYMBOL NUMBER REFERENCES HEREON MAY BE FOUND IN THE STANDARD HIGHWAY SIGNS BOOK PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION (FHWA), LATEST EDITION



PLAN VIEW

ISOMETRIC VIEW

5 CORNER CURB RAMP
C5.10 N.T.S.



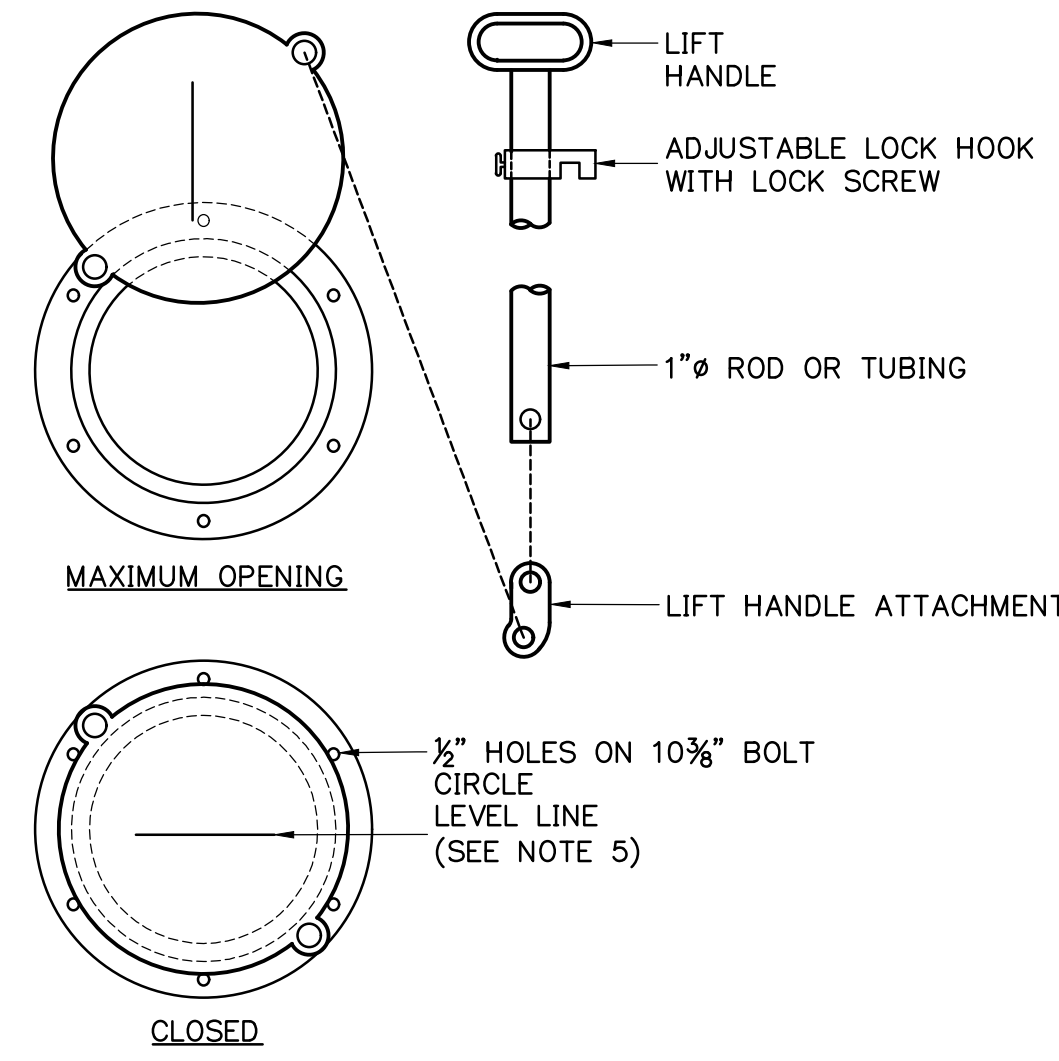
6 ACCESSIBLE PARKING AISLE SIGN
C5.10 N.T.S.

- OREGON DEPT OF TRANSPORTATION SIGN NO. OR7-9
BACKGROUND: WHITE, RETRO-REFLECTIVE SHEETING
LEGEND: RED, RETRO-REFLECTIVE SHEETING
SYMBOL: WHITE ON BLUE, RETRO-REFLECTIVE SHEETING
- OREGON DEPT OF TRANSPORTATION SIGN NO. OR7-9a
(WHERE CALLED OUT ON PLANS)
BACKGROUND: WHITE, RETRO-REFLECTIVE SHEETING
LEGEND: RED, RETRO-REFLECTIVE SHEETING
NOTE: USE WHEN BACK OF WALK DIRECTLY BEHIND ACCESS AISLE IS NOT AVAILABLE FOR SIGN PLACEMENT AND SIGN MUST BE PLACED TO ONE SIDE OF PEDESTRIAN ACCESS RAMP
- 2 INCH DIAMETER GALVANIZED STEEL POST
CONCRETE FOUNDATION, ROUND TOP TO SHED
FINISHED GROUND
- NOTE: MORE DETAIL ON THE OREGON DEPT OF TRANSPORTATION SIGN/SYMBOL NUMBER REFERENCES HEREON MAY BE FOUND IN THE ODOT SIGN POLICY AND GUIDELINES BOOK PUBLISHED BY OREGON DEPARTMENT OF TRANSPORTATION (ODOT), LATEST EDITION

- KEYNOTES:
1. CONCRETE PAVEMENT PER PLANS AND PROJECT SPECIFICATIONS
 2. ASPHALT PAVEMENT AND BASE COURSE PER PLANS AND PROJECT SPECIFICATIONS
 3. PROVIDE 3/8" TOOLED EDGE RADIUS ON CONCRETE AND APPLY SEALANT AT JOINT PER PROJECT SPECIFICATIONS

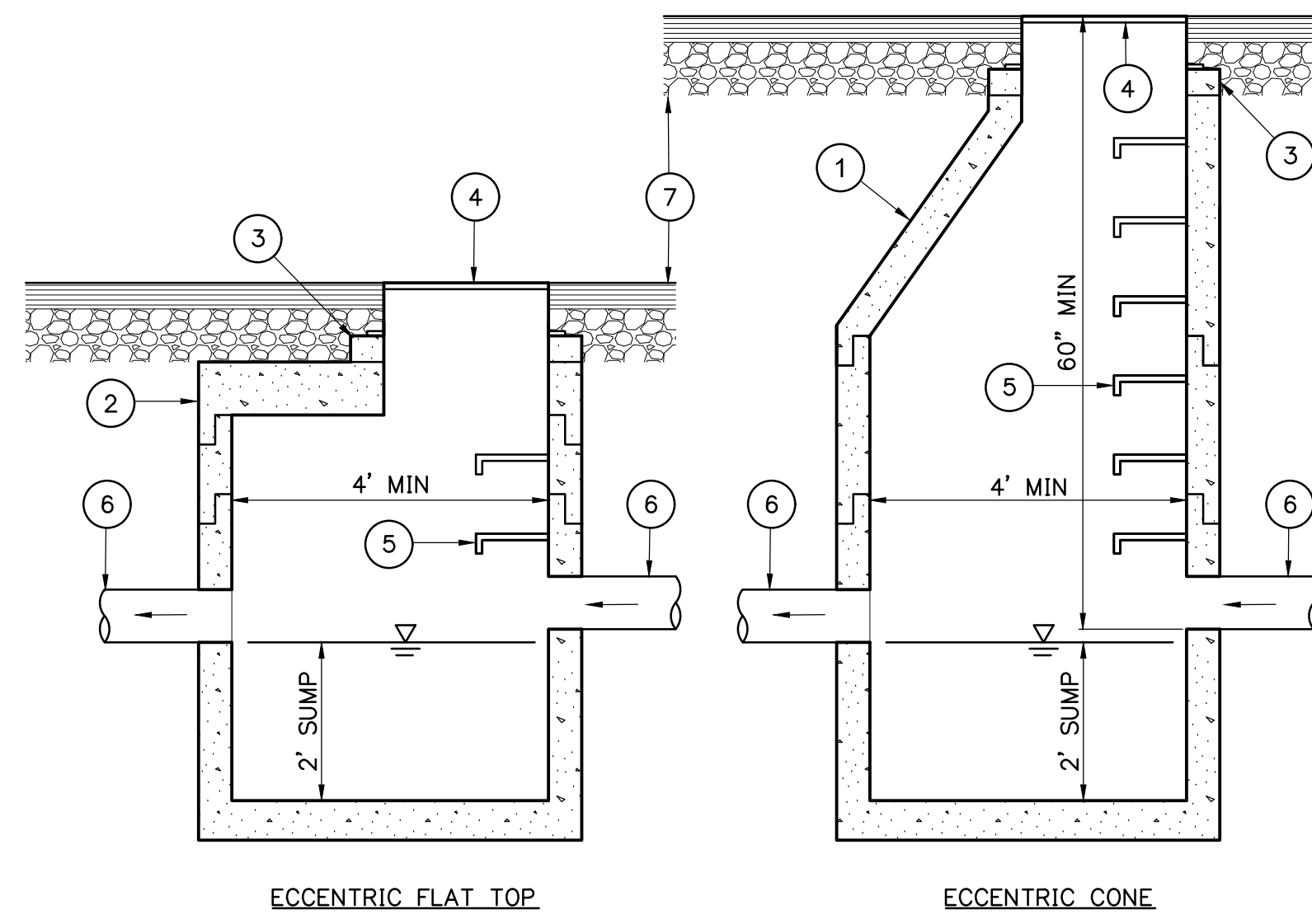
- NOTES:
1. THIS DETAIL IS NOT REQUIRED WHERE SIDEWALKS ABUT ASPHALT PAVEMENT IF PROVISIONS ARE SPECIFIED THAT PREVENT VEHICULAR ACCESS ONTO SIDEWALK

9 ASPHALT TO CONCRETE TRANSITION
C5.10 N.T.S.



1 SHEAR GATE
C5.12 NTS

- NOTES
- THE FRAME AND LADDER OR STEPS ARE TO BE OFFSET SO THAT THE SHEAR GATE IS VISIBLE FROM THE TOP; THE CLIMB-DOWN SPACE IS CLEAR OF RISER AND GATE; THE FRAME IS CLEAR OF THE CURB (IF APPLICABLE)
 - THE SHEAR GATE SHALL BE MADE OF ALUMINUM ALLOY IN ACCORDANCE WITH ASTM B 26M AND ASTM B 275, DESIGNATION ZG32A; OR CAST IRON IN ACCORDANCE WITH ASTM A 48, CLASS 30B
 - THE LIFT HANDLE SHALL BE MADE OF SIMILAR METAL TO THE GATE (TO PREVENT GALVANIC CORROSION)
 - A NEOPRENE RUBBER GASKET IS REQUIRED BETWEEN THE PIPE MOUNTING FLANGE AND THE GATE FLANGE
 - INSTALL THE GATE SO THAT THE LEVEL-LINE IS LEVEL WHEN THE GATE IS CLOSED
 - THE MATING SURFACES OF THE LID AND THE BODY SHALL BE MACHINED TO PROPER FIT
 - ALL SHEAR GATE BOLTS SHALL BE STAINLESS STEEL
 - THE SHEAR GATE MAXIMUM OPENING SHALL BE CONTROLLED BY LIMITED HINGE MOVEMENT, A STOP TAB, OR SOME OTHER DEVICE
 - ALTERNATIVE SHEAR GATE DESIGNS ARE ACCEPTABLE, IF MATERIAL SPECIFICATIONS ARE MET AND FLANGE BOLT PATTERN MATCHES. CONTRACTOR TO SUBMIT SHOP DRAWINGS TO ENGINEER PRIOR TO PROCURING PRODUCT OR CONSTRUCTION



2 STORM SEWER MANHOLES
C5.12 NTS

- KEYNOTES: (12" TOTAL MAX)
- 48" MIN DIAMETER PRECAST CONCRETE MANHOLE WITH ECCENTRIC CONE
 - 48" MIN DIAMETER PRECAST CONCRETE FLAT TOP MANHOLE (USED WHEN LESS THAN 60" AVAILABLE FROM PIPE INVERT TO RIM). CONCENTRIC LID SHALL BE USED AND STEPS SHALL BE OMITTED WHEN DEPTH FROM RIM TO INVERT IS LESS THAN 3 FEET
 - PRECAST CONCRETE GRADE RING AS REQUIRED TO ACCOMMODATE PAVING SECTION
 - MANHOLE FRAME AND COVER PER PROJECT SPECIFICATIONS, RIM ELEVATION PER PLANS
 - 6 1/2" MIN LONG MANHOLE STEPS AT 12" ON CENTER PER PROJECT SPECIFICATIONS. LOCATE WITHIN 24" OF COVER AND FLOOR OF MANHOLE, AND A MINIMUM OF 5" FROM PRECAST SECTION JOINT
 - PIPE SIZE, INVERT, AND SLOPE PER PLANS
 - PAVING SECTION PER PLANS
- NOTES:
- MANHOLE DIAMETER SHALL BE INCREASED, IF REQUIRED, TO PROVIDE A MINIMUM OF 12" SEPARATION BETWEEN PIPE CONNECTIONS, OR WHEN ANY PIPE DIAMETER IS GREATER THAN 1/2 THE DIAMETER OF THE MANHOLE
 - MANHOLE ACCESS COVER SHALL NOT BE LOCATED DIRECTLY OVER A PIPE CONNECTION UNLESS DIRECTED OTHERWISE BY THE ENGINEER
 - CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL MANHOLES FOR REVIEW AND APPROVAL BY THE ENGINEER PRIOR TO PROCURING MATERIALS
 - SELECTED MANHOLE SHALL MEET THE CRITERIA OF THE PROJECT SPECIFICATIONS AND BE INSTALLED ACCORDINGLY
 - INLET AND OUTLET PIPES CONNECTIONS SHALL BE COMPLIANT WITH PROJECT SPECIFICATIONS OR THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION, WHICHEVER IS MOST STRINGENT



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CIVIL DETAILS

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SHEET:

C5.12

JOB NO. 2190382.00

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COVER SHEET

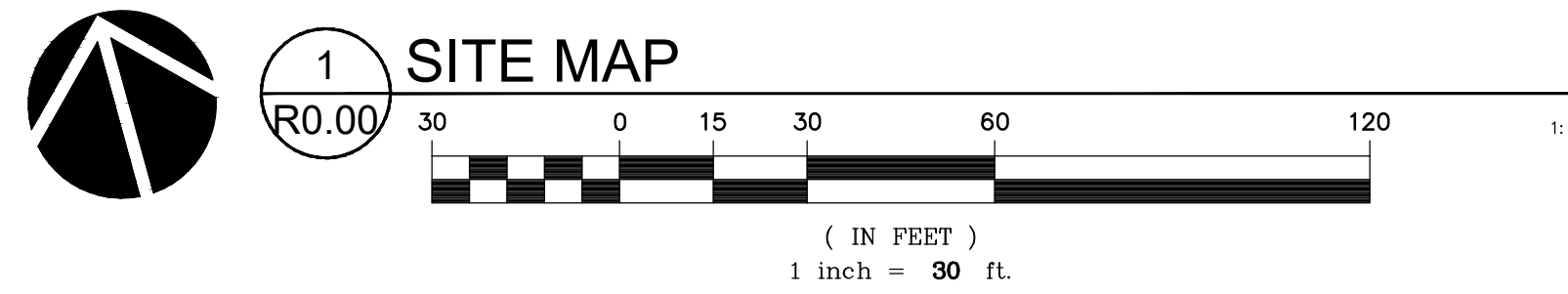
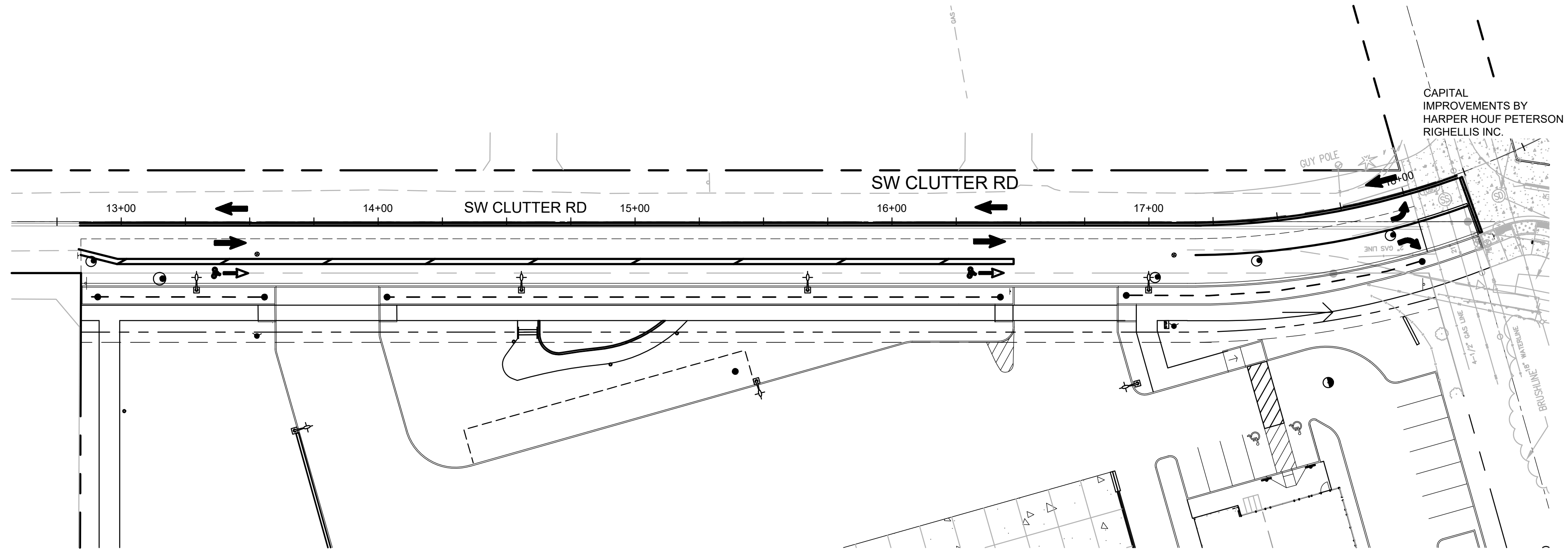
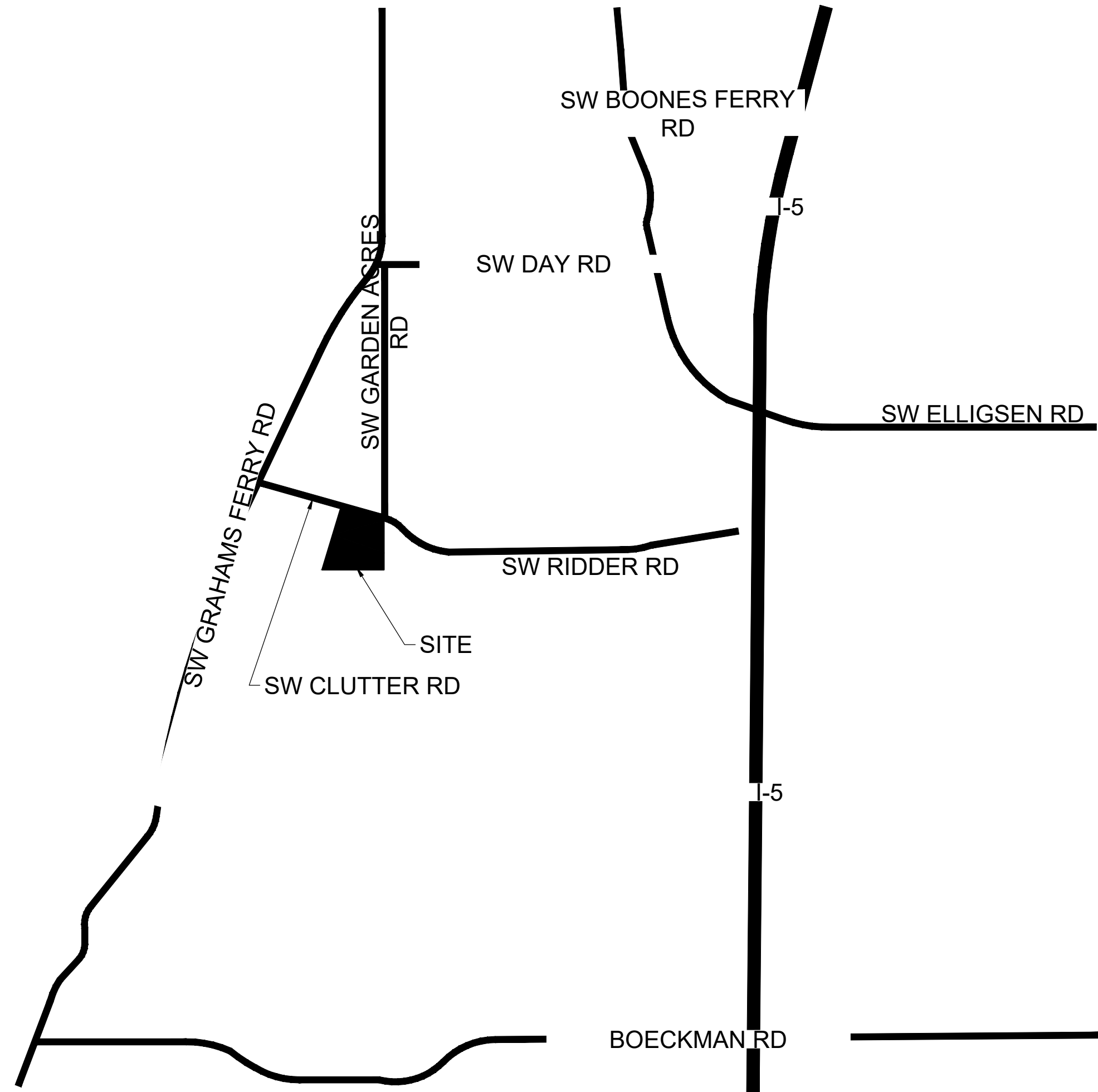
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SHEET:

R0.00

JOB NO. **2190382.00**



APPLICANT

PANATTONI
ATTN: BRENDAN MASON
1821 DOCK ST, SUITE 100
TACOMA, WA 98402
PH: (206) 838-3843
E-MAIL: bmason@panattoni.com

SURVEYOR

NORTHWEST SURVEYING INC.
ATTN: SCOTT FIELD
1815 NW 169TH PLACE, SUITE 2090
BEAVERTON, OR 97006
PH: (503) 848-2127
FAX: (503) 848-2179
E-MAIL: nwsurveying@nwsrvy.com

SITE ADDRESS

10680 SW CLUTTER ST
SHERWOOD, OR
97140-9552
PARCEL# 3S103D002100

CIVIL

MACKENZIE
ATTN: MATT BUTTS
1515 SE WATER AVE, SUITE #100
PORTLAND, OR 97214
PH: (503) 224-9560
FAX: (503) 228-1285
E-MAIL: MWB@mcknze.com

LANDSCAPE ARCHITECT

MACKENZIE
ATTN: NICOLE FERREIRA
1515 SE WATER AVENUE, SUITE 100
PORTLAND, OREGON 97214
PH: (503) 224-9560
FAX: (503) 228-1285
E-MAIL: NRF@mcknze.com

BENCH MARK

A 4" ALUMINUM DISK AT THE INTERSECTION OF
COUNTY ROAD NO. 557 AND COUNTY ROAD NO.
561
ELEVATION = 211.78', NGVD 1929

SHEET INDEX

R0.00	COVER SHEET
R0.01	SITE NOTES
R0.02	TYPICAL SECTION
R0.03	ROAD DETAILS
R1.10	FRONTAGE IMPROVEMENTS PLAN
R1.20	GRADING PLAN
R1.30	UTILITY PLAN AND PROFILE
R1.40	SIGNING AND STRIPING PLAN
R1.41	SIGNING AND STRIPING DETAILS
R1.50	LIGHTING AND ILLUMINATION PLAN
R1.51	LIGHTING AND ILLUMINATION DETAILS

NOTICE TO EXCAVATORS:
ATTENTION: OREGON LAW REQUIRES YOU
TO FOLLOW RULES ADOPTED BY THE
OREGON UTILITY NOTIFICATION CENTER.
THOSE RULES ARE SET FORTH IN OAR
952-001-0010 THROUGH OAR
952-001-0090. YOU MAY OBTAIN
COPIES OF THE RULES BY CALLING THE
CENTER.
(NOTE: THE TELEPHONE NUMBER FOR
THE OREGON UTILITY NOTIFICATION
CENTER IS (503)-232-1987).

POTENTIAL UNDERGROUND FACILITY OWNERS

Dig Safely.

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DIAL 811 or 1-800-332-2344

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AFTER HOURS 503-226-4211
PGE 503-464-7777
QWEST 1-800-573-1311
CITY BUREAU OF MAINTENANCE 503-823-1700
CITY WATER 503-823-4874
VERIZON 1-800-483-1000



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R0.01

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219038200DRAWINGSBASEMCK-FSIZR.DWG CTL 06/22/20 10:51 1:1.00

LEGEND

	EXISTING	PROPOSED
FOUND LOT CORNER		
SANITARY SEWER MANHOLE		
SANITARY SEWER CLEANOUT		
STORM DRAINAGE CATCH BASIN		
STORM DRAINAGE MANHOLE		
FIRE HYDRANT		
FIRE DEPARTMENT CONNECTION		
WATER METER		
WATER VALVE		
LIGHT		
UTILITY POLE		
GUY WIRE		
ELECTRIC METER		
POWER JUNCTION BOX		
TELEPHONE JUNCTION BOX		
TELEPHONE MANHOLE		
SIGN		
TREE		
UNDERGROUND STORM DRAINAGE LINE		
UNDERGROUND SANITARY SEWER LINE		
UNDERGROUND WATER LINE		
UNDERGROUND POWER LINE		
OVERHEAD UTILITY LINE		
SPOT GRADE		
RIM=RIM ELEVATION		
TC=TOP OF CURB ELEVATION		
FG=FINISH GRADE ELEVATION		
EX=EXISTING ELEVATION		
SW=SIDEWALK ELEVATION		
BS=BOTTOM OF STAIR ELEVATION		
TS=TOP OF STAIR ELEVATION		
MATCH=MATCH EXISTING ELEVATION		
FLOW LINE		
SURFACE ELEVATION CONTOUR		
SLOPE ARROW		
CATCH BASIN INLET PROTECTION		
SEDIMENT FENCE		
DRAINAGE FLOW PATTERN		
CONSTRUCTION ENTRANCE		
VERTICAL CURB PAINTED RED W/FIRE LANE SIGNED, COORDINATE WITH FIRE MARSHAL		
VERTICAL CURB		
HEAVY DUTY PAVING SECTION (SEE GEOTECH REPORT AND 2/C5.11)		
LIGHT DUTY PAVING SECTION (SEE GEOTECH REPORT AND 2/C5.11)		
CONCRETE PAD		
SIDEWALK		
PUBLIC UTILITY EASEMENT		
PROPERTY LINE		

GRADING NOTES

- ROUGH GRADING: BRING ALL FINISH GRADES TO APPROXIMATE LEVELS INDICATED. WHERE GRADES ARE NOT OTHERWISE INDICATED, FINISH GRADES ARE TO BE THE SAME AS ADJACENT SIDEWALKS, CURBS, OR THE OBVIOUS GRADE OF ADJACENT STRUCTURE. GRADE TO UNIFORM LEVELS OR SLOPES BETWEEN POINTS WHERE GRADES ARE GIVEN. ROUND OFF SURFACES, AVOID ABRUPT CHANGES IN LEVELS. ROUGH GRADE TO ALLOW FOR DEPTH OF CONCRETE SLABS, WALKS, AND THEIR BASE COURSES. GRADE FOR PAVED DRIVES AND PAVED PARKING AREAS AS INDICATED AND SPECIFIED HEREIN, AND PROVIDE FOR SURFACE DRAINAGE AS SHOWN, ALLOWING FOR THICKNESS OF SURFACING MATERIAL.
FINISH GRADING: AT COMPLETION OF JOB AND AFTER BACKFILLING BY OTHER CRAFTS HAS BEEN COMPLETED, REFILL AND COMPACT AREAS WHICH HAVE SETTLED OR ERODED TO BRING TO FINAL GRADES.
GRADING TOLERANCES:
ROUGH GRADE AT PAVED OR LANDSCAPED AREAS: ±0.1 FT.
FINISH GRADE PRIOR TO PLACING FINAL SURFACING: ±0.03 FT.
- EFFECTIVE EROSION PREVENTION AND SEDIMENT CONTROL IS REQUIRED. EROSION CONTROL DEVICES MUST BE INSTALLED AND MAINTAINED MEETING THE CITY AND DEQ REQUIREMENTS. THE GOVERNING JURISDICTION MAY, AT ANY TIME, ORDER CORRECTIVE ACTION AND STOPPAGE OF WORK TO ACCOMPLISH EFFECTIVE EROSION CONTROL.
- EFFECTIVE DRAINAGE CONTROL IS REQUIRED. DRAINAGE SHALL BE CONTROLLED WITHIN THE WORK SITE AND SHALL BE SO ROUTED THAT ADJACENT PRIVATE PROPERTY, PUBLIC PROPERTY, AND THE RECEIVING SYSTEM ARE NOT ADVERSELY IMPACTED. THE GOVERNING JURISDICTION MAY, AT ANY TIME, ORDER CORRECTIVE ACTION AND STOPPAGE OF WORK TO ACCOMPLISH EFFECTIVE DRAINAGE CONTROL.
- SITE TOPSOIL SHALL BE STOCKPILED DURING CONSTRUCTION AND USED FOR LANDSCAPING.
- THE SURVEY INFORMATION SHOWN AS A BACKGROUND SCREEN ON THIS SHEET IS BASED ON A SURVEY BY MINISTER AND GLACIER, AND IS SHOWN FOR REFERENCE ONLY. CONTRACTOR TO VERIFY ALL EXISTING CONDITIONS WITH HIS OWN RESOURCES PRIOR TO START OF ANY CONSTRUCTION.
- CONTRACTOR TO COORDINATE GRADES AT ENTRANCE WITH ARCHITECTURAL PLANS PRIOR TO CONSTRUCTION.
- 2% MAXIMUM CROSS SLOPE AT ALL ADA-COMPLIANT PARKING SPACES AND LOADING ZONES.
- 5% MAX LONGITUDINAL SLOPE (EXCLUDING RAMPS) AT PEDESTRIAN SIDEWALK CONNECTIONS BETWEEN PUBLIC R.O.W. AND BUILDING ENTRANCES.
- WHERE SLOPES ARE STEEPER THAN 3:1, CONTRACTOR SHALL INSTALL JUTE MATTING. SLOPE SHALL BE PREPARED TO ENSURE COMPLETE AND DIRECT CONTACT OF MATTING WITH SOIL. FOLLOW MANUFACTURER'S RECOMMENDATIONS.

UTILITY NOTES

- ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF CITY OF SHERWOOD, DEPARTMENT OF ENVIRONMENTAL SERVICE, AND THE CURRENT EDITION OF THE UNIFORM PLUMBING CODE AND THE INTERNATIONAL BUILDING CODE. ALL WORK WITHIN THE PUBLIC R.O.W. REQUIRES A PUBLIC WORKS PERMIT.
- THE WORKING DRAWINGS ARE GENERALLY DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND OR ELBOW REQUIRED FOR INSTALLATION IN THE SPACE PROVIDED. THEY DO NOT SHOW EVERY DIMENSION, COMPONENT PIECE, SECTION, JOINT OR FITTING REQUIRED TO COMPLETE THE PROJECT. ALL LOCATIONS FOR WORK SHALL BE CHECKED AND COORDINATED WITH EXISTING CONDITIONS IN THE FIELD BEFORE BEGINNING CONSTRUCTION. EXISTING UNDERGROUND UTILITIES LAYING WITHIN THE LIMITS OF EXCAVATION SHALL BE VERIFIED AS TO CONDITION, SIZE AND LOCATION BY UNCOVERING, PROVIDING SUCH IS PERMITTED BY LOCAL PUBLIC AUTHORITIES WITH JURISDICTION, BEFORE BEGINNING CONSTRUCTION. CONTRACTOR TO NOTIFY ENGINEER IF THERE ARE ANY DISCREPANCIES.
- PROVIDE CLEANOUTS AS REQUIRED IN THE CURRENT EDITION OF THE UNIFORM PLUMBING CODE.
- ALL STORM PIPING IS SIZED FOR A MANNING'S "N" VALUE = 0.013
ALL STORM PIPING IS DESIGNED USING CONCENTRIC PIPE TO PIPE AND WYE FITTINGS, UNLESS OTHERWISE NOTED.
- SEE MECHANICAL DRAWINGS FOR UTILITIES LOCATED WITHIN THE BUILDING AND TO 5' OUTSIDE THE BUILDING.
- ALL DOWNSPOUT LEADERS TO BE 4" AT 2.0% MIN. UNLESS NOTED OTHERWISE.
- VERIFY LOCATION, SIZE AND DEPTH OF EXISTING UTILITIES BY POTHOLING PRIOR TO CONSTRUCTION. NOTIFY ENGINEER OF DISCREPANCIES.
- THE SURVEY INFORMATION SHOWN AS A BACKGROUND SCREEN ON THIS SHEET IS BASED ON A SURVEY PREPARED BY MINISTER AND GLAESER, INC.
- CONTRACTOR TO PROVIDE POWER TO IRRIGATION CONTROLLER. SEE SPECIFICATIONS AND LANDSCAPE PLANS.
- SEE BUILDING PLUMBING DRAWINGS FOR PIPING WITHIN THE BUILDING AND UP TO 5' OUTSIDE THE BUILDING, INCLUDING ANY FOUNDATION DRAINAGE PIPING.
- CONTRACTOR TO MAINTAIN MINIMUM 3 FT OF COVER OVER ALL WATER LINE.

EROSION CONTROL NOTES

- SEE SHEET C1.40 FOR EROSION CONTROL NOTES
- A WHEEL WASH IS NOT PROPOSED BUT MAY BE REQUIRED TO PREVENT MUD AND DEBRIS FROM TRACKING OFF SITE
- A TEMPORARY SEDIMENT POND IS NOT PROPOSED. HOWEVER, A POND MAY BE NECESSARY TO PREVENT SEDIMENT LADEN WATERS FROM LEAVING SITE.
- AN NPDES CONSTRUCTION STORMWATER GENERAL PERMIT AND SWPPP ARE REQUIRED FOR THIS PROJECT.

GENERAL NOTES

- ALL WORK SHALL CONFORM TO THE STANDARD SPECIFICATIONS AND THE REQUIREMENTS OF CITY OF SHERWOOD AND THE CURRENT AMERICAN PUBLIC WORKS ASSOCIATION STANDARDS FOR PUBLIC WORKS CONSTRUCTION.
- THE WORKING DRAWINGS ARE GENERALLY DIAGRAMMATIC. THEY DO NOT SHOW EVERY OFFSET, BEND OR ELBOW REQUIRED FOR INSTALLATION IN THE SPACE PROVIDED. THEY DO NOT SHOW EVERY DIMENSION, COMPONENT PIECE, SECTION, JOINT OR FITTING REQUIRED TO COMPLETE THE PROJECT. ALL LOCATIONS FOR WORK SHALL BE CHECKED AND COORDINATED WITH EXISTING CONDITIONS IN THE FIELD BEFORE BEGINNING CONSTRUCTION. EXISTING UNDERGROUND UTILITIES LAYING WITHIN THE LIMITS OF EXCAVATION SHALL BE VERIFIED AS TO CONDITION, SIZE AND LOCATION BY UNCOVERING, PROVIDING SUCH IS PERMITTED BY LOCAL PUBLIC AUTHORITIES WITH JURISDICTION, BEFORE BEGINNING CONSTRUCTION. CONTRACTOR TO NOTIFY ENGINEER IF THERE ARE ANY DISCREPANCIES.
- EFFECTIVE EROSION CONTROL IS REQUIRED. EROSION CONTROL DEVICES MUST BE INSTALLED AND MAINTAINED TO MEET THE CITY REQUIREMENTS. THE GOVERNING JURISDICTION MAY, AT ANY TIME, ORDER CORRECTIVE ACTION AND STOPPAGE OF WORK TO ACCOMPLISH EFFECTIVE EROSION CONTROL.
- EFFECTIVE DRAINAGE CONTROL IS REQUIRED. DRAINAGE SHALL BE CONTROLLED WITHIN THE WORK SITE AND SHALL BE SO ROUTED THAT ADJACENT PRIVATE PROPERTY, PUBLIC PROPERTY, AND THE RECEIVING SYSTEM ARE NOT ADVERSELY IMPACTED. THE GOVERNING JURISDICTION MAY, AT ANY TIME, ORDER CORRECTIVE ACTION AND STOPPAGE OF WORK TO ACCOMPLISH EFFECTIVE DRAINAGE CONTROL.
- CONTRACTOR SHALL ADJUST ALL STRUCTURES IMPACTED BY CONSTRUCTION IMPROVEMENTS TO NEW FINISH GRADES.
- EXCAVATION: EXCAVATE FOR SLABS, PAVING, AND OTHER IMPROVEMENTS TO SIZES AND LEVELS SHOWN OR REQUIRED. ALLOW FOR FORM CLEARANCE AND FOR PROPER COMPACTION OF REQUIRED BACKFILLING MATERIAL.
EXCAVATOR(S) SHALL NOTIFY ALL UTILITY COMPANIES FOR LINE LOCATIONS SEVENTY-TWO (72) HOURS (MINIMUM) PRIOR TO START OF WORK. DAMAGE TO UTILITIES SHALL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- WHERE CONNECTING TO AN EXISTING PIPE, AND PRIOR TO ORDERING MATERIALS, THE CONTRACTOR SHALL EXPOSE THE END OF THE EXISTING PIPE VERIFY THE LOCATION, SIZE, AND ELEVATION. NOTIFY ENGINEER OF ANY DISCREPANCIES.

ABBREVIATIONS

TC	TOP OF CURB	WM	WATER METER	CL	CENTERLINE
AC	ASPHALT	OH	OVERHEAD WIRE	GPM	GALLONS PER MINUTE
FH	FIRE HYDRANT	SSWR	SANITARY SEWER	FW	FIRE WATER
FG	FINISHED GRADE	MH	MANHOLE	PWS	PUBLIC WORKS STANDARDS
SW	SIDEWALK ELEVATION	IE	INVERT ELEVATION	ELEV	ELEVATION
TS	TOP OF STAIR	CB	CATCH BASIN	CO	CLEAN OUT
BS	BOTTOM OF STAIR	STM	STORM	INV	INVERT
TYP	TYPICAL	RD	ROOF DRAIN	RD	ROOF DRAIN
R.O.W.	RIGHT OF WAY	FF	FINISHED FLOOR ELEVATION	COG	CITY OF GRESHAM
LS	LANDSCAPE				

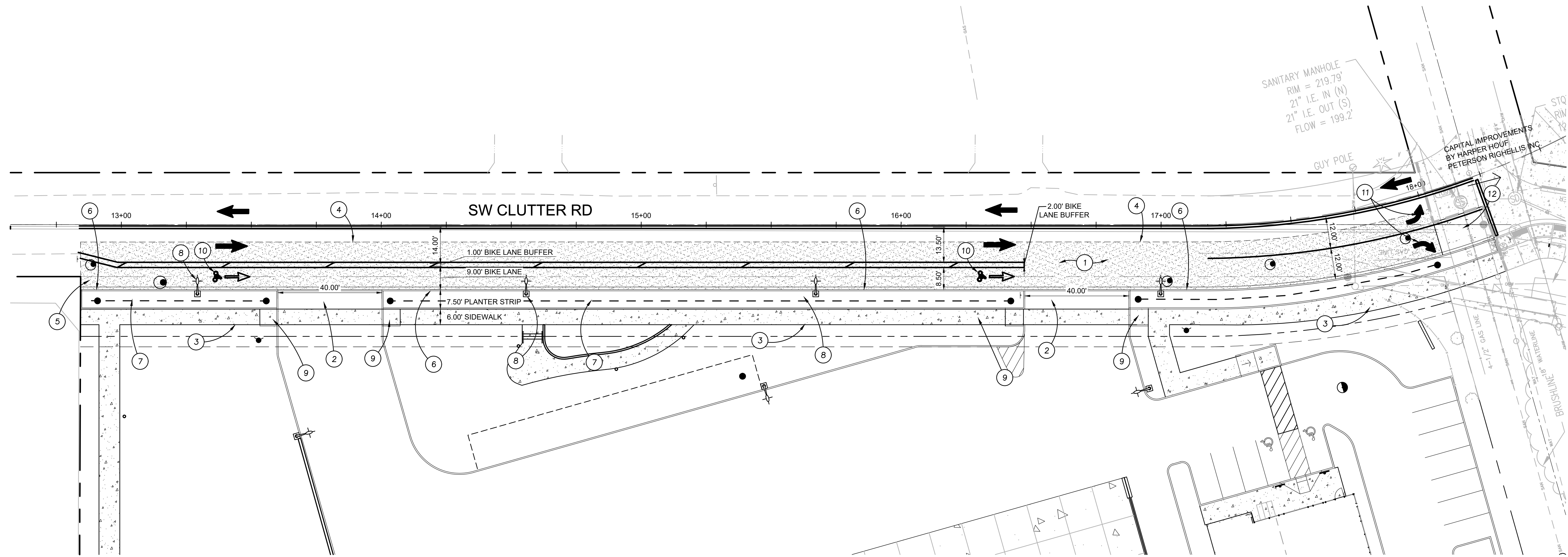
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**FRONTAGE
IMPROVEMENTS
PLAN**

DRAWN BY: CME
CHECKED BY: CTL
SHEET:

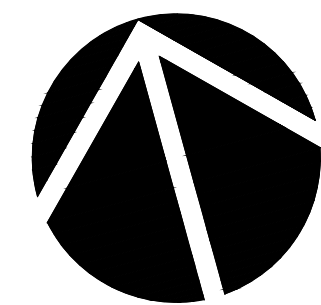
R1.10

JOB NO. **2190382.00**



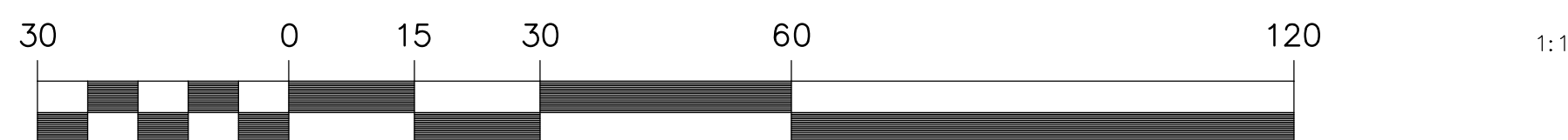
KEY NOTES

1. PROPOSED ASPHALT PAVING
2. PROPOSED COMMERCIAL DRIVEWAY PER CITY DETAIL RD-1095/R0.03
3. PROPOSED SIDEWALK PER CITY DETAIL RD-1075/R0.03
4. SAWCUT EXISTING PAVEMENT AC PAVING, MATCH EXISTING
5. PROPOSED END OF BIKE LANE SIGN
6. PROPOSED CURB AND GUTTER PER CITY DETAIL RD-1060/R0.03
7. PROPOSED STORMWATER PLANTER PER CITY DETAIL ST-6005/R0.03
8. PROPOSED STREET LIGHT, SEE ILLUMINATION AND LIGHTING PLANS.
9. PROPOSED ADA PERPENDICULAR CURB RAMP
10. BIKE LANE SYMBOL
11. TURN LANE SYMBOL
12. CONCRETE PAVING



1
R1.10

FRONTAGE IMPROVEMENTS PLAN



(IN FEET)
1 inch = 30 ft.



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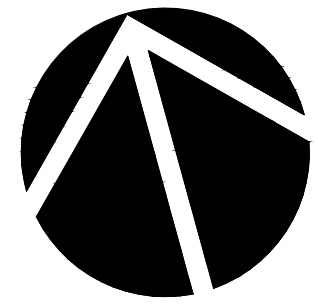
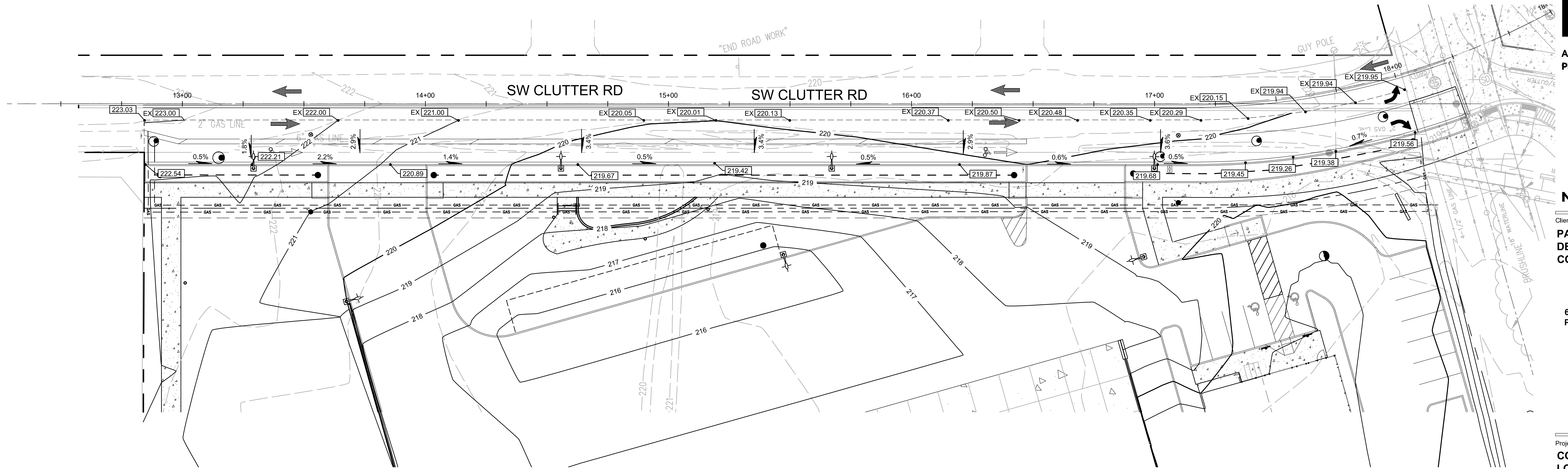
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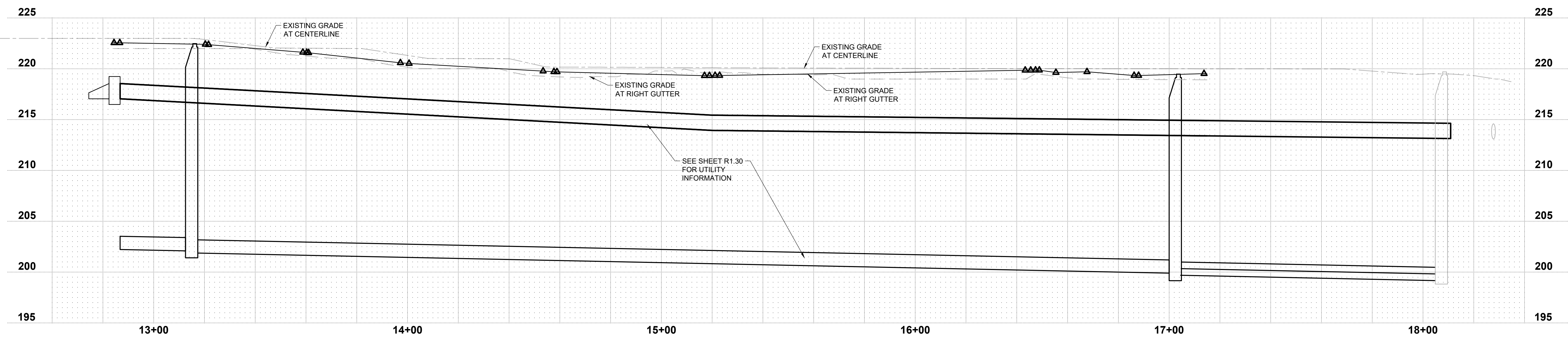
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1 FRONTAGE GRADING PLAN



(IN FEET)
1 inch = 30 ft.



1 PROFILE

R1.20 HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=5'

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GRADING PLAN

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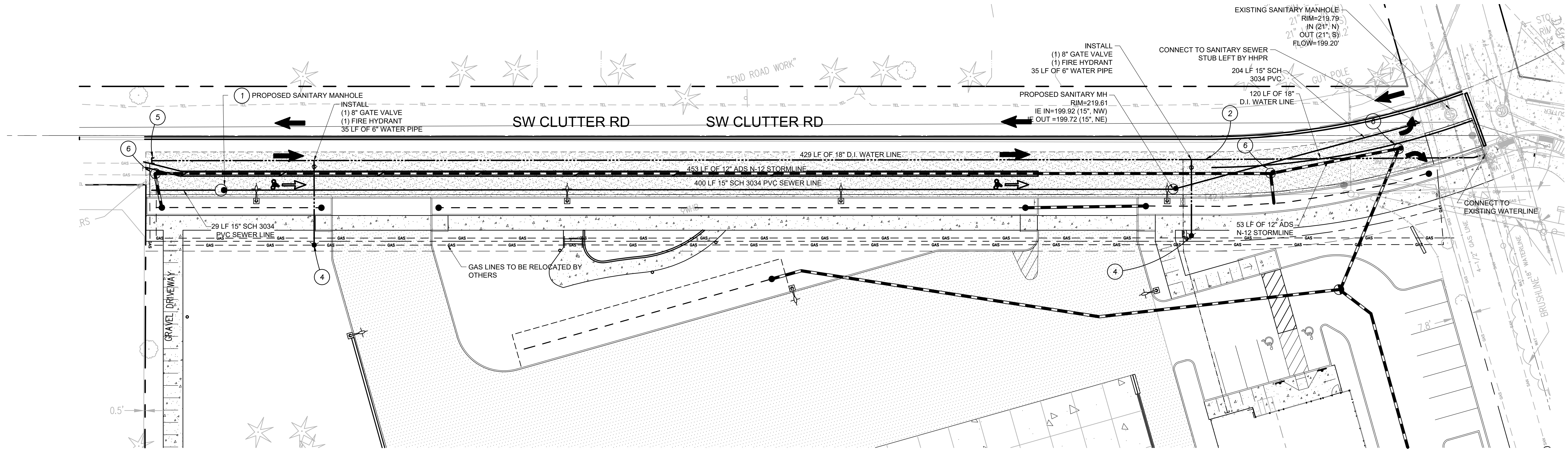
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**UTILITY PLAN
AND PROFILE**

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SHEET:

R1.30

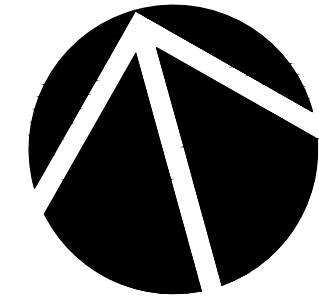
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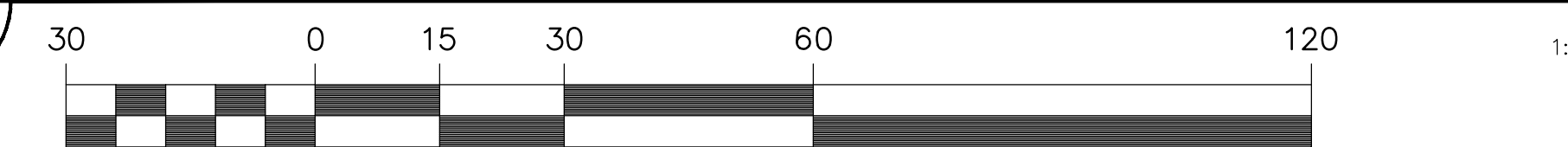
KEY NOTES

1. PROPOSED SANITARY MANHOLE
2. CONNECT TO EXISTING WATER STUB PROVIDED BY CAPITAL IMPROVEMENTS PLAN
3. CONNECT TO EXISTING SEWER MANHOLE PROVIDED BY CAPITAL IMPROVEMENTS PLAN
4. PROPOSED FIRE HYDRANT
5. PROPOSED WATER MAIN BLOWOFF PER CITY DETAIL WT-3085/R0.03
6. PROPOSED STORM MANHOLE

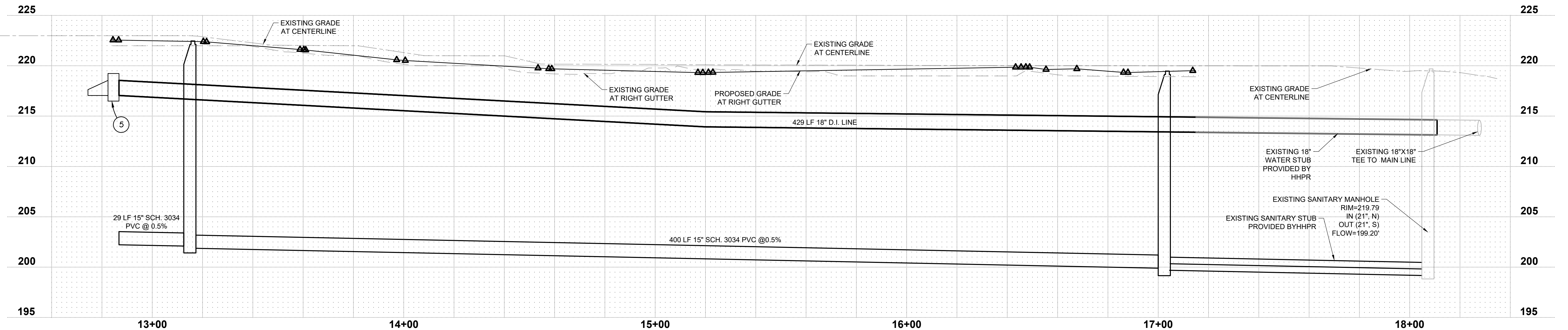


1
R1.30

UTILITY PLAN



(IN FEET)
1 inch = 30 ft.

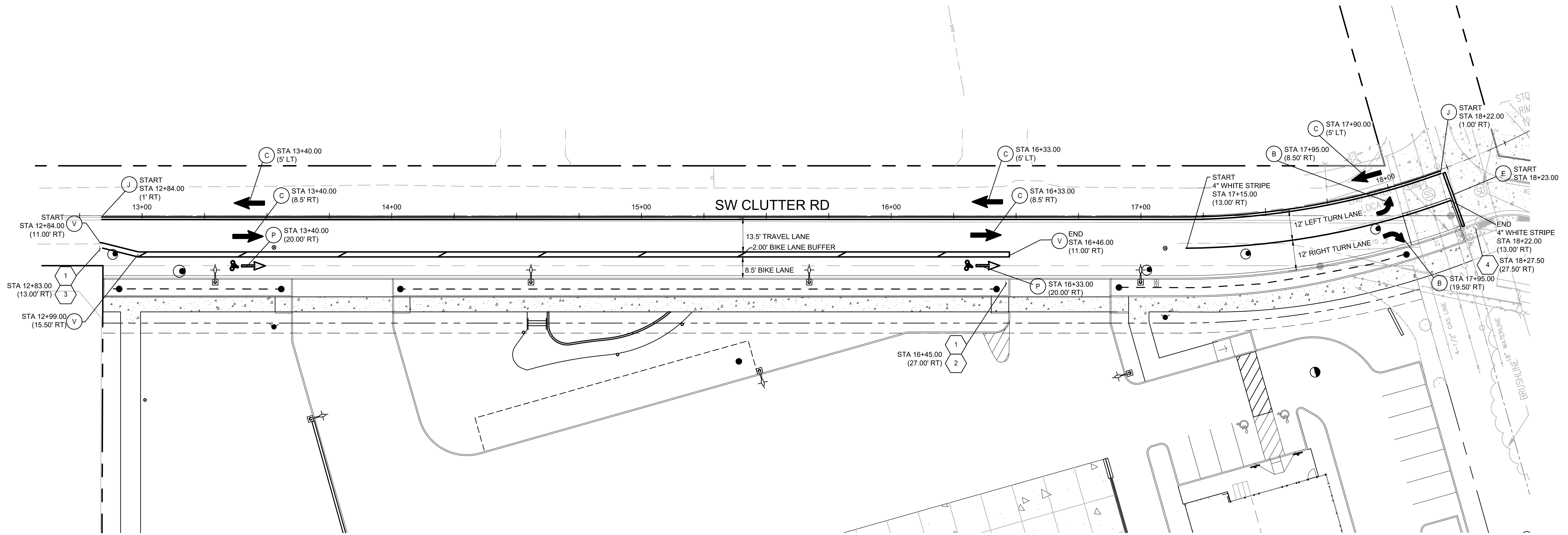


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R1.30

UTILITY PROFILE

HORIZONTAL SCALE: 1"=20'
VERTICAL SCALE: 1"=5'

1:1

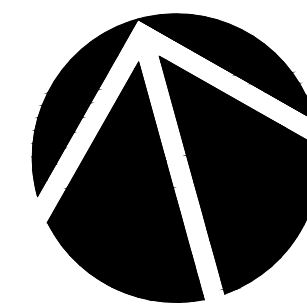


SIGNING NOTES

- REFER TO THE CITY OF WILSONVILLE DWG. RD-1245/SHEET R1.41

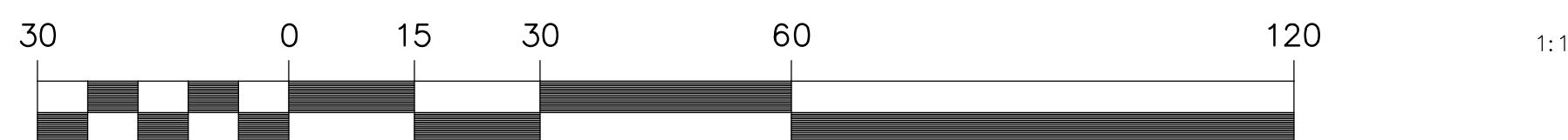
STRIPING NOTES

- REFER TO THE CITY OF WILSONVILLE PAVEMENT MARKING NOTES ON CITY OF WILSONVILLE STD. DWG. RD-1280/SHEET R1.41
- DO NOT PAINT CURBS MAINTAINED BY THE CITY OF WILSONVILLE. CONTRACTOR WILL BE RESPONSIBLE FOR THE REMOVAL OF ANY PAINT ON CITY CURBS.



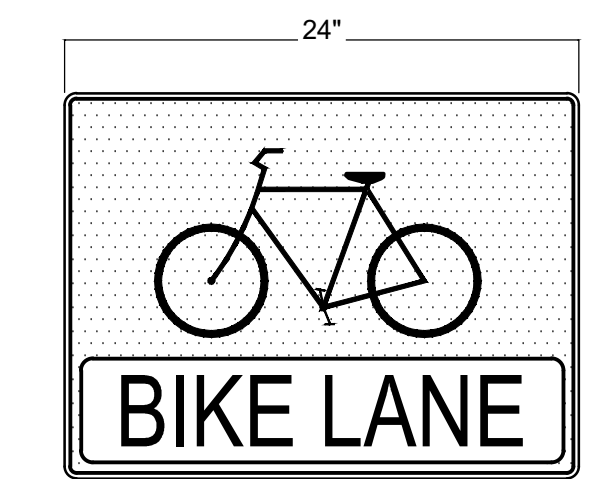
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R1.40

SIGNING AND STRIPING PLAN

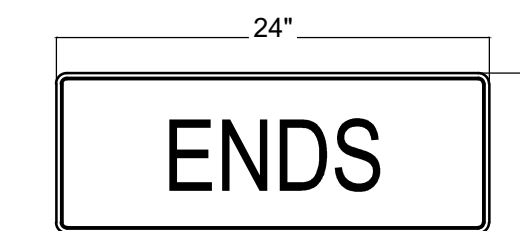


(IN FEET)
1 inch = 30 ft.

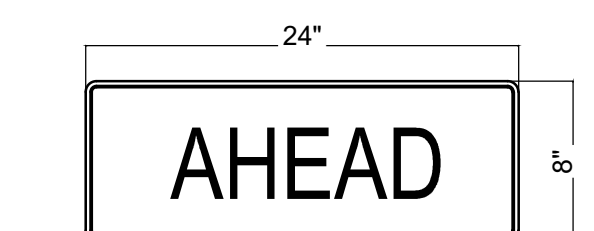
SIGN NO. (N)	QTY. USED	SIGN DIMENSION		SIGN CODE		TYPE OF SUPPORT					FOOTING TYPE		SIGN LEGEND / OTHER REMARKS	
		WIDTH (IN)	HEIGHT (IN)	MUTCD	ODOT	MOUNT					BREAKAWAY ANCHOR ASSEMBLY	BREAKAWAY DOME ASSEMBLY		
						SINGLE PIPE POST	EXISTING PIPE POST	UTILITY POLE	LIGHT POLE	SIGNAL POLE				MODIFIED BIKE RACK
1	2	24	18	R3-17		X								[BIKE LANE]
2	1	24	8	R3-17BP		X								[ENDS]
3	1	24	8	R3-17AP		X								[AHEAD]
4	1	30	30	R1-1		X								[STOP]



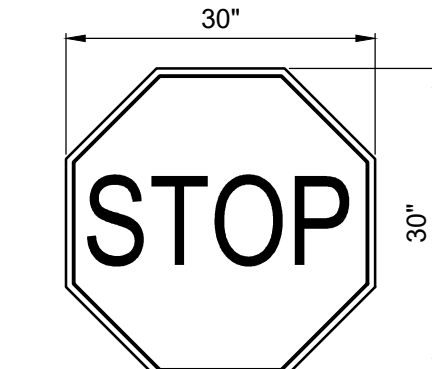
1 R3-17



2 R3-17BP



3 R3-17AP



4 R1-1 TYPE R1

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REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
**SIGNING AND
STRIPING PLAN**

DRAWN BY: CME
CHECKED BY: CTL
SHEET:

R1.40

JOB NO. **2190382.00**

REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
**LIGHTING AND
ILLUMINATION
PLAN**

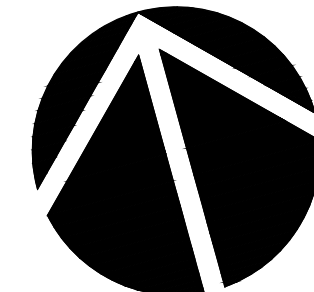
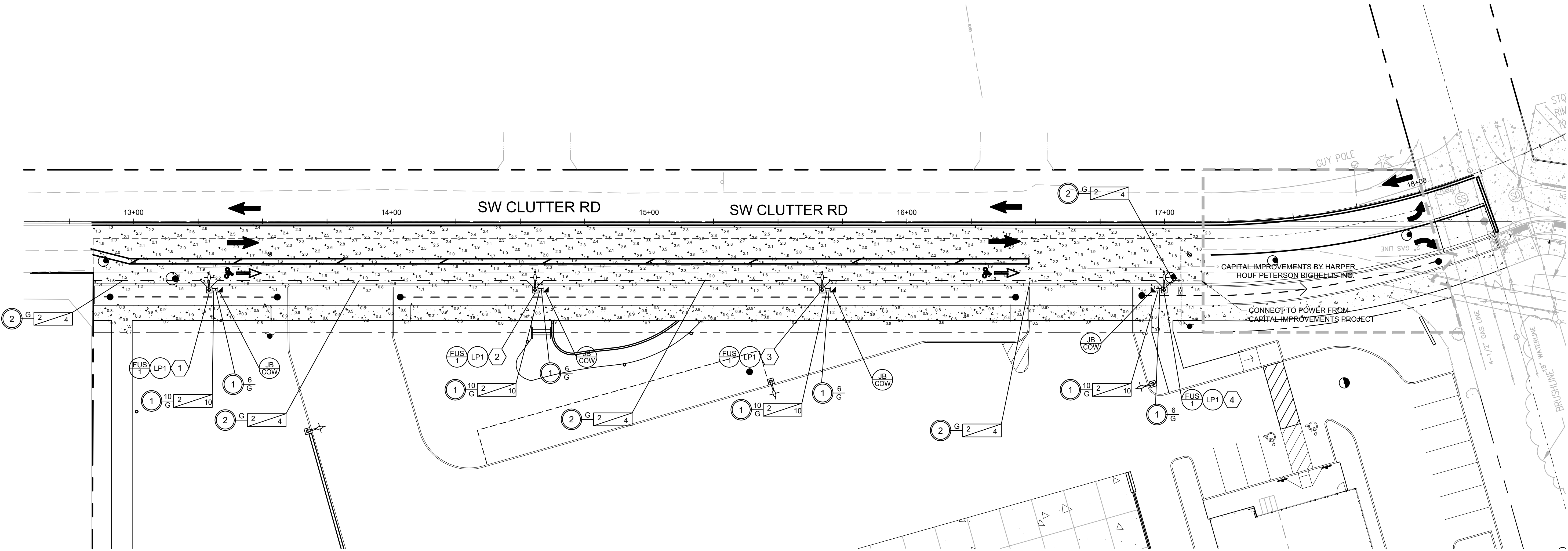
DRAWN BY: CME

CHECKED BY: CTL

SHEET:

R1.50

JOB NO. **2190382.00**



1 LIGHTING AND ILLUMINATION PLAN



- STREET LIGHTING EQUIPMENT**
- LIGHT POLES, FOR PROPOSED STREET LIGHTS SHALL BE ALUMINUM POLES WITH PRECAST CONCRETE FOUNDATION, 35-FOOT MOUNTING HEIGHT WITH 6-FOOT DAVIT ARM. SEE DETAIL RD-1335/C1.51 FOR CONCRETE FOUNDATION

APPROVED 30' ALUMINUM LIGHT POLES FOR LIGHTS ARE:
VALMONT/LEXINGTON 3500-86108D4
HAPCO 41-231PGE
P&K POLES (FLAGPOLE INC) RTA8M35AAD1832D
UNION METAL 920-B115-Y260
 - JUNCTION BOXES SHALL BE POLYMER 13"x24"x18" DEEP WIRE REINFORCED PRECAST CONCRETE WITH NO FLOOR AND SLIP RESISTANT COVERS HELD WITH TAMPER-RESISTANT FASTENERS. LIDS SHALL BE STAMPED "STREET LIGHTING".
 - LUMINAIRES SHALL BE:
LUM 1: CREE XSP2 LED: BXSP-C-HT-2LG-F-30K-UL-SV-N-Q9
 - PHOTOMETRIC CONTROL SHALL BE PROVIDED ON THE STREET LIGHT CLOSEST TO THE CONTROLLER CABINET. THE PHOTOMETRIC CONTROL SHALL BE EXTENDED LIFE WITH 7 PIN RECEPTACLE.
 - STREET LIGHTING CONTROLLER CABINET: CABINET SHALL HAVE A SERVICE PANEL WITH "SERVICE EQUIPMENT" RATED UL LABEL ATTACHED.

APPROVED CABINETS (SEE ODOT STD DWG TM300): STD ODOT CABINET NO. 2, TYPE A WITH 7 BREAKERS
 - STREET LIGHTING CONTROLLER: 100 AMP, SINGLE PHASE, 3 WIRE, 240 VOLT DEDICATED, UNMETERED SERVICE SHALL BE PROVIDED. MATERIALS AND INSTALLATION PER ODOT STANDARD DRAWING TM485ss.

- LIGHTING NOTES**
- ALL MATERIALS AND WORKMANSHIP CONFORM TO CITY OF WILSONVILLE AND PGE OPTION C SPECIFICATIONS. ALL MATERIALS AND INSTALLATIONS SHALL BE APPROVED BY WILSONVILLE.
 - CONTRACTOR SHALL COORDINATE INSTALLATION OF STREET LIGHTS WITH PGE AND CITY FORCES. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS. NOTIFY ENGINEER OF ANY DISCREPANCIES.
 - CONTRACTOR SHALL SUBMIT A LIGHTING SUBMITTAL OF ALL LIGHTING EQUIPMENT TO THE CITY OF HILLSBORO AND HAVE APPROVED PRIOR TO ORDERING.
 - CONTACT PGE AT (503) 736-5450 TO BEGIN A WORK ORDER REQUEST. VERIFY PROPOSED LIGHT POLE LOCATION WITH PGE AND CITY PRIOR TO ORDERING AND INSTALLATION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
 - STREET LIGHTING SHALL BE PER PGE OPTION C. PGE PROVIDES ELECTRICITY SERVICE TO LUMINAIRES THAT ARE PURCHASED, OWNED AND MAINTAINED BY THE CITY OF WILSONVILLE AND INSTALLED ON CITY OWNER POLES. LUMINAIRES SHALL BE ISOLATED BY A DISCONNECT SWITCH OR FUSE APPROVED BY PGE.
 - CONTRACTOR SHALL VERIFY LUMINAIRE CHARACTERISTICS AND CATALOG NUMBER, INCLUDING BUT NOT LIMITED TO EXTERIOR HOUSING COLOR, WITH PGE AND CITY FORCES PRIOR TO ORDERING.
 - SEE DETAIL RD-1335/R1.51 FOR STREET POLE CONNECTION TO JUNCTION BOX
 - SEE DETAIL RD-1335/R1.51 FOR STREET LIGHTING CONNECTION TO JUNCTION BOX
 - PROVIDE 6' OF EXTRA CONNECTED WIRE COILED IN EACH JUNCTION BOX FOR FUTURE GRADE ADJUSTMENT
 - CONTRACTOR TO PROVIDE ARC FLASH ANALYSIS AND LABELING OF SERVICE PER NFPA 70E.
 - THE CONTROLLER AND ALL JUNCTION BOXES AND LIGHTS SHOULD BE ALIGNED WITH THE CURB

- LIGHTING LEGEND**
- INSTALL LUMINAIRE POLE (30' MOUNTING HEIGHT) SEE FOOTING DETAIL RD-1335
 - POLE NUMBER (N). SEE POLE INFORMATION TABLE.
 - INSTALL CITY OF WILSONVILLE JUNCTION BOX PER CITY STANDARDS. INSTALL PER DETAIL RD-1325/R1.51
 - INSTALL NEW FUSE AND DISCONNECT IN LIGHT POLE HAND HOLE
 - INSTALL PHOTO ELECTRONIC CONTROL ON POLE FOR STREET LIGHTING
 - INSTALL (S) INCH SCHEDULE 40 PVC ELECTRICAL CONDUIT
 - INSTALL RIGID METALLIC CONDUIT FROM POWER SOURCE TO 1' FROM STREET LIGHTING CONTROLLER. INSTALL CONDUIT AND WIRE AS REQUIRED BY POWER COMPANY.
 - INSTALL CONTROL CABINET WITH 100 AMP, SINGLE PHASE, 3 WIRE, 240 VOLT UNMETERED SERVICE, FOR STREET LIGHTING SYSTEM. MATERIALS AND INSTALLATION PER ODOT STANDARD DRAWING TM 485SS.
 - INSTALL (N) NO. (G) TYPE XHHW WIRES
 - INSTALL POLY PULL LINE WITH 225 LBF MIN STRENGTH
 - INSTALL NO. 8 BARE STANDARD COPPER GROUND WIRE
 - POWER SOURCE

ILLUMINATION DATA

DESIGNED	SW CLUTTER ROAD - COLLECTOR ROAD		
	AVERAGE (fc)	MINIMUM (fc)	AVERAGE/MINIMUM
DESIGNED	2.0	0.7	2.9:1

DESIGNED	SIDEWALK ALONG SW CLUTTER ROAD - COLLECTOR ROAD		
	AVERAGE (fc)	MINIMUM (fc)	AVERAGE/MINIMUM
DESIGNED	0.8	0.3	2.7:1

- NOTES:**
- A LIGHT LOSS FACTOR OF 0.85 WAS USED FOR ALL LUMINAIRES
 - STREET LIGHTING WAS DESIGNED IN ACCORDANCE WITH THE MOST CURRENT AMERICAN STANDARD PRACTICE FOR ROADWAY LIGHTING (RP-8-14) PER CITY OF WILSONVILLE PUBLIC WORKS STANDARD

POLE INFORMATION

POLE NUMBER (N)	POLE LOCATION	MAST ARM LENGTH	MOUNTING HEIGHT	TYPE	CONDUIT IE ELEVATION AT JUNCTION BOX **
1	STA 13+29.29 (26.62' RT)	6'	30'	LUM. 1	205.20
2	STA 14+55.75 (26.62' RT)	6'	30'	LUM. 1	205.00
3	STA 15+67.16 (26.62' RT)	6'	30'	LUM. 1	204.40
4	STA 16+99.18 (26.62' RT)	6'	30'	LUM. 1	204.00

* SEE STREET LIGHTING NOTES THIS SHEET FOR COMPLETE POLE DESCRIPTION.
** ELEVATION LISTED IS PRIOR TO UPSWEEP INTO JUNCTION BOX. CONDUIT IS TO BE LOCATED AT DEPTH THAT PROVIDES 24" OF COVER MINIMUM IN THIS PHASE AND IN THE ULTIMATE ROADWAY BUILDOUT.
*** PROVIDE 6' OF EXTRA WIRE IN EACH JUNCTION BOX FOR FUTURE GRADE ADJUSTMENT




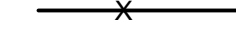


EROSION CONTROL GENERAL NOTES

- SEED USED FOR TEMPORARY OR PERMANENT SEEDING SHALL BE COMPOSED OF ONE OF THE FOLLOWING MIXTURES, UNLESS OTHERWISE AUTHORIZED:
 - VEGETATED CORRIDOR AREAS REQUIRE NATIVE SEED MIXES. SEE RESTORATION PLAN FOR APPROPRIATE SEED MIX.
 - DWARF GRASS MIX (MIN. 100 LB./AC.)
 - DWARF PERENNIAL RYEGRASS (80% BY WEIGHT)
 - CREeping RED FESCUE (20% BY WEIGHT)
 - STANDARD HEIGHT GRASS MIX (MIN. 100 LB./AC.)
 - ANNUAL RYEGRASS (40% BY WEIGHT)
 - TURF-TYPE FESCUE (60% BY WEIGHT)
- SLOPE TO RECEIVE TEMPORARY OR PERMANENT SEEDING SHALL HAVE THE SURFACE ROUGHENED BY MEANS OF TRACK-WALKING OR THE USE OF OTHER APPROVED IMPLEMENTS. SURFACE ROUGHENING IMPROVES SEED BEDDING AND REDUCES RUN-OFF VELOCITY.
- LONG TERM SLOPE STABILIZATION MEASURES SHALL INCLUDE THE ESTABLISHMENT OF PERMANENT VEGETATIVE COVER VIA SEEDING WITH APPROVED MIX AND APPLICATION RATE.
- TEMPORARY SLOPE STABILIZATION MEASURES SHALL INCLUDE: COVERING EXPOSED SOIL WITH PLASTIC SHEETING, STRAW MULCHING, WOOD CHIPS, OR OTHER APPROVED MEASURES.
- STOCKPILED SOIL OR STRIPPINGS SHALL BE PLACED IN A STABLE LOCATION AND CONFIGURATION. DURING "WET WEATHER" PERIODS, STOCKPILES SHALL BE COVERED WITH PLASTIC SHEETING OR STRAW MULCH. SEDIMENT FENCE IS REQUIRED AROUND THE PERIMETER OF THE STOCKPILE.
- EXPOSED CUT OR FILL AREAS SHALL BE STABILIZED THROUGH THE USE OF TEMPORARY SEEDING AND MULCHING. EROSION CONTROL BLANKETS OR MATS, MID-SLOPE SEDIMENT FENCES OR WATTLES, OR OTHER APPROPRIATE MEASURES. SLOPES EXCEEDING 25% MAY REQUIRE ADDITIONAL EROSION CONTROL MEASURES.
- AREAS SUBJECT TO WIND EROSION SHALL USE APPROPRIATE DUST CONTROL MEASURES INCLUDING THE APPLICATION OF A FINE SPRAY OF WATER, PLASTIC SHEETING, STRAW MULCHING, OR OTHER APPROVED MEASURES.
- CONSTRUCTION ENTRANCES SHALL BE INSTALLED AT THE BEGINNING OF CONSTRUCTION AND MAINTAINED FOR THE DURATION OF THE PROJECT. ADDITIONAL MEASURES INCLUDING, BUT NOT LIMITED TO, TIRE WASHES, STREET SWEEPING, AND VACUUMING MAY BE REQUIRED TO INSURE THAT ALL PAVED AREAS ARE KEPT CLEAN FOR THE DURATION OF THE PROJECT.
- ACTIVE INLETS TO STORM WATER SYSTEMS SHALL BE PROTECTED THROUGH THE USE OF APPROVED INLET PROTECTION MEASURES. ALL INLET PROTECTION MEASURES ARE TO BE REGULARLY INSPECTED AND MAINTAINED AS NEEDED.
- SATURATED MATERIALS THAT ARE HAULED OFF-SITE MUST BE TRANSPORTED IN WATER-TIGHT TRUCKS TO ELIMINATE SPILLAGE OF SEDIMENT AND SEDIMENT-LADEN WATER.
- AN AREA SHALL BE PROVIDED FOR THE WASHING OUT OF CONCRETE TRUCKS IN A LOCATION THAT DOES NOT PROVIDE RUN-OFF THAT CAN ENTER THE STORM WATER SYSTEM. IF THE CONCRETE WASH-OUT AREA CAN NOT BE CONSTRUCTED GREATER THAN 50' FROM ANY DISCHARGE POINT, SECONDARY MEASURES SUCH AS BERMS OR TEMPORARY SETTLING PITS MAY BE REQUIRED. THE WASH-OUT SHALL BE LOCATED WITHIN SIX FEET OF TRUCK ACCESS AND BE CLEANED WHEN IT REACHES 50% OF THE CAPACITY.
- SWEEPINGS FROM EXPOSED AGGREGATE CONCRETE SHALL NOT BE TRANSFERRED TO THE STORM WATER SYSTEM. SWEEPINGS SHALL BE PICKED UP AND DISPOSED IN THE TRASH.
- AVOID PAVING IN WET WEATHER WHEN PAVING CHEMICALS CAN RUN-OFF INTO THE STORM WATER SYSTEM.
- USE BMPs SUCH AS CHECK-DAMS, BERMS, AND INLET PROTECTION TO PREVENT RUN-OFF FROM REACHING DISCHARGE POINTS.
- COVER CATCH BASINS, MANHOLES, AND OTHER DISCHARGE POINTS WHEN APPLYING SEAL COAT, TACK COAT, ETC. TO PREVENT INTRODUCING THESE MATERIALS TO THE STORM WATER SYSTEM.

THESE EROSION AND SEDIMENT CONTROL PLANS ASSUME "DRY WEATHER" CONSTRUCTION. "WET WEATHER" CONSTRUCTION MEASURES NEED TO BE APPLIED BETWEEN OCTOBER 1ST AND MAY 31ST.

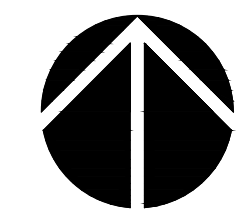
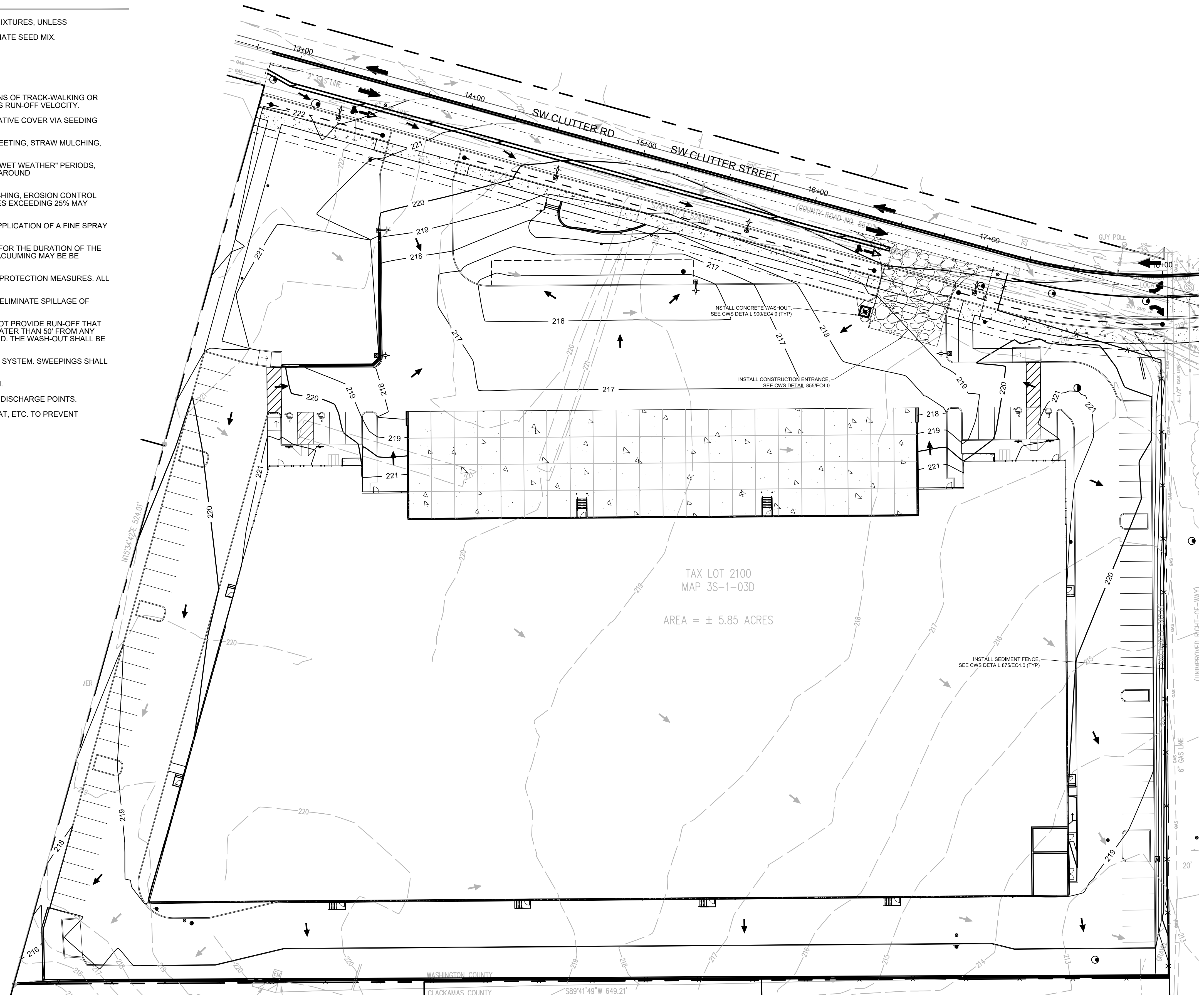
- WET WEATHER MEASURES INCLUDE:
- MINIMIZE EXPOSURE OF DISTURBED GROUND (SCHEDULE 7.A.I)
 - COVER OR STABILIZE EXPOSED GROUND AT END OF EACH WORK DAY (SCHEDULE 7.A.II)
 - TEMPORARY GROUND STABILIZATION MEASURES MAY INCLUDE:
 - STRAW COVERAGE (2.5 TONS/AC)
 - PLASTIC SHEETING
 - CRUSHED ROCK SURFACING

LEGEND

-  SEDIMENT FENCE, SEE CWS DETAIL 875, SHEET EC4.0
-  PROPOSED SURFACE DRAINAGE DIRECTION
-  EXISTING SURFACE DRAINAGE DIRECTION
-  CONSTRUCTION FENCE
-  CONCRETE WASHOUT, SEE CWS DETAIL 900, SHEET EC4.0
-  CONSTRUCTION ENTRANCE, SEE CWS DETAIL 855/EC4.0 (TYP)

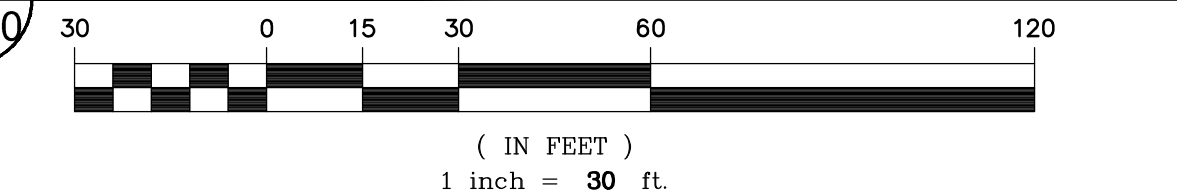
CONTROL BMP IMPLEMENTATION

- ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, GRAVEL CONSTRUCTION ENTRANCES, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL INSPECTION PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
- ALL "SEDIMENT BARRIERS (TO BE INSTALLED AFTER GRADING)" SHALL BE INSTALLED IMMEDIATELY FOLLOWING ESTABLISHMENT OF FINISHED GRADE AS SHOWN ON THESE PLANS.
- LONG TERM SLOPE STABILIZATION MEASURES "INCLUDING MATTING" SHALL BE IN PLACE OVER ALL EXPOSED SOILS BY OCTOBER 1.
- THE STORM WATER FACILITY SHALL BE CONSTRUCTED AND LANDSCAPED PRIOR TO THE STORM WATER SYSTEM FUNCTIONING AND SITE PAVING.
- INLET PROTECTION SHALL BE IN-PLACE IMMEDIATELY FOLLOWING PAVING ACTIVITIES.



1
EC3.0

SITE GRADING, STREET, AND UTILITY CONSTRUCTION EROSION AND SEDIMENT CONTROL PLAN



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Client

**PANATTONI
DEVELOPMENT
COMPANY LLC**

6650 SW REDWOOD LN,
PORTLAND, OR 97224

Project

**COFFEE CREEK
LOGISTICS CENTER**

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REVISION SCHEDULE

Delta	Issued As	Issue Date

SHEET TITLE:

**CONSTRUCTION
EROSION AND
SEDIMENT
CONTROL PLAN**

DRAWN BY: CME

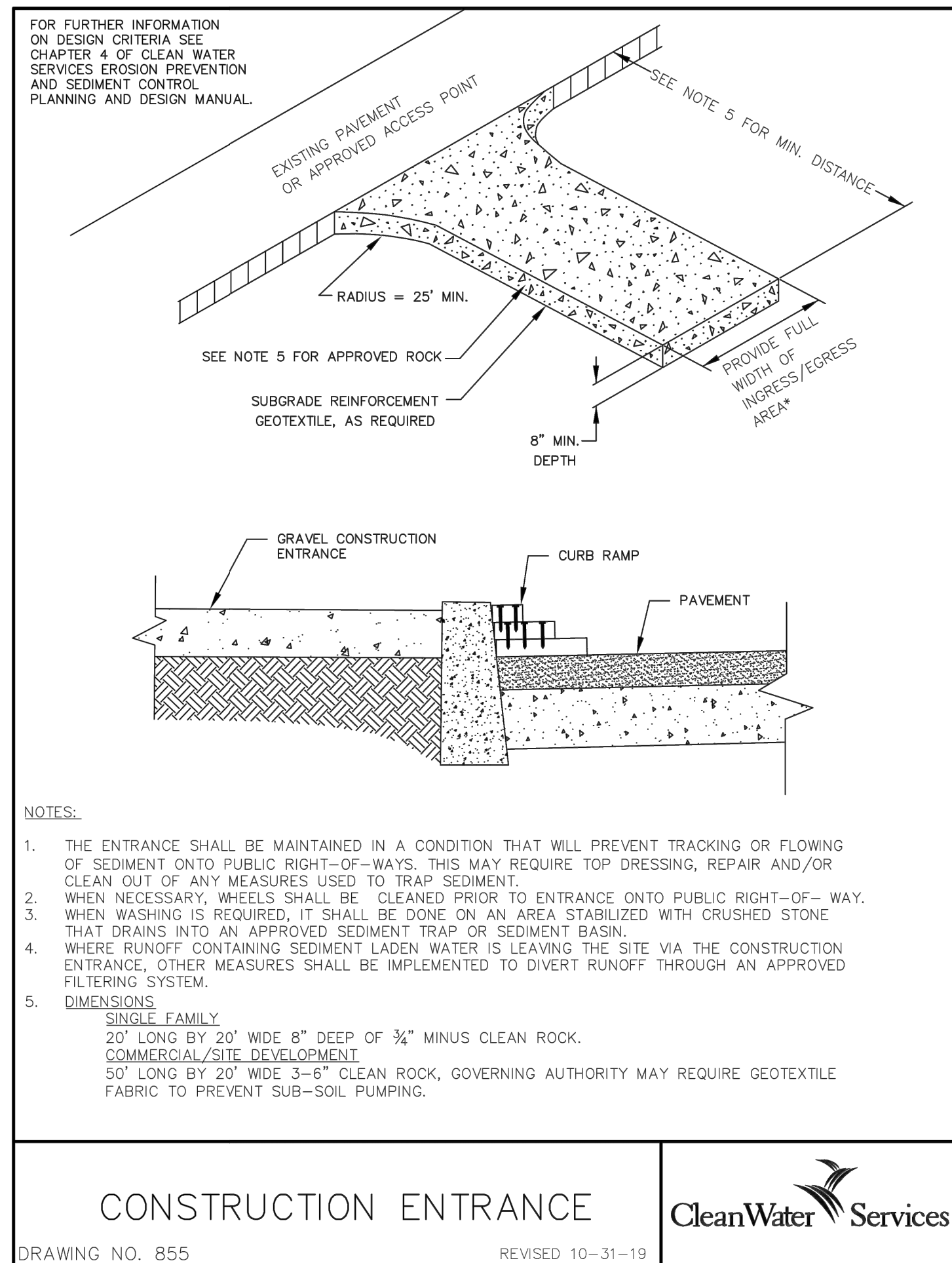
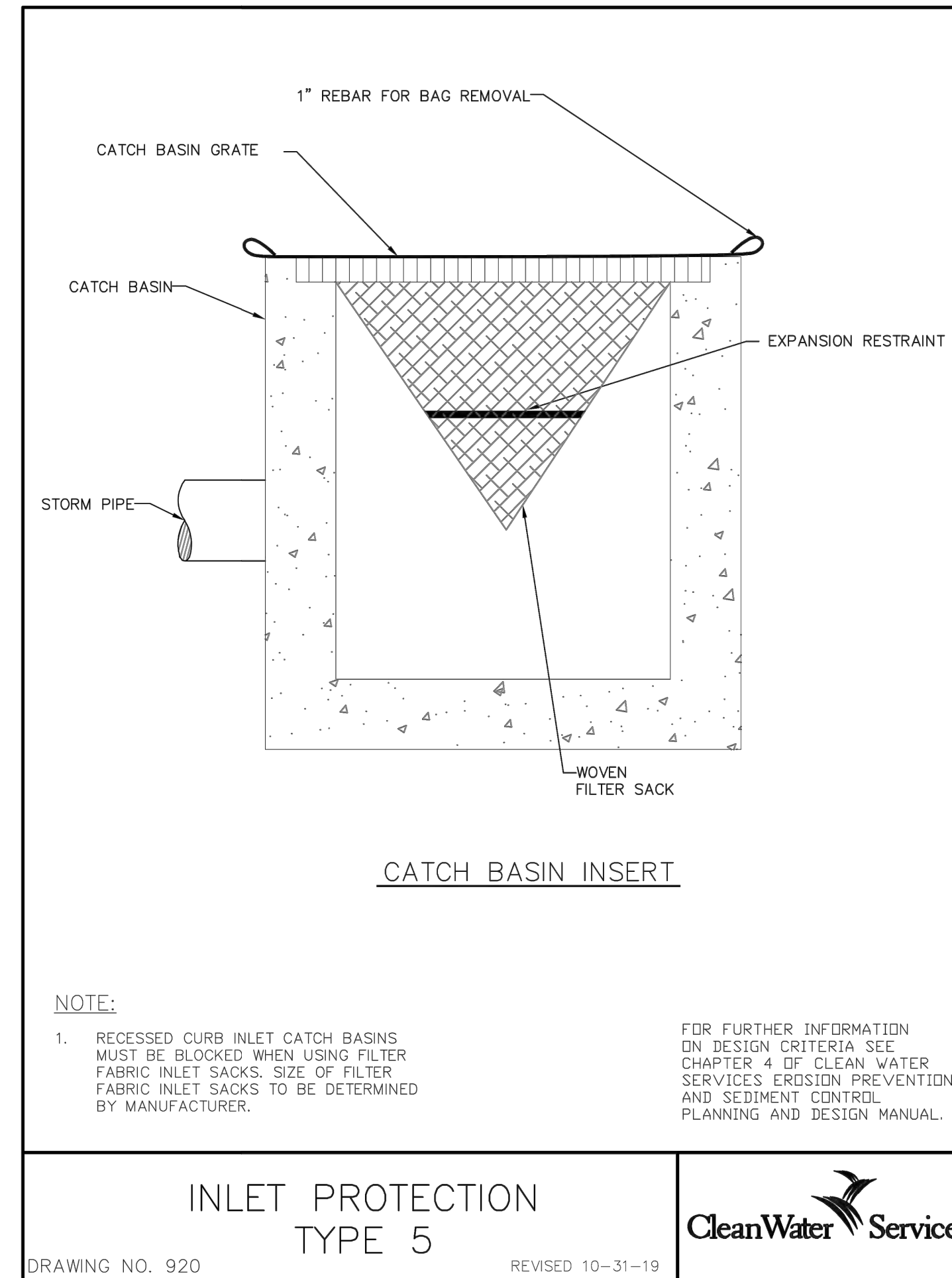
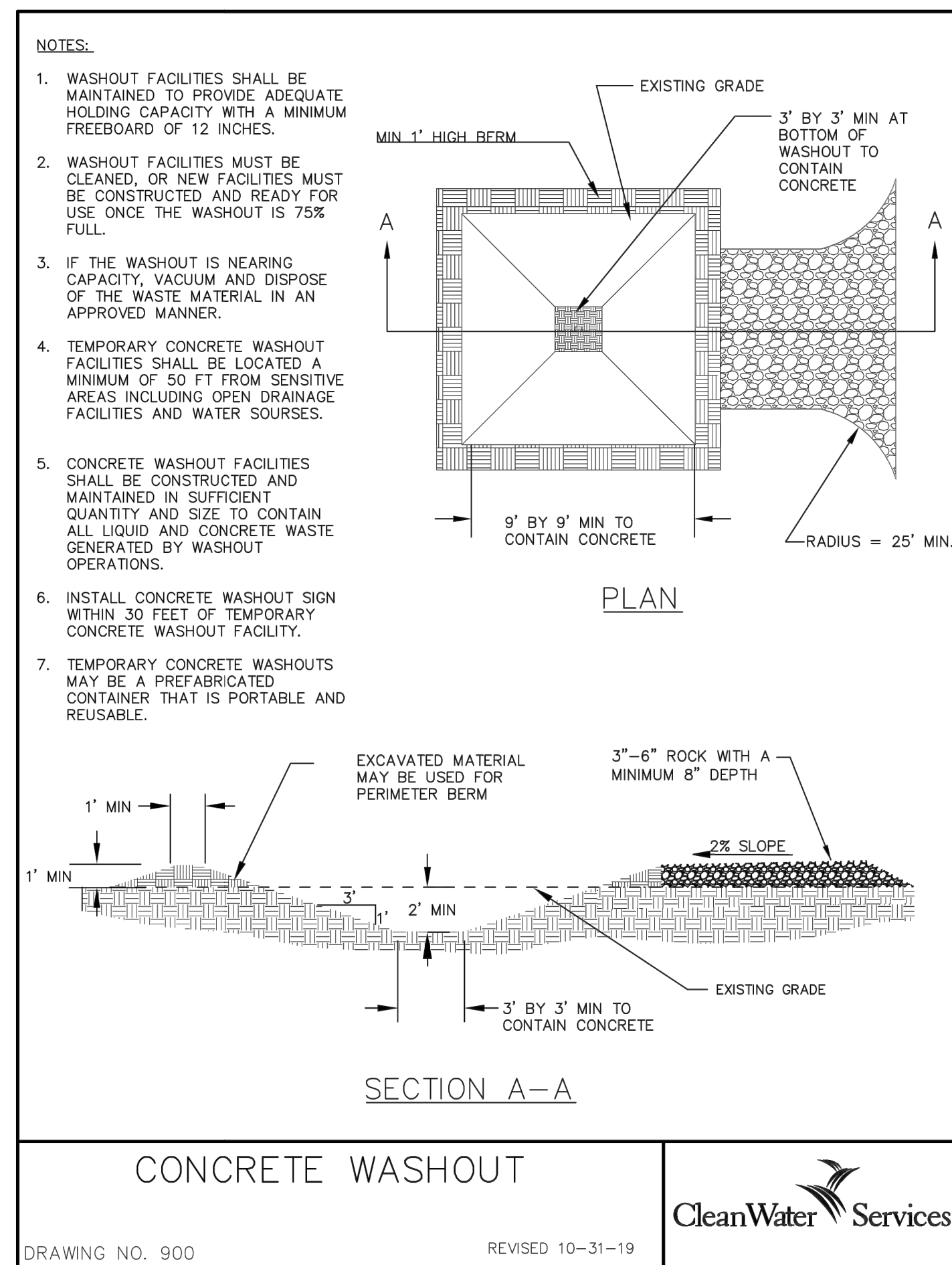
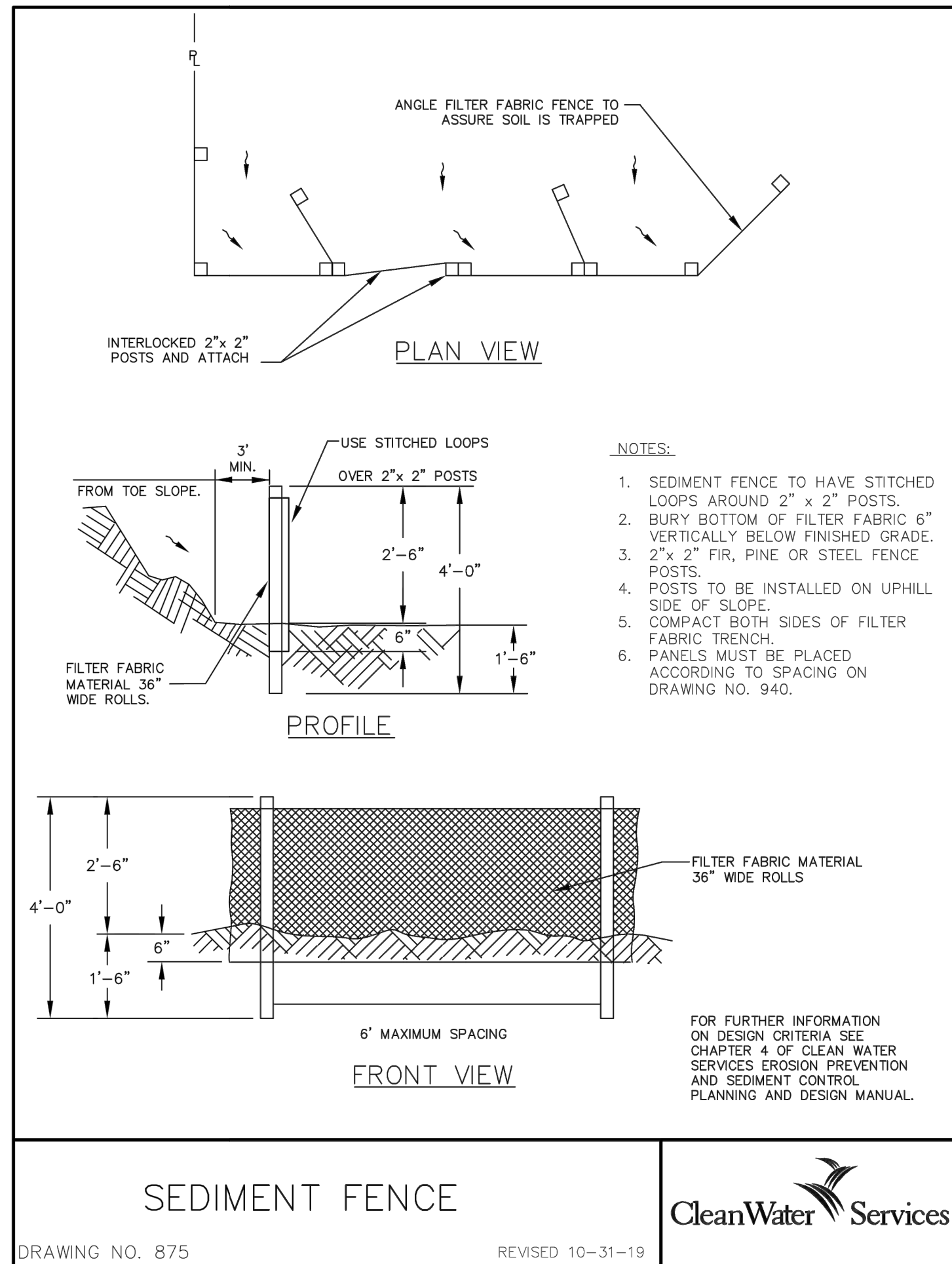
CHECKED BY: CTL

SHEET:

EC3.0

JOB NO. **2190382.00**

REVIEW SET 6-22-2020



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Vancouver, WA 360.695.7879
Seattle, WA 206.749.9993
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PANATTONI DEVELOPMENT COMPANY LLC

6650 SW REDWOOD LN,
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COFFEE CREEK LOGISTICS CENTER

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REVISION SCHEDULE		
Delta	Issued As	Issue Date

SHEET TITLE:
EROSION CONTROL DETAILS

DRAWN BY: CAM
CHECKED BY: RJH
SHEET:

EC4.0

JOB NO. **2190382.00**



10295 Southwest Ridder Road Wilsonville, OR 97070
a 503.570.0626 f 503.582.9307 republicservices.com

August 11, 2020

Mike Terpner
Mackenzie Architecture

Re: Coffee Creek Logistics Center
Clutter Road
Wilsonville, OR 97070

Dear Mike,

Thank you, for sending us the final site plans for this proposed development in Wilsonville.

My Company: Republic Services of Clackamas and Washington Counties has the franchise agreement to service this area with the City of Wilsonville. We will provide complete commercial waste removal and recycling services as needed on a weekly basis for this location

The trash and recycle enclosure design specifications submitted 6/9/2020 will provide adequate space for housing up to two 8-yard trash and recycle containers which should be adequate for this development with potential daily service frequency of 5 days per week. The design location of the enclosure on the site, and traffic pattern plans sent 6/9/2020 will allow access for our trucks to safely service this location.

Thanks Mike, for your help and concerns for our services prior to this project being developed.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kelly Herrod", written over a light blue horizontal line.

Kelly Herrod
Operations Supervisor
Republic Services Inc.



10295 Southwest Ridder Road Wilsonville, OR 97070
a 503.570.0626 f 503.582.9307 republicservices.com

June 10, 2020

Mike Terpner
Mackenzie Architecture

Re: Coffee Creek Logistics Center
Clutter Road
Wilsonville, OR 97070

Dear Mike,

Thank you, for sending us the final site plans for this proposed development in Wilsonville.

My Company: Republic Services of Clackamas and Washington Counties has the franchise agreement to service this area with the City of Wilsonville. We will provide complete commercial waste removal and recycling services as needed on a weekly basis for this location


The trash and recycle enclosure design, location and traffic pattern plans sent 6/9/2020 will allow access for our trucks to safely service this location.

Thanks Mike, for your help and concerns for our services prior to this project being developed.

Sincerely,

A handwritten signature in blue ink, appearing to read "Kelly Herrod", written over a light blue horizontal line.

Kelly Herrod
Operations Supervisor
Republic Services Inc.



Low profile, low glare.
Edge-lit technology unlike any other.

IVELOT™

RAB | Outdoor

IVELOT™

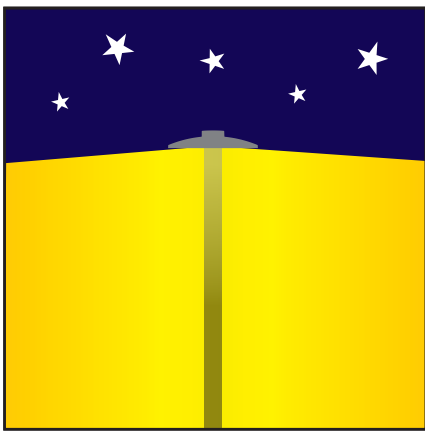


- Available in 4,500lm (38W), 7,500lm (67W), 10,000lm (94W) and 13,000lm (117W) models
- Offered with 3 mounting options: universal pole adapter, wall or slipfitter
- Type II, III, IV, VS and Forward Throw distributions
- 0-10V Dimming, standard
- Motion sensor, photocell and Lightcloud® Controller options available
- 100,000-Hour LED lifespan

RAB's warranty is subject to all terms and conditions found at rablighting.com/warranty.



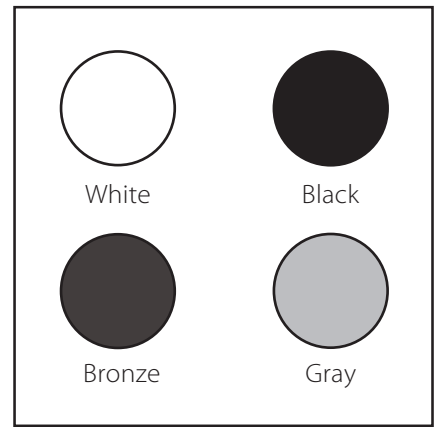
Visit rablighting.com to see which models are DLC listed.



The IVELOT is a complete cutoff, fully shielded area light that minimizes glare, while reducing light trespass.



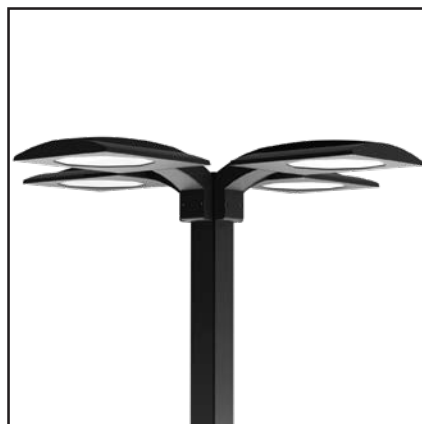
IVELOT offers several mounting options to support a variety of applications. *(Universal Pole Adapter shown)*



Available in four color finishes: bronze, black, white and gray. *(gray has no texture)*



Available with Lightcloud Controller.



Lightweight, low-profile design, and a low EPA help reduce the load on a pole.



Available with an optional, integrated motion sensor or photocell.

Specifications

UL:

Suitable for wet locations

LEDs:

Long-life, high-efficiency, micro-power, surface-mount LEDs

Drivers(s):

Class 2, 50/60Hz. 120 - 277V, 347-480V, 4kV standard, 10kV optional surge protection

Dimming Driver:

Driver includes dimming control wiring for 0-10V dimming systems. Requires separate 0-10V DC dimming circuit. Dims as low as 10%.

Lifespan:

100,000-hour LED lifespan based on IES LM-80 results & TM-21 calculations at 25°C

IP Rating:

Ingress Protection rating of IP66 for dust and water

Color Weather Starting:

Minimum starting temperature is -40°C (-40°F)

Maximum Ambient Temperature:

Suitable for use in 40°C (104°F) temperatures

Housing:

Die-cast aluminum housing

Mounting:

Universal pole adapter, slipfitter or wall mount options available

Lens:

Diffused Polymethyl Methacrylate (PMMA)

Vibration Rating:

3G vibration tested per ANSI C136.31

Effective Projected Area:

EPA = 0.61

Color Stability:

LED color temperature is warranted to shift no more than 200K in CCT over a 5-year period

Color Uniformity:

RAB's range of CCT (Correlated Color Temperature) follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.377-2017.

Title 24 Compliant:

An IVELOT edge-lit area light can be used with a motion sensor or photocell control option to comply with 2016 Title 24 Part 6 Section 130.2 (a,b,c).

Finish:

Formulated for high durability and long-lasting color

Green Technology:

Mercury and UV free. RoHS-compliant components

IESNA LM-79 Testing:

RAB LED luminaires have been tested by an independent laboratory in accordance with IESNA LM-79

Performance

Type II

	IVAT2 - 100L			IVAT2 - 75L			IVAT2 - 45L		
	5000K	4000K	3000K	5000K	4000K	3000K	5000K	4000K	3000K
Color Temperature	5000K	4000K	3000K	5000K	4000K	3000K	5000K	4000K	3000K
Input Watts	92	93	93	66	67	67	37	38	38
Output Lumens	10,739	10,095	10,167	7,961	7,484	7,537	4,340	4,080	4,109
Efficacy (lm/W)	117	109	110	120	112	112	117	109	110
Color Accuracy (CRI)	75	73	80	75	73	80	75	73	81
	<i>(Replaces 400W PSMH)</i>			<i>(Replaces 320W PSMH)</i>			<i>(Replaces 175W PSMH)</i>		

Type III

	IVAT3 - 100L			IVAT3 - 75L			IVAT3 - 45L		
	5000K	4000K	3000K	5000K	4000K	3000K	5000K	4000K	3000K
Color Temperature	5000K	4000K	3000K	5000K	4000K	3000K	5000K	4000K	3000K
Input Watts	96	96	91	70	70	66	40	40	38
Output Lumens	11,359	9,939	9,588	7,608	6,657	6,422	4,963	4,342	4,189
Efficacy (lm/W)	118	103	105	110	96	98	124	109	111
Color Accuracy (CRI)	75	73	81	75	73	80	75	73	80
	<i>(Replaces 400W PSMH)</i>			<i>(Replaces 320W PSMH)</i>			<i>(Replaces 175W PSMH)</i>		

Type IV

	IVAT4 - 130L			IVAT4 - 100L			IVAT4 - 75L			IVAT4 - 45L		
	5000K	4000K	3000K	5000K	4000K	3000K	5000K	4000K	3000K	5000K	4000K	3000K
Color Temperature	5000K	4000K	3000K	5000K	4000K	3000K	5000K	4000K	3000K	5000K	4000K	3000K
Input Watts	117	116	117	95	95	93	66	66	66	37	37	37
Output Lumens	14,322	14,174	13,232	11,361	10,832	10,207	7,429	7,353	6,864	4,906	4,856	4,533
Efficacy (lm/W)	123	122	113	120	115	109	113	112	104	132	131	121
Color Accuracy (CRI)	75	72	80	90	90	90	75	72	80	75	72	80
	<i>(Replaces 450W PSMH)</i>			<i>(Replaces 400W PSMH)</i>			<i>(Replaces 320W PSMH)</i>			<i>(Replaces 175W PSMH)</i>		

Type VS

	IVAT5S - 130L			IVAT5S - 100L			IVAT5S - 75L			IVAT5S - 45L		
	5000K	4000K	3000K	5000K	4000K	3000K	5000K	4000K	3000K	5000K	4000K	3000K
Color Temperature	5000K	4000K	3000K	5000K	4000K	3000K	5000K	4000K	3000K	5000K	4000K	3000K
Input Watts	118	115	116	97	95	95	66	64	65	38	37	38
Output Lumens	14,494	13,357	12,659	11,577	11,508	10,032	8,434	7,772	7,366	5,210	4,801	4,550
Efficacy (lm/W)	123	116	109	119	122	106	129	122	114	136	128	120
Color Accuracy (CRI)	74	72	80	90	90	90	74	72	80	74	72	80
	<i>(Replaces 450W PSMH)</i>			<i>(Replaces 400W PSMH)</i>			<i>(Replaces 300W PSMH)</i>			<i>(Replaces 320W PSMH)</i>		

Type FT (Forward Throw)

	IVAFT - 100L			IVAFT - 75L			Type FT - 45L		
	5000K	4000K	3000K	5000K	4000K	3000K	5000K	4000K	3000K
Color Temperature	5000K	4000K	3000K	5000K	4000K	3000K	5000K	4000K	3000K
Input Watts	95	91	93	68	65	67	39	37	38
Output Lumens	10,594	9,999	9,970	7,927	7,482	7,460	4,928	4,651	4,638
Efficacy (lm/W)	111	110	108	116	115	112	127	125	122
Color Accuracy (CRI)	75	73	80	74	72	80	74	72	80
	<i>(Replaces 400W PSMH)</i>			<i>(Replaces 320W PSMH)</i>			<i>(Replaces 175W PSMH)</i>		

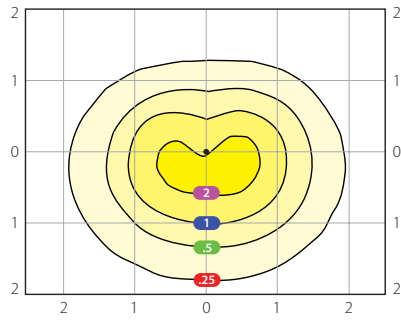
Photometrics

IVAT2-100L

(Type II)

25' Mounting Ht.

Photometric Report
#DLF1810114-11A.IES



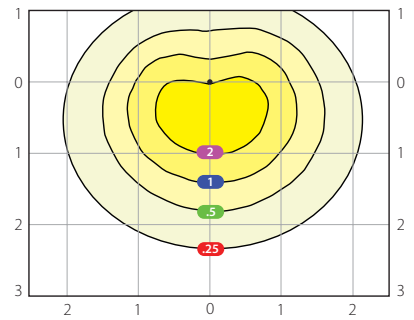
Mounting Height	15	20	25	30	35
Multiplier	2.8	1.6	1.0	0.7	0.5

IVAT3-100L

(Type III)

25' Mounting Ht.

Photometric Report
#DLF1810114-14A.IES



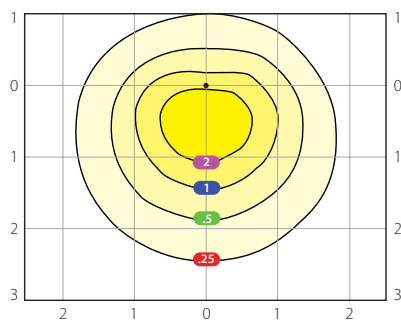
Mounting Height	15	20	25	30	35
Multiplier	2.8	1.6	1.0	0.7	0.5

IVAF7-100L

(Forward Throw)

25' Mounting Ht.

Photometric Report
#DLF1810114-17A.IES



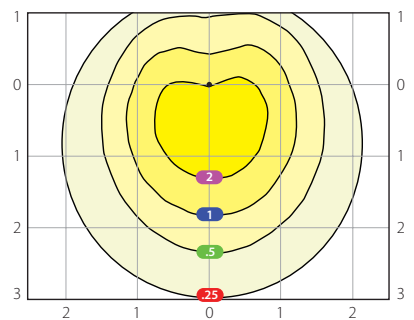
Mounting Height	15	20	25	30	35
Multiplier	2.8	1.6	1.0	0.7	0.5

IVAT4-130L

(Type IV)

25' Mounting Ht.

Photometric Report
#DLF1810114-20A.IES



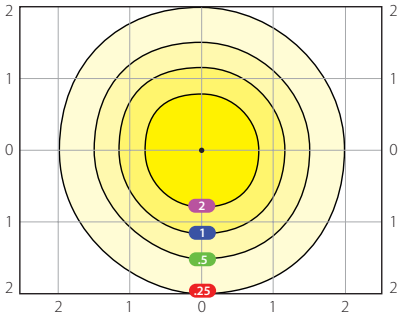
Mounting Height	15	20	25	35	30
Multiplier	2.8	1.6	1.0	0.5	0.7

IVAT5S-130L

(Type V Square)

25' Mounting Ht.

Photometric Report
#DLF1810114-23A.IES



Mounting Height	15	20	25	35	30
Multiplier	2.8	1.6	1.0	0.5	0.7

Grid Scales: Multiples of Mounting Height Values Shown in Footcandles

Watts	Lumens Based on 5000K CCT @ 120Vac					Avg Lumens Across All Dist Types
	Type II	Type III	Type IV	Type VS	Forward Throw	
38W	4,340	4,963	4,906	5,210	4,928	4,869
67W	7,961	7,608	7,429	8,434	7,927	7,872
94W	10,739	11,359	10,832	11,577	10,594	10,897
117W	n/a	n/a	14,322	14,494	n/a	14,408



led wallpacks

The Simkar WS LED Series of traditionally-styled LED wallpacks replaces 100W to 400W metal halide wall mounted fixtures while consuming up to 79% less energy and operating for up to 100,000 hours (L85). Powered by high performance, energy-efficient mid power LED chip packages, the WS LED wallpacks produce bright, long-lasting illumination, reducing shadows and creating a safer nighttime environment while saving energy and maintenance costs. The footprint allows for replacement of HID fixtures without painting or patching.

Project _____

Catalog Number _____

Type _____

Date _____

- Traditional design, familiar footprint
- Up to 79% energy savings vs. traditional HID sources
- Up to 100,000 hour operating life (L85)

- 10 KV, field replaceable surge protector
- 5000K (standard)
- >70 CRI

HOUSING / LENS Bronze powder coat die cast aluminum housing for a high quality finish, excellent heat dissipation, and durability. Borosilicate prismatic glass lens with weatherproof silicone gasketing to seal out contaminants. The WSM approximate shipping weight is 13 lbs. The WSL approximate shipping weight is 28 lbs.

40W fixture uses 50W 1.2A power supply. 64W fixture uses 75W 1.4A power supply. 94W fixture uses 96W 3.5 amp power supply.

LEDS WS LED wallpacks are available in 4 light levels (delivered): 3,400 lumens (28W), 4,780 lumens (40W), 8,150 lumens (63.68W) and 11,640 lumens (94W) at 5000K (standard), >70 CRI. Also available in 3000K and 4000K. Consult factory for lead times.

TEMPERATURE The WS LED Series is suitable for use in operating temperatures of -22°F (-30°C) to 104°F (40°C).

Operating life is 100,000 hours (L85) for WSMLED35L, WSMLED50L and WSMLED75L. Operating life is 50,000 hours (L85) for WSLLED120L.

ACCESS / WIRING The side-hinged door opens easily using two captive stainless steel screws to provide quick access to internal components. Four threaded and plugged 1/2" conduit entries: sides, top and rear. Rear knockouts for mounting over 3" and 4" J boxes. LED PCB board and power supply have quick disconnect for easier installation and maintenance. Top conduit entry provided for optional photocell.

Light engines consist of 45, 60, 112, and 133 mid power LED chip packages mounted to a metal core PCB and integral heavy gauge aluminum heat sink. Heavy gauge internal aluminum LED mounting plate is bolted to top of the housing for superior heat dissipation.

MOUNTING The recommended wall mounting height of the WSM LED is 10 to 25 ft. The recommended mounting height of the WSL LED is up to 30 ft.

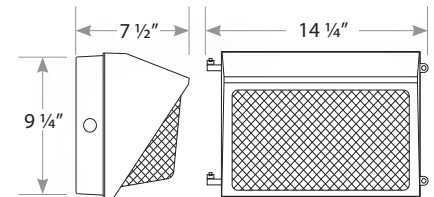
ELECTRICAL Power supplies are 120-277V, 0-10V dimmable. Power factor is >0.9. Power supply is mounted in direct contact with aluminum housing for cooler operation and longer life. 28W fixture uses 30W 830 mA power supply.

LISTINGS C-UL-US Listed wet location. DLC listed to the outdoor non-cut-off and semi-cut-off wall mounted area luminaires category.

WARRANTY 5 year limited warranty.



WSM LED (shown)



WSM LED (shown)



WS LED Wall Pack Configuration

SERIES	LUMENS*	CCT	VOLTAGE	OPTIONS
WSMLED = 14" Housing WSLLED = 19" Housing	<u>WSMLED</u> 35L = 3,400 lumens (28W) 50L = 4,780 lumens (40W) 75L = 8,150 lumens (64W) <u>WSLLED</u> 120L = 11,640 lumens (94W)	30 = 3000K 40 = 4000K 50 = 5000K (standard)	U1 = universal 120-277V	WT = White Housing BK = Black Housing (X)B = Button Photocell; designate voltage: 1 = 120V, 2 = 277V ELS: Emergency Backup

* See performance table for light output and actual power consumption

ACCESSORIES
WSM-TSD = Tamperproof Screws & screwdriver
<i>For (x) below, please use (M) for WSM or (L) for WSL</i>
WG(x) = Wire Guard
PG(x) = Polycarbonate Guard (vandal shield)
<i>Glare Shields</i>
WS(x)-GS = Side Cutoffs
WS(x)-GSF = Full Cutoff

Performance Data

Model	Light Output* (lumens)	Input Power	Efficacy (lumens/watt)	Color Temperature	Operating Life	Operating Temperature	Mounting Height**	Equivalent HID
WSMLED35L50U1	3,401 Lm	27.75W	123 Lpw	5000K	100,000 hrs. (L85)	-22°F (-30°C) to 104°F (40°C)	up to 10 ft.	up to 100W PSMH
WSMLED50L50U1	4,780 Lm	39.83W	120 Lpw	5000K	100,000 hrs. (L85)		up to 15 ft.	up to 150W PSMH
WSMLED75L50U1	8,148 Lm	63.68W	128 Lpw	5000K	100,000 hrs. (L85)		up to 25 ft.	up to 250W PSMH
WSLLED120L50U1	11,642 Lm	93.88W	124 Lpw	5000K	50,000 hrs. (L85)		up to 30 ft.	up to 400W PSMH

* Delivered lumens

** Consult a lighting engineer to meet specific requirements

Accessories

For (x) below, please use (M) for WSM or (L) for WSL



WG(x)
Wire guard



PG(x)
Polycarbonate Guard
(vandal shield)



WS(x) TSD
Tamperproof Screws &
Drivers

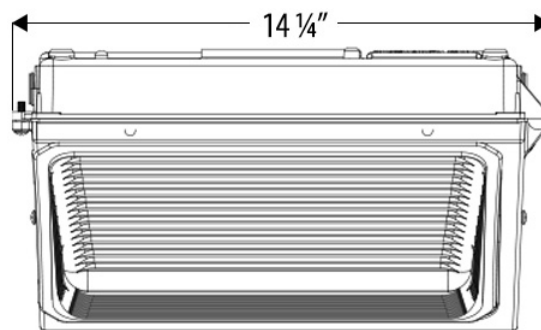
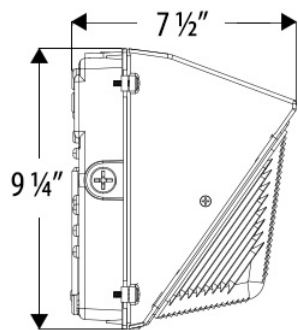


WS(x) - GS
Side Cutoff Glare
Shield

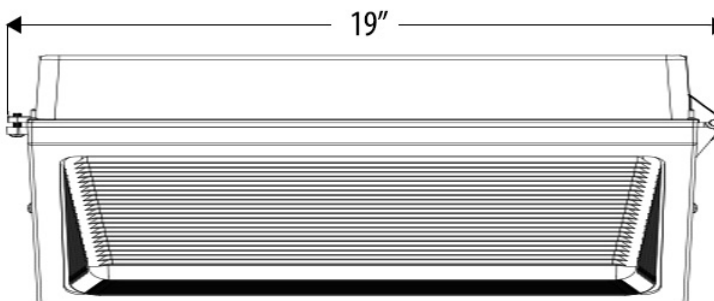
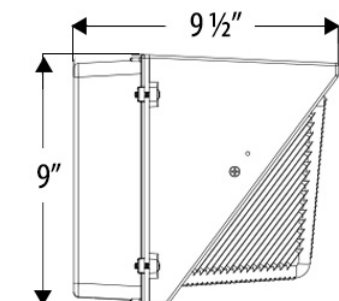


WS(x) - GSF
Full Cutoff Glare
Shield

Dimensions



WSM LED



WSL LED

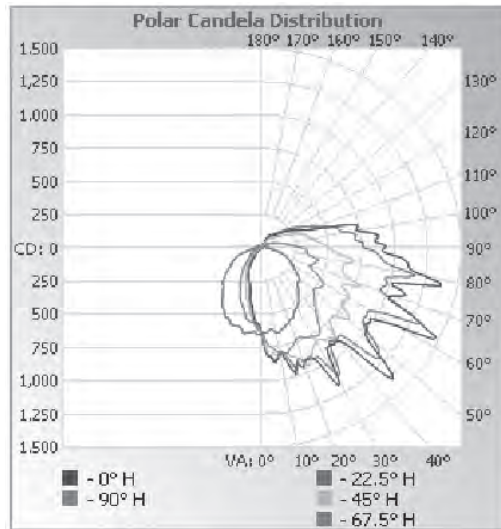
Photometric Data

Luminaire Data WSMLED35L50U1

Formed steel housing, clear linear prismatic lens enclosure

Catalog Number	WSMLED35L50U1
Lab Test#	GZE161270-A
(#) Driver	(1) Constant Current 830mA
# LED	45 white LEDs
Color Temperature	5000K
Input Watts	27.75
Delivered Lumens	3,401
Operating Life	100,000 hrs. (L85)
Fixture Efficacy	123.0 Lpw

Polar Plot



Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	63.7	1.9%	90-100	263.2	7.6%
10-20	177.9	5.2%	100-110	192.3	5.6%
20-30	267.7	7.8%	110-120	119.4	3.5%
30-40	329.4	9.6%	120-130	71.1	2.1%
40-50	369.2	10.7%	130-140	39.6	1.2%
50-60	376.2	10.9%	140-150	22.3	0.6%
60-70	410.1	11.9%	150-160	8.2	0.2%
70-80	383.1	11.1%	160-170	0.7	0%
80-90	349.3	10.1%	170-180	0.1	0%

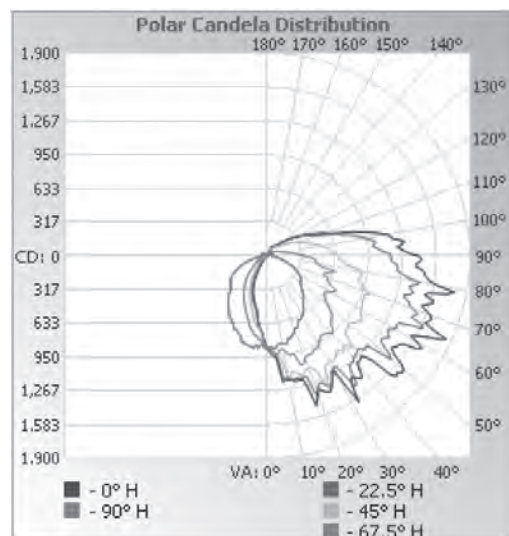
Photometric Data

Luminaire Data WSMLED50L50U1

Formed steel housing, clear linear prismatic lens enclosure

Catalog Number	WSMLED50L50U1
Lab Test#	GZE160672-AB
(#) Driver	(1) Constant Current 1.2A
# LED	60 white LEDs
Color Temperature	5000K
Input Watts	39.83 W
Delivered Lumens	4,780
Operating Life	100,000 hrs. (L85)
Fixture Efficacy	120.0 Lpw

Polar Plot



Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	81.6	1.8%	90-100	371.2	8%
10-20	237.7	5.1%	100-110	259.5	5.6%
20-30	363.6	7.8%	110-120	157.1	3.4%
30-40	439.5	9.5%	120-130	90.0	1.9%
40-50	480.6	10.4%	130-140	47.6	1%
50-60	519.4	11.2%	140-150	26.0	0.6%
60-70	555.5	12.0%	150-160	11.6	0.2%
70-80	531.4	11.5%	160-170	1.9	0%
80-90	465.9	10.0%	170-180	0.2	0%

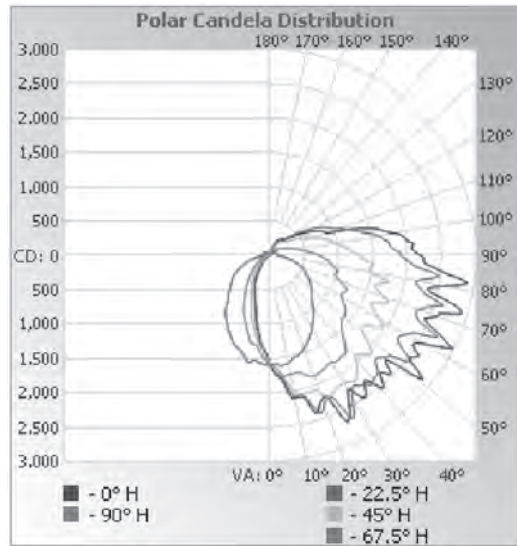
Photometric Data

Luminaire Data WSMLED75L50U1

Formed steel housing, clear linear prismatic lens enclosure

Catalog Number	WSMLED75L50U1
Lab Test#	GZE161270-B
(#) Driver	(1) Constant Current 1.4A
# LED	133 white LED
Color Temperature	5000K
Input Watts	63.68 W
Delivered Lumens	8,148
Operating Life	100,000 hrs. (L85)
Fixture Efficacy	128.0 lm/W

Polar Plot



Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	149.8	1.8%	90-100	631.9	7.8%
10-20	428.3	5.3%	100-110	460.5	5.7%
20-30	650.7	8.0%	110-120	292.8	3.6%
30-40	791.6	9.7%	120-130	178.4	2.2%
40-50	843.6	10.4%	130-140	99.2	1.2%
50-60	893.3	11.0%	140-150	57.5	0.7%
60-70	928.1	11.4%	150-160	25.7	0.3%
70-80	900.3	11.1%	160-170	3.9	0%
80-90	809.4	9.9%	170-180	0.4	0%

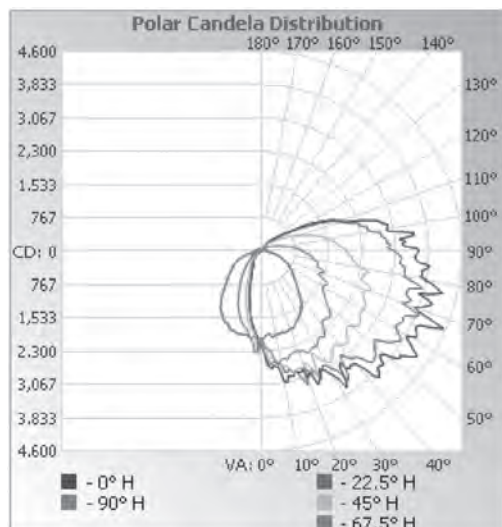
Photometric Data

Luminaire Data WSLLED120L50U1

Formed steel housing, clear linear prismatic lens enclosure

Catalog Number	WSLLED120L50U1
Lab Test#	GZE160672-C
(#) Driver	(1) Constant Current 3.5A
# LED	112 white LEDs
Color Temperature	5000K
Input Watts	93.88W
Delivered Lumens	11,642
Operating Life	50,000 hrs. (L85)
Fixture Efficacy	124.0 lm/W

Polar Plot

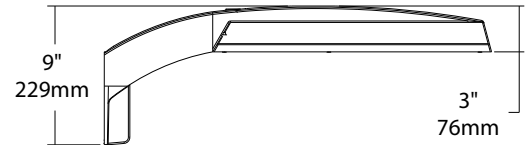
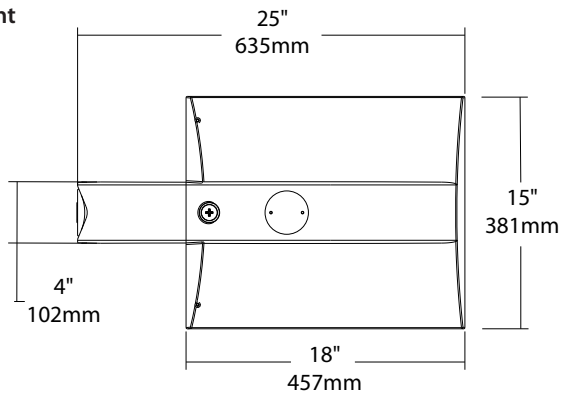


Lumens Per Zone					
Zone	Lumens	% Total	Zone	Lumens	% Total
0-10	207.4	1.8%	90-100	1,003.3	8.5%
10-20	575.5	4.9%	100-110	751.9	6.4%
20-30	848.6	7.2%	110-120	460.2	3.9%
30-40	1,063.8	9.0%	120-130	222.3	1.9%
40-50	1,226.1	10.4%	130-140	108.3	0.9%
50-60	1,324.9	11.2%	140-150	52.8	0.4%
60-70	1,373.8	11.7%	150-160	23.0	0.2%
70-80	1,342.3	11.4%	160-170	5.9	0.1%
80-90	1,188.8	10.1%	170-180	0.6	0%

Mountings, Dimensions & Weights

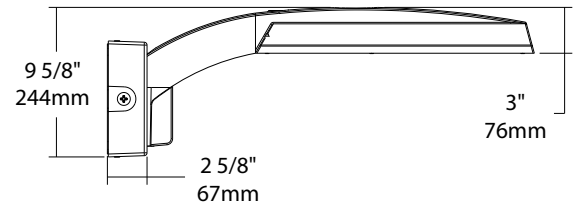
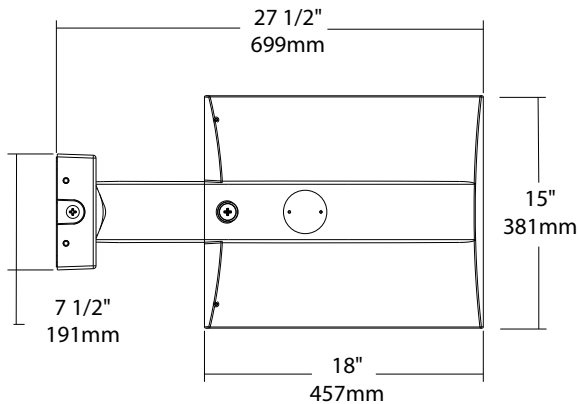
PA - Universal Pole Mount

Weight: 15.0 lbs (7kg)



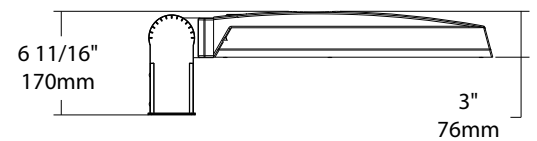
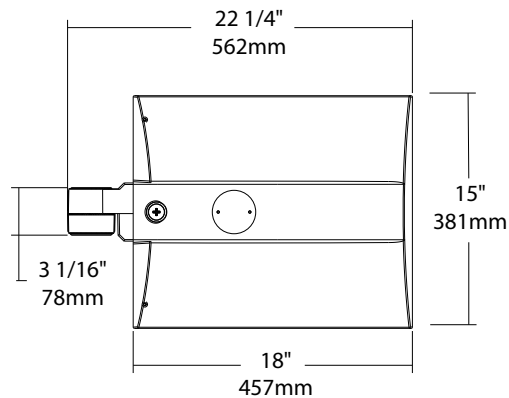
WM - Wall Mount

Weight: 20.0 lbs (9kg)



SF - Slipfitter Mount

Weight: 13.5 lbs (6kg)



Ordering information

Product Family	Optics /Distribution	Lumen Output	Mounting	CCT/CRI	Finish	Voltage/Driver	Sensor Options	Lightcloud Option
IVA								
T2	Type II	45L 4500 lumens (38W)	PA Universal Pole Adapter	750 5000K (Cool), 70 CRI	Z Bronze	U 120-277V, 0-10V Dimming	Blank No Sensor	Blank No Lightcloud
T3	Type III	75L 7500 lumens (67W)	WM Wall Mount	740 4000K (Neutral), 70 CRI	W White	H 347-480V, 0-10V Dimming	/WS Multi-Level Motion Sensor, 8ft mounting	/LC Lightcloud Controller ²
T4	Type IV	130L 13000 lumens (117W)	SF Slipfitter	730 3000K (Warm), 70 CRI	G Roadway Gray		/WS2 Multi-Level Motion Sensor, 20ft mounting	
T5S	Type V Sq				K Black		/WS4 Multi-Level Motion Sensor, 40ft mounting	
FT	Forward Throw						/7PR 7-Pin Receptacle	

ACCESSORIES (SOLD SEPARATELY)

IVA-SF	Single Fuse (120V, 277V)
IVA-DF	Double Fuse (208V, 240V, 480V)
RSP10GI-277	10kV Surge Protector (120V & 277V)
RSP10GI-480	10kV Surge Protector (480V)

1. Applies to TYPE IV, V Square | 2. Applies to 120-277V

Application

Bollards designed for use in the private home and garden that provide direct light towards the ground surface with offering a high degree of visual comfort and safety.

Materials

Luminaire housing and post constructed of extruded and die-cast marine grade, copper free ($\leq 0.3\%$ copper content) A360.0 aluminum alloy
 Clear safety glass with optical texture
 Reflector made of pure anodized aluminum
 Silicone applied robotically to casting, plasma treated for increased adhesion
 High temperature silicone gasket
 Mechanically captive stainless steel fasteners
 Galvanized steel mounting stem

NRTL listed to North American Standards, suitable for wet locations
 Protection class IP65
 Weight: 6.0lbs

Electrical

Operating voltage	Magnetic 12VAC
Minimum start temperature	-40° C
LED module wattage	1.9W
System wattage	4.0W
Color rendering index	Ra > 80
Luminaire lumens	146 lumens (3000K)
LED service life (L70)	60,000 hours

LED color temperature

- 4000K - Product number + **K4**
- 3500K - Product number + **K35**
- 3000K - Product number + **K3**
- 2700K - Product number + **K27**
- Amber - Product number + **AMB**

Wildlife friendly amber LED - Optional

Luminaire is optionally available with a narrow bandwidth, amber LED source (585-600nm) approved by the FWC. This light output is suggested for use within close proximity to sea turtle nesting and hatching habitats. Electrical and control information may vary from standard luminaire.

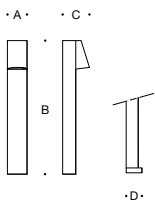
LED module wattage	2.1 W (Amber)
System wattage	2.9 W (Amber)
Luminaire lumens	119 lumens (Amber)

BEGA can supply you with suitable LED replacement modules for up to 20 years after the purchase of LED luminaires - see website for details

Finish

All BEGA standard finishes are matte, textured polyester powder coat with minimum 3 mil thickness.

Available colors	Black (BLK)	White (WHT)	RAL:
	Bronze (BRZ)	Silver (SLV)	CUS:



Garden and pathway bollard · directed light · direct burial

	LED	A	B	C
77 239	1.9 W	3	27 1/2	5

Type:
 BEGA Product:
 Project:
 Modified:

Available Accessories

536 300VA 12VAC Transformer

See individual accessory spec sheet for details.



WILSONVILLE COFFEE CREEK LOGISTICS CENTER

TRANSPORTATION IMPACT STUDY

APRIL 2020

PREPARED FOR:

CITY OF WILSONVILLE



PREPARED FOR CITY OF WILSONVILLE



Khoi Le, P.E., Development Engineering Manager

PREPARED BY DKS ASSOCIATES



Scott Mansur, P.E., PTOE, Principal

Jenna Bogert, E.I., Transportation Engineer



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INTRODUCTION

This study evaluates the transportation impacts associated with the proposed Coffee Creek Logistics Center development located on the southwest corner of the Clutter Street/Garden Acres Road intersection in Wilsonville, Oregon (tax parcel 3S103D 002100).

Based on the information provided by the project sponsor, this development will be an industrial building suitable for one or two tenants. The building size is an estimated 115,000 square feet and the use is assumed to be 25% manufacturing and 75% warehousing with ancillary office uses.

The purpose of this transportation impact analysis is to identify potential mitigation measures needed to offset transportation impacts that the proposed development may have on the nearby transportation network. The impact analysis is focused on the study intersections, which were selected for evaluation in coordination with City staff. The intersections are shown in Figure 1 and listed below:

- Boones Ferry Road/95th Avenue
- 95th Avenue/Ridder Road

This section introduces the proposed development. Table 1 lists important characteristics of the study area and proposed project.



FIGURE 1: PROJECT STUDY AREA

TABLE 1: KEY STUDY AREA AND PROPOSED DEVELOPMENT CHARACTERISTICS

CHARACTERISTICS	INFORMATION
STUDY AREA	
NUMBER OF STUDY INTERSECTIONS	Two
ANALYSIS PERIOD	Weekday PM Peak Hour (Peak hour between 4-6 PM)
PROJECT SITE	
EXISTING LAND USE	Vacant
PROPOSED DEVELOPMENT	One 115,00 square-foot manufacturing and warehousing building
PROPOSED PROJECT ACCESS(ES)	Two full-access driveways on Clutter Street

EXISTING CONDITIONS

This chapter provides documentation of existing study area conditions, including the study area roadway network, pedestrian and bicycle facilities, and existing traffic volumes and operations. Supporting details for volumes and operations are provided in the appendix.

PROPOSED DEVELOPMENT

The proposed development is an industrial building suitable for one or two tenants. The building size is an estimated 115,000 square feet and the use is assumed to be 25% manufacturing and 75% warehousing with ancillary office uses. There are two full-access site driveways on Clutter Street that are proposed.

STUDY AREA ROADWAY NETWORK

Key roadway(s) in the study area are summarized in Table 2 along with their existing roadway characteristics. The functional classification of Clutter Road, Ridder Road, and Garden Acres Road are found in the Wilsonville’s Transportation System Plan (TSP).¹

¹ 2013 Transportation System Plan – Amended, City of Wilsonville, April 16, 2019.

TABLE 2: STUDY AREA ROADWAY CHARACTERISTICS (WITHIN THE STUDY AREA)

ROADWAY	CLASSIFICATION	NO. OF LANES	POSTED SPEED	SIDWALKS	BIKE FACILITIES	ON-STREET PARKING
CLUTTER STREET	Collector ^a	2	40 mph	None	None	None
RIDDER ROAD	Minor Arterial ^b	3	40 mph	Partial	None	None
GARDEN ACRES ROAD	Minor Arterial	2	25 mph	None	None	None

^a between Grahams Ferry Road and Garden Acres Road

^b between Garden Acres Road and future Kinsman Road extension

PEDESTRIAN AND BICYCLE FACILITIES

Clutter Street does not currently have sidewalks or bicycle facilities. Ridder Road, between Garden Acres Road and the future Kinsman Road extension, has partial sidewalks and no bicycle facilities. Garden Acres Road is currently under construction and will have protected bicycle lanes once construction is complete.

PUBLIC TRANSIT

South Metro Area Regional Transit (SMART) operates several fixed routes that serve Wilsonville and the surrounding area. Route 5 (95th Avenue) provides service along 95th Avenue between the SMART Central Station in Wilsonville to Boones Ferry Road. There is one westbound bus stop that is located approximately 700 feet east of the proposed project site. This route has headways of 30 mins between the hours of 5:15 a.m. – 10:15 a.m. and 3:00 p.m. to 6:30 p.m. on weekdays only.

EXISTING TRAFFIC VOLUMES

Existing PM peak hour traffic operations were analyzed at the following study intersections based on coordination with city staff²:

- Boones Ferry Road/95th Avenue
- 95th Avenue/Ridder Road

Due to the COVID-19 closures of businesses and schools, current traffic counts were not able to be collected. Historical intersection turn movement volumes were utilized for this impact analysis and were factored to represent typical traffic conditions.

² Email from Khoi Le on January 30, 2020.

The intersection counts for the Boones Ferry Road/95th Avenue intersection were collected in April 2019. Two days of intersection counts were collected and then the average between the two days was calculated. This set of averaged traffic counts was used in the intersection operations analysis. Since these counts were less than a year old, no growth factor was applied.

The intersection counts for the 95th Avenue/Ridder Road that were used in the intersection operations analysis are the build volumes from the *Republic Services Shop Expansion Transportation Impact Study* that was completed in April 2014. The build volumes include the existing traffic counts from April 2014, the development project trips, and Stage II trips. More details on Stage II trips can be found in the *Future Traffic Volumes* section of this report. An annual growth rate of 1% was also applied to these volumes to account for the growth in the surrounding area between 2014 and 2020.

The existing traffic volumes that were used in this analysis are shown in Figure 2 below.



FIGURE 2: EXISTING PM PEAK HOUR VOLUMES

INTERSECTION PERFORMANCE MEASURES

Level of service (LOS) ratings and volume-to-capacity (v/c) ratios are two commonly used performance measures that provide a good picture of intersection operations.

- **Level of service (LOS):** A “report card” rating (A through F) based on the average delay experienced by vehicles at the intersection. LOS A, B, and C indicate conditions where traffic

moves without significant delays over periods of peak hour travel demand. LOS D and E are progressively worse operating conditions. LOS F represents conditions where average vehicle delay has become excessive and demand has exceeded capacity.

- **Volume-to-capacity (v/c) ratio:** A decimal representation (typically between 0.00 and 1.00) of the proportion of capacity that is being used at a turn movement, approach leg, or intersection. It is determined by dividing the peak hour traffic volume by the hourly capacity of a given intersection or movement. A lower ratio indicates smooth operations and minimal delays. As the ratio approaches 1.00, congestion increases, and performance is reduced. If the ratio is greater than 1.00, the turn movement, approach leg, or intersection is oversaturated and usually results in excessive queues and long delays.

REQUIRED OPERATING STANDARDS

The two study intersections are located within the City of Wilsonville’s jurisdiction. The City requires that study intersections on public streets meet its minimum acceptable level of service (LOS) standard, which is LOS D per overall intersection for peak periods.

EXISTING OPERATING CONDITIONS

Existing traffic operations at the study intersections were determined for the PM peak hour based on the Highway Capacity Manual (HCM) 6th Edition methodology for signalized intersections.³ The results were then compared with the City of Wilsonville’s minimum acceptable LOS operating standard of LOS D or better. Table 3 lists the estimated v/c ratio, delay, and LOS of each study intersection.

TABLE 3: EXISTING INTERSECTION OPERATIONS

STUDY INTERSECTION	OPERATING STANDARD	EXISTING OPERATIONS		
		V/C RATIO	DELAY (SECS)	LOS
BOONES FERRY RD/95TH AVE	LOS D	0.69	26.3	C
95TH AVE/RIDDER RD	LOS D	0.84	29.0	C

As shown, the existing intersection operations for both of the study intersections meet the City’s LOS standard of LOS D or better.

³ Highway Capacity Manual, 6th Edition, Transportation Research Board, 2016.

PROJECT IMPACTS

This section reviews the impacts that the proposed Coffee Creek Logistics Center may have on the transportation system within the study area. This analysis includes a site plan evaluation, trip generation, trip distribution, and future year traffic volumes and operating conditions for the two study intersections.

PROPOSED DEVELOPMENT

The proposed development is an industrial building suitable for one or two tenants. The building size is an estimated 115,000 square feet and the use is assumed to be 25% manufacturing and 75% warehousing with ancillary office uses. There are two full-access site driveways on Clutter Street that are proposed.

TRIP GENERATION

Trip generation is the method used to estimate the number of vehicles added to site roadways and the adjacent roadway network by a development during a specified period (i.e., such as the PM peak hour). For this study, ITE 10th Edition trip generation data was used which is based on national land use data.⁴

Table 4 provides the trip generation for the proposed development. Typically, the ITE land use for the described development would be General Light Industrial (110), but because the project owner specified the breakdown of specific building use by percentage, the Manufacturing (140) and Warehousing (150) land uses were used instead. As shown, the development is expected to generate approximately 57 total (16 in, 41 out) PM peak hour trips and 433 daily trips.

TABLE 4: TRIP GENERATION

LAND USE (ITE CODE)	SIZE ^A	PM PEAK HOUR				DAILY	
		TRIP RATE	IN	OUT	TOTAL	TRIP RATE	TOTAL
MANUFACTURING (140)	29 KSF	2.1 trips/KSF	6	13	19	8.7 trips/KSF ^B	252
WAREHOUSING (150)	86 KSF	0.44 trips/KSF ^B	10	28	38	2.1 trips/KSF ^B	181
TOTAL	115 KSF	-	16	41	57	-	433

^A KSF= 1,000 square feet

^B Rate back calculated from ITE fitted curve equation

⁴ Trip Generation Manual, 10th Edition, Institute of Transportation Engineers, 2017.

Note that some of the trip rates are back calculated based on the non-linear ITE trip generation equation for that land use.

TRIP DISTRIBUTION

Trip distribution provides an estimate of where project-related trips would be coming from and going to. It is given as percentages at key gateways to the study area and is used to route project trips through the study intersections.

Figure 3 on the following page shows the expected trip distribution and project trip routing for the additional traffic generated by the proposed development. The distribution shows 65% of trips traveling east of the project site via Ridder Road and 35% trips will travel west of the site to Grahams Ferry Road. Approximately 5% of trips will travel north on Boones Ferry Road and 45% will travel east to the I-5 Interchange. The distribution assumes that 15% of the trips will travel south of the study area. The trip distribution was estimated using the City of Wilsonville travel demand model.⁵

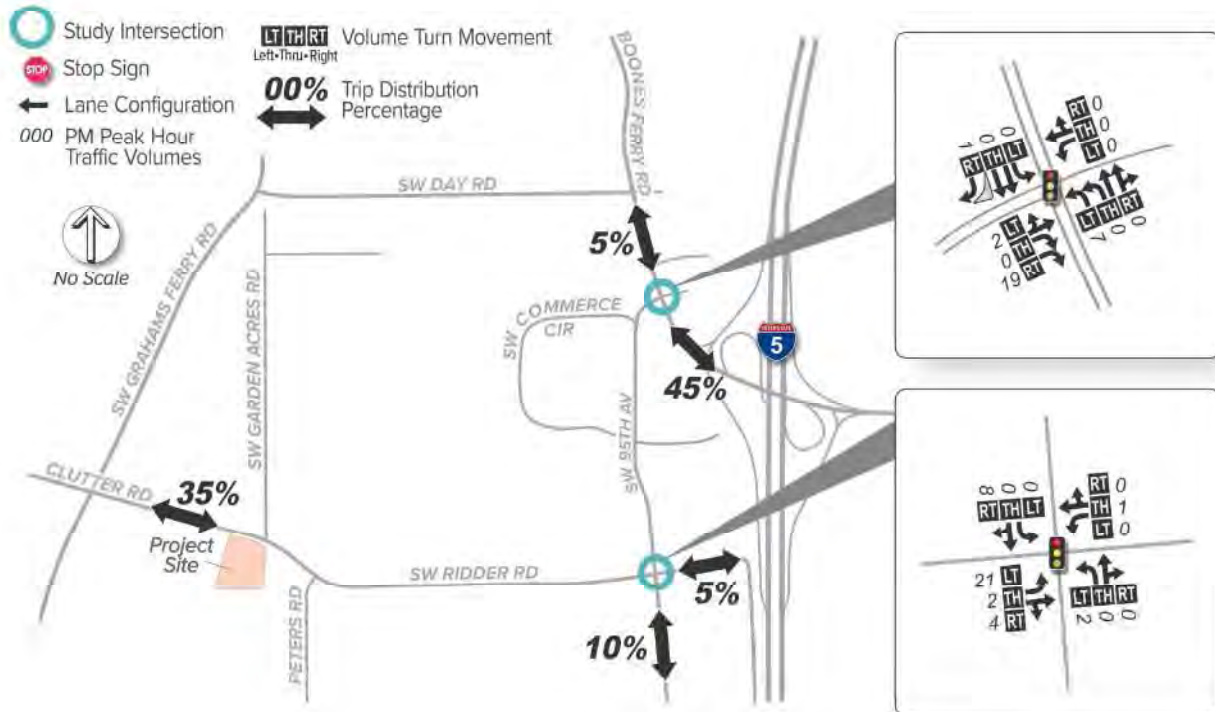


FIGURE 3: TRIP DISTRIBUTION AND PROJECT TRIPS

⁵ 2035 Wilsonville Travel Demand Model, Select Zone Analysis of Zone 1018.

PROJECT TRIPS THROUGH CITY OF WILSONVILLE INTERCHANGE AREAS

The project trips through the two City of Wilsonville I-5 interchange areas were estimated based on the trip generation and distribution assumptions as discussed prior. The I-5/Elligsen interchange area includes the two I-5 ramp terminals on Elligsen Road. The I-5/Wilsonville Road interchange area includes the intersections on Wilsonville Road between Boones Ferry Road and Town Center Loop West.

The proposed development is expected to route approximately 45% of its project trips through the I-5/Elligsen Road interchange area, that is 26 trips total during the PM peak hour. The proposed development is expected to route approximately 8% of its project trips through the I-5/Wilsonville Road interchange area, that is 5 trips total during the PM peak hour.

WILSONVILLE TSP – CLUTTER STREET FUTURE CONNECTIVITY

The following project is listed in the TSP as a “Higher-Priority” project and is located near the project site.

- UU-08: Garden Acres Road Urban Upgrade - Upgrade Garden Acres Road to a three-lane collector with bicycle lanes and upgrade Garden Acres Road/Day Road to either a signal or a roundabout.

Realign Ridder Road to Garden Acres Road and close the existing Clutter Street connection to Grahams Ferry Road once the Java Road connection (RE-13) has been built. See figure below.

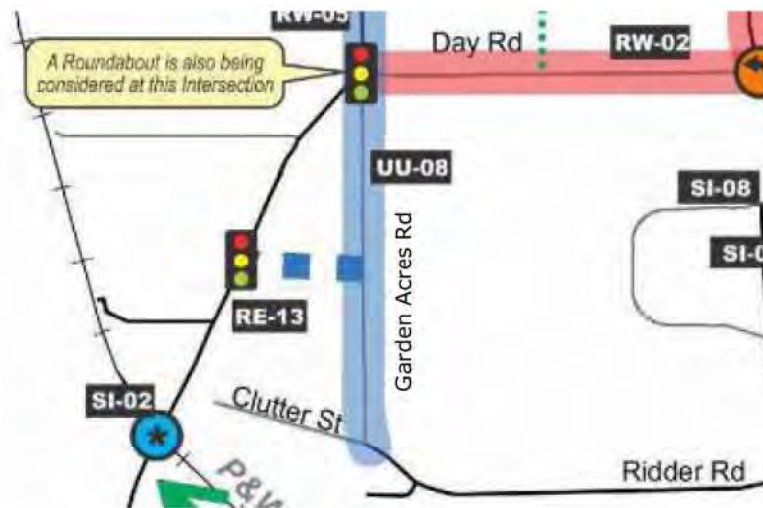


FIGURE 4: CITY OF WILSONVILLE TSP PROJECT UU-08

As stated above, Clutter Street will become a dead-end street and the intersection of Ridder Road/Clutter Street/Garden Acres Road will be realigned and Clutter Street will become the minor stop-controlled approach of the intersection. At that point, Clutter Street will function more like a Local Street, not a Collector. The construction on Garden Acres Road is currently underway (see photo on following page).



FIGURE 5: CURRENT CONSTRUCTION AT GARDEN ACRES ROAD/CLUTTER STREET/RIDDER ROAD

Trips to and from the proposed development will then only be able to access Grahams Ferry Road via Garden Acres Road. However, because these network changes have not been built or implemented yet, the trip distribution for this analysis is based on the current alignment and connectivity.

ANALYSIS SCENARIOS

Future operating conditions were analyzed at the two study intersections for the following future traffic scenarios. The comparison of the following scenarios enables the assessment of project impacts:

- Existing + Stage II
- Existing + Stage II + Project

Stage II traffic represents trips for the developments that are currently approved by the City but have not yet been built nor occupied. The Stage II development list is provided by City staff and is provided in the appendix.

FUTURE TRAFFIC VOLUMES

The traffic volumes for the two future analysis scenarios are shown in Figure 6 and Figure 7. The volumes are for the PM peak hour.



FIGURE 6: EXISTING + STAGE II PM PEAK HOUR VOLUMES



FIGURE 7: EXISTING + STAGE II + PROJECT PM PEAK HOUR VOLUMES

FUTURE INTERSECTION OPERATIONS

Future traffic operations at the two study intersections were determined for the PM peak hour based on the Highway Capacity Manual (HCM) 6th Edition methodology for signalized intersections. Table 5 lists the estimated v/c ratio, delay, and LOS of each study intersection.

TABLE 5: FUTURE INTERSECTION OPERATIONS

STUDY INTERSECTION	OPERATING STANDARD	EXISTING + STAGE II			EXISTING + STAGE II + PROJECT		
		V/C RATIO	DELAY (SECS)	LOS	V/C RATIO	DELAY (SECS)	LOS
BOONES FERRY RD/95TH AVE	LOS D	0.71	26.1	C	0.72	26.1	C
95TH AVE/RIDDER RD	LOS D	0.86	32.1	C	0.88	33.9	C

As shown, both intersections are expected to meet the City's operating standard in the future.

SITE PLAN EVALUATION

The following site plan evaluation is based on the site plan provided by the project sponsor. The site plan showing the proposed development can be found in the appendix. It should be noted that this project site is located within the Coffee Creek Industrial Design Overlay District and is subject to those development requirements as well as the City of Wilsonville standard Development Code.

SITE ACCESS AND CIRCULATION

There are two full access driveways proposed on Clutter Street shown on the site plan. Both driveways provide access to the front of the property. Head-in parking stalls are provided on both the west and east sides of the building. The site plans show sufficient space for two-way motor vehicle circulation throughout the parking aisles (25-foot wide aisles). Four ADA parking stalls are provided on the north side of the building at the entrance.

The City has minimum driveway clear drive aisle length standards.⁶ For driveways with more than 100 average daily traffic (ADT), the minimum clear drive aisle length shall be 100 feet. It is recommended that the clear drive aisle lengths be shown at a minimum 100 feet at both proposed driveways.

MULTIMODAL FACILITIES

The site plan shows sidewalks on both the northwest and northeast corners of the project site that connect Clutter Street to the building entrance. Marked pedestrian crosswalks are shown on the site plan also, which provide clear guidance for pedestrians to safely cross through the parking lot aisles. It is recommended to construct all sidewalks to meet ADA requirements.

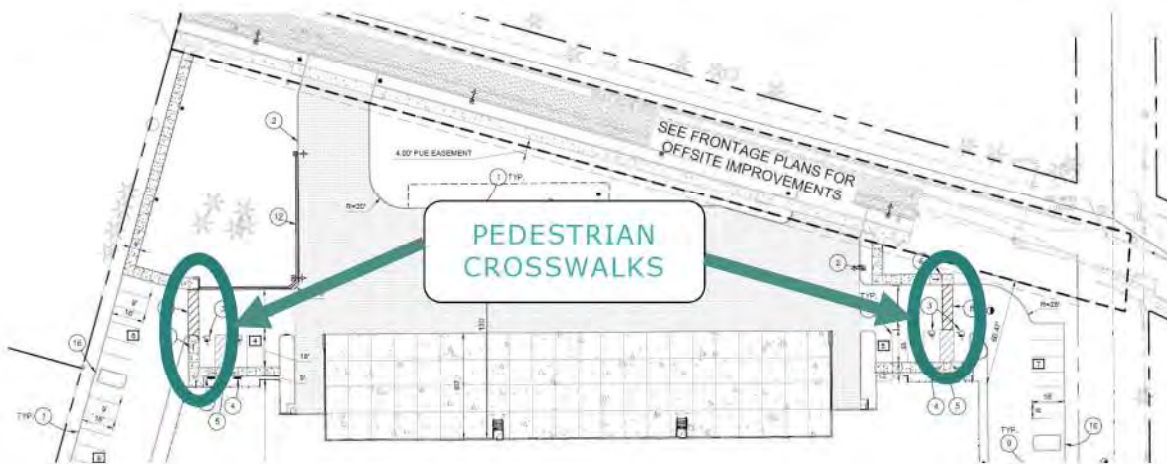


FIGURE 8: MULTIMODAL FACILITIES ON THE SITE PLAN

⁶ Detail No. RD-1105, Public Works Standards, City of Wilsonville, Revised September 2017.

As discussed in the *Wilsonville TSP – Clutter Street Future Connectivity* section, the Garden Acres Road upgrade projects are currently under construction. As part of the intersection improvement at Garden Acres Road/Clutter Street/Ridder Road, a minimum 100-foot left turn pocket shall be provided on the Clutter Street approach by the project sponsor.

In addition, the project site frontage is required to meet half-street improvements for a Collector classification. The City’s TSP⁷ provides the requirements for Collectors and is shown in Figure 9. This includes constructing a minimum of 5-foot-wide sidewalk, planter strips, and a 6-foot bike lane on the southern half of Clutter Street fronting the project site.

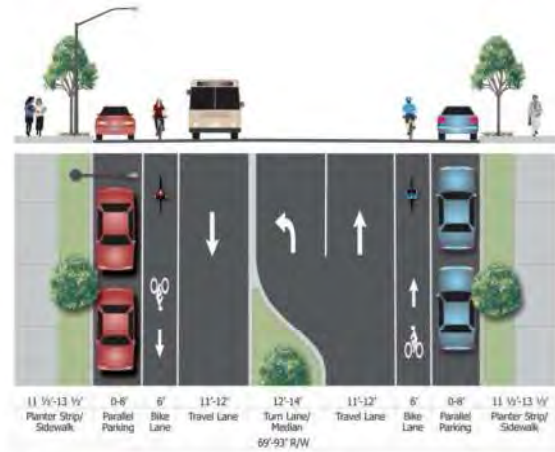


FIGURE 9: CITY OF WILSONVILLE CROSS SECTION STANDARD FOR COLLECTORS

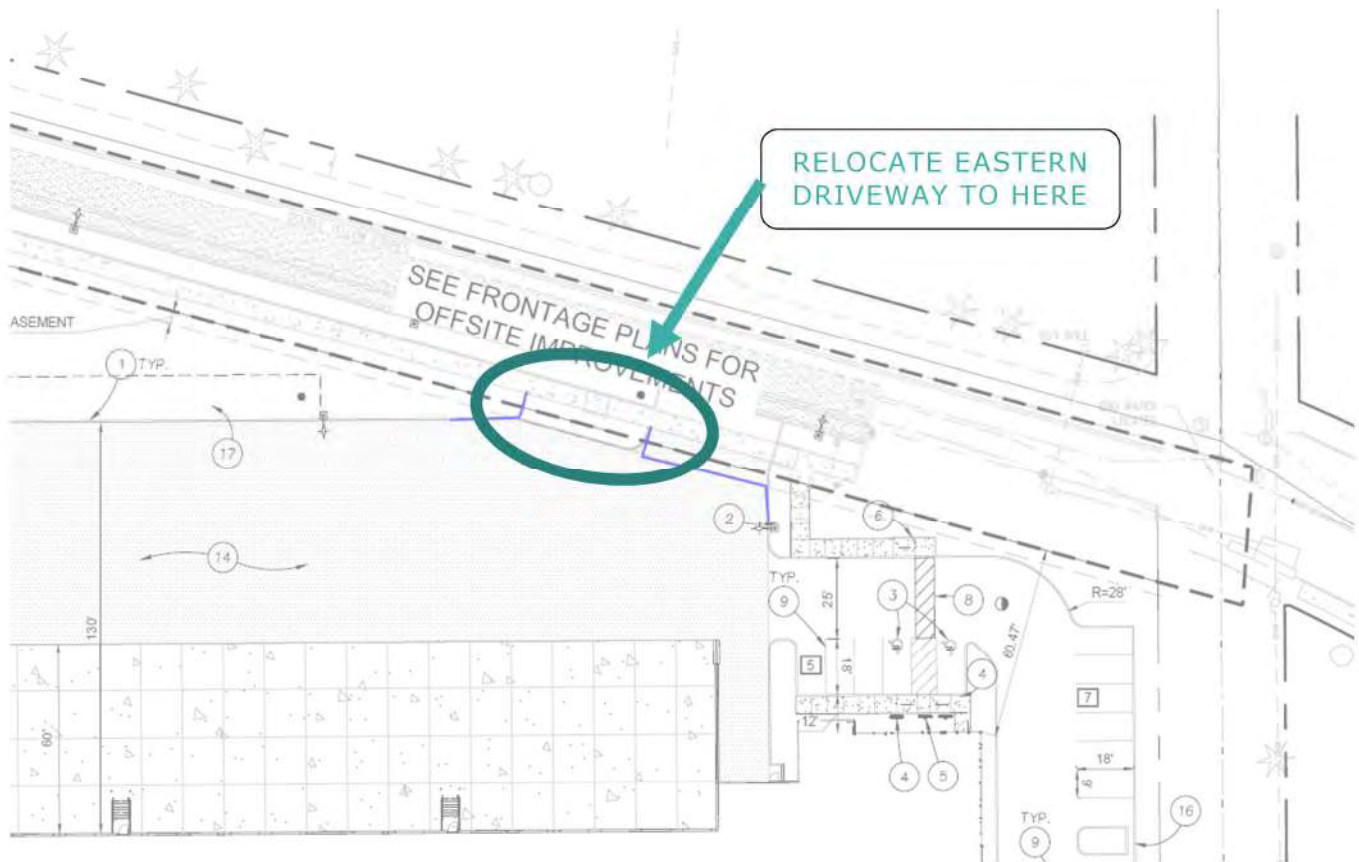
ACCESS SPACING

All proposed access points are required to meet the City’s required spacing between intersections and driveways. Per previous discussion, Clutter Street is anticipated to function like a Local Street after the nearby TSP projects have been completed. Therefore, the access spacing standards on Clutter Street will be based on Local Street standards. According to the TSP⁹, there is no minimum or desired access spacing on Local Streets.

However, it is recommended that the project sponsor relocate the eastern driveway to the west such that it is located as far away from the future turn pocket at the intersection in order to improve safety and operations at the intersection.

⁷ Figure 3-8, 2013 Transportation System Plan, City of Wilsonville, Amended 2019.

⁹ Table 3-2, 2013 Transportation System Plan, City of Wilsonville, Amended 2019.



SIGHT DISTANCE

According to industry standards¹⁰, the intersection sight distance for left-turning vehicles is 445 feet (based on a speed of 40 mph). Preliminary sight distance was evaluated along the property frontage on Clutter Street and was found to be sufficient to meet the AASHTO requirement. Prior to occupancy, sight distance at any proposed access points will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon to assure that buildings, signs or landscaping does not restrict sight distance.

PARKING

The proposed project is required to comply with the City of Wilsonville Development Code for the number of vehicular parking stalls and bicycle parking spaces that are provided on site.¹¹ Table 8 lists the vehicular and bicycle parking requirements for the project site. The parking requirements are based on the building use and square footage of the building.

¹⁰A Policy on Geometric Design of Highways and Streets, AASHTO, 2018.

¹¹ Wilsonville Development Code, Section 4.155, Table 5, Updated October 2018.

TABLE 6: VEHICLE AND BICYCLE PARKING REQUIREMENTS

LAND USE	SIZE ^A	SPACES REQUIRED BY CODE			PROPOSED SPACES	
		VEHICLE MINIMUM	VEHICLE MAXIMUM	BICYCLE MINIMUM	VEHICLE PARKING	BICYCLE PARKING
MANUFACTURING	29 KSF	46 stalls	No Limit	6 stalls	73 stalls	Unknown
WAREHOUSING	86 KSF	26 stalls	43 stalls	4 stalls		
TOTAL	115 KSF	72 stalls	No Limit	10 stalls		

^A KSF= 1,000 square feet

^B Estimated demand based on 85th percentile identified in the Parking Generation, 4th Edition, ITE, 2010.

^C City of Wilsonville, Planning and Land Development Ordinance, Section 4.155, Table 5, Updated June 2013.

As shown above, 72 vehicular stalls are needed to meet the minimum Code requirements for the project. Because the site is expected to have 73 parking stalls including 4 ADA stalls, the site will meet Code requirements. The parking table also indicates that 10 bicycle parking spaces are required at the project site to meet the minimum Code requirements. The site plan does not currently show any bicycle parking stalls. At minimum, 10 bicycle parking spaces will need to be provided on the project site and should be located near building entrances in order to provide convenient access.

PROJECT IMPACT SUMMARY

The Coffee Creek Logistics Center development is anticipated to result in the following impacts:

TRIP GENERATION

- The building size is an estimated 115,000 square feet and the use is assumed to be 25% manufacturing and 75% warehousing with ancillary office uses.
- The development is expected to generate 57 total (16 in, 41 out) PM peak hour trips.
- Of the project trips, 26 new PM peak hour trips are estimated to pass through the I-5/Elligsen Road interchange area and 5 PM peak hour trips through the I-5/Wilsonville Road interchange area.

INTERSECTION OPERATIONS

- All study intersections meet City standards under both future analysis scenarios.

SITE PLAN EVALUATION

- It is recommended to construct all sidewalks to meet ADA requirements.

- It recommended that the clear drive aisle lengths be shown at a minimum 100 feet at both proposed driveways to meet public works construction standards.
- As part of the intersection improvement at Garden Acres Road/Clutter Street/Ridder Road, a minimum 100-foot left turn pocket shall be provided on the Clutter Street approach by the project sponsor.
- The remaining project site frontage is required to meet half-street improvements for a Collector. This includes constructing a minimum of 5-foot-wide sidewalks, planter strips, and 6-foot bike lanes on the southern half of Clutter Street.
- It is recommended that the project sponsor relocate the eastern driveway to the west such that it is located as far away from the future turn pocket at the intersection.
- Prior to occupancy, sight distance at any proposed access points will need to be verified, documented, and stamped by a registered professional Civil or Traffic Engineer licensed in the State of Oregon to assure that buildings, signs or landscaping does not restrict sight distance.
- It is recommended that future site plans show the required number of bicycle parking stalls (10) per the City's parking requirement.

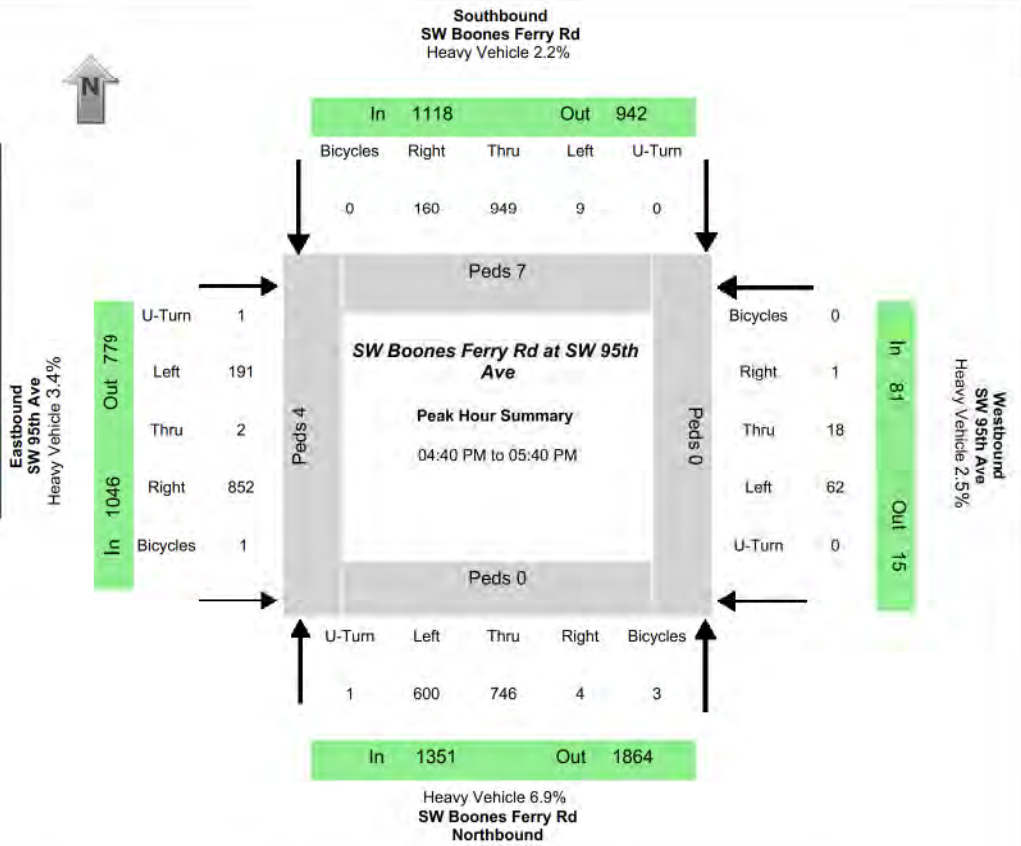
APPENDIX



117 COMMERCIAL STREET NE, SUITE 310, SALEM, OR 97301 • 503.391.8773 • DKSASSOCIATES.COM

Data Provided by K-D-N.com 503-594-4224

N/S street	SW Boones Ferry Rd
E/W street	SW 95th Ave
City, State	Wilsonville OR
Site Notes	
Location	45.338005 - -122.772873
Start Date	Thursday, April 04, 2019
Start Time	04:00:00 PM
Weather	
Study ID #	
Peak Hour Start	04:40:00 PM
Peak 15 Min Start	05:10:00 PM
PHF (15-Min Int)	0.95



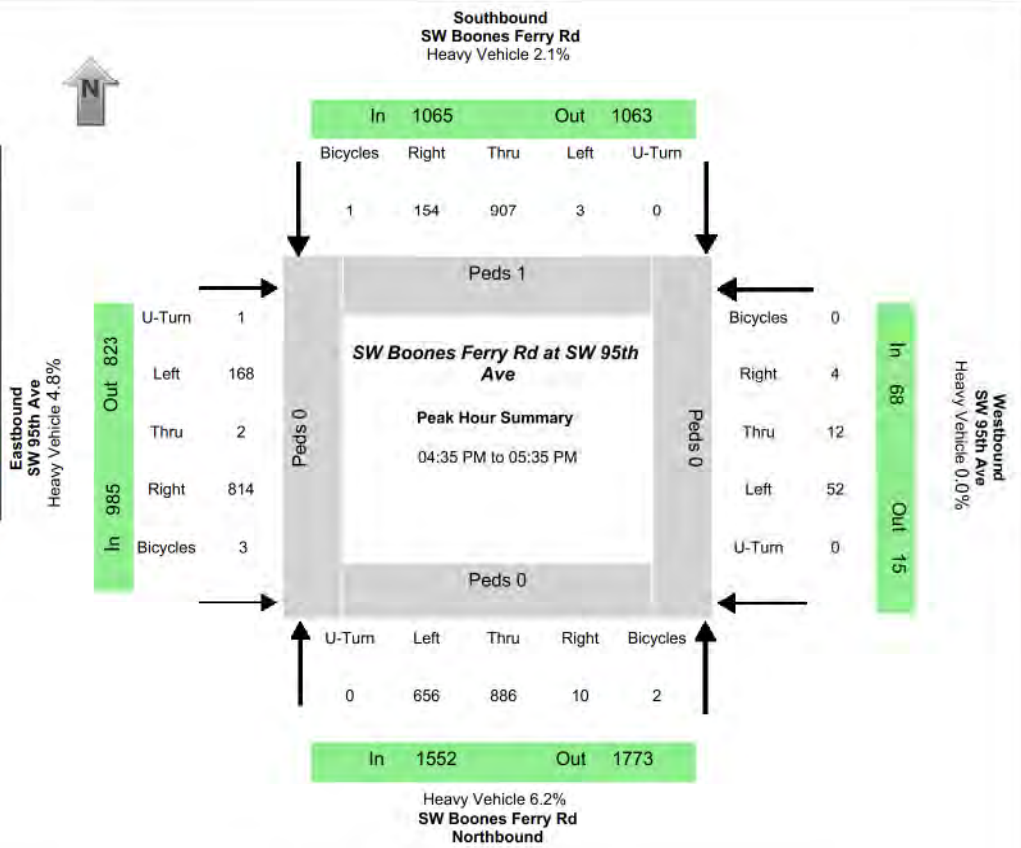
Peak-Hour Volumes (PHV)																							
Northbound				Southbound				Eastbound				Westbound				Entering				Leaving			
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
600	746	4	1	9	949	160	0	191	2	852	1	62	18	1	0	1351	1118	1046	81	1864	938	779	15
Percent Heavy Vehicles																							
10.2%	4.2%	25.0%	0.0%	11.1%	1.8%	4.4%	0.0%	4.2%	0.0%	3.3%	0.0%	0.0%	11.1%	0.0%	0.0%	6.0%	2.2%	3.4%	2.5%	2.4%	4.2%	9.0%	13.3%

PHV - Bicycles														PHV - Pedestrians							
Northbound				Southbound				Eastbound				Westbound				in Crosswalk				Sum	
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Sum	NB	SB	EB	WB	Sum
0	3	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4	0	7	4	0	11

Time	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW 95th Ave				Westbound SW 95th Ave				15 Min Sum	1 HR Sum
	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn		
04:00:00 PM	33	41	1	0	5	71	16	0	13	0	61	0	8	2	0	0		
04:05:00 PM	52	60	3	0	0	73	10	0	9	0	81	0	5	3	0	0		
04:10:00 PM	38	52	0	0	0	55	10	0	20	0	80	0	3	4	0	0	809	
04:15:00 PM	38	62	1	0	1	76	19	0	12	0	76	0	3	2	0	0	848	
04:20:00 PM	56	64	0	0	0	85	14	0	14	0	46	0	6	1	0	0	838	
04:25:00 PM	46	48	0	0	2	66	7	0	9	0	67	0	1	3	0	0	825	
04:30:00 PM	41	56	0	0	2	87	9	0	13	0	62	0	2	3	0	0	810	
04:35:00 PM	42	53	3	0	0	80	10	0	10	0	81	0	4	0	1	0	808	
04:40:00 PM	52	59	0	0	0	81	11	0	18	0	98	0	2	0	0	0	880	
04:45:00 PM	52	56	1	0	2	77	17	0	16	0	87	0	8	3	0	0	924	
04:50:00 PM	44	53	1	0	0	58	5	0	11	0	81	0	3	0	1	0	897	
04:55:00 PM	49	53	0	1	1	86	15	0	14	0	58	0	0	2	0	0	855	3369
05:00:00 PM	44	67	1	0	0	91	14	0	12	0	63	0	6	2	0	0	836	3418
05:05:00 PM	48	60	0	0	3	57	11	0	19	2	81	0	8	2	0	0	870	3413
05:10:00 PM	40	73	0	0	2	87	18	0	27	0	88	0	13	4	0	0	943	3503
05:15:00 PM	43	70	0	0	1	77	18	0	13	0	71	0	4	2	0	0	942	3512
05:20:00 PM	58	77	0	0	0	68	9	0	24	0	59	0	2	0	0	0	948	3523
05:25:00 PM	67	61	0	0	0	93	14	0	8	0	59	1	2	0	0	0	901	3579
05:30:00 PM	47	64	1	0	0	87	7	0	15	0	53	0	10	1	0	0	887	3589
05:35:00 PM	56	53	0	0	0	87	21	0	14	0	54	0	4	2	0	0	881	3596
05:40:00 PM	67	66	1	0	0	73	9	0	16	0	49	0	0	0	0	0	857	3556
05:45:00 PM	45	62	0	0	0	71	19	0	13	0	57	0	2	0	0	0	841	3506
05:50:00 PM	64	65	1	0	0	67	22	0	10	0	60	1	1	0	0	0	841	3540
05:55:00 PM	65	63	0	0	0	63	17	0	10	0	44	0	6	1	0	0	829	3530

Data Provided by K-D-N.com 503-594-4224

N/S street	SW Boones Ferry Rd
E/W street	SW 95th Ave
City, State	Wilsonville OR
Site Notes	
Location	45.338005 - -122.772873
Start Date	Wednesday, April 03, 2019
Start Time	04:00:00 PM
Weather	
Study ID #	
Peak Hour Start	04:35:00 PM
Peak 15 Min Start	05:05:00 PM
PHF (15-Min Int)	0.96



Peak-Hour Volumes (PHV)																							
Northbound				Southbound				Eastbound				Westbound				Entering				Leaving			
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
656	886	10	0	3	907	154	0	168	2	814	1	52	12	4	0	1552	1064	985	68	1773	1058	823	15
Percent Heavy Vehicles																							
8.5%	4.5%	10.0%	0.0%	0.0%	1.4%	5.8%	0.0%	5.4%	0.0%	4.7%	0.0%	0.0%	0.0%	0.0%	0.0%	6.3%	2.1%	4.8%	0.0%	2.9%	4.6%	7.9%	6.7%

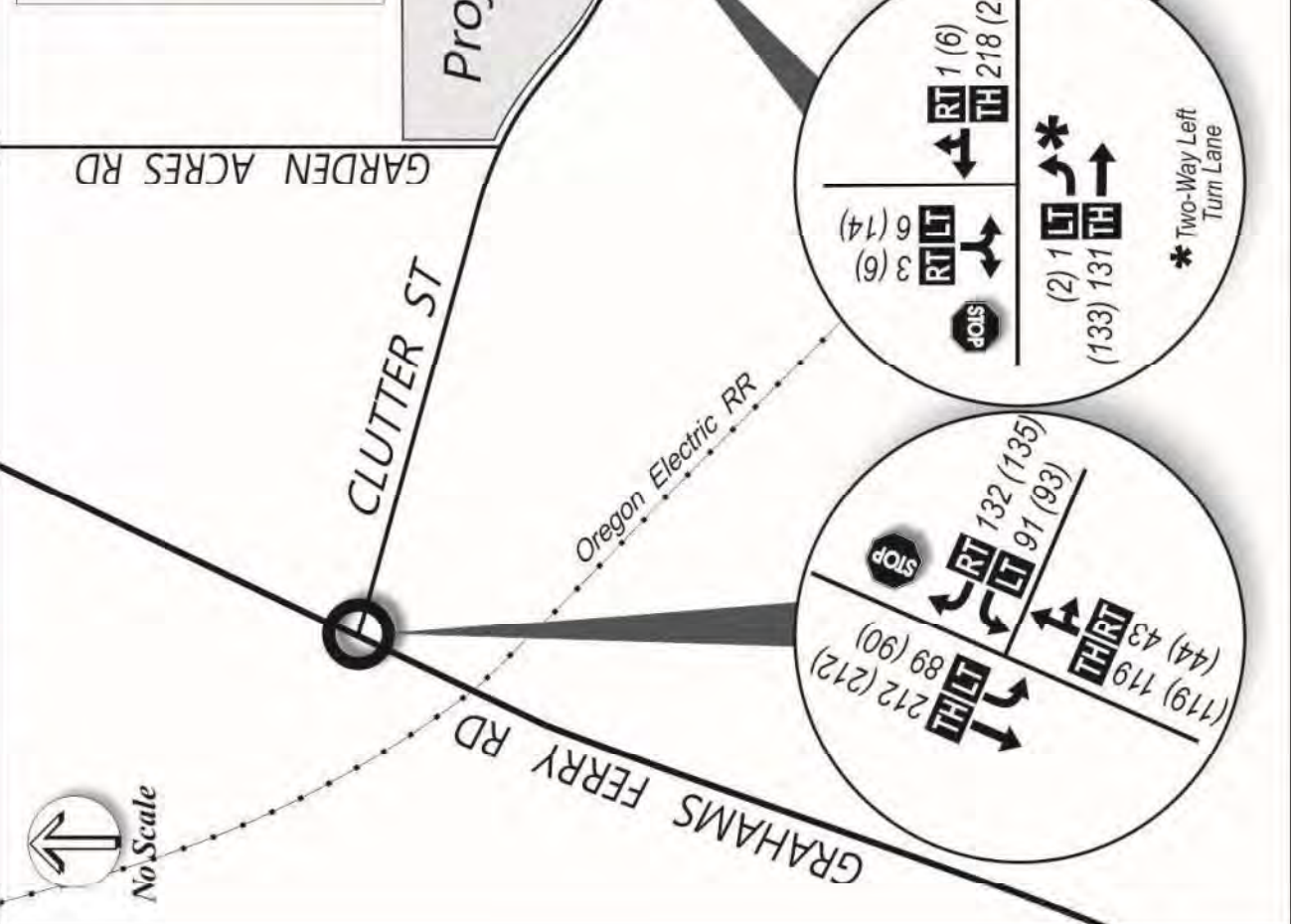
PHV - Bicycles														PHV - Pedestrians							
Northbound				Southbound				Eastbound				Westbound				Sum	in Crosswalk				Sum
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn		NB	SB	EB	WB	
0	2	0	0	0	0	1	0	3	0	0	0	0	0	0	0	6	0	1	0	0	1

Time	Northbound SW Boones Ferry Rd				Southbound SW Boones Ferry Rd				Eastbound SW 95th Ave				Westbound SW 95th Ave				15 Min Sum	1 HR Sum
	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn		
04:00:00 PM	44	37	0	0	0	73	14	0	15	0	62	0	2	5	0	0		
04:05:00 PM	44	69	3	0	0	78	7	0	14	0	90	0	3	0	0	0		
04:10:00 PM	50	45	1	0	0	76	8	0	15	1	102	0	2	0	0	0	860	
04:15:00 PM	49	62	1	0	1	75	7	0	13	1	83	0	4	2	1	0	907	
04:20:00 PM	44	64	0	0	1	92	11	0	10	0	50	0	3	2	1	0	877	
04:25:00 PM	54	62	0	0	1	85	15	0	7	0	67	0	3	1	0	0	872	
04:30:00 PM	43	66	1	0	0	92	8	0	8	2	62	0	6	1	1	0	863	
04:35:00 PM	54	58	2	0	0	64	14	0	12	1	90	0	5	1	0	0	886	
04:40:00 PM	47	64	1	0	1	71	8	0	13	0	76	0	3	0	0	0	875	
04:45:00 PM	58	80	2	0	1	80	17	0	7	0	85	0	4	1	1	0	921	
04:50:00 PM	48	75	0	0	1	77	8	0	20	0	64	0	2	0	1	0	916	
04:55:00 PM	48	68	1	0	0	82	8	0	10	0	66	0	5	2	0	0	922	3529
05:00:00 PM	56	79	0	0	0	78	18	0	6	0	61	0	5	2	0	0	891	3582
05:05:00 PM	57	79	0	0	0	67	8	0	19	0	85	0	14	1	0	0	925	3604
05:10:00 PM	55	73	1	0	0	71	6	0	16	0	71	1	4	1	0	0	934	3603
05:15:00 PM	60	74	1	0	0	83	22	0	14	1	67	0	5	1	1	0	958	3633
05:20:00 PM	70	86	0	0	0	74	11	0	19	0	43	0	0	2	1	0	934	3661
05:25:00 PM	53	71	1	0	0	79	13	0	20	0	62	0	1	0	0	0	935	3666
05:30:00 PM	50	79	1	0	0	81	21	0	12	0	44	0	4	1	0	0	899	3669
05:35:00 PM	49	73	0	0	0	63	14	0	12	0	54	0	2	1	1	0	862	3637
05:40:00 PM	38	62	0	0	0	57	10	0	14	1	74	0	1	0	0	0	819	3610
05:45:00 PM	40	65	0	0	0	60	7	0	8	0	39	0	4	1	0	0	750	3498
05:50:00 PM	33	56	0	0	0	46	10	0	7	0	42	0	3	0	2	0	680	3401
05:55:00 PM	29	55	0	0	0	71	11	0	15	0	37	1	2	0	0	0	644	3332

Republic Services TIA
Existing + Stage II + Full Project Traffic Volumes

LEGEND

- - Study Intersection
- (with STOP) - Stop Sign
- ⚡ - Traffic Signal
- ← - Lane Configuration
- 00 (00) - Existing + Stage II (+ Project Phases 1 & 2) PM Peak Hour Traffic Volumes
- LT|TH|RT - Volume Turn Movement (Left•Thru•Right)



No Scale

95TH AV

RT	120 (120)
TH	38 (38)
LT	2 (2)
RT	114 (123)
TH	388 (388)
LT	72 (72)
TH	119 (123)
RT	43 (43)
TH	49 (52)
RT	3 (3)
TH	563 (563)
LT	86 (88)

GARDEN ACRES RD

RT	12 (18)
TH	214 (221)
LT	5 (7)
RT	3 (6)
TH	218 (222)
LT	6 (14)
TH	131 (133)
RT	2 (2)
TH	135 (144)

* Two-Way Left Turn Lane

CLUTTER ST

RT	1 (6)
TH	218 (222)
LT	3 (6)
RT	1 (1)
TH	131 (133)
LT	2 (2)
TH	135 (144)

* Two-Way Left Turn Lane

RIDDER RD

RT	120 (120)
TH	38 (38)
LT	2 (2)
RT	114 (123)
TH	388 (388)
LT	72 (72)
TH	119 (123)
RT	3 (3)
TH	563 (563)
LT	86 (88)

TRAFFIC LEVELS OF SERVICE

Analysis of traffic volumes is useful in understanding the general nature of traffic in an area, but by itself indicates neither the ability of the street network to carry additional traffic nor the quality of service afforded by the street facilities. For this, the concept of level of service has been developed to subjectively describe traffic performance. Level of service can be measured at intersections and along key roadway segments.

Levels of service categories are similar to report card ratings for traffic performance. Intersections are typically the controlling bottlenecks of traffic flow and the ability of a roadway system to carry traffic efficiently is generally diminished in their vicinities. Levels of Service A, B and C indicate conditions where traffic moves without significant delays over periods of peak travel demand. Level of service D and E are progressively worse peak hour operating conditions and F conditions represent where demand exceeds the capacity of an intersection. Most urban communities set level of service D as the minimum acceptable level of service for peak hour operation and plan for level of service C or better for all other times of the day. The Highway Capacity Manual provides level of service calculation methodology for both intersections and arterials¹. The following two sections provide interpretations of the analysis approaches.

¹ 2000 *Highway Capacity Manual*, Transportation Research Board, Washington D.C., 2000, Chapter 16 and 17.

SIGNALIZED INTERSECTIONS

For signalized intersections, level of service is evaluated based upon average vehicle delay experienced by vehicles entering an intersection. Control delay (or signal delay) includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. In previous versions of this chapter of the HCM (1994 and earlier), delay included only stopped delay. As delay increases, the level of service decreases. Calculations for signalized and unsignalized intersections are different due to the variation in traffic control. The 2000 Highway Capacity Manual provides the basis for these calculations.

Level of Service	Delay (secs.)	Description
A	<10.00	Free Flow/Insignificant Delays: No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Most vehicles do not stop at all. Progression is extremely favorable and most vehicles arrive during the green phase.
B	10.1-20.0	Stable Operation/Minimal Delays: An occasional approach phase is fully utilized. Many drivers begin to feel somewhat restricted within platoons of vehicles. This level generally occurs with good progression, short cycle lengths, or both.
C	20.1-35.0	Stable Operation/Acceptable Delays: Major approach phases fully utilized. Most drivers feel somewhat restricted. Higher delays may result from fair progression, longer cycle lengths, or both. Individual cycle failures may begin to appear at this level, and the number of vehicles stopping is significant.
D	35.1-55.0	Approaching Unstable/Tolerable Delays: The influence of congestion becomes more noticeable. Drivers may have to wait through more than one red signal indication. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high v/c ratios. The proportion of vehicles not stopping declines, and individual cycle failures are noticeable.
E	55.1-80.0	Unstable Operation/Significant Delays: Volumes at or near capacity. Vehicles may wait through several signal cycles. Long queues form upstream from intersection. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are a frequent occurrence.
F	>80.0	Forced Flow/Excessive Delays: Represents jammed conditions. Queues may block upstream intersections. This level occurs when arrival flow rates exceed intersection capacity, and is considered to be unacceptable to most drivers. Poor progression, long cycle lengths, and v/c ratios approaching 1.0 may contribute to these high delay levels.

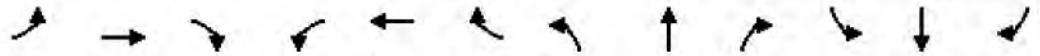
Source: *2000 Highway Capacity Manual*, Transportation Research Board, Washington D.C.

Updated by D. Pauly 03.25.2020

Project	Land Use	Status	Size	Total PM Peak Trips	Trip Allocation Percentage		Net New (Primary + Diverted) PM Peak Hour Trips not yet active		
					Internal	Pass-By	In	Out	Total
Ash Park Subdivision	Residential	Partially Built, 9 homes built and occupied	12 units				2	1	3
Hydro-Temp: Recent agreement with the City, the project is vested and so are the traffic trips	Office/Flex-Space	Not built	60.8 KSF				44	46	90
Mercedes Benz (Phase 2)	Auto Dealership	Not built					20	26	46
Shredding Systems (SQFT does not including paint canopy and another canopy)	Industrial/Commercial	Not built	66.8 KSF				20	46	66
Town Center Ph III and trip dedication to Miller Paint store	*High Turnover Restaurant (Pad 1)	Not built	7.5 KSF				24	17	41
Uses marked with "*" have not been built and PM peak hr trip sum exceeds remaining vested trip level by 2 trips. It has yet to be determined how to allocate trips between remaining buildings.	Dutch Bros	Not built	5.0 KSF				5	6	11
	Remaining Approved Total								
Wilsonville Road Business Park Phase II	Phase 2 - office (2-story building on west parcel)	Partially Built	21.7 KSF				15	71	86
Universal Health Services	Mental Health Facility	Not built	62K						
Aspen Meadows 14-Lot Single-Family Subdivision at 28500 and 28530 SW Canyon Creek Rd. South	Residential	Partially Built, 4 homes built and occupied	14				6	4	10
SORT Bionergy *Minimal impact, no PM Peak indicated in traffic impact analysis	Industrial	Not built					*	*	*
Hilton Garden Inn	Hotel	Under construction	118 units				15	15	30
Frog Pond-Stafford Meadows (Phase 2 and 3a of 10/28 study)	Residential	Partially Built, 4 homes built and occupied	46 units				26	14	40
Frog Pond-Frog Pond Meadows (Phase 3B, 4A, 4B of 10/18 Study)	Residential	Under construction	74 units				45	29	74
Frog Pond-Morgan Farm	Residential	Partially Built, 2 homes built and occupied	80 units				50	28	78
Fir Avenue Commons	Residential	Under construction	10 units				7	3	10
Aspen Meadows II	Residential	Under construction	5 units				2	3	5

HCM 6th Signalized Intersection Summary
1: Boones Ferry Road & 95th Avenue

Wilsonville Coffee Creek Logistitcs Center TIA
Existing (PM Peak)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔↔	↔	↔		↔↔	↔↔		↔	↔↔	↔
Traffic Volume (veh/h)	180	2	833	57	15	2	628	816	7	6	928	157
Future Volume (veh/h)	180	2	833	57	15	2	628	816	7	6	928	157
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.99	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1841	1900	1811	1811	1752	1841	1841	1811	1870	1826
Adj Flow Rate, veh/h	189	2	877	60	16	2	661	859	7	6	977	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	4	0	6	6	10	4	4	6	2	5
Cap, veh/h	403	4	1580	139	391	49	1086	979	8	626	1076	
Arrive On Green	0.24	0.25	0.25	0.24	0.25	0.24	0.67	0.55	0.53	0.73	0.61	0.00
Sat Flow, veh/h	1354	14	2661	641	1577	197	3237	3554	29	1725	3554	1547
Grp Volume(v), veh/h	191	0	877	60	0	18	661	423	443	6	977	0
Grp Sat Flow(s),veh/h/ln	1368	0	1330	641	0	1774	1618	1749	1835	1725	1777	1547
Q Serve(g_s), s	12.6	0.0	0.0	9.7	0.0	0.8	11.9	22.1	22.1	0.1	25.3	0.0
Cycle Q Clear(g_c), s	13.4	0.0	0.0	23.1	0.0	0.8	11.9	22.1	22.1	0.1	25.3	0.0
Prop In Lane	0.99		1.00	1.00		0.11	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	394	0	1580	139	0	439	1086	482	505	626	1076	
V/C Ratio(X)	0.48	0.00	0.56	0.43	0.00	0.04	0.61	0.88	0.88	0.01	0.91	
Avail Cap(c_a), veh/h	394	0	1580	139	0	439	1086	1033	1083	626	1286	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	0.90	0.90	0.90	0.83	0.83	0.00
Uniform Delay (d), s/veh	35.6	0.0	13.4	45.9	0.0	30.1	13.4	22.0	22.1	9.2	19.4	0.0
Incr Delay (d2), s/veh	0.9	0.0	0.4	2.1	0.0	0.0	0.9	18.1	17.4	0.0	10.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	0.0	5.8	1.6	0.0	0.4	3.1	8.0	8.4	0.0	7.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.5	0.0	13.8	48.0	0.0	30.1	14.3	40.2	39.5	9.2	30.3	0.0
LnGrp LOS	D	A	B	D	A	C	B	D	D	A	C	
Approach Vol, veh/h		1068			78			1527			983	A
Approach Delay, s/veh		17.9			43.8			28.8			30.2	
Approach LOS		B			D			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	39.2	35.8		30.0	42.1	32.9		30.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	28.0	37.0		25.0	4.0	61.0		25.0				
Max Q Clear Time (g_c+l1), s	13.9	27.3		25.1	2.1	24.1		15.4				
Green Ext Time (p_c), s	2.8	3.5		0.0	0.0	3.9		4.0				

Intersection Summary

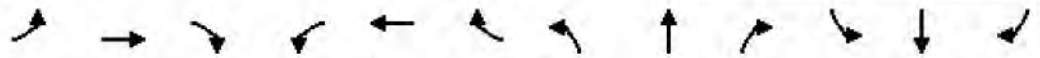
HCM 6th Ctrl Delay	26.3
HCM 6th LOS	C

Notes

- User approved pedestrian interval to be less than phase max green.
- Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
2: Ridder Rd & 95th Avenue

Wilsonville Coffee Creek Logistitcs Center TIA
Existing (PM Peak)

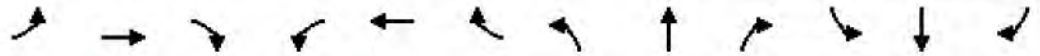


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	140	46	55	2	40	127	93	597	3	76	411	130
Future Volume (veh/h)	140	46	55	2	40	127	93	597	3	76	411	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1900	1352	1352	1737	1826	1826	1707	1796	1796
Adj Flow Rate, veh/h	154	51	60	2	44	140	102	656	3	84	452	143
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	9	9	9	0	37	37	11	5	5	13	7	7
Cap, veh/h	294	204	240	343	53	170	250	747	3	226	524	166
Arrive On Green	0.09	0.28	0.28	0.00	0.19	0.19	0.06	0.41	0.41	0.05	0.40	0.40
Sat Flow, veh/h	1682	733	862	1810	283	901	1654	1816	8	1626	1299	411
Grp Volume(v), veh/h	154	0	111	2	0	184	102	0	659	84	0	595
Grp Sat Flow(s),veh/h/ln	1682	0	1594	1810	0	1184	1654	0	1824	1626	0	1710
Q Serve(g_s), s	5.4	0.0	4.1	0.1	0.0	11.5	2.7	0.0	25.6	2.3	0.0	24.5
Cycle Q Clear(g_c), s	5.4	0.0	4.1	0.1	0.0	11.5	2.7	0.0	25.6	2.3	0.0	24.5
Prop In Lane	1.00		0.54	1.00		0.76	1.00		0.00	1.00		0.24
Lane Grp Cap(c), veh/h	294	0	445	343	0	223	250	0	751	226	0	690
V/C Ratio(X)	0.52	0.00	0.25	0.01	0.00	0.82	0.41	0.00	0.88	0.37	0.00	0.86
Avail Cap(c_a), veh/h	313	0	560	527	0	416	331	0	878	318	0	823
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.7	0.0	21.5	25.2	0.0	30.0	16.5	0.0	20.8	16.8	0.0	21.0
Incr Delay (d2), s/veh	1.1	0.0	0.2	0.0	0.0	5.6	0.8	0.0	10.6	0.8	0.0	9.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	1.5	0.0	0.0	3.5	1.0	0.0	12.2	0.8	0.0	10.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.8	0.0	21.7	25.2	0.0	35.6	17.3	0.0	31.4	17.6	0.0	30.9
LnGrp LOS	C	A	C	C	A	D	B	A	C	B	A	C
Approach Vol, veh/h		265			186			761			679	
Approach Delay, s/veh		22.3			35.5			29.5			29.2	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.3	36.0	12.1	19.5	8.6	36.6	5.2	26.5				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	8.0	37.0	8.0	27.0	8.0	37.0	8.0	27.0				
Max Q Clear Time (g_c+I1), s	4.7	26.5	7.4	13.5	4.3	27.6	2.1	6.1				
Green Ext Time (p_c), s	0.1	4.0	0.0	0.5	0.1	4.0	0.0	0.3				

Intersection Summary												
HCM 6th Ctrl Delay				29.0								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
1: Boones Ferry Road & 95th Avenue

Wilsonville Coffee Creek Logistitcs Center TIA
Existing + Stage II (PM Peak)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔↔	↔	↔		↔↔	↔↔		↔	↔↔	↔
Traffic Volume (veh/h)	184	2	871	57	15	2	660	823	7	6	931	159
Future Volume (veh/h)	184	2	871	57	15	2	660	823	7	6	931	159
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	1.00		0.99	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1841	1900	1811	1811	1752	1841	1841	1811	1870	1826
Adj Flow Rate, veh/h	194	2	917	60	16	2	695	866	7	6	980	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	4	0	6	6	10	4	4	6	2	5
Cap, veh/h	390	3	1578	127	376	47	1114	986	8	639	1078	
Arrive On Green	0.23	0.24	0.24	0.23	0.24	0.23	0.69	0.55	0.54	0.74	0.61	0.00
Sat Flow, veh/h	1351	14	2660	617	1577	197	3237	3555	29	1725	3554	1547
Grp Volume(v), veh/h	196	0	917	60	0	18	695	426	447	6	980	0
Grp Sat Flow(s),veh/h/ln	1365	0	1330	617	0	1774	1618	1749	1835	1725	1777	1547
Q Serve(g_s), s	13.2	0.0	0.0	10.0	0.0	0.8	12.3	22.2	22.2	0.1	25.4	0.0
Cycle Q Clear(g_c), s	14.0	0.0	0.0	24.0	0.0	0.8	12.3	22.2	22.2	0.1	25.4	0.0
Prop In Lane	0.99		1.00	1.00		0.11	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	380	0	1578	127	0	422	1114	485	509	639	1078	
V/C Ratio(X)	0.52	0.00	0.58	0.47	0.00	0.04	0.62	0.88	0.88	0.01	0.91	
Avail Cap(c_a), veh/h	380	0	1578	127	0	422	1114	1049	1101	639	1286	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.90	0.90	0.90	0.83	0.83	0.00
Uniform Delay (d), s/veh	36.6	0.0	13.8	47.6	0.0	30.8	12.6	21.8	21.9	8.6	19.4	0.0
Incr Delay (d2), s/veh	1.2	0.0	0.5	2.7	0.0	0.0	1.0	18.1	17.4	0.0	10.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	0.0	6.2	1.7	0.0	0.4	3.1	8.0	8.4	0.0	7.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.8	0.0	14.3	50.3	0.0	30.9	13.6	40.0	39.3	8.6	30.3	0.0
LnGrp LOS	D	A	B	D	A	C	B	D	D	A	C	
Approach Vol, veh/h		1113			78			1568			986	A
Approach Delay, s/veh		18.4			45.8			28.1			30.2	
Approach LOS		B			D			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	40.1	35.9		29.0	42.9	33.1		29.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	29.0	37.0		24.0	4.0	62.0		24.0				
Max Q Clear Time (g_c+I1), s	14.3	27.4		26.0	2.1	24.2		16.0				
Green Ext Time (p_c), s	3.0	3.5		0.0	0.0	3.9		3.7				

Intersection Summary

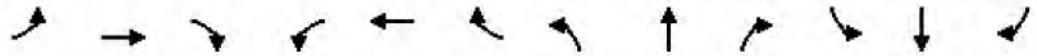
HCM 6th Ctrl Delay	26.1
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
2: Ridder Rd & 95th Avenue

Wilsonville Coffee Creek Logistitcs Center TIA
Existing + Stage II (PM Peak)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	140	46	56	2	40	127	95	639	3	76	446	130
Future Volume (veh/h)	140	46	56	2	40	127	95	639	3	76	446	130
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1900	1352	1352	1737	1826	1826	1707	1796	1796
Adj Flow Rate, veh/h	154	51	62	2	44	140	104	702	3	84	490	143
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	9	9	9	0	37	37	11	5	5	13	7	7
Cap, veh/h	287	199	242	336	53	169	236	772	3	208	553	161
Arrive On Green	0.09	0.28	0.28	0.00	0.19	0.19	0.06	0.43	0.43	0.05	0.42	0.42
Sat Flow, veh/h	1682	719	874	1810	283	901	1654	1817	8	1626	1328	387
Grp Volume(v), veh/h	154	0	113	2	0	184	104	0	705	84	0	633
Grp Sat Flow(s),veh/h/ln	1682	0	1592	1810	0	1184	1654	0	1824	1626	0	1715
Q Serve(g_s), s	5.6	0.0	4.4	0.1	0.0	12.0	2.8	0.0	29.1	2.3	0.0	27.4
Cycle Q Clear(g_c), s	5.6	0.0	4.4	0.1	0.0	12.0	2.8	0.0	29.1	2.3	0.0	27.4
Prop In Lane	1.00		0.55	1.00		0.76	1.00		0.00	1.00		0.23
Lane Grp Cap(c), veh/h	287	0	441	336	0	222	236	0	775	208	0	714
V/C Ratio(X)	0.54	0.00	0.26	0.01	0.00	0.83	0.44	0.00	0.91	0.40	0.00	0.89
Avail Cap(c_a), veh/h	300	0	536	513	0	398	310	0	841	294	0	791
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.8	0.0	22.6	26.4	0.0	31.4	17.4	0.0	21.6	17.9	0.0	21.7
Incr Delay (d2), s/veh	1.3	0.0	0.2	0.0	0.0	5.9	1.0	0.0	14.2	0.9	0.0	12.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	1.6	0.0	0.0	3.7	1.0	0.0	14.5	0.9	0.0	12.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	0.0	22.8	26.4	0.0	37.3	18.4	0.0	35.9	18.9	0.0	34.1
LnGrp LOS	C	A	C	C	A	D	B	A	D	B	A	C
Approach Vol, veh/h		267			186			809			717	
Approach Delay, s/veh		23.6			37.2			33.6			32.3	
Approach LOS		C			D			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.4	38.4	12.4	20.0	8.7	39.1	5.2	27.2				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	8.0	37.0	8.0	27.0	8.0	37.0	8.0	27.0				
Max Q Clear Time (g_c+I1), s	4.8	29.4	7.6	14.0	4.3	31.1	2.1	6.4				
Green Ext Time (p_c), s	0.1	3.4	0.0	0.5	0.1	3.0	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay				32.1								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary

1: Boones Ferry Road & 95th Avenue

Wilsonville Coffee Creek Logistitcs Center TIA

Existing + Stage II + Project (PM Peak)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔↔	↔	↔		↔↔	↔↔		↔	↔↔	↔
Traffic Volume (veh/h)	186	2	890	57	15	2	667	823	7	6	931	160
Future Volume (veh/h)	186	2	890	57	15	2	667	823	7	6	931	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.97	1.00		0.99	1.00		0.97	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1900	1841	1900	1811	1811	1752	1841	1841	1811	1870	1826
Adj Flow Rate, veh/h	196	2	937	60	16	2	702	866	7	6	980	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	0	4	0	6	6	10	4	4	6	2	5
Cap, veh/h	390	3	1578	125	376	47	1114	986	8	639	1078	
Arrive On Green	0.23	0.24	0.24	0.23	0.24	0.23	0.69	0.55	0.54	0.74	0.61	0.00
Sat Flow, veh/h	1351	14	2660	605	1577	197	3237	3555	29	1725	3554	1547
Grp Volume(v), veh/h	198	0	937	60	0	18	702	426	447	6	980	0
Grp Sat Flow(s),veh/h/ln	1365	0	1330	605	0	1774	1618	1749	1835	1725	1777	1547
Q Serve(g_s), s	13.3	0.0	0.0	9.8	0.0	0.8	12.5	22.2	22.2	0.1	25.4	0.0
Cycle Q Clear(g_c), s	14.2	0.0	0.0	24.0	0.0	0.8	12.5	22.2	22.2	0.1	25.4	0.0
Prop In Lane	0.99		1.00	1.00		0.11	1.00		0.02	1.00		1.00
Lane Grp Cap(c), veh/h	380	0	1578	125	0	422	1114	485	509	639	1078	
V/C Ratio(X)	0.52	0.00	0.59	0.48	0.00	0.04	0.63	0.88	0.88	0.01	0.91	
Avail Cap(c_a), veh/h	380	0	1578	125	0	422	1114	1049	1101	639	1286	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.90	0.90	0.90	0.83	0.83	0.00
Uniform Delay (d), s/veh	36.7	0.0	13.9	47.8	0.0	30.8	12.7	21.8	21.9	8.6	19.4	0.0
Incr Delay (d2), s/veh	1.3	0.0	0.6	2.8	0.0	0.0	1.0	18.1	17.4	0.0	10.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	0.0	6.4	1.7	0.0	0.4	3.1	8.0	8.4	0.0	7.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.0	0.0	14.5	50.7	0.0	30.9	13.7	40.0	39.3	8.6	30.3	0.0
LnGrp LOS	D	A	B	D	A	C	B	D	D	A	C	
Approach Vol, veh/h		1135			78			1575			986	A
Approach Delay, s/veh		18.6			46.1			28.1			30.2	
Approach LOS		B			D			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	40.1	35.9		29.0	42.9	33.1		29.0				
Change Period (Y+Rc), s	5.0	5.0		5.0	5.0	5.0		5.0				
Max Green Setting (Gmax), s	29.0	37.0		24.0	4.0	62.0		24.0				
Max Q Clear Time (g_c+I1), s	14.5	27.4		26.0	2.1	24.2		16.2				
Green Ext Time (p_c), s	3.0	3.5		0.0	0.0	3.9		3.7				

Intersection Summary

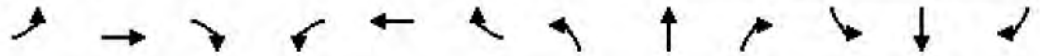
HCM 6th Ctrl Delay	26.1
HCM 6th LOS	C

Notes

- User approved pedestrian interval to be less than phase max green.
- Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
2: Ridder Rd & 95th Avenue

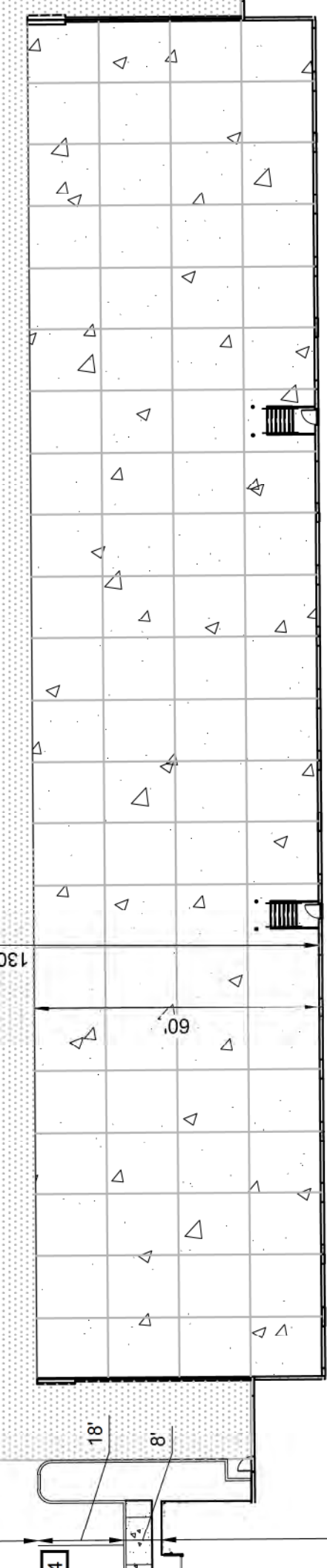
Wilsonville Coffee Creek Logistitcs Center TIA
Existing + Stage II + Project (PM Peak)



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗		↖	↗	
Traffic Volume (veh/h)	161	48	60	2	41	127	97	639	3	76	446	138
Future Volume (veh/h)	161	48	60	2	41	127	97	639	3	76	446	138
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1767	1767	1900	1352	1352	1737	1826	1826	1707	1796	1796
Adj Flow Rate, veh/h	177	53	66	2	45	140	107	702	3	84	490	152
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	9	9	9	0	37	37	11	5	5	13	7	7
Cap, veh/h	295	201	250	334	54	168	226	768	3	204	539	167
Arrive On Green	0.10	0.28	0.28	0.00	0.19	0.19	0.06	0.42	0.42	0.05	0.41	0.41
Sat Flow, veh/h	1682	708	882	1810	288	896	1654	1817	8	1626	1306	405
Grp Volume(v), veh/h	177	0	119	2	0	185	107	0	705	84	0	642
Grp Sat Flow(s),veh/h/ln	1682	0	1590	1810	0	1185	1654	0	1824	1626	0	1711
Q Serve(g_s), s	6.6	0.0	4.7	0.1	0.0	12.3	3.0	0.0	29.7	2.4	0.0	28.8
Cycle Q Clear(g_c), s	6.6	0.0	4.7	0.1	0.0	12.3	3.0	0.0	29.7	2.4	0.0	28.8
Prop In Lane	1.00		0.55	1.00		0.76	1.00		0.00	1.00		0.24
Lane Grp Cap(c), veh/h	295	0	451	334	0	222	226	0	772	204	0	707
V/C Ratio(X)	0.60	0.00	0.26	0.01	0.00	0.83	0.47	0.00	0.91	0.41	0.00	0.91
Avail Cap(c_a), veh/h	295	0	526	507	0	392	295	0	827	288	0	776
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.2	0.0	22.6	26.8	0.0	31.9	18.2	0.0	22.1	18.4	0.0	22.5
Incr Delay (d2), s/veh	3.0	0.0	0.2	0.0	0.0	6.0	1.1	0.0	15.0	1.0	0.0	15.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	1.7	0.0	0.0	3.8	1.1	0.0	14.9	0.9	0.0	13.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.1	0.0	22.9	26.8	0.0	37.9	19.4	0.0	37.1	19.4	0.0	37.6
LnGrp LOS	C	A	C	C	A	D	B	A	D	B	A	D
Approach Vol, veh/h		296			187			812			726	
Approach Delay, s/veh		24.8			37.8			34.8			35.5	
Approach LOS		C			D			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.6	38.7	13.0	20.3	8.8	39.5	5.2	28.1				
Change Period (Y+Rc), s	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0				
Max Green Setting (Gmax), s	8.0	37.0	8.0	27.0	8.0	37.0	8.0	27.0				
Max Q Clear Time (g_c+I1), s	5.0	30.8	8.6	14.3	4.4	31.7	2.1	6.7				
Green Ext Time (p_c), s	0.1	2.9	0.0	0.5	0.1	2.8	0.0	0.3				

Intersection Summary

HCM 6th Ctrl Delay	33.9
HCM 6th LOS	C



476'

PROPOSED BUILDING

249'

City of Wilsonville
Community Development Department
Engineering and Planning Divisions

29799 SW Town Center Loop E
Wilsonville, OR 97070
Phone: 503 682-4960; Fax 503 682-7025
kle@ci.wilsonville.or.us

This form must be completed and returned to Khoi Le, Development Engineering Manager, to initiate a traffic Scope of Services, a request for a traffic study waiver, a determination of de minimus traffic impact, or other traffic-related issues.

REQUEST FOR TRAFFIC STUDY – PLEASE READ COMPLETELY

<input checked="" type="checkbox"/>	Traffic Study Scope of Services	<input type="checkbox"/>	Waiver from Traffic Study requirement
Other Traffic Related Request		<input checked="" type="checkbox"/> & driveway locations/intersection spacing	

Requested by: Scott Moore, Mackenzie Date: 01/28/2020

Property address: 10680 SW Clutter Street (west of Garden Acres Rd)

Legal description: Tax lot(s) 02100 (5.85 acres) Section 3S 1 03D

Project name: Coffee Creek Logistics Center

Property owner: Chris and Sonya Bickford
Name:
Address: 10680 SW Clutter Street, Sherwood, OR 97140

Applicant: Brendan Mason, Panattoni Development
Name:
Address: 1821 Dock St., Ste 100, Tacoma WA 98402

Authorized representative:
(contact person)*
Name: Scott Moore, AIA
Company: Mackenzie
Address: 1515 SE Water Ave, Ste 100, Portland OR 97214
Phone: 503 224-9560 Email: smoore@mcknze.com

**Note: This person will receive all correspondence regarding traffic analysis.*

Process: A Request, along with a site plan and project description must be submitted to the Engineering Division. The request is forwarded to the City's traffic consultant who will prepare a Scope of Services, which will include the necessary fee. The prepared Scope will be reviewed by the Engineering Division, and once approved, will be forwarded to the authorized representative listed above. When the applicant reviews and submits the fee indicated in the Scope of Services plus 15% for City overhead, the scope will be authorized by Staff and forwarded to the traffic consultant. When the traffic study has been received and approved by the City's Engineering Division, it will be forwarded to the applicant and the Planning Division.

A request for a Waiver from a traffic study will be reviewed by the Community Development Director and the Engineering Division and the requestor will be notified by mail.

Note: If the project description and/or site plan change from what was originally submitted, additional traffic analysis and fees may be required.



117 Commercial Street NE
Suite 310
Salem, OR 97301
503.391.8773
www.dksassociates.com

February 20, 2020

Khoi Le, P.E.
Development Engineering Manager
City of Wilsonville
29799 Town Center Loop East
Wilsonville, OR 97070

Subject: Scope of Services – Coffee Creek Logistics Center Transportation Impact Study

Dear Khoi:

Based on your recent email,¹ DKS Associates has prepared this letter scope for traffic engineering services as part of our standing on-call services agreement. The scope is based on a traffic study request provided by the project sponsor for the proposed warehouse space located on Clutter Street (Tax lot 3S103D 002100) in Wilsonville, Oregon. Based on the information provided by the project sponsor, the applicant is proposing to build a 115,000 square-foot warehouse and manufacturing building. Approximately 75% of the building will be warehouse space and 25% will be manufacturing space with auxiliary office space.

Once the project has been initiated, changes to the site plan, including building size and land use changes, access locations, or schedule adjustments (i.e. putting the project on hold for any period of time), may require modification to scope and budget to address. The study will include the following elements:

- Data collection and trip generation
- Transportation impact analysis
- Site plan review
- Estimated I-5 interchange p.m. peak hour trips
- Documentation and response to comments
- Project meetings/hearings (if requested and for an additional fee)

SCOPE OF SERVICES

Task 1: Data Collection and Trip Generation

Intersection turn movement counts will be collected for two consecutive weekday p.m. peak periods (4:00-6:00 p.m.) to complete intersection operations analysis at the following intersections:

- SW Ridder Road/SW 95th Avenue
- SW Boones Ferry Road/SW 95th Avenue

¹ Email from Khoi Le, January 30, 2020.



DKS will perform p.m. peak hour trip generation estimates using rates provided by the Institute of Transportation Engineers (ITE) in their most recent edition of the *Trip Generation Manual*.²

Task 2: Transportation Impact Analysis

The intersection operations will be performed for existing conditions based on 2000 Highway Capacity Manual methodology for signalized intersections. Data collection will include roadway geometrics, intersection operation, and sight distance. We will visit the field during the peak period to observe traffic conditions in the vicinity of the project site. Intersection analysis will include the following scenarios:

- Existing Weekday PM Peak Hour
- Existing + Stage II (traffic from other developments that have Stage II approval or are under construction)
- Existing + Project
- Existing + Stage II + Project

For each of these analysis scenarios, we will show unmitigated impacts for the study area intersections. Where the City's level of service D standard cannot be maintained, improvements will be identified to mitigate operating conditions. Additional analysis will then be performed with any recommended improvements in place to determine the resulting levels of service.

Task 3: Site Plan Review

We will also review the proposed site plan and make an assessment of pedestrian and bicycle needs, vehicular access and driveway spacing, parking supply, on-site circulation, and safety. Additionally, on-street design standard elements (center turn lane and on-street parking) for a Collector will also be evaluated along the project frontages. The transportation review will include a discussion of any site plan issues as well as any recommended mitigations.

Task 4: Estimated I-5 Interchange PM Peak Hour Trips

An assessment will be made of the number of evening peak hour trips traveling through the I-5/Wilsonville Road and I-5/Elligsen Road interchange areas.

Task 5: Documentation and Response to Comments

A report of our findings will be submitted to City of Wilsonville within six to eight weeks of authorization. The report will document data collection, analysis procedures and results, and mitigation measures for the proposed project traffic. A summary and technical appendix will accompany the report. We have allocated a nominal budget (2 hours of staff effort) toward response to comments from City staff and/or the project sponsor's representatives following the completion of this report. Additional work beyond the tasks outlined in this scope, attendance at any additional meetings, or further effort in responding to comments would require a subsequent mutual agreement between DKS, City staff and the project sponsor.

² *Trip Generation Manual, 10th Edition*, Institute of Transportation Engineers (2017).



Task 6: Project Meetings/Hearings (Contingency)

We have not included any project-related meetings in this scope of services. Meetings could be attended if authorized, at a cost of approximately \$650 per meeting.

BUDGET AND AUTHORIZATION

In consideration of the performance of these services, DKS Associates will be compensated the fixed price amount of \$10,600. This fixed price amount is based upon the scope of services and level of effort presented above.

DKS will invoice monthly based upon our estimate of progress (percent complete). Payments are due on a net 30-day basis. A service charge of 1¼ percent per month compounded will be assessed on billings not paid when due. If payment of our invoices is not made within 45 days of the due date, DKS reserves the right to cease work on this project until such time as payment is received. In the event of any litigation between the parties to this agreement arising from this agreement, the prevailing party shall be reimbursed for its reasonable attorney's fees and costs.

Should the services not be authorized in thirty (30) days; or should changes occur in the scope or level of effort; or should the completion date extend beyond December 31, 2020, due to circumstances beyond DKS's control; we reserve the right to revise the scope, budget and schedule to reflect the current conditions. Such revisions will be effected through amendments to this agreement.

If this agreement is acceptable, please have a duly authorized official of your company sign below and return one original for our files. That signature will constitute formal authorization to proceed with the services according to the terms outlined. Please give me or Jenna Hills a call if you have any questions.

Sincerely,

DKS
Associates

Scott M. Mansur, P.E., PTOE
Principal

Approved by:
City of Wilsonville

By: Khoi Le, P.E. Date
Development Engineering Manager

By: Project Applicant Date
02-24-2020



CONCRETE 1



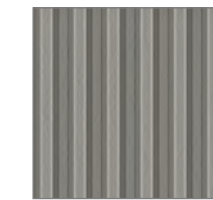
CONCRETE 2



CONCRETE 3



SMOOTH
SHEET
METAL



CORRUGATED
SHEET
METAL



GLASS

-CONCRETE & GLASS AS PREDOMINANT BUILDING MATERIALS AT MAIN ENTRANCES- SMOOTH SHEET METAL & CORRUGATED SHEET METAL USED AS PROJECTED CANOPY- STOREFRONT WRAPPING OVERHANG ACTS AS STRONG CORNICE-LOWER STORY STEPPED BACK-

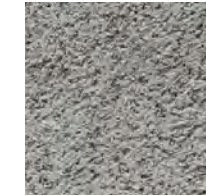
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CONCRETE 1



CONCRETE 2



CONCRETE 3



GLASS

-CONCRETE & GLASS AS PREDOMINANT BUILDING MATERIALS AT MAIN ENTRANCES- STOREFRONT WRAPPING OVERHANG ACTS AS STRONG CORNICE-LOWER STORY STEPPED BACK-

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