

**CITY OF SHERWOOD  
JUNE 21, 2022  
PLANNING COMMISSION STAFF REPORT**



**CASCADE COLUMBIA DISTRIBUTION  
MAJOR MODIFICATION  
LU 2021-025 MM / CUP**

**To: City of Sherwood Planning Commission**

**From:** Eric Rutledge, Associate Planner



Pre-App Meeting:	August 12, 2021
App. Submitted:	December 17, 2021
App. Complete:	April 4, 2022
Hearing Date:	May 10, 2022
120-Day Deadline:	August 2, 2022

**PROPOSAL:** The applicant is proposing a new 12,000 SF warehousing building and 8,400 SF covered storage building on an existing industrial site located at 14200 SW Tualatin-Sherwood Rd. The applicant is also requesting retroactive Site Plan approval for two outdoor covered structures and outdoor storage areas that were added to the site without land use approval. The site is occupied by Cascade Columbia Distribution and Northstar Chemical, two chemical storage and distribution companies. The existing development was approved by the City in 1992 under Site Plan Approval 92-7. The proposed expansion will support Cascade Columbia Distribution's growing business in the food and beverage industry. Access to the site is proposed from the existing driveway along SW Tualatin-Sherwood Rd.

**STAFF RECOMMENDATION:** Staff recommends approval of LU 2021-025 MM / CUP Cascade Columbia Distribution, subject to the findings and Conditions of Approval described in this report. The recommendation is based on review of the applicable code standards and approval criteria, the applicant's submittal, agency comments, and public testimony.

**I. BACKGROUND**

- A. Applicant: Cascade Columbia Distribution  
14200 SW Tualatin-Sherwood Rd.  
Sherwood, OR 97140
- Owner: Sherwood Road Industrial, LLC  
6900 Fox Ave. S  
Seattle, WA 98108
- B. Location: 21900 SW Tualatin-Sherwood Rd.  
Sherwood, OR 97140  
(Tax Lot 2S128C000200)
- C. Review Type: The applicant is requesting the following land use approvals: Type IV Major Modification and Type III Conditional Use
- D. Public Notice: Notice of the application was provided in accordance with § 16.72.020 of the Sherwood Zoning and Development Code (SZDC) as follows: notice was distributed in five locations throughout the City, posted on the property, and mailed to property owners within 1,000 feet of the site on or before April 20, 2022. Notice of the application was also published in a local newspaper (Tigard Times) on April 21 and May 5, 2022.
- E. Review Criteria: Sherwood Zoning and Community Development Code (SZCDC) SZCDC Chapter 16.31 Industrial Land Use Districts; Chapter 16.72 Procedures for Processing Development Permits; Chapter 16.82 Conditional Uses; Chapter 16.90 Site Planning; Chapter 16.92 Landscaping; Chapter 16.94 Off-Street Parking and Loading; Chapter 16.96 On-Site Circulation; Chapter 16.98 On-Site Storage; Chapter 16.110 Sanitary Sewers; Chapter 16.112 Water Supply; Chapter 16.114 Storm Water; Chapter 16.116 Fire Protection; Chapter 16.118 Public and Private Utilities; Chapter 16.142 Parks, Trees, and Open Spaces; Chapter 16.144 Wetland, Habitat, and Natural Areas
- F. History and Background: The subject property is owned and operated by Cascade Columbia Distribution, a chemical distribution company with locations in Oregon and Washington. The site is also occupied by Northstar Chemical Inc., a chemical distribution company with locations in Oregon, Washington, and California. The site received initial Site Plan approval for a 38,658 SF chemical storage and distribution facility in 1994 (SP 92-7). A 10,000 SF building expansion was approved in 2004 (SP 04-06).



The applicant is proposing to add approximately 20,400 SF of new storage area which represents a 10% or more increase in floor area. The application is subject to the Major Modification procedures. At the time of the original approval, storage and handling of acid products and other hazardous material did not require a Conditional Use Permit. Pursuant to SZCDC § 16.82.010(B), the applicant is required to obtain a Conditional Use Permit as the proposal represents a 20% or more increase in floor area to a site storing chemicals and hazardous materials. The applicant is also requesting retroactive Site Plan approval for new outdoor covered structures and additional outdoor storage areas that were added over the years without going through land use approval. The extent of these improvements is shown in Exhibit P.

The site is located on SW Tualatin-Sherwood Rd. under control of Washington County. The County has a capital improvement project for this portion of the road to redevelop the road from a 3-lane arterial to a 5-lane arterial.

- G. Existing Conditions: The subject property is a ±16.9-acre lot zoned General Industrial (GI). The northern boundary of the site has frontage and access on SW Tualatin-Sherwood Road, a Washington County arterial road. Washington County is in the process of purchasing ±9½ feet of additional frontage from the property owner for planned road widening, which is projected to occur in 2022. Portland and Western Railroad line runs along the northwestern boundary of the site. The site is also bisected by a 250-foot-wide Bonneville Power Administration (BPA) transmission easement running east and west.

Existing buildings, loading docks, storage tanks, and outdoor storage areas are located on the southern portion of the site, beyond the BPA easement. The warehouse and additional storage area planned with this application will be constructed adjacent to the existing warehouse in the southern portion of the site, next to the existing buildings and loading areas. The northern portion of the property—which contains a security fence, a paved access road, a paved truck parking area, a lined retention pond, and some unimproved land—will not be impacted.

H. Surrounding Land Uses:

- West: Portland & Western Railroad, wetland and floodplain
- South: Industrial uses (Allied Systems Company)

- East Industrial uses (Allied Systems Company and Pride Disposal)
- North Tualatin-Sherwood Rd. and Industrial uses

I. Current Zoning: General Industrial

**II. AFFECTED AGENCY AND PUBLIC COMMENTS**

- A. Notice of the application was sent to affected agencies via email on April 14, 2022. The following responses were received:
1. City of Sherwood Engineering Department provided comments dated June 14, 2022 (Exhibit S). The comments address traffic and transportation, public utilities, and other engineering requirements. The comments and Conditions of Approval are incorporated throughout the report under each applicable code section.
  2. Washington County Land Use & Transportation – Washington County has submitted comments dated May 2, 2022 (Exhibit T). The comments state that access is proposed from SW Tualatin-Sherwood Rd., however, no frontage improvements are required as the street will be redeveloped as a capital project.
  3. Tualatin Valley Fire and Rescue (TVF&R) – TVF&R has issued a Service Provider Letter for the project which is included in the applicant submittal (Exhibit G). Issuance of the Service Provider Letter indicates the plans submitted comply with fire code requirements. Changes to the plans would require re-review and approval.
  4. Clean Water Services provided a memorandum dated May 17, 2022 (Exhibit U). The memorandum provides Conditions of Approvals related to CWS regulations for stormwater, erosion control, and sensitive habitat areas. The applicant has also submitted a CWS Service Provider Letter (Exhibit H) which addresses water quality and sensitive habitat protection requirements in detail.
  5. Oregon Department of State Lands (DSL) – DSL provided a Wetland Land Use Notice Response dated May 23, 2022 (Exhibit V). The response indicates the proposed development appears to avoid impacts to jurisdictional wetlands. A federal permit may still be required.
  6. Oregon Department of Transportation Region 1 – ODOT provided comments via email dated April 21, 2022 (Exhibit W). ODOT regulates the Portland & Western railroad abutting the site. Advisory comments related to private rail crossing were provided.

7. The following agencies acknowledged the application without expressing any issues or concerns: Oregon Department of Transportation Outdoor Advertising Sign Program.

B. Public Comments

1. As of the date of this report, no written public comments were received on the application.

### III. APPLICABLE CODE PROVISIONS

*Note – three asterisks (\*\*\*) Indicates code has been omitted because it is not applicable*

#### Chapter 16.72 PROCEDURES FOR PROCESSING DEVELOPMENT PERMITS

##### 16.72.010 – Generally

###### A. Classifications

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

###### 3. Type III

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

###### a. Conditional Uses

**ANALYSIS:** The applicant is requesting Conditional Use and Major Modification approval for the new storage buildings. While Conditional Use applications are processed under the Type III procedures, the Major Modification application is subject to the Type IV procedures pursuant to SZCDC § 16.90.030(A)(1)(b)(2). Both applications are being processed concurrently under the City's Type IV land use procedures.

**FINDING:** The application is subject to the Type IV land use review procedures and this criterion is met.

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###### B. Hearing and Appeal Authority

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

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

- (1) The Planning Commission shall hold a public hearing following public notice in accordance with Sections 16.72.020 through 16.72.080.
- (2) Any person who testified before the Planning Commission at the public hearing or submitted written comments prior to the close of the record may appeal the Planning Commission's decision.

**ANALYSIS:** The application is being processed as a Type IV quasi-judicial decision with the Planning Commission as the Hearing Authority. A public hearing will be held on the application on May 10, 2022 in accordance with SZCDC § 16.72.

**FINDING:** This criterion is met.

**C. Approval Criteria**

1. The approval criteria for each development permit application shall be the approval standards and requirements for such applications as contained in this Code. Each decision made by a Hearing Authority or Appeal Authority shall list the approval criteria and indicate whether the criteria are met. It is the applicant's burden to demonstrate to the Hearing Authority and Appeal Authority how each of the approval criteria are met. An application may be approved with conditions of approval imposed by the Hearing Authority or Appeal Authority. On appeal, the Appeal Authority may affirm, reverse, amend, refer, or remand the decision of the Hearing Authority.
2. In addition to Section 1 above, all Type IV quasi-judicial applications shall also demonstrate compliance with the Conditional use criteria of Section 16.82.020.

**ANALYSIS:** The approval criteria for the development is addressed throughout this report. The applicant has provided a detailed narrative and supporting plans and documents addressing the applicable criteria.

**FINDING:** This criterion is met.

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## Chapter 16.31 - INDUSTRIAL LAND USE DISTRICTS

### 16.31.010 - Purpose

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

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

### 16.31.020 - Uses

- A. **The table below identifies the land uses that are permitted outright (P), permitted conditionally (C) and not permitted (N) in the industrial zoning districts. The specific land use categories are described and defined in Chapter 16.88.**
- B. **Uses listed in other sections of this Code, but not within this specific table are prohibited.**
- C. **Any use not otherwise listed that can be shown to be consistent or associated with the uses permitted outright or conditionally in the industrial zones or contribute to the achievement of the objectives of the industrial zones may be permitted outright or conditionally, utilizing the provisions of Chapter 16.88.**
- D. **Additional limitations for specific uses are identified in the footnotes of this table.**

Uses	GI
Manufacture, compounding, processing, assembling, packaging, treatment, fabrication of products contained wholly within an enclosed	P

<p><b>building provided exterior odor and noise is consistent with municipal code standards and there is no unscreened storage and not otherwise regulated elsewhere in the code</b></p>	
<p><b>Manufacture, compounding, processing, assembling, packaging, treatment, fabrication of products not otherwise prohibited elsewhere in the code provided other off-site impacts are compliant with local, state and federal regulations</b></p>	<p><b>P</b></p>
<p><b>Manufacture, compounding, processing, assembling, packaging, treatment, or fabrication of acids, paints, dyes, soaps, ammonia, chlorine, sodium compounds, fertilizer, herbicides, insecticides and similar chemicals</b></p>	<p><b>C</b></p>

**ANALYSIS:** The proposed storage buildings will support the applicant’s growing business in the food industry by storing and re-packaging food-grade chemicals and products, including salt, sugar, dextrose, vitamin C, and other products. Storage of food-grade chemicals and products wholly within an enclosed building is permitted outright in the GI zone. The applicant also requests a Conditional Use Permit (CUP) to store and package acids and other material that requires a CUP. In addition to the new storage areas, a CUP is required for the previously completed outdoor storage areas, including covered and uncovered storage, and chemical storage tanks, beyond what was approved by the initial Site Plan Review (SP 92-07) and subsequent modification (SP 04-06). The areas of the site that have not been approved as part of a Site Plan Review are labeled in Exhibit P.

**FINDING:** These standards are met with approval of the Conditional Use Permit.

**16.31.030 - Development Standards**

**A. Generally**

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

**B. Development Standards**

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

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

<sup>9</sup> Lots within the EI zone that were legal lots of record prior to October 5, 2010 and smaller than the minimum lot size required in the table below may be developed if found consistent with other applicable requirements of Chapter 16.31 and this Code. Further subdivision of lots smaller than three acres shall be prohibited unless Section 16.31.050 applies.

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

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

**ANALYSIS:** The proposed buildings will be located at the south end of the site, near the south and east property lines. The proposed covered storage building will be located approximately 19 ft. from the east property line and the proposed warehouse building will be located approximately 87 ft. from the south property line. The applicant's Existing Conditions Plan indicates center portion of the site has not been surveyed. Staff confirmed with the applicant that all of the property lines have been surveyed and the

proposed covered storage building will be located on-site, approximately 19 ft. from the property line. All of the structures added on the site without permits also meet the development standards of the zone (Exhibit P). Area 7 is a rain cover structure for truck loading and is approximately 100 ft. from the nearest property line. Area 8 is an outdoor covered storage structure and is approximately 200 ft. from the nearest property line. Outdoor storage without permanent structures (e.g. container storage) is not subject to setback standards.

**FINDING:** These standards are met.

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### **16.31.080 - Floodplain**

**Except as otherwise provided, Section 16.134.020 shall apply.**

**ANALYSIS:** A small portion of the 100-year floodplain associated with Rock Creek is located at the southwest corner of the property. The floodplain chapter of the development code is addressed below in this report.

**FINDING:** This standard is met.

## **Chapter 16.82 – CONDITIONAL USES**

### **16.82.010 - Generally**

#### **A. Authorization**

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

#### **B. Changes in Conditional Uses**

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

#### **C. Application and Fee**



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

**ANALYSIS:** At the time of the original approval, storage and handling of acid products and other hazardous material did not require a Conditional Use Permit (CUP). Pursuant to SZCDC § 16.82.010(B), the applicant is required to obtain a CUP as the proposal represents a 20% or more increase in floor area to a site storing chemicals and hazardous materials which now requires a CUP in the GI zone. The applicant is also required to obtain a CUP for areas of the site that are storing similar chemicals and that have not been approved through a Site Plan Review process.

**FINDING:** A Conditional Use Permit is required for the new development and areas of the site that are storing hazardous chemicals but have not been approved through a Site Plan Review process.

#### **16.82.020 – Permit Approval**

##### **C. Use Criteria**

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

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

**ANALYSIS:** Public facilities - the site is developed with industrial uses and has access to public facilities including water, sanitary sewer, storm drainage, transportation, electrical, gas, and other utilities. The land use review has not identified any public facility deficiencies. The City of Sherwood Engineering comments (Exhibit S) address each utility in additional detail.

Public services - the property is located within the service districts of the Sherwood Police Department, Tualatin Valley Fire and Rescue, and Pride Waste Disposal. The application has been routed to these service districts and no service issues were indicated. The site is located in an industrial zone and public parks and open space are not proposed or required.

**FINDING:** This criterion is met.

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

**ANALYSIS:** The proposed storage buildings meet the other standards of the GI zone as described in the findings under SZCDC § 16.31. The site is surrounded by industrial uses in all directions except to the west, where a wetland and floodplain associated with Rock Creek are located. The proposed storage building near the open space will be an enclosed building with a setback of approximately 150 ft. from the wetland.

**FINDING:** This criterion is met.

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

**ANALYSIS:** The proposed storage buildings will be located on an existing industrial site occupied by Cascade Columbia Distribution since 1993. The applicant's narrative states the proposed expansion will ensure the business is able to expand and remain in the City while generating tax revenue and providing employment opportunities. The first Vision of Sherwood's 2040 Comprehensive Plan is "Thriving and Diversified Economy". Goal 1 Policy 1.4 reads "Support business growth in Sherwood to diversify and expand commercial and industrial development in order to provide employment opportunities and expand the tax base".

No changes are proposed to site access and employees and delivery trucks will access the site from Tualatin-Sherwood Rd, an arterial street under Washington County jurisdiction. The County is planning to widen Tualatin-Sherwood Rd. in front of the subject property from a 3-lane arterial to a 5-lane arterial with a center turn lane and does require additional frontage improvements from the applicant.

**FINDING:** This criterion is met.

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

**ANALYSIS:** The site is surrounded by industrial uses in all directions except to the west, where a wetland and floodplain associated with Rock Creek are located. The applicant's Executive Summary (Exhibit A – pp. 2 -3) states, "Based on facility's operations history, spills are highly unlikely, but in the event of a spill, Cascade Columbia Distribution is equipped and has procedures in place to quickly respond to an accidental spill. The entire Cascade Columbia Distribution facility is self-contained, which means that the premises provide complete separation from the outside environment with physical barriers, separate utilities, as well as established procedures, controls, and monitoring. Therefore, any spill on the facility's property is considered a controlled release and does not have the ability to get offsite. Spill response and clean-up procedures are described in detail under Section 16.82.020C.6 in this narrative."

"In the event of a spill that creates vapor, the Applicant follows a Risk Management Plan approved by Tualatin Valley Fire & Rescue (TVFR). The Plan identifies off-site zones and the surrounding businesses that would be affected in a worst-case scenario and contains notification procedures. The Washington County Local Emergency Planning Committee (LEPC), which the Applicant helped form, also has a copy of the Risk Management Plan on record. Cascade Columbia Distribution operations and handling of certain chemicals is governed by the U.S. Environmental Protection Agency (US EPA), among other regulatory agencies, who regularly audit the facility for conformance to regulations."

The applicant's narrative (Exhibit A – p. 23 – 25) also describes the various agencies with regulatory authority over the site and business. These include the US Food and Drug Administration, US Department of Homeland Security, US Environmental Protection Agency, US Department of Transportation (Pipeline and Hazardous Materials Safety), State of Oregon Department of Environmental Quality, Tualatin Valley Fire & Rescue, and others. The applicant is conditioned to comply with all applicable fire, state, and federal regulations related to storing and handling chemicals and other materials on the site.

**FINDING:** As discussed above, the site is self-contained from surrounding properties as a mitigation measure. In addition, the site and business are subject to strict safety regulations from outside agencies. The potential adverse impacts to surrounding properties can be adequately mitigated by requiring the applicant to comply with all applicable fire, state, and federal regulations related to the storage and handling of chemicals and hazardous material. This criterion is met as conditioned below.

**CONDITION OF APPROVAL A8:** The site and businesses operating on the site shall maintain compliance with all applicable fire, state, and federal regulations related to the storage and handling of chemicals and other materials within the proposed storage buildings.

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

**ANALYSIS:** The proposed storage buildings will be located on an existing industrial site that has been operating in the location since 1993. The covered storage building will be located near the east property line with a setback of approximately 20 ft. The new warehouse building will be located at the south end with a setback of approximately 88 ft. to the property line and 100 ft. to the wetland buffer. Removal of mature trees is required to accommodate the new storage area, however, the site will maintain a minimum 30% tree canopy over the site. In addition, the wetland and floodplain associated with Rock Creek will not be impacted. Condition of Approval B7 requires the applicant to provide a sight-obscuring fence along the south property line in accordance with the outdoor storage regulations as trees will be removed up to the property line.

The areas of the site added without land use approval are located at the north and east ends of the site. With the exception of the north property line, the storage areas are buffered from surrounding properties by vegetation and maintain compliance with wetland and floodplain buffer requirements as demonstrated in the applicant's survey and Clean Water Services SPL. Condition of Approval B7 requires the applicant to screen the outdoor storage area located along the north property line.

**FINDING:** This criterion is met.

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

**ANALYSIS:** The development site is adjacent to sensitive habitats, including wetland, floodplain, and upland habitat. The applicant is proposing to develop a previously undeveloped portion of the site near the south/west corner of the property adjacent to the natural area. As discussed above, the site is self-contained in case of a spill in order to protect abutting properties including the natural area to the west of the site. The applicant has also provided an existing site survey and Clean Water Services SPL demonstrating that the proposed development meets applicable local and regional standards for natural resources.

**FINDING:** This criterion is met.

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**D. Additional Conditions**

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

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

**ANALYSIS:** The development site is adjacent to sensitive habitat including wetland, floodplain, and upland habitat. While the exterior lighting standards under SZCDC § 16.154 (Heat and Glare) apply when a commercial or industrial use is located next to a residential use, the Rock Creek corridor contains sensitive habitat including native plants and wildlife. In order to ensure the sensitive area is protected from excessive outdoor lighting, a condition of approval is provided below.

**FINDING:** These criteria are met as conditioned below.

**CONDITION OF APPROVAL B1:** Prior to Final Site Plan approval, the applicant shall provide a lighting plan that demonstrates exterior lighting will not shine off-site in excess of 0.5 foot candle.

**E. Time Limits**

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

**F. Revocation**

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

**ANALYSIS:** The Conditional Use permit is subject to the time limits and revocation standards described above.

**FINDING:** These standards are met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL A9:** The Conditional Use permit shall be void after two (2) years unless substantial construction, in the City's determination, has taken place.

**RECOMMENDED CONDITION OF APPROVAL A10:** Any departure from approved plans not authorized by the Hearing Authority shall be cause for revocation of applicable building and occupancy permits.

**Chapter 16.90 – SITE PLANNING**

**16.90.020 – Site Plan Review**

**A. Site Plan Review Required**

Site Plan review is required prior to any substantial change to a site or use that does not meet the criteria of a minor or major modification, issuance of building permits for a new building or

**structure, or for the substantial alteration of an existing structure or use.**

**ANALYSIS:** The development site received Site Plan approval from the City in 1992 (SP 92-7). The current proposal will increase the floor area on the site by more than 10% and requires Major Modification approval. Compliance with the Site Plan and Major Modification approval criteria is addressed in this report. The applicant is required to obtain building permits for structures installed on the site without permits.

**FINDING:** This criterion is met as conditioned below.

**CONDITION OF APPROVAL D1:** Prior to Issuance of a grading permit and/or building permits, the applicant shall obtain Final Site Plan approval.

**CONDITION OF APPROVAL G1:** Prior to issuance of occupancy, the applicant shall obtain building permits for the rain cover structure located in Area 7 and the covered outdoor storage structure in Area 8 as shown in Exhibit P. The applicant shall obtain final occupancy for both existing structures before or concurrent with occupancy for the new storage structures.

**D. Required Findings**

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

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

**ANALYSIS:** The proposed development meets or is conditioned to meet all of the applicable zoning district standards as discussed in this report.

**FINDING:** This criterion is met.

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

**ANALYSIS:** The subject site is located within City boundaries and can be adequately served by the required public services as demonstrated in this report under Division VII – Public Infrastructure and in the agency comments. The application was routed to affected agencies and no service deficiencies were reported.

**FINDING:** This criterion is met.

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

**ANALYSIS:** The property will be under single ownership and the property owner is responsible for management and maintenance of on-site development features and landscaping. The property contains various public and private easements for utilities including for overhead power lines. The proposed modification will not be within or near existing easements.

**FINDING:** This criterion is met.

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

**ANALYSIS:** The proposed covered storage building will be located interior to the site near the east property line and will not impact existing natural resources. The proposed warehouse building at the south end of the site will require tree removal and filling of the southern portion of the site to accommodate the building and additional outdoor storage. While a large portion of the site remains undeveloped near SW Tualatin-Sherwood Rd., the site is bisected by large electric utility easements that restrict development in the center of the site. While the proposed location of the new warehouse requires tree removal and fill, it is the only practical location for an expansion at this time. No impacts to the wetland or floodplain are proposed.

**FINDING:** This criterion is met.

5. **For developments that are likely to generate more than 400 average daily trips (ADTs), or at the discretion of the City Engineer, the applicant must provide adequate information, such as a traffic impact analysis (TIA) or traffic counts, to demonstrate the level of impact to the surrounding transportation system. The developer is required to mitigate**



**for impacts attributable to the project, pursuant to TIA requirements in Section 16.106.080 and rough proportionality requirements in Section 16.106.090. The determination of impact or effect and the scope of the impact study must be coordinated with the provider of the affected transportation facility.**

**ANALYSIS:** The applicant has provided a Trip Generation Analysis (Exhibit L) that describes the expected trip generation of the new storage buildings. The trip generation calculations show that the proposed development is projected to generate a net increase of 3 morning peak hour trips, 4 evening peak hour trips, and of 34 average weekday trips. A complete Transportation Impact Analysis (TIA) is not required for this project.

**FINDING:** This criterion does not apply.

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

\*\*\*

**ANALYSIS:** The proposal is for an industrial development these standards do not apply.

**FINDING:** These standards do not apply.

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

**ANALYSIS:** The proposed buildings are not within 200 ft. of SW Tualatin-Sherwood Rd. and the industrial design standards do not apply.

**FINDING:** These standards do not apply.

- 8. Driveways that are more than twenty-four (24) feet in width shall align with existing streets or planned streets as shown in the Local Street Connectivity Map in the adopted Transportation System Plan (Figure 17), except where**

prevented by topography, rail lines, freeways, pre-existing development, or leases, easements, or covenants.

**ANALYSIS:** There are no planned streets across from the existing driveway in the City's Transportation System Plan.

**FINDING:** This standard is not applicable.

**E. Approvals**

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

**F. Time Limits**

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

**ANALYSIS:** The applicant is required to comply with all conditions of approval included in the Notice of Decision and has the right to appeal to City Council in accordance with SZCDC § 16.76. The site plan approval becomes void after two (2) years unless construction on the site has begun, as determined by the City.

**FINDING:** The Site Plan approval shall be void after two (2) years unless construction on the site has begun, as determined by the City. A one (1) year extension of the Site Plan approval may be requested by the applicant per the standard above.

**16.90.030 - Site Plan Modifications and Revocation**

**A. Modifications to Approved Site Plans**

**1. Major Modifications to Approved Site Plans**

- a. Defined. A major modification review is required if one or more of the changes listed below are proposed:**

- (3) A change in setbacks or lot coverage by more than ten (10) percent, provided the resulting setback or lot coverage does not exceed that allowed by the land use district;
- (7) Change to a condition of approval that was specifically applied to this approval (i.e. not a "standard condition"), or a change similar to items identified in Section 16.90.030.A.1.a.(1)—(2) as determined by the Review Authority.

**ANALYSIS:** The proposed building represents a 10% increase or more for a non-residential use. The applicant has provided a written narrative addressing the previous conditions of approval placed on the site through the original land use decision. The narrative demonstrates the site continues to comply with the conditions of approval originally placed on the property.

**FINDING:** The application is subject to Major Modification procedures and approval criteria.

- b. **Approval Criteria. An applicant may request a major modification as follows:**
  - (1) Upon the review authority determining that the proposed modification is a major modification, the applicant must submit an application form, filing fee and narrative, and a site plan using the same plan format as in the original approval. The review authority may require other relevant information, as necessary, to evaluate the request.
  - (2) The application is subject to the same review procedure (Type II, III or IV), decision making body, and approval criteria used for the initial project approval, except that adding a Conditional Use to an approved Type II project is reviewed using a Type III procedure.
  - (3) The scope of review is limited to the modification request and does not open the entire site up for additional review unless impacted by the proposed modification. For example, a request to modify a parking lot requires site design review only for the proposed parking lot and any

- changes to associated access, circulation, pathways, lighting, trees, and landscaping.
- (4) Notice must be provided in accordance with Chapter 16.72.020.
  - (5) The decision maker approves, denies, or approves with conditions an application for major modification based on written findings of the criteria.

**ANALYSIS:** The application is being processed as a Type IV application, including public notice requirements in Chapter 16.72.020. The scope of the Major Modification review is limited to the areas of the site impacted by the modification. The proposed modification complies or is conditioned to comply with applicable standards.

**FINDING:** As discussed throughout this report, the proposed modification complies or is conditioned to comply with applicable standards. These criteria are met.

## **Chapter 16.92 – LANDSCAPING**

### **16.92.010-Landscaping Plan Required**

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

**ANALYSIS:** The application is for Site Plan Major Modification and areas of the site that are new / redeveloped and areas of the site that were developed without permits are required to provide landscaping in accordance with this section. The applicant has provided plans and narrative addressing the standards in this chapter.

**FINDING:** This standard is met.

### **16.92.020 Landscaping Materials**

#### **A. Type of Landscaping**

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

#### **1. Ground Cover Plants**

- a. All of the landscape that is not planted with trees and shrubs must be planted in ground cover plants, which may include grasses. Mulch is not a substitute for ground cover, but is allowed in addition to the ground cover plants.
    - b. Ground cover plants other than grasses must be at least the four-inch pot size and spaced at distances appropriate for the plant species. Ground cover plants must be planted at a density that will cover the entire area within three (3) years from the time of planting.
  - 2. Shrubs
    - a. All shrubs must be of sufficient size and number to be at full growth within three (3) years of planting.
    - b. Shrubs must be at least the one-gallon container size at the time of planting.
  - 3. Trees
    - a. Trees at the time of planting must be fully branched and must be a minimum of two (2) caliper inches and at least six (6) feet in height.
    - b. Existing trees may be used to meet the standards of this chapter, as described in Section 16.92.020.C.2.
- B. Plant Material Selection and Preparation
  - 1. Required landscaping materials shall be established and maintained in a healthy condition and of a size sufficient to meet the intent of the approved landscaping plan. Specifications shall be submitted showing that adequate preparation of the topsoil and subsoil will be undertaken.
  - 2. Landscape materials should be selected and sited to produce a hardy and drought-resistant landscape area. Selection of the plants should include consideration of soil type, and depth, the amount of maintenance required, spacing, exposure to sun and wind, the slope and contours of the site, and compatibility with existing native vegetation preserved on the site.

**ANALYSIS:** The Landscape Plans provide detail on the size, location, and quantity of landscaping in conformance with this section.

**FINDING:** These standards are met.

- C. Existing Vegetation
  - 1. All developments subject to site plan review per Section 16.90.020 and required to submit landscaping plans per this

section shall preserve existing trees, woodlands and vegetation on the site to the maximum extent possible, as determined by the Review Authority, in addition to complying with the provisions of Section 16.142 (Parks, Trees and Open Space) and Chapter 16.144 (Wetland, Habitat, and Natural Resources).

2. Existing vegetation, except those plants on the Nuisance Plants list as identified in the "Suggested Plant Lists for Required Landscaping Manual" may be used to meet the landscape standards, if protected and maintained during the construction phase of the development.
  - a. If existing trees are used, each tree six (6) inches or less in diameter counts as one (1) medium tree.
  - b. Each tree that is more than six (6) inches and up to nine (9) inches in diameter counts as two (2) medium trees.
  - c. Each additional three (3) inch diameter increment above nine (9) inches counts as an additional medium tree.

**ANALYSIS:** Mature trees at the southern end of the property will be removed to accommodate the new warehouse building. The remaining mature trees on the site will be retained. A total of 170 mature trees will be preserved through the Major Modification development.

**FINDING:** These standards have been met.

**D. Non-Vegetative Features**

1. Landscaped areas as required by this Chapter may include architectural features interspersed with planted areas, such as sculptures, benches, masonry or stone walls, fences, rock groupings, bark dust, semi-pervious decorative paving, and graveled areas.
2. Impervious paving shall not be counted toward the minimum landscaping requirements unless adjacent to at least one (1) landscape strip and serves as a pedestrian pathway.
3. Artificial plants are prohibited in any required landscaped area.

**ANALYSIS:** Non-vegetative features may be used as prescribed above. No artificial plants are permitted or proposed.

**FINDING:** These standards are met.

## **16.92.030 Site Area Landscaping and Perimeter Screening Standards**

### **A. Perimeter Screening and Buffering**

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

**ANALYSIS:** The subject property is zoned General Industrial and the surrounding zoning in all directions is industrial land uses.

**FINDING:** This standard is not applicable.

- 2. Perimeter Landscaping Buffer**
  - a. A minimum ten (10) foot wide landscaped strip comprised of trees, shrubs and ground cover shall be provided between off-street parking, loading, or vehicular use areas on separate, abutting, or adjacent properties.**
- 3. Perimeter Landscape Buffer Reduction**  
If the separate, abutting property to the proposed development contains an existing perimeter landscape buffer of at least five (5) feet in width, the applicant may reduce the proposed site's required perimeter landscaping up to five (5) feet maximum, if the development is not adjacent to a residential zone. For example, if the separate abutting perimeter landscaping is five (5) feet, then applicant may reduce the perimeter landscaping to five (5) feet in width on their site so there is at least five (5) feet of landscaping on each lot.

**ANALYSIS:** New and redeveloped parking is proposed along the south and east property lines. The plans show a 10 ft. wide landscape buffer is proposed for the south property line. A 10 ft. wide setback is shown for the parking near the east property line but no new landscaping is proposed. The application has also not demonstrated that any existing landscaping meets the standard above.

**FINDING:** This standard is met as conditioned below.

**CONDITION OF APPROVAL B2:** Prior to Final Site Plan approval, revise the plans to provide a 10 ft. wide landscape buffer between the proposed parking along the east property line and the property line.

**B. Parking Area Landscaping**

**3. Required Landscaping**

There shall be at least forty-five (45) square feet parking area landscaping for each parking space located on the site. The amount of required plant materials are based on the number of spaces as identified below.

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

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

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

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

**(i) One (1) large tree is required per four (4) parking spaces;**

**(ii) One (1) medium tree is required per three (3) parking spaces; or**

**(iii) One (1) small tree is required per two (2) parking spaces.**

**(iv) At least five (5) percent of the required trees must be evergreen.**

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

**b. Shrubs:**

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

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

**c. Ground cover plants:**

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

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

**5. Individual Landscape Islands Requirements**

**a. Individual landscaped areas (islands) shall be at least ninety (90) square feet in area and a minimum width of**



five (5) feet and shall be curbed to protect the landscaping.

- b. Each landscape island shall be planted with at least one (1) tree.
- c. Landscape islands shall be evenly spaced throughout the parking area.
- d. Landscape islands shall be distributed according to the following:
  - (3) Industrial uses: one (1) island for every twelve (12) contiguous parking spaces.
- e. Storm water bio-swales may be used in lieu of the parking landscape areas and may be included in the calculation of the required landscaping amount.

**ANALYSIS:** A total of 60 new and redeveloped parking stalls are proposed. Parking lot landscaping is defined as any site landscaping that is not required as perimeter landscaping. The plans indicate a total of 170 mature trees are present on the site totaling 226,108 SF and exceeding the parking lot tree requirements. The plans indicate landscape islands will be provided to break up parking stalls into 12 contiguous spaces or less. Trees are not proposed within the landscape islands because of the existing power line easements and restrictions on vegetation. Staff concurs with this finding as the new parking would need to be provided outside of the easements at the far north end of the site resulting in a inefficient site for the owner and employees. The existing trees and buildings located near the parking provide shade in lieu of new parking lot trees. The application does not show compliance with the requirements for shrubs and ground cover.

**FINDING:** These standards are met as conditioned below.

**CONDITION OF APPROVAL B3:** Prior to Final Site Plan approval, a minimum of 120 new shrubs are required to be installed to serve the proposed 60 stalls. Any additional parking lot landscaping area not covered by trees and shrubs shall be landscaped with groundcover.

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

**ANALYSIS:** No new landscaping is proposed at the points of access.

**FINDING:** This standard is met.

**6. Exceptions**

- a. For properties with an environmentally sensitive area and/or trees or woodlands that merit protection per Chapters 16.142 (Parks, Trees and Open Space) and 16.144 (Wetland, Habitat and Natural Areas) the landscaping standards may be reduced, modified or "shifted" on-site where necessary in order to retain existing vegetation that would otherwise be removed to meet the above referenced landscaping requirements.
- b. The maximum reduction in required landscaping buffer permitted through this exception process shall be no more than fifty (50) percent. The resulting landscaping buffer after reduction may not be less than five (5) feet in width unless otherwise permitted by the underlying zone. Exceptions to the required landscaping may only be permitted when reviewed as part of a land use action application and do not require a separate variance permit.

**ANALYSIS:** The applicant is not requesting any additional reduction to the site landscaping requirements.

**FINDING:** This standard is not applicable.

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

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

**ANALYSIS:** The site abuts SW Tualatin-Sherwood Rd. and outdoor storage areas are screened from the street by existing mature trees. There are no adjacent residential zones.

**FINDING:** This standard is met.

**D. Visual Corridors**

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

**ANALYSIS:** The site has frontage on SW Tualatin-Sherwood Rd., an arterial street. The establishment of the visual corridor is not required because the scope of the Major Modification does not propose changes to the front of the site near the road.

**FINDING:** This standard does not apply.

**16.92.040 Installation and Maintenance Standards**

**A. Installation**

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

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

1. Maintenance of existing non-invasive native vegetation is encouraged within a development and required for portions of the property not being developed.
2. All landscaping shall be maintained in a manner consistent with the intent of the approved landscaping plan.
3. Any required landscaping trees removed must be replanted consistent with the approved landscaping plan and comply with § 16.142, (Parks, Trees and Open Space).

**C. Irrigation**

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

1. Option 1: A permanent built-in irrigation system with an automatic controller installed.
2. Option 2: An irrigation system designed and certified by a licensed landscape architect or other qualified professional as

part of the landscape plan, which provides sufficient water to ensure that the plants become established. The system does not have to be permanent if the plants chosen can survive independently once established.

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

**ANALYSIS:** The applicant's landscape plans provide planting details to industry standards and indicate hand watering is proposed.

**FINDING:** This standard is met.

## **Chapter 16.94 OFF-STREET PARKING AND LOADING**

### **16.94.010 General Requirements**

#### **A. Off-Street Parking Required**

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

**ANALYSIS:** The applicant is proposing a total of 60 new and redeveloped parking stalls. Parking areas have been added to the site throughout the years without land use approval and without meeting the design standards. The 9 stalls approved as part of the original land use approval will be restriped as part of this project.

**FINDING:** These criteria are met.

#### **B. Deferral of Improvements**

Off-street parking and loading spaces shall be completed prior to the issuance of occupancy permits, unless the City determines that weather conditions, lack of available surfacing materials, or other circumstances beyond the control of the applicant make completion impossible. In such circumstances, security equal to one hundred twenty five (125) percent of the cost of the parking and loading area

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

**ANALYSIS:** No deferral of improvements is proposed at this time.

**FINDING:** These criteria are met.

**C. Options for Reducing the Required Parking Spaces**

1. Two (2) or more uses or, structures on multiple parcels of land may utilize jointly the same parking and loading spaces when the peak hours of operation do not substantially overlap, provided that satisfactory evidence is presented to the City, in the form of deeds, leases, or contracts, clearly establishing the joint use.
  - a. Within commercial, institutional and public, or industrial zones, shared parking may be provided on lots that are within five hundred (500) feet of the property line of the use to be served.
  - b. Shared parking is allowed if the application can show that the combined peak use is available by a parking study that demonstrates:
    - (1) There is a sufficient number of parking spaces to accommodate the requirements of the individual businesses; or
    - (2) That the peak hours of operation of such establishments do not overlap, and
    - (3) That an exclusive permanent easement over a delineated area has been granted for parking space use.

**ANALYSIS:** A reduction to the amount of required parking is not proposed.

**FINDING:** This standard does not apply.

2. Mixed use projects are developments where a variety of uses occupies a development project or complex. For example, an eating establishment, professional office building and movie theater are all components of a mixed use site. It does not include a secondary use within a primary use such as an

administrative office associated with a retail establishment. In mixed-use projects, the required minimum vehicle parking shall be determined using the following formula:

- a. **Primary use:** i.e. that with the largest proportion of total floor area within the development at one hundred (100) percent of the minimum vehicle parking required for that use.
- b. **Secondary Use:** i.e. that with the second largest percentage of total floor area within the development, at ninety (90) percent of the vehicle parking required for that use.
- c. **Subsequent use or uses,** at eighty (80) percent of the vehicle parking required for that use.

**ANALYSIS:** A reduction to the amount of required parking is not proposed.

**FINDING:** This standard does not apply.

**D. Prohibited Uses**

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

**ANALYSIS:** The parking areas are required to be used for parking as indicated in this section.

**FINDING:** This standard is met.

**E. Location**

1. **Residential off-street parking spaces:**
  - a. **Shall be located on the same lot or development as the residential use.**
  - b. **Shall not include garages or enclosed buildings with the exception of a parking structure in multifamily developments where three (3) or more spaces are not individually enclosed. (Example: Underground or multi-level parking structures).**
2. **For other uses, required off-street parking spaces may include adjacent on-street parking spaces, nearby public parking and shared parking located within five hundred (500) feet of the use. The distance from the parking, area to the use shall be**

measured from the nearest parking space to a building entrance, following a sidewalk or other pedestrian route. The right to use private off-site parking must be evidenced by a recorded deed, lease, easement, or similar written notarized letter or instrument.

3. **Vehicle parking is allowed only on improved parking shoulders that meet City standards for public streets, within garages, carports and other structures, or on driveways or parking lots that have been developed in conformance with this code. Specific locations and types of spaces (car pool, compact, etc.) for parking shall be indicated on submitted plans and located to the side or rear of buildings where feasible.**
  - a. **All new development with forty (40) employees or more shall include preferential spaces for carpool/vanpool designation. Carpool and vanpool parking spaces shall be located closer to the main employee entrance than all other parking spaces with the exception of ADA parking spaces. Carpool/vanpool spaces shall be clearly marked as reserved for carpool/vanpool only.**
  - b. **Existing development may redevelop portions of designated parking areas for multi-modal facilities (transit shelters, park and ride, and bicycle parking), subject to meeting all other applicable standards, including minimum space standards.**

**ANALYSIS:** All required parking spaces are proposed on-site. No shared or on-street parking is proposed.

**FINDING:** These standards are met.

**F. Marking**

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

**ANALYSIS:** The plans provide marking details for the parking and loading areas.

**FINDING:** This standard is met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL G2:** Prior to Receiving Occupancy, all parking, loading or maneuvering areas including ADA and loading stalls shall be clearly marked and signed. All interior drives and access aisles shall be clearly marked and signed to show the direction of flow and maintain vehicular and pedestrian safety.

**G. Surface and Drainage**

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

**ANALYSIS:** All proposed parking and loading areas are required to be hard surface and include storm drainage facilities. In addition, any previously constructed parking and loading areas installed without permits are required to be hard surface and include storm drainage facilities. Areas 1 and 3 in Exhibit P are currently used for truck parking but have not been approved through a Site Plan Review process. Area 3 is paved, but Area 1 is not.

**FINDING:** These standards are met as conditioned below.

**CONDITION OF APPROVAL B4:** Prior to Final Site Plan approval, revise the plans to provide a permanent hard surface under “Area 1” as shown in Exhibit P.

**CONDITION OF APPROVAL B5:** Prior to Final Site Plan approval, revise the plans to provide storm drainage facilities for all parking and loading areas.

**CONDITION OF APPROVAL G3:** Prior to Occupancy, all parking and loading areas, including Area 1, shall be improved with a permanent hard surface and include storm drainage facilities.

**H. Repairs**

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

**ANALYSIS:** The property owner will be responsible for the proper maintenance of the parking and loading areas. Violations are subject to City code compliance action.



**FINDING:** This standard is met.

**I. Parking and Loading Plan**

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

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

**ANALYSIS:** The applicant has provided a narrative and plans that include information at an adequate level to determine compliance with the parking and loading standards.

**FINDING:** This standard is met.

**J. Parking Districts**

**The City may establish a parking district (i.e., permits or signage) in residential areas in order to protect residential areas from spillover parking generated by adjacent commercial, employment or mixed-use areas, or other uses that generate a high demand for parking. The district request shall be made to the City Manager, who will forward a recommendation to the City Council for a decision. Structured parking and on-street parking are exempt from the parking space maximums in Section 16.94.020.A.**

**ANALYSIS:** No parking districts or structured parking is proposed.

**FINDING:** This standard is not applicable.

**16.94.020 Off-Street Parking Standards**

**A. Generally**

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

**Table 1: Minimum and Maximum Parking Standards  
(Metro spaces are based on 1 per 1,000 sq ft of gross leasable area)**

Use	Minimum Parking Standard	Maximum Permitted Parking Zone A <sup>1</sup>	Maximum Permitted Parking Zone B <sup>2</sup>
Office	1.6	None	None
Warehouse	0.3	-	-

**ANALYSIS:** The applicant is proposing to utilize the office and warehouse parking ratios. Parking stalls for a total of 11,333 SF of office and 87,673 SF of warehousing is proposed.

$11.33 \times 2.7 = 30.59$

$87.67 \times 0.3 = 26.30$

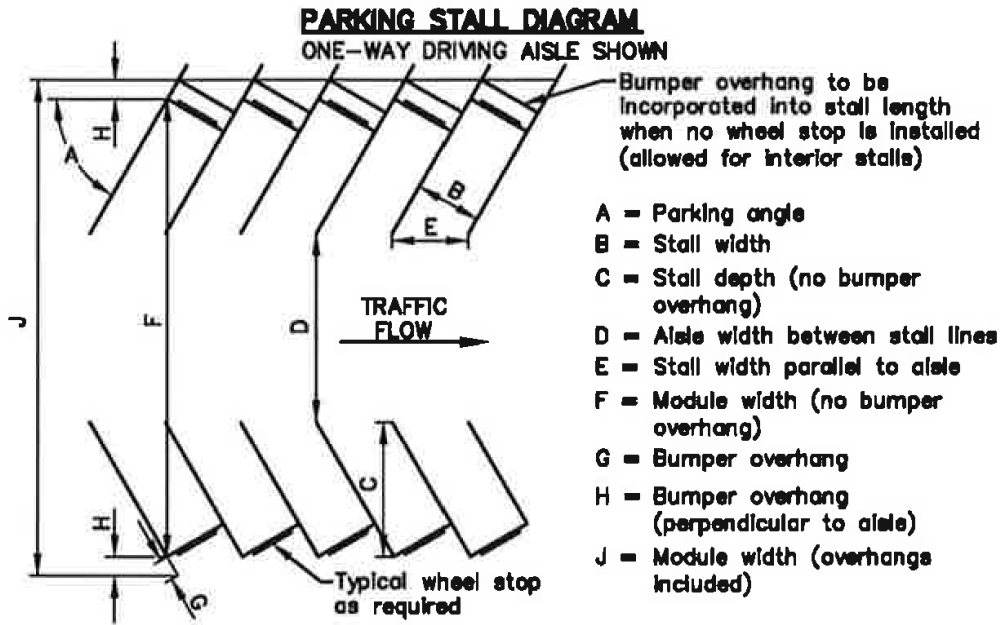
Rounding up, a minimum of 57 stalls are required. The applicant is proposing 60 parking stalls.

**FINDING:** This standard is met.

**B. Dimensional and General Configuration Standards**

1. **Dimensions** For the purpose of this Chapter, a "parking space" means a stall nine (9) feet in width and twenty (20) feet in length. Up to twenty five (25) percent of required parking spaces may have a minimum dimension of eight (8) feet in width and eighteen (18) feet in length so long as they are signed as compact car stalls.
2. **Layout**

Parking space configuration, stall and access aisle size shall be of sufficient width for all vehicle turning and maneuvering. Groups of more than four (4) parking spaces shall be served by a driveway so as to minimize backing movements or other maneuvering within a street, other than an alley. All parking areas shall meet the minimum standards shown in the following table and diagram.



**Table 2: Minimum Parking Dimension Requirements  
One-Way Driving Aisle (Dimensions in Feet)**

A	B	C	D	E	F	G	H	J
60°	8.0	17.0	18.0	9.2	52.0	3.0	2.5	57.0
	9.0	19.5	16.0	10.4	55.0	3.0	2.5	60.0

**Table 3: Minimum Parking Dimension Requirements  
Two-Way Driving Aisle (Dimensions in Feet)**

A	B	C	D	E	F	G	H	J
90°	8.0	18.0	26.0	8.0	56.0	3.0	3.0	62.0
	9.0	20.0	24.0	9.0	58.0	3.0	3.0	64.0

### 3. Wheel Stops

- a. **Parking spaces along the boundaries of a parking lot or adjacent to interior landscaped areas or sidewalks shall be provided with a wheel stop at least four (4) inches high, located three (3) feet back from the front of the parking stall as shown in the above diagram.**
- b. **Wheel stops adjacent to landscaping, bio-swales or water quality facilities shall be designed to allow storm water runoff.**
- c. **The paved portion of the parking stall length may be reduced by three (3) feet if replaced with three (3) feet of low lying landscape or hardscape in lieu of a wheel stop; however, a curb is still required. In other words, the traditional three-foot vehicle overhang from a wheel stop may be low-lying landscaping rather than an impervious surface.**

**ANALYSIS:** The plans show the proposed dimensions of the parking and loading areas. All stalls are proposed at 9 ft. wide by 20 ft. deep. Drive aisles are proposed to be 24 ft. wide. Wheel stops are proposed as required by the standard above.

**FINDING:** These standards are met as conditioned below.

**CONDITION OF APPROVAL G4:** Prior to occupancy, parking stalls and drive aisles shall meet the dimensional standards shown in the plans. Wheel stops shall also be installed in accordance with the plans.

**4. Service Drives**

**Service drives shall be clearly and permanently marked and defined through use of rails, fences, walls, or other barriers or markers, and shall have minimum vision clearance area formed by the intersection of the driveway center line, the street right-of-way line, and a straight line joining said lines through points fifteen (15) feet from their intersection.**

**ANALYSIS:** No service drives are proposed.

**FINDING:** This standard does not apply.

\*\*\*

**C. Bicycle Parking Facilities**

**1. General Provisions**

- a. **Applicability. Bicycle parking spaces shall be provided for new development, changes of use, and major renovations, defined as construction valued at twenty-**

- five (25) percent or more of the assessed value of the existing structure.
- b. **Types of Spaces.** Bicycle parking facilities shall be provided in terms of short-term bicycle parking and long-term bicycle parking. Short-term bicycle parking is intended to encourage customers and other visitors to use bicycles by providing a convenient and readily accessible place to park bicycles. Long-term bicycle parking provides employees, students, residents, commuters, and others who generally stay at a site for at least several hours a weather-protected place to park bicycles.
  - c. **Minimum Number of Spaces.** The required total minimum number of bicycle parking spaces for each use category is shown in Table 4, Minimum Required Bicycle Parking Spaces.
  - d. **Minimum Number of Long-term Spaces.** If a development is required to provide eight (8) or more required bicycle parking spaces in Table 4, at least twenty-five (25) percent shall be provided as long-term bicycle with a minimum of one (1) long-term bicycle parking space.
  - e. **Multiple Uses.** When there are two or more primary uses on a site, the required bicycle parking for the site is the sum of the required bicycle parking for the individual primary uses.
2. **Location and Design.**
- a. **General Provisions**
    - (1) Each space must be at least two (2) feet by six (6) feet in area, be accessible without moving another bicycle, and provide enough space between the rack and any obstructions to use the space properly.
    - (2) There must be an aisle at least five (5) feet wide behind all required bicycle parking to allow room for bicycle maneuvering. Where the bicycle parking is adjacent to a sidewalk, the maneuvering area may extend into the right-of-way.
    - (3) **Lighting.** Bicycle parking shall be at least as well lit as vehicle parking for security.

- (4) **Reserved Areas.** Areas set aside for bicycle parking shall be clearly marked and reserved for bicycle parking only.
  - (5) **Bicycle parking in the Old Town Overlay District** can be located on the sidewalk within the right-of-way. A standard inverted "U shaped" or staple design is appropriate. Alternative, creative designs are strongly encouraged.
  - (6) **Hazards.** Bicycle parking shall not impede or create a hazard to pedestrians. Parking areas shall be located so as to not conflict with vision clearance standards.
- b. **Short-term Bicycle Parking**
- (1) Provide lockers or racks that meet the standards of this section.
  - (2) Locate inside or outside the building within thirty (30) feet of the main entrance to the building or at least as close as the nearest vehicle parking space, whichever is closer.

**Table 4: Minimum Required Bicycle Parking Spaces**

Use Categories	Minimum Required Spaces
Industrial	2 or 1 per 40 auto spaces, whichever is greater

**ANALYSIS:** The applicant’s narrative states that bicycle parking is not proposed or required due to the industrial nature of the development. The code does not provide exceptions for industrial development and the City has consistently applied these standards to all industrial development.

A minimum of two short-term bicycle parking stalls is required.

**FINDING:** This standard is met as conditioned below.

**CONDITION OF APPROVAL B6:** Prior to Final Site Plan approval, revise the plans to include two short-term bicycle stalls in accordance with SZCDC § 16.94.020(C)(2) including a space 2x6’ for each bicycle.

**CONDITION OF APPROVAL G5:** Prior to Receiving Occupancy, the development shall include two short-term bicycle stalls in accordance with SZCDC § 16.94.020(C)(2) including a space 2x6’ for each bicycle.

## **16.94.030 - Off-Street Loading Standards**

### **A. Minimum Standards**

- 1. A driveway designed for continuous forward flow of passenger vehicles for the purpose of loading and unloading passengers shall be located on the site of any school, or other public meeting place, which is designed to accommodate more than twenty five (25) persons at one time.**
- 2. The minimum loading area for non-residential uses shall not be less than ten (10) feet in width by twenty-five (25) feet in length and shall have an unobstructed height of fourteen (14) feet.**
- 3. Multiple uses on the same parcel or adjacent parcels may utilize the same loading area if it is shown in the development application that the uses will not have substantially overlapping delivery times.**
- 4. The following additional minimum loading space is required for buildings in excess of twenty thousand (20,000) square feet of gross floor area:**
  - a. Twenty thousand (20,000) to fifty (50,000) sq. ft. - five hundred (500) sq. ft.**
  - b. Fifty (50,000) sq. ft. or more - seven hundred fifty (750) sq. ft.**

**ANALYSIS:** The site is used as a chemical storage and distribution facility, and as such loading areas are an integral component of site design. Existing off-street loading areas are located throughout the site in excess of 750 SF.

**FINDING:** This standard is met.

### **B. Separation of Areas**

**Any area to be used for the maneuvering of delivery vehicles and the unloading or loading of materials shall be separated from designated off-street parking areas and designed to prevent the encroachment of delivery vehicles onto off-street parking areas or public streets. Off-street parking areas used to fulfill the requirements of this Chapter shall not be used for loading and unloading operations.**

**ANALYSIS:** The off-street parking and loading areas are not adjacent to each other.

**FINDING:** This standard is met.

### **C. Exceptions and Adjustments.**

The review authority, through Site Plan Review, may approve loading areas within a street right-of-way in the Old Town Overlay District when all of the following conditions are met:

1. Short in duration (i.e., less than one (1) hour);
2. Infrequent (less than three (3) operations occur daily between 5:00 a.m. and 12:00 a.m. or all operations occur between 12:00 a.m. and 5:00 a.m. at a location that is not adjacent to a residential zone);
3. Does not unreasonably obstruct traffic; [or] Does not obstruct traffic during peak traffic hours;
4. Does not obstruct a primary emergency response route; and
5. Is acceptable to the applicable roadway authority.

**ANALYSIS:** No exceptions are requested.

**FINDING:** This standard is met.

## **Chapter 16.96 - ONSITE CIRCULATION**

### **16.92.010 – On-Site Pedestrian and Bicycle Circulation**

#### **A. Purpose**

On-site facilities shall be provided that accommodate safe and convenient pedestrian access within new subdivisions, multi-family developments, planned unit developments, shopping centers and commercial districts, and connecting to adjacent residential areas and neighborhood activity centers within one-half mile of the development. Neighborhood activity centers include but are not limited to existing or planned schools, parks, shopping areas, transit stops or employment centers. All new development, (except single-family detached housing), shall provide a continuous system of private pathways/sidewalks.

#### **B. Maintenance**

No building permit or other City permit shall be issued until plans for ingress, egress and circulation have been approved by the City. Any change increasing any ingress, egress or circulation requirements, shall be a violation of this Code unless additional facilities are provided in accordance with this Chapter.

#### **C. Joint Access**

Two (2) or more uses, structures, or parcels of land may utilize the same ingress and egress when the combined ingress and egress of all uses, structures, or parcels of land satisfied the other requirements of this Code, provided that satisfactory legal evidence



is presented to the City in the form of deeds, easements, leases, or contracts to clearly establish the joint use.

**D. Connection to Streets**

1. Except for joint access per this Section, all ingress and egress to a use or parcel shall connect directly to a public street, excepting alleyways with paved sidewalk.
2. Required private sidewalks shall extend from the ground floor entrances or the ground floor landing of stairs, ramps or elevators to the public sidewalk or curb of the public street which provides required ingress and egress.

**E. Maintenance of Required Improvements**

Required ingress, egress and circulation improvements shall be kept clean and in good repair.

**F. Access to Major Roadways**

Points of ingress or egress to and from Highway 99W and arterials designated on the Transportation Plan Map, attached as Appendix C of the Community Development Plan, Part II, shall be limited as follows:

1. Single and two-family uses and manufactured homes on individual residential lots developed after the effective date of this Code shall not be granted permanent driveway ingress or egress from Highway 99W and arterial roadways. If alternative public access is not available at the time of development, provisions shall be made for temporary access which shall be discontinued upon the availability of alternative access.
2. Other private ingress or egress from Highway 99W and arterial roadways shall be minimized. Where alternatives to Highway 99W or arterials exist or are proposed, any new or altered uses developed after the effective date of this Code shall be required to use the alternative ingress and egress.
3. All site plans for new development submitted to the City for approval after the effective date of this Code shall show ingress and egress from existing or planned local or collector streets, consistent with the Transportation Plan Map and Section VI of the Community Development Plan.

**G. Service Drives**

Service drives shall be provided pursuant to Section 16.94.030.

**ANALYSIS:** The applicant's narrative states sidewalks and curbs are not proposed as part of the development due to physical conditions that make the connections impracticable. The primary physical condition making the connections impracticable is

the existing development including use of the site as an outdoor storage area containing forklifts and trucks as an integral part of the operations.

Staff agrees with this conclusion as it relates to the outdoor storage areas and circulation pattern around the existing and proposed buildings. Staff does not agree with this conclusion it relates to the parking areas and connection between the parking areas and the office building. The existing office space indicates some staff are not involved in the outdoor operations of the site.

**FINDING:** These standards are met as conditioned below.

**CONDITION OF APPROVAL B7:** Prior to Final Site Plan approval, revise the plans to provide a 4 ft. wide pedestrian pathway between all existing and proposed parking areas and the primary office entrance(s). Private pathway surfaces shall be concrete, asphalt, brick/masonry pavers, or other pervious durable surface.

**CONDITION OF APPROVAL G8:** Prior to Occupancy, a 4 ft. wide pedestrian pathway is required between all existing and proposed parking areas and the primary office entrance. Private pathway surfaces shall be concrete, asphalt, brick/masonry pavers, or other pervious durable surface.

#### **16.96.030 - Minimum Non-Residential Standards**

**Minimum standards for private, on-site circulation improvements in non-residential developments:**

**A. Driveways**

**2. Industrial: Improved hard surfaced driveways are required as follows:**

<b>Required Parking Spaces</b>	<b># Driveways</b>	<b>Minimum Width: One-Way</b>	<b>Minimum Width: Two-Way</b>
<b>1 - 249</b>	<b>1</b>	<b>15 feet</b>	<b>24 feet</b>
<b>250 &amp; above</b>	<b>2</b>	<b>15 feet</b>	<b>24 ft.</b>

**ANALYSIS:** All of the proposed drive aisles serving the parking are 24 ft. wide.

**FINDING:** This standard is met.

**3. Surface materials are encouraged to be pervious when appropriate considering soils, anticipated vehicle usage and other pertinent factors.**

**B. Sidewalks and Curbs**

1. A private pathway/sidewalk system extending throughout the development site shall be required to connect to existing development, to public rights-of-way with or without improvements, to parking and storage areas, and to connect all building entrances to one another. The system shall also connect to transit facilities within five hundred (500) feet of the site, future phases of development, and whenever possible to parks and open spaces.
2. Curbs shall also be required at a standard approved by the Hearing Authority. Private pathways/sidewalks shall be connected to public rights-of-way along driveways but may be allowed other than along driveways if approved by the Hearing Authority.
3. Private Pathway/Sidewalk Design. Private pathway surfaces shall be concrete, asphalt, brick/masonry pavers, or other pervious durable surface. Primary pathways connecting front entrances to the right of way shall be at least 6 feet wide and conform to ADA standards. Secondary pathways between buildings and within parking areas shall be a minimum of four (4) feet wide and/or conform to ADA standards. Where the system crosses a parking area, driveway or street, it shall be clearly marked with contrasting paving materials or raised crosswalk (hump). At a minimum all crosswalks shall include painted striping.
4. Exceptions. Private pathways/sidewalks shall not be required where physical or topographic conditions make a connection impracticable, where buildings or other existing development on adjacent lands physically preclude a connection now or in the future considering the potential for redevelopment; or pathways would violate provisions of leases, restrictions or other agreements.

**ANALYSIS:** There are no physical or topographic conditions that make connection impracticable between the parking areas and the office building.

**FINDING:** This standard is met by Condition of Approval B7 and G8.

#### **16.96.040 - On-Site Vehicle Circulation**

##### **A. Maintenance**

**No building permit or other City permit shall be issued until plans for ingress, egress and circulation have been approved by the City. Any change increasing any ingress, egress or circulation requirements,**

shall be a violation of this Code unless additional facilities are provided in accordance with this Chapter.

- B. **Joint Access [See also Chapter 16.108]**  
Two (2) or more uses, structures, or parcels of land are strongly encouraged to utilize jointly the same ingress and egress when the combined ingress and egress of all uses, structures, or parcels of land satisfy the other requirements of this Code, provided that satisfactory legal evidence is presented to the City in the form of deeds, easements, leases, or contracts to clearly establish the joint use. In some cases, the City may require a joint access to improve safety, vision clearance, site distance, and comply with access spacing standards for the applicable street classification.
- C. **Connection to Streets**
  - 1. Except for joint access per this Section, all ingress and egress to a use or parcel shall connect directly to a public street, excepting alleyways.
  - 2. Required private sidewalks shall extend from the ground floor entrances or the ground floor landing of stairs, ramps or elevators to the public sidewalk or curb of the public street which provides required ingress and egress.
- D. **Maintenance of Required Improvements**  
Required ingress, egress and circulation improvements shall be kept clean and in good repair.
- E. **Service Drives**  
Service drives shall be provided pursuant to Section 16.94.030.

**ANALYSIS:** The site has an existing access along SW Tualatin-Sherwood Rd. No new driveways are proposed.

**FINDING:** These standards are met.

## **Chapter 16.98 - ONSITE STORAGE**

### **16.98.020 Solid Waste and Recycling Storage**

All uses shall provide solid waste and recycling storage receptacles which are adequately sized to accommodate all solid waste generated on site. All solid waste and recycling storage areas and receptacles shall be located out of public view. Solid waste and recycling receptacles for multi-family, commercial, industrial and institutional uses shall be screened by six (6) foot high sight-obscuring fence or masonry wall and shall be easily accessible to collection vehicles.

**ANALYSIS:** No changes are proposed to the on-site trash and recycling area. Pride Disposal has provided comment (Exhibit N) that indicates no changes are required.

**FINDING:** This standard is met.

#### **16.98.030 - Material Storage**

- A. Generally. Except as otherwise provided herein, external material storage is prohibited, except in commercial and industrial zones where storage areas are approved by the Review Authority as part of a site plan or per Section 16.98.040.**
- B. Standards. Except as per Section 16.98.040, all service, repair, storage, and merchandise display activities carried on in connection with any commercial or industrial activity, and not conducted within an enclosed building, shall be screened from the view of all adjacent properties and adjacent streets by a six (6) foot to eight (8) foot high, sight obscuring fence subject to chapter 16.58.020. In addition, unless adjacent parcels to the side and rear of the storage area have existing solid evergreen screening or sight-obscuring fencing in place, new evergreen screening no less than three (3) feet in height shall be planted along side and rear property lines. Where other provisions of this Code require evergreen screening, fencing, or a landscaped berm along side and rear property lines, the additional screening stipulated by this Section shall not be required.**
- C. Hazardous Materials. Storage of hazardous, corrosive, flammable, or explosive materials, if such storage is otherwise permitted by this Code, shall comply with all local fire codes, and Federal and State regulations.**

**ANALYSIS:** New outdoor storage is proposed along the east property line. In addition, outdoor storage areas have been established in various areas of the site that have not been reviewed and approved through a Site Plan. All existing and proposed outdoor storage areas will be screened from adjacent properties by existing on-site vegetation, with the exception of Area 5 and Area 9 as identified in Exhibit P.

Area 5 - A chain link fence is located near the property line but does not appear to be sight-obscuring. The adjacent property to the north has existing vegetation along the property line, therefore the additional landscaping is not required.

Area 9 – a portion of this area will be replaced with an enclosed building as part of the Major Modification and the remaining area will be used for outdoor storage. The plans indicate a chain link fence is proposed but it is not sight obscuring. The adjacent

property to the south has existing vegetation along the property line, therefore the additional landscaping is not required.

**FINDING:** These standards are met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL B8:** Prior to Final Site Plan approval, revise the plans to show a minimum 6 ft. tall sight obscuring fence between Areas 5 and 9 and the adjacent property lines.

**RECOMMENDED CONDITION OF APPROVAL G7:** Prior to Occupancy, a minimum 6 ft. tall sight obscuring fence between Areas 5 and 9 and the adjacent property lines shall be installed.

### **Chapter 16.106 - TRANSPORTATION FACILITIES**

#### **Sections 16.106.010 Generally through 16.106.090 Rough Proportionality**

**ANALYSIS:** The site has frontage on SW Tualatin-Sherwood Rd., an arterial street under County jurisdiction. The County comments (Exhibit T) state that no frontage improvements are required as the street will be redeveloped as a capital project.

**FINDING:** No transportation facility improvements are required as part of the proposed development. These standards are met as conditioned below.

**CONDITION OF APPROVAL A11:** The applicant shall comply with Condition of Approval I in the Washington County comments dated June 16, 2022. A County Right-of-Way Permit is required for any work performed by the applicant within the Tualatin-Sherwood Rd. right-of-way.

### **Chapter 16.110 – SANITARY SEWERS**

**Sanitary sewers shall be installed to serve all new developments and shall connect to existing sanitary sewer mains. Provided, however, that when impractical to immediately connect to a trunk sewer system, the use of septic tanks may be approved, if sealed sewer laterals are installed for future connection and the temporary system meets all other applicable City, Clean Water Services, Washington County and State sewage disposal standards.**

#### **16.110.020 - Design Standards**

##### **A. Capacity**

**Sanitary sewers shall be constructed, located, sized, and installed at standards consistent with this Code, the Sanitary Sewer Service Plan Map in the Sanitary Sewer Master Plan, and other applicable Clean Water Services and City standards, in order to adequately serve the proposed development and allow for future extensions.**

**B. Over-Sizing**

1. **When sewer facilities will, without further construction, directly serve property outside a proposed development, gradual reimbursement may be used to equitably distribute the cost of that over-sized system.**
2. **Reimbursement shall be in an amount estimated by the City to be a proportionate share of the cost for each connection made to the sewer by property owners outside of the development, for a period of ten (10) years from the time of installation of the sewers. The boundary of the reimbursement area and the method of determining proportionate shares shall be determined by the City. Reimbursement shall only be made as additional connections are made and shall be collected as a surcharge in addition to normal connection charges.**

**ANALYSIS:** The City of Sherwood Engineering Comments (Exhibit S) state “Currently a public sanitary sewer main exists along the northwest side of the subject property and along the north side of the subject property along the full frontage of SW Tualatin Sherwood Road. No public sanitary sewer main extension is required. The proposed warehouse building will obtain sanitary sewer via the existing on-site sanitary sewer system.”

**FINDING:** This standard is met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL E2:** Prior to Issuance of a Plumbing Permit, the proposed development shall design the private sanitary sewer to be in compliance with the current Oregon Plumbing Specialty Code.

**Chapter 16.112– WATER SUPPLY**

**16.112.010 Required Improvements**

**Water lines and fire hydrants conforming to City and Fire District standards shall be installed to serve all building sites in a proposed development. All waterlines shall be connected to existing water mains or shall construct new mains appropriately sized and located in accordance with the Water System Master Plan.**

**16.112.020 - Design Standards**

**A. Capacity**

**Water lines providing potable water supply shall be sized, constructed, located and installed at standards consistent with this Code, the Water System Master Plan, the City's Design and Construction Manual, and with other applicable City standards and**

specifications, in order to adequately serve the proposed development and allow for future extensions.

**B. Fire Protection**

All new development shall comply with the fire protection requirements of Chapter 16.116, the applicable portions of Chapter 7 of the Community Development Plan, and the Fire District.

**C. Over-Sizing**

1. When water mains will, without further construction, directly serve property outside a proposed development, gradual reimbursement may be used to equitably distribute the cost of that over-sized system.
2. Reimbursement shall be in an amount estimated by the City to be the proportionate share of the cost of each connection made to the water mains by property owners outside the development, for a period of ten (10) years from the time of installation of the mains. The boundary of the reimbursement area and the method of determining proportionate shares shall be determined by the City. Reimbursement shall only be made as additional connections are made and shall be collected as a surcharge in addition to normal connection charges.
3. When over-sizing is required in accordance with the Water System Master Plan, it shall be installed per the Water System Master Plan. Compensation for over-sizing may be provided through direct reimbursement, from the City, after mainlines have been accepted. Reimbursement of this nature would be utilized when the cost of over-sizing is for system wide improvements.

**ANALYSIS:** The City of Sherwood Engineering Comments state “Currently there is a public water main existing within SW Tualatin-Sherwood Road along the full frontage of the subject property frontage. No public water main extension is required. The proposed warehouse building will obtain domestic and fire water via the existing on-site water system.

**FINDING:** This standard is met as conditioned below.

**CONDITION OF APPROVAL E3:** Prior to Issuance of a Plumbing Permit, water flows calculations (domestic, irrigation and fire) shall be provided by the developer.

**CONDITION OF APPROVAL E4:** Prior to Issuance of a Plumbing Permit, the proposed development shall design for private water lines to be in compliance with the current Oregon Plumbing Specialty Code.



## **Chapter 16.114 – STORM WATER**

**Storm water facilities, including appropriate source control and conveyance facilities, shall be installed in new developments and shall connect to the existing downstream drainage systems consistent with the Comprehensive Plan and the requirements of the Clean Water Services water quality regulations contained in their Design and Construction Standards R&O 04-9, or its replacement.**

### **16.114.020 - Design Standards**

#### **A. Capacity**

**Storm water drainage systems shall be sized, constructed, located, and installed at standards consistent with this Code, the Storm Drainage Master Plan Map, attached as Exhibit E, Chapter 7 of the Community Development Plan, other applicable City standards, the Clean Water Services Design and Construction standards R&O 04-9 or its replacement, and hydrologic data and improvement plans submitted by the developer.**

#### **B. On-Site Source Control**

**Storm water detention and groundwater recharge improvements, including but not limited to such facilities as dry wells, detention ponds, and roof top ponds shall be constructed according to Clean Water Services Design and Construction Standards.**

#### **C. Conveyance System**

**The size, capacity and location of storm water sewers and other storm water conveyance improvements shall be adequate to serve the development and accommodate upstream and downstream flow. If an upstream area discharges through the property proposed for development, the drainage system shall provide capacity to the receive storm water discharge from the upstream area. If downstream drainage systems are not sufficient to receive an increase in storm water caused by new development, provisions shall be made by the developer to increase the downstream capacity or to provide detention such that the new development will not increase the storm water caused by the new development.**

### **16.114.030 - Service Availability**

**Approval of construction plans for new storm water drainage facilities pursuant to Chapter 16.106, and the issuance of building permits for new development to be served by existing storm water drainage systems shall include certification by the City that existing or proposed drainage facilities are adequate to serve the development.**

**ANALYSIS:** The City of Sherwood Engineering Comments state “Currently the subject property consists of 2 drainage basins. The north basin flows to a ditch which flows to culvert pipes crossing SW Tualatin-Sherwood Road. The south basin discharges to a vegetative corridor along Rock Creek. The proposed site improvements are all within the south basin. No public storm sewer main extension required. All new storm facilities are proposed to be built on-site.

Currently there are no water quality/hydro-modification facilities existing on the site to accommodate the subject development.

The subject development will need to provide on-site water quality/hydro-modification facilities in compliance with Clean Water Services (CWS) standards for any new/modified impervious area to be installed or installed previously without a permit unless otherwise approved for a payment-in-lieu by the City of Sherwood and CWS.

Clean Water Services (CWS) has issued a Service Provider Letter for the subject development. A vegetative corridor does exist within the subject development. CWS has issued conditions associated with the vegetative corridor.

Due to required vegetative corridor restoration by Clean Water Services, public improvement plans (aka vegetative corridor restoration) will need City of Sherwood and CWS approval.

City policy requires that a grading and erosion control permit be obtained for any site work that disturbs over 500 square feet of area. This permit is obtained from the Building Department.”

**FINDING:** This standard is met as conditioned below.

**CONDITION OF APPROVAL C1:** Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design to provide water quality and hydro-modification in compliance with Clean Water Services’ standards unless otherwise approved for a payment-in-lieu by the City of Sherwood and CWS. This includes impervious area installed previously within the subject property without a permit.

**CONDITION OF APPROVAL F1:** Prior to Final Acceptance of Public Improvements, private water quality/hydro-modification facilities shall have a recorded Private Stormwater Facility Access and Maintenance Covenant. An Operation and Maintenance Plan for all private hydro-modification facilities is also required to be submitted to the Sherwood Engineering Department.

**CONDITION OF APPROVAL E5:** Prior to Issuance of a Plumbing Permit, the proposed development shall design for private storm water runoff within the subject property to be

collected and conveyed in accordance with the current Oregon Plumbing Specialty Code.

**CONDITION OF APPROVAL C2:** Prior to Approval of the Engineering Public Improvement Plans, a grading and erosion control permit shall be obtained.

**CONDITION OF APPROVAL F2:** Prior to Final Acceptance of Public Improvements, all conditions of the Clean Water Services' Service Provider Letter shall be met (includes recording of easement dedication).

**CONDITION OF APPROVAL C3:** Prior to Approval of the Engineering Public Improvement Plans, a Storm Water Connection Permit Authorization shall be obtained from Clean Water Services.

## **Chapter 16.116 - FIRE PROTECTION**

### **16.116.010 Required Improvements**

**When land is developed so that any commercial or industrial structure is further than two hundred and fifty (250) feet or any residential structure is further than five hundred (500) feet from an adequate water supply for fire protection, as determined by the Fire District, the developer shall provide fire protection facilities necessary to provide adequate water supply and fire safety.**

**A. Capacity**

**All fire protection facilities shall be approved by and meet the specifications of the Fire District, and shall be sized, constructed, located, and installed consistent with this Code, Chapter 7 of the Community Development Plan, and other applicable City standards, in order to adequately protect life and property in the proposed development.**

**B. Fire Flow**

**Standards published by the Insurance Services Office, entitled "Guide for Determination of Required Fire Flows" shall determine the capacity of facilities required to furnish an adequate fire flow. Fire protection facilities shall be adequate to convey quantities of water, as determined by ISO standards, to any outlet in the system, at no less than twenty (20) pounds per square inch residual pressure. Water supply for fire protection purposes shall be restricted to that available from the City water system. The location of hydrants shall be taken into account in determining whether an adequate water supply exists.**

**C. Access to Facilities**

**Whenever any hydrant or other appurtenance for use by the Fire District is required by this Chapter, adequate ingress and egress**

shall be provided. Access shall be in the form of an improved, permanently maintained roadway or open paved area, or any combination thereof, designed, constructed, and at all times maintained, to be clear and unobstructed. Widths, height clearances, ingress and egress shall be adequate for District firefighting equipment. The Fire District, may further prohibit vehicular parking along private accessways in order to keep them clear and unobstructed, and cause notice to that effect to be posted.

**D. Hydrants**

Hydrants located along private, accessways shall either have curbs painted yellow or otherwise marked prohibiting parking for a distance of at least fifteen (15) feet in either direction, or where curbs do not exist, markings shall be painted on the pavement, or signs erected, or both, given notice that parking is prohibited for at least fifteen (15) feet in either direction.

**ANALYSIS:** Tualatin Valley Fire and Rescue has issued a Service Provider Letter for the project which is included in the applicant submittal (Exhibit G). Issuance of the Service Provider Letter indicates the plans submitted comply with fire code requirements. Changes to the plans would require re-review and approval.

**FINDING:** This standard is met as conditioned below.

**RECOMMENDED CONDITION OF APPROVAL G9:** Prior to Receiving Occupancy, the site shall conform to local fire code standards and obtain final approval from TVF&R. Any changes to the plans impacting fire code requirements require a revised Service Provider Letter from TVF&R.

## **Chapter 16.118 - PUBLIC AND PRIVATE UTILITIES**

### **16.118.010 Purpose**

Public telecommunication conduits as well as conduits for franchise utilities including, but not limited to, electric power, telephone, natural gas, lighting, and cable television shall be installed to serve all newly created lots and developments in Sherwood.

### **16.118.020 Standard**

- A. Installation of utilities shall be provided in public utility easements and shall be sized, constructed, located and installed consistent with this Code, Chapter 7 of the Community Development Code, and applicable utility company and City standards.**
- B. Public utility easements shall be a minimum of eight (8) feet in width unless a reduced width is specifically exempted by the City**

**Engineer. An eight-foot wide public utility easement (PUE) shall be provided on private property along all public street frontages. This standard does not apply to developments within the Old Town Overlay.**

- C. Where necessary, in the judgment of the City Manager or his designee, to provide for orderly development of adjacent properties, public and franchise utilities shall be extended through the site to the edge of adjacent property(ies).**
- D. Franchise utility conduits shall be installed per the utility design and specification standards of the utility agency.**
- E. Public Telecommunication conduits and appurtenances shall be installed per the City of Sherwood telecommunication design standards.**
- F. Exceptions: Installation shall not be required if the development does not require any other street improvements. In those instances, the developer shall pay a fee in lieu that will finance installation when street or utility improvements in that location occur.**

#### **16.118.030 - Underground Facilities**

**Except as otherwise provided, all utility facilities, including but not limited to, electric power, telephone, natural gas, lighting, cable television, and telecommunication cable, shall be placed underground, unless specifically authorized for above ground installation, because the points of connection to existing utilities make underground installation impractical, or for other reasons deemed acceptable by the City.**

#### **16.118.040 - Exceptions**

**Surface-mounted transformers, surface-mounted connection boxes and meter cabinets, temporary utility service facilities during construction, high capacity electric and communication feeder lines, and utility transmission lines operating at fifty thousand (50,000) volts or more may be located above ground. The City reserves the right to approve location of all surface-mounted transformers.**

**ANALYSIS:** The City of Sherwood Engineering comments state “Currently there is no PUE along the subject property frontage of SW Tualatin-Sherwood Road. Washington County will be widening SW Tualatin-Sherwood Road along the frontage of the subject property. With said widening improvements additional right-of-way will be needed in order to construct said improvements. However Washington County will not be obtaining a PUE along the subject property street frontage. The developer will need to dedicate a minimum 8-foot wide PUE along the subject property frontage of SW Tualatin-Sherwood Road outside of the new/future right-of-way line.

Currently there is no Sherwood Broadband existing along the subject property frontage of SW Tualatin-Sherwood Road. The developer will either need to install vaults and conduit for Sherwood Broadband along the subject property frontage at the location of the new PUE or make a payment in lieu of.

**FINDING:** These standards are as conditioned below.

**CONDITION OF APPROVAL F3:** Prior to Final Acceptance of Public Improvements, a minimum 8-foot wide PUE shall be dedicated to the City of Sherwood outside of the new/future right-of-way line as established by the Washington County widening of SW Tualatin-Sherwood Road.

**CONDITION OF APPROVAL C4:** Prior to Approval of the Engineering Public Improvement Plans, the developer shall either design for the installation of Sherwood Broadband facilities (vaults and conduit) along the subject property of SW Tualatin-Sherwood Road or make a payment-in lieu thereof.

**CONDITION OF APPROVAL E6:** Prior to Issuance of Building or Plumbing Permit, Approval of the Engineering Public Improvement Plans and an Engineering Compliance Agreement shall be obtained from the City of Sherwood Engineering Department.

## **Chapter 16.142 Parks, Trees and Open Space**

### **16.142.040 - Visual Corridors**

#### **A. Corridors Required**

**New developments located outside of the Old Town Overlay with frontage on Highway 99W, or arterial or collector streets designated on Figure 8-1 of the Transportation System Plan shall be required to establish a landscaped visual corridor according to the following standards:**

	<u>Category</u>	<u>Width</u>
1.	Highway 99W	25 feet
2.	Arterial	15 feet
3.	Collector	10 feet

**In residential developments where fences are typically desired adjoining the above described major street the corridor may be placed in the road right-of-way between the property line and the sidewalk. In all other developments, the visual corridor shall be on private property adjacent to the right-of-way.**

**ANALYSIS:** The site is located along SW Tualatin-Sherwood Rd., an arterial roadway. The scope of the modification does not include changes to the northern portion of the

property near the road. Establishment of a visual corridor is not required until such time that the front of the property is developed.

**FINDING:** This standard does not apply.

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#### **16.142.060: STREET TREES**

- A. Installation of Street Trees on New or Redeveloped Property.**  
Trees are required to be planted to the following specifications along public streets abutting or within any new development or re-development. Planting of such trees shall be a condition of development approval. The City shall be subject to the same standards for any developments involving City-owned property, or when constructing or reconstructing City streets. After installing street trees, the property owner shall be responsible for maintaining the street trees on the owner's property or within the right-of-way adjacent to the owner's property.

**ANALYSIS:** New street trees along Tualatin-Sherwood Rd. will be installed as part of the County improvement project.

**FINDING:** These standards do not apply.

#### **16.142.070 Trees on Property Subject to Certain Land Use Applications**

- A. Generally**  
The purpose of this Section is to establish processes and standards which will minimize cutting or destruction of trees and woodlands within the City. This Section is intended to help protect the scenic beauty of the City; to retain a livable environment through the beneficial effect of trees on air pollution, heat and glare, sound, water quality, and surface water and erosion control; to encourage the retention and planting of tree species native to the Willamette Valley and Western Oregon; to provide an attractive visual contrast to the urban environment, and to sustain a wide variety and distribution of viable trees and woodlands in the community over time.
- B. Applicability**  
All applications including a Type II - IV land use review, shall be required to preserve trees or woodlands, as defined by this Section to the maximum extent feasible within the context of the proposed

land use plan and relative to other codes, policies, and standards of the City Comprehensive Plan.

**C. Inventory**

- 1. To assist the City in making its determinations on the retention of trees and woodlands, land use applications including Type II - IV development shall include a tree and woodland inventory and report. The report shall be prepared by a qualified professional and must contain the following information:**
  - a. Tree size (in DBH and canopy area)**
  - b. Tree species**
  - c. The condition of the tree with notes as applicable explaining the assessment**
  - d. The location of the tree on the site**
  - e. The location of the tree relative to the planned improvements**
  - f. Assessment of whether the tree must be removed to accommodate the development**
  - g. Recommendations on measures that must be taken to preserve trees during the construction that are not proposed to be removed.**
- 2. In addition to the general requirements of this Section, the tree and woodland inventory's mapping and report shall also include, but is not limited to, the specific information outlined in the appropriate land use application materials packet.**
- 3. Definitions for the inventory purposes of this Section**
  - a. A tree is a living woody plant having a trunk diameter as specified below at Diameter at Breast Height (DBH). Trees planted for commercial agricultural purposes, and/or those subject to farm forest deferral, such as nut and fruit orchards and Christmas tree farms, are excluded from this definition and from regulation under this Section, as are any living woody plants under six (6) inches at DBH. All trees six (6) inches or greater shall be inventoried.**
  - b. A woodland is a biological community dominated by trees covering a land area of 20,000 square feet or greater at a density of at least fifty (50) trees per every 20,000 square feet with at least fifty percent (50%) of those trees of any species having a six (6) inches or greater at DBH. Woodlands planted for commercial agricultural purposes and/or subject to farm forest deferral, such as nut and fruit orchards and Christmas**



tree farms, are excluded from this definition, and from regulation under this Section.

- c. A large stature tree is over 20 feet tall and wide with a minimum trunk diameter of 30 inches at DBH.

**D. Retention requirements**

- 1. Trees may be considered for removal to accommodate the development including buildings, parking, walkways, grading etc., provided the development satisfies of D.2 or D.3, below.
- 3. **Required Tree Canopy - Non-Residential and Multi-family Developments**

Each net development site shall provide a variety of trees to achieve a minimum total tree canopy of 30 percent. The canopy percentage is based on the expected mature canopy of each tree by using the equation  $\pi r^2$  to calculate the expected square footage of each tree. The expected mature canopy is counted for each tree even if there is an overlap of multiple tree canopies.

The canopy requirement can be achieved by retaining existing trees or planting new trees. Required landscaping trees can be used toward the total on site canopy required to meet this standard. The expected mature canopy spread of the new trees will be counted toward the required canopy cover. A certified arborist or other qualified professional shall provide an estimated tree canopy for all proposed trees to the planning department for review as a part of the land use review process.

	Residential (single family & two family developments)	Old Town & Infill developments	Commercial, Industrial, Institutional Public and Multi-family
<b>Canopy Requirement</b>	40%	N/A	30%
<b>Counted Toward the Canopy Requirement</b>			
<b>Street trees included in canopy requirement</b>	Yes	N/A	No
<b>Landscaping requirements included in canopy requirement</b>	N/A	N/A	Yes
<b>Existing trees onsite</b>	Yes x2	N/A	Yes x2
<b>Planting new trees onsite</b>	Yes	N/A	Yes

	Residential (single family & two family developments)	Old Town & Infill developments	Commercial, Industrial, Institutional Public and Multi-family
<b>Mature Canopy in Square Feet Equation <math>\pi r^2</math> or <math>(3.14159 * \text{radius}^2)</math> (This is the calculation to measure the square footage of a circle. The Mature Canopy is given in diameter. In gardening and horticulture reference books, therefore to get the radius you must divide the diameter in half.</b>			
<b>Canopy Calculation Example: Pin Oak Mature canopy = 35' <math>(3.14159 * 17.5^2) = 962</math> square feet</b>			

**ANALYSIS:** Trees will be removed at the south end of the site to accommodate the new storage building. A total of 170 mature trees will be retained along the western edge and throughout the property. The 30% canopy requirement is met as shown below. Double canopy has been granted for each existing mature tree retained through site development.

Net buildable area	733,968 SF
30% canopy required	220,190 SF
Canopy proposed	452,216 SF (includes 2x canopy for mature trees)

**FINDING:** This standard is met.

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- G. Tree Protection During Development**  
The applicant shall prepare and submit a final Tree and Woodland Plan prior to issuance of any construction permits, illustrating how identified trees and woodlands will be retained, removed or protected as per the Notice of Decision. Such plan shall specify how trees and woodlands will be protected from damage or destruction by construction activities, including protective fencing, selective pruning and root treatments, excavation techniques, temporary drainage systems, and like methods. At a minimum, trees to be protected shall have the area within the drip line of the tree protected from grading, stockpiling, and all other construction related activity unless specifically reviewed and recommended by a certified arborist or other qualified professional. Any work within the dripline of the tree shall be supervised by the project arborist or other qualified professional onsite during construction.

**ANALYSIS:** The applicant has provided a Preliminary Tree and Perseveration Removal Plan (Exhibit A – Sheets P07 and P08) that describe tree protection requirements. The applicant is required to comply with the tree preservation notes as conditioned below.

**FINDING:** This criterion is met as conditioned below.

**CONDITION OF APPROVAL A12:** The applicant shall protect and preserve the 170 trees identified for protection in the Tree Preservation and Removal Plan through site development.

## **Chapter 16.144 - WETLAND, HABITAT AND NATURAL AREAS\***

### **Chapter 16.134 - FLOODPLAIN (FP) OVERLAY**

#### **16.134.010 - Generally**

Special resource zones are established to provide for preservation, protection, and management of unique natural and environmental resources in the City that are deemed to require additional standards beyond those contained elsewhere in this Code. Special resource zones may be implemented as underlying or overlay zones depending on patterns of property ownership and the nature of the resource. A property or properties may be within more than one resource zone. In addition, the City may identify special resource areas and apply a PUD overlay zone in advance of any development in order to further protect said resources.

The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled, "The Flood Insurance Study for Washington County, Oregon and Incorporated Areas," (flood

insurance study) dated October 19, 2018, with accompanying Flood Insurance Maps are hereby adopted by reference and declared to be a part of this ordinance. The Flood Insurance Study is on file with the Sherwood City Engineer at Sherwood City Hall.

#### **16.134.20 - Purpose**

The purpose of this ordinance is to promote the public health, safety, and general welfare, and to minimize public and private losses due to flood conditions in specific areas by complying with the provisions of this chapter.

- A. The FP zoning district is an overlay district that controls and regulates flood hazard areas in order to protect the public health, safety and general welfare; to reduce potential flood damage losses; and to protect floodways and natural drainageways from encroachment by uses which may adversely affect water quality and water flow and subsequent upstream or downstream flood levels. The FP zone shall be applied to all areas within the base flood, and shall supplement the regulations of the underlying zoning district.**

- B. FP zoning districts are areas within the base flood as identified by the Federal Emergency Management Agency (FEMA) in a Flood Insurance Study (FIS) and in Flood Insurance Rate Maps (FIRM) published for the City and surrounding areas, or as otherwise identified in accordance with Section 16.134.020C. These FEMA documents are adopted by reference as part of this Code, and are on file at the City.**
- C. When base flood elevation data is not available from the FIS or FIRM, the City shall obtain, review, and reasonably utilize any base flood elevation and floodway data available from a federal, state, or other source, and standards developed by the FEMA, in order to administer the provisions of this Code.**
- D. In areas where a regulatory floodway has not been designated, and where the Flood Insurance Study indicates that it is possible to calculate a floodway, no new construction, substantial improvements, or other development (including fill) shall be permitted within Zones A1-30 and AE on the community's FIRM, unless it is demonstrated that the cumulative effect of the proposed development, when combined with all other existing and anticipated development, will not increase the water surface elevation of the base flood more than one foot at any point within the community.**

**ANALYSIS:** A 100-year floodplain associated with Rock Creek is located on the property. The applicant has identified the floodplain on the plans. No development is proposed within the floodplain, as shown in Exhibit A – Sheet P11.

**FINDING:** A portion of the subject site is located within the 100-year floodplain, however, no development is proposed within the base flood zone. This chapter does not apply.

#### **16.144.010 - Generally**

**Unless otherwise permitted, residential, commercial, industrial, and institutional uses in the City shall comply with the following wetland, habitat and natural area standards if applicable to the site as identified on the City's Wetland Inventory, the Comprehensive Plan Natural Resource Inventory, the Regionally Significant Fish and Wildlife Habitat Area map adopted by Metro, and by reference into this Code and the Comprehensive Plan. Where the applicability of a standard overlaps, the more stringent regulation shall apply.**

**ANALYSIS:** A 100-year floodplain and Regionally Significant Fish and Wildlife Habitat are located at the west end of the property near the Rock Creek corridor. A wetland is located on the adjacent property to the west and the vegetated corridor buffer of the wetland extends to the subject property.

**FINDING:** Wetland and habitat areas regulated by this chapter are located on the site and this chapter applies. Compliance with the applicable regulations is addressed below.

**16.144.20 Standards**

- A. The applicant shall identify and describe the significance and functional value of wetlands on the site and protect those wetlands from adverse effects of the development. A facility complies with this standard if it complies with the criteria of subsections A.1.a and A.1.b, below:**
- 1. The facility will not reduce the area of wetlands on the site, and development will be separated from such wetlands by an area determined by the Clean Water Services Design and Construction Standards R&O 00-7 or its replacement provided Section 16.140.090 does not require more than the requested setback.**
    - a. A natural condition such as topography, soil, vegetation or other feature isolates the area of development from the wetland.**
    - b. Impact mitigation measures will be designed, implemented, and monitored to provide effective protection against harm to the wetland from sedimentation, erosion, loss of surface or ground water supply, or physical trespass.**
    - c. A lesser setback complies with federal and state permits, or standards that will apply to state and federal permits, if required.**
  - 2. If existing wetlands are proposed to be eliminated by the facility, the applicant shall demonstrate that the project can, and will develop or enhance an area of wetland on the site or in the same drainage basin that is at least equal to the area and functional value of wetlands eliminated.**

**ANALYSIS:** The application includes a Natural Resource Assessment included as Exhibit I. The report indicates wetlands will not be impacted by the proposed development. The applicant has also obtained a Clean Water Services SPL (Exhibit H) demonstrating compliance with the sensitive area requirements of the agency including the required buffer around the off-site wetland. The Department of State Lands (DSL) has provided comment as Exhibit V. The comments indicate a state permit is not required for the proposed activity, but that a federal permit may be required.

**FINDING:** These standards are met as conditioned below.

**CONDITION OF APPROVAL A13:** The applicant shall obtain a federal permit for the development located near the wetland or demonstrate that a federal permit is not required.

- B. The applicant shall provide appropriate plans and text that identify and describe the significance and functional value of natural features on the site (if identified in the Community Development Plan, Part 2) and protect those features from impacts of the development or mitigate adverse effects that will occur. A facility complies with this standard if:**
- 1. The site does not contain an endangered or threatened plant or animal species or a critical habitat for such species identified by Federal or State government (and does not contain significant natural features identified in the Community Development Plan, Part 2, Natural Resources and Recreation Plan).**
  - 2. The facility will comply with applicable requirements of the zone.**
  - 3. The applicant will excavate and store topsoil separate from subsurface soil, and shall replace the topsoil over disturbed areas of the site not covered by buildings or pavement or provide other appropriate medium for re-vegetation of those areas, such as yard debris compost.**
  - 4. The applicant will retain significant vegetation in areas that will not be covered by buildings or pavement or disturbed by excavation for the facility; will replant areas disturbed by the development and not covered by buildings or pavement with native species vegetation unless other vegetation is needed to buffer the facility; will protect disturbed areas and adjoining habitat from potential erosion until replanted vegetation is established; and will provide a plan or plans identifying each area and its proposed use.**
  - 5. Development associated with the facility will be set back from the edge of a significant natural area by an area determined by the Clean Water Services Design and Construction standards R&O 00-7 or its replacement, provided Section 16.140.090A does not require more than the requested setback. Lack of adverse effect can be demonstrated by showing the same sort of evidence as in subsection A.1 above.**

**ANALYSIS:** The applicant has provided a Natural Resource Assessment (Exhibit I) that describes the significance and functional value of natural features on the site. Existing mature trees will be removed to accommodate the storage building at the south end of the site, however, the development activities will be set back from the wetland by a buffer as determined by Clean Water Services. The remaining natural area will be preserved through site development.

**FINDING:** This standard is met.

- C. When the Regionally Significant Fish and Wildlife Habitat map indicates there are resources on the site or within 50 feet of the site, the applicant shall provide plans that show the location of resources on the property. If resources are determined to be located on the property, the plans shall show the value of environmentally sensitive areas using the methodologies described in Sections 1 and 2 below. The Metro Regionally Significant Fish and Wildlife Habitat map shall be the basis for determining the location and value of environmentally sensitive habitat areas. In order to specify the exact locations on site, the following methodology shall be used to determine the appropriate boundaries and habitat values:**
- 1. Verifying boundaries of inventoried riparian habitat. Locating habitat and determining its riparian habitat class is a four-step process:**
    - a. Located the Water Feature that is the basis for identifying riparian habitat.**
      - 1. Locate the top of bank of all streams, rivers, and open water within 200 feet of the property.**
      - 2. Locate all flood areas within 100 feet of the property.**
      - 3. Locate all wetlands within 150 feet of the property based on the Local Wetland Inventory map and on the Metro 2002 Wetland Inventory map (available from the Metro Data Resource Center, 600 NE Grand Ave., Portland, OR 97232). Identified wetlands shall be further delineated consistent with methods currently accepted by the Oregon Division of State Lands and the US Army Corps of Engineers.**
    - b. Identify the vegetative cover status of all areas on the property that are within 200 feet of the top of bank of streams, rivers, and open water, are wetlands or are**

within 150 feet of wetlands, and are flood areas or are within 100 feet of flood areas. Vegetative cover status shall be as identified on the Metro Vegetative Cover map. In the event of a discrepancy between the Metro Vegetative Cover map and the existing site conditions, document the actual vegetative cover based on the following definitions along with a 2002 aerial photograph of the property;

1. **Low structure vegetation or open soils — Areas that are part of a contiguous area one acre or larger of grass, meadow, crop-lands, or areas of open soils located within 300 feet of a surface stream (low structure vegetation areas may include areas of shrub vegetation less than one acre in size if they are contiguous with areas of grass, meadow, crop-lands, orchards, Christmas tree farms, holly farms, or areas of open soils located within 300 feet of a surface stream and together form an area of one acre in size or larger).**
  2. **Woody vegetation — Areas that are part of a contiguous area one acre or larger of shrub or open or scattered forest canopy (less than 60% crown-closure) located within 300 feet of a surface stream.**
  3. **Forest canopy — Areas that are part of a contiguous grove of trees of one acre or larger in area with approximately 60% or greater crown closure, irrespective of whether the entire grove is within 200 feet of the relevant water feature.**
- c. **Determine whether the degree that the land slopes upward from all streams, rivers, and open water within 200 feet of the property is greater than or less than 25% (using the Clean Water Services Vegetated Corridor methodology); and**
- d. **Identify the riparian habitat classes applicable to all areas on the property using Table 8-1 below:**

	<b>Development/Vegetation Status</b>
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<b>Distance in feet from Water Feature</b>	<b>Developed areas not providing vegetative cover</b>	<b>Low structure vegetation or open soils</b>	<b>Woody vegetation (shrub and scatted forest canopy)</b>	<b>Forest Canopy (closed to open forest canopy)</b>
<b>Surface Streams</b>				
<b>0-50</b>	<b>Class II</b>	<b>Class I</b>	<b>Class I</b>	<b>Class I</b>
<b>50-100</b>		<b>Class II</b>	<b>Class I</b>	<b>Class I</b>
<b>100-150</b>		<b>Class II if slope &gt;25%</b>	<b>Class II if slope &gt;25%</b>	<b>Class II</b>
<b>150-200</b>		<b>Class II if slope &gt;25%</b>	<b>Class II if slope &gt;25%</b>	<b>Class II if slope &gt;25%</b>
<b>Wetlands (Wetland feature itself is a Class I Riparian Area)</b>				
<b>0-100</b>			<b>Class I</b>	<b>Class I</b>
<b>100-150</b>				<b>Class II</b>
<b>Flood Areas (undeveloped portion of a flood area is a Class I Riparian area)</b>				
<b>0-100</b>			<b>Class II</b>	<b>Class II</b>

2. **Verifying boundaries of inventoried upland habitat. Upland habitat was identified based on the existence of contiguous patches of forest canopy, with limited canopy openings. The "forest canopy" designation is made based on analysis of aerial photographs, as part of determining the vegetative cover status of land within the region. Upland habitat shall be as identified on the HCA map. The perimeter of an area delineated as "forest canopy" on the Metro Vegetative Cover map may be adjusted to more precisely indicate the drip line of the trees within the canopied area.**

**ANALYSIS:** The applicant has provided a Natural Resource Assessment (Exhibit I) that describes the significance and functional value of natural features on the site including the upland and riparian habitat. Existing mature trees will be removed to accommodate the storage building at the south end of the site, however, the development activities will be set back from the wetland by a buffer as determined by Clean Water Services. The remaining natural area will be preserved through site development.

**FINDING:** This standard is met.

## **Chapter 16.146 - Noise**

### **16.146.010 - Generally**

All otherwise permitted commercial, industrial, and institutional uses in the City shall comply with the noise standards contained in OAR 340-35-035. The City may require proof of compliance with OAR 340-35-035 in the form of copies of all applicable State permits or certification by a professional acoustical engineer that the proposed uses will not cause noise in excess of State standards.

### **16.146.020 - Noise Sensitive Uses**

When proposed commercial and industrial uses do not adjoin land exclusively in commercial or industrial zones, or when said uses adjoin special care, institutional, or parks and recreational facilities, or other uses that are, in the City's determination, sensitive to noise impacts, then:

- A. The applicant shall submit to the City a noise level study prepared by a professional acoustical engineer. Said study shall define noise levels at the boundaries of the site in all directions.
- B. The applicant shall show that the use will not exceed the noise standards contained in OAR 340-35-035, based on accepted noise modeling procedures and worst case assumptions when all noise sources on the site are operating simultaneously.
- C. If the use exceeds applicable noise standards as per subsection B of this Section, then the applicant shall submit a noise mitigation program prepared by a professional acoustical engineer that shows how and when the use will come into compliance with said standards.

**ANALYSIS:** The development site is surrounded in all directions by industrial zoning, and a noise study is not required. The proposed use as warehousing is not expected to generate noise levels that exceed state standards. Any future violations related to noise, vibrations, air quality, and odor can be addressed by the applicable State agency or City Code Compliance.

**FINDING:** This standard is met.

## **Chapter 16.148 - Vibrations**

### **16.148.010 - Vibrations**

**All otherwise permitted commercial, industrial, and institutional uses shall not cause discernible vibrations that exceed a peak of 0.002 gravity at the property line of the originating use, except for vibrations that last five (5) minutes or less per day, based on a certification by a professional engineer.**

**ANALYSIS:** The proposed use as warehousing and packaging of chemicals is not expected to generate vibrations that exceed 0002 gravity at the property line. Any future violations related to noise, vibrations, air quality, and odor can be addressed by the applicable State agency or City Code Compliance.

**FINDING:** This standard is met.

## **Chapter 16.150 - Air Quality**

### **16.150.010 – Air Quality**

**All otherwise permitted commercial, industrial, and institutional uses shall comply with applicable State air quality rules and statutes:**

- A. All such uses shall comply with standards for dust emissions as per OAR 340-21-060.**
- B. Incinerators, if otherwise permitted by Section 16.140.020, shall comply with the standards set forth in OAR 340-25-850 through 340-25-905.**
- C. Uses for which a State Air Contaminant Discharge Permit is required as per OAR 340-20-140 through 340-20-160 shall comply with the standards of OAR 340-220 through 340-20-276.**

**ANALYSIS:** The proposed use as warehousing and packaging of chemicals is not expected to dust or other air quality impacts. The applicant's narrative states that a state discharge permit is not required for the operations. Any future violations related to noise, vibrations, air quality, and odor can be addressed by the applicable State agency or City Code Compliance.

**FINDING:** This standard is met.

## **Chapter 16.152 - Odors**

### **16.152.010 - Odors**

**All otherwise permitted commercial, industrial, and institutional uses shall incorporate the best practicable design and operating measures so that odors produced by the use are not discernible at any point beyond the boundaries of the development site.**

**ANALYSIS:** The proposed use as warehousing and packaging of chemicals is not expected to create odors that are discernable beyond the boundaries of the site. Any future violations related to noise, vibrations, air quality, and odor can be addressed by the applicable State agency or City Code Compliance.

**FINDING:** This standard is met.

## **Chapter 16.154 - Heat and Glare**

### **16.154.010 – Heat and Glare**

**Except for exterior lighting, all otherwise permitted commercial, industrial, and institutional uses shall conduct any operations producing excessive heat or glare entirely within enclosed buildings. Exterior lighting shall be directed away from adjoining properties, and the use shall not cause such glare or lights to shine off site in excess of one-half (0.5) foot candle when adjoining properties are zoned for residential uses.**

**ANALYSIS:** The proposed use as warehousing and packaging of chemicals is not expected to create heat and glare in violation of this section. Any future violations related to noise, vibrations, air quality, and odor can be addressed by the applicable State agency or City Code Compliance.

**FINDING:** This standard is met.

#### IV. STAFF RECOMMENDATION AND CONDITIONS OF APPROVAL

Staff recommends approval of LU 2021-025 MM / CUP Cascade Columbia Distribution, subject to the findings and Conditions of Approval described in this report. The recommendation is based on review of the applicable code standards and approval criteria, the applicant's submittal, agency comments, and public testimony.

##### A. General Conditions

1. Compliance with the Conditions of Approval is the responsibility of the developer or its successor in interest.
2. The development shall substantially comply with the submitted preliminary plans and narrative except as indicated in the conditions of the Notice of Decision. Additional development or change of use may require a new development application and approval.
3. The continual operation of the property shall comply with the applicable requirements of the Sherwood Zoning and Community Development Code and Municipal Code.
4. This approval does not negate the need to obtain permits, as appropriate from other local, state or federal agencies even if not specifically required by this decision.
5. All new utilities to be installed for the development of the subject property shall be underground.
6. Retaining walls within public easements or the public right-of-way shall require engineering approval.
7. Any departure from approved plans not authorized by the Hearing Authority shall be cause for revocation of applicable building and occupancy permits.
8. The site and businesses operating on the site shall maintain compliance with all applicable fire, state, and federal regulations related to the storage and handling of chemicals and other materials within the proposed storage buildings.
9. The Conditional Use permit shall be void after two (2) years unless substantial construction, in the City's determination, has taken place.
10. Any departure from approved plans not authorized by the Hearing Authority shall be cause for revocation of applicable building and occupancy permits.
11. The applicant shall comply with Condition of Approval I in the Washington County comments dated June 16, 2022. A County Right-of-Way Permit is required for any work performed by the applicant within the Tualatin-Sherwood Rd. right-of-way.
12. The applicant shall protect and preserve the 170 trees identified for protection in the Tree Preservation and Removal Plan through site development.
13. The applicant shall obtain a federal permit for the development located near the wetland or demonstrate that a federal permit is not required.

## **B. Prior to Final Site Plan Approval**

1. Prior to Final Site Plan approval, the applicant shall provide a lighting plan that demonstrates exterior lighting will not shine off-site in excess of 0.5 foot candle.
2. Prior to Final Site Plan approval, revise the plans to provide a 10 ft. wide landscape buffer between the proposed parking along the east property line and the property line.
3. Prior to Final Site Plan approval, a minimum of 120 new shrubs are required to be installed to serve the proposed 60 stalls. Any additional parking lot landscaping area not covered by trees and shrubs shall be landscaped with groundcover.
4. Prior to Final Site Plan approval, revise the plans to provide a permanent hard surface under "Area 1" as shown in Exhibit P.
5. Prior to Final Site Plan approval, revise the plans to provide storm drainage facilities for all parking and loading areas.
6. Prior to Final Site Plan approval, revise the plans to include two short-term bicycle stalls in accordance with SZCDC § 16.94.020(C)(2) including a space 2x6' for each bicycle.
7. Prior to Final Site Plan approval, revise the plans to provide a 4 ft. wide pedestrian pathway between all existing and proposed parking areas and the primary office entrance(s). Private pathway surfaces shall be concrete, asphalt, brick/masonry pavers, or other pervious durable surface.
8. Prior to Final Site Plan approval, revise the plans to show a minimum 6 ft. tall sight obscuring fence between Areas 5 and 9 and the adjacent property lines.

## **C. Prior to Approval of the Engineering Public Improvement Plans**

1. Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design to provide water quality and hydro-modification in compliance with Clean Water Services' standards unless otherwise approved for a payment-in-lieu by the City of Sherwood and CWS. This includes impervious area installed previously within the subject property without a permit.
2. Prior to Approval of the Engineering Public Improvement Plans, a grading and erosion control permit shall be obtained.
3. Prior to Approval of the Engineering Public Improvement Plans, a Storm Water Connection Permit Authorization shall be obtained from Clean Water Services.
4. Prior to Approval of the Engineering Public Improvement Plans, the developer shall either design for the installation of Sherwood Broadband facilities (vaults and conduit) along the subject property of SW Tualatin-Sherwood Road or make a payment-in lieu thereof.

## **D. Prior to Issuance of a Grading Permit .**

1. Prior to Issuance of a grading permit and/or building permits, the applicant shall obtain Final Site Plan approval.

#### **E. Prior to Issuance of Building Permits**

1. Prior to issuance of occupancy, the applicant shall obtain building permits for the rain cover structure located in Area 7 and the covered outdoor storage structure in Area 8 as shown in Exhibit P. The applicant shall obtain final occupancy for both existing structures before or concurrent with occupancy for the new storage structures.
2. Prior to Issuance of a Plumbing Permit, the proposed development shall design the private sanitary sewer to be in compliance with the current Oregon Plumbing Specialty Code.
3. Prior to Issuance of a Plumbing Permit, water flows calculations (domestic, irrigation and fire) shall be provided by the developer.
4. Prior to Issuance of a Plumbing Permit, the proposed development shall design for private water lines to be in compliance with the current Oregon Plumbing Specialty Code.
5. Prior to Issuance of a Plumbing Permit, the proposed development shall design for private storm water runoff within the subject property to be collected and conveyed in accordance with the current Oregon Plumbing Specialty Code.
6. Prior to Issuance of Building or Plumbing Permit, Approval of the Engineering Public Improvement Plans and an Engineering Compliance Agreement shall be obtained from the City of Sherwood Engineering Department.

#### **F. Prior to Acceptance of Public Improvements**

1. Prior to Final Acceptance of Public Improvements, private water quality/hydro-modification facilities shall have a recorded Private Stormwater Facility Access and Maintenance Covenant. An Operation and Maintenance Plan for all private hydro-modification facilities is also required to be submitted to the Sherwood Engineering Department.
2. Prior to Final Acceptance of Public Improvements, all conditions of the Clean Water Services' Service Provider Letter shall be met (includes recording of easement dedication).
3. Prior to Final Acceptance of Public Improvements, a minimum 8-foot wide PUE shall be dedicated to the City of Sherwood outside of the new/future right-of-way line as established by the Washington County widening of SW Tualatin-Sherwood Road.

#### **G. Prior to Receiving Occupancy**

1. Prior to issuance of occupancy, the applicant shall obtain building permits for the rain cover structure located in Area 7 and the covered outdoor storage structure in Area 8 as shown in Exhibit P. The applicant shall obtain final occupancy for both existing structures before or concurrent with occupancy for the new storage structures.
2. Prior to Receiving Occupancy, all parking, loading or maneuvering areas including ADA and loading stalls shall be clearly marked and signed. All interior drives and

access aisles shall be clearly marked and signed to show the direction of flow and maintain vehicular and pedestrian safety.

3. Prior to Occupancy, all parking and loading areas, including Area 1, shall be improved with a permanent hard surface and include storm drainage facilities.
4. Prior to occupancy, parking stalls and drive aisles shall meet the dimensional standards shown in the plans. Wheel stops shall also be installed in accordance with the plans.
5. Prior to Receiving Occupancy, the development shall include two short-term bicycle stalls in accordance with SZCDC § 16.94.020(C)(2) including a space 2x6' for each bicycle.
6. Prior to Occupancy, a 4 ft. wide pedestrian pathway is required between all existing and proposed parking areas and the primary office entrance. Private pathway surfaces shall be concrete, asphalt, brick/masonry pavers, or other pervious durable surface.
7. Prior to Occupancy, a minimum 6 ft. tall sight obscuring fence between Areas 5 and 9 and the adjacent property lines shall be installed.
8. Prior to Receiving Occupancy, the site shall conform to local fire code standards and obtain final approval from TVF&R. Any changes to the plans impacting fire code requirements require a revised Service Provider Letter from TVF&R.

## **V. EXHIBITS\***

*\*The complete application materials are available in the paper project file at City Hall.*

### **Applicant Submittal**

- A.** Narrative and Preliminary Plans
- B.** Application Form
- C.** Ownership Information
- D.** Assessors Map
- E.** Documentation of Neighborhood Meeting
- F.** Mailing Labels
- G.** Tualatin Valley Fire & Rescue SPL
- H.** Clean Water Services SPL
- I.** Natural Resource Assessment Report
- J.** Preliminary Tree Preservation and Removal Inventory Table
- K.** Tree Canopy Calculations
- L.** Traffic Analysis Memo
- M.** Conditions of Approval of SP 92-7
- N.** Pride Disposal Comments
- O.** Preliminary Storm Report
- P.** Existing Site Improvements Requiring Retroactive Approval
- Q.** Clean Water Services Permit
- R.** Transmission Line Easement



**Agency Comments**

- S.** City of Sherwood Engineering Department
- T.** Washington County Land Use & Transportation
- U.** Clean Water Services
- V.** Department of State Lands
- W.** Oregon Department of Transportation (Rail)

**Additional Information**

- X.** SP 92-04 Original land use approval
- Y.** SP 04-06 Modification approval
- Z.** Continuance and 120-Day Extension

# Cascade Columbia Distribution Company Land Use Application for a Modification to an Approved Site Plan and a Conditional Use Permit

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**Date:** Updated May 2022

**Submitted to:** City of Sherwood  
22560 SW Pine Street  
Sherwood, OR 97140

**Applicant:** Cascade Columbia Distribution Company  
14200 SW Tualatin-Sherwood Road  
Sherwood, OR 97140

**AKS Job Number:** 7431



**AKS**  
ENGINEERING & FORESTRY

12965 SW Herman Road, Suite 100  
Tualatin, OR 97062  
(503) 563-6151

**Table of Contents**

**I. Executive Summary.....2**

**II. Site Description/Setting .....3**

**III. Applicable Review Criteria .....4**

CITY OF SHERWOOD ZONING AND COMMUNITY DEVELOPMENT CODE..... 4

    Division II. - LAND USE AND DEVELOPMENT..... 4

        Chapter 16.31 - INDUSTRIAL LAND USE DISTRICTS..... 4

    Division III. - ADMINISTRATIVE PROCEDURES..... 6

        Chapter 16.58 VISION CLEARANCE AND FENCE STANDARDS ..... 6

        Chapter 16.70 - GENERAL PROVISIONS..... 8

        Chapter 16.72 - PROCEDURES FOR PROCESSING DEVELOPMENT PERMITS..... 9

        Chapter 16.82 - CONDITIONAL USES..... 10

    Division V. - COMMUNITY DESIGN..... 14

        Chapter 16.90 - SITE PLANNING..... 14

        Chapter 16.92 - LANDSCAPING ..... 20

        Chapter 16.94 - OFF-STREET PARKING AND LOADING ..... 22

        Chapter 16.96 - ON-SITE CIRCULATION ..... 26

        Chapter 16.98 - ON-SITE STORAGE ..... 27

    Division VI. - PUBLIC INFRASTRUCTURE ..... 30

        Chapter 16.106 - TRANSPORTATION FACILITIES..... 30

        Chapter 16.108 IMPROVEMENT PLAN REVIEW ..... 32

        Chapter 16.110 - SANITARY SEWERS ..... 32

        Chapter 16.112 - WATER SUPPLY..... 33

        Chapter 16.114 - STORM WATER..... 34

        Chapter 16.116 - FIRE PROTECTION..... 35

        Chapter 16.118 - PUBLIC AND PRIVATE UTILITIES ..... 36

    Division VIII. - ENVIRONMENTAL RESOURCES ..... 37

        Chapter 16.134 FLOODPLAIN (FP) OVERLAY..... 37

        Chapter 16.142 - PARKS, TREES AND OPEN SPACES ..... 38

        Chapter 16.144 WETLAND, HABITAT AND NATURAL AREAS ..... 40

        Chapter 16.146 - NOISE..... 44

        Chapter 16.148 - VIBRATIONS..... 45

        Chapter 16.150 - AIR QUALITY ..... 45

        Chapter 16.152 - ODORS..... 46

        Chapter 16.154 - HEAT AND GLARE ..... 46

        Chapter 16.156 - ENERGY CONSERVATION..... 47

**IV. Conclusion.....47**

**Tables**

Table 1: Required Parking Calculations..... 24

**Figures**

Figure 1: Site Topography ..... 28

## Exhibits

- Exhibit A:** Preliminary Plans
- Exhibit B:** Application Forms
- Exhibit C:** Ownership Information
- Exhibit D:** Assessor's Map
- Exhibit E:** Documentation of Neighborhood Meeting
- Exhibit F:** Mailing Labels
- Exhibit G:** TVF&R Service Provider Letter
- Exhibit H:** CWS Service Provider Letter
- Exhibit I:** Natural Resource Assessment Report
- Exhibit J:** Preliminary Tree Preservation and Removal Inventory Table
- Exhibit K:** Tree Canopy Calculations
- Exhibit L:** Traffic Analysis Memo
- Exhibit M:** Conditions of Approval of the Original Decision (Case # SP 92-7)
- Exhibit N:** Pride Disposal Approval
- Exhibit O:** Preliminary Stormwater Report
- Exhibit P:** Existing Site Improvements Requiring Retroactive Approval
- Exhibit Q:** Clean Water Services Permit
- Exhibit R:** Transmission Line Easement

# Land Use Application for a Major Modification to an Approved Site Plan and a Conditional Use Permit

<b>Submitted to:</b>	City of Sherwood Planning Department 22560 SW Pine Street Sherwood, OR 97140
<b>Applicant:</b>	Cascade Columbia Distribution Company 14200 SW Tualatin-Sherwood Road Sherwood, OR 97140
<b>Property Owner:</b>	Sherwood Road Industrial, LLC 6900 Fox Avenue S Seattle, WA 98108
<b>Applicant's Consultant:</b>	AKS Engineering & Forestry, LLC 12965 SW Herman Road, Suite 100 Tualatin, OR 97062  Contact: Chris Goodell, AICP Email: <a href="mailto:chrisg@aks-eng.com">chrisg@aks-eng.com</a> Phone: (503) 563-6151
<b>Site Location:</b>	14200 SW Tualatin-Sherwood Road
<b>Washington County Assessor's Map:</b>	2S 1 28C; Tax Lot 200
<b>Site Size:</b>	±16.93 acres
<b>Land Use District:</b>	General Industrial (GI)



## **I. Executive Summary**

Cascade Columbia Distribution Company (Applicant), a locally based, family-owned chemical distribution business, is submitting this application to the City of Sherwood (City) for a modification to a previously approved site plan (Case # SP 92-7) (Exhibit M) consisting of an additional warehouse building and a covered outdoor storage area. The Applicant's existing facility at 14200 SW Tualatin-Sherwood Road has been in operation in the City of Sherwood since 1994. While their industrial chemical demand has remained steady over the years, the Applicant has experienced significant growth in the food market. The food and beverage industry is currently the fastest-growing manufacturing sector in Oregon and represents a significant local economic development opportunity. The new warehouse will allow the Applicant to store and distribute more products used in food and beverage manufacturing, accelerating the growth of their business with Oregon, Washington, and Idaho companies, and provide its clients with more of the excellent service and uninterrupted supply chain they have come to expect from Cascade Columbia Distribution Company. Some of the local food sector companies that the Applicant currently works with include Beaverton Foods (a specialty condiment manufacturer), Oregon Cherry Growers (a fruit and vegetable preserver and specialty food manufacturer located in Salem), St. Cousair (food and beverage packing service provider located in Newberg), and Trailblazer Foods (a fruit-based food production facility in Portland), among many others. Reeser's Fine Foods based in Hillsboro recently named the Applicant a top supplier for 2022, as they are able to maintain supply without disruption.

The Applicant's distribution facility is located in the General Industrial (GI) zoning district, surrounded by other industrial properties. An 8,400-square foot warehouse is a permitted use in the underlying zone and would typically be approved using a Type II "Fast-Track" Site Plan review process. However, since the initial site plan application was approved through a Type IV procedure, the additional warehouse and storage area are considered a Major Modification to an Approved Site Plan, which elevates this application to a Type IV procedure, per City of Sherwood Zoning and Community Development Code (Code). Following the establishment of the Applicant's facility in the 1990s, the Code was subsequently updated to require a Conditional Use Permit for storage of certain materials, which were formerly permitted by right. Thus, this application includes a Conditional Use Permit to allow the storage of the same type of materials that the Applicant has been safely handling at this facility for the past three decades, in full regulatory compliance with the laws, regulations, guidelines and specifications of the applicable local, state, and federal agencies.

Based on facility's operations history, spills are highly unlikely, but in the event of a spill, Cascade Columbia Distribution is equipped and has procedures in place to quickly respond to an accidental spill. The entire Cascade Columbia Distribution facility is self-contained, which means that the premises provide complete separation from the outside environment with physical barriers, separate utilities, as well as established procedures, controls, and monitoring. Therefore, any spill on the facility's property is considered a controlled release and does not have the ability to get offsite. Spill response and clean-up procedures are described in detail under Section 16.82.020C.6 in this narrative. In the event of a spill that creates vapor, the Applicant follows a Risk Management Plan approved by Tualatin Valley Fire & Rescue (TVFR). The Plan identifies off-site zones and the surrounding businesses that would be affected in a worst-case scenario and contains notification procedures. The Washington County Local Emergency Planning Committee

(LEPC), which the Applicant helped form, also has a copy of the Risk Management Plan on record. Cascade Columbia Distribution operations and handling of certain chemicals is governed by the U.S. Environmental Protection Agency (US EPA), among other regulatory agencies, who regularly audit the facility for conformance to regulations.

In addition to the new warehouse and covered storage area in the southern portion of the site, this land use application seeks to obtain retroactive approval for a number of existing site improvements that were incrementally completed on the site since the initial approval was granted in 1993 as Cascade Columbia's operations have gradually expanded over the years. Those improvements are identified on Exhibit P and include additional paved and gravel areas in several locations used for parking and outdoor storage, additional storage tanks, which are used to store the same chemicals as were previously approved and have been stored at the facility since 1993, a truck weigh station, and two covered outdoor storage structures.

This written narrative demonstrates that the existing improvements listed above, and the planned new improvements meet the current standards of the City of Sherwood Code. Additionally, this written statement includes findings of fact demonstrating that the application complies with all applicable approval criteria and that the project will not result in a change to the original conditions of approval. These findings are supported by substantial evidence in the application, including preliminary plans and other written documentation. Considered together, this information provides the necessary basis for the City of Sherwood to approve the application.

## **II. Site Description/Setting**

The project site is a ±16.9-acre property zoned General Industrial (GI). The northern boundary of the site has frontage and access on SW Tualatin-Sherwood Road, a Washington County arterial road. Washington County is in the process of purchasing ±9½ feet of additional frontage from the property owner for planned road widening, which is projected to occur in 2022. Portland and Western Railroad line runs along the northwestern boundary of the site.

The site is bisected by a 250-foot-wide Bonneville Power Administration (BPA) transmission easement running east and west. Existing buildings, loading docks, storage tanks, and outdoor storage areas are located on the southern portion of the site, beyond the BPA easement. The warehouse and additional storage area planned with this application will be constructed adjacent to the existing warehouse in the southern portion of the site, next to the existing buildings and loading areas. The northern portion of the property—which contains a security fence, a paved access road, a paved truck parking area, a lined retention pond, and some unimproved land—will not be impacted.

The project site is surrounded by other large-scale industrial uses on all sides. Pride Disposal operations facility and recycling depot is located along the northeastern boundary of the site. Along the project's southeastern and southern perimeter is Allied Systems Company, a manufacturer of large-material-handling equipment and machinery. The grade of Allied Systems' site is substantially higher in comparison with the grade of the Applicant's site, which effectively screens it from public view along SW Oregon Street. The southwestern boundary of the site abuts Rock Creek Greenway. The Applicant donated ±2 acres of

land within Rock Creek floodplain to the City of Sherwood in 1992; the floodplain is now preserved as a habitat conservation area, without public access. Therefore, there are no public views of the Applicant's facility from the west. The adjacent properties operate heavy machinery, have truck and trailer parking areas, and loading and outdoor storage areas along the boundaries of their sites. Warehousing, distribution, and outdoor storage activities planned to be conducted at the Applicant's facility are similar to/the same as what has been occurring for some time and are compatible with surrounding uses and will not cause adverse visual impacts on the adjacent sites.

### III. Applicable Review Criteria

#### CITY OF SHERWOOD ZONING AND COMMUNITY DEVELOPMENT CODE

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

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

##### 16.31.020 - Uses

- A. The table below identifies the land uses that are permitted outright (P), permitted conditionally (C) and not permitted (N) in the industrial zoning districts. The specific land use categories are described and defined in Chapter 16.88.
- B. Uses listed in other sections of this Code, but not within this specific table are prohibited.
- C. Any use not otherwise listed that can be shown to be consistent or associated with the uses permitted outright or conditionally in the industrial zones or contribute to the achievement of the objectives of the industrial zones may be permitted outright or conditionally, utilizing the provisions of Chapter 16.88.
- D. Additional limitations for specific uses are identified in the footnotes of this table.

USES	GI Zone
<b>INDUSTRIAL</b>	
Manufacture, compounding, processing, assembling, packaging, treatment, fabrication of products contained wholly within an enclosed building provided exterior odor and noise is consistent with municipal code standards and there is no unscreened storage and not otherwise regulated elsewhere in the code	P
Manufacture, compounding, processing, assembling, packaging, treatment, fabrication of products not otherwise prohibited elsewhere in the code provided other off-site impacts are compliant with local, state and federal regulations	P
Manufacture, compounding, processing, assembling, packaging, treatment, or fabrication of acids, paints, dyes, soaps, ammonia, chlorine, sodium compounds, fertilizer, herbicides, insecticides and similar chemicals	C
Distribution, warehousing and storage associated with a permitted use operating on the same site	P
Distribution and warehousing up to 150,000 square feet, provided product(s) are stored within an enclosed building <sup>9</sup>	P

9. For standalone warehousing and distribution only. Warehousing and distribution associated with another approved use is ancillary and permitted without size limitations.

**Response:** The new warehouse would allow the Applicant to store and distribute more of the following food-grade chemicals and products: salt, sugar, dextrose, vitamin C, citric acid



(which is generally used in food and drink applications for pH adjustment), vinegar, brining chemicals for fruit applications, food preservatives, food coatings (to prevent discoloration during processing), gums, and heat transfer fluids. Storage/processing/packaging of these materials is permitted outright in the General Industrial zoning district.

In the future, the warehouse may be used for storage of products that are permitted with a conditional use permit. Those are the same materials that the Applicant is already storing in their existing warehouses under their original permit. Those include caustic soda, phosphoric acid, muriatic acid, and sulfuric acid. These materials are commonly used in the personal care industry, institutional cleaning and disinfecting products, water treatment, aerospace industry, and other industries that partner with the Applicant. This application includes a conditional use permit to allow the above-listed use.

Additionally, this application seeks retroactive conditional use approval for several chemical storage tanks that were installed to the west of the previously approved tanks. As described in response to subsections 16.82.020 and 16.82.010, those additional tanks are used to store the same materials as were previously approved (Sodium Hypo, Sulfuric Acid 50%, Aluminum Chlorohydrate, Aluminum Sulfate, as well as some non-hazardous chemicals). This written narrative and the preliminary plans (Exhibit A) demonstrate that the expanded storage tank area was constructed and is being operated in compliance with the original conditions of approval, as well as in full regulatory compliance with the laws, regulations, guidelines and specifications of the applicable local, state, and federal agencies.

**16.31.030 - Development Standards**

[...]

**B. Development Standards**

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

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

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



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

**Response:** The project does not create a new lot; therefore, lot dimensional standards are not applicable. The new warehouse building and covered storage area are located at the rear of the property, and the General Industrial zoning district does not have minimum rear or side yard setback requirements. As shown on the Preliminary Building Elevations (Exhibit A), the warehouse building will be less than 50 feet in height. Therefore, the applicable criteria are met.

#### 16.31.070 - Community Design

For standards relating to off-street parking and loading, energy conservation, historic resources, environmental resources, landscaping, access and egress, signs, parks and open space, on-site storage, and site design, the applicable provisions of Divisions V, VIII and IX will apply.

**Response:** The applicable provisions of Divisions V, VIII, and IX are addressed in the responses below.

#### 16.31.080 –Floodplain

Except as otherwise provided, Section 16.134.020 shall apply.

**Response:** The applicable criteria of Section 16.134.020 are addressed in the responses below.

### Division III. - ADMINISTRATIVE PROCEDURES

#### Chapter 16.58 VISION CLEARANCE AND FENCE STANDARDS

##### 16.58.010 Clear Vision Areas

- A. A clear vision area shall be maintained on the corners of all property at the intersection of two (2) streets, intersection of a street with a railroad, or intersection of a street with an alley or private driveway.
- B. A clear vision area shall consist of a triangular area, two (2) sides of which are lot lines measured from the corner intersection of the street lot lines for a distance specified in this regulation; or, where the lot lines have rounded corners, the lot lines extended in a straight line to a point of intersection, and so measured, and the third side of which is a line across the corner of the lot joining the non-intersecting ends of the other two (2) sides.
- C. A clear vision area shall contain no planting, sight obscuring fence, wall, structure, or temporary or permanent obstruction exceeding two and one-half (2½) feet in height, measured from the top of the curb, or where no curb exists, from the established street center line grade, except that trees exceeding this height may be located in this area, provided all branches and foliage are removed to the height of seven (7) feet above the ground on the sidewalk side and ten (10) feet on the street side.

The following requirements shall govern clear vision areas:

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



**Response:** The scope of this project does not include any changes at the corners of the property where clear vision areas are required. The warehouse building and covered exterior storage area are located at the southeastern portion of the site, where it does not abut a street.

16.58.020 Fences, Walls and Hedges.

A. Purpose:

The fence standards promote the positive benefits of fences without negatively impacting the community or endangering public or vehicle safety. Fences can create a sense of privacy, protect children and pets, provide separation from busy streets, and enhance the appearance of the property by providing attractive landscape materials. The negative effect of fences can include the creation of street walls that inhibit police and community surveillance, decrease the sense of community, hinder the safe movement of pedestrians and vehicles, and create an unattractive appearance. These standards are intended to promote the positive aspects of fences and to limit the negative ones.

B. Applicability:

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

[...]

D. Location—Non-Residential Zone:

1. Fences up to eight (8) feet high are allowed along front, rear and side property lines, subject to Section 16.58.010. (Clear Vision Areas) and building department requirements.
2. A sound wall is permitted when required as a part of a development review or concurrent with a road improvement project. A sound wall may not be taller than twenty (20) feet.
3. Hedges up to twelve (12) feet tall are allowed.

**Response:** As shown on the Preliminary Site Plan (Exhibit A), a 6-foot-tall security fencing is planned along the rear of the property.

E. General Conditions—All Fences:

1. Retaining, masonry, concrete, and modular retaining walls may not be constructed within the eight-foot public utility easement (PUE) located on the front and corner street side yards, without approval from the City Engineer.
2. Fences must be structurally sound and maintained in good repair. A fence may not be propped up in any way from the exterior side.
3. Chain link fencing is not allowed in any required residential front yard setback.
4. The finished side of the fence must face the street or the neighboring property. This does not preclude finished sides on both sides.

5. **Buffering:** If a proposed development is adjacent to a dissimilar use such as a commercial use adjacent to a residential use, or development adjacent to an existing farming operation, a buffer plan that includes, but is not limited to, setbacks, fencing, landscaping, and maintenance via a homeowner's association or managing company must be submitted and approved as part of the preliminary plat or site plan review process per Section 16.90.020 and Chapter 16.122.
6. In the event of a conflict between this Section and the clear vision standards of Section 16.58.010, the standards in Section 16.58.010 prevail.
7. The height of a fence or wall is measured from the actual adjoining level of finished grade measured six (6) inches from the fence. In the event the ground is sloped, the lowest grade within six (6) inches of the fence is used to measure the height.
8. Call before you dig (811) if placing a fence within the public utility easement (PUE) to have your utility lines located. This easement area is usually located eight (8) feet across the front yard and the side yard setback on a corner lot. Utility lines can be buried just beneath the surface.

**Response:** As shown on the Preliminary Site Plan (Exhibit A), security fencing meets the applicable requirements of this code.

#### Chapter 16.70 - GENERAL PROVISIONS

##### 16.70.010 - Pre-Application Conference

Pre-application conferences are encouraged and shall be scheduled to provide applicants with the informational and procedural requirements of this Code; to exchange information regarding applicable policies, goals and standards of the Comprehensive Plan; to provide technical and design assistance; and to identify opportunities and constraints for a proposed land use action. An applicant may apply at one time for all permits or zone changes needed for a development project as determined in the pre-application conference.

**Response:** A pre-application conference (PAC 2021-009) was held on August 12, 2021.

##### 16.70.020 - Neighborhood Meeting

[...]

- B. Applicants of Type III, IV and V applications are required to hold a meeting, at a public location for adjacent property owners and recognized neighborhood organizations that are within 1,000 feet of the subject application, prior to submitting their application to the City. Affidavits of mailing, sign-in sheets and a summary of the meeting notes must be included with the application when submitted. Applicants for Type II land use action are encouraged, but not required to hold a neighborhood meeting.

**Response:** The Applicant held a virtual neighborhood meeting on November 9, 2021, via Zoom, in conformance with the City of Sherwood COVID-19 Virtual Neighborhood Meeting Requirements dated May 11, 2020. Notice was provided to owners of property within

1,000 feet of the subject property. Documentation consistent with the provisions of this section is provided in Exhibit E. The criteria are met.

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

**16.72.010 - Generally**

**A. Classifications**

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

[...]

**3. Type III**

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

**a. Conditional Uses**

**Response:** This application includes a Conditional Use permit to allow storage of certain materials; therefore, it is subject to a Type III procedure, which is done concurrently with a Type IV review of the major modification to approved site plan.

**4. Type IV**

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

[...]

**c. Site Plans — Greater than 40,000 square feet of floor area, parking or seating capacity.**

**d. Site Plans subject to Section 16.90.020.D.6.f.**

**e. Industrial Site Plans subject to Section 16.90.020.D.7.b.**

[...]

**Response:** As indicated by City staff during the pre-application conference and in accordance with Section 16.90.030.A, the addition of a ±12,000-square-foot warehouse building requires a Major Modification to Approved Site Plan, which is subject to Type IV review procedure.

[...]

**C. Approval Criteria**

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

reverse, amend, refer, or remand the decision of the Hearing Authority.

**Response:** This narrative demonstrates how the project meets the applicable approval criteria contained within this Code.

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

**Response:** Compliance with Section 16.82.020 is addressed in the responses below.

16.72.020 - Public Notice and Hearing

[...]

B. Posted Notice

[...]

2. Signage must be posted on the subject property fourteen (14) calendar days in advance of the staff decision on Type II applications and twenty (20) calendar days in advance of the initial hearing before the Hearing Authority for Type III, IV and V applications.
  - a. on-site posted notice shall provide a general description of the land use action proposed, the project number and where additional information can be obtained.
  - b. On-site posted notice shall be designed to be read by motorists passing by; the exact size and font style to be determined by the City.
  - c. On-site posted notice shall be located on the property in a manner to be visible from the public street. For large sites or sites with multiple street frontages, more than one sign may be required.

**Response:** This requirement is understood. The Applicant will post the required signage on the property along SW Tualatin-Sherwood Road frontage 20 days prior to the hearing. At the time of this submittal, the hearing date has not been scheduled.

[...]

Chapter 16.82 - CONDITIONAL USES

16.82.010 - Generally

[...]

B. Changes in Conditional Uses

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

**Response:** As discussed in the response to Section 16.31.020, above, the Applicant plans to use the new warehouse and covered storage area to serve the growing needs of their food-industry business. However, for long-term business success, the facility needs to be constructed to H-2 Building Code occupancy classification to allow flexibility in the types and quantity of materials being stored. To plan for future growth and business needs changes and to ensure that the warehouse will meet the requirements of the building code, the Applicant desires to obtain a Conditional Use approval to allow storage of chemicals in the warehouse which are permitted conditionally in Code Section 16.31.020. Additionally, this application seeks retroactive approval for the previously completed outdoor storage areas, including covered and uncovered storage, and chemical storage tanks, beyond what was approved by the initial site permit (SP 92-07). These areas are labeled on Exhibit P. Those areas are used to store the same materials that were previously approved by SP 92-07, which include Sodium Hypo, Sulfuric Acid 50%, Aluminum Chlorohydrate, Aluminum Sulfate, as well as other non-hazardous chemicals. As further discussed under subsections 16.82.020.C and 16.98.030 in this written narrative, the Applicant has been safely handling the materials listed above at this facility for the past three decades, in compliance with the laws, regulations, guidelines and specifications of the applicable local, state, and federal agencies.

**C. Application and Fee**

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

**Response:** An application and fee are included with this application. This written narrative demonstrates compliance with the criteria of this Chapter and other applicable section of the Code.

**16.82.020 - Permit Approval**

**A. Hearing Authority Action**

1. The Hearings Authority shall conduct a public hearing pursuant to Chapter 16.72 and take action to approve, approve with conditions, or deny the application. Conditions may be imposed by the Hearings Authority if necessary to fulfill the requirements of the adopted Comprehensive Plan, Transportation System Plan, or the Code. The decision shall include appropriate findings of fact as required by this Section, and an effective date.

**Response:** The Applicant acknowledges that reasonable conditions may be imposed.

...

**C. Use Criteria**

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



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

**Response:** As demonstrated on the Preliminary Composite Utility Plan (Exhibit A), the project, including previously improved outdoor storage areas, the new warehouse and new covered storage area, is served by adequate public facilities.

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

**Response:** The existing and planned use is conditionally permitted in the General Industrial zoning district and is compatible with the surrounding industrial land uses.

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

**Response:** Granting of this conditional use will result in tangible benefits for the community by providing investment in the area, boosting economic development, increasing employment stability, and generating city tax revenues. Moreover, it will spur regional economic growth since Cascade Columbia Distribution supports small- and large-scale food producers throughout the region, as well as in the neighboring states of Washington and Idaho. The planned use is appropriate for the GI-zoned district and with the right infrastructure, which includes the needed warehousing space, Cascade Columbia Distribution can deliver jobs and economic growth. The approval of this project will ensure that local businesses like Cascade Columbia Distribution expand and/or remain in the City of Sherwood.

This is in line with the City's economic development goals outlined in Chapter 4 of the Comprehensive Plan. Specifically, Policy 5 states that "the City will seek to diversify and expand commercial and industrial development in order to provide nearby job opportunities and expand the tax base". Additionally, the Comprehensive Plan Economic Development Strategy includes supporting "existing businesses ... that provide local family-wage jobs".

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

**Response:** As previously discussed, the subject site is surrounded with other industrially zoned properties and is compatible with the uses intended for General Industrial zoning district.



The construction of a warehouse and covered storage at the existing facility will not result in adverse effects on the surrounding neighborhood, or the City as a whole.

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

**Response:** This project consists of a site plan modification at a location with a pre-existing land use. The addition of a warehouse and covered storage area will not generate discernible impacts, which is supported by the findings in the technical reports, including the Transportation Analysis Memo prepared by Lancaster Mobley (Exhibit L) and the Natural Resource Assessment Report (Exhibit I).

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

**Response:** Clean Water Services (CWS) has reviewed the project and concluded that it will not impact sensitive wildlife species or the natural environment. Please refer to the Service Provider Letter included as Exhibit H. Notably, CWS issued a certificate of excellence to Cascade Columbia Distribution in 2020 for meeting the sanitary industrial criteria and operating the entire year without a violation that includes exceeding purchased flow capacity, late reports, and pH level. This award highlights the Applicant's commitment to help protect the environment, which is recognized by the water resources management authority.

As noted earlier, this application also seeks retroactive conditional use approval for a previously completed improvements beyond the approved site plan, which includes existing outdoor storage areas, covered outdoor storage structures, and additional chemical storage tanks. Those improvements are identified on Exhibit P. Spills are unlikely, but in case of a spill, the facility has an advanced and reliable system in place to capture and treat the spill and not allow it to enter the adjacent creek or storm drains and cause pollution. Similarly to the chemical storage tanks that were approved under the initial site permit, the tanks that were added later are equipped with drains that collect runoff and discharge it to the special pre-treatment system. The pretreatment system is a set of tanks that capture industrial wastewater from operations. This water is pumped into a large batch tank and is pH adjusted to meet the stringent parameters of the Applicant's CWS discharge permit. Water samples are tested prior to each release. The discharge line is equipped with a permanent meter and pH probe that monitors the pH levels during the entire process and the amount of discharge that enters the drain. CWS inspects this process and regularly performs independent verification of samples.

While industrial packaging areas drain to the pre-treatment system described above, the paved truck parking area is also equipped with a secondary containment system, which provides an essential line of defense in the event of a failure of the primary containment and prevents a spill from reaching drainage channels. Surface runoff from the truck parking area flows to a lined detention pond which is equipped with a pH meter, alarm and signal light to alert the facility staff of a spill. Parking lot stormwater runoff

undergoes the same testing process as the runoff from industrial packaging areas prior to being released. In case of a spill, the Applicants has the capability to redirect stormwater to the pre-treatment system. Absolutely no water is allowed to go offsite without visual and physical confirmation that it is not contaminated. Please refer to Exhibit Q, Clean Water Services Permit, for specific the criteria for pond sampling and testing and for the effluent industrial wastewater. The Applicant's operation is highly regulated by responsible federal state, and local agencies, as described in more detail under subsection 16.98.030.C....

**D. Additional Conditions**

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

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

**Response:** The Applicant acknowledges that reasonable conditions may be imposed; however, the findings in this narrative as well as the technical reports by third-party consultants sufficiently demonstrate that the scope of this project does not generate impacts that necessitate mitigation or additional conditions.

**Division V. - COMMUNITY DESIGN**

**Chapter 16.90 - SITE PLANNING**

[...]



16.90.020 - Site Plan Review

A. Site Plan Review Required

Site Plan review is required prior to any substantial change to a site or use that does not meet the criteria of a minor or major modification, issuance of building permits for a new building or structure, or for the substantial alteration of an existing structure or use.

**Response:** This written narrative demonstrates that the additional warehouse, covered outdoor storage area, and the associated site improvements are in compliance with the approval criteria of Chapter 16.90. The narrative also demonstrates that the existing improvements that were completed beyond the approved CP-92-07 and SP-04-06 site permits also meet the current standards and therefore can be approved retroactively. The existing improvements that are sought to be approved retroactively are illustrated on Exhibit P and include the following:

1. Area 1 - this gravel area was installed by the construction company working on the repairs to the rail trestle as a construction staging area. The area consists of six-inch base layer of gravel with fabric underneath. The staging yard remained after the repairs, and the Applicant currently uses it for parking/storage of equipment (truck trailers). This area is planned to be paved as part of this land use application to bring parking into compliance.
2. Area 2 – an overflow parking area was added for employees. It consists of an 8-inch base layer of gravel with fabric underneath. This application includes improvements to existing off-street parking, which bring those parking areas into compliance with the current standards, as described in subsection 16.94, including asphalt paving and striping.
3. Area 3 – this asphalt parking area was added for truck storage/parking. As described above, the area is designed with a secondary containment system, including a retention pond which is equipped with a pH meter, alarm and signal light to alert the facility staff in case of a spill. The stormwater runoff from this truck parking area is tested prior to being released to ensure compliance with the parameters of Applicant’s CWS discharge permit. If needed, stormwater is routed from the retention pond to a pre-treatment system.
4. Area 4 – this gravel area was added for more efficient circulation, and it drains to the existing stormwater swale along SW Tualatin-Sherwood Road. A truck scale/weight station was added in this location, as identified on the Preliminary Existing Condition Plan – North (Exhibit A).
5. Area 5 – asphalt paving was added to accommodate storage of empty containers. The area around that is graveled and is also used for empty containers storage. This area is fully contained, a membrane is applied

underneath, and even rainwater has to go through the Applicant's sewer treatment system which is regulated by CWS.

6. Area 6 – chemical storage tanks were added to store the same chemicals that were previously approved and had already been stored at the facility, as described above under subsection 16.82.010.
7. Area 7 - a rain cover for truck loading area was added. The structure meets the current building code, and the Applicant plans to obtain a retroactive building permit for it. The ramp and the truck loading rack was all part of the original plant design and is included in the original permit.
8. Area 8 – an additional canopy cover over a poured foundation was installed for more covered workspace for existing processes, which is consistent with the conditions of approval of the initial site permit SP-92-07 recommending that roofing is extended over open storage areas for additional rainfall protection. The structure meets the current building code, and the Applicant plans to obtain a retroactive building permit for it. These areas drain to the sanitary sewer treatment tanks and runoff does not leave the site. The type of land use has not changed - there have not been any new processes or chemicals added.
9. Area 9 – this area is used for outdoor storage of empty containers. It was paved to keep forklifts from getting stuck. As demonstrated by the Preliminary Existing Conditions Plan – South (Exhibit A) and analyzed in the Preliminary Stormwater Report (Exhibit O), storm drains were installed in this area that convey runoff to the retention pond.
10. Area 10 - this area was paved as part of the scope that was approved in 2004 under site permit for Building D. Runoff from this paved area drains to the detention pond, as demonstrated by the Preliminary Existing Conditions Plan – South (Exhibit A) and described in the Preliminary Stormwater Report (Exhibit O). The needs of the facility required that this area is used for storage of approved chemicals instead of parking, as had been previously planned. This application includes a new covered outdoor storage area in this location. Previously required parking is now provided to the north of Buildings A and B.

[...]

**D. Required Findings**

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

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

**Response:** The findings in this written narrative, preliminary plans, and other documentation included in this application demonstrate compliance with the listed approval criteria.

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

**Response:** The subject property is adequately served by public urban services. Sanitary sewer, water, and franchise utilities are located within SW Tualatin-Sherwood Road. This criterion is met.

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

**Response:** New covenants, agreements, or other specific documents addressing ownership, management, and maintenance of structures, landscaping, and other on-site features are neither necessary nor planned. The criterion does not apply.

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

**Response:** As shown on the Preliminary Grading and Erosion and Sediment Control Plan (Exhibit A), the limit of grading associated with the warehouse construction is outside the off-site wetland boundary, which will be protected throughout construction activities. A portion of the 50-foot-wide Vegetated Corridor associated with the off-site wetland extends into the project area. Clean Water Services (CWS) has conducted a Sensitive Area Pre-Screening Site Assessment, verifying that the project will not encroach into the Vegetated Corridor. A CWS Service Provider Letter is included in Exhibit H. Non-native invasive vegetation is required to be removed and approximately ±3,510 square feet of the existing Vegetated Corridor is required to be enhanced from marginal condition to good condition, per Enhancement Planting Specifications approved by CWS (Exhibit H). The site does not contain any protected scenic views. Written responses to the applicable provisions of Division VIII are provided further in this narrative. The applicable criteria are met.

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

**Response:** A licensed traffic engineer evaluated the project with regard to the requirements in Section 16.106.080 and determined that none of the criteria are met and that traffic impact analysis (TIA) is not required. The technical memorandum by Lancaster Mobley (Exhibit L) addresses a condition of approval from the City's 1993 decision.

[...]

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

**Response:** The warehouse building and covered storage area will be located towards the rear of the site, behind existing industrial structures, at a distance ±1,000 feet away from SW Tualatin-Sherwood Road; therefore, they will not be visible from the road. The southeastern perimeter of the site abuts other properties zoned General Industrial which are improved with existing buildings and structures and are occupied with large industrial equipment. Additionally, the site not visible from the south and west due to existing dense vegetation along the north side of SW Oregon Street and the topography of the surrounding area. Therefore, the warehouse and covered storage area will not be visible from public rights-of-way, and the above design criteria do not apply to this project.

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

**Response:** This site modification does not involve new driveways—the project will utilize the existing, previously approved driveways.

#### 16.90.030 Site Plan Modifications and Revocation

##### A. Modifications to Approved Site Plans

##### 1. Major Modifications to Approved Site Plans

- a. Defined. A major modification review is required if one or more of the changes listed below are proposed:
  - (1) A change in land use (i.e. residential to commercial, commercial to industrial, etc.);
  - (2) An increase in density by more than ten (10) percent, provided the resulting density does not exceed that allowed by the land use district;
  - (3) A change in setbacks or lot coverage by more than ten (10) percent, provided the resulting setback or lot coverage does not exceed that allowed by the land use district;

- (4) A change in the type and/or location of accessways, drives or parking areas negatively affecting off-site traffic or increasing Average Daily Trips (ADT) by more than 100;
- (5) An increase in the floor area or height proposed for non-residential use by more than ten (10) percent;
- (6) A reduction of more than ten (10) percent of the area reserved for common open space; or
- (7) Change to a condition of approval that was specifically applied to this approval (i.e. not a "standard condition"), or a change similar to items identified in Section 16.90.030.A.1.a.(1)—(2) as determined by the Review Authority.

**Response:** Based on criteria (3) and (5) above, the addition of a ±12,000-square-foot warehouse and an ±8,400-square-foot covered storage area constitutes a change in lot coverage and an increase in floor area by more than 10 percent and is therefore considered a Major Modification to Approved Site Plan. As shown on the Preliminary Site Plan (Exhibit A), the setback and resulting lot coverage do not exceed GI zoning district standards.

b. **Approval Criteria.** An applicant may request a major modification as follows:

- (1) Upon the review authority determining that the proposed modification is a major modification, the applicant must submit an application form, filing fee and narrative, and a site plan using the same plan format as in the original approval. The review authority may require other relevant information, as necessary, to evaluate the request.
- (2) The application is subject to the same review procedure (Type II, III or IV), decision making body, and approval criteria used for the initial project approval, except that adding a Conditional Use to an approved Type II project is reviewed using a Type III procedure.
- (3) The scope of review is limited to the modification request and does not open the entire site up for additional review unless impacted by the proposed modification. For example, a request to modify a parking lot requires site design review only for the proposed parking lot and any changes to associated access, circulation, pathways, lighting, trees, and landscaping.
- (4) Notice must be provided in accordance with Chapter 16.72.020.
- (5) The decision maker approves, denies, or approves with conditions an application for major modification based on written findings of the criteria.



**Response:** This application for a major modification is subject to Type IV review by the Planning Commission, and includes an application form (Exhibit B), filing fee and narrative, and Preliminary Plans (Exhibit A). These criteria are met.

[...]

#### Chapter 16.92 - LANDSCAPING

##### 16.92.010 - Landscaping Plan Required

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

**Response:** This project includes landscaped islands in the parking areas and a landscape strip south of the new paved parking area. A Preliminary Landscape Plan (Exhibit A) with planting details is included with this land use application. The limited scope of this modification does not include components which require additional landscaping, beyond parking islands and buffering, and beyond what was previously approved and provided by the Applicant.

##### 16.92.030 - Site Area Landscaping and Perimeter Screening Standards

###### A. Perimeter Screening and Buffering

[...]

###### 2. Perimeter Landscaping Buffer

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

**Response:** As demonstrated by the Preliminary Existing Conditions Plan and Preliminary Site Plan (Exhibit A), there is an existing landscaping buffer along the perimeter of the site adjacent to parking, loading, and vehicular use areas and a proposed landscaping buffer south of the new paved parking area. Additionally, a privacy fence along the property line screens the site from the adjacent Pride Disposal site.

###### B. Parking Area Landscaping

[...]

###### 3. Required Landscaping

There shall be at least forty-five (45) square feet parking area landscaping for each parking space located on the site. The amount of required plant materials are based on the number of spaces as identified below.

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

- a. Number of Trees required based on Canopy Factor

Small trees have a canopy factor of less than forty (40), medium trees have a canopy factor from forty (40) to ninety



(90), and large trees have a canopy factor greater than ninety (90);

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

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

**Response:** As demonstrated by the Tree Canopy Calculations (Exhibit K) and described under subsection 16.142.070.D.3, the project site contains 170 mature trees with an expected tree canopy coverage of ±62 percent, significantly exceeding the minimum required 30 percent standard. Therefore, per the Applicant's discussion with staff, the existing onsite trees may be included in the calculation for the number of required trees in the parking area. The existing preserved trees meet the canopy factor, size and species standards.

b. Shrubs:

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

c. Ground cover plants:

- (1) Any remainder in the parking area must be planted with ground cover plants.
- (2) The plants selected must be spaced to cover the area within three (3) years. Mulch does not count as ground cover.

**Response:** As demonstrated by the Preliminary Plans (Exhibit A), parking areas are located within the high-voltage transmission line easement. In order to reduce wildfire risk, the easement agreement (Exhibit R) contains restrictions on landscaping and requires the property to be kept clear of all brush or timber and reserves the right to top, limb, fell, and remove all growing trees as part of transmission facilities maintenance. Therefore, due to the easement constraints, the parking area landscaping cannot be provided on this site.

#### 5. Individual Landscape Islands Requirements

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

- b. Each landscape island shall be planted with at least one (1) tree.
- c. Landscape islands shall be evenly spaced throughout the parking area.
- d. Landscape islands shall be distributed according to the following:
  - (1) Residential uses in a residential zone: one (1) island for every eight (8) contiguous parking spaces.
  - (2) Multi or mixed-uses, institutional and commercial uses: one (1) island for every ten (10) contiguous parking spaces.
  - (3) Industrial uses: one (1) island for every twelve (12) contiguous parking spaces.

**Response:** As demonstrated by the Preliminary Plans (Exhibit A), the existing parking areas are being improved as part of this project to meet the current standards. Parking areas include appropriately sized and spaced landscape islands. Due to use restrictions in the transmission line easement, landscape materials in the islands are limited to shrubs and groundcover.

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

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

**Response:** This property is not adjacent to residential zones. As discussed above, the location of the covered storage area is not visible from public streets, as it is set back ±1,000 feet from SW Tualatin-Sherwood Road. This criterion does not apply.

**D. Visual Corridors**

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

**Response:** Although the property itself is adjacent to an arterial street, no improvements are planned within the northern portion of the site, which abuts SW Tualatin-Sherwood Road. The warehouse is set ±1,000 feet from the street frontage; therefore, this criterion does not apply.

**Chapter 16.94 - OFF-STREET PARKING AND LOADING**

**16.94.010 - General Requirements**

[...]

E. Location

[...]

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

**Response:** The Preliminary Site Plan (Exhibit A) shows that required off-street parking is provided entirely on-site and existing parking areas are being improved to meet the current standards of the code. Therefore, the applicable criteria are met.

G. Surface and Drainage

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

**Response:** As demonstrated by the Preliminary Plans (Exhibit A), parking and loading areas are improved with a permanent hard surface and include storm water drainage facilities.

I. Parking and Loading Plan

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

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

**Response:** Parking improvements meeting the above standards, as applicable, are demonstrated on the Preliminary Site Plan (Exhibit A).

[...]

16.94.020 - Off-Street Parking Standards

A. Generally

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

Table 1: Minimum and Maximum Parking Standards (Metro spaces are based on 1 per 1,000 sq ft of gross leasable area)			
	Minimum Parking Standard	Maximum Permitted Parking Zone A <sup>1</sup>	Maximum Permitted Parking Zone B <sup>2</sup>
General Office	2.7 (370 sf)	3.4	4.1
Warehouse	0.3	0.4	0.5

1. Parking Zone A reflects the maximum number of permitted vehicle parking spaces allowed for each listed land use. Parking Zone A areas include those parcels that are located within one-quarter (1/4) mile walking distance of bus transit stops, one-half (1/2) mile walking distance of light rail station platforms, or both, or that have a greater than twenty-minute peak hour transit service.

2. Parking Zone B reflects the maximum number of permitted vehicle parking spaces allowed for each listed land use. Parking Zone B areas include those parcels that are located at a distance greater than one-quarter (1/4) mile walking distance of bus transit stops, one-half (1/2) mile walking distance of light rail station platforms, or both.

**Response:** As demonstrated in the table below, 57 parking spaces are required for the entire site’s office and warehouse uses, combined, based on the parking standards in Table 1 and the gross leasable floor area of each type of land use. Warehouse ratio (instead of industrial ratio) is applied to both indoor and covered outdoor storage areas because it the most appropriate standard based on the functioning of the Applicant’s warehousing/distribution facility, which does not include manufacturing, production lines, etc.

Table 1: Required Parking Calculations

	Floor Area	Parking Standard	Number of Parking Spaces
Office floor area	±11,333 sf	2.7 spaces per 1,000 sf	31
Warehouse floor area	±87,673 sf	0.3 spaces per 1,000 sf	26
Required Parking:			57
Provided Parking:			60

B. Dimensional and General Configuration Standards

1. **Dimensions.** For the purpose of this Chapter, a "parking space" means a stall nine (9) feet in width and twenty (20) feet in length. Up to twenty five (25) percent of required parking spaces may have a minimum dimension of eight (8) feet in width and eighteen (18) feet in length so long as they are signed as compact car stalls.

2. Layout

Parking space configuration, stall and access aisle size shall be of sufficient width for all vehicle turning and maneuvering. Groups of more than four (4) parking spaces shall be served by a driveway so as to minimize backing movements or other maneuvering within a street, other than an alley. All parking areas shall meet the minimum standards shown in the following table and diagram.

**Response:** As demonstrated by the Preliminary Site Plan (Exhibit A), parking spaces meet the above dimensional and configuration standards, as applicable.

C. Bicycle Parking Facilities

1. General Provisions

- a. **Applicability.** Bicycle parking spaces shall be provided for new development, changes of use, and major renovations, defined as construction valued at twenty-five (25) percent or more of the assessed value of the existing structure.
- b. **Types of Spaces.** Bicycle parking facilities shall be provided in terms of short-term bicycle parking and long-term bicycle parking. Short-term bicycle parking is intended to encourage customers and other visitors to use bicycles by providing a convenient and readily accessible place to park bicycles. Long-term bicycle parking provides employees, students, residents, commuters, and others who generally stay at a site for at least several hours a weather-protected place to park bicycles.
- c. **Minimum Number of Spaces.** The required total minimum number of bicycle parking spaces for each use category is shown in Table 4, Minimum Required Bicycle Parking Spaces.
- d. **Minimum Number of Long-term Spaces.** If a development is required to provide eight (8) or more required bicycle parking spaces in Table 4, at least twenty-five (25) percent shall be provided as long-term bicycle with a minimum of one (1) long-term bicycle parking space.
- e. **Multiple Uses.** When there are two or more primary uses on a site, the required bicycle parking for the site is the sum of the required bicycle parking for the individual primary uses.

**Response:** Long-term bicycle parking for employees is not required. Short-term bicycle parking for visitors is not planned with this application, as cycling, as transportation mode, is not compatible with the nature of the industrial chemical distribution facility, which does not have customers or visitors arriving by bicycles. Moreover, providing bike parking near the warehouse could pose potential safety issues because warehouse traffic includes forklifts and large commercial trucks, which do not invite cycling through that area.

16.94.030 - Off-Street Loading Standards

A. Minimum Standards



[...]

2. The minimum loading area for non-residential uses shall not be less than ten (10) feet in width by twenty-five (25) feet in length and shall have an unobstructed height of fourteen (14) feet.
3. Multiple uses on the same parcel or adjacent parcels may utilize the same loading area if it is shown in the development application that the uses will not have substantially overlapping delivery times.

[...]

**Response:** As shown on the Preliminary Site Plan (Exhibit A), an adequately sized loading area currently exists at this facility. A new loading area is not planned to be provided with this application, nor is it needed.

#### Chapter 16.96 - ON-SITE CIRCULATION

[...]

##### 16.96.030 - Minimum Non-Residential Standards

Minimum standards for private, on-site circulation improvements in non-residential developments:

###### A. Driveways

**Response:** As shown on the Preliminary Site Plan (Exhibit A), the new warehouse and covered storage area are planned to be located at an improved site with existing driveways. New driveways are not needed for this project and are not planned.

###### B. Sidewalks and Curbs

4. Exceptions. Private pathways/sidewalks shall not be required where physical or topographic conditions make a connection impracticable, where buildings or other existing development on adjacent lands physically preclude a connection now or in the future considering the potential for redevelopment; or pathways would violate provisions of leases, restrictions or other agreements.

**Response:** Pedestrian sidewalks and curbs are not planned with this application, as this project qualifies for an exception under Section 16.96.030.B.4, above, due to physical conditions making such connection impracticable. The planned warehouse and covered outdoor storage area are an addition to an existing facility that was constructed in 1994. As shown on the Preliminary Existing Conditions Plan (Exhibit A), the site is currently improved with concrete pavement, which functions as a vehicular use area for forklifts and large trucks, as well as a storage area for outdoor pallets and large drums. Providing a new private pathway/sidewalk system at the planned warehouse and covered storage area would necessitate retrofitting the entire distribution facility, which would not only impede the Applicant's operations and traffic circulation at this distribution center but would also be cost-prohibitive. Moreover, for reasons outlined above, it is not industry standard practice to provide sidewalks with curbs at a warehouse/distribution business. Instead, the Applicant has created and adheres to a warehouse traffic management plan, which serves to satisfy the intent of this Code to provide safe pedestrian access.

---

16.96.040 - On-Site Vehicle Circulation

[...]

C. Connection to Streets

1. Except for joint access per this Section, all ingress and egress to a use or parcel shall connect directly to a public street, excepting alleyways.
2. Required private sidewalks shall extend from the ground floor entrances or the ground floor landing of stairs, ramps or elevators to the public sidewalk or curb of the public street which provides required ingress and egress.

**Response:** As shown on the Preliminary Existing Conditions Plan (Exhibit A), there is an existing connection to SW Tualatin-Sherwood Road. The scope of this project does not include changes to on-site vehicular circulation on the existing site. To the extent that this criterion is applicable, it is met.

Chapter 16.98 - ON-SITE STORAGE

[...]

16.98.020 - Solid Waste and Recycling Storage

All uses shall provide solid waste and recycling storage receptacles which are adequately sized to accommodate all solid waste generated on site. All solid waste and recycling storage areas and receptacles shall be located out of public view. Solid waste and recycling receptacles for multi-family, commercial, industrial and institutional uses shall be screened by six (6) foot high sight-obscuring fence or masonry wall and shall be easily accessible to collection vehicles.

**Response:** The facility will continue to use the existing trash enclosure; changes to its size or location are not planned with this project. The Preliminary Site Plan (Exhibit A) showing the new warehouse and covered storage area was reviewed and approved by Pride Disposal; please refer to Exhibit N.

16.98.030 - Material Storage

- A. Generally. Except as otherwise provided herein, external material storage is prohibited, except in commercial and industrial zones where storage areas are approved by the Review Authority as part of a site plan or per Section 16.98.040.

**Response:** External material storage is permitted in industrial zones, subject to site plan approval.

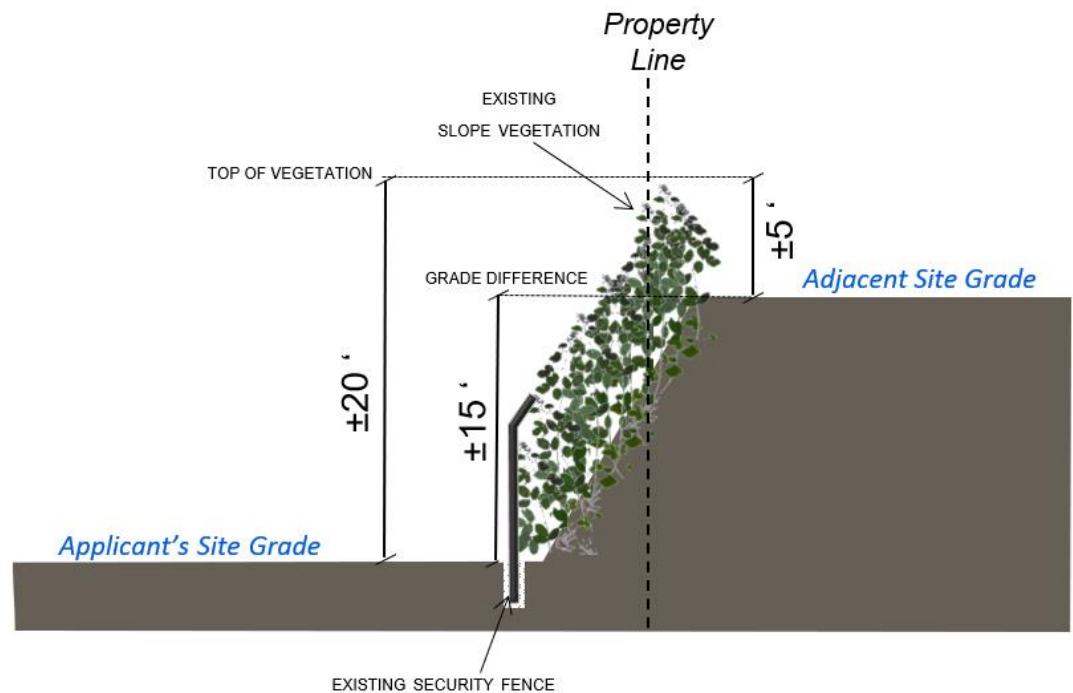
- B. Standards. Except as per Section 16.98.040, all service, repair, storage, and merchandise display activities carried on in connection with any commercial or industrial activity, and not conducted within an enclosed building, shall be screened from the view of all adjacent properties and adjacent streets by a six (6) foot to eight (8) foot high, sight obscuring fence subject to chapter 16.58.020. In addition, unless adjacent parcels to the side and rear of the storage area have existing solid evergreen screening or sight-obscuring fencing in place, new evergreen screening no less than three (3) feet in height shall be planted along side and rear property lines. Where other provisions of this Code require evergreen screening, fencing, or a landscaped berm along



side and rear property lines, the additional screening stipulated by this Section shall not be required.

**Response:** The portion of the site where the new exterior covered storage area is planned is  $\pm 15$  feet below the grade of the adjacent industrial site. The slope separating the two lots is currently covered with dense vegetation, which extends another  $\pm 5$  feet above the top of the higher grade. Please refer to Figure 1 below for a conceptual illustration of the site topography. Since the slope and existing vegetation along the property line essentially serves as a visual screen and exceeds the 6- to 8-foot height of the fencing that would otherwise be required by this code, additional screening along covered storage area is not necessary and is not planned.

**Figure 1: Site Topography**



C. **Hazardous Materials.** Storage of hazardous, corrosive, flammable, or explosive materials, if such storage is otherwise permitted by this Code, shall comply with all local fire codes, and Federal and State regulations.

**Response:** The materials planned to be stored at Cascade Columbia's warehouse and covered storage area are described in the response to Section 16.31.020. Storage of these materials is permitted in the GI zoning district with a conditional use approval. This application also seeks retroactive approval for expanded additional chemical storage areas which were added beyond the approved site plan. As discussed earlier in this written narrative, the additional chemical storage tanks (Area 6 on Exhibit P) and outdoor storage areas (Areas 5 and 8 on Exhibit P) are used to store the same materials as



previously approved by SP 92-07 and as the Applicant has been storing and handling at the facility since 1993. The Applicant's facility operates in compliance with applicable local fire codes, and State and Federal regulations. Below is a list of some of the various agencies that regulate and routinely monitor the operations of Cascade Columbia Distribution facility:

1. **U.S. Food and Drug Administration:** the Applicant's facility is licensed with the USDA and is subject to periodic inspections. They are licensed on two packing lines with FDA Pharma and are subject to annual inspections by federal regulatory officers on a routine basis.
2. **U.S. Department of Homeland Security** conducts annual audits of the facility's operations.
3. **U.S. Environmental Protection Agency (EPA):** the Applicant's facility handles multiple products licensed by the EPA for disinfection and are used in food applications and CIP (Cleaning in Place). Cascade Columbia Distribution's Risk Management Plan is monitored by the EPA and audited ever 5 years.
4. **Federal Rail Authority and ODOT Rail** conduct annual audits and review of all rail traffic. Cascade Columbia Distribution staff regularly attend training offered by ODOT Rail.
5. **Federal Motor Carrier Safety Administration** oversees the Applicant's drivers and commercial truck traffic. They provide safety rating as trucks are inspected at roadside scales and jump scales.
6. **U.S. Department of Transportation, Pipeline and Hazardous Materials Safety** overseas all transport, packaging, procedures, safety, security, training of the Applicant's hazmat operations.
7. **State of Oregon Department of Environmental Quality** regulates Cascade Columbia Distribution as a Conditionally Exempt Generator.
8. **Tualatin Valley Fire & Rescue** conducts annual audits and holds training drills to help all parties respond better and more efficiently to any potential chemical spills around the area. The Applicant offers frequent tours for the TVF&R trainees to familiarize them with packaging/labeling and types of material present at the facility, offers training on chemicals to TVF&R and acts as a resource for TVF&R to call on to better deal with chemical responses they may not be familiar with.
9. **Clean Water Services:** the Applicant holds an active permit; CWS conducts inspections every six months and monitors the testing of the sewer and stormwater output.
10. **Water Quality Association (WQA)** is an independent trade association providing accreditation to water treatment industry in the United States to American

National Standards Institute (ANSI) standards. The Applicant's facility is certified by WQA to NSF 60 standards (National Sanitation Foundation). The Applicant undergoes annual audit and submits samples for testing.

11. **The Safe Quality Food Institute** maintains a third-party certification on every process related to the Applicant's food storage, packaging, and distribution. They conduct annual audits of the facility.
12. **National Association of Chemical Distributors (NACD)**: Cascade Columbia Distribution is a member of the NACD. This professional industry association has published standards and requirements for distribution and sets the bar above others in the industry. Annual audits are conducted at the facility.
13. **Oregon Kosher**: rabbis conduct periodic inspections of food warehouse and labeling.

## Division VI. - PUBLIC INFRASTRUCTURE

### Chapter 16.106 - TRANSPORTATION FACILITIES

#### 16.106.010 - Generally

##### A. Creation

Public streets shall be created in accordance with provisions of this Chapter. Except as otherwise provided, all street improvements and rights-of-way shall conform to standards for the City's functional street classification, as shown on the Transportation System Plan (TSP) Map (Figure 15) and other applicable City standards. The following table depicts the guidelines for the street characteristics.

**Response:** The subject property has frontage on SW Tualatin-Sherwood Road (Washington County arterial road). The scope of this project does not include creation of public streets.

#### 16.106.020 - Required Improvements

##### A. Generally

Except as otherwise provided, all developments containing or abutting an existing or proposed street, that is either unimproved or substandard in right-of-way width or improvement, shall dedicate the necessary right-of-way prior to the issuance of building permits and/or complete acceptable improvements prior to issuance of occupancy permits. Right-of-way requirements are based on functional classification of the street network as established in the Transportation System Plan, Figure 17.

##### B. Existing Streets

Except as otherwise provided, when a development abuts an existing street, the improvements requirement shall apply to that portion of the street right-of-way located between the centerline of the right-of-way and the property line of the lot proposed for development. In no event shall a required street improvement for an existing street exceed a pavement width of thirty (30) feet.

**Response:** Washington County Department of Land Use and Transportation (DLUT) is coordinating right-of-way acquisition with the Applicant for the planned widening of SW Tualatin-

Sherwood Road as part of a larger project. Please refer to the trip analysis in Lancaster Mobley's Engineering Traffic Analysis Memo (Exhibit L), which concluded that the planned site modifications, as well as previously expanded storage areas, related to this land use application do not increase vehicle trips to/from the site and will not affect the planned road improvements. Along with the new warehouse and covered storage area, the trip generation estimate includes the existing outdoor storage areas that were added by the Applicant after the project had been originally approved (Exhibit P). The Traffic Analysis Memo concludes that the combined improvements do not warrant a traffic signal or additional analysis beyond the included trip generation memorandum.

[...]

#### 16.106.080 - Traffic Impact Analysis (TIA)

[...]

##### B. Applicability

A traffic impact analysis (TIA) shall be required to be submitted to the City with a land use application at the request of the City Engineer or if the proposal is expected to involve one (1) or more of the following:

1. An amendment to the Sherwood Comprehensive Plan or zoning map.
2. A new direct property approach road to Highway 99W is proposed.
3. The proposed development generates fifty (50) or more PM peak-hour trips on Highway 99W, or one hundred (100) PM peak-hour trips on the local transportation system.
4. An increase in use of any adjacent street or direct property approach road to Highway 99W by ten (10) vehicles or more per day that exceed the twenty thousand-pound gross vehicle weight.
5. The location of an existing or proposed access driveway does not meet minimum spacing or sight distance requirements, or is located where vehicles entering or leaving the property are restricted, or such vehicles are likely to queue or hesitate at an approach or access connection, thereby creating a safety hazard.
6. A change in internal traffic patterns that may cause safety problems, such as back up onto the highway or traffic crashes in the approach area.

**Response:** A licensed traffic engineer at Lancaster Mobley evaluated the project relative to Section 16.106.080 and determined that none of the criteria are met and a TIA is not required. The technical memorandum (Exhibit L) addresses a condition of approval from the City's 1993 decision.

#### 16.106.090 Rough Proportionality

##### A. Purpose

The purpose of this section is to ensure that required transportation facility improvements are roughly proportional to the potential impacts of the proposed development. The rough proportionality requirements of this section apply to both frontage and non-frontage improvements. A

proportionality analysis will be conducted by the City Engineer for any proposed development that triggers transportation facility improvements pursuant to this chapter. The City Engineer will take into consideration any benefits that are estimated to accrue to the development property as a result of any required transportation facility improvements. A proportionality determination can be appealed pursuant to Chapter 16.76. The following general provisions apply whenever a proportionality analysis is conducted.

- B. Mitigation of impacts due to increased demand for transportation facilities associated with the proposed development shall be provided in rough proportion to the transportation impacts of the proposed development. When applicable, anticipated impacts will be determined by the TIA in accordance with Section 16.106.080. When no TIA is required, anticipated impacts will be determined by the City Engineer.

**Response:** Since this project does not have an impact on transportation facilities, mitigation not is necessary.

#### Chapter 16.108 IMPROVEMENT PLAN REVIEW

##### 16.108.010 Preparation and Submission

An improvement plan shall be prepared and stamped by a Registered Civil Engineer certifying compliance with City specifications. Two (2) sets of the plan shall be submitted to the City for review. An improvements plan shall be accompanied by a review fee as per this Section.

##### A. Review Fee

Plan review fees are calculated as a percentage of the estimated total cost of improvements and are set by the "Schedule of Development and Business Fees" adopted by Resolution of the Council. This schedule is included herein for the purposes of information, but is deemed to be separate from and independent of this Code.

##### B. Engineering Agreement

A copy of an agreement or contract between the applicant and Registered Civil Engineer for:

1. Surveying sufficient to prepare construction plans.
2. Preparation of construction plans and specifications.
3. Construction staking, and adequate inspection.
4. Construction notes sufficient to develop accurate as-built plans.
5. Drawing of accurate as-built plans and submission of reproducible mylars for finals to the City.
6. Certificate stating that construction was completed in accordance with required plans and

**Response:** Following land use approval, the Applicant will submit an improvement plan meeting the above criteria, as necessary.

[...]

#### Chapter 16.110 - SANITARY SEWERS



16.110.010 - Required Improvements

Sanitary sewers shall be installed to serve all new developments and shall connect to existing sanitary sewer mains. Provided, however, that when impractical to immediately connect to a trunk sewer system, the use of septic tanks may be approved, if sealed sewer laterals are installed for future connection and the temporary system meets all other applicable City, Clean Water Services, Washington County and State sewage disposal standards.

16.110.020 - Design Standards

A. Capacity

Sanitary sewers shall be constructed, located, sized, and installed at standards consistent with this Code, the Sanitary Sewer Service Plan Map in the Sanitary Sewer Master Plan, and other applicable Clean Water Services and City standards, in order to adequately serve the proposed development and allow for future extensions.

B. Over-Sizing

1. When sewer facilities will, without further construction, directly serve property outside a proposed development, gradual reimbursement may be used to equitably distribute the cost of that over-sized system.
2. Reimbursement shall be in an amount estimated by the City to be a proportionate share of the cost for each connection made to the sewer by property owners outside of the development, for a period of ten (10) years from the time of installation of the sewers. The boundary of the reimbursement area and the method of determining proportionate shares shall be determined by the City. Reimbursement shall only be made as additional connections are made and shall be collected as a surcharge in addition to normal connection charges.

16.110.030 - Service Availability

Approval of construction plans for new facilities pursuant to Chapter 16.106, and the issuance of building permits for new development to be served by existing sewer systems shall include certification by the City that existing or proposed sewer facilities are adequate to serve the development.

**Response:** The existing facility is already connected to the 15-inch-diameter public sanitary sewer main located within SW Tualatin-Sherwood Road. Please refer to the Preliminary Utility Plan (Exhibit A) showing planned on-site private sewer connection to the new warehouse building.

Chapter 16.112 - WATER SUPPLY

16.112.010 - Required Improvements

Water lines and fire hydrants conforming to City and Fire District standards shall be installed to serve all building sites in a proposed development. All waterlines shall be connected to existing water mains or shall construct new mains appropriately sized and located in accordance with the Water System Master Plan.

16.112.020 - Design Standards

A. Capacity



Water lines providing potable water supply shall be sized, constructed, located and installed at standards consistent with this Code, the Water System Master Plan, the City's Design and Construction Manual, and with other applicable City standards and specifications, in order to adequately serve the proposed development and allow for future extensions.

**B. Fire Protection**

All new development shall comply with the fire protection requirements of Chapter 16.116, the applicable portions of Chapter 7 of the Community Development Plan, and the Fire District.

**C. Over-Sizing**

1. When water mains will, without further construction, directly serve property outside a proposed development, gradual reimbursement may be used to equitably distribute the cost of that over-sized system.
2. Reimbursement shall be in an amount estimated by the City to be the proportionate share of the cost of each connection made to the water mains by property owners outside the development, for a period of ten (10) years from the time of installation of the mains. The boundary of the reimbursement area and the method of determining proportionate shares shall be determined by the City. Reimbursement shall only be made as additional connections are made and shall be collected as a surcharge in addition to normal connection charges.
3. When over-sizing is required in accordance with the Water System Master Plan, it shall be installed per the Water System Master Plan. Compensation for over-sizing may be provided through direct reimbursement, from the City, after mainlines have been accepted. Reimbursement of this nature would be utilized when the cost of over-sizing is for system wide improvements.

**16.112.030 - Service Availability**

Approval of construction plans for new water facilities pursuant to Chapter 16.106, and the issuance of building permits for new development to be served by existing water systems shall include certification by the City that existing or proposed water systems are adequate to serve the development.

**Response:** According to comments provided by the City's Engineering Department during the pre-application conference (PAC 2021-009), there is currently a 12-inch-diameter public water main within SW Tualatin-Sherwood Road. A domestic backflow assembly for the domestic service already exist. Planned private improvements related to water utility are shown on the Preliminary Utility Plan (Exhibit A). The applicable standards are met.

**Chapter 16.114 - STORM WATER**

**16.114.010 - Required Improvements**

Storm water facilities, including appropriate source control and conveyance facilities, shall be installed in new developments and shall connect to the existing downstream drainage systems consistent with the Comprehensive Plan and the requirements of the Clean Water Services water quality regulations contained in their Design and Construction Standards R&O 04-9, or its replacement.

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16.114.020 - Design Standards

A. Capacity

Storm water drainage systems shall be sized, constructed, located, and installed at standards consistent with this Code, the Storm Drainage Master Plan Map, attached as Exhibit E, Chapter 7 of the Community Development Plan, other applicable City standards, the Clean Water Services Design and Construction standards R&O 04-9 or its replacement, and hydrologic data and improvement plans submitted by the developer.

B. On-Site Source Control

Storm water detention and groundwater recharge improvements, including but not limited to such facilities as dry wells, detention ponds, and roof top ponds shall be constructed according to Clean Water Services Design and Construction Standards.

C. Conveyance System

The size, capacity and location of storm water sewers and other storm water conveyance improvements shall be adequate to serve the development and accommodate upstream and downstream flow. If an upstream area discharges through the property proposed for development, the drainage system shall provide capacity to the receive storm water discharge from the upstream area. If downstream drainage systems are not sufficient to receive an increase in storm water caused by new development, provisions shall be made by the developer to increase the downstream capacity or to provide detention such that the new development will not increase the storm water caused by the new development.

16.114.030 - Service Availability

Approval of construction plans for new storm water drainage facilities pursuant to Chapter 16.106, and the issuance of building permits for new development to be served by existing storm water drainage systems shall include certification by the City that existing or proposed drainage facilities are adequate to serve the development.

**Response:** As shown on the Preliminary Utility Plan (Exhibit A), the stormwater runoff from the new warehouse and covered storage area will be conveyed to the same location as the existing runoff, at the bottom of the slope in the southern portion of the site. The runoff from paved areas that were added after the original permit had been issued is conveyed to a retention pond on the west side of the property where the water quality is monitored prior to release. The stormwater system is appropriately sized for the existing and additional impervious areas. Please refer to the Preliminary Stormwater Report (Exhibit O) and Clean Water Services Industrial Wastewater Discharge Permit (Exhibit Q). The applicable standards are met.

Chapter 16.116 - FIRE PROTECTION

16.116.010 - Required Improvements

When land is developed so that any commercial or industrial structure is further than two hundred and fifty (250) feet or any residential structure is further than five hundred (500) feet from an adequate water supply for fire protection, as determined by the Fire District, the developer shall provide fire protection facilities necessary to provide adequate water supply and fire safety.



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16.116.020 - Standards

A. Capacity

All fire protection facilities shall be approved by and meet the specifications of the Fire District, and shall be sized, constructed, located, and installed consistent with this Code, Chapter 7 of the Community Development Plan, and other applicable City standards, in order to adequately protect life and property in the proposed development.

B. Fire Flow

Standards published by the Insurance Services Office, entitled "Guide for Determination of Required Fire Flows" shall determine the capacity of facilities required to furnish an adequate fire flow. Fire protection facilities shall be adequate to convey quantities of water, as determined by ISO standards, to any outlet in the system, at no less than twenty (20) pounds per square inch residual pressure. Water supply for fire protection purposes shall be restricted to that available from the City water system. The location of hydrants shall be taken into account in determining whether an adequate water supply exists.

C. Access to Facilities

Whenever any hydrant or other appurtenance for use by the Fire District is required by this Chapter, adequate ingress and egress shall be provided. Access shall be in the form of an improved, permanently maintained roadway or open paved area, or any combination thereof, designed, constructed, and at all times maintained, to be clear and unobstructed. Widths, height clearances, ingress and egress shall be adequate for District firefighting equipment. The Fire District, may further prohibit vehicular parking along private accessways in order to keep them clear and unobstructed, and cause notice to that effect to be posted.

D. Hydrants

Hydrants located along private, accessways shall either have curbs painted yellow or otherwise marked prohibiting parking for a distance of at least fifteen (15) feet in either direction, or where curbs do not exist, markings shall be painted on the pavement, or signs erected, or both, given notice that parking is prohibited for at least fifteen (15) feet in either direction.

**Response:** Adequate water supply consisting of a 12-inch-diameter public water main within SW Tualatin-Sherwood Road along the property frontage, as well as and an existing fire system for the facility are already in place. As shown on the Preliminary Utility Plan (Exhibit A), fire hydrants will be placed at locations approved by the City and Tualatin Valley Fire & Rescue to ensure adequate access and flows for the proposed structures. No deficiencies have been identified. The applicable standards are met.

Chapter 16.118 - PUBLIC AND PRIVATE UTILITIES

[...]

16.118.020 - Standard

- A. Installation of utilities shall be provided in public utility easements and shall be sized, constructed, located and installed consistent with this Code, Chapter



7 of the Community Development Code, and applicable utility company and City standards.

- B. Public utility easements shall be a minimum of eight (8) feet in width unless a reduced width is specifically exempted by the City Engineer. An eight-foot wide public utility easement (PUE) shall be provided on private property along all public street frontages. This standard does not apply to developments within the Old Town Overlay.
- C. Where necessary, in the judgment of the City Manager or his designee, to provide for orderly development of adjacent properties, public and franchise utilities shall be extended through the site to the edge of adjacent property(ies).
- D. Franchise utility conduits shall be installed per the utility design and specification standards of the utility agency.
- E. Public Telecommunication conduits and appurtenances shall be installed per the City of Sherwood telecommunication design standards.
- F. Exceptions: Installation shall not be required if the development does not require any other street improvements. In those instances, the developer shall pay a fee in lieu that will finance installation when street or utility improvements in that location occur.

**Response:** Right-of-way acquisition by Washington County will include the required 8-foot public utility easement (PUE) along SW Tualatin-Sherwood Road.

#### 16.118.030 - Underground Facilities

Except as otherwise provided, all utility facilities, including but not limited to, electric power, telephone, natural gas, lighting, cable television, and telecommunication cable, shall be placed underground, unless specifically authorized for above ground installation, because the points of connection to existing utilities make underground installation impractical, or for other reasons deemed acceptable by the City.

**Response:** New utilities necessary to serve this project are planned to be constructed underground. This standard is met.

### Division VIII. - ENVIRONMENTAL RESOURCES

#### Chapter 16.134 FLOODPLAIN (FP) OVERLAY

[...]

#### 16.134.080 - Floodplain Development

- A. Floodplain Alterations
  - 1. Floodplain Survey

The floodplain, including the floodway and flood fringe areas, shall be surveyed by a registered land surveyor or civil engineer, and approved by the City, based on the findings of the flood insurance study and other available data. Such delineation shall be based on the current FIRM and FIS data and be field-located from recognized valid benchmarks.

**Response:** As shown on the Preliminary Site Plan (Exhibit A), a small portion of the property in the southwest corner is located within the 100-year floodplain boundary. The limits of grading

for the site improvements associated with this land use permit are located outside the floodplain; therefore, the provisions of this Chapter do not apply to this project.

Chapter 16.142 - PARKS, TREES AND OPEN SPACES

[...]

16.142.040 - Visual Corridors

A. Corridors Required

New developments located outside of the Old Town Overlay with frontage on Highway 99W, or arterial or collector streets designated on Figure 8-1 of the Transportation System Plan shall be required to establish a landscaped visual corridor according to the following standards:

Category	Width
1. Highway 99W	25 feet
2. Arterial	15 feet
3. Collector	10 feet

In residential developments where fences are typically desired adjoining the above described major street the corridor may be placed in the road right-of-way between the property line and the sidewalk. In all other developments, the visual corridor shall be on private property adjacent to the right-of-way.

**Response:** Although the project site has frontage on an arterial street (SW Tualatin-Sherwood Road), the northern portion of the site that is adjacent to the road are planned to remain as-is; therefore, a visual corridor is not planned as part of this project.

16.142.070 - Trees on Property Subject to Certain Land Use Applications

[...]

B. Applicability

All applications including a Type II - IV land use review, shall be required to preserve trees or woodlands, as defined by this Section to the maximum extent feasible within the context of the proposed land use plan and relative to other codes, policies, and standards of the City Comprehensive Plan.

**Response:** This is a Type IV land use application; therefore, the requirements of Section 16.142.070 are applicable to this project.

C. Inventory

1. To assist the City in making its determinations on the retention of trees and woodlands, land use applications including Type II - IV development shall include a tree and woodland inventory and report. The report shall be prepared by a qualified professional and must contain the following information:
  - a. Tree size (in DBH and canopy area)
  - b. Tree species
  - c. The condition of the tree with notes as applicable explaining the assessment

- d. The location of the tree on the site
  - e. The location of the tree relative to the planned improvements
  - f. Assessment of whether the tree must be removed to accommodate the development
  - g. Recommendations on measures that must be taken to preserve trees during the construction that are not proposed to be removed.
2. In addition to the general requirements of this Section, the tree and woodland inventory's mapping and report shall also include, but is not limited to, the specific information outlined in the appropriate land use application materials packet.

**Response:** The Preliminary Tree Preservation and Removal Plan (Exhibit A) and Preliminary Tree Preservation and Removal Inventory Table (Exhibit J) contain the required information, as applicable.

**D. Retention requirements**

1. Trees may be considered for removal to accommodate the development including buildings, parking, walkways, grading etc., provided the development satisfies of D.2 or D.3, below.

**Response:** As shown on the Preliminary Tree Preservation and Removal Plan (Exhibit A) and Preliminary Tree Preservation and Removal Inventory Table (Exhibit J), some trees are required to be removed to accommodate the necessary site improvements; however, the site will continue to meet the minimum canopy coverage standards through preservation of the remaining trees. The response below demonstrates compliance with criterion D.3.

[...]

3. **Required Tree Canopy - Non-Residential and Multi-family Developments**

Each net development site shall provide a variety of trees to achieve a minimum total tree canopy of 30 percent. The canopy percentage is based on the expected mature canopy of each tree by using the equation  $\pi r^2$  to calculate the expected square footage of each tree. The expected mature canopy is counted for each tree even if there is an overlap of multiple tree canopies.

The canopy requirement can be achieved by retaining existing trees or planting new trees. Required landscaping trees can be used toward the total on site canopy required to meet this standard. The expected mature canopy spread of the new trees will be counted toward the required canopy cover. A certified arborist or other qualified professional shall provide an estimated tree canopy for all proposed trees to the planning department for review as a part of the land use review process.

	Commercial, Industrial, Institutional Public and Multi-family
Canopy Requirement	30%
Counted Toward the Canopy Requirement	
Street trees included in canopy requirement	No
Landscaping requirements included in canopy requirement	Yes
Existing trees onsite	Yes x 2
Planting new trees onsite	Yes
Mature Canopy in Square Feet Equation $\pi r^2$ or $(3.14159 * \text{radius}^2)$ (This is the calculation to measure the square footage of a circle. The Mature Canopy is given in diameter. In gardening and horticulture reference books, therefore to get the radius you must divide the diameter in half.	

**Response:** The Tree Canopy Calculations (Exhibit K) show an expected tree canopy coverage of ±62 percent of the total site area, which exceeds the minimum 30 percent canopy coverage requirement.

**G. Tree Protection During Development**

The applicant shall prepare and submit a final Tree and Woodland Plan prior to issuance of any construction permits, illustrating how identified trees and woodlands will be retained, removed or protected as per the Notice of Decision. Such plan shall specify how trees and woodlands will be protected from damage or destruction by construction activities, including protective fencing, selective pruning and root treatments, excavation techniques, temporary drainage systems, and like methods. At a minimum, trees to be protected shall have the area within the drip line of the tree protected from grading, stockpiling, and all other construction related activity unless specifically reviewed and recommended by a certified arborist or other qualified professional. Any work within the dripline of the tree shall be supervised by the project arborist or other qualified professional onsite during construction.

**Response:** This requirement is understood. The Applicant will submit a final Tree and Woodland Plan prior to issuance of building permits, pursuant to the provision of this code.

Chapter 16.144 WETLAND, HABITAT AND NATURAL AREAS

[...]

16.144.020 - Standards

A. The applicant shall identify and describe the significance and functional value of wetlands on the site and protect those wetlands from adverse effects of the development. A facility complies with this standard if it complies with the criteria of subsections A.1.a and A.1.b, below:

1. The facility will not reduce the area of wetlands on the site, and development will be separated from such wetlands by an area determined by the Clean Water Services Design and Construction Standards R&O 00-7 or its replacement provided Section 16.140.090 does not require more than the requested setback.

- a. A natural condition such as topography, soil, vegetation or other feature isolates the area of development from the wetland.
  - b. Impact mitigation measures will be designed, implemented, and monitored to provide effective protection against harm to the wetland from sedimentation, erosion, loss of surface or ground water supply, or physical trespass.
  - c. A lesser setback complies with federal and state permits, or standards that will apply to state and federal permits, if required.
2. If existing wetlands are proposed to be eliminated by the facility, the applicant shall demonstrate that the project can, and will develop or enhance an area of wetland on the site or in the same drainage basin that is at least equal to the area and functional value of wetlands eliminated.

**Response:** As shown on the Preliminary Existing Conditions Plan (Exhibit A), wetlands are not present on the site. The Preliminary Existing Conditions Plan (Exhibit A) identifies the approximate boundary of the off-site wetland, which will not be disturbed during construction.

- B. The applicant shall provide appropriate plans and text that identify and describe the significance and functional value of natural features on the site (if identified in the Community Development Plan, Part 2) and protect those features from impacts of the development or mitigate adverse effects that will occur. A facility complies with this standard if:
  1. The site does not contain an endangered or threatened plant or animal species or a critical habitat for such species identified by Federal or State government (and does not contain significant natural features identified in the Community Development Plan, Part 2, Natural Resources and Recreation Plan).
  2. The facility will comply with applicable requirements of the zone.
  3. The applicant will excavate and store topsoil separate from subsurface soil, and shall replace the topsoil over disturbed areas of the site not covered by buildings or pavement or provide other appropriate medium for re-vegetation of those areas, such as yard debris compost.
  4. The applicant will retain significant vegetation in areas that will not be covered by buildings or pavement or disturbed by excavation for the facility; will replant areas disturbed by the development and not covered by buildings or pavement with native species vegetation unless other vegetation is needed to buffer the facility; will protect disturbed areas and adjoining habitat from potential erosion until replanted vegetation is established; and will provide a plan or plans identifying each area and its proposed use.
  5. Development associated with the facility will be set back from the edge of a significant natural area by an area determined by the Clean Water Services Design and Construction standards R&O 00-7 or its replacement, provided Section 16.140.090A does not require more than the requested setback. Lack of adverse effect can be

demonstrated by showing the same sort of evidence as in subsection A.1 above.

**Response:** This application includes a Natural Resource Assessment Report prepared by a qualified natural resource specialist (Exhibit I). The report contains the information required by this Code section, as applicable. Please refer to Exhibit I for findings to support the decision that the facility complies with the standard of Code Section 16.144.020.B.

- C. When the Regionally Significant Fish and Wildlife Habitat map indicates there are resources on the site or within 50 feet of the site, the applicant shall provide plans that show the location of resources on the property. If resources are determined to be located on the property, the plans shall show the value of environmentally sensitive areas using the methodologies described in Sections 1 and 2 below.

The Metro Regionally Significant Fish and Wildlife Habitat map shall be the basis for determining the location and value of environmentally sensitive habitat areas. In order to specify the exact locations on site, the following methodology shall be used to determine the appropriate boundaries and habitat values:

1. Verifying boundaries of inventoried riparian habitat. Locating habitat and determining its riparian habitat class is a four-step process:
  - a. Located the Water Feature that is the basis for identifying riparian habitat.
    1. Locate the top of bank of all streams, rivers, and open water within 200 feet of the property.
    2. Locate all flood areas within 100 feet of the property.
    3. Locate all wetlands within 150 feet of the property based on the Local Wetland Inventory map and on the Metro 2002 Wetland Inventory map (available from the Metro Data Resource Center, 600 NE Grand Ave., Portland, OR 97232). Identified wetlands shall be further delineated consistent with methods currently accepted by the Oregon Division of State Lands and the US Army Corps of Engineers.
  - b. Identify the vegetative cover status of all areas on the property that are within 200 feet of the top of bank of streams, rivers, and open water, are wetlands or are within 150 feet of wetlands, and are flood areas or are within 100 feet of flood areas. Vegetative cover status shall be as identified on the Metro Vegetative Cover map. In the event of a discrepancy between the Metro Vegetative Cover map and the existing site conditions, document the actual vegetative cover based on the following definitions along with a 2002 aerial photograph of the property;
    1. Low structure vegetation or open soils — Areas that are part of a contiguous area one acre or larger of grass, meadow, crop-lands, or areas of open soils

located within 300 feet of a surface stream (low structure vegetation areas may include areas of shrub vegetation less than one acre in size if they are contiguous with areas of grass, meadow, croplands, orchards, Christmas tree farms, holly farms, or areas of open soils located within 300 feet of a surface stream and together form an area of one acre in size or larger).

2. Woody vegetation — Areas that are part of a contiguous area one acre or larger of shrub or open or scattered forest canopy (less than 60% crown-closure) located within 300 feet of a surface stream.
  3. Forest canopy — Areas that are part of a contiguous grove of trees of one acre or larger in area with approximately 60% or greater crown closure, irrespective of whether the entire grove is within 200 feet of the relevant water feature.
- c. Determine whether the degree that the land slopes upward from all streams, rivers, and open water within 200 feet of the property is greater than or less than 25% (using the Clean Water Services Vegetated Corridor methodology); and
- d. Identify the riparian habitat classes applicable to all areas on the property using Table 8-1 below:

Distance in feet from Water Feature	Development/Vegetation Status			
	Developed areas not providing vegetative cover	Low structure vegetation or open soils	Woody vegetation (shrub and scatted forest canopy)	Forest Canopy (closed to open forest canopy)
<b>Surface Streams</b>				
0-50	Class II	Class I	Class I	Class I
50-100		Class II	Class I	Class I
100-150		Class II if slope >25%	Class II if slope >25%	Class II
150-200		Class II if slope >25%	Class II if slope >25%	Class II if slope >25%
<b>Wetlands (Wetland feature itself is a Class I Riparian Area)</b>				
0-100			Class I	Class I
100-150				Class II
<b>Flood Areas (undeveloped portion of a flood area is a Class I Riparian area)</b>				
0-100			Class II	Class II

2. Verifying boundaries of inventoried upland habitat. Upland habitat was identified based on the existence of contiguous patches of forest canopy, with limited canopy openings. The "forest canopy" designation is made based on analysis of aerial photographs, as part of determining the vegetative cover status of land within the region. Upland habitat shall be as identified on the HCA map. The perimeter of an area delineated as "forest canopy" on the Metro Vegetative Cover map may be adjusted to more precisely indicate the drip line of the trees within the canopied area.



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**Response:** A portion of the property in the southwestern corner of the site is within Metro-mapped sensitive resources overlay. The Natural Resource Assessment Report (Exhibit I) includes the required plans meeting the applicable requirements of this section of the code.

16.144.030 - Exceptions to Standards

In order to protect environmentally sensitive areas that are not also governed by floodplain, wetland and Clean Water Services vegetated corridor regulations, the City allows flexibility of the specific standards in exchange for the specified amount of protection inventoried environmentally sensitive areas as defined in this code.

**Response:** This application does not include exceptions to standards.

Chapter 16.146 - NOISE

16.146.010 - Generally

All otherwise permitted commercial, industrial, and institutional uses in the City shall comply with the noise standards contained in OAR 340-35-035. The City may require proof of compliance with OAR 340-35-035 in the form of copies of all applicable State permits or certification by a professional acoustical engineer that the proposed uses will not cause noise in excess of State standards.

**Response:** The subject site is surrounded entirely by other properties zoned General Industrial. Noise levels at the planned warehouse would be similar to nearby industrial uses. Warehousing uses do not typically generate noise beyond that associated with traffic entering and leaving the site, along with other activities typical of what could be expected to occur in an urban area. The noise levels associated with warehousing use are anticipated to comply with OAR 340-35-035 standards. Therefore, this standard will be met.

16.146.020 - Noise Sensitive Uses

When proposed commercial and industrial uses do not adjoin land exclusively in commercial or industrial zones, or when said uses adjoin special care, institutional, or parks and recreational facilities, or other uses that are, in the City's determination, sensitive to noise impacts, then:

- A. The applicant shall submit to the City a noise level study prepared by a professional acoustical engineer. Said study shall define noise levels at the boundaries of the site in all directions.
- B. The applicant shall show that the use will not exceed the noise standards contained in OAR 340-35-035, based on accepted noise modeling procedures and worst case assumptions when all noise sources on the site are operating simultaneously.
- C. If the use exceeds applicable noise standards as per subsection B of this Section, then the applicant shall submit a noise mitigation program prepared by a professional acoustical engineer that shows how and when the use will come into compliance with said standards.

**Response:** The subject property is surrounded entirely by other land zoned General Industrial and does not adjoin special care, institutional, recreational facilities, or other noise-sensitive uses. Noise levels would be similar to the nearby commercial and industrial uses.

16.146.030 - Exceptions





This Chapter does not apply to noise making devices which are maintained and utilized solely as warning or emergency signals, or to noise caused by automobiles, trucks, trains, aircraft, and other similar vehicles when said vehicles are properly maintained and operated and are using properly designated rights-of-way, travel ways, flight paths or other routes. This Chapter also does not apply to noise produced by humans or animals. Nothing in this Chapter shall preclude the City from abating any noise problem as per applicable City nuisance and public safety ordinances.

**Response:** Warehousing use is not anticipated to generate noise problems. It is understood that the City has authority to abate noise problems per applicable City nuisance and public safety ordinances.

#### Chapter 16.148 - VIBRATIONS

##### 16.148.010 - Generally

All otherwise permitted commercial, industrial, and institutional uses shall not cause discernible vibrations that exceed a peak of 0.002 gravity at the property line of the originating use, except for vibrations that last five (5) minutes or less per day, based on a certification by a professional engineer.

##### 16.148.020 - Exceptions

This Chapter does not apply to vibration caused by construction activities including vehicles accessing construction sites, or to vibrations caused by automobiles, trucks, trains, aircraft, and other similar vehicles when said vehicles are properly maintained and operated and are using properly designated rights-of-way, travelways, flight paths or other routes. Nothing in this Chapter shall preclude the City from abating any vibration problem as per applicable City nuisance and public safety ordinances.

**Response:** Vibration levels are expected to be similar to the surrounding industrial uses. Elevated levels of vibration, beyond what is expected in an urban area, are not anticipated. Therefore, the proposed use will be within required standards, and there will be no adverse impacts.

#### Chapter 16.150 - AIR QUALITY

##### 16.150.010 - Generally

All otherwise permitted commercial, industrial, and institutional uses shall comply with applicable State air quality rules and statutes:

- A. All such uses shall comply with standards for dust emissions as per OAR 340-21-060.
- B. Incinerators, if otherwise permitted by Section 16.140.020, shall comply with the standards set forth in OAR 340-25-850 through 340-25-905.
- C. Uses for which a State Air Contaminant Discharge Permit is required as per OAR 340-20-140 through 340-20-160 shall comply with the standards of OAR 340-220 through 340-20-276.

**Response:** The planned warehousing use will not generate dust and is anticipated to comply with the standards in OAR 340-21-060. Air quality impacts are expected to be similar to the surrounding industrial uses. Odorous or unusual emissions, beyond what is expected in an urban area, are not anticipated. The planned use will be within required standards,

and there will be no adverse impacts. A State Air Contaminant Discharge Permit is not required for the operation of this project; therefore, this criterion does not apply.

**16.150.020 - Proof of Compliance**

Proof of compliance with air quality standards as per Section 16.150.010 shall be in the form of copies of all applicable State permits, or if permits have not been issued, submission by the applicant, and acceptance by the City, of a report certified by a professional engineer indicating that the proposed use will comply with State air quality standards. Depending on the nature and size of the use proposed, the applicant may, in the City's determination, be required to submit to the City a report or reports substantially identical to that required for issuance of State Air Contaminant Discharge Permits.

**Response:** As stated above, air quality permits are not necessary for the planned warehousing use; therefore, this Code section is not applicable to this project.

**16.150.030 - Exceptions**

Nothing in this Chapter shall preclude the City from abating any air quality problem as per applicable City nuisance and public safety ordinances.

**Response:** This standard is understood.

**Chapter 16.152 - ODORS**

**16.152.010 - Generally**

All otherwise permitted commercial, industrial, and institutional uses shall incorporate the best practicable design and operating measures so that odors produced by the use are not discernible at any point beyond the boundaries of the development site.

**16.152.020 - Standards**

The applicant shall submit a narrative explanation of the source, type and frequency of the odorous emissions produced by the proposed commercial, industrial, or institutional use. In evaluating the potential for adverse impacts from odors, the City shall consider the density and characteristics of surrounding populations and uses, the duration of any odorous emissions, and other relevant factors.

**Response:** Warehousing use does not produce odors; therefore, the project will be within required standards, and there will be no adverse impacts.

**16.152.030 - Exceptions**

Nothing in this Chapter shall preclude the City from abating any odor problem as per applicable City nuisance and public safety ordinances.

**Response:** This standard is understood.

**Chapter 16.154 - HEAT AND GLARE**

**16.154.010 - Generally**

Except for exterior lighting, all otherwise permitted commercial, industrial, and institutional uses shall conduct any operations producing excessive heat or glare entirely within enclosed buildings. Exterior lighting shall be directed away from adjoining properties, and the use shall not cause such glare or lights to shine off site in excess of one-half (0.5) foot candle when adjoining properties are zoned for residential uses.

16.154.020 - Exceptions

Nothing in this Chapter shall preclude the City from abating any heat and glare problem as per applicable City nuisance and public safety ordinances.

**Response:** The planned warehousing use does not produce heat or glare. The subject property does not adjoin any properties zoned for residential uses. Consequently, foot candle analysis is not required.

Chapter 16.156 - ENERGY CONSERVATION

16.156.020 - Standards

A. Building Orientation - The maximum number of buildings feasible shall receive sunlight sufficient for using solar energy systems for space, water or industrial process heating or cooling. Buildings and vegetation shall be sited with respect to each other and the topography of the site so that unobstructed sunlight reaches the south wall of the greatest possible number of buildings between the hours of 9:00 AM and 3:00 PM, Pacific Standard Time on December 21st.

**Response:** The planned warehouse building will be oriented in a generally north-south direction. The building is intended for storage of goods that do not require heating or cooling; therefore, solar energy systems are not planned.

B. Wind - The cooling effects of prevailing summer breezes and shading vegetation shall be accounted for in site design. The extent solar access to adjacent sites is not impaired vegetation shall be used to moderate prevailing winter wind on the site.

**Response:** Since the warehouse building is not intended for human occupancy, this standard is not applicable to this project.

#### IV. Conclusion

The required findings have been made, and this written narrative and accompanying documentation demonstrate the application is consistent with the applicable provisions of the City of Sherwood Zoning and Community Development Code. The evidence in the record is substantial and supports approval of the application. The City can rely upon this information in its approval of the application.



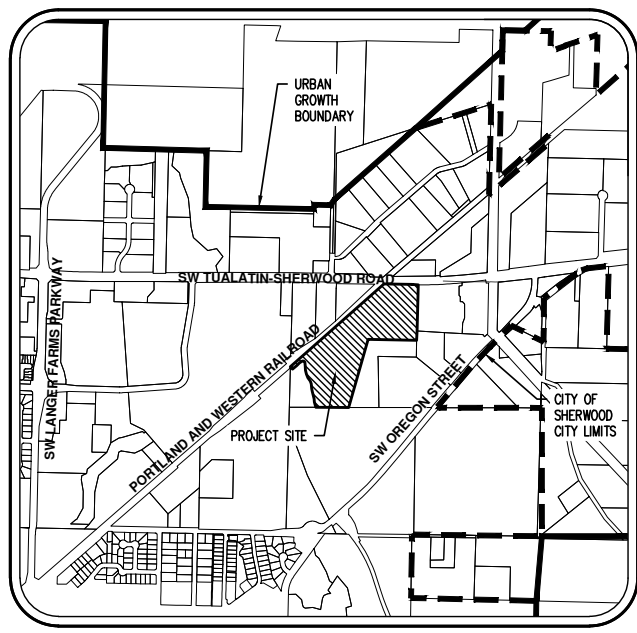
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## Exhibit A: Preliminary Plans

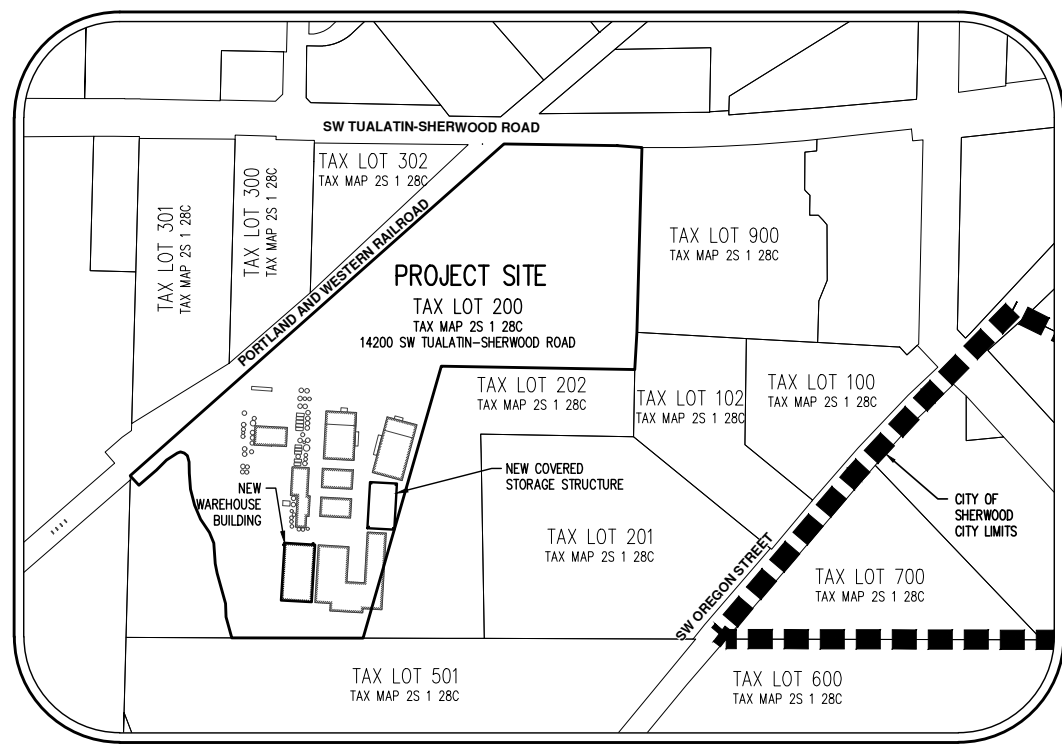
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# CASCADE COLUMBIA DISTRIBUTION COMPANY

## PRELIMINARY PLANS FOR A MODIFICATION TO APPROVED SITE PLAN



**VICINITY MAP**  
NTS



**SITE MAP**  
1"=250'

**APPLICANT:**  
CASCADE COLUMBIA DISTRIBUTION COMPANY  
14200 SW TUALATIN-SHERWOOD ROAD  
SHERWOOD, OR 97140

**OWNER:**  
SHERWOOD ROAD INDUSTRIAL, LLC  
6900 FOX AVE S  
SEATTLE, WA 98108

**PLANNING/CIVIL ENGINEERING/  
LANDSCAPE ARCHITECTURE/  
SURVEYING FIRM:**  
AKS ENGINEERING & FORESTRY, LLC.  
CONTACT: CHRIS GOODELL, AICP  
12965 SW HERMAN RD STE 100  
TUALATIN, OR 97062  
P: (503) 563-6151  
F: (503) 563-6152

**PROJECT LOCATION:**  
14200 SW TUALATIN-SHERWOOD ROAD  
SHERWOOD, OR 97140

**SITE AREA:**  
±16.93 ACRES

**PROPERTY DESCRIPTION:**  
TAX LOT 200 WASHINGTON COUNTY ASSESSOR'S MAP 2S 1 28C, LOCATED IN THE SOUTHWEST 1/4 OF SECTION 28, TOWNSHIP 2 SOUTH, RANGE 1 WEST, WILLAMETTE MERIDIAN, WASHINGTON COUNTY, OREGON.

**EXISTING LAND USE:**  
INDUSTRIAL SITE WITH WAREHOUSES AND OFFICE SPACE, RAIL SPUR, AND ASSOCIATED INFRASTRUCTURE FOR CASCADE COLUMBIA DISTRIBUTION COMPANY AND NORTHSTAR CHEMICAL INC.

**PROJECT PURPOSE:**  
ADD NEW COVERED STORAGE STRUCTURE AND WAREHOUSE BUILDING, AND ASSOCIATED SITE IMPROVEMENTS.

**VERTICAL DATUM:**  
ELEVATIONS ARE BASED ON WASHINGTON COUNTY BENCHMARK NO. 103, LOCATED AT THE SW CORNER OF THE INTERSECTION OF SW TUALATIN-SHERWOOD ROAD AND PORTLAND AND WESTERN RAILROAD. ELEVATION = 171.38 FEET (NGVD 29).

### SHEET INDEX

- P01 COVER SHEET WITH VICINITY AND SITE MAPS
- P02 PRELIMINARY SITE CIRCULATION PLAN AND SURROUNDING LAND USES
- P03 PRELIMINARY EXISTING CONDITIONS PLAN - OVERALL
- P04 PRELIMINARY EXISTING CONDITIONS PLAN - NORTH
- P05 PRELIMINARY EXISTING CONDITIONS PLAN - SOUTH
- P06 PRELIMINARY DEMOLITION PLAN
- P07 PRELIMINARY TREE PRESERVATION AND REMOVAL PLAN
- P08 PRELIMINARY TREE PRESERVATION AND REMOVAL PLAN
- P09 PRELIMINARY SITE PLAN (SOUTH)
- P10 PRELIMINARY SITE PLAN (NORTH)
- P11 PRELIMINARY GRADING AND EROSION-SEDIMENT CONTROL PLAN (SOUTH)
- P12 PRELIMINARY GRADING AND EROSION-SEDIMENT CONTROL PLAN (NORTH)
- P13 PRELIMINARY COMPOSITE UTILITY PLAN
- P14 PRELIMINARY WAREHOUSE BUILDING ELEVATIONS
- P15 PRELIMINARY COVERED STORAGE AREA ELEVATIONS
- P16 PRELIMINARY LANDSCAPE PLAN

### LEGEND

EXISTING		PROPOSED		EXISTING		PROPOSED	
DECIDUOUS TREE				STORM SEWER CLEAN OUT			
CONIFEROUS TREE				STORM SEWER CATCH BASIN			
FIRE HYDRANT				STORM SEWER AREA DRAIN			
WATER BLOWOFF				STORM SEWER MANHOLE			
WATER METER				GAS METER			
WATER VALVE				GAS VALVE			
DOUBLE CHECK VALVE				GUY WIRE ANCHOR			
AIR RELEASE VALVE				UTILITY POLE			
SANITARY SEWER CLEAN OUT				POWER VAULT			
SANITARY SEWER MANHOLE				POWER JUNCTION BOX			
SIGN				POWER PEDESTAL			
STREET LIGHT				COMMUNICATIONS VAULT			
MAILBOX				COMMUNICATIONS JUNCTION BOX			
				COMMUNICATIONS RISER			

	EXISTING	PROPOSED
RIGHT-OF-WAY LINE		
BOUNDARY LINE		
PROPERTY LINE		
CENTERLINE		
DITCH		
CURB		
EDGE OF PAVEMENT		
EASEMENT		
FENCE LINE		
GRAVEL EDGE		
POWER LINE		
OVERHEAD WIRE		
COMMUNICATIONS LINE		
FIBER OPTIC LINE		
GAS LINE		
STORM SEWER LINE		
SANITARY SEWER LINE		
WATER LINE		

AKS DRAWING FILE: 7431 PRELIM COVER.DWG | LAYOUT: P01

AKS ENGINEERING & FORESTRY, LLC  
12965 SW HERMAN RD, STE 100  
TUALATIN, OR 97062  
503.563.6151  
WWW.AKS-ENG.COM

ENGINEERING • SURVEYING • NATURAL RESOURCES  
FORESTRY • PLANNING • LANDSCAPE ARCHITECTURE

CASCADE COLUMBIA  
DISTRIBUTION COMPANY

SHERWOOD OREGON  
TAX MAP 2S 1 28C

COVER SHEET WITH  
VICINITY AND SITE MAPS

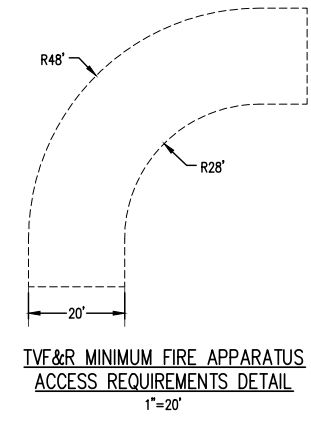
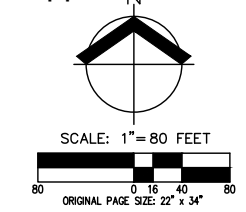
DESIGNED BY: KNU  
DRAWN BY: KNU  
MANAGED BY: SR  
CHECKED BY: SR  
DATE: 5/26/2022

REGISTERED PROFESSIONAL ENGINEER  
PRELIMINARY NOT FOR CONSTRUCTION  
CODY C. ROOPER  
RENEWAL DATE: 12/31/22

JOB NUMBER  
7431

SHEET  
P01





**CASCADE COLUMBIA DISTRIBUTION COMPANY**  
**SHERWOOD OREGON**  
TAX MAP 25 1 28C

**PRELIMINARY SITE CIRCULATION PLAN AND SURROUNDING LAND USES**

DESIGNED BY:	KNU
DRAWN BY:	KNU
MANAGED BY:	SR
CHECKED BY:	SR
DATE:	5/26/2022
REVISIONS:	

LEGEND	
VEHICLE CIRCULATION	
TRANSIT ROUTE	
CURRENT LAND USE	
	CURRENT LAND USE ZONING

JOB NUMBER  
**7431**  
SHEET  
**P02**

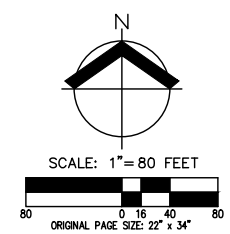
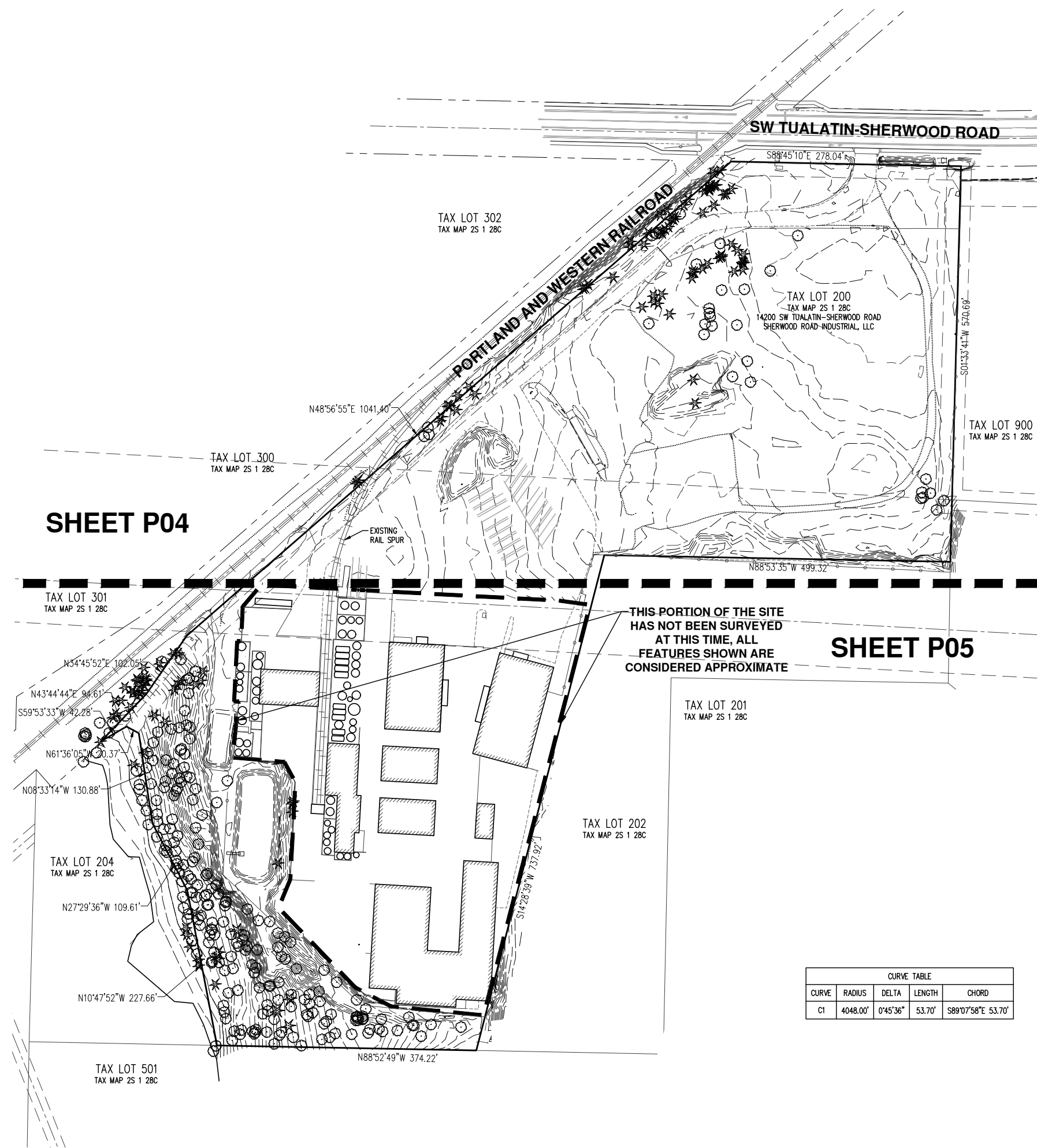
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DESIGNED BY: ---  
DRAWN BY: CTH  
MANAGED BY: NSW  
CHECKED BY: CC  
DATE: 09/08/2021

REGISTERED  
PROFESSIONAL  
LAND SURVEYOR  
**REVIEW COPY**  
JANIS WHITE  
NOV 1980  
70652LS  
RENEWS: 6/30/24

REVISIONS  
JOB NUMBER  
7431  
SHEET  
**P03**

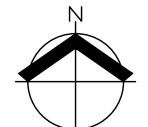


CURVE TABLE				
CURVE	RADIUS	DELTA	LENGTH	CHORD
C1	4048.00'	0°45'36"	53.70'	S89°07'58"E 53.70'

AKS DRAWING FILE: 7431 PRELIM EXCOND.DWG | LAYOUT: P03

- NOTES:**
- UTILITIES SHOWN ARE BASED ON UNDERGROUND UTILITY LOCATE INFORMATION PER GIS AND AS-BUILTS. CONTRACTORS ARE RESPONSIBLE FOR VERIFYING ALL EXISTING CONDITIONS PRIOR TO BEGINNING CONSTRUCTION.
  - FIELD WORK WAS CONDUCTED MAY 1-18, 2021.
  - VERTICAL DATUM: ELEVATIONS ARE BASED ON WASHINGTON COUNTY BENCHMARK NO. 103, LOCATED AT THE SW CORNER OF INTERSECTION OF SW TUALATIN-SHERWOOD ROAD AND PORTLAND AND WESTERN RAILROAD. ELEVATION = 171.38 FEET (NGVD 29).
  - HORIZONTAL DATUM: A LOCAL DATUM PLANE SCALED FROM OREGON STATE PLANE NORTH 3601 NAD83(2011) EPOCH 2010.0000 BY HOLDING A PROJECT MEAN GROUND COMBINED SCALE FACTOR OF 1.0001036685 AT A CALCULATED CENTRAL PROJECT POINT WITH GRID VALUES OF (NORTH 627763.123, EAST 7604628.335). THE MERIDIAN CONVERGENCE ANGLE AT THE CALCULATED CENTRAL POINT IS -1'38"56". THE STATE PLANE COORDINATES WERE DERIVED FROM THE TRIMBLE VRS NOW NETWORK.
  - THIS IS NOT A PROPERTY BOUNDARY SURVEY TO BE RECORDED WITH THE COUNTY SURVEYOR. BOUNDARIES MAY BE PRELIMINARY AND SHOULD BE CONFIRMED WITH THE STAMPING SURVEYOR PRIOR TO RELYING ON FOR DETAILED DESIGN OR CONSTRUCTION.
  - BUILDING FOOTPRINTS ARE DRAWN FROM AERIAL UNLESS NOTED OTHERWISE. CONTACT SURVEYOR WITH QUESTIONS REGARDING BUILDING TIES.
  - CONTOUR INTERVAL IS 1 FOOT.
  - TREES WITH DIAMETER OF 6" AND GREATER ARE SHOWN. TREE DIAMETERS WERE MEASURED UTILIZING A DIAMETER TAPE AT BREAST HEIGHT. TREE INFORMATION IS SUBJECT TO CHANGE UPON ARBORIST INSPECTION.
  - WETLAND BOUNDARIES SHOWN WERE DELINEATED BY AKS ENGINEERING & FORESTRY, LLC, ON APRIL 9, 2021 AND WERE PROFESSIONALLY SURVEYED BY AKS ON MAY 5, 2021.
  - REFERENCE AS-BUILT DATA WAS UTILIZED FOR MOST OF THE UTILITY LINE PLACEMENT. CONTACT THE SURVEYOR WITH QUESTIONS REGARDING UTILITY INFORMATION.
  - FEMA FLOOD PLAINS SHOWN PER FLOOD INSURANCE RATE MAP PANEL 602 OF 650. THE BASE FLOOD ELEVATION (BFE) WAS DETERMINED TO BE 133.04' (NGVD 29) ALSO BEING 136.50' (NAVD 88). A VERTICAL CONVERSION FACTOR OF -3.458' WAS USED TO CONVERT PUBLISHED FEMA VALUES FROM NAVD88 TO NGVD29.
  - NON-MAPPABLE EASEMENT PER DOC. NO. 79-025572, A 10' SEWER EASEMENT EXISTS WITHIN THE 250' TRANSMISSION LINE EASEMENT, BEGINNING ON THE EASTERLY RIGHT-OF-WAY LINE OF THE SOUTHERN PACIFIC RAILROAD AND RUNNING EASTERLY TO TAX LOT 202, FOR THE BENEFIT OF TAX LOT 202.

CURVE TABLE				
CURVE	RADIUS	DELTA	LENGTH	CHORD
C1	4048.00'	0°45'36"	53.70'	S89°07'58"E 53.70'



SCALE: 1" = 40 FEET

**STORM DRAIN LEGEND**

- EXISTING STORM DRAIN TO RETENTION POND (Red dashed line)
- EXISTING STORM DRAIN TO OPEN SPACE (Green dashed line)
- EXISTING SANITARY SEWER (Orange dashed line)

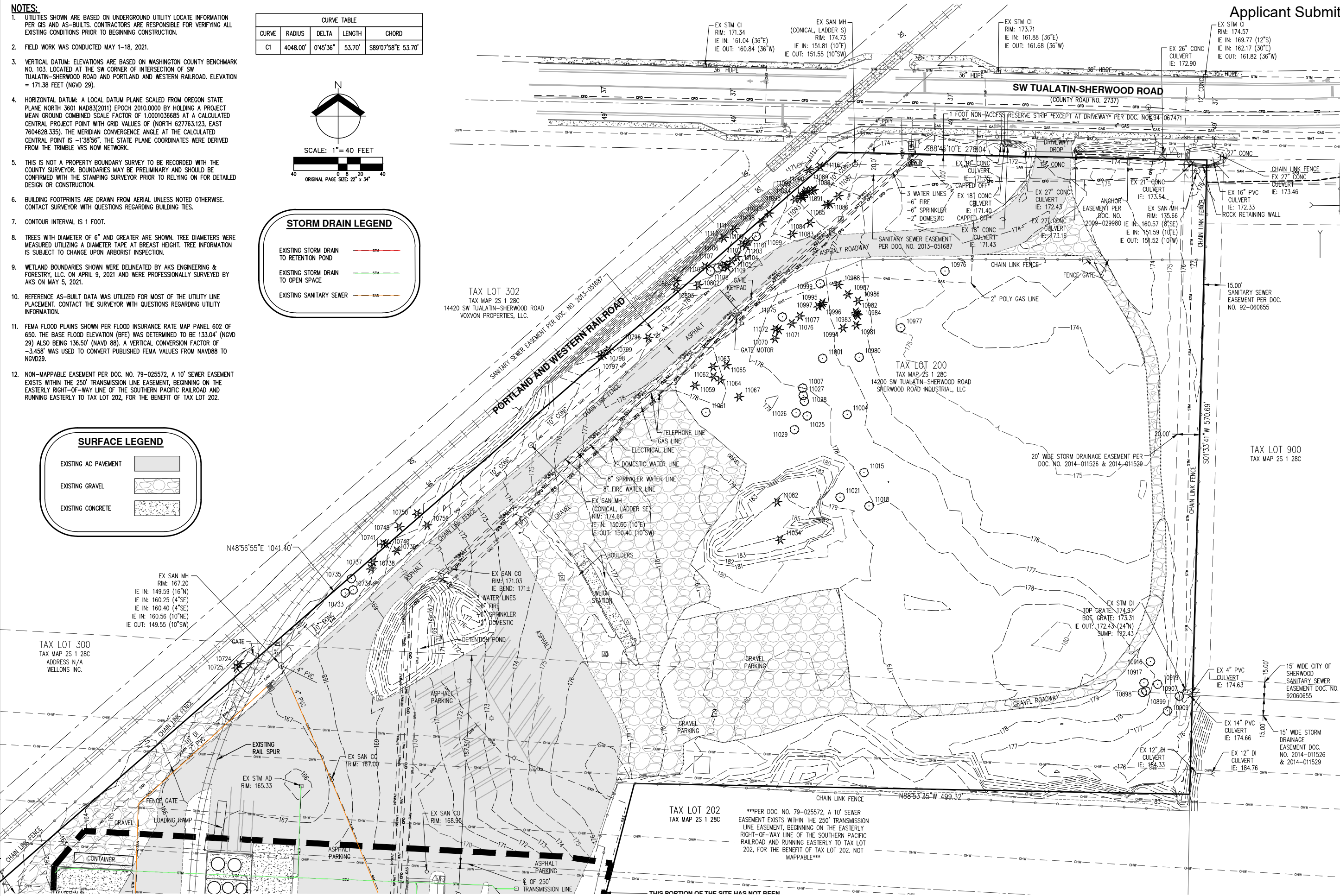
**SURFACE LEGEND**

- EXISTING AC PAVEMENT (Grey hatched)
- EXISTING GRAVEL (White hatched)
- EXISTING CONCRETE (Black hatched)

TAX LOT 302  
TAX MAP 2S 1 28C  
14420 SW TUALATIN-SHERWOOD ROAD  
VOXVON PROPERTIES, LLC.

TAX LOT 200  
TAX MAP 2S 1 28C  
14200 SW TUALATIN-SHERWOOD ROAD  
SHERWOOD ROAD INDUSTRIAL, LLC

TAX LOT 900  
TAX MAP 2S 1 28C



TAX LOT 202  
TAX MAP 2S 1 28C  
\*\*\*PER DOC. NO. 79-025572, A 10' SEWER EASEMENT EXISTS WITHIN THE 250' TRANSMISSION LINE EASEMENT, BEGINNING ON THE EASTERLY RIGHT-OF-WAY LINE OF THE SOUTHERN PACIFIC RAILROAD AND RUNNING EASTERLY TO TAX LOT 202, FOR THE BENEFIT OF TAX LOT 202. NOT MAPPABLE\*\*\*

THIS PORTION OF THE SITE HAS NOT BEEN

SEE SHEET P05

SEE SHEET P05

AKS DRAWING FILE: 7431 PRELIM EXCOND.DWG | LAYOUT: P04



SEE SHEET P04

SEE SHEET P04

AKS  
 AKS ENGINEERING & FORESTRY, LLC  
 12065 SW HERMAN RD, STE 100  
 TUALATIN, OR 97062  
 503.563.6151  
 WWW.AKS-ENG.COM

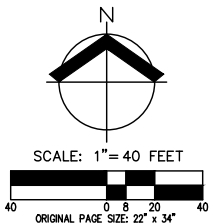
ENGINEERING • SURVEYING • NATURAL RESOURCES  
 FORESTRY • PLANNING • LANDSCAPE ARCHITECTURE



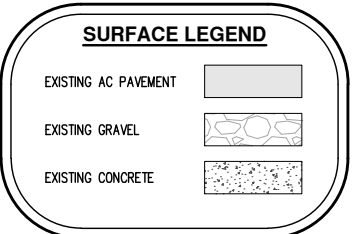
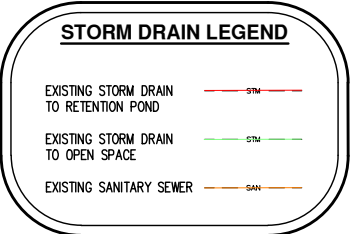
TAX LOT 202  
 TAX MAP 2S 1 28C

\*\*\*PER DOC. NO. 79-025572, A 10' SEWER EASEMENT EXISTS WITHIN THE 250' TRANSMISSION LINE EASEMENT, BEGINNING ON THE EASTERLY RIGHT-OF-WAY LINE OF THE SOUTHERN PACIFIC RAILROAD AND RUNNING EASTERLY TO TAX LOT 202, FOR THE BENEFIT OF TAX LOT 202. NOT MAPPABLE\*\*\*

THIS PORTION OF THE SITE HAS NOT BEEN SURVEYED AT THIS TIME. ALL FEATURES SHOWN ARE CONSIDERED APPROXIMATE



- NOTES:**
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CASCADE COLUMBIA  
 DISTRIBUTION COMPANY  
 SHERWOOD OREGON  
 TAX LOT: 200

PRELIMINARY EXISTING  
 CONDITIONS PLAN - SOUTH

DESIGNED BY: ---  
 DRAWN BY: CTH  
 MANAGED BY: NSW  
 CHECKED BY: CC  
 DATE: 09/08/2021

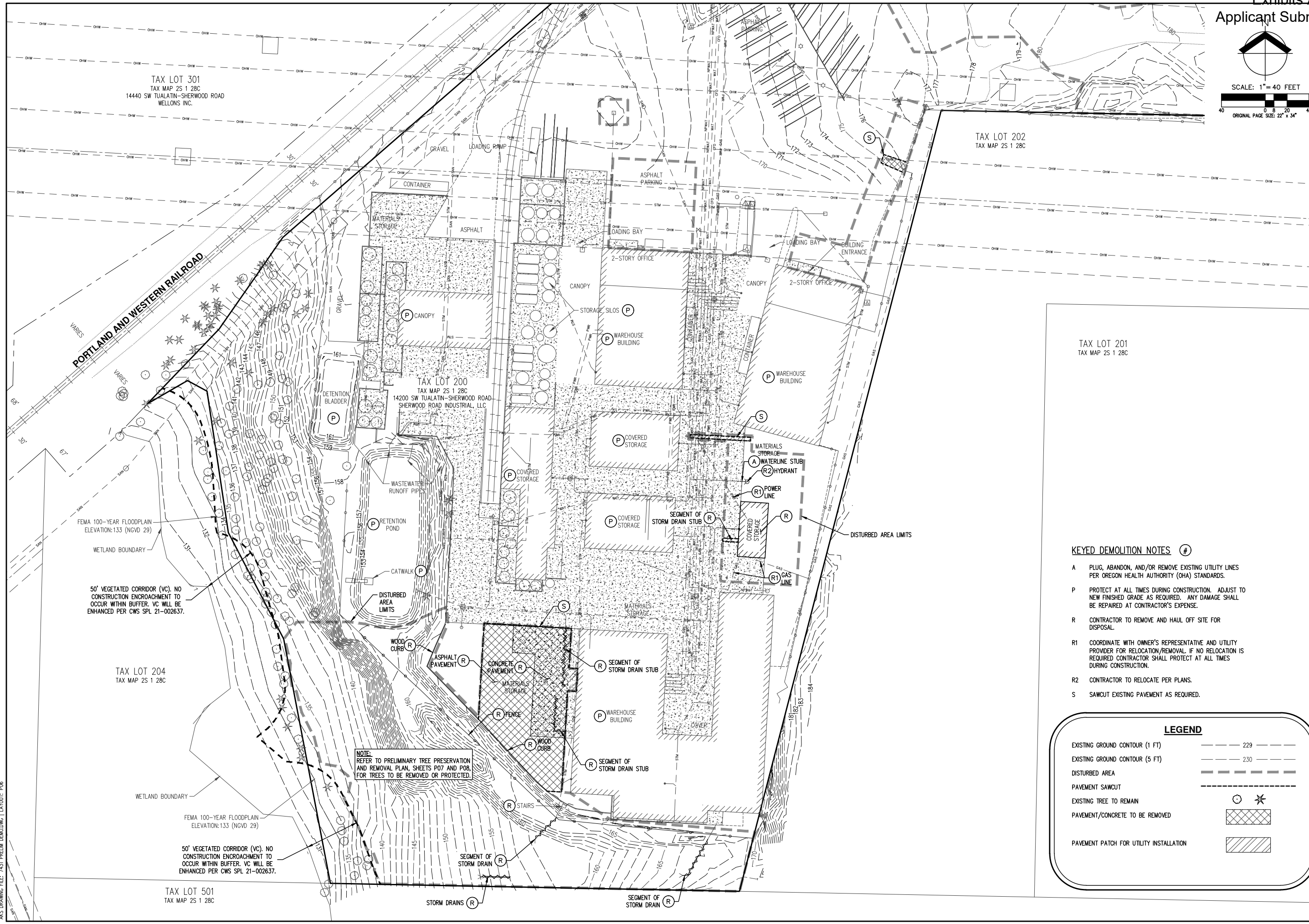
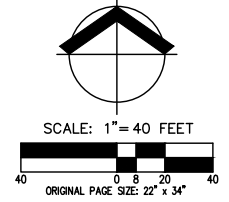
REGISTERED PROFESSIONAL LAND SURVEYOR  
**REVIEW**  
 Mark White  
 JAN 13 2020  
 MARK WHITE  
 70652LS  
 RENEWS: 6/30/24  
 REVISIONS

JOB NUMBER  
 7431

SHEET  
 P05

AKS DRAWING FILE: 7431 PRELIM EXCOND.DWG | LAYOUT: P05





TAX LOT 201  
TAX MAP 2S 1 28C

**KEYED DEMOLITION NOTES** #

- A PLUG, ABANDON, AND/OR REMOVE EXISTING UTILITY LINES PER OREGON HEALTH AUTHORITY (OHA) STANDARDS.
- P PROTECT AT ALL TIMES DURING CONSTRUCTION. ADJUST TO NEW FINISHED GRADE AS REQUIRED. ANY DAMAGE SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.
- R CONTRACTOR TO REMOVE AND HAUL OFF SITE FOR DISPOSAL.
- R1 COORDINATE WITH OWNER'S REPRESENTATIVE AND UTILITY PROVIDER FOR RELOCATION/REMOVAL. IF NO RELOCATION IS REQUIRED CONTRACTOR SHALL PROTECT AT ALL TIMES DURING CONSTRUCTION.
- R2 CONTRACTOR TO RELOCATE PER PLANS.
- S SAWCUT EXISTING PAVEMENT AS REQUIRED.

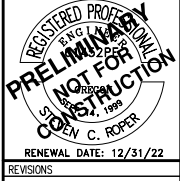
**LEGEND**

- EXISTING GROUND CONTOUR (1 FT) ----- 229 -----
- EXISTING GROUND CONTOUR (5 FT) ----- 230 -----
- DISTURBED AREA -----
- PAVEMENT SAWCUT -----
- EXISTING TREE TO REMAIN (circle with star)
- PAVEMENT/CONCRETE TO BE REMOVED (cross-hatched)
- PAVEMENT PATCH FOR UTILITY INSTALLATION (diagonal lines)

**CASCADE COLUMBIA  
DISTRIBUTION COMPANY**  
**SHERWOOD**  
TAX MAP 2S 1 28C

**PRELIMINARY DEMOLITION  
PLAN**

DESIGNED BY: KNU  
DRAWN BY: KNU  
MANAGED BY: SR  
CHECKED BY: SR  
DATE: 5/26/2022



JOB NUMBER  
**7431**  
SHEET  
**P06**

AKS DRAWING FILE: 7431 PRELIM DEMOLITION LAYOUT: P06

TAX LOT 301  
TAX MAP 2S 1 28C  
14440 SW TUALATIN-SHERWOOD ROAD  
WELLONS INC.

TAX LOT 202  
TAX MAP 2S 1 28C

TAX LOT 200  
TAX MAP 2S 1 28C  
14200 SW TUALATIN-SHERWOOD ROAD  
SHERWOOD ROAD INDUSTRIAL, LLC

TAX LOT 204  
TAX MAP 2S 1 28C

TAX LOT 501  
TAX MAP 2S 1 28C

**NOTE:**  
REFER TO PRELIMINARY TREE PRESERVATION  
AND REMOVAL PLAN, SHEETS P07 AND P08,  
FOR TREES TO BE REMOVED OR PROTECTED.

FEMA 100-YEAR FLOODPLAIN  
ELEVATION: 133 (NGVD 29)

WETLAND BOUNDARY

50' VEGETATED CORRIDOR (VC). NO  
CONSTRUCTION ENCROACHMENT TO  
OCCUR WITHIN BUFFER. VC WILL BE  
ENHANCED PER CWS SPL 21-002637.

FEMA 100-YEAR FLOODPLAIN  
ELEVATION: 133 (NGVD 29)

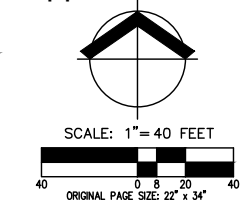
WETLAND BOUNDARY

50' VEGETATED CORRIDOR (VC). NO  
CONSTRUCTION ENCROACHMENT TO  
OCCUR WITHIN BUFFER. VC WILL BE  
ENHANCED PER CWS SPL 21-002637.

SEE SHEET P08

SEE SHEET P08

Exhibits A - R  
Applicant Submittal



**AKS**  
AKS ENGINEERING & FORESTRY, LLC  
12065 SW HERMAN RD, STE 100  
TUALATIN, OR 97062  
503.563.6151  
WWW.AKS-ENG.COM  
ENGINEERING • SURVEYING • NATURAL RESOURCES  
FORESTRY • PLANNING • LANDSCAPE ARCHITECTURE

TAX LOT 301  
TAX MAP 2S 1 28C  
14440 SW TUALATIN-SHERWOOD ROAD  
WELLONS INC.

TAX LOT 202  
TAX MAP 2S 1 28C

TAX LOT 200  
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14200 SW TUALATIN-SHERWOOD ROAD  
SHERWOOD ROAD INDUSTRIAL, LLC

TAX LOT 204  
TAX MAP 2S 1 28C

TAX LOT 501  
TAX MAP 2S 1 28C

EXISTING PRESERVED SITE TREES:

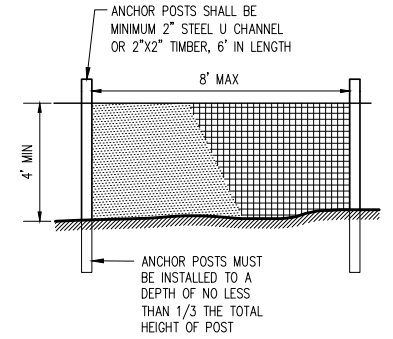
TREE TYPE	NATURE	QUANTITY	TOTAL CANOPY AREA (CANOPY AREA X QUANTITY X 2 EXISTING TREE CREDIT)
APPLE	(20' DIA) 314 SF	3	±1,884 SF
BIGLEAF MAPLE	(50' DIA) 1,963 SF	2	±7,852 SF
CHERRY	(20' DIA) 314 SF	13	±8,164 SF
COTTONWOOD	(30' DIA) 707 SF	7	±9,898 SF
DOUGLAS-FIR	(40' DIA) 1,257 SF	68	±170,952 SF
HAWTHORN	(18' DIA) 254 SF	4	±2,032 SF
OREGON ASH	(40' DIA) 1,257 SF	6	±15,084 SF
OREGON WHITE OAK	(50' DIA) 1,963 SF	57	±223,782 SF
PACIFIC MADRONE	(30' DIA) 707 SF	8	±11,312 SF
WILLOW	(20' DIA) 314 SF	2	±1,256 SF

TOTAL EXISTING TREE CANOPY AREA: ±452,216 SF

NET BUILDABLE SITE AREA: ±733,968 SF (±16.85 AC)  
 MINIMUM REQUIRED TREE CANOPY COVERAGE: ±220,190 SF (30%)  
 TOTAL TREE CANOPY COVERAGE: ±452,216 SF (62%)

**LEGEND**

- EXISTING CONIFEROUS TREE: \* (with star symbol)
- EXISTING DECIDUOUS TREE: ○ (with circle symbol)
- TREE REMOVAL: ⊗ (with X symbol)
- EXISTING GROUND CONTOUR (2 FT): - - - - -
- EXISTING GROUND CONTOUR (10 FT): - - - - - 200 - - - - -
- FINISHED GRADE CONTOUR (2 FT): ————
- FINISHED GRADE CONTOUR (10 FT): ———— 200 ————
- TREE PROTECTION FENCE: ~~~~~
- SEDIMENT FENCE (STRAW WATTLES TO BE USED WITHIN THE ROOTZONE OF TREES TO BE PRESERVED): — x — x —
- SEDIMENT FENCE AND ADDITIONAL SECONDARY BMP (STRAW WATTLES TO BE USED WITHIN THE ROOTZONE OF TREES TO BE PRESERVED): — o — o —



- NOTES:
- BLAZE ORANGE PLASTIC MESH FENCE FOR TREE PROTECTION DEVICE OR APPROVED EQUAL.
  - AVOID DAMAGE TO TREE ROOT ZONE. DO NOT DAMAGE OR SEVERE LARGE ROOTS WHEN INSTALLING POSTS.
  - DEVICE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

**TREE PROTECTION FENCE**

PRELIMINARY  
NOT FOR  
CONSTRUCTION

BRUCE R. BALDWIN  
CERTIFICATE NUMBER: PN-8686A  
EXPIRATION DATE: 12/31/23

**CASCADE COLUMBIA  
DISTRIBUTION COMPANY**  
**SHERWOOD OREGON**  
TAX LOT 200

**PRELIMINARY TREE  
PRESERVATION AND  
REMOVAL PLAN**

DESIGNED BY: KNU  
DRAWN BY: KNU  
MANAGED BY: SR  
CHECKED BY: SR  
DATE: 5/26/2022

**PRELIMINARY  
NOT FOR  
CONSTRUCTION**

REVISIONS

JOB NUMBER  
**7431**

SHEET  
**P07**

AKS DRAWING FILE: 7431 PRELIM TREE PRESERVATION.DWG | LAYOUT: P06

**PRUNING/TREE REMOVAL NOTES:**

1. THE CONTRACTOR SHALL PROVIDE AN ADEQUATE CREW OF PERSONNEL, EQUIPMENT, AND MATERIALS TO SAFELY AND EFFICIENTLY COMPLETE THE ASSIGNED WORK. EACH SUCH CREW SHALL INCLUDE AN INDIVIDUAL WHO SHALL BE DESIGNATED AS THE CREW SUPERVISOR, BE RESPONSIBLE FOR THE CREW'S ACTIVITIES, RECEIVE INSTRUCTION FROM THE OWNER OR THE OWNER'S REPRESENTATIVE, AND DIRECT THE CREW TO ACCOMPLISH SUCH WORK.
2. WHENEVER A TREE, WHICH IS NOT SCHEDULED TO BE REMOVED, MUST BE TRIMMED OR PRUNED, THE CONTRACTOR SHALL ENSURE THAT SUCH TRIMMING AND PRUNING IS CARRIED OUT UNDER THE DIRECT SUPERVISION OF A CERTIFIED ARBORIST. ALL PRUNING AND TRIMMING SHALL BE PERFORMED IN ACCORDANCE WITH THE PROVISIONS OF ANSI A300 "STANDARD PRACTICES FOR TREE, SHRUB AND OTHER WOODY PLANT MAINTENANCE".
3. UNLESS AS OTHERWISE DIRECTED BY THE OWNER, ROOT BALLS FROM TREES BEING REMOVED SHALL BE COMPLETELY REMOVED UNLESS THE ROOT REMOVAL CROSSES ONTO ADJACENT PROPERTIES OR WOULD COMPROMISE TREES BEING PRESERVED. IN THOSE CASES, THE STUMPS SHALL BE GROUND AS NECESSARY SO AS NOT TO CAUSE DAMAGE TO THE ROOT ZONES OF ADJACENT TREES TO BE PRESERVED ON THE SUBJECT PARCEL OR ADJUTING PARCELS. STUMPS NEAR PROPERTY LINES SHALL ALSO BE GROUND AS NECESSARY SO AS NOT TO CAUSE DISTURBANCE TO ADJACENT PARCELS.
4. THE CONTRACTOR SHALL PERFORM ALL WORK IN ACCORDANCE WITH THE LATEST GOVERNMENTAL SAFETY REGULATIONS. ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE WITH ANSI Z133.1 "PRUNING, TRIMMING, REPAIRING, MAINTAINING AND REMOVING TREES AND CUTTING BRUSH-SAFETY REQUIREMENTS" WITH SPECIAL EMPHASIS GIVEN TO THE REQUIREMENT THAT ONLY QUALIFIED LINE-CLEARANCE TREE TRIMMERS BE ASSIGNED TO WORK WHERE A POTENTIAL ELECTRICAL HAZARD EXISTS.
5. THE CONTRACTOR SHALL MAKE ALL THE NECESSARY ARRANGEMENTS WITH ANY UTILITY THAT MUST BE PROTECTED OR RELOCATED IN ORDER TO ACCOMPLISH THE WORK. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE PROTECTION OF THE OPERATING CONDITION OF ALL ACTIVE UTILITIES WITHIN THE AREA OF CONSTRUCTION AND SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING UTILITIES.
6. ANY MATERIAL RESULTING FROM THE TRIMMING OR REMOVAL OF ANY TREES SHALL BECOME THE RESPONSIBILITY OF THE CONTRACTOR TO DISPOSE OF.
7. HAZARDOUS TREE REPORTING: ANY PERSON ENGAGED IN TRIMMING OR PRUNING WHO BECOMES AWARE OF A TREE OF DOUBTFUL STRENGTH, THAT COULD BE DANGEROUS TO PERSONS AND PROPERTY, SHALL REPORT SUCH TREE(S) TO THE OWNER OR THE OWNER'S REPRESENTATIVE. SUCH TREES SHALL INCLUDE THOSE THAT ARE OVER MATURE, DISEASED, OR SHOWING SIGNS OF DECAY OR OTHER STRUCTURAL WEAKNESS.
8. TREES DETERMINED TO BE A HAZARD SHALL BE REMOVED AS SOON AS POSSIBLE.
9. DAMAGES: ANY DAMAGE CAUSED BY THE CONTRACTOR, INCLUDING, BUT NOT LIMITED TO, BROKEN SIDEWALK, CURB, RUTTED LAWN, BROKEN WATER SHUT-OFFS, WIRE DAMAGE, BUILDING DAMAGE, STREET DAMAGE, ETC., WILL BE REPAIRED OR REPLACED IN A TIMELY MANNER, TO THE OWNER'S SATISFACTION, AND ALL COSTS PAID BY THE CONTRACTOR.
10. ANY BRUSH CLEARING REQUIRED WITHIN THE TREE PROTECTION AREA SHALL BE ACCOMPLISHED WITH HAND OPERATED EQUIPMENT.
11. TREES TO BE REMOVED SHALL BE FELLED SO AS TO FALL AWAY FROM ASSUMED TREE ROOT ZONES AND TO AVOID PULLING AND BREAKING OF ROOTS TO REMAIN. DIRECTIONAL FELLING OF TREES SHALL BE USED TO AVOID DAMAGE TO TREES DESIGNATED FOR RETENTION.
12. ALL DOWNED BRUSH AND TREES SHALL BE REMOVED FROM THE TREE PROTECTION AREA EITHER BY HAND OR WITH EQUIPMENT STAGED OUTSIDE OF THE TREE PROTECTION AREA. EXTRACTION SHALL OCCUR BY LIFTING THE MATERIAL OUT, NOT BY SKIDDING IT ACROSS THE GROUND.
13. IF TEMPORARY HAUL OR ACCESS ROADS MUST PASS OVER TREE PROTECTION AREA, A ROADBED OF STEEL PLATES, OR 6 INCHES OF MULCH, OR 6 INCHES OF GRAVEL SHALL BE PLACED TO PREVENT SOIL COMPACTION IF DETERMINED NECESSARY BY THE PROJECT ARBORIST. THE ROADBED MATERIAL SHALL BE REPLENISHED AS NECESSARY TO MAINTAIN A 6-INCH DEPTH.
14. PRUNING: THE CONTRACTOR SHALL CONSULT WITH THE PROJECT ARBORIST PRIOR TO ANY PRUNING ACTIVITIES NECESSARY FOR CONSTRUCTION ACTIVITIES. ALL PRUNING ACTIVITIES SHALL BE PERFORMED IN ACCORDANCE WITH ANSI A300 PRUNING STANDARDS. PRUNING SHALL BE COMPLETED PRIOR TO THE START OF CONSTRUCTION ACTIVITIES.
15. CUT BRANCHES AND ROOTS WITH SHARP PRUNING INSTRUMENTS THAT DO NOT CHOP OR TEAR.
16. FENCING SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITIES, INCLUDING, BUT NOT LIMITED TO CLEARING, GRADING, EXCAVATION, OR DEMOLITION WORK, AND SHALL BE REMOVED ONLY AFTER THE COMPLETION OF ALL CONSTRUCTION ACTIVITIES, INCLUDING LANDSCAPING AND IRRIGATION INSTALLATION.
17. TREE PROTECTION FENCING SHALL BE FLUSH WITH THE INITIAL UNDISTURBED GRADE.

**TREE PRESERVATION NOTES:**

**PLACING MATERIALS NEAR TREES:**

1. NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE TREE PROTECTION AREA OF ANY TREE DESIGNATED TO REMAIN, INCLUDING, BUT NOT LIMITED TO, PARKING EQUIPMENT, PLACING SOLVENTS, STORING BUILDING MATERIAL AND SOIL DEPOSITS, DUMPING CONCRETE WASHOUT.

**ATTACHMENTS TO TREES:**

1. DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY OBJECT TO ANY TREE DESIGNATED FOR PROTECTION.

**GRADING NEAR TREES:**

1. THE GRADE SHALL NOT BE ELEVATED OR REDUCED WITHIN THE TREE PROTECTION AREA OF TREES TO BE PRESERVED WITHOUT THE PROJECT ARBORIST'S AUTHORIZATION. THE PROJECT ARBORIST MAY ALLOW COVERAGE OF UP TO ONE HALF OF THE AREA OF THE TREE'S ASSUMED ROOT ZONE WITH LIGHT SOILS (NO CLAY) TO THE MINIMUM DEPTH NECESSARY TO CARRY OUT GRADING OR LANDSCAPING PLANS, IF IT WILL NOT IMPERIL THE SURVIVAL OF THE TREE. AERATION DEVICES MAY BE REQUIRED TO ENSURE THE TREE'S SURVIVAL.
2. IF THE GRADE ADJACENT TO A PRESERVED TREE IS RAISED SUCH THAT IT COULD SLOUGH OR ERODE INTO THE TREE PROTECTION AREA, IT SHALL BE PERMANENTLY STABILIZED TO PREVENT SUFFOCATION OF THE ROOTS.

3. THE APPLICANT SHALL NOT INSTALL AN IMPERVIOUS SURFACE WITHIN THE TREE PROTECTION AREA WITHOUT THE AUTHORIZATION OF THE PROJECT ARBORIST. THE PROJECT ARBORIST MAY REQUIRE SPECIFIC CONSTRUCTION METHODS AND/OR USE OF AERATION DEVICES TO ENSURE THE TREE'S SURVIVAL AND TO MINIMIZE THE POTENTIAL FOR ROOT INDUCED DAMAGE TO THE IMPERVIOUS SURFACE.
4. TO THE GREATEST EXTENT PRACTICAL, UTILITY TRENCHES SHALL BE LOCATED OUTSIDE OF THE TREE PROTECTION AREA. THE PROJECT ARBORIST MAY REQUIRE THAT UTILITIES BE TUNNELED UNDER THE ROOTS OF TREES TO BE RETAINED IF THE PROJECT ARBORIST DETERMINES THAT TRENCHING WOULD SIGNIFICANTLY REDUCE THE CHANCES OF THE TREE'S SURVIVAL.
5. TREES AND OTHER VEGETATION TO BE RETAINED SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION. CLEARING OPERATIONS SHALL BE CONDUCTED SO AS TO EXPOSE THE SMALLEST PRACTICAL AREA OF SOIL FOR THE LEAST POSSIBLE AMOUNT OF TIME. SHRUBS, GROUND COVER, AND STUMPS SHALL BE MAINTAINED TO CONTROL EROSION, WHERE FEASIBLE. WHERE NOT FEASIBLE, APPROPRIATE EROSION CONTROL PRACTICES SHALL BE IMPLEMENTED.

**ADDITIONAL REQUIREMENTS:**

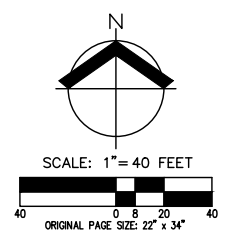
1. THE PROJECT ARBORIST MAY REQUIRE ADDITIONAL TREE PROTECTION MEASURES WHICH ARE CONSISTENT WITH ACCEPTED URBAN FORESTRY PRACTICES.

**EXCAVATION WITHIN ASSUMED TREE ROOT ZONES:**

1. EXCAVATION IN THE TOP 24 INCHES OF SOIL IN THE ASSUMED TREE ROOT ZONE SHOULD BEGIN AT THE EXCAVATION LINE THAT IS CLOSEST TO THE TREE.
2. THE EXCAVATION SHOULD BE DONE BY HAND/SHOVEL OR WITH AN EXCAVATOR AND A PERSON WITH A SHOVEL, PRUNING SHEARS, AND A PRUNING SAW.
3. IF DONE BY HAND, ALL ROOTS 1-INCH DIAMETER OR LARGER SHOULD BE PRUNED AT THE EXCAVATION LINE.
4. IF DONE WITH AN EXCAVATOR (MOST LIKELY SCENARIO), THEN THE OPERATOR SHALL START THE CUT AT THE EXCAVATION LINE AND CAREFULLY "FEEL" FOR ROOTS/RESISTANCE. WHEN THERE IS RESISTANCE, THE PERSON WITH THE SHOVEL HAND DIGS AROUND THE ROOTS AND PRUNES THE ROOTS 1-INCH DIAMETER OR LARGER.
5. THE EXCAVATOR IS TO REMAIN OFF OF THE TREE ROOTS TO BE PRESERVED AT ALL TIMES.
6. ALL ROOTS SHALL BE CUT CLEANLY WITH PRUNING SHEARS OR A PRUNING SAW.
7. THE PROJECT ARBORIST MUST BE ON SITE DURING ANY WORK WITHIN THE TREE PROTECTION AREA.

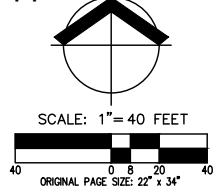
**SEE SHEET P07**

**SEE SHEET P07**



AKS DRAWING FILE: 7431 PRELIM TREE PRESERVATION.DWG | LAYOUT: P08



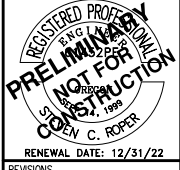


**AKS**  
AKS ENGINEERING & FORESTRY, LLC  
12065 SW HERMAN RD, STE 100  
TUALATIN, OR 97062  
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WWW.AKS-ENG.COM  
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FORESTRY • PLANNING • LANDSCAPE ARCHITECTURE

**CASCADE COLUMBIA  
DISTRIBUTION COMPANY**  
SHERWOOD OREGON  
TAX MAP 2S 1 28C

**PRELIMINARY SITE PLAN  
(SOUTH)**

DESIGNED BY: KNU  
DRAWN BY: KNU  
MANAGED BY: SR  
CHECKED BY: SR  
DATE: 5/26/2022

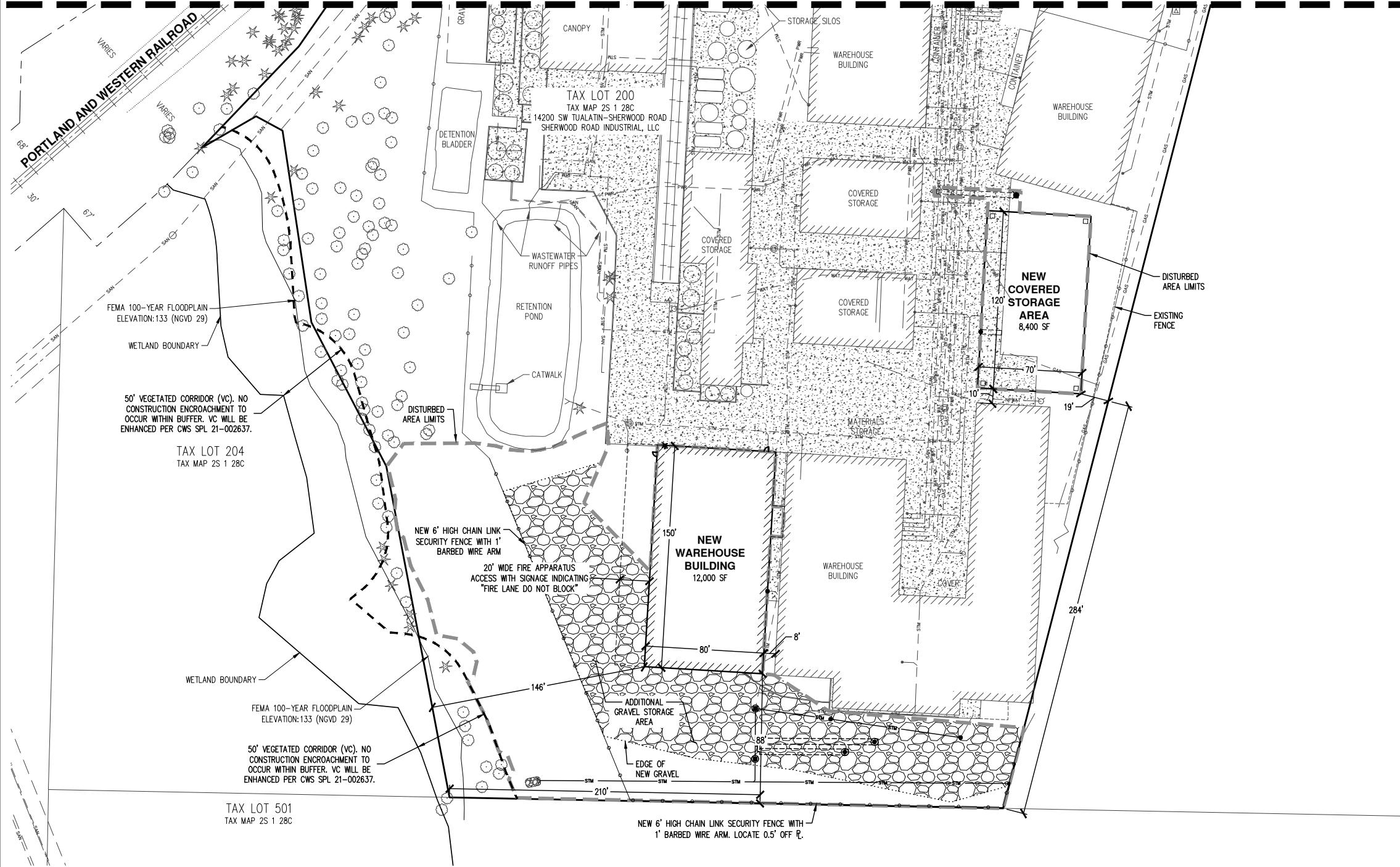


REVISIONS

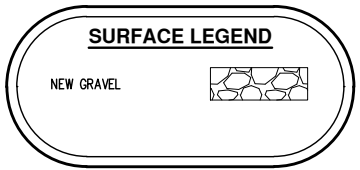
JOB NUMBER  
**7431**  
SHEET  
**P09**

SEE SHEET P10

SEE SHEET P10



TAX LOT 201  
TAX MAP 2S 1 28C



**IMPERVIOUS AREA SUMMARY**

EXISTING IMPERVIOUS AREA: ±398,444 SF  
NEW IMPERVIOUS AREA: ±25,480 SF  
TOTAL IMPERVIOUS AREA: ±423,924 SF  
**NET BUILDABLE AREA**  
TOTAL SITE AREA: ±733,968 SF = ±16.85 AC  
UNBUILDABLE AREA (WITHIN FLOODPLAIN): ±944 SF = ±0.02 AC  
NET BUILDABLE AREA: ±733,024 SF = ±16.83 AC

**NEW STRUCTURES**


NEW STORAGE BUILDING: ±12,000 SF  
NEW COVERED STORAGE AREA: ±8,400 SF


**PARKING CALCULATIONS**

EXISTING WAREHOUSE AREA: ±67,273 SF  
NEW WAREHOUSE AREA: ±20,400 SF  
TOTAL WAREHOUSE AREA: ±87,673 SF  
EXISTING OFFICE AREA: ±11,333 SF  
MINIMUM PARKING REQUIRED: 57 SPACES (((0.3 SPACES/1000 SF) X 87,673 SF) + ((2.7 SPACES/1000 SF) X 11,333 SF)) = 56.9 SPACES BASED ON WAREHOUSE BUILDING AND GENERAL OFFICE DESIGNATIONS)  
PARKING PROVIDED: 60 SPACES

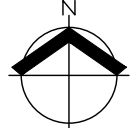


**SURFACE LEGEND**

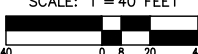
NEW GRAVEL 

NEW AC PAVEMENT 

N



SCALE: 1" = 40 FEET



ORIGINAL PAGE SIZE: 22" x 34"

**IMPERVIOUS AREA SUMMARY**

EXISTING IMPERVIOUS AREA: ±398,444 SF  
 NEW IMPERVIOUS AREA: ±25,480 SF  
 TOTAL IMPERVIOUS AREA: ±423,924 SF

**NET BUILDABLE AREA**

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 UNBUILDABLE AREA (WITHIN FLOODPLAIN): ±944 SF = ±0.02 AC  
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**NEW STRUCTURES**

NEW STORAGE BUILDING: ±12,000 SF  
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EXISTING WAREHOUSE AREA: ±67,273 SF  
 NEW WAREHOUSE AREA: ±20,400 SF  
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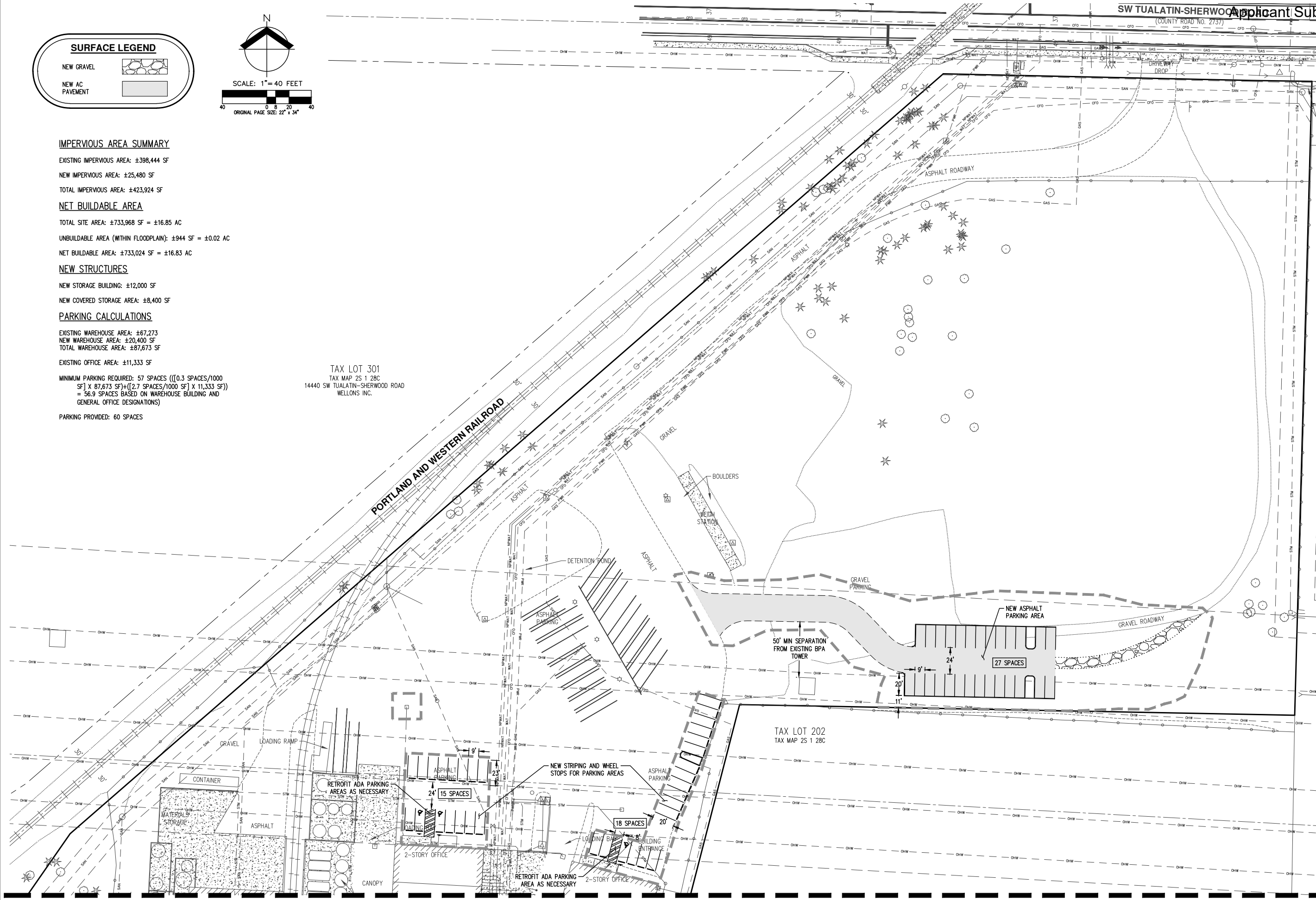
EXISTING OFFICE AREA: ±11,333 SF

MINIMUM PARKING REQUIRED: 57 SPACES  
 (((0.3 SPACES/1000 SF) X 87,673 SF) + ((2.7 SPACES/1000 SF) X 11,333 SF))  
 = 56.9 SPACES BASED ON WAREHOUSE BUILDING AND  
 GENERAL OFFICE DESIGNATIONS)

PARKING PROVIDED: 60 SPACES

TAX LOT 301  
 TAX MAP 2S 1 28C  
 14440 SW TUALATIN-SHERWOOD ROAD  
 WELLONS INC.

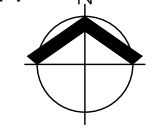
TAX LOT 202  
 TAX MAP 2S 1 28C



SEE SHEET P09

SEE SHEET P09

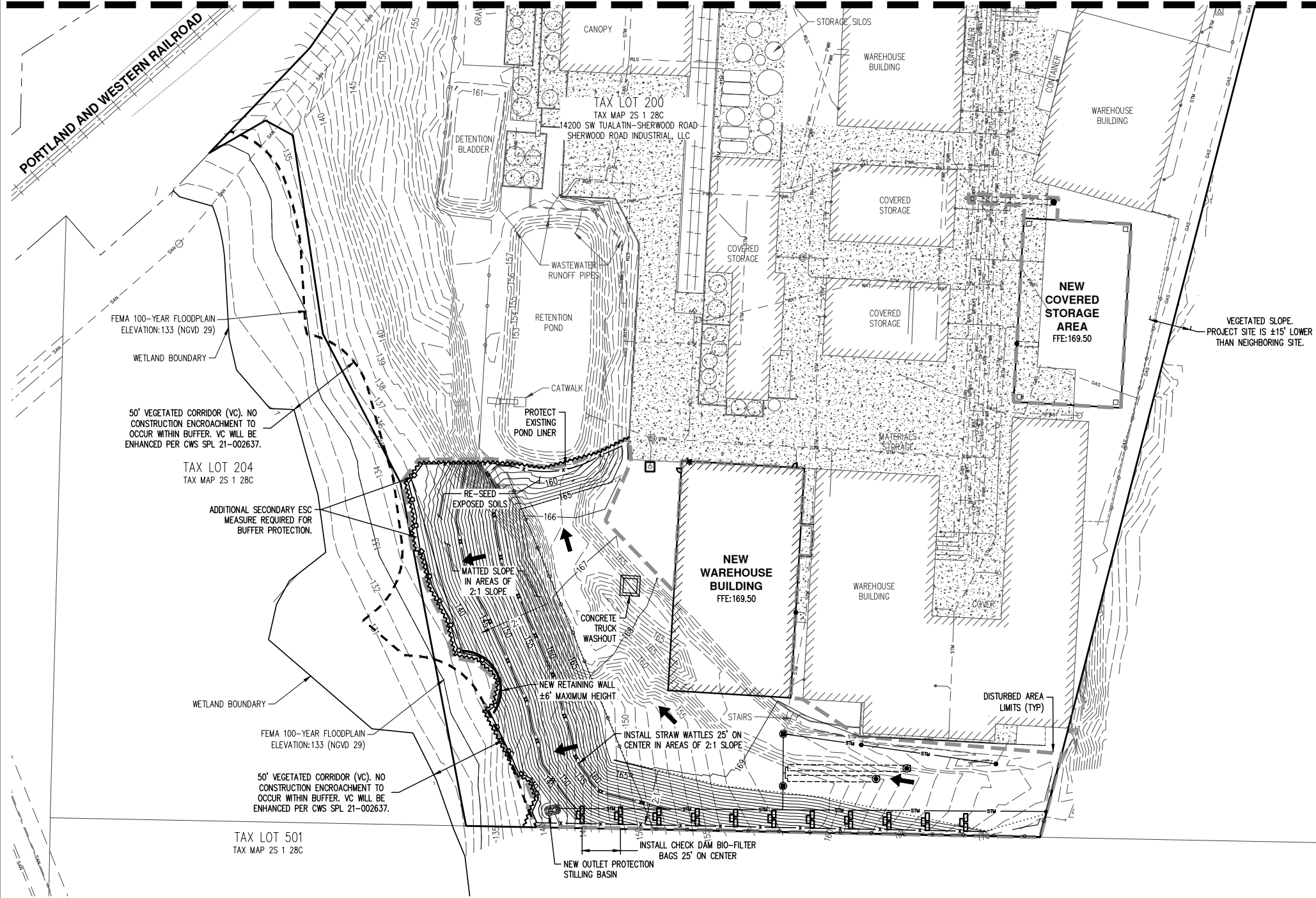
AKS DRAWING FILE: 7431 PRELIM SITE.DWG | LAYOUT: P10



SCALE: 1" = 40 FEET  
ORIGINAL PAGE SIZE: 22" x 34"

SEE SHEET P12

SEE SHEET P12



TAX LOT 201  
TAX MAP 2S 1 28C

**EROSION AND SEDIMENT CONTROL BMP IMPLEMENTATION**

1. ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL SITE INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
2. LONG TERM STABILIZATION MEASURES, INCLUDING SLOPE MATTING AND PERMANENT SEEDING SHALL BE IN PLACE OVER ALL EXPOSED SOILS IMMEDIATELY AFTER SITE FINISH GRADE IS ESTABLISHED. CONTRACTOR MAY PHASE LONG TERM STABILIZATION MEASURES BASED ON TIMING AND COMPLETION OF FINISH GRADE.
3. SLOPE STABILIZATION (TRACK WALKING) TO BE USED ON ALL PERVIOUS AREAS WITHIN DISTURBED AREA BOUNDARY THAT ARE NOT TO BE COVERED WITH SLOPE MATTING.

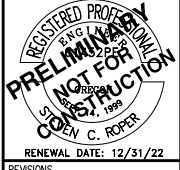
**LEGEND**

EXISTING GROUND CONTOUR (1FT)	---164---
EXISTING GROUND CONTOUR (5FT)	---165---
FINISHED GRADE CONTOUR (1FT)	---164---
FINISHED GRADE CONTOUR (5FT)	---165---
DISTURBED AREA LIMITS	--- ---
CONCRETE TRUCK WASHOUT INSTALL PER CLEAN WATER SERVICES DETAIL DRAWING 900	
FLOW ARROW	
SEDIMENT FENCE (TO BE INSTALLED PRIOR TO GRADING) INSTALL PER CLEAN WATER SERVICES DETAIL DRAWING 875	--- x ---
SEDIMENT FENCE AND ADDITIONAL SECONDARY BMP MEASURE - COMPOST SOCK/BERM OR STRAW WATTLES (TO BE INSTALLED PRIOR TO GRADING) INSTALL PER CLEAN WATER SERVICES DETAIL DRAWINGS 875, 880, OR 890 AS APPLICABLE	--- o ---
TREE PROTECTION FENCE	~~~~~
INLET PROTECTION (TYPE 5) INSTALL PER CLEAN WATER SERVICES DETAIL DRAWING 920	
CHECK DAM BIO-FILTER BAG (TO BE INSTALLED POST GRADING) INSTALL PER CLEAN WATER SERVICES DETAIL DRAWING 845	
STRAW WATTLES (TO BE INSTALLED POST GRADING) INSTALL PER CLEAN WATER SERVICES DETAIL DRAWINGS 880 AND 940	--- xx ---

**CASCADE COLUMBIA DISTRIBUTION COMPANY SHERWOOD OREGON**  
TAX MAP 2S 1 28C

**PRELIMINARY GRADING AND EROSION-SEDIMENT CONTROL PLAN (SOUTH)**  
TAX LOT 201

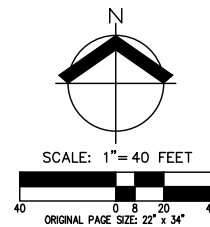
DESIGNED BY: KNU  
DRAWN BY: KNU  
MANAGED BY: SR  
CHECKED BY: SR  
DATE: 5/26/2022



JOB NUMBER  
**7431**  
SHEET  
**P11**

EROSION AND SEDIMENT CONTROL BMP IMPLEMENTATION

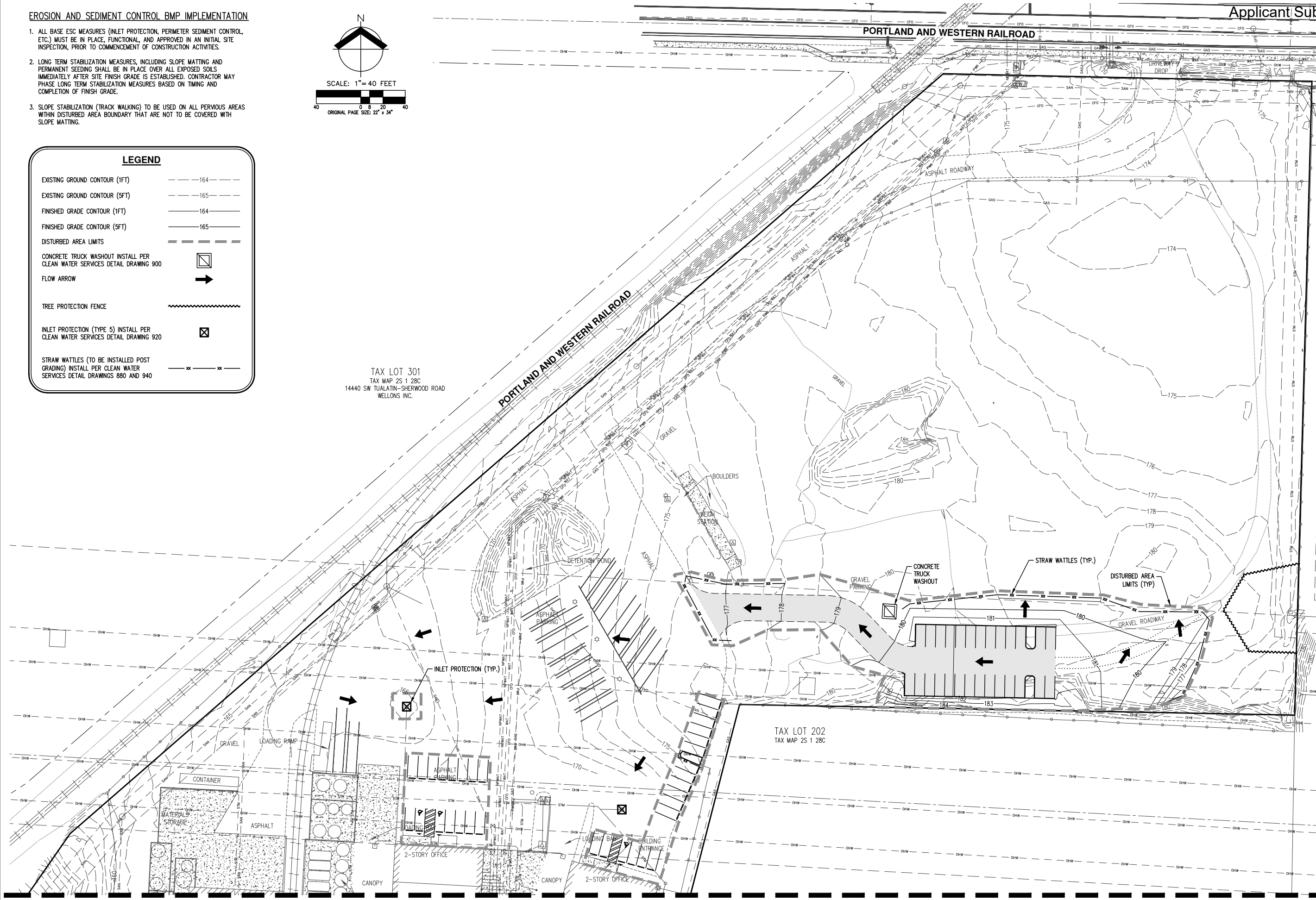
1. ALL BASE ESC MEASURES (INLET PROTECTION, PERIMETER SEDIMENT CONTROL, ETC.) MUST BE IN PLACE, FUNCTIONAL, AND APPROVED IN AN INITIAL SITE INSPECTION, PRIOR TO COMMENCEMENT OF CONSTRUCTION ACTIVITIES.
2. LONG TERM STABILIZATION MEASURES, INCLUDING SLOPE MATTING AND PERMANENT SEEDING SHALL BE IN PLACE OVER ALL EXPOSED SOILS IMMEDIATELY AFTER SITE FINISH GRADE IS ESTABLISHED. CONTRACTOR MAY PHASE LONG TERM STABILIZATION MEASURES BASED ON TIMING AND COMPLETION OF FINISH GRADE.
3. SLOPE STABILIZATION (TRACK WALKING) TO BE USED ON ALL PERVIOUS AREAS WITHIN DISTURBED AREA BOUNDARY THAT ARE NOT TO BE COVERED WITH SLOPE MATTING.



**LEGEND**

EXISTING GROUND CONTOUR (1FT)	---	164
EXISTING GROUND CONTOUR (5FT)	- - -	165
FINISHED GRADE CONTOUR (1FT)	---	164
FINISHED GRADE CONTOUR (5FT)	- - -	165
DISTURBED AREA LIMITS	- - - - -	
CONCRETE TRUCK WASHOUT INSTALL PER CLEAN WATER SERVICES DETAIL DRAWING 900		
FLOW ARROW		
TREE PROTECTION FENCE		
INLET PROTECTION (TYPE 5) INSTALL PER CLEAN WATER SERVICES DETAIL DRAWING 920		
STRAW WATTLES (TO BE INSTALLED POST GRADING) INSTALL PER CLEAN WATER SERVICES DETAIL DRAWINGS 880 AND 940		

TAX LOT 301  
TAX MAP 2S 1 28C  
14440 SW TUALATIN-SHERWOOD ROAD  
WELLONS INC.



SEE SHEET P11

SEE SHEET P11

**AKS**  
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WWW.AKS-ENG.COM

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**CASCADE COLUMBIA**  
**DISTRIBUTION COMPANY**  
**SHERWOOD OREGON**  
TAX MAP 2S 1 28C  
TAX LOT 200

**PRELIMINARY GRADING**  
**AND EROSION-SEDIMENT**  
**CONTROL PLAN (NORTH)**

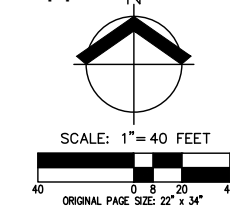
DESIGNED BY: KNU  
DRAWN BY: KNU  
MANAGED BY: SR  
CHECKED BY: SR  
DATE: 5/26/2022

**REGISTERED PROFESSIONAL ENGINEER**  
**PRELIMINARY PLAN NOT FOR CONSTRUCTION**  
C. ROFFER  
RENEWAL DATE: 12/31/22

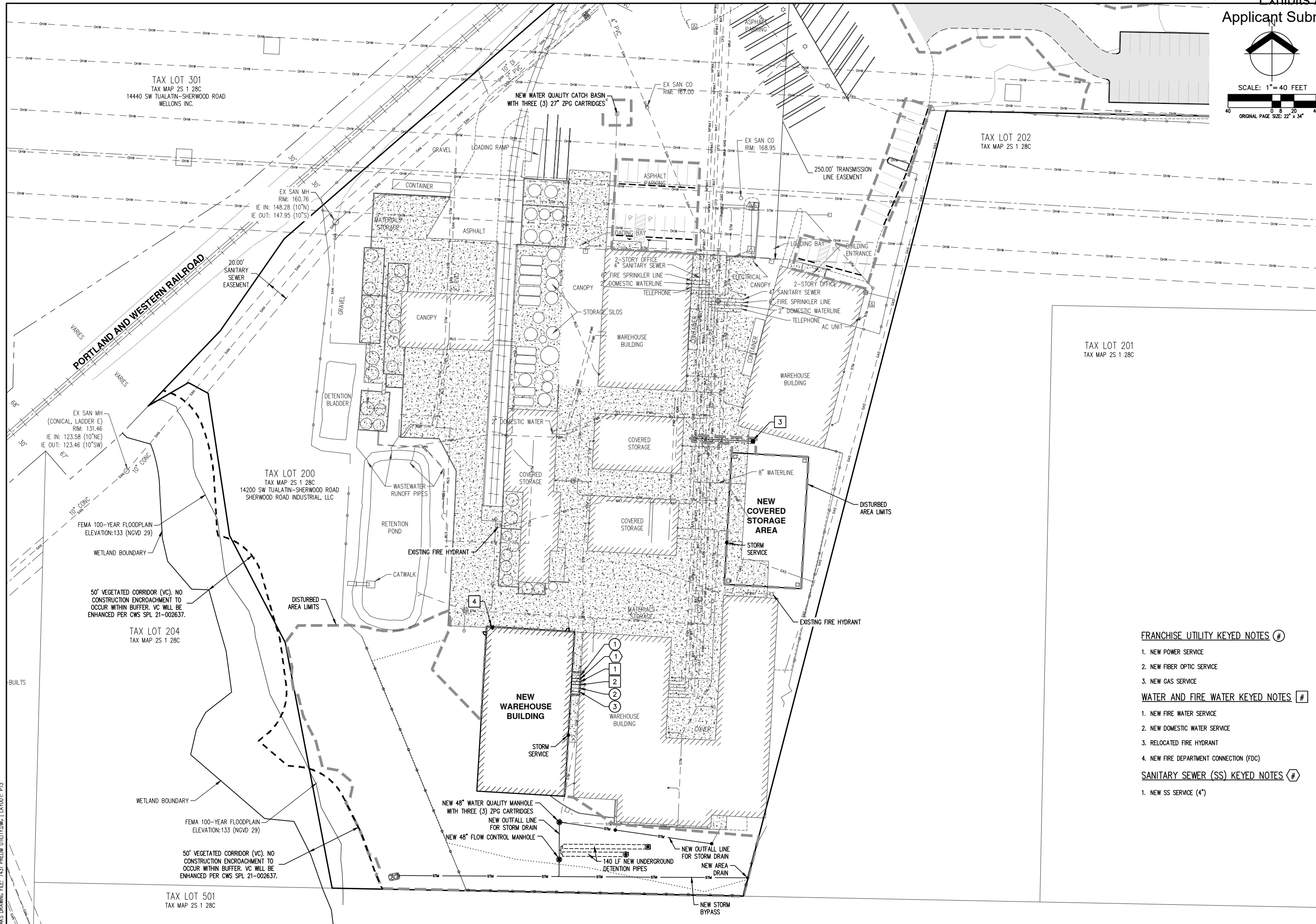
JOB NUMBER  
7431  
SHEET  
**P12**

AKS DRAWING FILE: 7431 PRELIM GRADING.DWG LAYOUT: P12





DESIGNED BY:	KNU
DRAWN BY:	KNU
MANAGED BY:	SR
CHECKED BY:	SR
DATE:	5/26/2022
REVISIONS:	



**FRANCHISE UTILITY KEYED NOTES #**

1. NEW POWER SERVICE
2. NEW FIBER OPTIC SERVICE
3. NEW GAS SERVICE

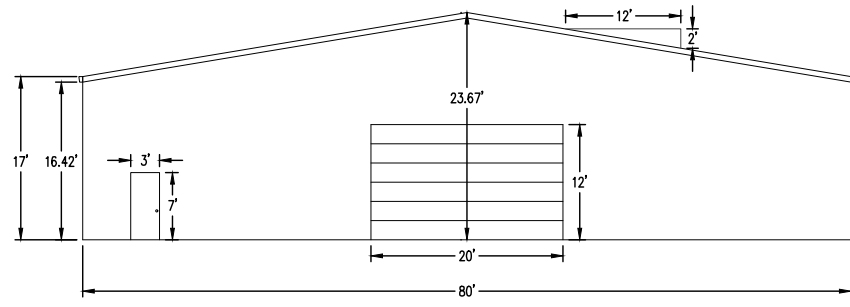
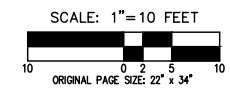
**WATER AND FIRE WATER KEYED NOTES #**

1. NEW FIRE WATER SERVICE
2. NEW DOMESTIC WATER SERVICE
3. RELOCATED FIRE HYDRANT
4. NEW FIRE DEPARTMENT CONNECTION (FDC)

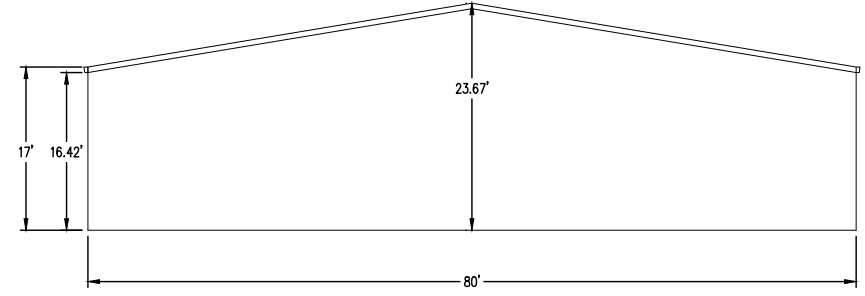
**SANITARY SEWER (SS) KEYED NOTES #**

1. NEW SS SERVICE (4")

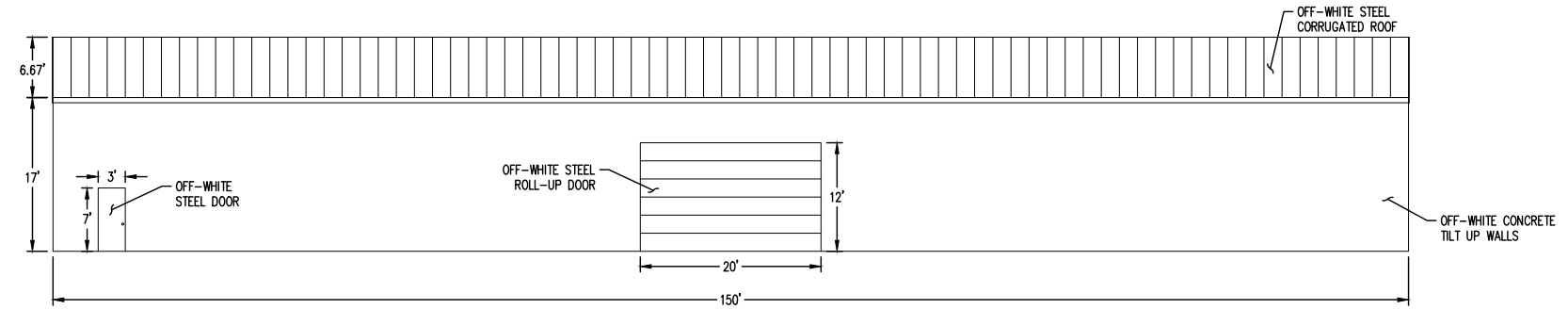
AKS DRAWING FILE: 7431 PRELIM UTILITY.DWG | LAYOUT: P13



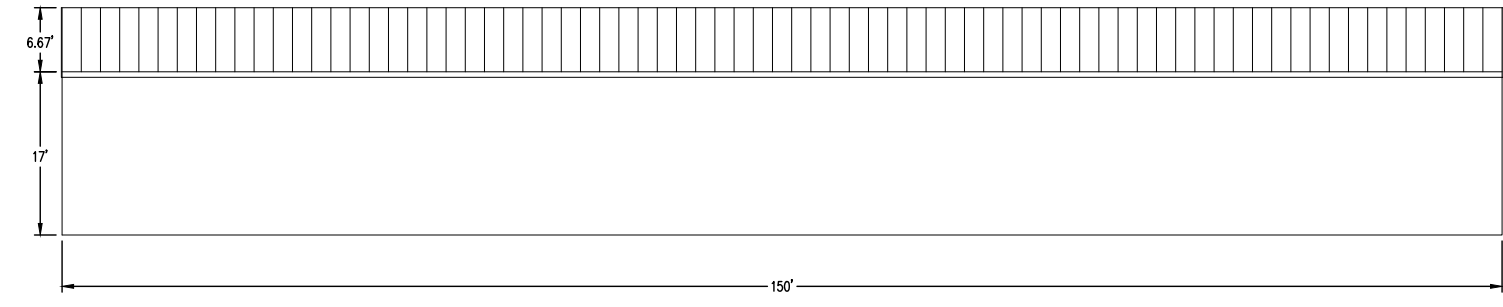
**NEW WAREHOUSE BUILDING - NORTH ELEVATION**  
1"=10'



**NEW WAREHOUSE BUILDING - SOUTH ELEVATION**  
1"=10'



**NEW WAREHOUSE BUILDING - WEST ELEVATION**  
1"=10'



**NEW WAREHOUSE BUILDING - EAST ELEVATION**  
1"=10'



**NEW WAREHOUSE BUILDING - ROOF**  
1"=10'

**CASCADE COLUMBIA  
DISTRIBUTION COMPANY**  
SHERWOOD OREGON  
TAX LOT 200

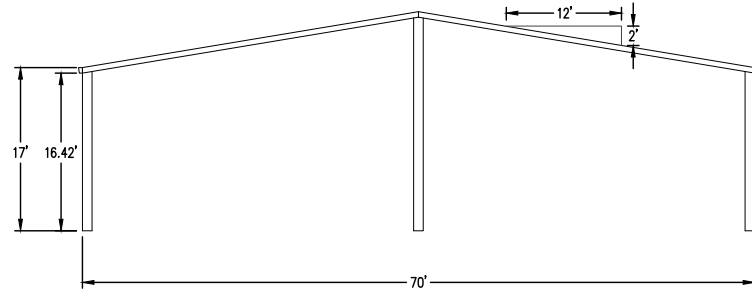
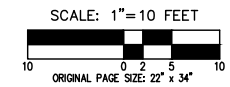
**PRELIMINARY WAREHOUSE  
BUILDING ELEVATIONS**

DESIGNED BY: KNU  
DRAWN BY: KNU  
MANAGED BY: SR  
CHECKED BY: SR  
DATE: 5/26/2022  
REGISTERED PROFESSIONAL ENGINEER  
PRELIMINARY NOT FOR CONSTRUCTION  
COLEEN C. ROPER  
RENEWAL DATE: 12/31/22

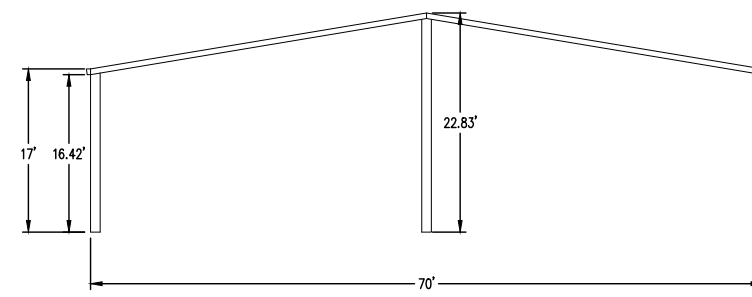
REVISIONS

JOB NUMBER  
7431

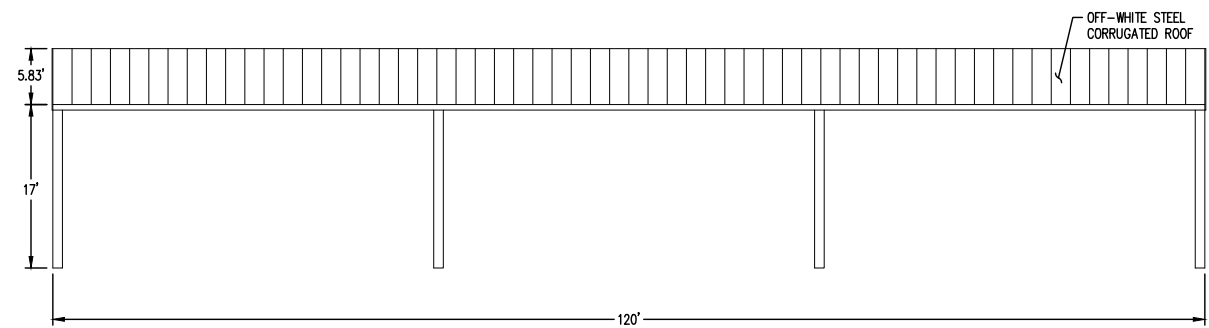
SHEET  
P14



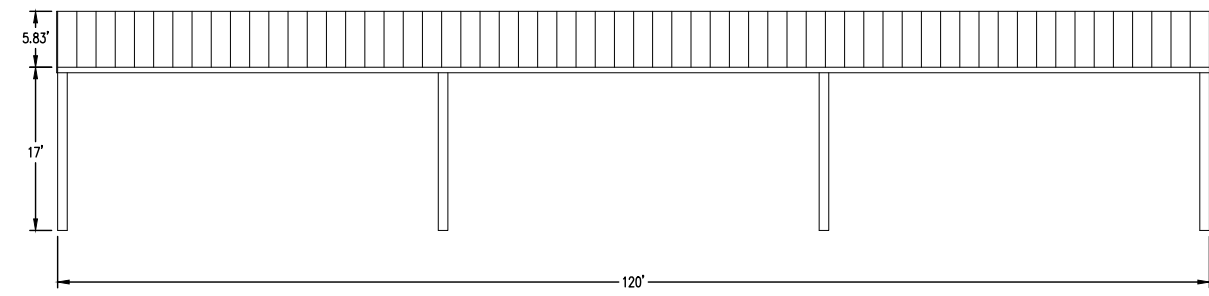
**NEW COVERED STORAGE AREA - NORTH ELEVATION**  
1"=10'



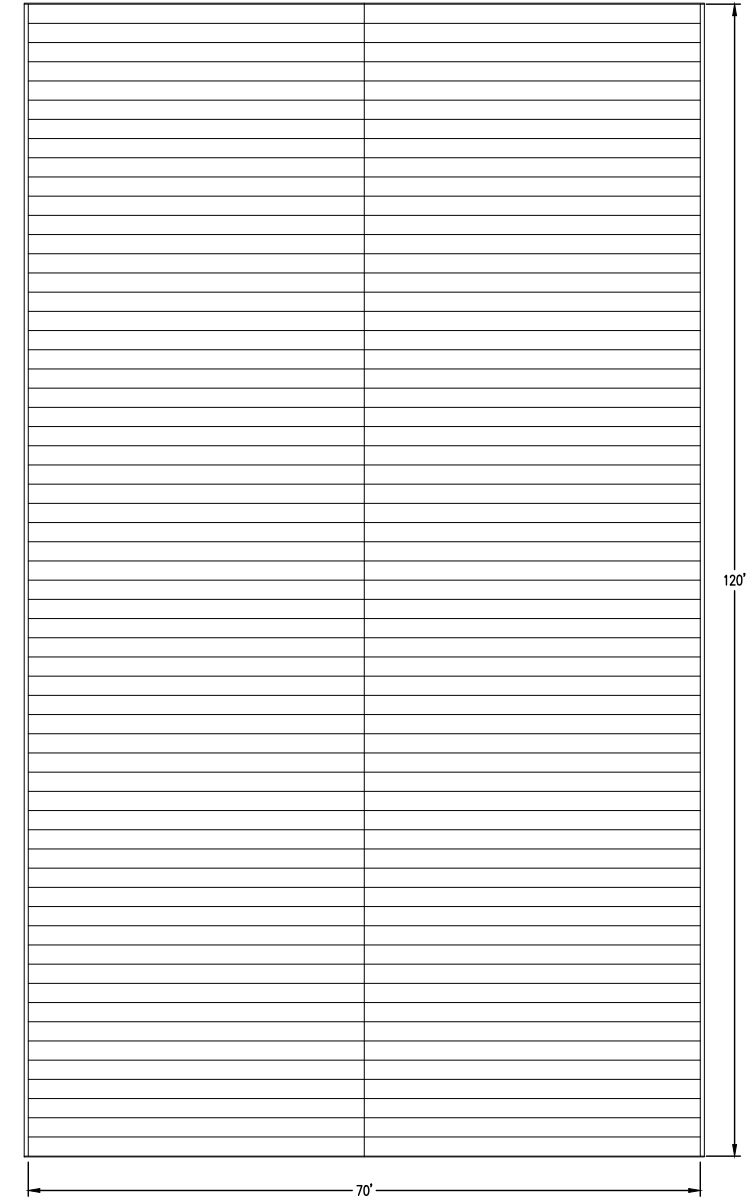
**NEW COVERED STORAGE AREA - SOUTH ELEVATION**  
1"=10'



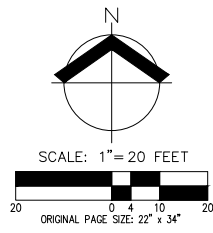
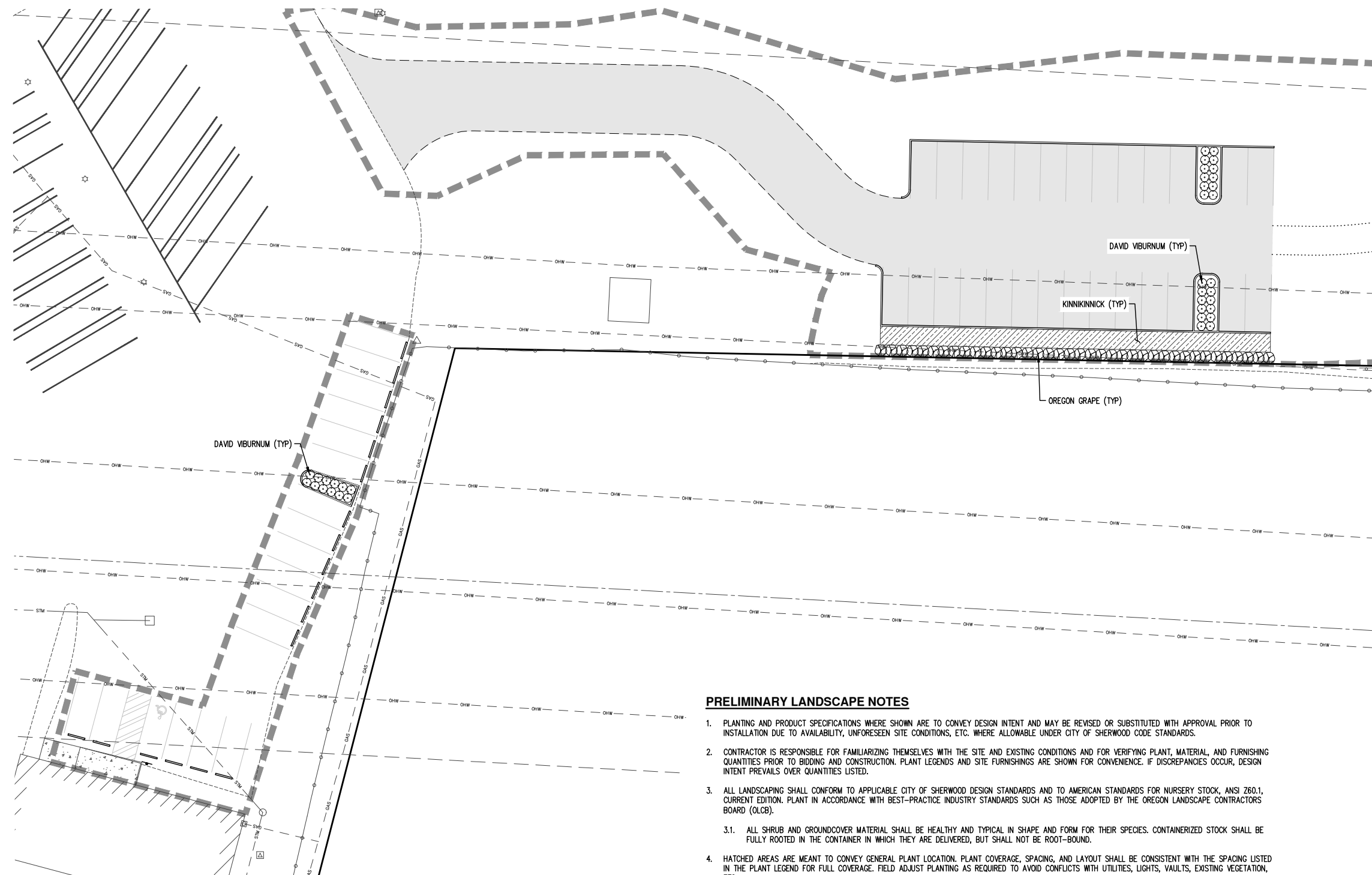
**NEW COVERED STORAGE AREA - WEST ELEVATION**  
1"=10'



**NEW COVERED STORAGE AREA - EAST ELEVATION**  
1"=10'



**NEW COVERED STORAGE AREA - ROOF**  
1"=10'



**PRELIMINARY PLANT SCHEDULE**

SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
	38	MAHONIA AQUIFOLIUM	OREGON GRAPE	2 GAL CONT.	48" o.c.
	36	VIBURNUM DAVIDII	DAVID VIBURNUM	1 GAL CONT.	36" o.c.
GROUND COVERS	QTY	BOTANICAL NAME	COMMON NAME	SIZE/CONTAINER	SPACING
	146	ARCTOSTAPHYLOS UVA-URSI	KINNIKINICK	1 GAL CONT.	30" o.c.

**PRELIMINARY LANDSCAPE NOTES**

- PLANTING AND PRODUCT SPECIFICATIONS WHERE SHOWN ARE TO CONVEY DESIGN INTENT AND MAY BE REVISED OR SUBSTITUTED WITH APPROVAL PRIOR TO INSTALLATION DUE TO AVAILABILITY, UNFORESEEN SITE CONDITIONS, ETC. WHERE ALLOWABLE UNDER CITY OF SHERWOOD CODE STANDARDS.
- CONTRACTOR IS RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH THE SITE AND EXISTING CONDITIONS AND FOR VERIFYING PLANT, MATERIAL, AND FURNISHING QUANTITIES PRIOR TO BIDDING AND CONSTRUCTION. PLANT LEGENDS AND SITE FURNISHINGS ARE SHOWN FOR CONVENIENCE. IF DISCREPANCIES OCCUR, DESIGN INTENT PREVAILS OVER QUANTITIES LISTED.
- ALL LANDSCAPING SHALL CONFORM TO APPLICABLE CITY OF SHERWOOD DESIGN STANDARDS AND TO AMERICAN STANDARDS FOR NURSERY STOCK, ANSI Z60.1, CURRENT EDITION. PLANT IN ACCORDANCE WITH BEST-PRACTICE INDUSTRY STANDARDS SUCH AS THOSE ADOPTED BY THE OREGON LANDSCAPE CONTRACTORS BOARD (OLCB).
  - ALL SHRUB AND GROUND COVER MATERIAL SHALL BE HEALTHY AND TYPICAL IN SHAPE AND FORM FOR THEIR SPECIES. CONTAINERIZED STOCK SHALL BE FULLY ROOTED IN THE CONTAINER IN WHICH THEY ARE DELIVERED, BUT SHALL NOT BE ROOT-BOUND.
- HATCHED AREAS ARE MEANT TO CONVEY GENERAL PLANT LOCATION. PLANT COVERAGE, SPACING, AND LAYOUT SHALL BE CONSISTENT WITH THE SPACING LISTED IN THE PLANT LEGEND FOR FULL COVERAGE. FIELD ADJUST PLANTING AS REQUIRED TO AVOID CONFLICTS WITH UTILITIES, LIGHTS, VAULTS, EXISTING VEGETATION, ETC.
- ALL PLANTING BEDS SHALL BE BROUGHT TO GRADE SHOWN ON THE GRADING PLANS AND BE SMOOTH, AND FREE OF DEBRIS, CLODS, ROOTS, ROCKS OVER 3/4" DIAMETER, ETC. AND HIGH/LOW SPOTS WHERE WATER MAY COLLECT PRIOR TO PLANT INSTALLATION OR SEEDING. NATIVE TOPSOIL, ON-SITE STOCKPILED TOPSOIL, OR IMPORTED TOPSOIL MAY BE USED TO MAKE UP REQUIRED AMOUNTS.
- SOIL PREPARATION: GROWING MEDIUM IN ALL NEW PLANTING BEDS SHALL BE OF SUFFICIENT DEPTH AND QUALITY TO ENSURE PLANT ESTABLISHMENT AND HEALTHY GROWTH. EXISTING, NON-COMPACTED NATIVE TOPSOIL, TOPSOIL STORED ON SITE, OR IMPORTED TOPSOIL WHERE NECESSARY MAY BE USED. TOPSOIL SHALL BE FREE OF ROOTS, PLANTS, SOD, STONES, CLAY LUMPS, DEBRIS, ALKALI SALTS, WEED SEEDS, AND OTHER EXTRANEIOUS MATERIALS HARMFUL TO PLANT GROWTH. SOIL PLACEMENT AND PLANTING SHALL OCCUR IN CONDITIONS THAT DO NOT RESULT IN OVER-COMPACTION OR EROSION, SATURATED SOILS OR OTHER CONDITIONS SUCH AS FREEZING OR ABOVE AVERAGE TEMPERATURES. SOILS SHALL BE IN FRIABLE (WORKABLE) CONDITION WHEN PLACED. FINISH GRADE OF NEW PLANTING AREAS SHALL SEAMLESSLY MEET FINISH GRADE SHOWN ON GRADING PLANS AND ACCOMMODATE MULCH APPLICATION WHERE APPLICABLE.
- IRRIGATION: IRRIGATION SHALL BE DONE BY HAND WATERING, WATER TRUCK, ETC. ALL NEW LANDSCAPING SHALL BE WATERED AT A RATE TO MAINTAIN ALL PLANTINGS IN A HEALTHY, THRIVING CONDITION DURING ESTABLISHMENT (A MINIMUM OF 1-INCH PER WEEK, INCLUDING NATURAL RAINFALL TOTALS, DURING DRY MONTHS - BETWEEN JUNE 15 AND OCTOBER 15) FOR AT LEAST THE FIRST 2-YEARS, UNLESS OTHERWISE APPROVED.
- MULCH: APPLY 3" DEEP WELL-AGED MEDIUM GRIND OR SHREDDED DARK HEMLOCK BARK MULCH UNDER AND AROUND ALL PLANTINGS. DO NOT COVER FOLIAGE OR ROOT CROWNS OF PLANTS WITH BARK MULCH. PLANTS SHALL BE SET TO ACCOMMODATE MULCH APPLICATION WITHOUT BURYING ROOT CROWNS.
- ALL LANDSCAPE MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED BY THE LANDSCAPE CONTRACTOR FOR A PERIOD OF ONE-YEAR TO SURVIVE IN GOOD CONDITION. LANDSCAPE CONTRACTOR SHALL GUARANTEE REPLACEMENT OF DEAD OR DYING PLANT MATERIALS, AT NO ADDITIONAL COST TO THE OWNER, EXCEPT IN CASES OF GROSS NEGLIGENCE OR VANDALISM DURING THE ONE-YEAR WARRANTY.
- LANDSCAPING WORK SHALL BE PERFORMED BY A LANDSCAPE CONTRACTOR LICENSED AND BONDED IN THE STATE OF OREGON. COORDINATE LANDSCAPE WORK WITH GENERAL CONTRACTOR AND OWNER/DEVELOPER.

AKS DRAWING FILE: 7431 PRELIM LANDSCAPE.DWG | LAYOUT: P16



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## Exhibit B: Application Forms

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Home of the Tualatin River National Wildlife Refuge

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

**City of Sherwood**  
**Application for Land Use Action**

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

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

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

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

**Owner/Applicant Information:**

Applicant: Cascade Columbia Distribution Phone: Please contact Applicant's Consultant  
 Applicant Address: 14200 SW Tualatin-Sherwood Rd., Sherwood, OR Email: Please contact Applicant's Consultant  
 Owner: Sherwood Road Industrial, LLC Phone: \_\_\_\_\_  
 Owner Address: 6900 Fox Ave S., Seattle, WA 98108 Email: \_\_\_\_\_  
 Contact for Additional Information: Applicant's Consultant: AKS Engineering & Forestry, LLC  
Chris Goodell, AICP, LEED, 503.563.6151, ChrisG@aks-eng.com  
12965 SW Herman Road, Suite 100, Tualatin, OR 97062

**Property Information:**

Street Location: 14200 SW Tualatin-Sherwood Rd.  
 Tax Lot and Map No: 200; 2S 1 28C  
 Existing Structures/Use: Chemical Warehouse and Distribution Facility/Industrial  
 Existing Plan/Zone Designation: General Industrial  
 Size of Property(ies) 16.93

**Proposed Action:**

**Purpose and Description of Proposed Action:**

Modification to an approved site plan for the Cascade Columbia Distribution facility, which consists of the addition of a warehouse building and covered outdoor storage area in the southern portion of the site

Proposed Use: Warehousing/storage/distribution

Proposed No. of Phases (one year each): 1

LAND USE APPLICATION FORM

**Authorizing Signatures:**

---

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

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

<i>CASCADE Columbia Dist. by LR Code printed</i>	<u>11/17/21</u>
Applicant's Signature	Date
<i>Sherwood Rd INV LLC by LR Code member</i>	<u>11/17/21</u>
Owner's Signature	Date

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

- 3 Copies of Application Form\*** completely filled out and signed by the property owner (or person with authority to make decisions on the property).
- Copy of Deed** to verify ownership, easements, etc.
- At least 3 folded** sets of plans\*
- At least 3 copies** of narrative addressing application criteria\*
- Fee** (along with calculations utilized to determine fee if applicable)
- Neighborhood Meeting Verification** including affidavit, sign-in sheet and meeting summary (required for Type III, IV and V projects)

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

Reference Number	Reference Date	Voucher Number	Gross	Discount	Applicant Submitted	Net
INLAND USE FE	11/16/2021	260027	3,133.12	0.00		3,133.12

Check No. 87861

3,133.12

0.00

3,133.12

CASCADE COLUMBIA DISTRIBUTION COMPANY 6900 Fox Avenue S. • Seattle, WA 98108 (206) 282-6334

id128779-20

THE FACE OF THIS DOCUMENT HAS A COLORED BACKGROUND • FLUORESCENT FIBERS AND OTHER SECURITY FEATURES



CASCADE COLUMBIA DISTRIBUTION COMPANY

6900 Fox Avenue S. • Seattle, WA 98108  
(206) 282-6334 • ap\_invoice@cascapecolumbia.com

WELLS FARGO BANK, NA

19-854  
1250

87861

VENDOR NO

20243

CHECK NO

87861

DATE

11/17/2021

PAY SUM OF

\$3,133.12

Three thousand one hundred thirty three and 12/100 dollars

PAY TO THE ORDER OF CITY OF SHERWOOD  
LAND USE PERMITS  
SHERWOOD, OR 97140

MP



Reference Number	Reference Date	Voucher Number	Gross	Discount	Net
INCONDITIONAL	12/10/2021	260765	2,233.84	0.00	2,233.84

RE: 7431 - LAND USE APPLICATION

Check No. 88041 2,233.84 0.00 2,233.84

CASCADE COLUMBIA DISTRIBUTION COMPANY 6900 Fox Avenue S. • Seattle, WA 98108 (206) 282-6334

id128779-20

THE FACE OF THIS DOCUMENT HAS A COLORED BACKGROUND • FLUORESCENT FIBERS AND OTHER SECURITY FEATURES



**CASCADE COLUMBIA DISTRIBUTION COMPANY**  
 6900 Fox Avenue S. • Seattle, WA 98108  
 (206) 282-6334 • ap\_invoice@cascapecolumbia.com

WELLS FARGO BANK, NA <sup>19-854</sup>/<sub>1250</sub> **88041**  
 CHECK NO. DATE  
 88041 12/10/2021

PAY SUM OF \$2,233.84

Two thousand two hundred thirty three and 84/100 dollars

PAY CITY OF SHERWOOD  
 TO THE LAND USE PERMITS  
 ORDER OF SHERWOOD, OR 97140



MP



---

## **Exhibit C: Ownership Information**

---

2003-036657

Washington County, Oregon

03/12/2003 02:49:13 PM

D-DW

Cnt=1 Str=16 D HOFFMAN

\$20.00 \$6.00 \$11.00 - Total = \$37.00



00282263200300366570040049

I, Jerry Hanson, Director of Assessment and Taxation and Ex-Officio County Clerk for Washington County, Oregon, do hereby certify that the within instrument of writing was received and recorded in the book of records of said county.

*Jerry Hanson*

Jerry R. Hanson, Director of Assessment and Taxation,  
Ex-Officio County Clerk



20-b  
11

AFTER RECORDING RETURN TO:  
Sherwood Road Industrial LLC  
Robert Code, member  
c/o Cascade Pacific  
3231 17th Ave NW  
Seattle, WA 98119

STATE OF OREGON }  
County of Washington } SS

I, Jerry D. Lawless, Director of Assessment and Taxation and the Official County Clerk for the County of Washington, do hereby certify that the within instrument has been received and recorded in Book of records of said county.



Until a change is requested all tax statements shall be sent to the following address: Sherwood Road Industrial LLC  
Robert Code  
3231 17th Ave W.  
Seattle WA 98119

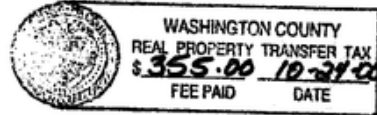
Doc : 2000086504  
Rect: 265579 387.00  
10/24/2000 01:34:45pm

Escrow No: 3400-221676-JG  
Order No: 220113

THIS WARRANTY DEED IS BEING RE-RECORDED TO CORRECT THE GRANTEE'S NAME. THIS DOCUMENT PREVIOUSLY WARRANTY DEED - STATUTORY FORM RECORDED ON 10-24-2000 AS 2000086504. (INDIVIDUAL or CORPORATION)

CODE FAMILY LLC, a Washington Limited Liability Company

Grantor, conveys and warrants to SHERWOOD ROAD <sup>\*INDUSTRIAL</sup> LLC



Grantee, the following described real property free of encumbrances except as specifically set forth herein:

(Continued)

This instrument will not allow use of the property described in this instrument in violation of applicable land use laws and regulations. Before signing or accepting this instrument, the person acquiring fee title to the property should check with the appropriate city or county planning department to verify approved uses and to determine any limits on lawsuits against farming or forest practices as defined in ORS 30.930.

ENCUMBRANCES:

Power of assessment of Unified Sewerage Agency; Easement recorded 2/28/57 in favor of United States of America; Easement recorded 6/29/79 in favor of Easterly adjacent property owners; Waiver of Remonstrance recorded 6/29/79, Fee 79025573; Restrictive covenants recorded 7/18/94, Fee 94067470; Restrictive Covenant for non-access reserve strip recorded 7/18/94, Fee 94067471; Line of Credit Trust Deed (Continued)

The true consideration for this conveyance is \$355,000.00 as part of an IRC Tax Deferred Exchange

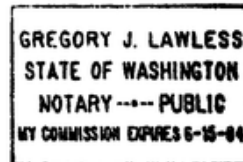
Dated October 20, 2000; if a corporate grantor, it has caused its name to be signed by order of its board of directors.

Code Family LLC  
Betty Code  
Betty Code, Member

William J. Code  
William Code, Member

Washington  
STATE OF OREGON, County of King ) ss.  
This instrument was acknowledged before me on October 20, 2000  
by William Code & Betty Code  
This instrument was acknowledged before me on \_\_\_\_\_  
by \_\_\_\_\_ as Members  
of the Code Family LLC

Notary Public for Oregon Washington  
My commission expires: 6-15-04



1-3



Pacific NW Title  
03227907-W  
T.O.



2003-36657

Order No: 220113

**LEGAL DESCRIPTION**

A tract of land in the Northwest quarter of the Southwest quarter of Section 28, Township 2 South, Range 1 West of the Willamette Meridian, County of Washington and State of Oregon, more particularly described as follows:

Beginning at the Southeast corner of the Northwest quarter of the Southwest quarter of said Section 28; thence South  $89^{\circ}53'02''$  West, along the South line of said Northwest quarter of the Southwest quarter, 500 feet to the Southwest corner of that tract of land conveyed to Howard E. Brune by Deed recorded June 29, 1979, Recorder's Fee No. 79-25571, Records of Washington County, said point being the true point of beginning; thence continuing West along the South line of the Northwest quarter of the Southwest quarter of said Section 28 to a point on the West line thereof; thence North, along the West line of said Section 28 to a point on the Southerly boundary of the Southern Pacific Railroad right of way; thence Northeasterly along said Southerly railroad right of way, to a point on the South line of S.W. Edy Road (County Road No. 2291 and No. 1070); thence Easterly, following the South line of said S.W. Edy Road to a point on the East line of the Northwest quarter of the Southwest quarter of said Section 28; thence South, along said East line 591.8 feet, more or less, to the Northeast corner of the aforementioned Brune Tract; thence South  $89^{\circ}53'02''$  West, along the North line of said Brune Tract, 500 feet to the Northwest corner thereof; thence South  $0^{\circ}02'19''$  East, along the West line of said Brune Tract, 718 feet to the Southwest corner thereof and the true point of beginning.

EXCEPTING THEREFROM that portion conveyed to Brune Investment Company by instrument recorded as Recorder's Fee No. 89-32751, Washington County Deed Records.

FURTHER EXCEPTING THEREFROM that portion conveyed to the City of Sherwood by instrument recorded as Recorder's Fee No. 92066602, Washington County Deed Records.

ALSO EXCEPTING THEREFROM that portion granted to the City of Sherwood by Dedication Deed recorded as Recorder's Fee No. 94067469, Washington County, Oregon.

**Encumbrances, continued**

recorded 12/7/94, Fee 94109346 in favor of Pacific Northwest Bank; Restrictive covenant recorded 5/19/95, Fee 95034688; Line of Credit Trust Deed recorded 9/20/99, Fee 99108283 and modified 8/15/00, Fee 2000065346



I, **Jerry R. Hanson**, Director of Assessment and Taxation and Ex-Officio County Clerk for Washington County, do hereby certify this to be a true and correct copy of the original.

Date: March 6, 2003

By: J. Hanson

Title: Deputy Clerk



2003-36657



---

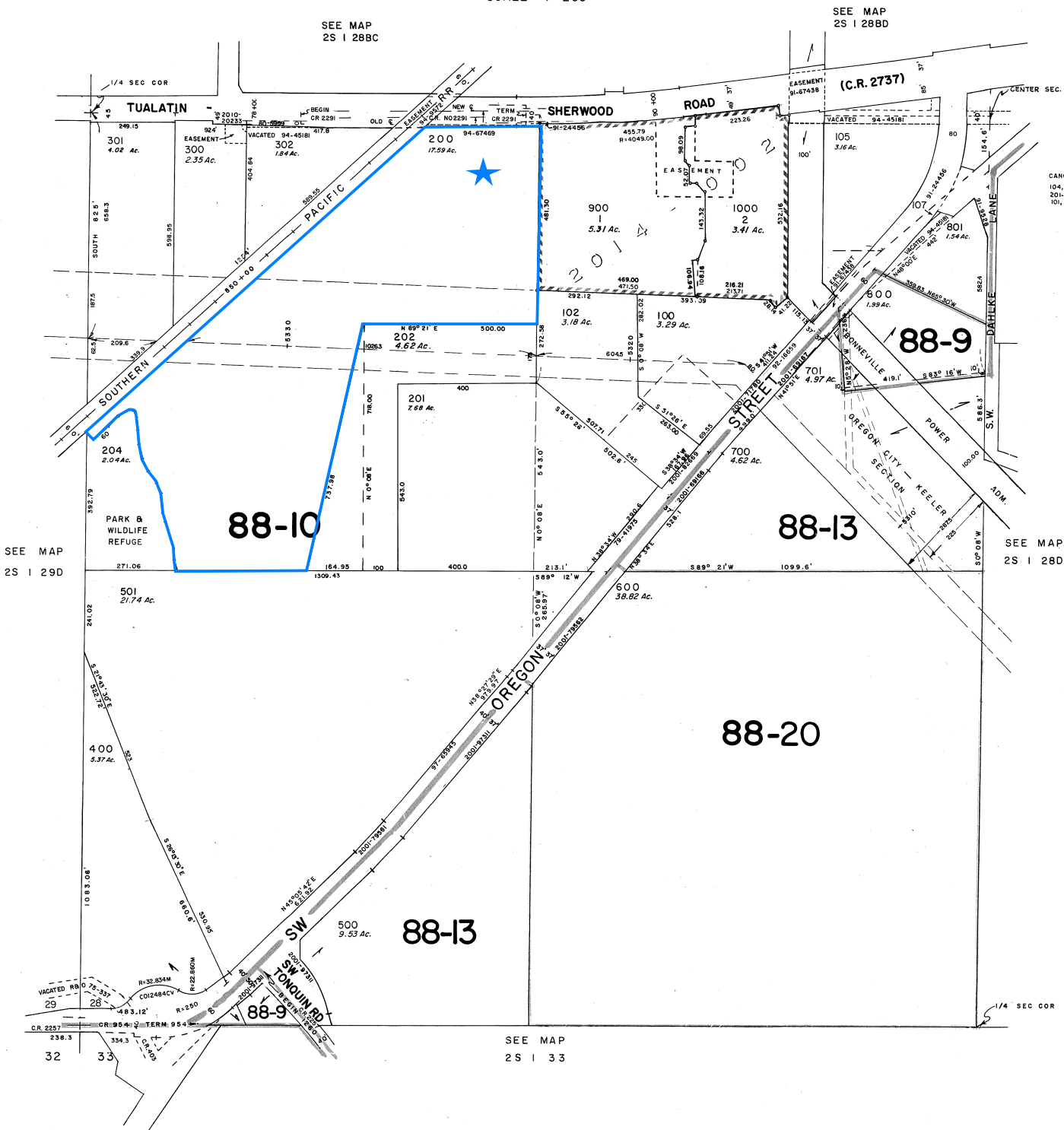
## Exhibit D: Assessor's Map

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SW1/4 SECTION 28 T2S RIW W.M.

WASHINGTON COUNTY OREGON

SCALE 1"=200'



CANCELLED TAX LOTS  
104, 203, 105, 106, 401, 201-A2,  
201-A3, 300-A1, 200-A1, 201-A1,  
101.

FOR ASSESSMENT  
PURPOSES ONLY  
DO NOT RELY ON  
FOR ANY OTHER USE





---

## **Exhibit E: Documentation of Neighborhood Meeting**

---



November 5, 2021

**Neighborhood Meeting Summary:** Cascade Columbia Distribution Warehouse Project

**Meeting Date:** November 4, 2021

**Time:** 6:00 PM

**Location:** Virtual Meeting via Zoom Webinar

The following serves as a summary of the Neighborhood Meeting process in accordance with the applicable City regulations. On October 21, 2021, property owners within 1,000 feet of the project site were sent notification of the planned land use application. This notification included the project description, the neighborhood meeting date and time, and a map of the project location and vicinity area. Information on how to join the meeting remotely was provided in the notification letter.

On November 4, 2021, Chris Goodell, Maria Miller, Mimi Doukas, and Nye Underwood from AKS Engineering & Forestry, LLC and Steve Durrell from Cascade Columbia Distribution (the Applicant) were prepared to make a presentation to attendees. No members of the public had registered to attend the meeting, and no one joined the meeting within 15 minutes of the scheduled start time. At 6:16 PM, the meeting concluded. Materials planned to be presented at the meeting were available on the AKS Engineering & Forestry website 2 days prior to the meeting and until November 14, 2021.

Sincerely,

**AKS ENGINEERING & FORESTRY, LLC**

A handwritten signature in blue ink that reads 'Maria Miller'.

Maria Miller, AICP

12965 SW Herman Road, Suite 100 | Tualatin, OR 97062

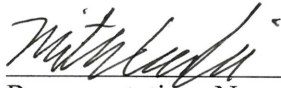
P: 503.563.6151 | [www.aks-eng.com](http://www.aks-eng.com) | [MariaM@aks-eng.com](mailto:MariaM@aks-eng.com)

## Affidavit of Mailing

DATE:

STATE OF OREGON        )  
                                  )  
Washington County     )

I, Mitchell Godwin, representative for the 14200 SW Tualatin Sherwood Rd proposed development project do hereby certify that the attached notice to adjacent property owners and recognized neighborhood organizations that are within 1,000 feet of the subject project, was placed in a U.S. Postal receptacle on Oct 21, 2021.



Representatives Name: Mitchell Godwin

Name of the Organization: AKS Engineering & Forestry, LLC



October 21, 2021

**RE: VIRTUAL NEIGHBORHOOD MEETING NOTICE  
MODIFICATION TO AN APPROVED SITE PLAN FOR CASCADE COLUMBIA DISTRIBUTION  
LOCATED AT 14200 SW TUALATIN-SHERWOOD ROAD**

Dear Neighbor:

A virtual neighborhood meeting will be held on November 4, 2021, to meet with interested community members and discuss a potential land use application submitted to the City of Sherwood for a project located at 14200 SW Tualatin-Sherwood Road (Washington County Assessor's Map 2S128C Tax Lot 200). The property is zoned General Industrial (GI).

The project applicant is Cascade Columbia Distribution, a locally owned chemical distribution business, who has been operating their facility on this site since 1994. To accommodate their growing warehousing and distribution business supporting the food industry, Cascade Columbia Distribution plans to add a new warehouse building and an additional covered storage area for food-grade chemicals within their existing facility. This requires approval of a modification by the City of Sherwood.

The purpose of this virtual meeting is to provide a forum for the Applicant and surrounding property owners to discuss the planned project in more detail before a land use application is submitted to the City of Sherwood. If you would like to attend the meeting, you will need to register with Zoom in advance.

Please join us on:

**THURSDAY, NOVEMBER 4, 2021 AT 6:00 PM**

**To register, please sign up for your individual Zoom link on the following website:**

**[https://www.aks-eng.com/cascade\\_columbia\\_distribution/](https://www.aks-eng.com/cascade_columbia_distribution/)**

***Please type in the web address exactly as appears above, including https:// and the forward slash at the end. See enclosed instructions for joining and participating in the meeting.***

Please note that this is an informational meeting to discuss preliminary plans. These plans may be modified before the application is finalized and submitted to the City of Sherwood. After the project is submitted to the City, you may receive an official notice from the City of Sherwood of your opportunity to submit written comments to the City Planning Division, and/or attend a public hearing before the decision on the application is made.

We look forward to discussing this project with you. If you have comments or questions about the project but are unable to join the Zoom webinar on November 4<sup>th</sup>, please contact Maria Miller at 503-563-6151 or [mariam@aks-eng.com](mailto:mariam@aks-eng.com) to request information or to submit your comments.

Sincerely,

**AKS ENGINEERING & FORESTRY, LLC**

*Maria Miller*

Maria Miller, AICP  
12965 SW Herman Road, Suite 100, Tualatin, OR 97062  
(503) 563-6151 | [mariam@aks-eng.com](mailto:mariam@aks-eng.com)

Enclosed:

Preliminary Site Plan  
Instructions for Joining and Participating in the Neighborhood Meeting

**Instructions for Joining & Participating in the  
Public Neighborhood Meeting for the  
Modification to an Approved Site Plan for Cascade Columbia Distribution  
Virtual Meeting provided via Zoom Webinar**

**Thursday November 4, 2021, at 6:00 PM**

**Please Register in Advance**

**(a list of attendees must be submitted to the City):**

- Go to [https://www.aks-eng.com/cascade\\_columbia\\_distribution/](https://www.aks-eng.com/cascade_columbia_distribution/) and follow the link to register.
  - Please type the full web address as it appears above
- Complete the online registration form.
- You will receive a confirmation email containing your personal link to join the Zoom webinar at the scheduled time as well as additional instructions.
- Meeting materials will be available on [https://www.aks-eng.com/cascade\\_columbia\\_distribution/](https://www.aks-eng.com/cascade_columbia_distribution/) **2 days prior to the meeting and at least 10 days after the meeting concludes.**

**How to Join the Meeting:**

**Join by computer, tablet, or smartphone**

- **This is the preferred method as it allows you to see the Presenter’s materials on screen.**
- Click on the “Click Here to Join” link provided in your registration confirmation email.
- If you registered at [https://www.aks-eng.com/cascade\\_columbia\\_distribution/](https://www.aks-eng.com/cascade_columbia_distribution/) but did not receive a confirmation email, please check your junk/spam folder before contacting the Meeting Administrator.
- You may be prompted to “download and run Zoom” or to install the App (ZOOM cloud meetings). Follow the prompts or bypass this process by clicking “join from your browser”.
- You should automatically be connected to the virtual neighborhood meeting.

**Join by telephone**

- If you cannot join by the computer or smartphone, you can dial any of the toll-free Zoom numbers below to connect to the neighborhood meeting and listen in:

+1-669-900-6833	+1-346-248-7799
+1-929-205-6099	+1-253-215-8782
+1-301-715-8592	+1-312-626-6799

- If you experience trouble connecting, please pick another number and try again.
- After dialing in, enter this Zoom ID when prompted: **823 9190 1035**
- The Password if needed is: **6151**

**MEETING ADMINISTRATOR:**

For technical assistance or to submit a question for the meeting:

Email [mariam@aks-eng.com](mailto:mariam@aks-eng.com)

## During the Meeting

### Audio Help

- Meeting attendees will be muted throughout the presentation. This will allow everyone to hear the presentation clearly without added distractions.
- Make sure that the speakers on your device are turned on and not muted.
- If you do not have speakers on your computer, you can join by phone (using the “Join by telephone” instructions) to hear the presentation while watching the presentation on your computer monitor.

### Submitting Comments and Asking Questions

Your questions are important to us. There will be time reserved during the meeting to take questions, using one of the submission options below. Our presentation team will make their best effort to answer all question(s) during the meeting.

#### Prior to the Meeting:

- You can Email your question(s) in advance to the Meeting Administrator.

Email [mariam@aks-eng.com](mailto:mariam@aks-eng.com)

#### During the Meeting:

- **Preferred Method:** Use the “Q&A” button on the bottom of the presentation screen to submit a question in real time.
- Email your question to the Meeting Administrator:

Email [mariam@aks-eng.com](mailto:mariam@aks-eng.com)

#### After the Meeting:

- We will continue to take questions after the meeting has ended. Please submit your question(s) to the Meeting Administrator:

Email [mariam@aks-eng.com](mailto:mariam@aks-eng.com)

- All questions received after the meeting and prior to November 14, 2021 will be answered in an email to all registered meeting participants by end of business the following day.

## Helpful Hints/Troubleshooting

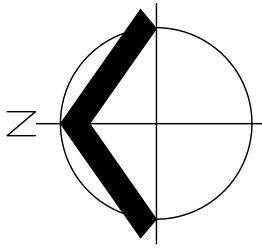
**We want to start on time! Please join the meeting 5-10 minutes prior to the 6:00 PM start time to ensure successful connection.**

- You do not need a paid Zoom account to join the meeting.
- You will need a valid email address at the time of registration to receive the confirmation email and link to join the webinar or receive answers to any questions submitted after the meeting.
- For first-time Zoom users, we recommend downloading and installing the Zoom App **well in advance**, by clicking on the “Click Here to Join” link in your confirmation email.
- For technical assistance, please contact the Meeting Administrator (contact above).
- If you have difficulties connecting by computer, tablet, or smartphone, we suggest disconnecting and instead use the “Join by telephone” instructions to listen in.

PRELIMINARY SITE PLAN

AKS ENGINEERING & FORESTRY, LLC  
12965 SW HERMAN RD, STE 100  
TUALATIN, OR 97062  
503.563.6151 WWW.AKS-ENG.COM

DATE: 10/20/2010

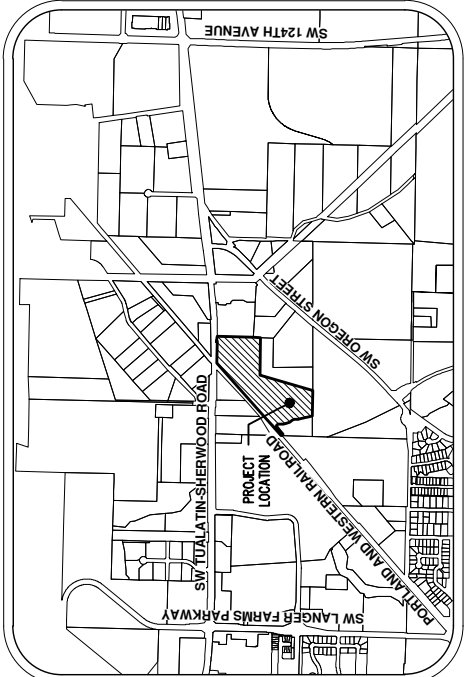
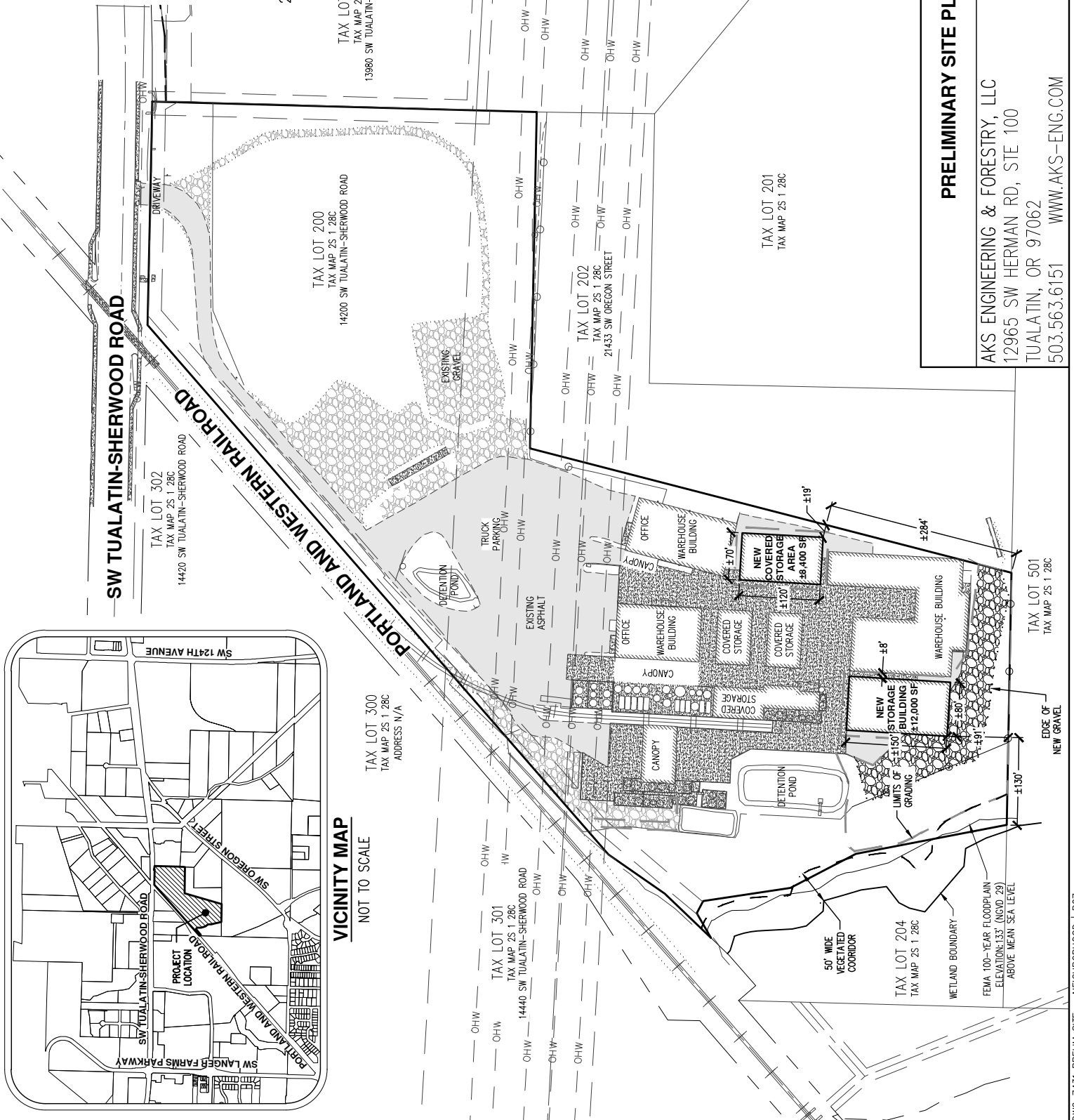


SCALE: 1" = 200 FEET



**SURFACING LEGEND**

- EXISTING ASPHALT PAVEMENT
- EXISTING CONCRETE PAVEMENT
- EXISTING GRAVEL
- NEW GRAVEL





## Meeting Attendee Report

Topic 14200 SW Tualatin-Sherwood Road Neighborhood Meeting

Webinar ID 823 9190 1035

Report Generated: 11/5/2021 8:31

Actual Start Time 11/5/2021 0:59

Actual Duration (minutes) 16

# Registered 0

# Cancelled 0

Enable Registration Yes

### Panelist Details

Attended

Attended	User Name (Original Name)	Email	Join Time	Leave Time
Yes	Mimi Doukas	mimid@aks-eng.com	11/4/2021 17:59	11/4/2021 18:15
Yes	Nye Underwood	underwoodn@aks-eng.com	11/4/2021 18:00	11/4/2021 18:15
Yes	Chris Goodell	ChrisG@aks-eng.com	11/4/2021 18:00	11/4/2021 18:15
Yes	Maria Miller	MariaM@aks-eng.com	11/4/2021 17:59	11/4/2021 18:15
Yes	Steve Durrell	steved@cascadecolumbia.com	11/4/2021 18:00	11/4/2021 18:15

### Attendee Details

Attended

User Name (Original Name)	First Name	Last Name	Email
Mimi Doukas	Mimi	Doukas	mimid@aks-eng.com
Nye Underwood	Nye	Underwood	underwoodn@aks-eng.com
Chris Goodell	Chris	Goodell	ChrisG@aks-eng.com
Maria Miller	Maria	Miller	MariaM@aks-eng.com
Steve Durrell	Steve	Durrell	steved@cascadecolumbia.com



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## Exhibit F: Mailing Labels

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Exhibits A - R  
Applicant Submittal

2S128BC-00700  
Treske Precision Machining Inc  
14140 SW Galbreath Dr  
Sherwood, OR 97140

2S128BC-01000  
Glen Wetzel  
Po Box 3451  
Tualatin, OR 97062

2S128C0-00301  
Wellons Inc  
2525 W Firestone Ln  
Vancouver, WA 98660

2S128C0-00400  
Washington County Facilities Mgmt  
169 N 1st Ave # 42  
Hillsboro, OR 97124

2S129D0-00600  
Washington County Facilities Mgmt  
169 N 1st Ave # 42  
Hillsboro, OR 97124

2S128C0-00302  
Voxvon Properties Llc  
14420 SW Tualatin Sherwood Rd  
Sherwood, OR 97140

2S128C0-00700  
Vandomelen Joint Trust  
4825 SW Evans St  
Portland, OR 97219

2S128B0-00103  
United States Of America  
911 NE 11th Ave  
Portland, OR 97232

2S129A0-00100  
United States Of America Dept Of Interior  
911 NE 11th Ave  
Portland, OR 97232

2S128BC-01100  
Treske Family Llc  
3860 Rosepark Dr  
West Linn, OR 97068

2S128BD-00700  
Lanz Properties Llc  
3025 W 7th Pl  
Eugene, OR 97402

2S128BD-00800  
Sherwood Park Business Center Llc  
12965 SW Herman Rd STE 100  
Tualatin, OR 97062

2S128BD-00900  
Sherwood Park Business Center Llc  
12965 SW Herman Rd STE 100  
Tualatin, OR 97062

2S128BD-01000  
Sherwood City Of  
22560 SW Pine St  
Sherwood, OR 97140

2S128C0-00204  
Sherwood City Of  
22560 SW Pine St  
Sherwood, OR 97140

2S128C0-00600  
Sherwood Commerce Center Llc  
1121 SW Salmon St STE 500  
Portland, OR 97205

2S128C0-00300  
Salem Equipment Inc  
2525 W Firestone Ln  
Vancouver, WA 98660

2S128C0-00100  
Pride Properties Investments Llc  
Po Box 820  
Sherwood, OR 97140

2S128C0-00105  
Pride West Llc  
Po Box 820  
Sherwood, OR 97140

2S128C0-00900  
Pride West Llc  
Po Box 820  
Sherwood, OR 97140

2S128C0-01000  
Pride East Llc  
Po Box 820  
Sherwood, OR 97140

2S128C0-00500  
Bruce & Karen Polley  
Po Box 1489  
Sherwood, OR 97140

2S128C0-00102  
Orwa Sherwood Llc  
8320 NE Highway 99  
Vancouver, WA 98665

2S129D0-00150  
Orwa Sherwood Llc  
8320 NE Highway 99  
Vancouver, WA 98665

2S128C0-00200  
Sherwood Road Industrial Llc & Bldg B  
6900 Fox Ave S  
Seattle, WA 98108

2S129A0-00101  
Misty Mountain Enterprises Llc  
1741 Woodbend Dr  
Claremont, CA 91711

2S129A0-02900  
Misty Mountain Enterprises Llc  
1741 Woodbend Dr  
Claremont, CA 91711

2S129A0-03000  
Misty Mountain Enterprises Llc  
1741 Woodbend Dr  
Claremont, CA 91711

2S129A0-03100  
Misty Mountain Enterprises Llc  
1741 Woodbend Dr  
Claremont, CA 91711

2S128BD-00400  
Mclellan Estate Co  
707 Old County Rd  
Belmont, CA 94002

Exhibits A - R  
Applicant Submittal

2S128BC-00100  
Jjb Properties Llc  
14255 SW Galbreath Dr STE C  
Sherwood, OR 97140

2S128BC-00900  
J & M Properties Llc  
14270 SW Galbreath Dr  
Sherwood, OR 97140

2S128C0-00202  
J & L Rink Llc  
21433 SW Oregon St  
Sherwood, OR 97140

2S128BC-00300  
Hundred Fold Llc  
14145 SW Galbreath Dr  
Sherwood, OR 97140

2S128BD-00300  
Hammerschmidt Terry 2012 Trust &  
Po Box 1600  
Victor, MT 59875

2S128BC-00500  
Gamroth Properties Llc  
21380 SW Chapman Rd  
Sherwood, OR 97140

2S128C0-00800  
Fitch Properties Llc  
Po Box 701  
Sherwood, OR 97140

2S129D0-00103  
Dld Llc  
14450 SW Tualatin Sherwood Rd  
Sherwood, OR 97140

2S128C0-00701  
Dahlke Lane Properties Llc  
4677 SE Concord Rd  
Portland, OR 97267

2S128BC-00200  
Cat Adoption Team  
14175 SW Galbreath Dr  
Sherwood, OR 97140

2S128BD-00600  
Bullock J L Rev Trust & Bullock G L Rev  
15975 SW Springtooth Ln  
Sherwood, OR 97140

2S128BC-00800  
Bueno Trust  
21661 Dorothy Way  
Los Gatos, CA 95033

2S128BC-00400  
Bond Properties Llc  
14085 SW Galbreath Dr  
Sherwood, OR 97140

2S128BD-00500  
Arec 24 Llc  
Po Box 29046  
Phoenix, AZ 85038

2S128C0-00201  
J & L Rink Llc  
21433 SW Oregon St  
Sherwood, OR 97140

2S128C0-00501  
Key Equipment Finance Inc  
66 S Pearl St FL 8  
Albany, NY 12207

2S128C0-00301  
Wellons Inc  
2525 W Firestone Ln  
Vancouver, WA 98660

2S128C0-00400  
Washington County Facilites Mgmt  
169 N 1st Ave # 42  
Hillsboro, OR 97124

2S128B0-00103  
United States Of America  
911 NE 11th Ave  
Portland, OR 97232

2S129A0-00100  
United States Of America  
911 NE 11th Ave  
Portland, OR 97232

2S128BC-01100  
Treske Family Llc  
3860 Rosepark Dr  
West Linn, OR 97068

2S128BD-00700  
Lanz Properties Llc  
3025 W 7th Pl  
Eugene, OR 97402

2S128C0-00300  
Salem Equipment Inc  
2525 W Firestone Ln  
Vancouver, WA 98660

2S128C0-00300  
Macro Manufacturing Inc  
2525 W Firestone Ln  
Vancouver, WA 98660

2S128C0-00300  
Wellons Inc  
2525 W Firestone Ln  
Vancouver, WA 98660

2S128C0-00500  
Bruce & Karen Polley  
Po Box 1489  
Sherwood, OR 97140

2S128C0-00200  
Sherwood Road Industrial Llc  
6900 Fox Ave S  
Seattle, WA 98108

2S128BC-00100  
Tamara Green & John Galbreath  
415 N Main St  
Pendleton, OR 97801

2S128C0-00201  
J & L Rink Llc  
21433 SW Oregon St  
Sherwood, OR 97140

Exhibits A - R  
Applicant Submittal

2S128C0-00201  
J & L Rink Llc  
21433 SW Oregon St  
Sherwood, OR 97140

2S128C0-00201  
J & L Rink Llc  
21433 SW Oregon St  
Sherwood, OR 97140

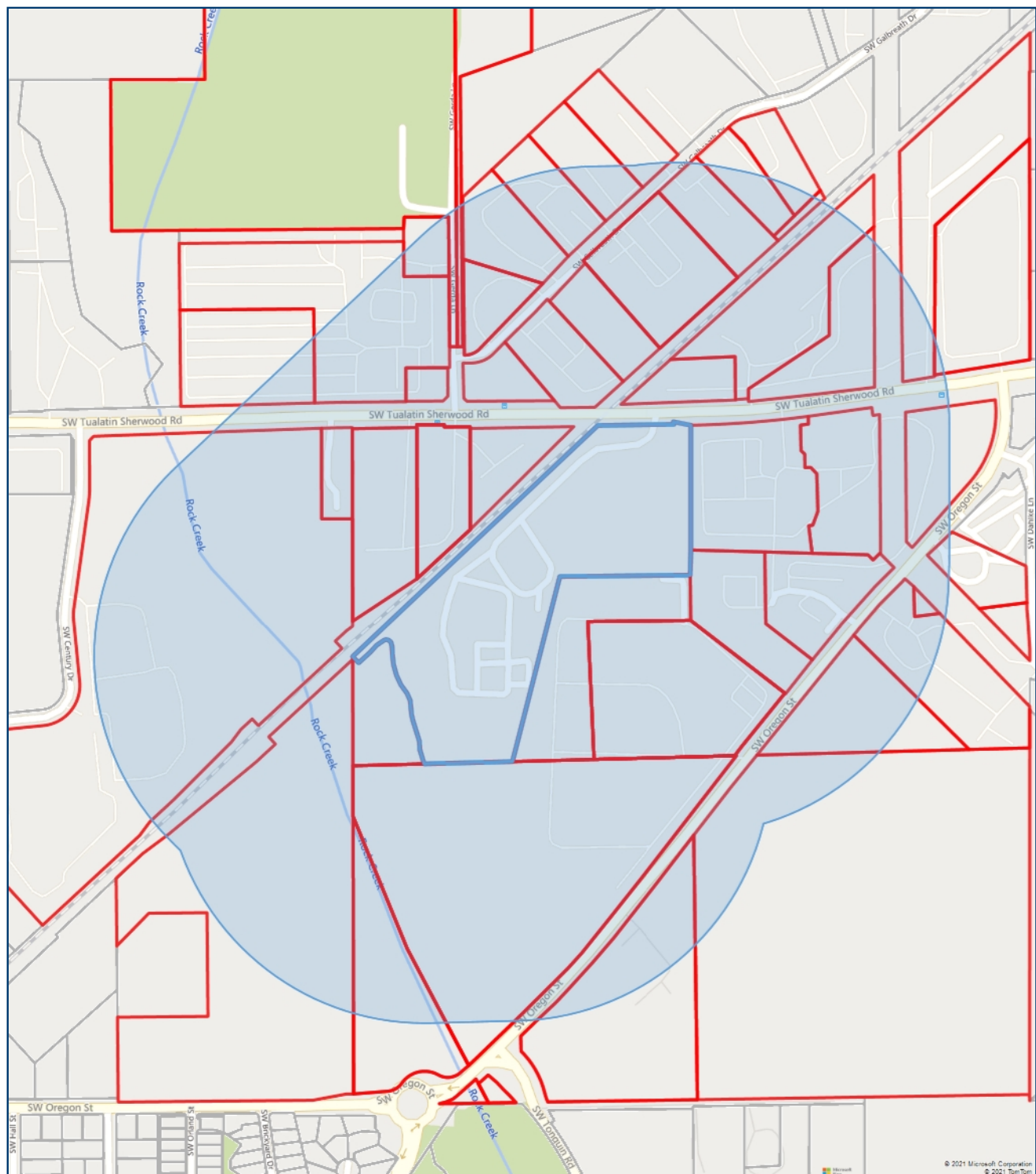
2S128C0-00501  
Keybank National Assoc  
Po Box 22055  
Albany, NY 12201

2S128C0-00501  
Allied Systems Company  
21433 SW Oregon St  
Sherwood, OR 97140



# 1000 ft Buffer

No Site Address, Sherwood, OR 97140  
Report Generated: 10/4/2021



The present data and maps are intended for informational purposes only. Some information has been procured from third-party sources and has not been independently verified. Individual parts are owned by their respective copyright owners and not by First American. First American Title Company makes no express or implied warranty respecting the information presented and assumes no responsibility for errors or omissions.



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## **Exhibit G: TVF&R Service Provider Letter**

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FIRE CODE / LAND USE / BUILDING REVIEW APPLICATION



North Operating Center
11945 SW 70th Avenue
Tigard, OR 97223
Phone: 503-649-8577

South Operating Center
8445 SW Elligsen Rd
Wilsonville, OR 97070
Phone: 503-649-8577

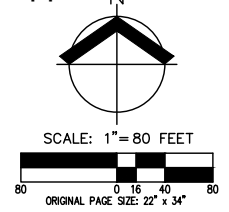
REV 6-30-20

Project Information
Applicant Name: Cascade Columbia Distribution
Address: 14200 SW Tualatin-Sherwood Rd, Sherwood
Phone: 503-563-6151
Email: mariam@aks-eng.com
Site Address: 14200 SW Tualatin-Sherwood Rd
City: Sherwood
Map & Tax Lot #: 2S 1 28C, Tax Lot 200
Business Name: Cascade Columbia Distribution
Land Use/Building Jurisdiction: City of Sherwood
Land Use/ Building Permit #
Choose from: Beaverton, Tigard, Newberg, Tualatin, North Plains, West Linn, Wilsonville, Sherwood, Rivergrove, Durham, King City, Washington County, Clackamas County, Multnomah County, Yamhill County
Project Description
A new 12,000-sq. ft. warehouse and an 8,400-sq. ft. outdoor covered storage area at Cascade's existing distribution facility

Permit/Review Type (check one):
[X] Land Use / Building Review - Service Provider Permit
[ ] Emergency Radio Responder Coverage Install/Test
[ ] LPG Tank (Greater than 2,000 gallons)
[ ] Flammable or Combustible Liquid Tank Installation (Greater than 1,000 gallons)
\* Exception: Underground Storage Tanks (UST) are deferred to DEQ for regulation.
[ ] Explosives Blasting (Blasting plan is required)
[ ] Exterior Toxic, Pyrophoric or Corrosive Gas Installation (in excess of 810 cu.ft.)
[ ] Tents or Temporary Membrane Structures (in excess of 10,000 square feet)
[ ] Temporary Haunted House or similar
[ ] OLCC Cannabis Extraction License Review
[ ] Ceremonial Fire or Bonfire (For gathering, ceremony or other assembly)
For Fire Marshal's Office Use Only
TVFR Permit # 2021 - 0128
Permit Type: SPP
Submittal Date: 11/19/21
Assigned To: DARBY
Due Date:
Fees Due: n/a
Fees Paid:

Approval/Inspection Conditions (For Fire Marshal's Office Use Only)
This section is for application approval only
Fire Marshal or Designee: [Signature] 0806
Date: 12/2/24
Conditions:
See Attached Conditions: [ ] Yes [X] No
Site Inspection Required: [ ] Yes [X] No
This section used when site inspection is required
Inspection Comments:
Final TVFR Approval Signature & Emp ID Date





**AKS**  
AKS ENGINEERING & FORESTRY, LLC  
12065 SW HERMAN RD, STE 100  
TUALATIN, OR 97062  
503.563.6151  
WWW.AKS-ENG.COM

ENGINEERING • SURVEYING • NATURAL RESOURCES  
FORESTRY • PLANNING • LANDSCAPE ARCHITECTURE

**14200 SW TUALATIN-SHERWOOD ROAD**  
**SHERWOOD OREGON**  
SHERWOOD OREGON  
TAX MAP 25 1 28C

**CIRCULATION PLAN AND SURROUNDING LAND USES**

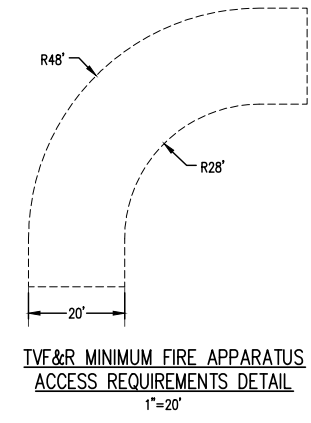
DESIGNED BY: KNU  
DRAWN BY: KNU  
MANAGED BY: SR  
CHECKED BY: SR  
DATE: 11/16/2021

REGISTERED PROFESSIONAL ENGINEER  
PRELIMINARY NOT FOR CONSTRUCTION  
COLEEN C. ROOPER  
RENEWAL DATE: 12/31/22

REVISIONS

JOB NUMBER  
**7431**

SHEET  
**P02**

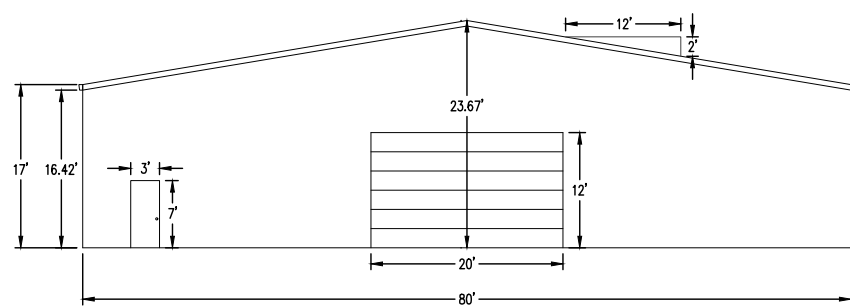
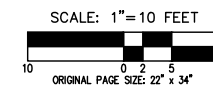


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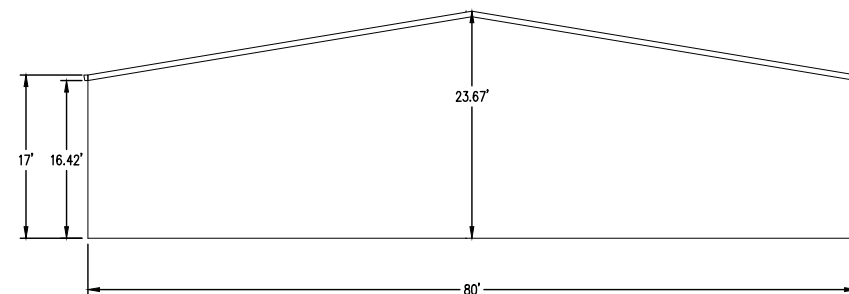
CIRCULATION	---
CURRENT LAND USE	CURRENT LAND USE ZONING

AKS DRAWING FILE: 7431 PRELIM CIRCULATION AND USES.DWG | LAYOUT: P02

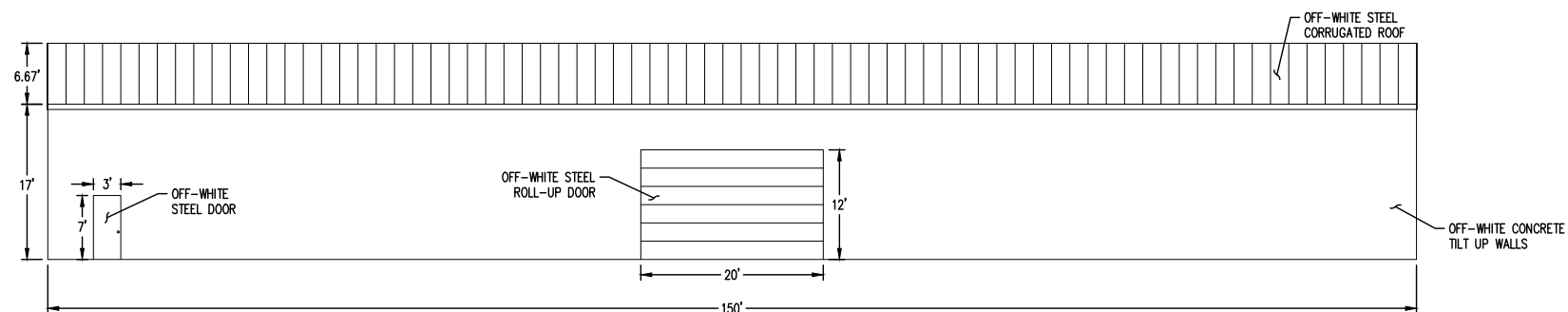




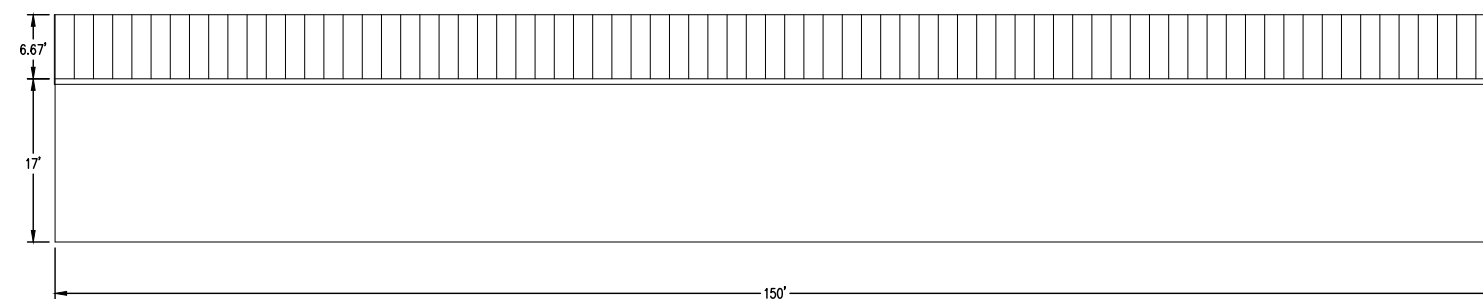
**NEW WAREHOUSE BUILDING - NORTH ELEVATION**  
1"=10'



**NEW WAREHOUSE BUILDING - SOUTH ELEVATION**  
1"=10'



**NEW WAREHOUSE BUILDING - WEST ELEVATION**  
1"=10'



**NEW WAREHOUSE BUILDING - EAST ELEVATION**  
1"=10'



**NEW WAREHOUSE BUILDING - ROOF**  
1"=10'

**14200 SW TUALATIN-  
SHERWOOD ROAD  
SHERWOOD OREGON**  
TAX MAP ZS 1 28C

**PRELIMINARY BUILDING  
ELEVATIONS**

DESIGNED BY: KNU  
DRAWN BY: KNU  
MANAGED BY: SR  
CHECKED BY: SR  
DATE: 11/16/2021  
REGISTERED PROFESSIONAL ENGINEER  
PRELIMINARY NOT FOR CONSTRUCTION  
COLEEN C. ROPER  
RENEWAL DATE: 12/31/22

REVISIONS  
JOB NUMBER  
**7431**  
SHEET  
**P12**



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## **Exhibit H: CWS Service Provider Letter**

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## Service Provider Letter

CWS File Number

21-002637

**This form and the attached conditions will serve as your Service Provider Letter in accordance with Clean Water Services Design and Construction Standards (R&O 19-5, as amended by R&O 19-22).**

<b>Jurisdiction:</b>	<u>City of Sherwood</u>	<b>Review Type:</b>	<u>No Impact</u>
<b>Site Address / Location:</b>	<u>14200 SW TUALATIN SHERWOOD RD</u> <u>SHERWOOD OR 97140</u>	<b>SPL Issue Date:</b>	<u>November 09, 2021</u>
		<b>SPL Expiration Date:</b>	<u>November 09, 2023</u>

**Applicant Information:**

Name SONYA TEMPLETON  
 Company AKS ENGINEERING & FORESTRY LLC  
12965 SW HERMAN RD SUITE 100  
 Address TUALATIN OR 97062  
 Phone/Fax (503) 867-2613  
 E-mail: templetons@aks-eng.com

**Owner Information:**

Name ROBERT CODE  
 Company SHERWOOD ROAD LLC  
 Address 6900 FOX AVE S  
SEATTLE WA 98108  
 Phone/Fax (206) 282-6334  
 E-mail: bobc@cascapecolumbia.com

**Tax lot ID**

2S128C000200

**Development Activity**

Storage Buildings

**Pre-Development Site Conditions:**

Sensitive Area Present:  On-Site  Off-Site  
 Vegetated Corridor Width: 50  
 Vegetated Corridor Condition: Good/Marginal

**Post Development Site Conditions:**

Sensitive Area Present:  On-Site  Off-Site  
 Vegetated Corridor Width: 50

**Enhancement of Remaining Vegetated Corridor Required:**

**Square Footage to be enhanced:**

3,510

**Encroachments into Pre-Development Vegetated Corridor:**

Type and location of Encroachment:	Square Footage:
<u>No Encroachment</u>	<u></u>
<u></u>	<u></u>
<u></u>	<u></u>

**Mitigation Requirements:**

Type/Location	Sq. Ft./Ratio/Cost
<u>No Mitigation</u>	<u></u>
<u></u>	<u></u>
<u></u>	<u></u>

Conditions Attached  Development Figures Attached (4)  Planting Plan Attached  Geotech Report Required

**This Service Provider Letter does NOT eliminate the need to evaluate and protect water quality sensitive areas if they are subsequently discovered on your property.**

**In order to comply with Clean Water Services water quality protection requirements the project must comply with the following conditions:**

1. No structures, development, construction activities, gardens, lawns, application of chemicals, uncontained areas of hazardous materials as defined by Oregon Department of Environmental Quality, pet wastes, dumping of materials of any kind, or other activities shall be permitted within the sensitive area or Vegetated Corridor which may negatively impact water quality, except those allowed in R&O 19-5, Chapter 3, as amended by R&O 19-22.
2. Prior to any site clearing, grading or construction the Vegetated Corridor and water quality sensitive areas shall be surveyed, staked, and temporarily fenced per approved plan. During construction the Vegetated Corridor shall remain fenced and undisturbed except as allowed by R&O 19-5, Section 3.06.1, as amended by R&O 19-22 and per approved plans.
3. **If there is any activity within the sensitive area, the applicant shall gain authorization for the project from the Oregon Department of State Lands (DSL) and US Army Corps of Engineers (USACE). The applicant shall provide Clean Water Services or its designee (appropriate city) with copies of all DSL and USACE project authorization permits. No wetland impacts proposed for this project.**
4. An approved Oregon Department of Forestry Notification is required for one or more trees harvested for sale, trade, or barter, on any non-federal lands within the State of Oregon.
5. Prior to any ground disturbing activities, an erosion control permit is required. Appropriate Best Management Practices (BMP's) for Erosion Control, in accordance with Clean Water Services' Erosion Prevention and Sediment Control Planning and Design Manual, shall be used prior to, during, and following earth disturbing activities.
6. Prior to construction, a Stormwater Connection Permit from Clean Water Services or its designee is required pursuant to Ordinance 27, Section 4.B.
7. Activities located within the 100-year floodplain shall comply with R&O 19-5, Section 5.10, as amended by R&O 19-22.
8. Removal of native, woody vegetation shall be limited to the greatest extent practicable.
9. The water quality swale and detention pond shall be planted with Clean Water Services approved native species, and designed to blend into the natural surroundings.
10. **Should final development plans differ significantly from those submitted for review by Clean Water Services, the applicant shall provide updated drawings, and if necessary, obtain a revised Service Provider Letter.**
11. The Vegetated Corridor width for sensitive areas within the project site shall be a minimum of 50 feet wide, as measured horizontally from the delineated boundary of the sensitive area.
12. **For Vegetated Corridors up to 50 feet wide, the applicant shall enhance the entire Vegetated Corridor to meet or exceed good corridor condition as defined in R&O 19-5, Section 3.14.2, Table 3-3, as amended by R&O 19-22.**
13. **Removal of invasive non-native species by hand is required in all Vegetated Corridors rated ""good."" Replanting is required in any cleared areas larger than 25 square feet using low impact methods. The applicant shall calculate all cleared areas larger than 25 square feet prior to the preparation of the required Vegetated Corridor enhancement/restoration plan.**
14. Prior to any site clearing, grading or construction, the applicant shall provide Clean Water Services with a Vegetated Corridor enhancement/restoration plan. Enhancement/restoration of the Vegetated Corridor shall be provided in accordance with R&O 19-5, Appendix A, as amended by R&O 19-22, and shall include planting specifications for all Vegetated Corridor, including any cleared areas larger than 25 square feet in Vegetated Corridor rated ""good.""
15. Prior to installation of plant materials, all invasive vegetation within the Vegetated Corridor shall be removed per methods described in Clean Water Services' Integrated Pest Management Plan, 2019. During removal of invasive vegetation care shall be taken to minimize impacts to existing native tree and shrub species.

16. Clean Water Services and/or City shall be notified 72 hours prior to the start and completion of enhancement/restoration activities. Enhancement/restoration activities shall comply with the guidelines provided in Planting Requirements (R&O 19-5, Appendix A, as amended by R&O 19-22).
17. **Maintenance and monitoring requirements shall comply with R&O 19-5, Section 2.12.2, as amended by R&O 19-22. If at any time during the warranty period the landscaping falls below the 80% survival level, the owner shall reinstall all deficient planting at the next appropriate planting opportunity and the two year maintenance period shall begin again from the date of replanting.**
18. **Performance assurances for the Vegetated Corridor shall comply with R&O 19-5, Section 2.07.2, Table 2-1 and Section 2.11, Table 2-2, as amended by R&O 19-22.**
19. **Clean Water Services shall require an easement over the Sensitive Area and Vegetated Corridor conveying storm and surface water management to Clean Water Services or the City that would prevent the owner of the Vegetated Corridor from activities and uses inconsistent with the purpose of the corridor and any easements therein.**
20. **Final construction plans shall include landscape plans.** In the details section of the plans, a description of the methods for removal and control of exotic species, location, distribution, condition and size of plantings, existing plants and trees to be preserved, and installation methods for plant materials is required. Plantings shall be tagged for dormant season identification and shall remain on plant material after planting for monitoring purposes.
21. **A Maintenance Plan shall be included on final plans** including methods, responsible party contact information, and dates (minimum two times per year, by June 1 and September 30).
22. **Final construction plans shall clearly depict the location and dimensions of the sensitive area and the Vegetated Corridor** (indicating good, marginal, or degraded condition). Sensitive area boundaries shall be marked in the field.
23. Protection of the Vegetated Corridors and associated sensitive areas shall be provided by the installation of permanent fencing and signage between the development and the outer limits of the Vegetated Corridors. **Fencing and signage details to be included on final construction plans.**

**This Service Provider Letter is not valid unless CWS-approved site plan is attached.**

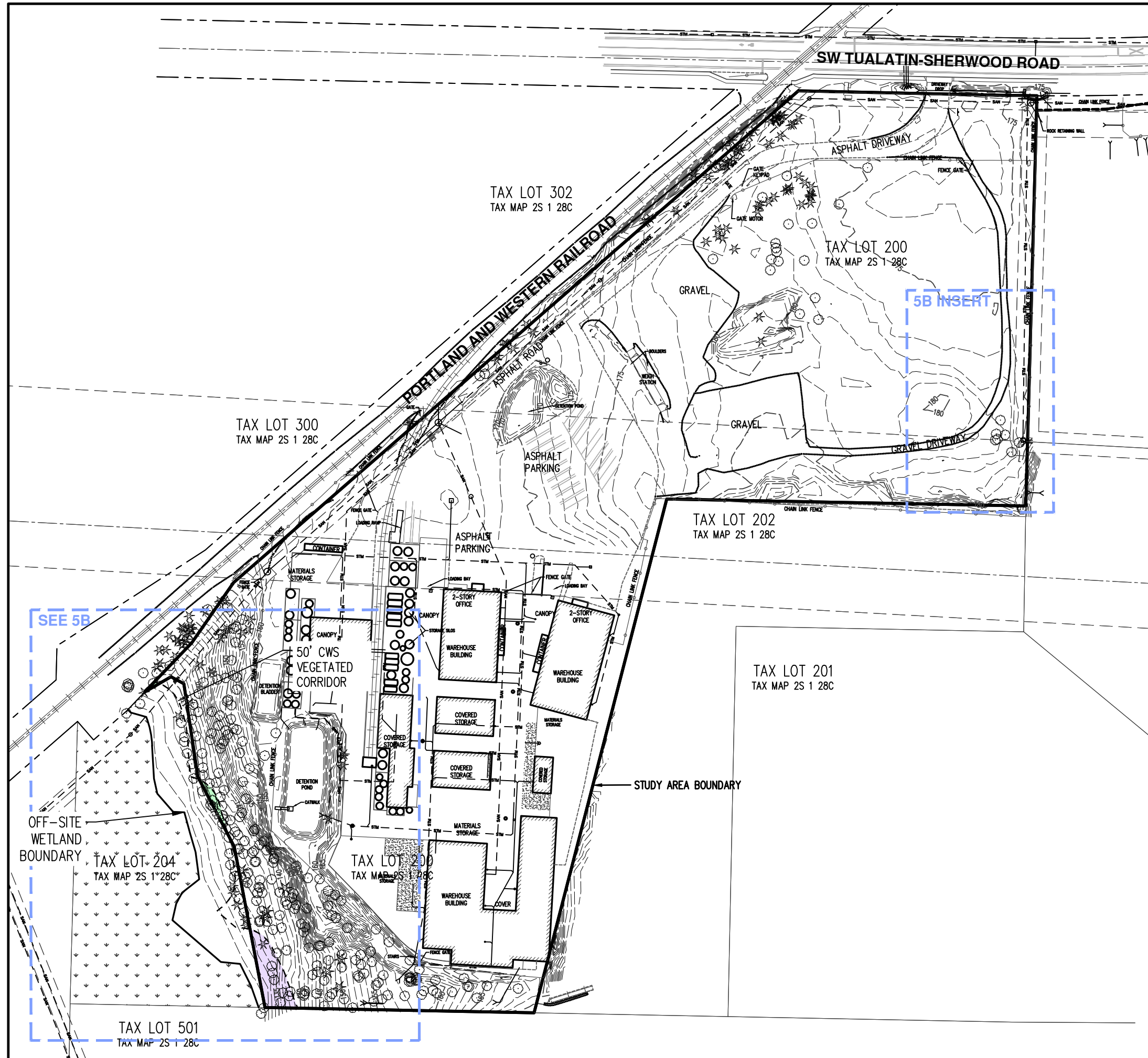
**Please call (503) 681-3667 with any questions.**

*Stacy Benjamin*

**Stacy Benjamin  
Environmental Plan Review**

**Attachments (5)**

CWS FILE NO. 21-002637  
 Approved  
 Clean Water Services  
 FOR ENVIRONMENTAL REVIEW  
 By SNB Date 11/9/2021  
 SPL ATTACHMENT 1 OF 5

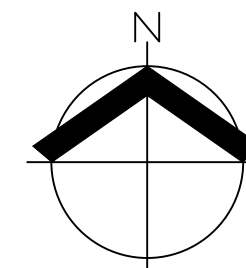


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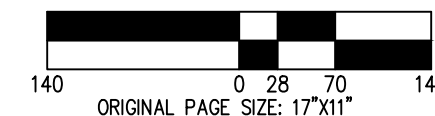
- ON-SITE GOOD CONDITION VEGETATED CORRIDOR: 598 SF± (0.01 ACRES)
- ON-SITE MARGINAL CONDITION VEGETATED CORRIDOR: 3,510 SF± (0.08 ACRES)
- TOTAL ON-SITE VEGETATED CORRIDOR: 4,108 SF± (0.09 ACRES)
- A PHOTO LOCATION & ORIENTATION

WETLAND AND WATER BOUNDARIES SHOWN WERE DELINEATED BY AKS ENGINEERING & FORESTRY, LLC ON APRIL 9, 2021 AND WERE PROFESSIONALLY LAND SURVEYED BY AKS ON MAY 5, 2021.

1-FOOT INTERVAL GROUND CONTOURS, EXISTING CONDITIONS, STUDY AREA BOUNDARY, AND TREE >6" DBH DERIVED FROM AKS LAND SURVEY.



SCALE: 1" = 140 FEET



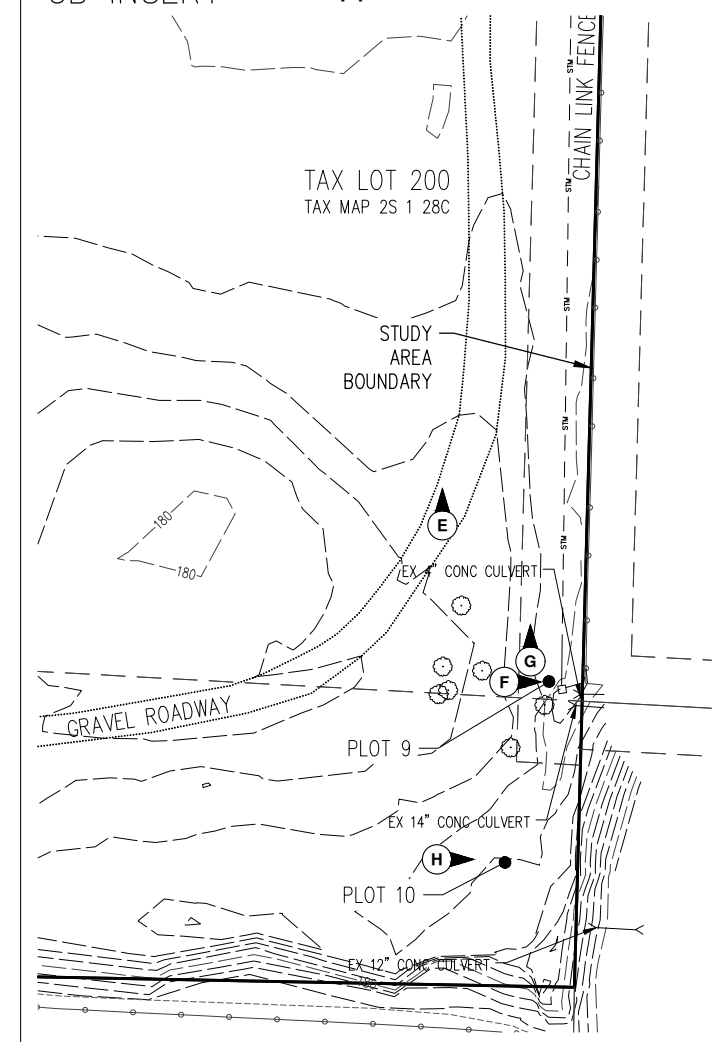
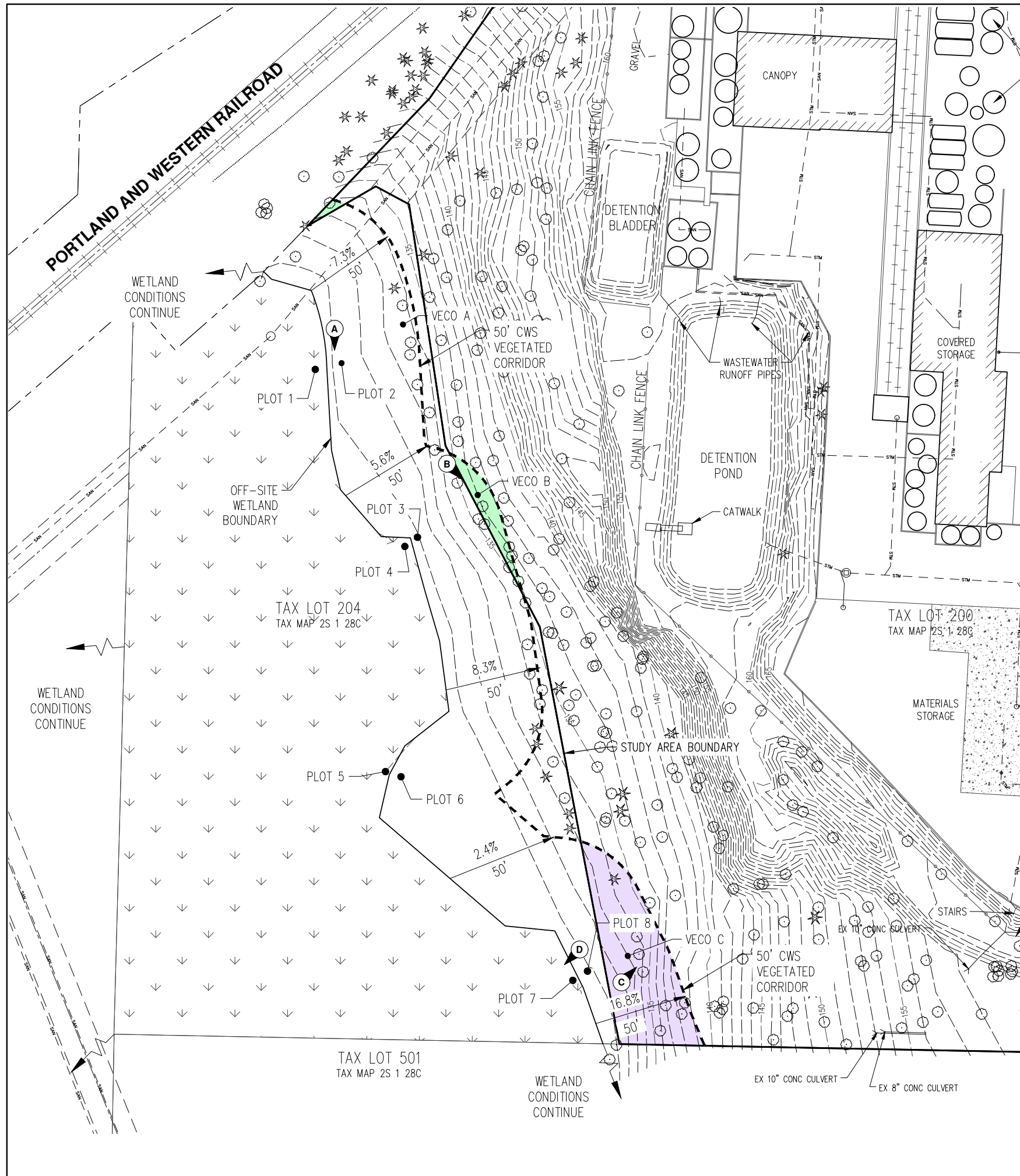
DATE: 10/28/2021

<b>NATURAL RESOURCES EXISTING CONDITIONS</b>	FIGURE
14200 SW TUALATIN-SHERWOOD ROAD SIMPLIFIED SITE ASSESSMENT	<b>5A</b>
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM	DRWN: SKT CHKD: SAR AKS JOB: 7431





**CWS FILE NO. 21-002637**  
 Approved  
 Clean Water Services  
 FOR ENVIRONMENTAL REVIEW  
 By *SNB* Date 11/9/2021  
 SPL ATTACHMENT 2 OF 5



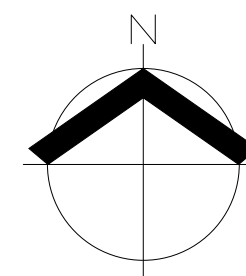
**LEGEND (COLOR COPY):**

- ON-SITE GOOD CONDITION VEGETATED CORRIDOR: 598 SF± (0.01 ACRES)
- ON-SITE MARGINAL CONDITION VEGETATED CORRIDOR: 3,510 SF± (0.08 AC)
- TOTAL ON-SITE VEGETATED CORRIDOR: 4,108 SF± (0.09 ACRES)
- A PHOTO LOCATION & ORIENTATION

WETLAND AND WATER BOUNDARIES SHOWN WERE DELINEATED BY AKS ENGINEERING & FORESTRY, LLC ON APRIL 9, 2021 AND WERE PROFESSIONALLY LAND SURVEYED BY AKS ON MAY 5, 2021.

1-FOOT INTERVAL GROUND CONTOURS, EXISTING CONDITIONS, STUDY AREA BOUNDARY, AND TREE >6" DBH DERIVED FROM AKS LAND SURVEY.

DATE: 10/28/2021



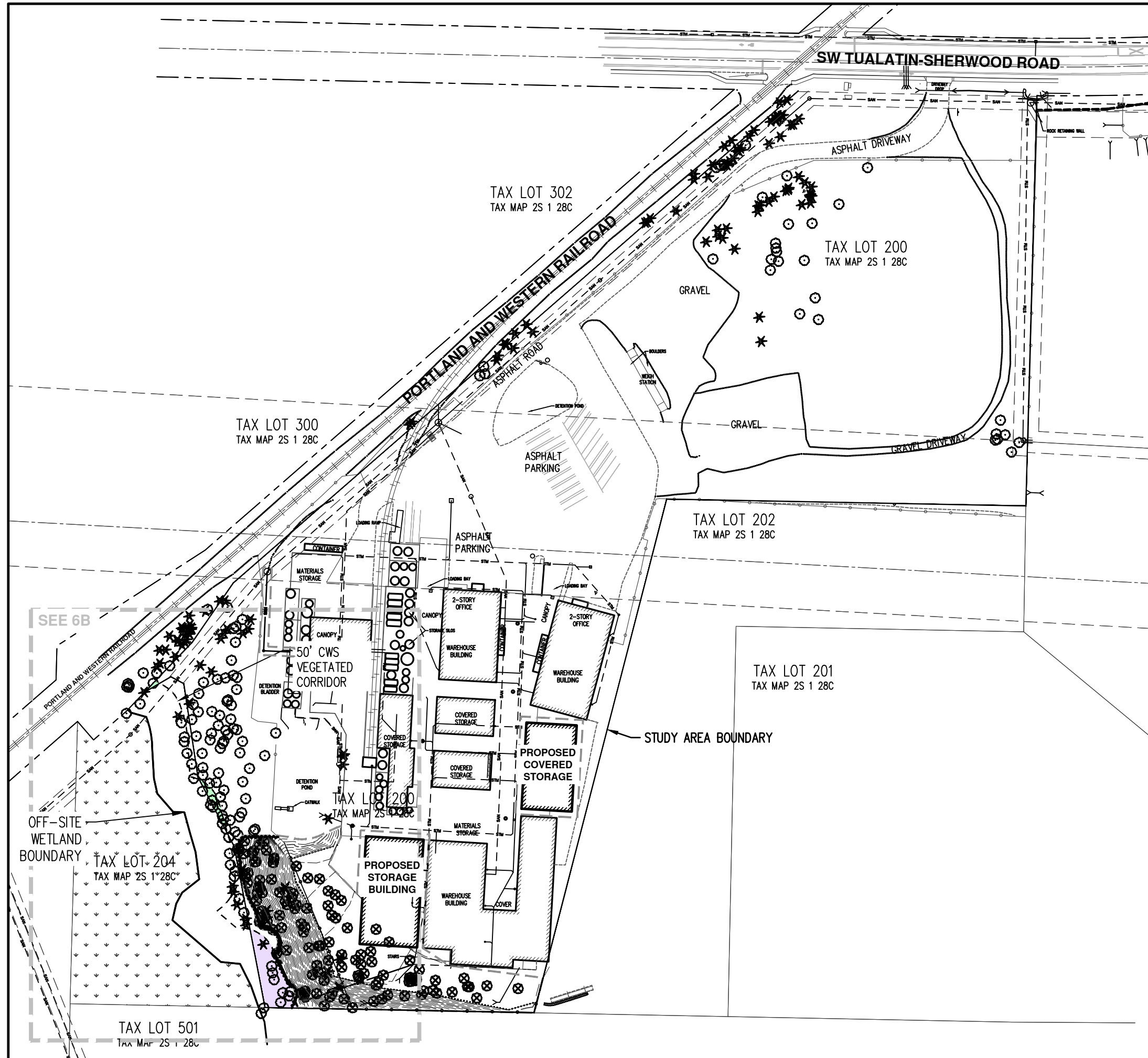
SCALE: 1" = 60 FEET



<b>NATURAL RESOURCES EXISTING CONDITIONS</b>	FIGURE
<b>14200 SW TUALATIN-SHERWOOD ROAD SIMPLIFIED SITE ASSESSMENT</b>	<b>5B</b>
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM	DRWN: SKT CHKD: SAR AKS JOB: 7431





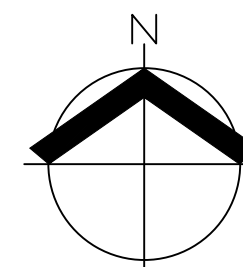


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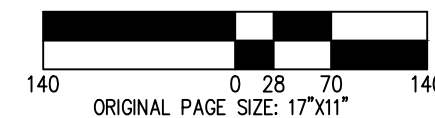
- ON-SITE GOOD CONDITION VEGETATED CORRIDOR AREA TO REMAIN: 598 SF± (0.01 ACRES)
  - ON-SITE MARGINAL CONDITION VEGETATED CORRIDOR TO BE ENHANCED TO GOOD CONDITION STANDARDS: 3,510 SF± (0.08 ACRES)
- TOTAL ON-SITE VEGETATED CORRIDOR: 4,108 SF± (0.09 ACRES)

WETLAND AND WATER BOUNDARIES SHOWN WERE DELINEATED BY AKS ENGINEERING & FORESTRY, LLC ON APRIL 9, 2021 AND WERE PROFESSIONALLY LAND SURVEYED BY AKS ON MAY 5, 2021.

TREES >6" DBH ARE SHOWN TO BE REMOVED.



SCALE: 1" = 140 FEET

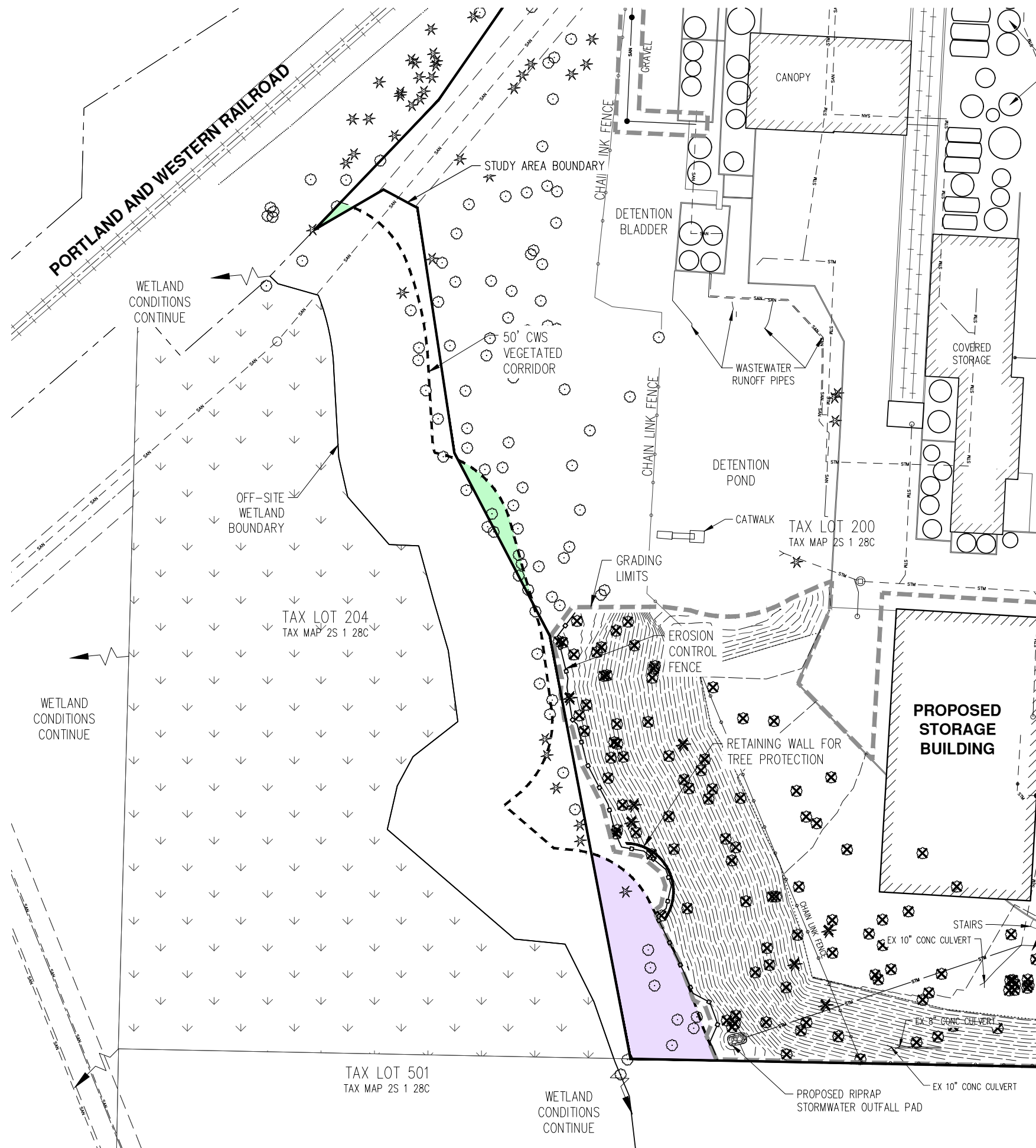


DATE: 10/28/2021

<b>NATURAL RESOURCES SITE PLAN</b>	FIGURE
14200 SW TUALATIN-SHERWOOD ROAD SIMPLIFIED SITE ASSESSMENT	<b>6A</b>
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM	DRWN: SKT CHKD: SAR AKS JOB: 7431



CWS FILE NO. 21-002637  
Approved  
Clean Water Services  
FOR ENVIRONMENTAL REVIEW  
By *SNB* Date 11/9/2021  
SPL ATTACHMENT 4 OF 5



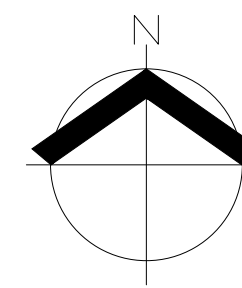
**LEGEND (COLOR COPY):**

- ON-SITE GOOD CONDITION VEGETATED CORRIDOR AREA TO REMAIN: 598 SF± (0.01 ACRES)
- ON-SITE MARGINAL CONDITION VEGETATED CORRIDOR TO BE ENHANCED TO GOOD CONDITION STANDARDS: 3,510 SF± (0.08 ACRES)

TOTAL ON-SITE VEGETATED CORRIDOR: 4,108 SF± (0.09 ACRES)

WETLAND AND WATER BOUNDARIES SHOWN WERE DELINEATED BY AKS ENGINEERING & FORESTRY, LLC ON APRIL 9, 2021 AND WERE PROFESSIONALLY LAND SURVEYED BY AKS ON MAY 5, 2021.

TREES >6" DBH ARE SHOWN TO BE REMOVED.



SCALE: 1" = 60 FEET



DATE: 10/28/2021

<b>NATURAL RESOURCES SITE PLAN</b>	FIGURE
<b>14200 SW TUALATIN-SHERWOOD ROAD SIMPLIFIED SITE ASSESSMENT</b>	<b>6B</b>
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM	DRWN: SKT CHKD: SAR AKS JOB: 7431



CWS FILE NO. 21-002637  
 Approved  
 Clean Water Services  
 FOR ENVIRONMENTAL REVIEW  
 By SNB Date 11/9/2021  
 SPL ATTACHMENT 5 OF 5

## 1-Sherwood Road – Vegetated Corridor Enhancement Planting Specifications

Planting specifications for the enhancement of ±3,510 square feet of *marginal* condition vegetated corridor enhancement to *good* condition.

### Total planting area 3,510 square feet

Scientific Name	Common Name	Size*	Spacing/Seeding Rate	Quantity
<b>Trees (total 36)**</b>				
<i>Acer macrophyllum</i>	bingleaf maple	2 gallon	10 feet on center	20
<i>Acer circirnatum</i>	Vine maple	2 gallon	10 feet on center	16
<b>Shrubs (total 176)**</b>				
<i>Symphoricarpus albus</i>	snowberry	1 gallon	4-5 feet on center	46
<i>Mahonia aquifolium</i>	tall Oregon grape	1 gallon	4-5 feet on center	35
<i>Polystichum munitum</i>	Pineland sword fern	1 gallon	4-5 feet on center	35
<i>Rosa gymnocarpa</i>	Baldhip rose	1 gallon	4-5 feet on center	30
<i>Ribes sanguineum</i>	red flowering currant	1 gallon	4-5 feet on center	30
<b>Seed Mix/Plug</b>				
<i>Agrostis exarata</i>	Spike bentgrass	seed	2 lb pls/acre	As needed for bare soil areas >25 square feet
<i>Bromus carinatus</i>	Native California brome	seed	2 lb pls/acre	

\*Bare root plants may be substituted for container plants based on availability. If bare root plants are used, they must be planted during the late winter/early spring dormancy period.

\*\* Minimum plant quantities ordered.

### Planting Notes (per CWS Design & Construction Standards R&O 19-5, amended by R&O 19-22, December 2019 Appendix A Planting Requirements):

- 1) Container stock shall be installed only from February 1 through May 1 and October 1 through November 15. Bare root stock shall be installed only from December 15 through April 15. Plantings outside these times may require additional measures to ensure survival which shall be specified on the plans.
- 2) All non-native invasive vegetation shall be removed from planting areas prior to installing native enhancement plantings. Invasive species control shall be consistent with Clean Water Services' June 2019 *Integrated Pest Management (IPM) Plan*.
- 3) Appropriate plant selection, along with adequate site preparation and maintenance, reduces the need for irrigation. However, unless site hydrology is currently adequate, a District/City approved irrigation system or equivalent (i.e., polymer, plus watering) shall be used during the two-year plant establishment period. Watering shall be at a minimum rate of at least one inch per week from June 15 through October 15. Other irrigation techniques, such as deep watering, may be allowed with prior approval by District staff.
- 4) Trees, shrubs, and groundcovers planted shall be mulched at a minimum of three inches in depth and 18 inches in diameter, to retain moisture and discourage weed growth around newly installed plant material. Appropriate mulches are made from composted bark or leaves that have not been chemically treated.



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# **Exhibit I: Natural Resource Assessment Report**

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# 14200 SW Tualatin-Sherwood Road Sherwood, Washington County Chapter 16.144 Compliance Memo

**Date:** November 2021

**Prepared for:** Cascade Columbia Distribution  
14200 SW Tualatin-Sherwood Road  
Sherwood, OR 97140

**Prepared by:** AKS Engineering & Forestry, LLC  
12965 SW Herman Road, Suite 100  
Tualatin, OR 97062  
Sonya Templeton, Natural Resource Specialist  
Lex Francis, Natural Resource Specialist  
(503) 563-6151 | francisl@aks-eng.com

**Site Information:** 14200 Tualatin-Sherwood Road  
Sherwood, OR  
Washington County Assessor's Map 2S 1 28C  
Tax Lot 200

**CWS Service  
Provider Letter:** 21-002637

**AKS Job Number:** 7431



12965 SW Herman Road, Suite 100  
Tualatin, OR 97062  
(503) 563-6151

## Table of Contents

<b>Introduction .....</b>	<b>2</b>
<b>Existing Conditions and Background Mapping.....</b>	<b>2</b>
<b>Delineation of Goal 5 Resources .....</b>	<b>2</b>
Wetlands and Non-Wetland Waters.....	3
Off-Site PEM/PSS Wetland.....	3
Regionally Significant Fish and Wildlife Habitat Areas.....	3
Riparian Habitat .....	3
Upland Habitat.....	3
<b>Project Overview .....</b>	<b>4</b>
<b>List of Preparers.....</b>	<b>4</b>
<b>Literature Cited and Referenced .....</b>	<b>5</b>

## Appendices

### Appendix A: Figures

**Figure 1:** USGS Vicinity Map

**Figure 2:** Washington County Assessor's Map

**Figure 3:** Local Wetlands Inventory (LWI)

**Figure 4:** Metro Regionally Significant Fish and Wildlife Habitat Area Map

**Figure 5A & 5B:** Existing Conditions

**Figure 6A & 6B:** Site Plan

**Appendix B:** Clean Water Services Service Provider Letter (File No. 21-002637) & Simplified Site Assessment Report

**Appendix C:** 2002 Google Earth Aerial Photograph

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## Introduction

AKS Engineering & Forestry, LLC (AKS) was contracted by Cascade Columbia Distribution (Applicant) to conduct a natural resource site assessment for industrial redevelopment, which received a Clean Water Services (CWS) Service Provider Letter (SPL) on November 10, 2021, under CWS file number 21-002637. The study area is located south of SW Tualatin-Sherwood Road and west of SW Oregon Street and consists of Tax Lot 200 of Washington County Assessor's Map 2S 1 28C in Sherwood, Washington County, Oregon (Appendix A, Figures 1 and 2).

Under the 2021 SPL, the boundary of a palustrine emergent/scrub-shrub (PEM/PSS) wetland associated with the Rock Creek floodplain was delineated off-site to the southwest on adjacent Tax Lot 204, which is a portion of the Tualatin River National Wildlife Refuge. The 50-foot-wide vegetated corridor (VC) associated with the off-site wetland extends onto the study area and was determined, under the 2021 SPL, to be in both *good* and *marginal* conditions. Metro Regional Services' (Metro's) Regionally Significant Fish and Wildlife Habitat Area Map (Metro Map) indicates both Class I Riparian and Upland Habitats as present on-site, with the Upland Habitat extending beyond the CWS VC (Appendix A, Figure 4).

The project consists of the redevelopment of Cascade Columbia Distribution. The redesign of the existing development allows for one additional material storage building and a covered area. The project will not impact the Class I Riparian Habitat (CWS 50-foot-wide VC). Encroachments within the City's Goal 5 Upland habitat area are necessary for the required site improvements (Site Plan, Figure 6A and 6B in Appendix A).

This memorandum has been prepared to meet the Sherwood Municipal Code, Chapter 16.144: *Wetland, Habitat, and Natural Areas*.

## Existing Conditions and Background Mapping

The site consists of a chemical distribution company and is currently zoned as General Industrial (GI). The vegetation in the study area is dominated by Oregon white oak (*Quercus garryana*), Pacific poison oak (*Toxicodendron diversilobum*), Himalayan blackberry (*Rubus armeniacus*), and dovefoot geranium (*Geranium molle*). Off-site, Rock Creek is identified in the *Sherwood Comprehensive Plan, Part 2* as having an associated Federal Emergency Management Agency (FEMA) 100-Year Floodplain that extends within the on-site VC.

According to the City of Sherwood Local Wetland Inventory (LWI) map (Appendix A, Figure 3) the southern portion of the study area is within the Rock Creek floodplain contiguous with the PEM/PSS wetland on Tax Lot 204. AKS does not concur with the LWI map and has set the boundary further back into Tax Lot 204.

According to the Metro Map, the extent of the CWS VC associated with the off-site wetland falls under Class I Riparian Habitat. Class I Upland Habitat is also mapped on-site.

## Delineation of Goal 5 Resources

AKS Natural Resource Specialist Sonya Templeton and Senior Wetland Scientist Stacey Reed, PWS conducted a site visit on April 9, 2021, to delineate the off-site wetland and determine the extent and condition of the on-site Regionally Significant Fish and Wildlife Habitat Areas. A CWS SPL was issued for the site under file number 21-002637 on November 10, 2021. Copies of the SPL and the CWS Simplified

Site Assessment Report, which includes the vegetated corridor and wetland determination data sheets, are provided in Appendix B.

The extent and value of the on-site Regionally Significant Fish and Wildlife Habitat Area was determined based on the Sherwood Municipal Code, Chapter 16.144.020.C and are shown in the Natural Resources Existing Conditions Plans (Figures 5A and 5B, Appendix A).

### **Wetlands and Non-Wetland Waters**

#### **Off-Site PEM/PSS Wetland**

No wetlands or waters were observed on-site.

The off-site PEM/PSS wetland was dominated by Oregon ash (*Fraxinus latifolia*), black hawthorn (*Crataegus douglasii*), Himalayan blackberry, and reed canary grass (*Phalaris arundinacea*). The wetland boundary was delineated based on a change in the topography and landform from a low-elevation floodplain terrace in the wetland to a higher-elevation hillslope in the upland. The elevation change coincided with a change in vegetation from hydrophytic-dominated species in the wetland (reed canary grass, Oregon Ash) to non-hydrophytic (Oregon white oak, beaked hazelnut) species in the upland.

### **Regionally Significant Fish and Wildlife Habitat Areas**

#### **Riparian Habitat**

The CWS 50-foot-wide VC associated with the off-site wetland extends onto the project area and is in the vicinity of the Metro-mapped Class I Riparian Habitat. Based on Section 16.144.020, Table 8-1 the Riparian Habitat was determined to be Forest Canopy Class I due to its proximity to the off-site wetland being less than 100 feet. The Riparian Habitat is confined to the CWS VC. The extent of the VC was determined based on the CWS *Design and Construction Standards* (R&O 19-5 as Amended by R&O 19-22), Chapter 3.03.3, Table 3-1.

The existing condition of the on-site Riparian Habitat (CWS VC) was determined according to Chapter 3.03.3, Table 3-3 (R&O 19-5 as Amended by R&O 19-22). The CWS VC standards are based on the presence of tree canopy and percent cover of native trees, shrubs, and groundcover. The vegetated corridor was determined to be in both *marginal* and *good* conditions; the *marginal* condition area had less than 80 percent combined cover by native vegetation species and was dominated by Himalayan blackberry. The *marginal* condition vegetated corridor will be enhanced to *good* condition per SPL 21-002637.

The Vegetated Corridor (VECO) Data Sheets and Planting Specification Table are included with the CWS Site Assessment Report in Appendix B.

#### **Upland Habitat**

Upland Habitat extends beyond the Riparian Habitat (CWS VC). It is classified as Forest Canopy Class I based on being part of a contiguous grove of trees with limited canopy openings, greater than 1 acre in size, and having approximately 60 percent or greater crown closure. Vegetation is dominated by Douglas fir (*Pseudotsuga menziesii*), Oregon white oak, and balsam poplar (*Populus balsamifera*).

The forest canopy was assessed by a certified AKS Arborist on October 13, 2021. A 2002 aerial photograph is included as Appendix C, showing no alterations to the existing on-site conditions.



## Project Overview

The project consists of the construction of one new warehouse building and addition of a covered outdoor storage area in the southern portion of the site. No impacts are proposed to the off-site wetland or Riparian Habitat (CWS VC) for this project and *marginal* condition VC will be enhanced to *good* condition standards per CWS SPL 21-002637. The Site Plan is included in Appendix A, Figures 6A and 6B.

The project will retain well above the minimum required 30 percent of the tree canopy and is therefore under compliance with City of Sherwood's Tree Code 16.142.070 (D)(1) and 16.142.070 (D)(3).

This project meets the standards pursuant to Sherwood Municipal Code, Chapter 16.144.010, as this project does not reduce the area of wetlands on-site and an established buffer was determined in conformance to CWS standards. Enhancement to the CWS Riparian Habitat includes a planting plan and monitoring to protect the values and functions of the off-site wetland and Rock Creek.

## List of Preparers



Lex Francis  
Natural Resource Specialist  
Report preparation



Sonya Templeton  
Natural Resource Specialist  
Fieldwork and Report QA/QC

## Literature Cited and Referenced

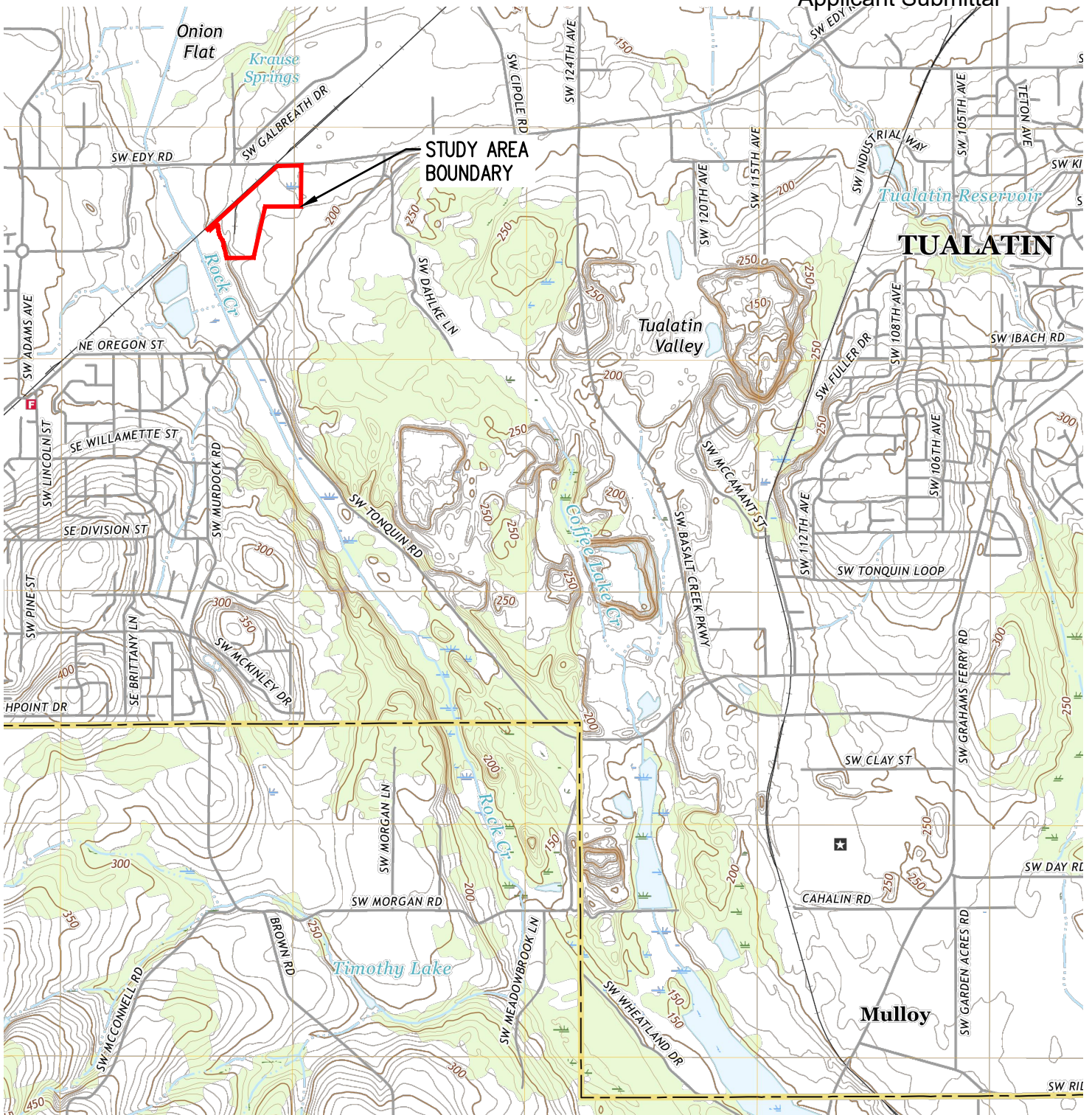
- City of Sherwood, 2021. Sherwood Municipal Code. Covering Ordinances through 2021-007, passed August 3, 2021 (Supp. No. 20, Update 3). Sherwood (Oregon): City of Sherwood. Available at: [https://library.municode.com/or/sherwood/codes/code\\_of\\_ordinances](https://library.municode.com/or/sherwood/codes/code_of_ordinances) [Accessed September 2021].
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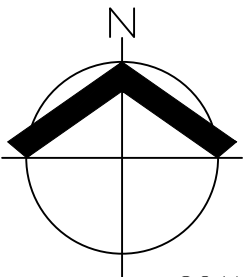
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## **Appendix A: Figures**

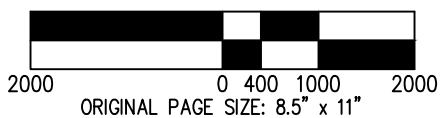
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USGS 7.5' TOPOGRAPHIC SERIES  
QUADRANGLE: SHERWOOD, OR (2020)



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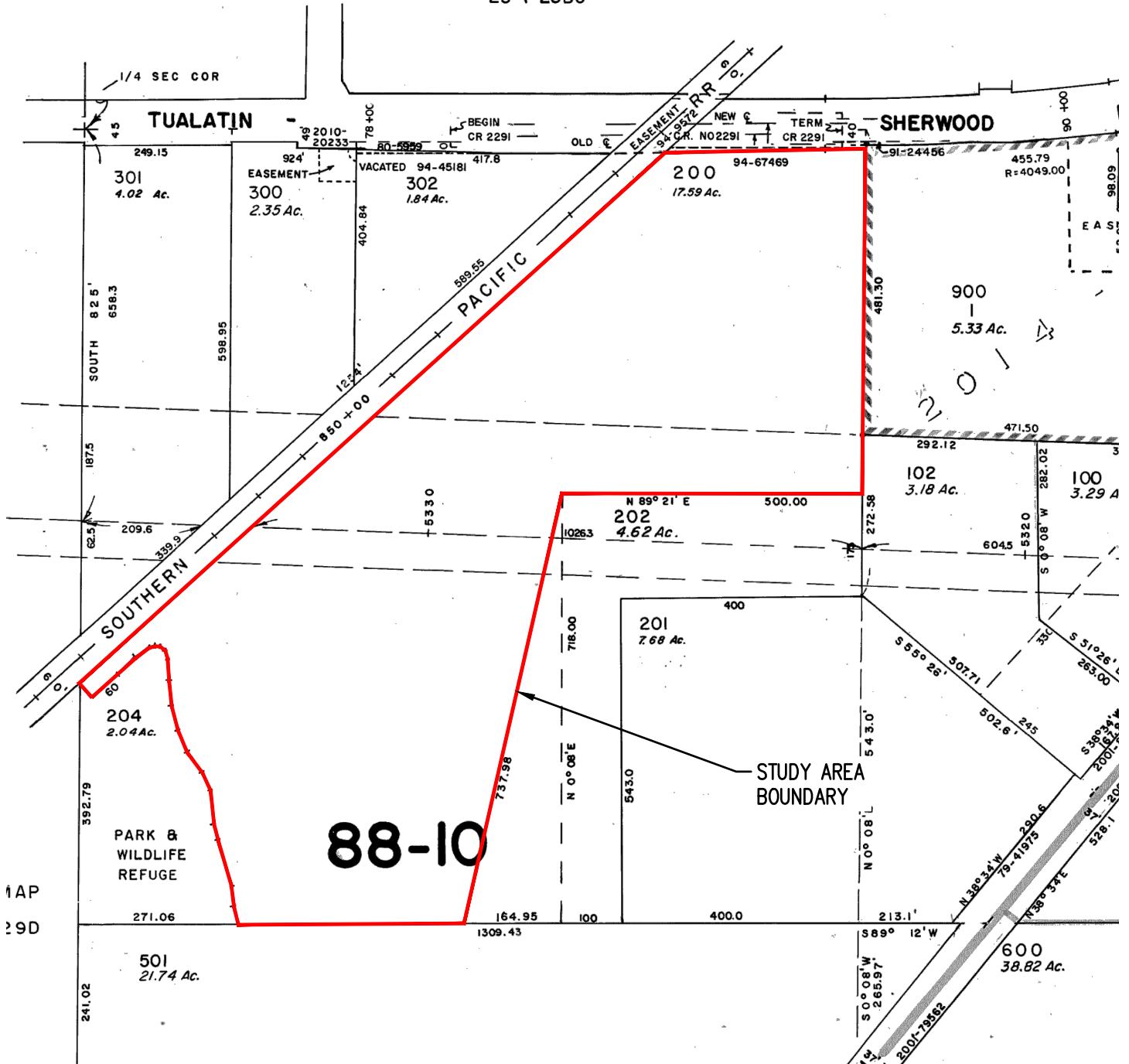


DATE: 10/22/2021

<p>USGS VICINITY MAP 14200 SW TUALATIN-SHERWOOD ROAD CHAPTER 16.144 COMPLIANCE MEMO</p>		<p>FIGURE <b>1</b></p>
<p>AKS ENGINEERING &amp; FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM</p>		<p>DRWN: LMF CHKD: SAR AKS JOB: 7431</p>

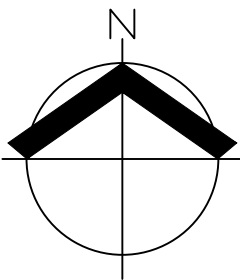


2S 1 28BC

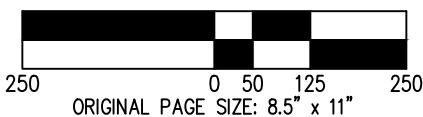


88-10

STUDY AREA BOUNDARY



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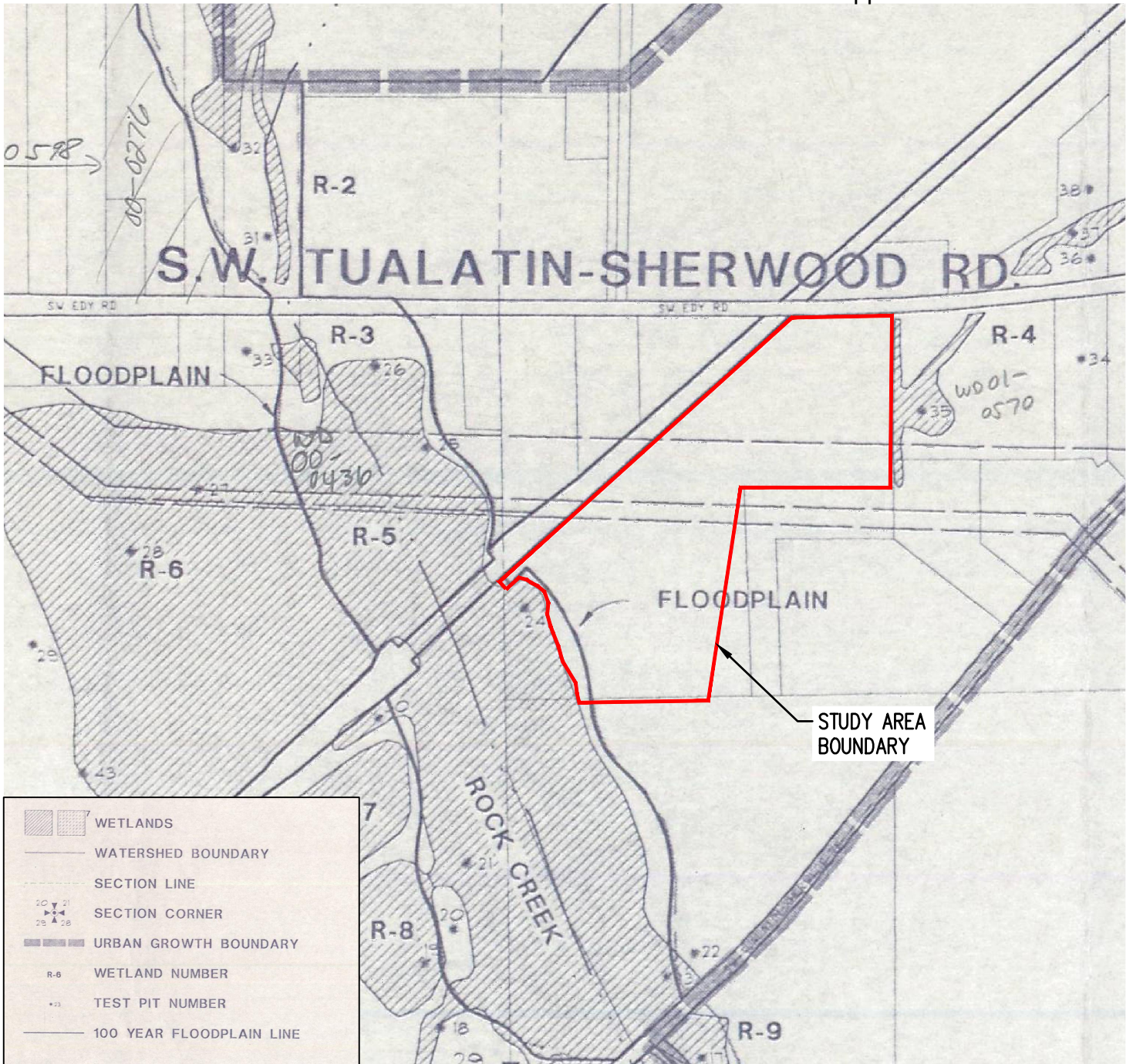
WASHINGTON COUNTY  
TAX LOT 200  
TAX MAP 2S 1 28C

DATE: 10/22/2021

TAX MAP (MAP 2S 1 28C) 14200 SW TUALATIN-SHERWOOD ROAD CHAPTER 16.144 COMPLIANCE MEMO		FIGURE <b>2</b>
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM		DRWN: LMF CHKD: SAR AKS JOB: 7431

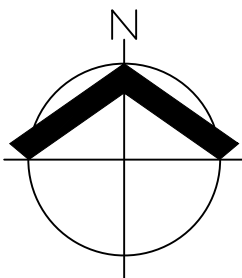




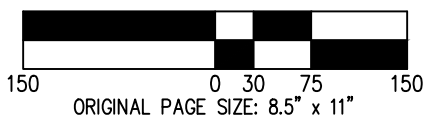


	WETLANDS
	WATERSHED BOUNDARY
	SECTION LINE
	SECTION CORNER
	URBAN GROWTH BOUNDARY
	WETLAND NUMBER
	TEST PIT NUMBER
	100 YEAR FLOODPLAIN LINE

CITY OF SHERWOOD  
LOCAL WETLAND INVENTORY (1992)



SCALE: 1" = 150 FEET

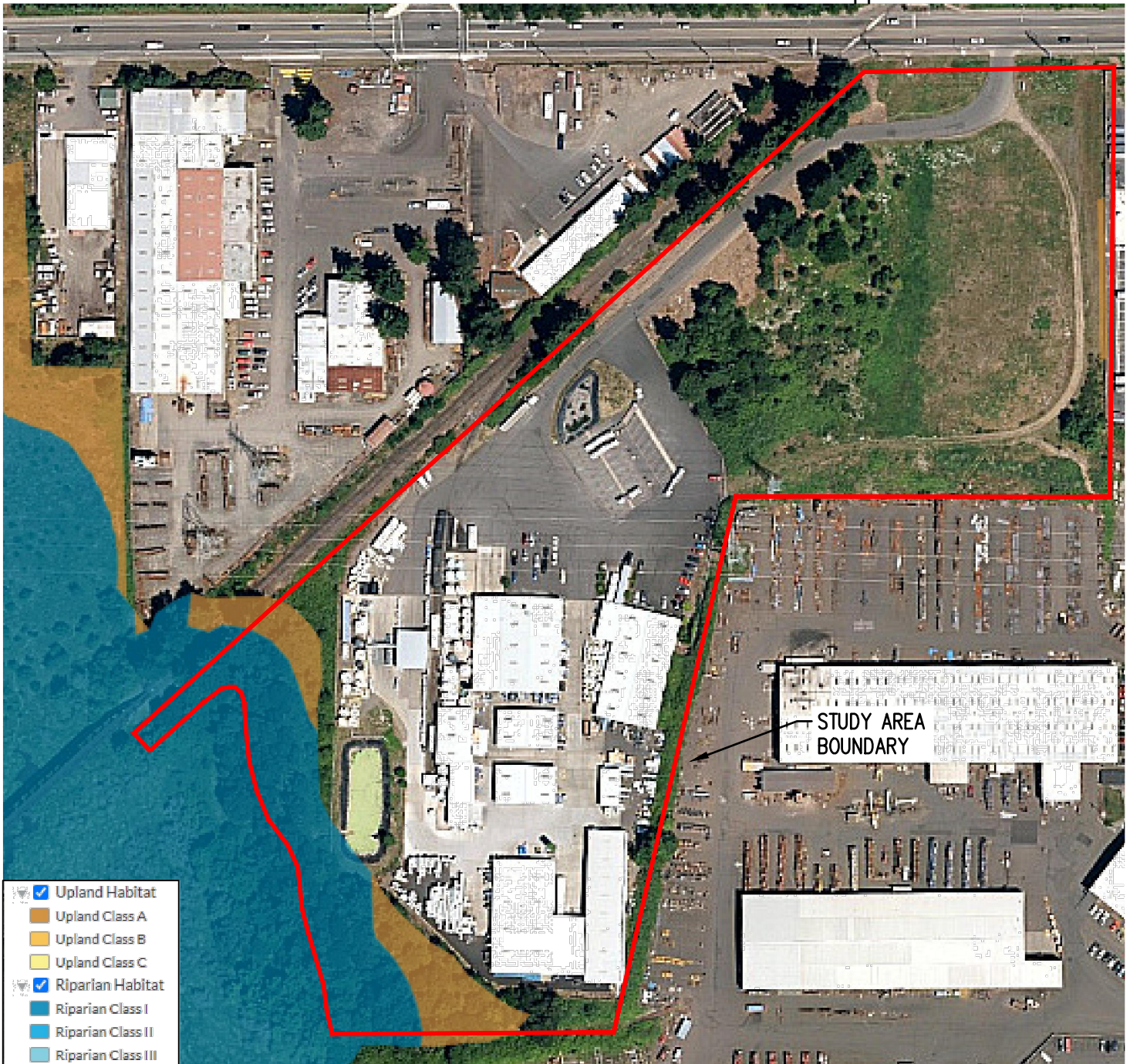


DATE: 10/22/2021

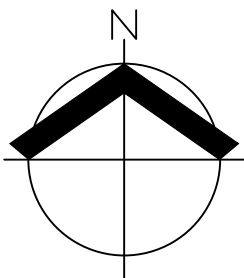
<b>LOCAL WETLAND INVENTORY MAP</b> 14200 SW TUALATIN-SHERWOOD ROAD CHAPTER 16.144 COMPLIANCE MEMO		<b>FIGURE</b> <b>3</b>
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151    WWW.AKS-ENG.COM		DRWN: LMF CHKD: SAR AKS JOB: 7431



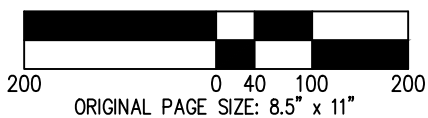




METRO MAP  
REGIONALLY SIGNIFICANT FISH &  
WILDLIFE HABITAT



SCALE: 1" = 200 FEET

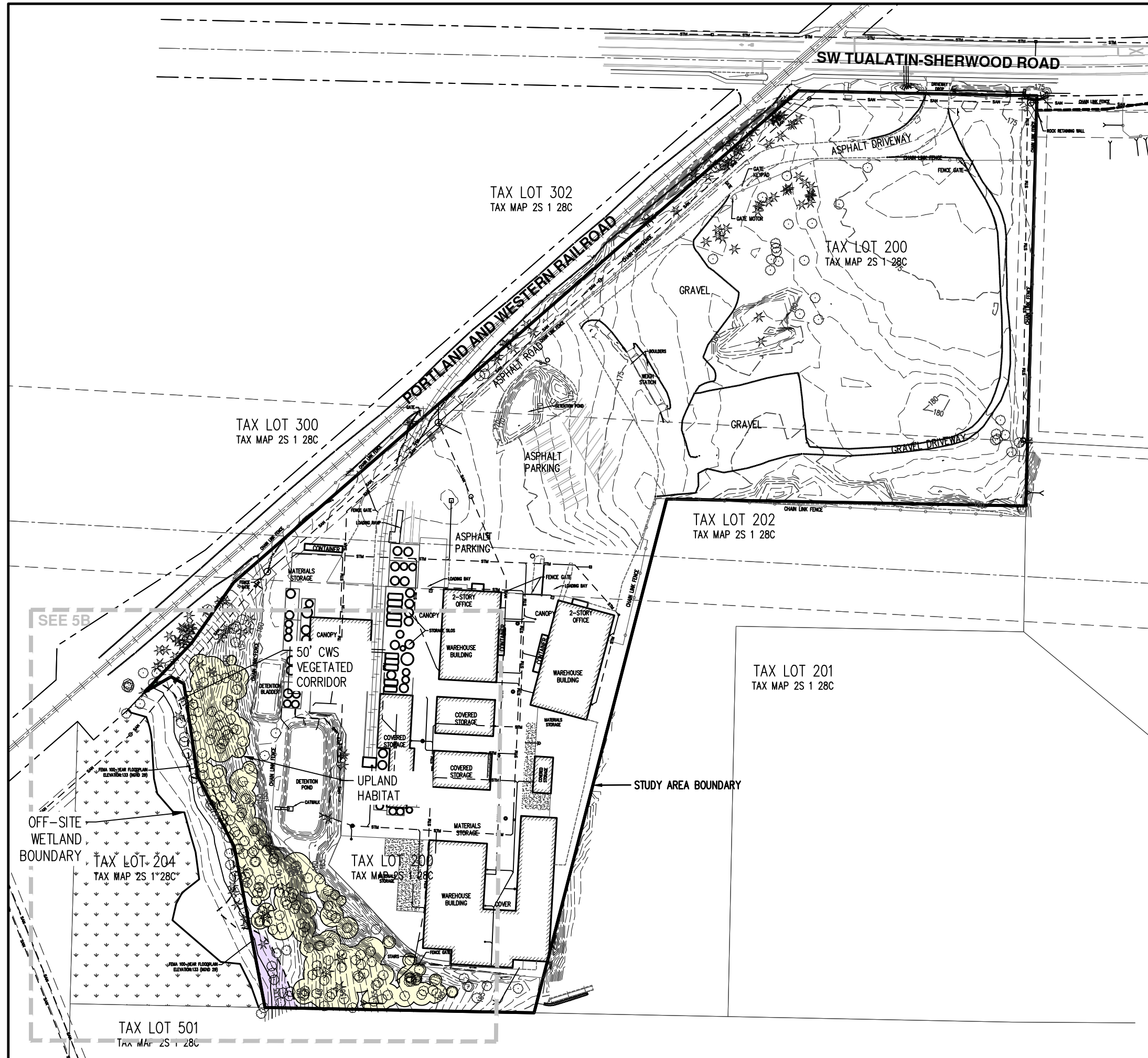


DATE: 10/22/2021

<p>METRO MAP 14200 SW TUALATIN-SHERWOOD ROAD CHAPTER 16.144 COMPLIANCE MEMO</p>		<p>FIGURE <b>4</b></p>
<p>AKS ENGINEERING &amp; FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151    WWW.AKS-ENG.COM</p>		<p>DRWN: LMF CHKD: SAR AKS JOB: 7431</p>







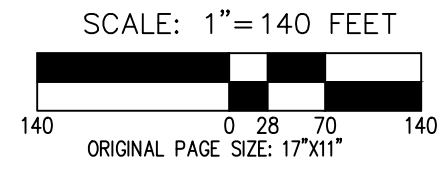
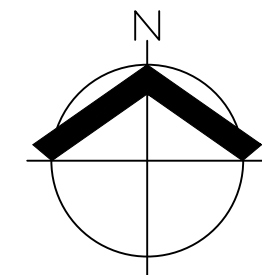
**LEGEND (COLOR COPY):**

- ON-SITE GOOD CONDITION CWS VEGETATED CORRIDOR: 598 SF± (0.01 ACRES)
- ON-SITE MARGINAL CONDITION CWS VEGETATED CORRIDOR: 3,510 SF± (0.08 ACRES)
- TOTAL ON-SITE CWS VEGETATED CORRIDOR: 4,108 SF± (0.09 ACRES)
- UPLAND HABITAT (FOREST CANOPY CLASS 1): 46,598 SF± (1.07 ACRES)

UPLAND HABITAT AREA SHOWN WAS ASSESSED AND DELINEATED BY AKS ENGINEERING & FORESTRY, LLC ON OCTOBER 13, 2021.

WETLAND AND WATER BOUNDARIES SHOWN WERE DELINEATED BY AKS ON APRIL 9, 2021 AND WERE PROFESSIONALLY LAND SURVEYED BY AKS ON MAY 5, 2021.

1-FOOT INTERVAL GROUND CONTOURS, EXISTING CONDITIONS, STUDY AREA BOUNDARY, AND TREE >6" DBH DERIVED FROM AKS LAND SURVEY.

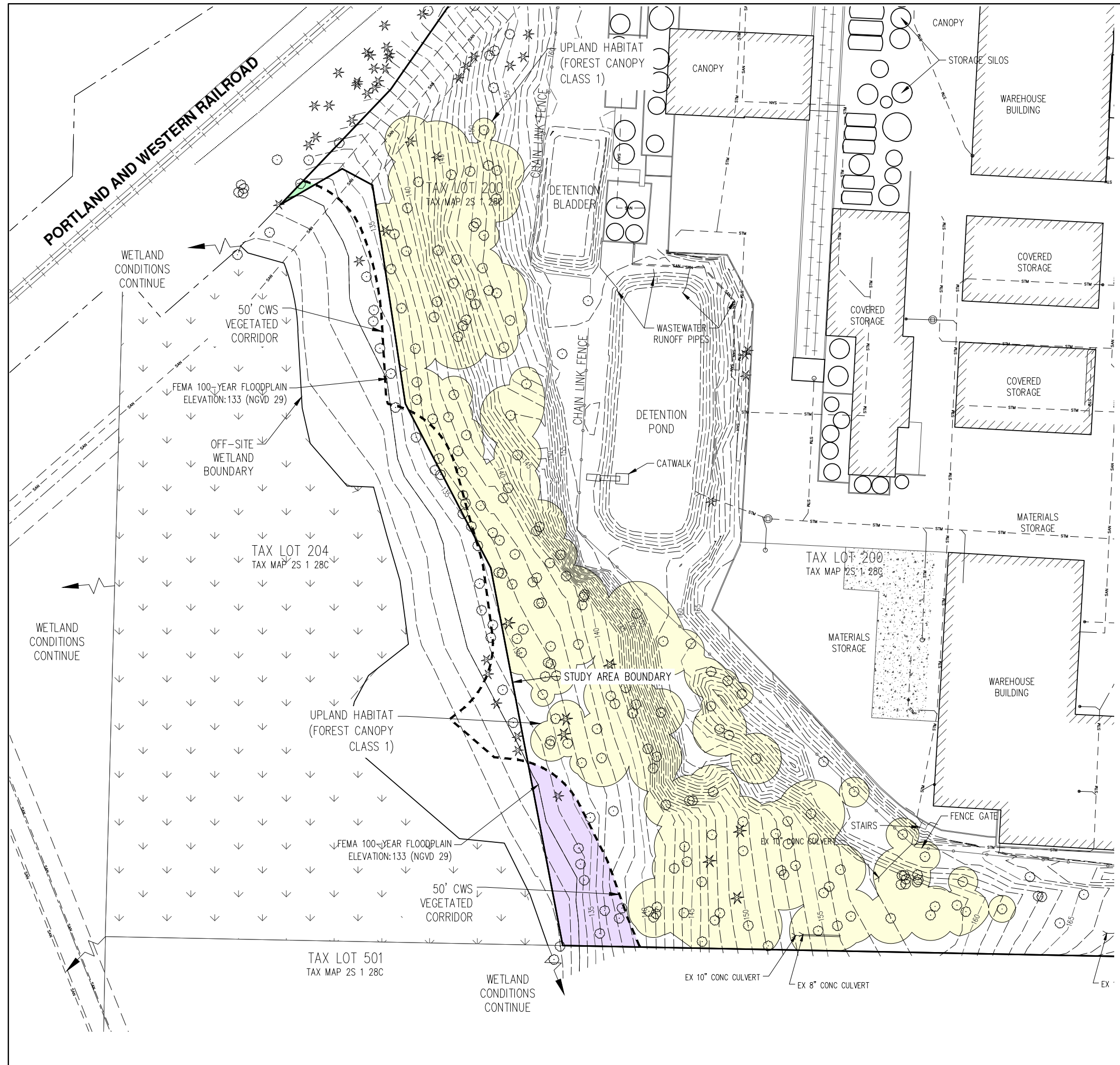


DATE: 11/03/2021

<b>NATURAL RESOURCES EXISTING CONDITIONS</b>	FIGURE
14200 SW TUALATIN-SHERWOOD ROAD CHAPTER 16.144 COMPLIANCE MEMO	<b>5A</b>
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM	DRWN: SKT CHKD: SAR AKS JOB: 7431







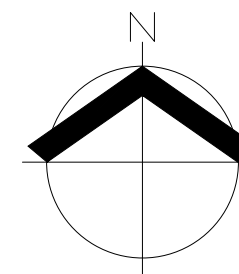
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- ON-SITE MARGINAL CONDITION CWS VEGETATED CORRIDOR: 3,510 SF± (0.08 ACRES)
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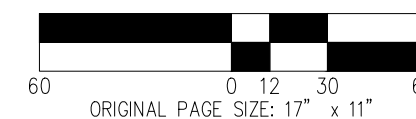
UPLAND HABITAT AREA SHOWN WAS ASSESSED AND DELINEATED BY AKS ENGINEERING & FORESTRY, LLC ON OCTOBER 13, 2021.

WETLAND AND WATER BOUNDARIES SHOWN WERE DELINEATED BY AKS ON APRIL 9, 2021 AND WERE PROFESSIONALLY LAND SURVEYED BY AKS ON MAY 5, 2021.

1-FOOT INTERVAL GROUND CONTOURS, EXISTING CONDITIONS, STUDY AREA BOUNDARY, AND TREE >6" DBH DERIVED FROM AKS LAND SURVEY.



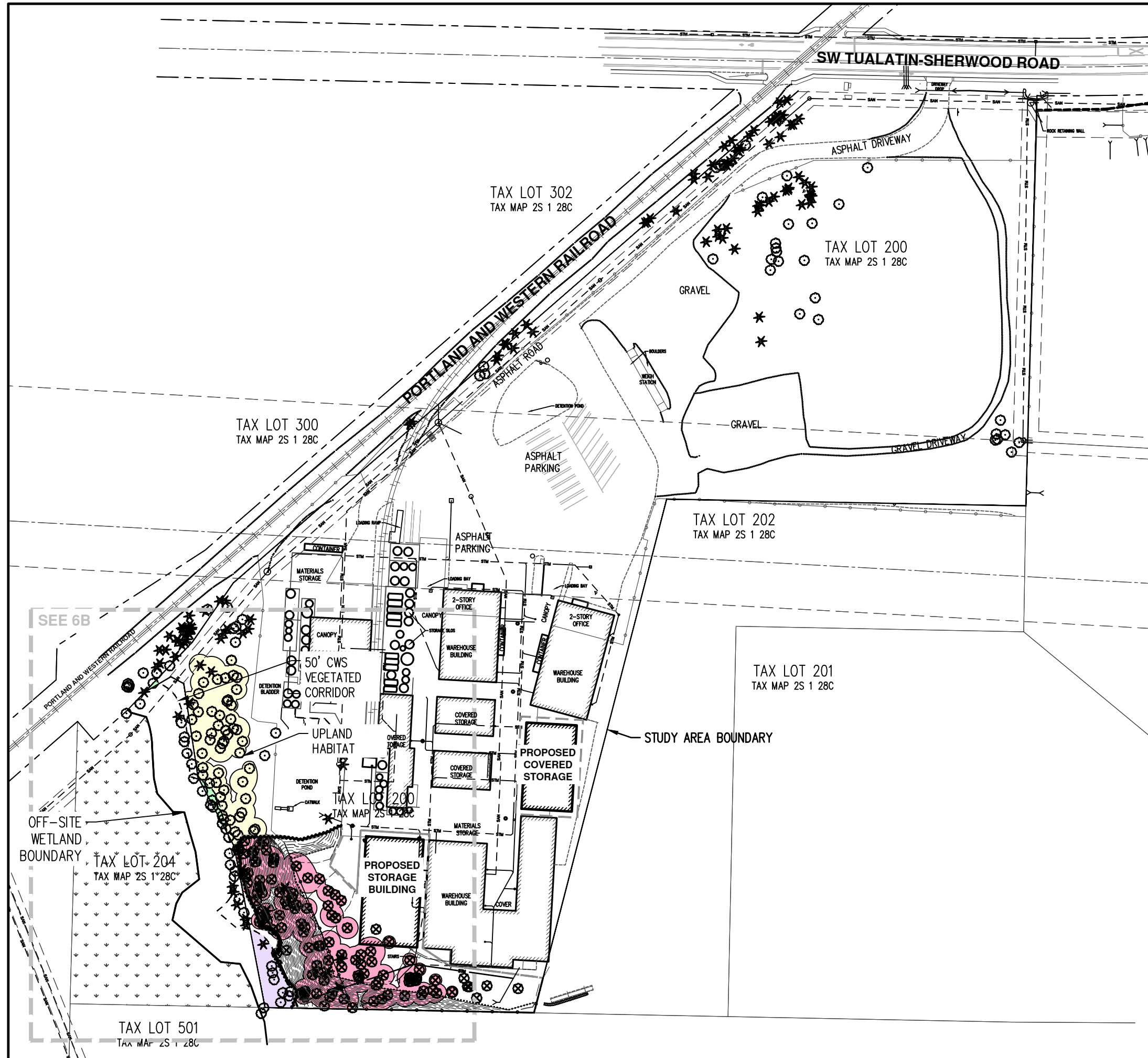
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DATE: 11/03/2021

<b>NATURAL RESOURCES EXISTING CONDITIONS</b>	FIGURE
14200 SW TUALATIN-SHERWOOD ROAD CHAPTER 16.144 COMPLIANCE MEMO	<b>5B</b>
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM	DRWN: SKT CHKD: SAR AKS JOB: 7431





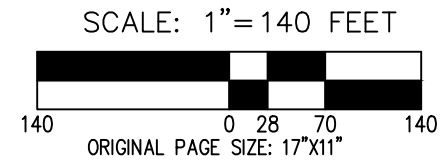
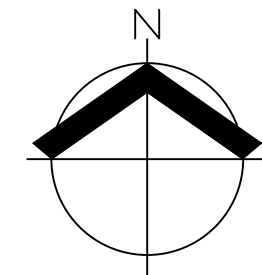
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- ON-SITE MARGINAL CONDITION CWS VEGETATED CORRIDOR TO BE ENHANCED TO GOOD CONDITION PER CWS STANDARDS: 3,510 SF± (0.08 ACRES)
- PERMANENT UPLAND HABITAT (FOREST CANOPY CLASS 1) IMPACT AREA: 29,632 SF± (0.68 ACRES)
- UPLAND HABITAT (FOREST CANOPY CLASS 1) TO REMAIN: 16,966 SF± (0.39 ACRES)
- TREES >6" DBH TO BE REMOVED

UPLAND HABITAT AREA SHOWN WAS ASSESSED AND DELINEATED BY AKS ENGINEERING & FORESTRY, LLC ON OCTOBER 13, 2021.

WETLAND AND WATER BOUNDARIES SHOWN WERE DELINEATED BY AKS ON APRIL 9, 2021 AND WERE PROFESSIONALLY LAND SURVEYED BY AKS ON MAY 5, 2021.

1-FOOT INTERVAL GROUND CONTOURS, EXISTING CONDITIONS, STUDY AREA BOUNDARY, AND TREE >6" DBH DERIVED FROM AKS LAND SURVEY.



DATE: 11/03/2021






<b>NATURAL RESOURCES SITE PLAN</b>	FIGURE <b>6A</b>
14200 SW TUALATIN-SHERWOOD ROAD CHAPTER 16.144 COMPLIANCE MEMO	
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM	
DRWN: SKT CHKD: SAR AKS JOB: 7431	







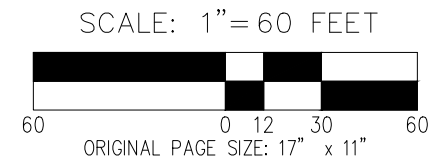
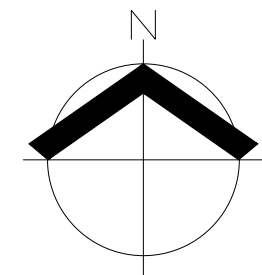
**LEGEND (COLOR COPY):**

-  ON-SITE GOOD CONDITION CWS VEGETATED CORRIDOR AREA TO REMAIN: 598 SF± (0.01 ACRES)
-  ON-SITE MARGINAL CONDITION CWS VEGETATED CORRIDOR TO BE ENHANCED TO GOOD CONDITION PER CWS STANDARDS: 3,510 SF± (0.08 ACRES)
-  PERMANENT UPLAND HABITAT (FOREST CANOPY CLASS 1) IMPACT AREA: 29,632 SF± (0.68 ACRES)
-  UPLAND HABITAT (FOREST CANOPY CLASS 1) TO REMAIN: 16,966 SF± (0.39 ACRES)
-  TREES >6" DBH TO BE REMOVED

UPLAND HABITAT AREA SHOWN WAS ASSESSED AND DELINEATED BY AKS ENGINEERING & FORESTRY, LLC ON OCTOBER 13, 2021.

WETLAND AND WATER BOUNDARIES SHOWN WERE DELINEATED BY AKS ON APRIL 9, 2021 AND WERE PROFESSIONALLY LAND SURVEYED BY AKS ON MAY 5, 2021.

1-FOOT INTERVAL GROUND CONTOURS, EXISTING CONDITIONS, STUDY AREA BOUNDARY, AND TREE >6" DBH DERIVED FROM AKS LAND



DATE: 11/03/2021

<b>NATURAL RESOURCES SITE PLAN</b>	FIGURE
14200 SW TUALATIN-SHERWOOD ROAD CHAPTER 16.144 COMPLIANCE MEMO	<b>6B</b>
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM	DRWN: SKT CHKD: SAR AKS JOB: 7431





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**Appendix B: Clean Water Services Service Provider  
Letter (File No. 21-002637) & Simplified Site  
Assessment Report**

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## Service Provider Letter

CWS File Number

21-002637

**This form and the attached conditions will serve as your Service Provider Letter in accordance with Clean Water Services Design and Construction Standards (R&O 19-5, as amended by R&O 19-22).**

<b>Jurisdiction:</b>	<u>City of Sherwood</u>	<b>Review Type:</b>	<u>No Impact</u>
<b>Site Address / Location:</b>	<u>14200 SW TUALATIN SHERWOOD RD</u> <u>SHERWOOD OR 97140</u>	<b>SPL Issue Date:</b>	<u>November 09, 2021</u>
		<b>SPL Expiration Date:</b>	<u>November 09, 2023</u>

**Applicant Information:**

Name SONYA TEMPLETON  
 Company AKS ENGINEERING & FORESTRY LLC  
12965 SW HERMAN RD SUITE 100  
 Address TUALATIN OR 97062  
 Phone/Fax (503) 867-2613  
 E-mail: templetons@aks-eng.com

**Owner Information:**

Name ROBERT CODE  
 Company SHERWOOD ROAD LLC  
 Address 6900 FOX AVE S  
SEATTLE WA 98108  
 Phone/Fax (206) 282-6334  
 E-mail: bobc@cascapecolumbia.com

**Tax lot ID**

2S128C000200

**Development Activity**

Storage Buildings

**Pre-Development Site Conditions:**

Sensitive Area Present:  On-Site  Off-Site  
 Vegetated Corridor Width: 50  
 Vegetated Corridor Condition: Good/Marginal

**Post Development Site Conditions:**

Sensitive Area Present:  On-Site  Off-Site  
 Vegetated Corridor Width: 50

**Enhancement of Remaining Vegetated Corridor Required:**

**Square Footage to be enhanced:**

3,510

**Encroachments into Pre-Development Vegetated Corridor:**

Type and location of Encroachment:	Square Footage:
<u>No Encroachment</u>	<u></u>
<u></u>	<u></u>
<u></u>	<u></u>

**Mitigation Requirements:**

Type/Location	Sq. Ft./Ratio/Cost
<u>No Mitigation</u>	<u></u>
<u></u>	<u></u>
<u></u>	<u></u>

Conditions Attached  Development Figures Attached (4)  Planting Plan Attached  Geotech Report Required

**This Service Provider Letter does NOT eliminate the need to evaluate and protect water quality sensitive areas if they are subsequently discovered on your property.**

**In order to comply with Clean Water Services water quality protection requirements the project must comply with the following conditions:**

1. No structures, development, construction activities, gardens, lawns, application of chemicals, uncontained areas of hazardous materials as defined by Oregon Department of Environmental Quality, pet wastes, dumping of materials of any kind, or other activities shall be permitted within the sensitive area or Vegetated Corridor which may negatively impact water quality, except those allowed in R&O 19-5, Chapter 3, as amended by R&O 19-22.
2. Prior to any site clearing, grading or construction the Vegetated Corridor and water quality sensitive areas shall be surveyed, staked, and temporarily fenced per approved plan. During construction the Vegetated Corridor shall remain fenced and undisturbed except as allowed by R&O 19-5, Section 3.06.1, as amended by R&O 19-22 and per approved plans.
3. **If there is any activity within the sensitive area, the applicant shall gain authorization for the project from the Oregon Department of State Lands (DSL) and US Army Corps of Engineers (USACE). The applicant shall provide Clean Water Services or its designee (appropriate city) with copies of all DSL and USACE project authorization permits. No wetland impacts proposed for this project.**
4. An approved Oregon Department of Forestry Notification is required for one or more trees harvested for sale, trade, or barter, on any non-federal lands within the State of Oregon.
5. Prior to any ground disturbing activities, an erosion control permit is required. Appropriate Best Management Practices (BMP's) for Erosion Control, in accordance with Clean Water Services' Erosion Prevention and Sediment Control Planning and Design Manual, shall be used prior to, during, and following earth disturbing activities.
6. Prior to construction, a Stormwater Connection Permit from Clean Water Services or its designee is required pursuant to Ordinance 27, Section 4.B.
7. Activities located within the 100-year floodplain shall comply with R&O 19-5, Section 5.10, as amended by R&O 19-22.
8. Removal of native, woody vegetation shall be limited to the greatest extent practicable.
9. The water quality swale and detention pond shall be planted with Clean Water Services approved native species, and designed to blend into the natural surroundings.
10. **Should final development plans differ significantly from those submitted for review by Clean Water Services, the applicant shall provide updated drawings, and if necessary, obtain a revised Service Provider Letter.**
11. The Vegetated Corridor width for sensitive areas within the project site shall be a minimum of 50 feet wide, as measured horizontally from the delineated boundary of the sensitive area.
12. **For Vegetated Corridors up to 50 feet wide, the applicant shall enhance the entire Vegetated Corridor to meet or exceed good corridor condition as defined in R&O 19-5, Section 3.14.2, Table 3-3, as amended by R&O 19-22.**
13. **Removal of invasive non-native species by hand is required in all Vegetated Corridors rated ""good."" Replanting is required in any cleared areas larger than 25 square feet using low impact methods. The applicant shall calculate all cleared areas larger than 25 square feet prior to the preparation of the required Vegetated Corridor enhancement/restoration plan.**
14. Prior to any site clearing, grading or construction, the applicant shall provide Clean Water Services with a Vegetated Corridor enhancement/restoration plan. Enhancement/restoration of the Vegetated Corridor shall be provided in accordance with R&O 19-5, Appendix A, as amended by R&O 19-22, and shall include planting specifications for all Vegetated Corridor, including any cleared areas larger than 25 square feet in Vegetated Corridor rated ""good.""
15. Prior to installation of plant materials, all invasive vegetation within the Vegetated Corridor shall be removed per methods described in Clean Water Services' Integrated Pest Management Plan, 2019. During removal of invasive vegetation care shall be taken to minimize impacts to existing native tree and shrub species.

16. Clean Water Services and/or City shall be notified 72 hours prior to the start and completion of enhancement/restoration activities. Enhancement/restoration activities shall comply with the guidelines provided in Planting Requirements (R&O 19-5, Appendix A, as amended by R&O 19-22).
17. **Maintenance and monitoring requirements shall comply with R&O 19-5, Section 2.12.2, as amended by R&O 19-22. If at any time during the warranty period the landscaping falls below the 80% survival level, the owner shall reinstall all deficient planting at the next appropriate planting opportunity and the two year maintenance period shall begin again from the date of replanting.**
18. **Performance assurances for the Vegetated Corridor shall comply with R&O 19-5, Section 2.07.2, Table 2-1 and Section 2.11, Table 2-2, as amended by R&O 19-22.**
19. **Clean Water Services shall require an easement over the Sensitive Area and Vegetated Corridor conveying storm and surface water management to Clean Water Services or the City that would prevent the owner of the Vegetated Corridor from activities and uses inconsistent with the purpose of the corridor and any easements therein.**
20. **Final construction plans shall include landscape plans.** In the details section of the plans, a description of the methods for removal and control of exotic species, location, distribution, condition and size of plantings, existing plants and trees to be preserved, and installation methods for plant materials is required. Plantings shall be tagged for dormant season identification and shall remain on plant material after planting for monitoring purposes.
21. **A Maintenance Plan shall be included on final plans** including methods, responsible party contact information, and dates (minimum two times per year, by June 1 and September 30).
22. **Final construction plans shall clearly depict the location and dimensions of the sensitive area and the Vegetated Corridor** (indicating good, marginal, or degraded condition). Sensitive area boundaries shall be marked in the field.
23. Protection of the Vegetated Corridors and associated sensitive areas shall be provided by the installation of permanent fencing and signage between the development and the outer limits of the Vegetated Corridors. **Fencing and signage details to be included on final construction plans.**

**This Service Provider Letter is not valid unless CWS-approved site plan is attached.**

**Please call (503) 681-3667 with any questions.**

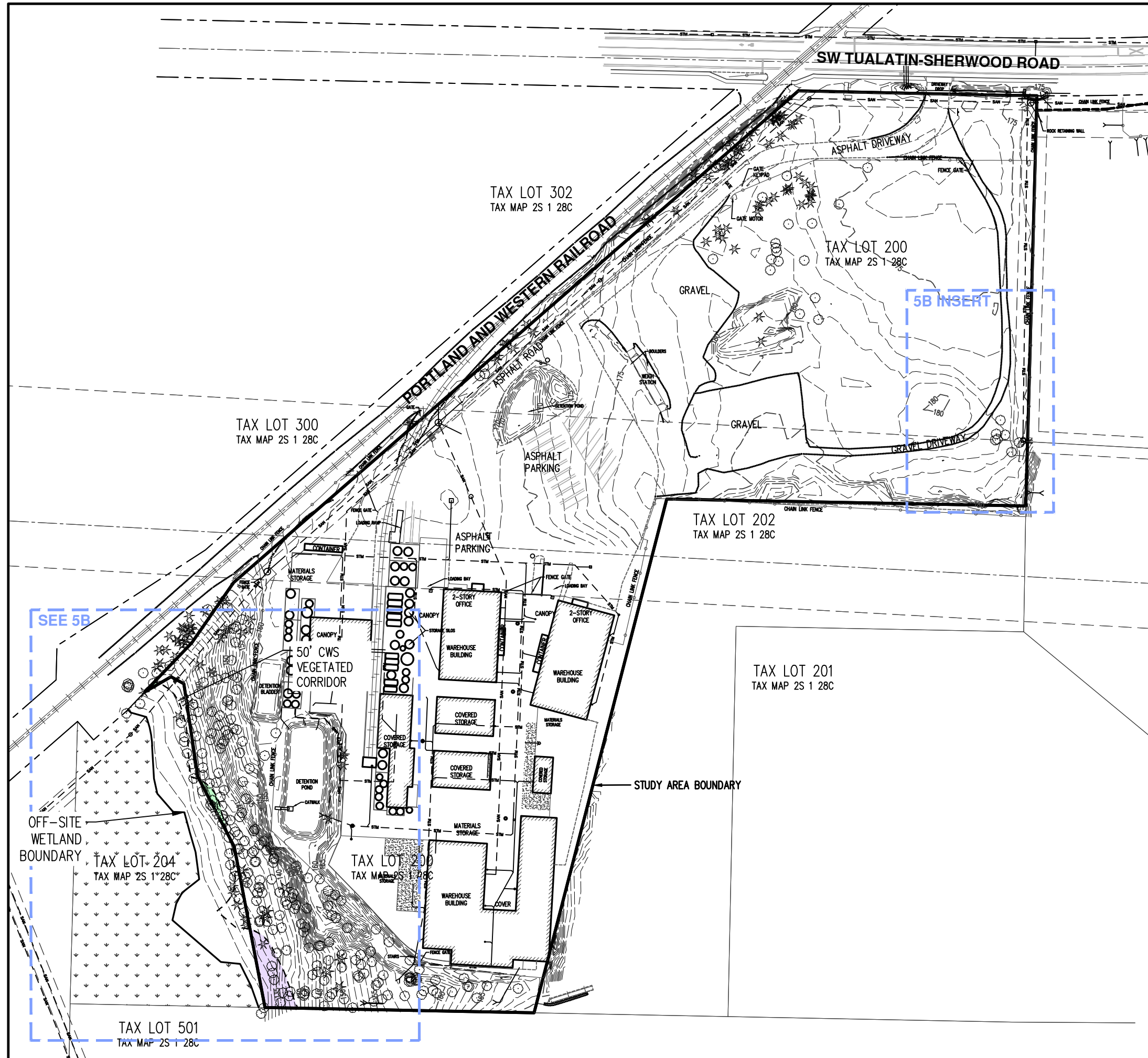
*Stacy Benjamin*

**Stacy Benjamin  
Environmental Plan Review**

**Attachments (5)**



CWS FILE NO. 21-002637  
 Approved  
 Clean Water Services  
 FOR ENVIRONMENTAL REVIEW  
 By SNB Date 11/9/2021  
 SPL ATTACHMENT 1 OF 5

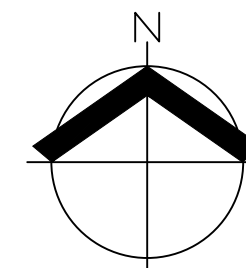


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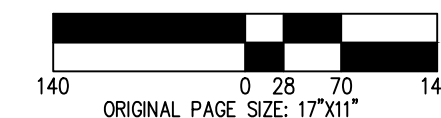
- ON-SITE GOOD CONDITION VEGETATED CORRIDOR: 598 SF± (0.01 ACRES)
- ON-SITE MARGINAL CONDITION VEGETATED CORRIDOR: 3,510 SF± (0.08 ACRES)
- TOTAL ON-SITE VEGETATED CORRIDOR: 4,108 SF± (0.09 ACRES)
- A PHOTO LOCATION & ORIENTATION

WETLAND AND WATER BOUNDARIES SHOWN WERE DELINEATED BY AKS ENGINEERING & FORESTRY, LLC ON APRIL 9, 2021 AND WERE PROFESSIONALLY LAND SURVEYED BY AKS ON MAY 5, 2021.

1-FOOT INTERVAL GROUND CONTOURS, EXISTING CONDITIONS, STUDY AREA BOUNDARY, AND TREE >6" DBH DERIVED FROM AKS LAND SURVEY.



SCALE: 1" = 140 FEET

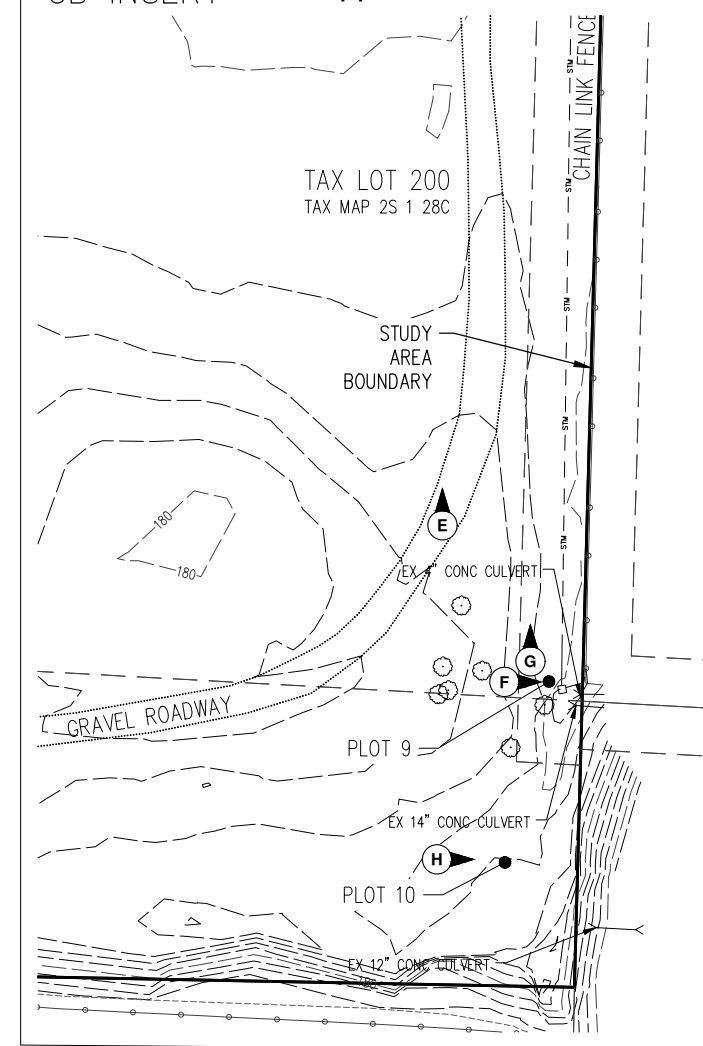
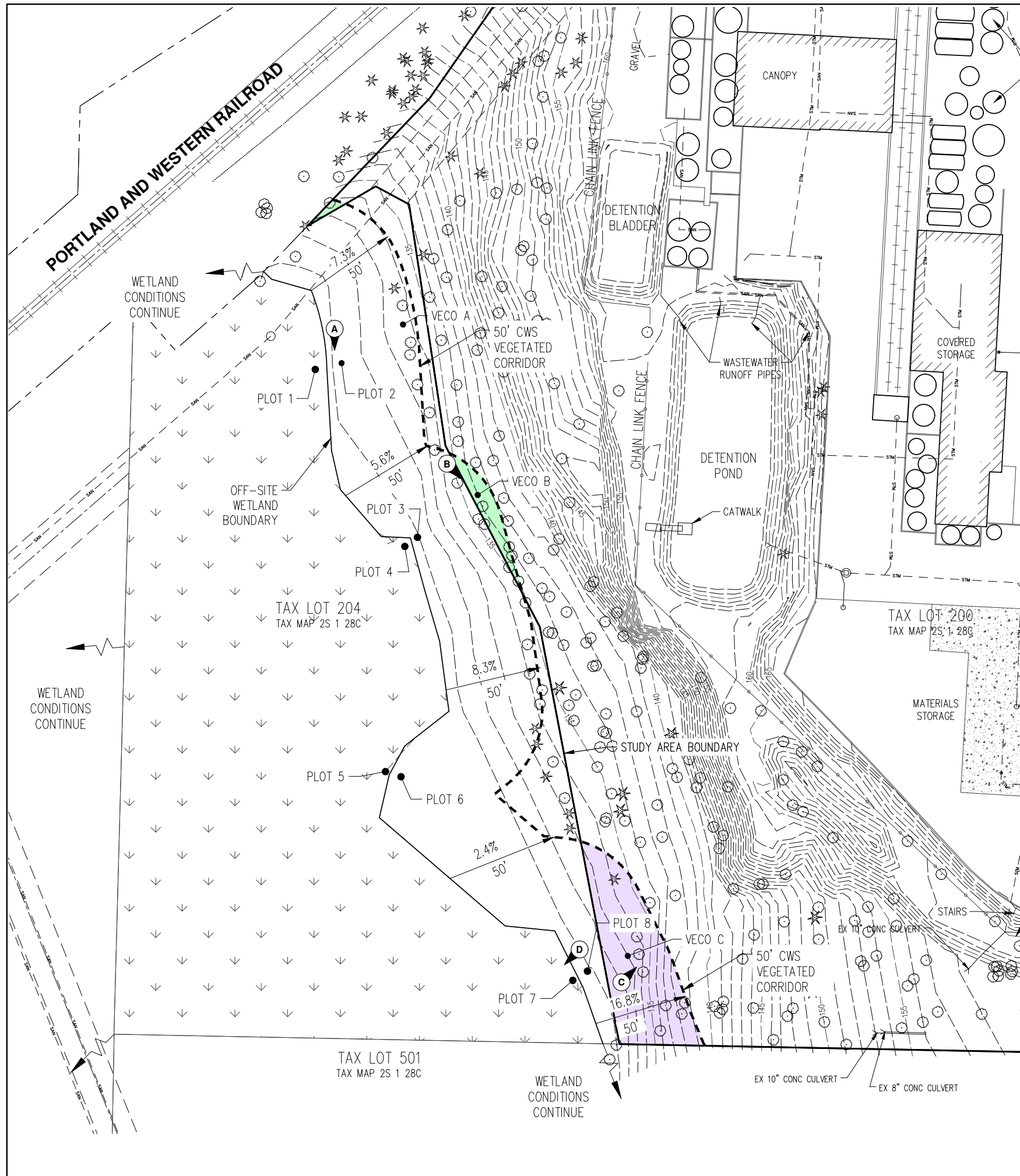


DATE: 10/28/2021

<b>NATURAL RESOURCES EXISTING CONDITIONS</b>	FIGURE
14200 SW TUALATIN-SHERWOOD ROAD SIMPLIFIED SITE ASSESSMENT	<b>5A</b>
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM	DRWN: SKT CHKD: SAR AKS JOB: 7431



**CWS FILE NO. 21-002637**  
**Approved**  
**Clean Water Services**  
**FOR ENVIRONMENTAL REVIEW**  
 By *SNB* Date **11/9/2021**  
**SPL ATTACHMENT 2 OF 5**

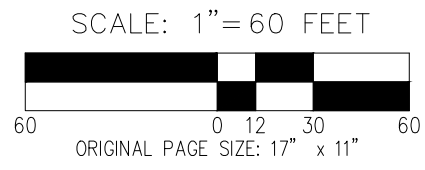
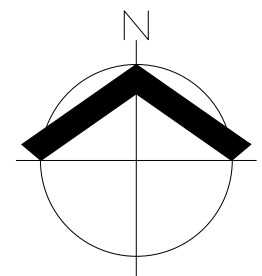


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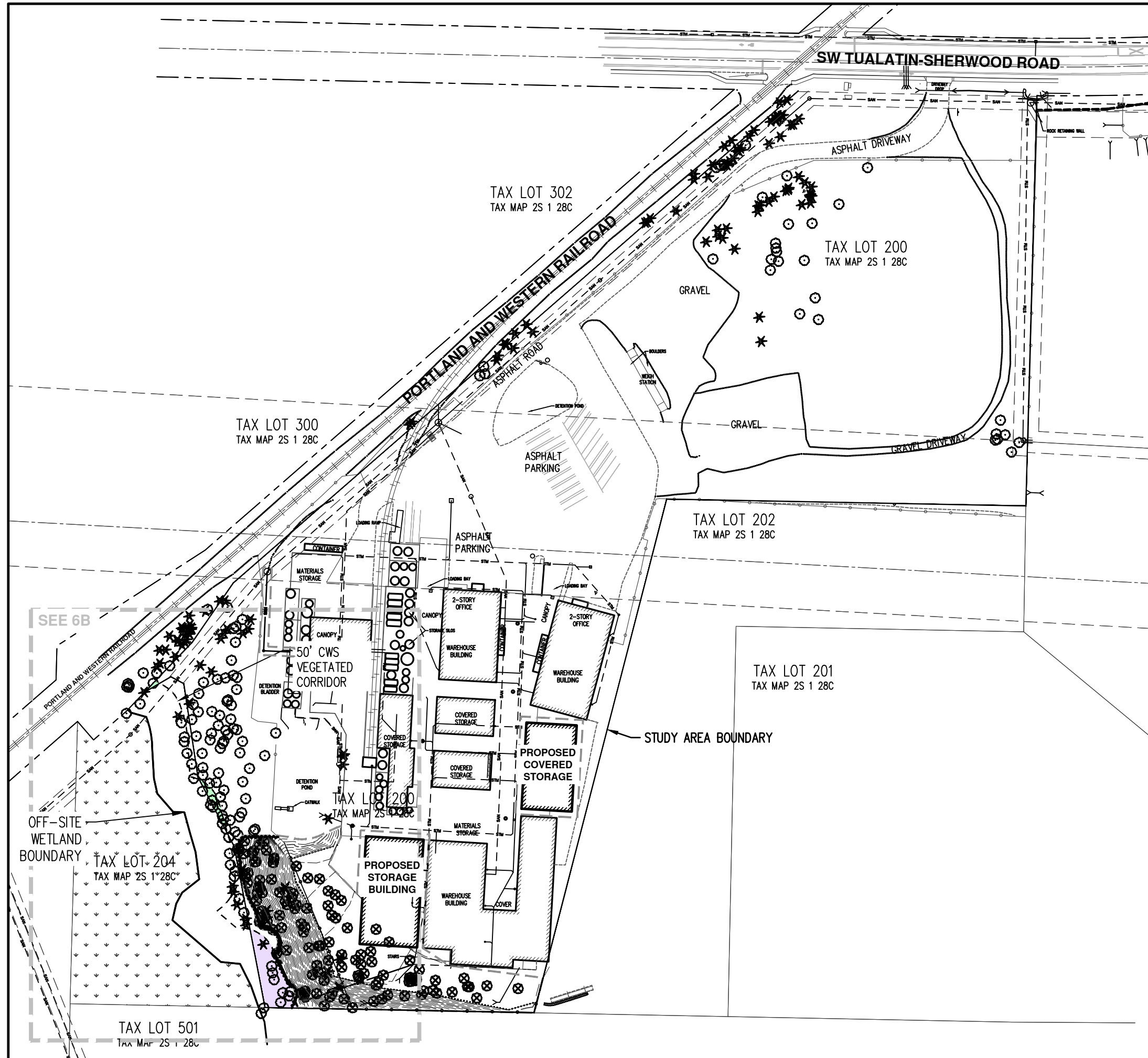
DATE: 10/28/2021



<b>NATURAL RESOURCES EXISTING CONDITIONS</b>	FIGURE
<b>14200 SW TUALATIN-SHERWOOD ROAD SIMPLIFIED SITE ASSESSMENT</b>	<b>5B</b>
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM	DRWN: SKT CHKD: SAR AKS JOB: 7431





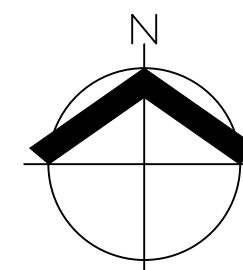


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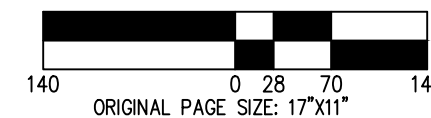
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TREES >6" DBH ARE SHOWN TO BE REMOVED.



SCALE: 1" = 140 FEET

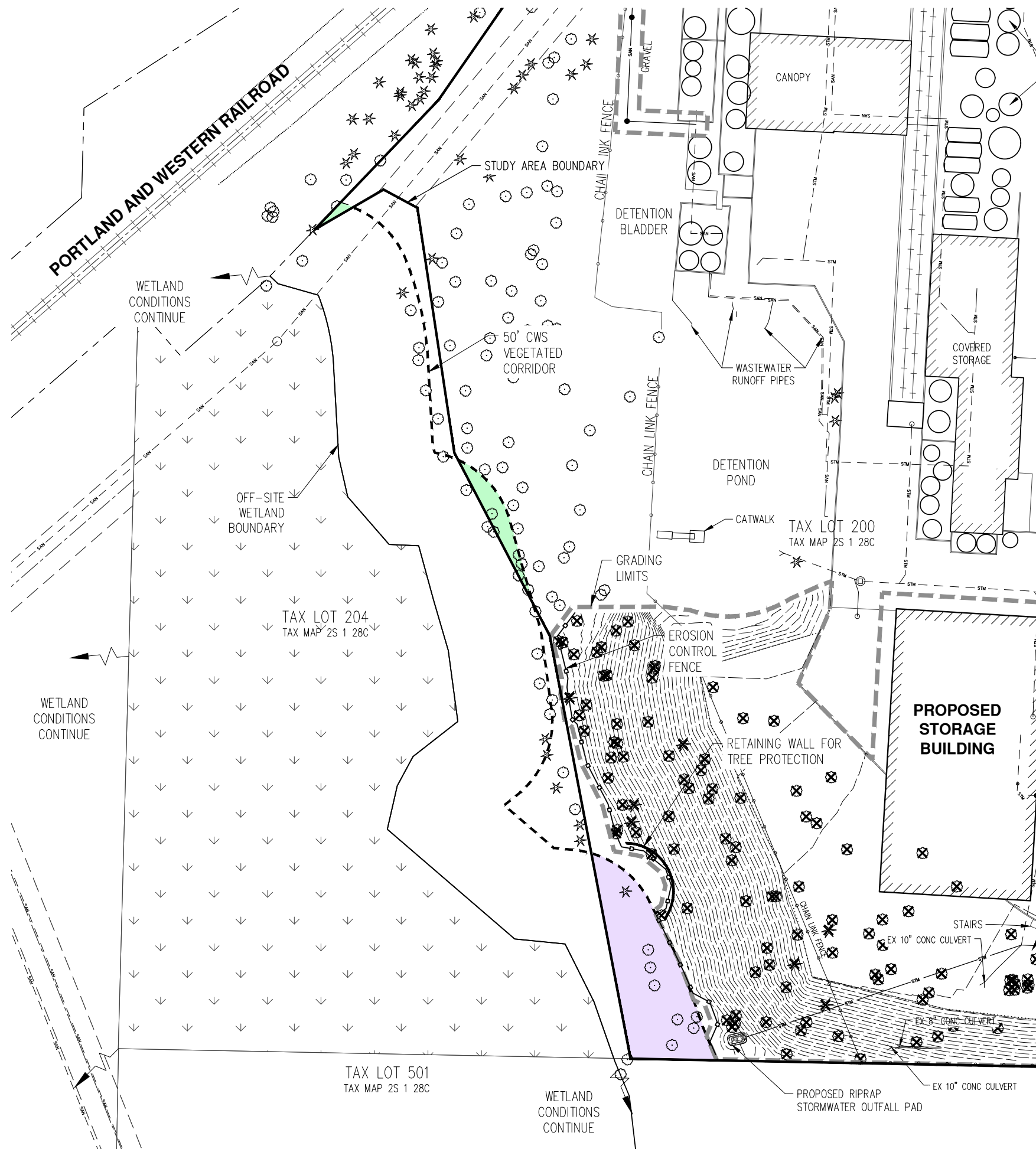


DATE: 10/28/2021

<b>NATURAL RESOURCES SITE PLAN</b>	FIGURE
14200 SW TUALATIN-SHERWOOD ROAD SIMPLIFIED SITE ASSESSMENT	<b>6A</b>
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM	DRWN: SKT CHKD: SAR AKS JOB: 7431

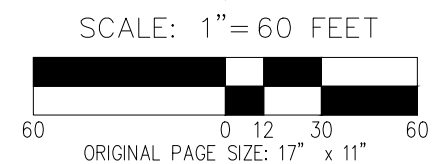
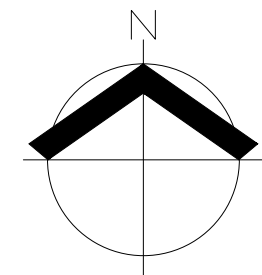


CWS FILE NO. 21-002637  
Approved  
Clean Water Services  
FOR ENVIRONMENTAL REVIEW  
By *SNB* Date 11/9/2021  
SPL ATTACHMENT 4 OF 5



**LEGEND (COLOR COPY):**

- ON-SITE GOOD CONDITION VEGETATED CORRIDOR AREA TO REMAIN: 598 SF± (0.01 ACRES)
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DATE: 10/28/2021

<b>NATURAL RESOURCES SITE PLAN</b>	FIGURE
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AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM	DRWN: SKT CHKD: SAR AKS JOB: 7431



CWS FILE NO. 21-002637  
 Approved  
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 SPL ATTACHMENT 5 OF 5

## 1-Sherwood Road – Vegetated Corridor Enhancement Planting Specifications

Planting specifications for the enhancement of ±3,510 square feet of *marginal* condition vegetated corridor enhancement to *good* condition.

### Total planting area 3,510 square feet

Scientific Name	Common Name	Size*	Spacing/Seeding Rate	Quantity
<b>Trees (total 36)**</b>				
<i>Acer macrophyllum</i>	bingleaf maple	2 gallon	10 feet on center	20
<i>Acer circirnatum</i>	Vine maple	2 gallon	10 feet on center	16
<b>Shrubs (total 176)**</b>				
<i>Symphoricarpus albus</i>	snowberry	1 gallon	4-5 feet on center	46
<i>Mahonia aquifolium</i>	tall Oregon grape	1 gallon	4-5 feet on center	35
<i>Polystichum munitum</i>	Pineland sword fern	1 gallon	4-5 feet on center	35
<i>Rosa gymnocarpa</i>	Baldhip rose	1 gallon	4-5 feet on center	30
<i>Ribes sanguineum</i>	red flowering currant	1 gallon	4-5 feet on center	30
<b>Seed Mix/Plug</b>				
<i>Agrostis exarata</i>	Spike bentgrass	seed	2 lb pls/acre	As needed for bare soil areas >25 square feet
<i>Bromus carinatus</i>	Native California brome	seed	2 lb pls/acre	

\*Bare root plants may be substituted for container plants based on availability. If bare root plants are used, they must be planted during the late winter/early spring dormancy period.

\*\* Minimum plant quantities ordered.

### Planting Notes (per CWS Design & Construction Standards R&O 19-5, amended by R&O 19-22, December 2019 Appendix A Planting Requirements):

- 1) Container stock shall be installed only from February 1 through May 1 and October 1 through November 15. Bare root stock shall be installed only from December 15 through April 15. Plantings outside these times may require additional measures to ensure survival which shall be specified on the plans.
- 2) All non-native invasive vegetation shall be removed from planting areas prior to installing native enhancement plantings. Invasive species control shall be consistent with Clean Water Services' June 2019 *Integrated Pest Management (IPM) Plan*.
- 3) Appropriate plant selection, along with adequate site preparation and maintenance, reduces the need for irrigation. However, unless site hydrology is currently adequate, a District/City approved irrigation system or equivalent (i.e., polymer, plus watering) shall be used during the two-year plant establishment period. Watering shall be at a minimum rate of at least one inch per week from June 15 through October 15. Other irrigation techniques, such as deep watering, may be allowed with prior approval by District staff.
- 4) Trees, shrubs, and groundcovers planted shall be mulched at a minimum of three inches in depth and 18 inches in diameter, to retain moisture and discourage weed growth around newly installed plant material. Appropriate mulches are made from composted bark or leaves that have not been chemically treated.



# SENSITIVE AREA CERTIFICATION FORM

Clean Water Services File Number

**1. Property Information** (example 1S234AB01400)

Tax lot ID(s): 2S128C00200  
  
Site Address: 14200 Tualatin Sherwood Road  
City, State, Zip: Sherwood, OR, 97140  
Nearest cross street: SW Oregon St

**2. Owner Information**

Name: Robert Code  
Company: Sherwood Road LLC  
Address: 6900 Fox Ave S.  
City, State, Zip: Seattle, Wa. 98108  
Phone/Fax: 206-282-6334  
E-Mail: bobc@cascadecolumbia.com

**3. Development Activity** (check all that apply)

- Addition to single family residence (rooms, deck, garage)
  - Lot line adjustment       Minor land partition
  - Residential condominium       Commercial condominium
  - Residential subdivision       Commercial subdivision
  - Single lot commercial       Multi lot commercial
- Other \_\_\_\_\_

**4. Applicant Information**

Name: Sonya Templeton  
Company: AKS Engineering & Forestry  
Address: 12965 SW Herman Rd UNIT 100  
City, State, Zip: Tualatin OR 97062  
Phone/Fax: 503-563-6151  
E-Mail: templetons@aks-eng.com

**5. Check any of the following that apply to this project**

- Adds less than 500 square feet of impervious surface.
- Does not encroach closer to the Sensitive Area than existing development on the property.
- Is not located on a slope greater than 25%.

**6. Applicant Information**

Name: Steve Durrell  
Company: Cascade Columbia Distribution  
Address: 14200 SW Tualatin Sherwood Rd  
City, State, Zip: Sherwood, Or. 97140  
Phone/Fax: 503-625-5293  
E-Mail: steved@cascadecolumbia.com

**7. Will the project involve any off-site work?**  Yes  No  Unknown (check appropriate box)

If yes, location and description of off-site work:

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**8. Additional comments or information that may be needed to understand your project:**

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**9. An on-site, water quality sensitive area reconnaissance was completed on:**

Date 04/09/2021 By Sonya Templeton  
Title Natural Resource Specialist Company AKS Engineering & Forestry





# SENSITIVE AREA CERTIFICATION FORM

Clean Water Services File Number

**10. Existence of Water Quality Sensitive Areas** (check all appropriate boxes)

As defined in the District's Design and Construction Standards:

- A. Water Quality Sensitive Areas  do  do not exist on the tax lot.
- B. Water Quality Sensitive Areas  do  do not exist within 200' on adjacent properties, or  unable to evaluate adjacent property.
- C. Vegetated corridors  do (4,108 SF)  do not exist on the tax lot.
- D. Vegetated corridors  do  do not exist within 200' on adjacent properties, or  unable to evaluate adjacent property.
- E. Impacts to sensitive areas and/or vegetated corridors will occur  On-site  Off-site  None proposed at this time.
- F. If impacts, mitigation is  On-site  Off-site  Other \_\_\_\_\_

**11. Simplified Site Assessment containing the following information:** (check only items submitted)

Please refer to Design and Construction Standards 19-5 section 3.02.2, as amended by Resolution and Order 19-22, for application requirements.

- Complete Certification Form (2 pages)
- Written description of the site and proposed activity.
- Site plan of the entire property.
- Photographs of the site labeled and keyed to the site plan.

**12. Standard Site Assessment containing the following information:** (check only items submitted)

Please refer to Design and Construction Standards 19-5 section 3.02.2, as amended by Resolution and Order 19-22, for application requirements.

- Complete Certification Form (2 pages)
- Written description per Design and Construction Standards 19-5 section 3.13 b. 1, as amended by Resolution and Order 19-22
- Wetland Data sheets
- Vegetated Corridor Data sheets
- Existing Site Condition Figures
- Proposed Development Figures

By signing this form the Owner, or Owner's authorized agent or representative, acknowledges and agrees that employees of Clean Water Services have authority to enter the project site at all reasonable times for the purpose of inspecting project site conditions and gathering information related to the project site.

I certify that I am familiar with the information contained in this document, and to the best of my knowledge and belief, this information is true, complete, and accurate.

Applicant:

Print/Type Name Steve Durrell Print/Type Title GENERAL MGR  
Signature  Date 10/6/21



# 14200 SW Tualatin-Sherwood Road Sherwood, Washington County Simplified Site Assessment Report

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**Date:** October 2021

**Prepared for:** Cascade Columbia Distributing  
14200 SW Tualatin-Sherwood Rd,  
Sherwood, OR 97140

**Prepared by:** AKS Engineering & Forestry, LLC  
12965 SW Herman Road, Suite 100  
Tualatin, OR 97062  
Lex Francis, Natural Resource Specialist  
(503) 563-6151 | francisl@aks-eng.com  
Sonya Templeton, Natural Resource Specialist  
(503) 563-6151 | Templetons@aks-eng.com

**Site Information:** 14200 Tualatin-Sherwood Road  
Sherwood, OR  
Washington County Assessor's Map 2S I 28C  
Tax Lot 200

**AKS Job Number:** 7431



12965 SW Herman Road, Suite 100  
Tualatin, OR 97062  
(503) 563-6151

## Table of Contents

<b>Introduction.....</b>	<b>2</b>
<b>Existing Conditions and Background.....</b>	<b>2</b>
<b>Water Quality Sensitive Areas.....</b>	<b>3</b>
Methodology.....	3
Off-Site PEM/PSS Wetland.....	3
Upland.....	3
<b>Extent and Condition of the Vegetated Corridor.....</b>	<b>3</b>
Existing Condition of Vegetated Corridor .....	3
Vegetated Corridor Enhancement .....	4
<b>List of Preparers.....</b>	<b>4</b>
<b>Literature Cited and Referenced .....</b>	<b>5</b>

## Appendices

### Appendix A: Figures

- Figure 1: USGS Vicinity Map
- Figure 2: Washington County Assessor’s Map
- Figure 3: NRCS Soil Surveys Map
- Figure 4: Local Wetlands Inventory (LWI)
- Figure 5A & 5B: Existing Conditions
- Figure 6A & 6B: Site Plan

### Appendix B: Wetland Determination Data Sheets (Plots 1 through 10)

### Appendix C: VECO Data Sheets (VECO Plots A, B, & C)

### Appendix D: Representative Site Photographs

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## Introduction

AKS Engineering & Forestry, LLC (AKS) was contracted by Cascade Columbia Distribution (Applicant), to conduct a site assessment for industrial site development. The study area consists of Tax Lot 200, south of SW Tualatin Sherwood Road and adjacent to SW Oregon Street of Washington County Assessor's Map 2S I 28C in Sherwood, Washington County, Oregon (Appendix A, Figures 1 & 2). Adjacent Tax Lot 204 is a portion of the Tualatin River National Wildlife Refuge which was accessed during the delineation. The project, referred to as 14200 SW Tualatin-Sherwood Road, consists of industrial redevelopment and expansion of accessibility and parking for Cascade Columbia Distributing.

Pacific Habitat Services (PHS) conducted a wetland delineation off site on Tax Lot 204 and adjacent parcels in 2013. Their delineation received concurrence from DSL under DSL File #WD2013-0108. AKS agrees with their delineation and mapped the wetland boundary similarly to determine the on-site vegetated corridor.

The off-site boundary of a palustrine emergent/scrub-shrub (PEM/PSS) wetland associated with the floodplain of perennial Rock Creek was delineated off-site to the southwest on adjacent Tax Lot 204. Slopes adjacent the wetland were less than 25 percent requiring a 50-foot-wide vegetated corridor (VC). A portion of the VC extends onto the study area. Conditions of the on-site vegetated corridor were determined to be in *good* condition. No VC encroachments are proposed with this project, see Site Plan 6A and 6B in Appendix A.

This report has been prepared to meet CWS simplified site assessment requirements listed under Chapter 3 of R&O 19-5.

## Existing Conditions and Background

The site consists of a chemical distribution company and is currently zoned as General Industrial. The vegetation in the study area was dominated by Oregon white oak (*Quercus garryana*; FACU), Pacific poison oak (*Toxicodendron diversilobum*; FAC), Himalayan blackberry (*Rubus armeniacus*; FAC), and dovefoot geranium (*Geranium molle*; NOL). Topography on-site slopes to the southwest towards the off-site wetland and was documented at less than 3 percent overall slope throughout the study area.

The following soil units are mapped within the study area, according to the Natural Resources Conservation Service (NRCS) Washington County Area Soil Survey Map and hydric soil list (Figure 3, Appendix A):

- (Unit 5B) Briedwell stony silt loam, 0% to 7% slopes; Non-hydric
- (Unit 37A) Quatama Loam, 0% to 3% slopes; Non-hydric
- (Unit 37B) Quatama Loam, 3% to 7% slopes; Non-hydric
- (Unit 37D) Quatama Loam, 12% - 20% slopes: Non-hydric
- (Unit 2225A) Huberly Silt loam, 0% - 3% slopes; Hydric
- (Unit 43) Wapato Silty clay loam; Hydric

According to the City of Sherwood Local Wetland Inventory (LWI) map (Appendix A Figure 4) the southern portion of our study area is within the Rock Creek floodplain with a documented palustrine emergent wetland on Tax Lot 204. AKS does not concur with LWI mapping and has set the boundary further back into Tax Lot 204.

## Water Quality Sensitive Areas

AKS Natural Resource Specialist Sonya Templeton and Stacey Reed, PWS conducted a site visit on April 9, 2021 to delineate the off-site wetland and determine the extent and condition of the associated VC.

### Methodology

The methodology used to determine the presence of wetlands followed the US Army Corps of Engineers' (USACE) *Wetland Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Western Mountains, Valleys, and Coast Region* (Version 2.0) (Wakeley et al., 2010). The *National Wetland Plant List: 2018 Wetland Ratings* was used to assign wetland indicator status for the appropriate region.

Data was collected at 10 sample plots to determine the wetland boundary; Wetland Determination Data Sheets are included as Appendix B. The wetland boundary and sample plots were flagged in the field and professionally land surveyed by AKS field staff. The wetland delineation is shown on the Natural Resources Existing Conditions, Figures 5A-5B in Appendix A.

### Off-Site PEM/PSS Wetland

The off-site PEM/PSS wetland was dominated by Himalayan blackberry, reed canary grass (*Phalaris arundinacea*; FACW), Oregon ash (*Fraxinus latifolia*; FACW), and black hawthorn (*Crataegus douglasii*; FAC) as documented at Plots 1, 4, 5, and 7. Soils in the wetland are of low chroma (chroma 2 or less) displaying common distinct and prominent redoximorphic features, meeting hydric soil indicator F6 Redox Dark Surface. Soils also displayed a depleted matrix. Primary indicators of wetland hydrology were observed including a high water table (A2) and saturation (A3) within 12 inches of the soil surface.

The wetland boundary was delineated based on a change in the topography and landform from a low elevation, floodplain terrace in the wetland to a higher elevation, hillslope in the upland. The elevation change coincided with a change in vegetation from hydrophytic dominated species in the wetland (reed canary grass, Oregon Ash) to non-hydrophytic (Oregon white oak, beaked hazelnut) species in the upland. The adjacent upland was documented at paired upland Plots 2, 3, 6, and 8.

### Upland

Plots 9 and 10 document upland conditions in the northeastern portion of the study area and are dominated by cottonwood (*Populus balsamifera*, FAC), English hawthorn, Himalayan blackberry, and reed canary grass. These plots lacked hydric soils and indicators of wetland hydrology, confirming upland conditions.

## Extent and Condition of the Vegetated Corridor

The slopes adjacent to the off-site wetland do not exceed 25 percent requiring a 50-foot-wide vegetated corridor per Section 3.03.1 Table 3-1 of the CWS *Design & Construction Standards*. The total on-site existing VC area is 4,108 square feet (0.09 acres). Representative slope measurements and the extents of the existing on-site VC are shown on Appendix A, Figure 5A & 5B, Existing Conditions.

### Existing Condition of Vegetated Corridor

The existing conditions of the on-site VC adjacent the off-site wetland was determined according to CWS vegetated corridor standards, Section 3.03.3, Table 3-1 (R&O 19-5). The CWS VC standards are based on the presence of tree canopy and percent cover of native trees, shrubs, and herbaceous layers.

The Vegetated Corridor (VECO) data sheets are provided in Appendix C. Representative photographs from the April 9, 2021 site visit are included in Appendix D.

VECO Plots A, B, and C were recorded within on-site VC. VECO Plots A, B, and C met *good* condition standards with tree canopy cover ranging from 60 to 90 percent with native cover exceeding 80 percent. The vegetation community was dominated by Oregon white oak, Pacific poison-oak, Himalayan blackberry, common snowberry (*Symphoricarpos albus*; FACU), and dovefoot geranium.

#### **Vegetated Corridor Enhancement**

The on-site *good* condition vegetated corridors as shown in the Site Plan (Appendix A, Figure 6A and 6B) do not require enhancement, per CWS standards.

#### **List of Preparers**



Lex Francis  
Natural Resource Specialist  
Report preparation



Sonya Templeton  
Natural Resource Specialist  
Field work & report QA/QC

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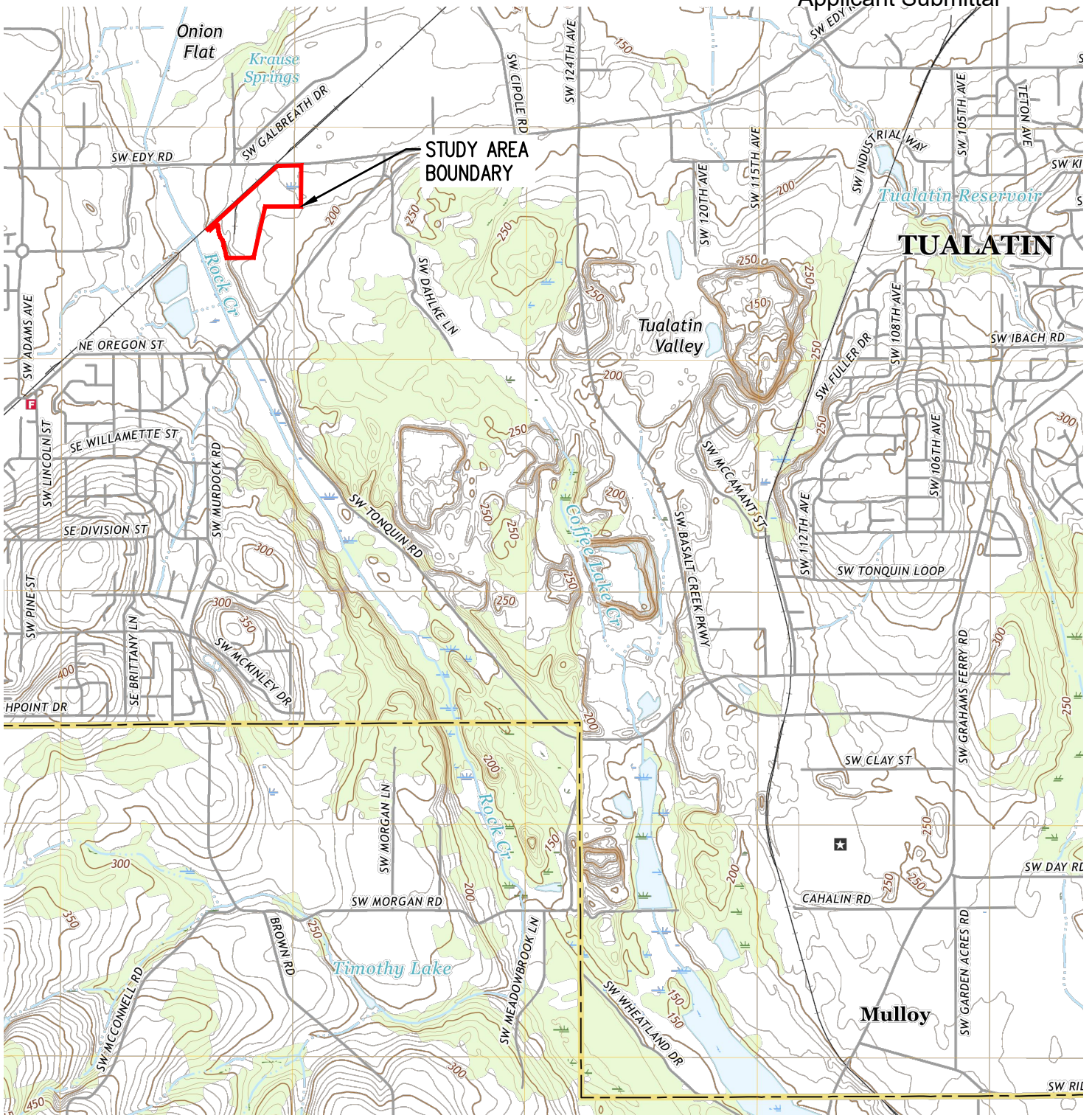




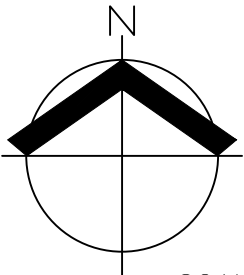
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## **Appendix A: Figures**

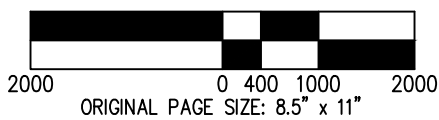
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USGS 7.5' TOPOGRAPHIC SERIES  
QUADRANGLE: SHERWOOD, OR (2020)



SCALE: 1" = 2000 FEET



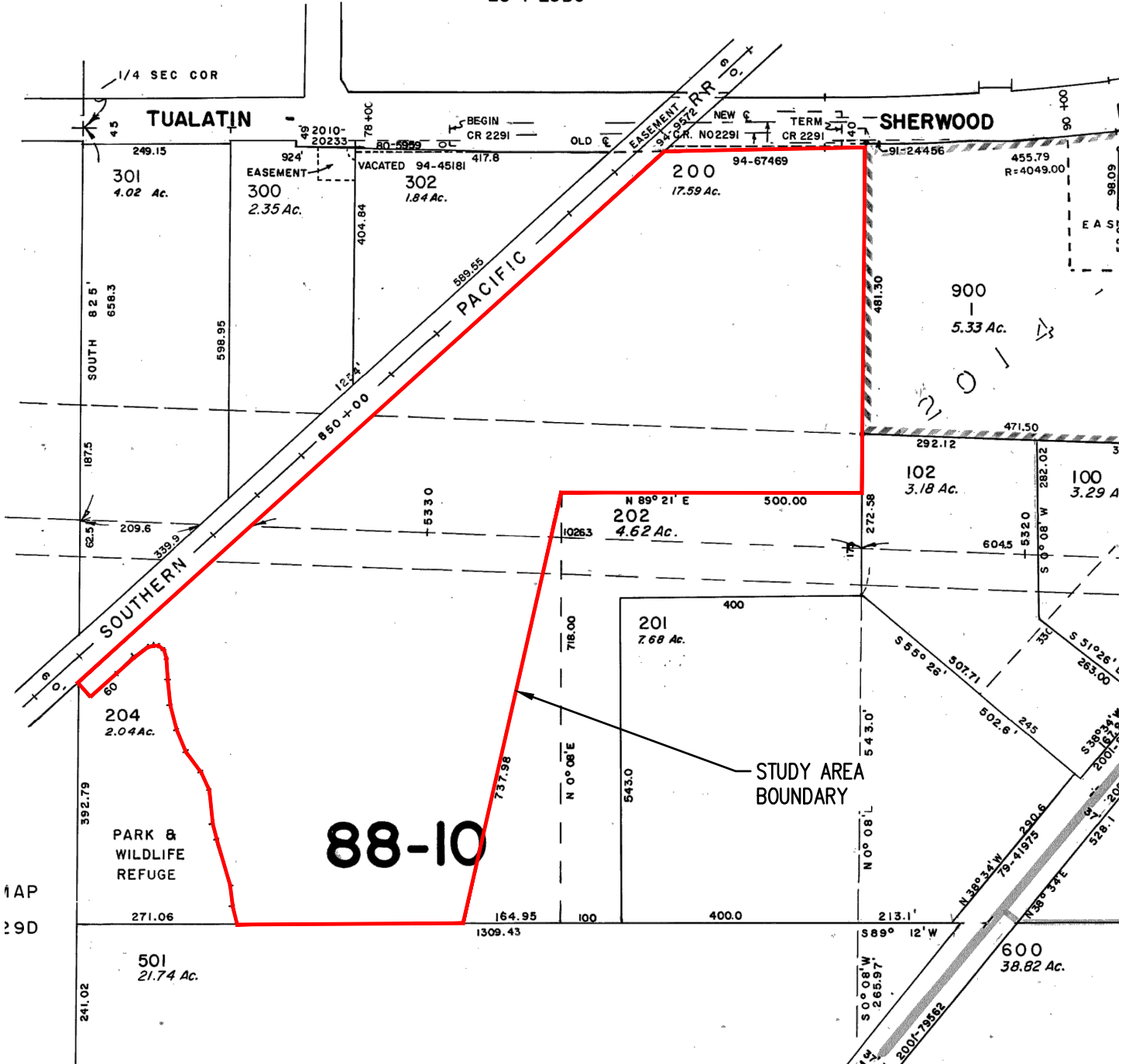
DATE: 09/27/2021

**USGS VICINITY MAP**  
**14200 SW TUALATIN-SHERWOOD ROAD SIMPLIFIED SITE ASSESSMENT**  
 AKS ENGINEERING & FORESTRY, LLC  
 12965 SW HERMAN RD, STE 100  
 TUALATIN, OR 97062  
 503.563.6151 WWW.AKS-ENG.COM



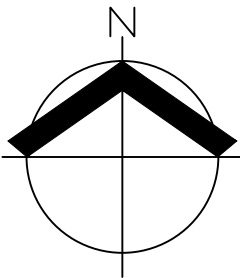
**FIGURE**  
**1**  
 DRWN: SKT  
 CHKD: SAR  
 AKS JOB:  
 7431

2S 1 28BC

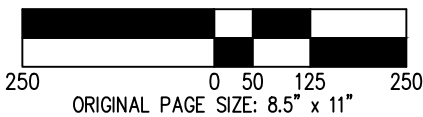


**88-10**

STUDY AREA BOUNDARY



SCALE: 1" = 250 FEET



WASHINGTON COUNTY  
TAX LOT 200  
TAX MAP 2S 1 28C

DATE: 09/27/2021

TAX MAP (MAP 2S 1 28C)  
14200 SW TUALATIN-SHERWOOD ROAD SIMPLIFIED SITE ASSESSMENT

FIGURE  
**2**

AKS ENGINEERING & FORESTRY, LLC  
12965 SW HERMAN RD, STE 100  
TUALATIN, OR 97062  
503.563.6151 WWW.AKS-ENG.COM



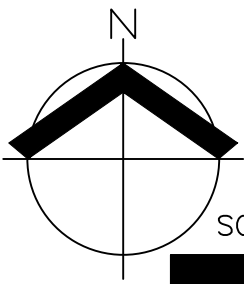
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CHKD: SAR  
AKS JOB:  
7431



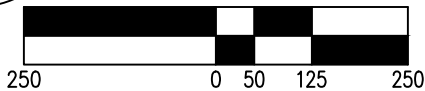


**NRCS WEB SOIL SURVEY  
FOR WASHINGTON COUNTY**

MAP UNIT SYMBOL	MAP UNIT NAME
5B	BRIEDWELL STONY SILT LOAM, 0% TO 7% SLOPES; NON-HYDRIC
37A	QUATAMA LOAM, 0% TO 3% SLOPES; NON-HYDRIC
37B	QUATAMA LOAM, 3% TO 7% SLOPES; NON-HYDRIC
37D	QUATAMA LOAM, 12% TO 20% SLOPES; NON-HYDRIC
2225A	HUBERLY SILT LOAM, 0% TO 3% SLOPES; HYDRIC
43	WAPATO SILTY CLAY LOAM; HYDRIC



SCALE: 1" = 250 FEET



ORIGINAL PAGE SIZE: 8.5" x 11"

DATE: 09/27/2021

**NRCS SOIL SURVEY MAP  
14200 SW TUALATIN-SHERWOOD ROAD SIMPLIFIED SITE ASSESSMENT**

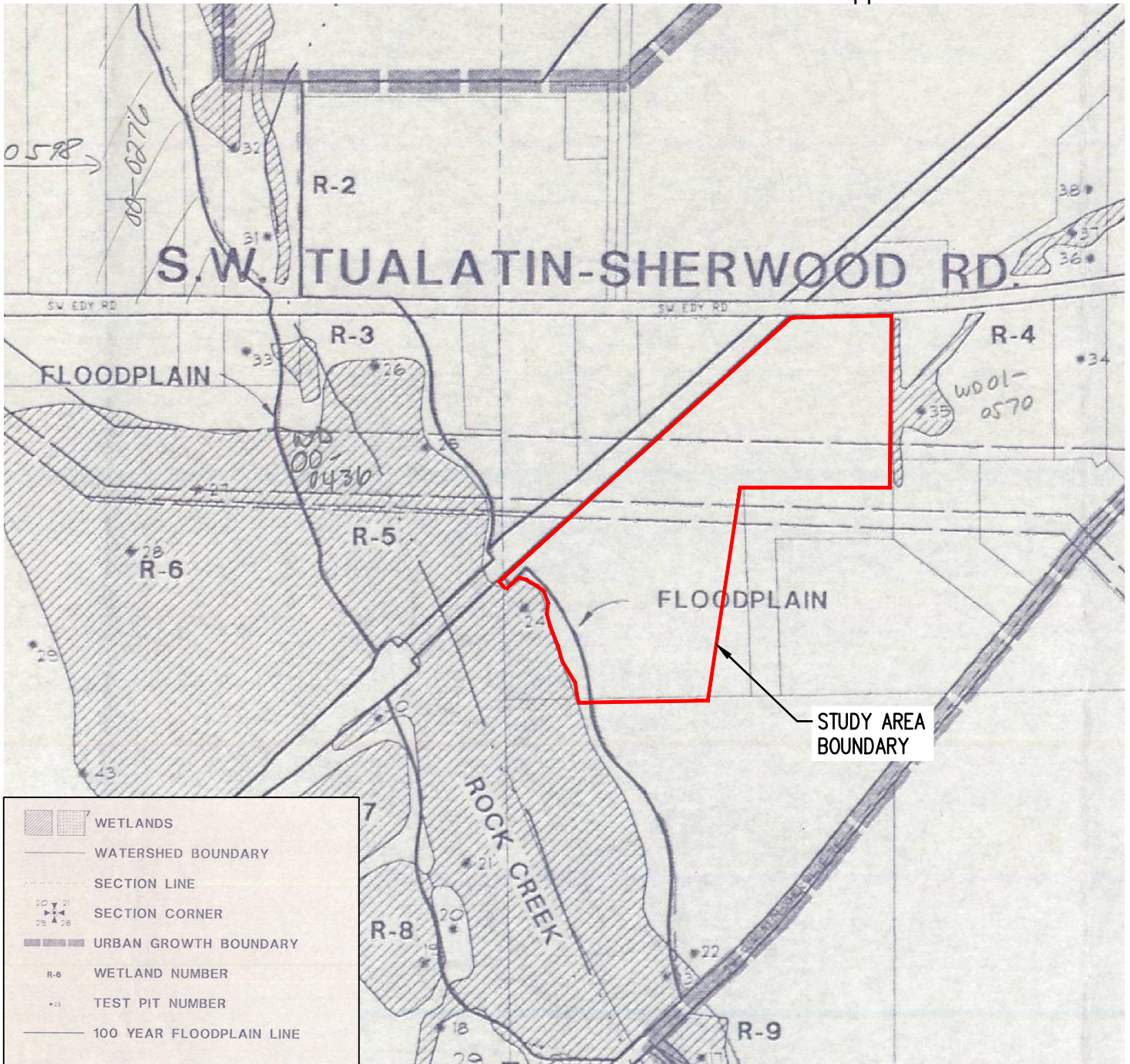
**FIGURE  
3**

AKS ENGINEERING & FORESTRY, LLC  
12965 SW HERMAN RD, STE 100  
TUALATIN, OR 97062  
503.563.6151 WWW.AKS-ENG.COM

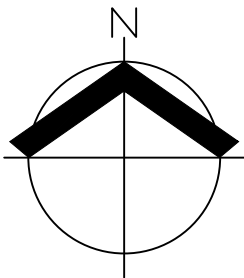


DRWN: SKT  
CHKD: SAR  
AKS JOB:  
7431

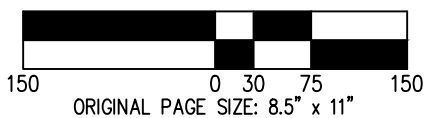




CITY OF SHERWOOD  
 LOCAL WETLAND INVENTORY (1992)



SCALE: 1" = 150 FEET

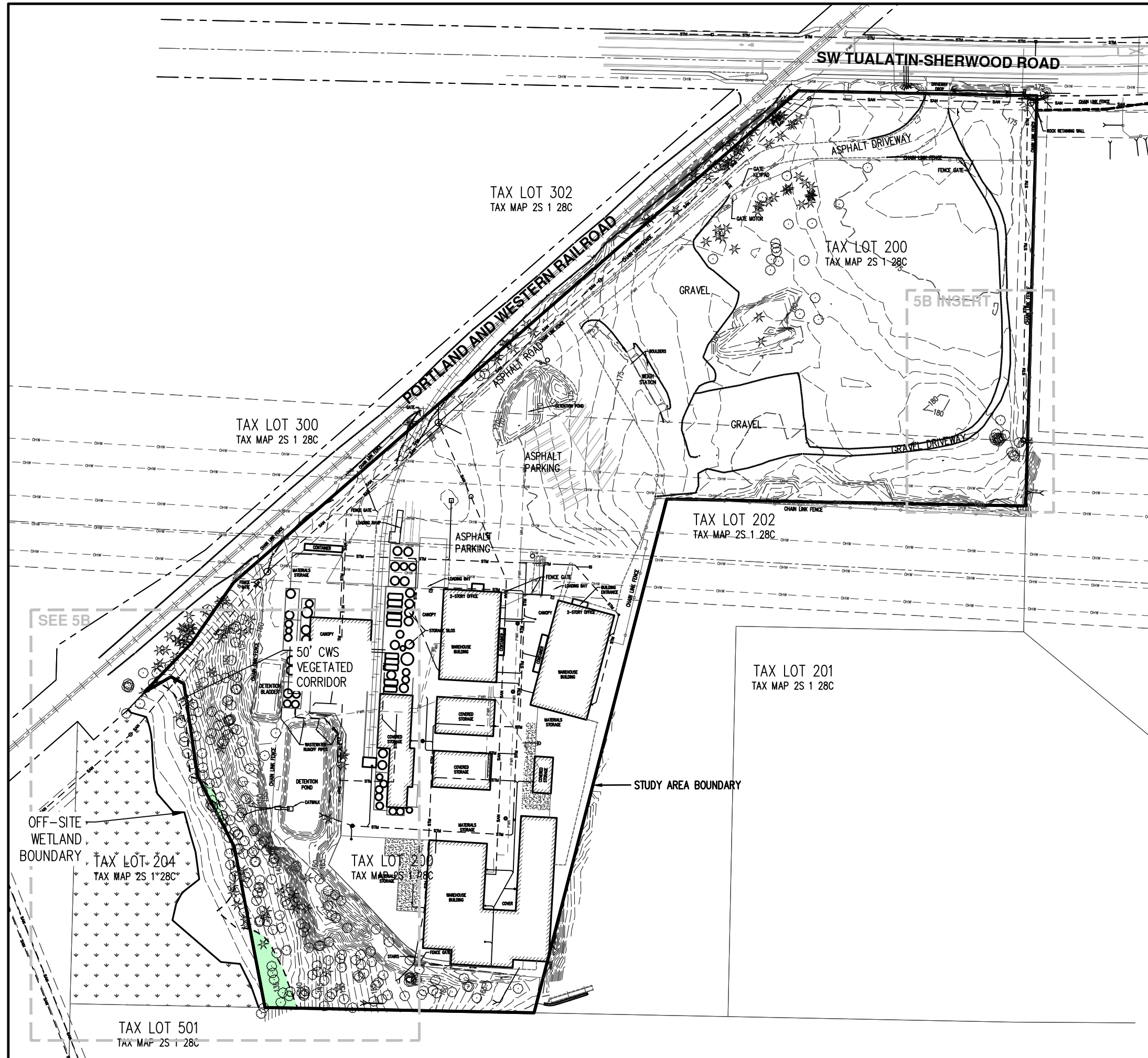


DATE: 09/27/2021

<b>LOCAL WETLAND INVENTORY MAP</b> <b>14200 SW TUALATIN-SHERWOOD ROAD SIMPLIFIED SITE ASSESSMENT</b>		<b>FIGURE</b> <b>4</b>
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151    WWW.AKS-ENG.COM		DRWN: SKT CHKD: SAR AKS JOB: 7431







**LEGEND (COLOR COPY):**



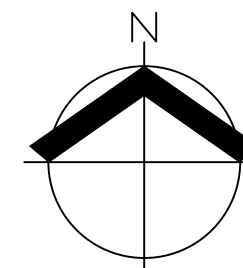
ON-SITE GOOD CONDITION VEGETATED CORRIDOR: 4,108 SF± (0.09 ACRES)



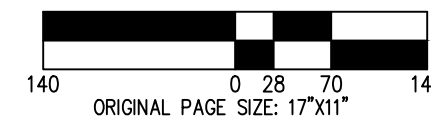
PHOTO LOCATION & ORIENTATION

WETLAND AND WATER BOUNDARIES SHOWN WERE DELINEATED BY AKS ENGINEERING & FORESTRY, LLC ON APRIL 9, 2021 AND WERE PROFESSIONALLY LAND SURVEYED BY AKS ON MAY 5, 2021.

1-FOOT INTERVAL GROUND CONTOURS, EXISTING CONDITIONS, STUDY AREA BOUNDARY, AND TREE >6" DBH DERIVED FROM AKS LAND SURVEY.



SCALE: 1" = 140 FEET



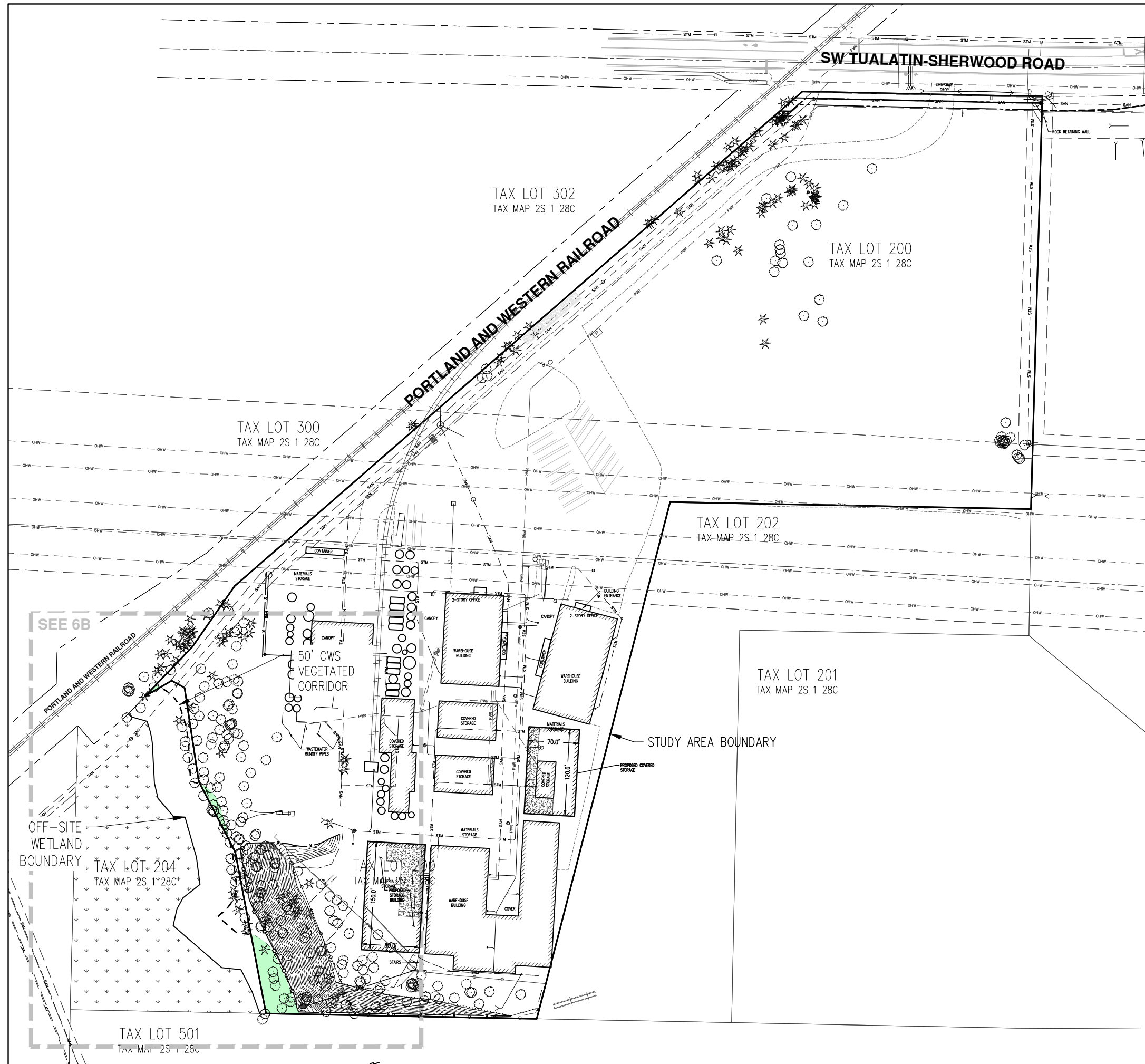
DATE: 10/1/2021

<b>NATURAL RESOURCES EXISTING CONDITIONS</b>	FIGURE
14200 SW TUALATIN-SHERWOOD ROAD SIMPLIFIED SITE ASSESSMENT	<b>5A</b>
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM	DRWN: SKT CHKD: SAR AKS JOB: 7431









**LEGEND (COLOR COPY):**


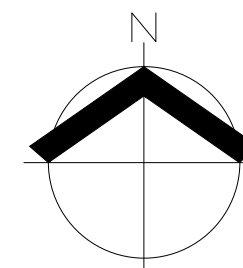
 ON-SITE GOOD CONDITION VEGETATED CORRIDOR TO REMAIN: 4,108 SF± (0.09 ACRES)

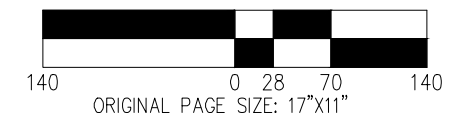
 PHOTO LOCATION & ORIENTATION

WETLAND AND WATER BOUNDARIES SHOWN WERE DELINEATED BY AKS ENGINEERING & FORESTRY, LLC ON APRIL 9, 2021 AND WERE PROFESSIONALLY LAND SURVEYED BY AKS ON MAY 5, 2021.

1-FOOT INTERVAL GROUND CONTOURS, EXISTING CONDITIONS, STUDY AREA BOUNDARY, AND TREE >6" DBH DERIVED FROM AKS LAND SURVEY.



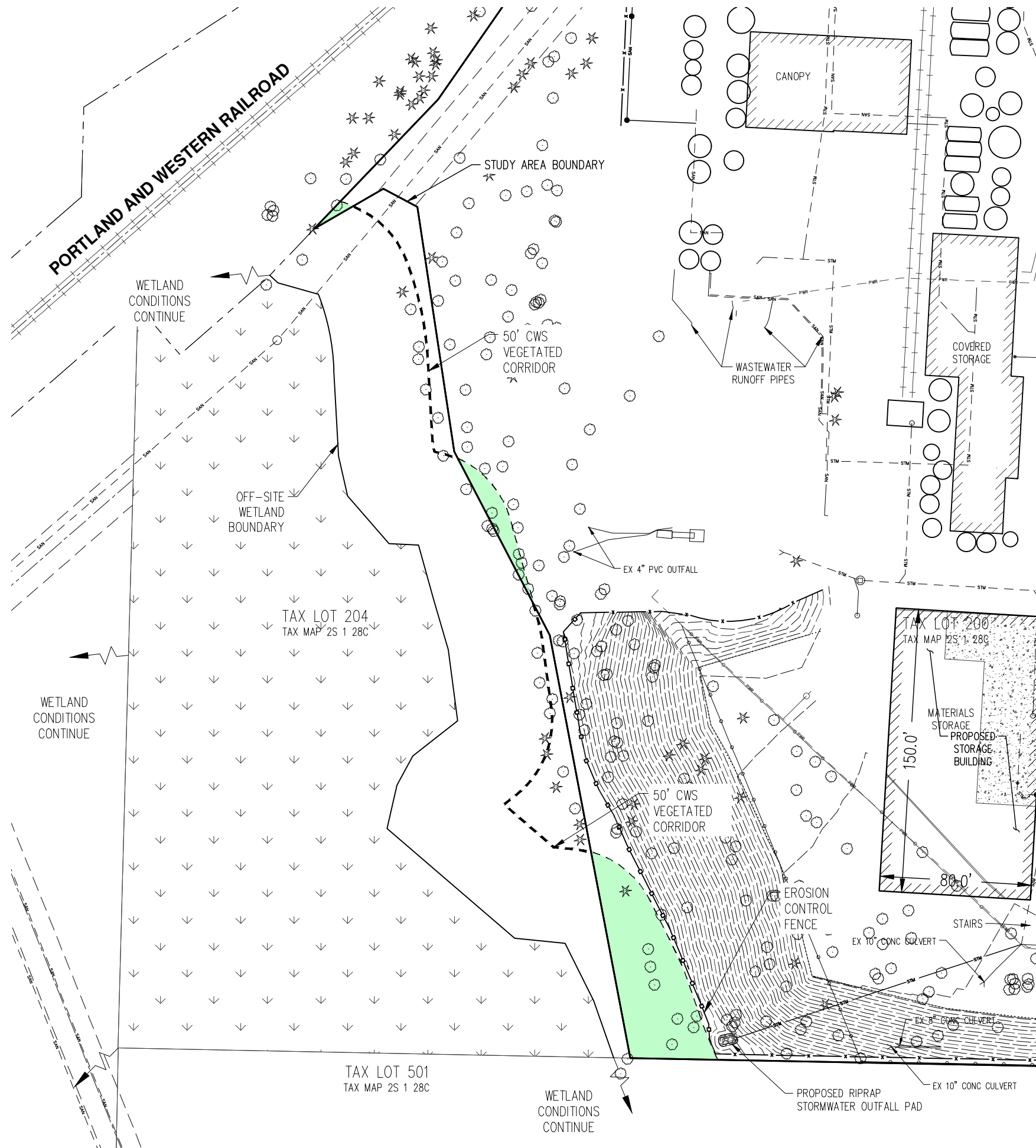
SCALE: 1" = 140 FEET



DATE: 10/04/2021

<b>NATURAL RESOURCES SITE PLAN</b>		FIGURE
<b>14200 SW TUALATIN-SHERWOOD ROAD SIMPLIFIED SITE ASSESSMENT</b>		<b>6A</b>
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM		DRWN: SKT CHKD: SAR AKS JOB: 7431





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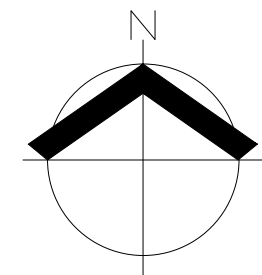

 ON-SITE GOOD CONDITION VEGETATED CORRIDOR TO REMAIN: 4,108 SF± (0.09 ACRES)

 PHOTO LOCATION & ORIENTATION

WETLAND AND WATER BOUNDARIES SHOWN WERE DELINEATED BY AKS ENGINEERING & FORESTRY, LLC ON APRIL 9, 2021 AND WERE PROFESSIONALLY LAND SURVEYED BY AKS ON MAY 5, 2021.

1-FOOT INTERVAL GROUND CONTOURS, EXISTING CONDITIONS, STUDY AREA BOUNDARY, AND TREE >6" DBH DERIVED FROM AKS LAND SURVEY.



SCALE: 1" = 60 FEET  
  
 ORIGINAL PAGE SIZE: 17" x 11"

DATE: 10/04/2021

<b>NATURAL RESOURCES SITE PLAN</b>	FIGURE
<b>14200 SW TUALATIN-SHERWOOD ROAD SIMPLIFIED SITE ASSESSMENT</b>	<b>6B</b>
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM	 DRWN: SKT CHKD: SAR AKS JOB: 7431



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## **Appendix B: Wetland Determination Data Sheets (Plots 1 through 10)**

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**WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region**

Project/Site: 14200 Tualatin Sherwood Road City/County: Sherwood/ Washington County Sampling Date: 4/9/2021  
 Applicant/Owner: Cascade Columbia Distribution State: OR Sampling Point: 1  
 Investigator(s): Sonya Templeton, Stacey Reed Section, Township, Range: Sec 28, T2S, R1.W, W.M  
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): <3%  
 Subregion (LRR): A. Northwest Forests and Coast Lat: 45.388681 Long: -121.56547938 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Wapato silty clay loam (Unit 43); Hydric NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

**Precipitation:**

According to the NWS Portland KGW weather station, 0.00 inches of rainfall was received on the day of the site visit and 0.23 inches within the two weeks prior. Drier than normal conditions.

**Remarks:**

**VEGETATION**

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
0% = Total Cover				
<b>Sapling/Shrub Stratum (Plot Size: 10' r or _____)</b>				
1. <u>Rubus armeniacus</u>	20%	Yes	FAC	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>60</u> x 2 = <u>120</u> FAC species <u>45</u> x 3 = <u>135</u> FACU species <u>10</u> x 4 = <u>40</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>115</u> (A) <u>295</u> (B) Prevalence Index = B/A = <u>2.57</u>
2. <u>Rosa gymnocarpa</u>	10%	Yes	FACU	
3. <u>Rosa nutkana</u>	5%	No	FAC	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
35% = Total Cover				
<b>Herb Stratum (Plot Size: 5' r or _____)</b>				
1. <u>Phalaris arundinacea</u>	60%	Yes	FACW	<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation (Explain) <sup>1</sup> <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
2. <u>Alopecurus pratensis</u>	15%	No	FAC	
3. <u>Ranunculus repens</u>	5%	No	FAC	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
80% = Total Cover				
<b>Woody Vine Stratum (Plot Size: 10' r or _____)</b>				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
2. _____	_____	_____	_____	
0% = Total Cover				
% Bare Ground in Herb Stratum <u>20%</u>				

**Remarks:**

<b>SOIL</b>							<b>Sampling Point:</b>	<b>1</b>
<b>Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):</b>								
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-4	10YR 3/2	92	7.5YR 4/4	8	C	M	SiCL	
4-14	2.5Y 4/1	95	10YR 4/6	5	C	M	SiC	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains.								
<sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted):</b>					<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>			
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)			<input type="checkbox"/> 2 cm Muck (A10)				
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)			<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)			<input type="checkbox"/> Very Shallow Dark Surface (TF12)				
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)			<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input checked="" type="checkbox"/> Depleted Matrix (F3)							
<input type="checkbox"/> Thick Dark Surface (A12)	<input checked="" type="checkbox"/> Redox Dark Surface (F6)							
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Depleted Dark Surface (F7)							
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Redox Depressions (F8)							
<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.								
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____						Yes <input checked="" type="checkbox"/> No _____		
Depth (inches): _____								
<b>Remarks:</b>								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>								
<b>Primary Indicators (minimum of one required; check all that apply)</b>					<b>Secondary Indicators (2 or more required)</b>			
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)			<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)				
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Salt Crust (B11)			<input type="checkbox"/> Drainage Patterns (B10)				
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)			<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)			<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)			<input type="checkbox"/> Geomorphic Position (D2)				
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Presence of Reduced Iron (C4)			<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)			<input type="checkbox"/> FAC-Neutral Test (D5)				
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)			<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)				
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Other (Explain in Remarks)			<input type="checkbox"/> Frost-Heave Hummocks (D7)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)								
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)								
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present?	Yes _____	No <input checked="" type="checkbox"/>	Depth (inches): _____	Yes <input checked="" type="checkbox"/> No _____				
Water Table Present?	Yes <input checked="" type="checkbox"/>	No _____	Depth (inches): Surface					
Saturation Present? (includes capillary fringe)	Yes <input checked="" type="checkbox"/>	No _____	Depth (inches): Surface					
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b>								

**WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region**

Project/Site: 14200 Tualatin Sherwood Road City/County: Sherwood/ Washington County Sampling Date: 4/9/2021  
 Applicant/Owner: Cascade Columbia Distribution State: OR Sampling Point: 2  
 Investigator(s): Sonya Templeton, Stacey Reed Section, Township, Range: Sec 28, T2S, R1.W, W.M  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): <3%  
 Subregion (LRR): A. Northwest Forests and Coast Lat: 45.388681 Long: -121.56545186 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Briedwell stony silt loam (Unit 5B), 0-7 percent; Non-Hydric NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	

**Precipitation:**  
 According to the NWS Portland KGW weather station, 0.00 inches of rainfall was received on the day of the site visit and 0.23 inches within the two weeks prior. Drier than normal conditions.

**Remarks:**  
 Plot located approximately 1' higher in elevation than Plot 1.

**VEGETATION**

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Quercus garyana</u>	10%	Yes	FACU	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
10% = Total Cover				
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				
1. <u>Toxicodendron diversilobum</u>	5%	Yes	FAC	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>78</u> x 3 = <u>234</u> FACU species <u>16</u> x 4 = <u>64</u> UPL species <u>3</u> x 5 = <u>15</u> Column Totals: <u>97</u> (A) <u>313</u> (B) Prevalence Index = B/A = <u>3.23</u>
2. <u>Rosa gymnocarpa</u>	3%	No	FACU	
3. <u>Quercus garyana</u>	3%	No	FACU	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
11% = Total Cover				
Herb Stratum (Plot Size: 5' r or _____)				
1. <u>Alopecurus pratensis</u>	70%	Yes	FAC	<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation (Explain) <sup>1</sup> <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
2. <u>Plantago lanceolata</u>	10%	No	FACU	
3. <u>Geranium dissectum</u>	3%	No	NOL	
4. <u>Ranunculus repens</u>	3%	No	FAC	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
86% = Total Cover				
Woody Vine Stratum (Plot Size: 10' r or _____)				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
2. _____	_____	_____	_____	
0% = Total Cover				
% Bare Ground in Herb Stratum <u>14%</u>				

**Remarks:**



<b>SOIL</b>	<b>Sampling Point:</b> 2
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**Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):**

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-9	10YR 3/2	100					SiCL	
9-16	2.5Y 4/1	100					SIC	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains.  
<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<p><b>Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted):</b></p> <p><input type="checkbox"/> Histosol (A1)                      <input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Histic Epipedon (A2)              <input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Black Histic (A3)                    <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)              <input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)          <input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)          <input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)          <input type="checkbox"/> Redox Depressions (F8)</p>	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p><sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p><b>Restrictive Layer (if present):</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b></p> <p>Yes _____ No <u>  X  </u></p>
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**Remarks:**

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	
<input type="checkbox"/> Other (Explain in Remarks)	

<p><b>Field Observations:</b></p> <p>Surface Water Present?    Yes _____ No <u>  X  </u>      Depth (inches): _____</p> <p>Water Table Present?     Yes _____ No <u>  X  </u>      Depth (inches): <u>  &gt;16"  </u></p> <p>Saturation Present?      Yes _____ No <u>  X  </u>      Depth (inches): <u>  &gt;16"  </u> (includes capillary fringe)</p>	<p><b>Wetland Hydrology Present?</b></p> <p>Yes _____ No <u>  X  </u></p>
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**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:**  
Soils were dry throughout.

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: 14200 Tualatin Sherwood Road City/County: Sherwood/ Washington County Sampling Date: 4/9/2021  
 Applicant/Owner: Cascade Columbia Distribution State: OR Sampling Point: 3  
 Investigator(s): Sonya Templeton, Stacey Reed Section, Township, Range: Sec 28, T2S, R1.W, W.M  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Convex Slope (%): <3%  
 Subregion (LRR): A. Northwest Forests and Coast Lat: 45.388434 Long: -121.56537321 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Briedwell stony silt loam (Unit 5B), 0-7 percent; Non-Hydric NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b>
Hydric Soil Present?	Yes _____	No <u>X</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	

**Precipitation:**  
 According to the NWS Portland KGW weather station, 0.00 inches of rainfall was received on the day of the site visit and 0.23 inches within the two weeks prior. Drier than normal conditions.

**Remarks:**

**VEGETATION**

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>6</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)
1. <u>Crataegus douglasii</u>	<u>20%</u>	<u>Yes</u>	<u>FAC</u>	
2. <u>Quercus garyana</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
<u>30%</u> = Total Cover				
Sapling/Shrub Stratum (Plot Size: 10' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>30</u> x 3 = <u>90</u> FACU species <u>35</u> x 4 = <u>140</u> UPL species <u>80</u> x 5 = <u>400</u> Column Totals: <u>145</u> (A) <u>630</u> (B) Prevalence Index = B/A = <u>4.34</u>
1. <u>Corylus cornuta</u>	<u>15%</u>	<u>Yes</u>	<u>FACU</u>	
2. <u>Symphoricarpos albus</u>	<u>10%</u>	<u>Yes</u>	<u>FACU</u>	
3. <u>Crataegus douglasii</u>	<u>10%</u>	<u>Yes</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
<u>35%</u> = Total Cover				
Herb Stratum (Plot Size: 5' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation (Explain) <sup>1</sup> <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
1. <u>Geranium molle</u>	<u>80%</u>	<u>Yes</u>	<u>NOL</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
<u>80%</u> = Total Cover				
Woody Vine Stratum (Plot Size: 10' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
<u>0%</u> = Total Cover				
% Bare Ground in Herb Stratum <u>20%</u>				

**Remarks:**



**WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region**

Project/Site: 14200 Tualatin Sherwood Road City/County: Sherwood/ Washington County Sampling Date: 4/9/2021  
 Applicant/Owner: Cascade Columbia Distribution State: OR Sampling Point: 4  
 Investigator(s): Sonya Templeton, Stacey Reed Section, Township, Range: Sec 28, T2S, R1.W, W.M  
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): <3%  
 Subregion (LRR): A. Northwest Forests and Coast Lat: 45.388420 Long: -121.56538646 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Wapato silty clay loam (Unit 43); Hydric NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u>	No _____	
Wetland Hydrology Present?	Yes <u>X</u>	No _____	

**Precipitation:**  
 According to the NWS Portland KGW weather station, 0.00 inches of rainfall was received on the day of the site visit and 0.23 inches within the two weeks prior. Drier than normal conditions.

**Remarks:**  
 Plot is located approximately 6' lower in elevation than Plot 3.

**VEGETATION**

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Fraxinus latifolia</u>	20%	Yes	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
20% = Total Cover				
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				
1. <u>Crataegus douglasii</u>	25%	Yes	FAC	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>20</u> x 2 = <u>40</u> FAC species <u>55</u> x 3 = <u>165</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>5</u> x 5 = <u>25</u> Column Totals: <u>80</u> (A) <u>230</u> (B) Prevalence Index = B/A = <u>2.88</u>
2. <u>Rosa nutkana</u>	20%	Yes	FAC	
3. <u>Rubus armeniacus</u>	10%	No	FAC	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
55% = Total Cover				
Herb Stratum (Plot Size: 5' r or _____)				
1. <u>Geranium molle</u>	5%	No	NOL	<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation (Explain) <sup>1</sup> <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
5% = Total Cover				
Woody Vine Stratum (Plot Size: 10' r or _____)				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
2. _____	_____	_____	_____	
0% = Total Cover				
% Bare Ground in Herb Stratum <u>95%</u>				

**Remarks:**



**WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region**

Project/Site: 14200 Tualatin Sherwood Road City/County: Sherwood/ Washington County Sampling Date: 4/9/2021  
 Applicant/Owner: Cascade Columbia Distribution State: OR Sampling Point: 5  
 Investigator(s): Sonya Templeton, Stacey Reed Section, Township, Range: Sec 28, T2S, R1.W, W.M  
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): <3%  
 Subregion (LRR): A. Northwest Forests and Coast Lat: 45.388089 Long: -121.56540658 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Wapato silty clay loam (Unit 43); Hydric NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	<b>Is the Sampled Area within a Wetland?</b> Yes <u>X</u> No _____
Hydric Soil Present?	Yes <u>X</u>	No _____	
Wetland Hydrology Present?	Yes <u>X</u>	No _____	

**Precipitation:**  
 According to the NWS Portland KGW weather station, 0.00 inches of rainfall was received on the day of the site visit and 0.23 inches within the two weeks prior. Drier than normal conditions.

**Remarks:**

**VEGETATION**

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Fraxinus latifolia</u>	20%	Yes	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
20% = Total Cover				
<b>Sapling/Shrub Stratum (Plot Size: 10' r or _____)</b>				
1. <u>Fraxinus latifolia</u>	5%	Yes	FACW	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>25</u> x 2 = <u>50</u> FAC species <u>10</u> x 3 = <u>30</u> FACU species <u>3</u> x 4 = <u>12</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>38</u> (A) <u>92</u> (B) Prevalence Index = B/A = <u>2.42</u>
2. <u>Rosa nutkana</u>	5%	Yes	FAC	
3. <u>Rubus armeniacus</u>	5%	Yes	FAC	
4. <u>Symphoricarpos albus</u>	3%	No	FACU	
5. _____	_____	_____	_____	
18% = Total Cover				
<b>Herb Stratum (Plot Size: 5' r or _____)</b>				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation (Explain) <sup>1</sup> <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
0% = Total Cover				
<b>Woody Vine Stratum (Plot Size: 10' r or _____)</b>				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
2. _____	_____	_____	_____	
0% = Total Cover				
<b>% Bare Ground in Herb Stratum</b> <u>100%</u>				

**Remarks:**  
 Bareground covered by leaf litter.



<b>SOIL</b>						<b>Sampling Point:</b> 5		
<b>Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):</b>								
Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>	Loc <sup>2</sup>	Texture	Remarks
0-12	10YR 3/1	98	7.5YR 3/4	2	C	M	SIC	
<sup>1</sup> Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains. <sup>2</sup> Location: PL=Pore Lining, M=Matrix.								
<b>Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted):</b>				<b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b>				
<input type="checkbox"/> Histosol (A1)		<input type="checkbox"/> Sandy Redox (S5)		<input type="checkbox"/> 2 cm Muck (A10)				
<input type="checkbox"/> Histic Epipedon (A2)		<input type="checkbox"/> Stripped Matrix (S6)		<input type="checkbox"/> Red Parent Material (TF2)				
<input type="checkbox"/> Black Histic (A3)		<input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)		<input type="checkbox"/> Very Shallow Dark Surface (TF12)				
<input type="checkbox"/> Hydrogen Sulfide (A4)		<input type="checkbox"/> Loamy Gleyed Matrix (F2)		<input type="checkbox"/> Other (Explain in Remarks)				
<input type="checkbox"/> Depleted Below Dark Surface (A11)		<input type="checkbox"/> Depleted Matrix (F3)		<sup>3</sup> Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.				
<input type="checkbox"/> Thick Dark Surface (A12)		<input checked="" type="checkbox"/> Redox Dark Surface (F6)						
<input type="checkbox"/> Sandy Mucky Mineral (S1)		<input type="checkbox"/> Depleted Dark Surface (F7)						
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		<input type="checkbox"/> Redox Depressions (F8)						
<b>Restrictive Layer (if present):</b>						<b>Hydric Soil Present?</b>		
Type: _____						Yes <input checked="" type="checkbox"/> No _____		
Depth (inches): _____								
<b>Remarks:</b>								
<b>HYDROLOGY</b>								
<b>Wetland Hydrology Indicators:</b>								
<u>Primary Indicators (minimum of one required; check all that apply)</u>				<u>Secondary Indicators (2 or more required)</u>				
<input type="checkbox"/> Surface Water (A1)		<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)		<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)				
<input checked="" type="checkbox"/> High Water Table (A2)		<input type="checkbox"/> Salt Crust (B11)		<input type="checkbox"/> Drainage Patterns (B10)				
<input checked="" type="checkbox"/> Saturation (A3)		<input type="checkbox"/> Aquatic Invertebrates (B13)		<input type="checkbox"/> Dry-Season Water Table (C2)				
<input type="checkbox"/> Water Marks (B1)		<input type="checkbox"/> Hydrogen Sulfide Odor (C1)		<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)				
<input type="checkbox"/> Sediment Deposits (B2)		<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)		<input type="checkbox"/> Geomorphic Position (D2)				
<input type="checkbox"/> Drift Deposits (B3)		<input type="checkbox"/> Presence of Reduced Iron (C4)		<input type="checkbox"/> Shallow Aquitard (D3)				
<input type="checkbox"/> Algal Mat or Crust (B4)		<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)		<input type="checkbox"/> FAC-Neutral Test (D5)				
<input type="checkbox"/> Iron Deposits (B5)		<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)		<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)				
<input type="checkbox"/> Surface Soil Cracks (B6)		<input type="checkbox"/> Other (Explain in Remarks)		<input type="checkbox"/> Frost-Heave Hummocks (D7)				
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)								
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)								
<b>Field Observations:</b>						<b>Wetland Hydrology Present?</b>		
Surface Water Present?		Yes _____ No <input checked="" type="checkbox"/>	Depth (inches): _____		Yes <input checked="" type="checkbox"/> No _____			
Water Table Present?		Yes <input checked="" type="checkbox"/> No _____	Depth (inches): 2"					
Saturation Present? (includes capillary fringe)		Yes <input checked="" type="checkbox"/> No _____	Depth (inches): Surface					
<b>Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:</b>								
<b>Remarks:</b>								

WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region

Project/Site: 14200 Tualatin Sherwood Road City/County: Sherwood/ Washington County Sampling Date: 4/9/2021  
 Applicant/Owner: Cascade Columbia Distribution State: OR Sampling Point: 6  
 Investigator(s): Sonya Templeton, Stacey Reed Section, Township, Range: Sec 28, T2S, R1.W, W.M  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): <5%  
 Subregion (LRR): A. Northwest Forests and Coast Lat: 45.388081 Long: -121.56539032 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Briedwell stony silt loam (Unit 5B), 0-7 percent; Non-Hydric NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b>	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

**Precipitation:**

According to the NWS Portland KGW weather station, 0.00 inches of rainfall was received on the day of the site visit and 0.23 inches within the two weeks prior. Drier than normal conditions.

**Remarks:**

Plot is located approximately 1' higher in elevation than Plot 5.

**VEGETATION**

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>7</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>29%</u> (A/B)
1. <u>Quercus garyana</u>	30%	Yes	FACU	
2. <u>Prunus americana</u>	10%	Yes	FACU	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
40% = Total Cover				
Sapling/Shrub Stratum (Plot Size: 10' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>35</u> x 3 = <u>105</u> FACU species <u>35</u> x 4 = <u>140</u> UPL species <u>20</u> x 5 = <u>100</u> Column Totals: <u>90</u> (A) <u>345</u> (B) Prevalence Index = B/A = <u>3.83</u>
1. <u>Rubus armeniacus</u>	15%	Yes	FAC	
2. <u>Toxicodendron diversilobum</u>	10%	Yes	FAC	
3. <u>Oemleria cerasiformis</u>	10%	Yes	FACU	
4. <u>Symphoricarpos albus</u>	10%	Yes	FACU	
5. <u>Quercus garyana</u>	5%	No	FACU	
50% = Total Cover				
Herb Stratum (Plot Size: 5' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation (Explain) <sup>1</sup> <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
1. <u>Geranium molle</u>	20%	Yes	NOL	
2. <u>Poa species</u>	10%	No	FAC*	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
30% = Total Cover				
Woody Vine Stratum (Plot Size: 10' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0% = Total Cover				
% Bare Ground in Herb Stratum <u>70%</u>				

**Remarks:**

\*Assumed FAC

<b>SOIL</b>	<b>Sampling Point:</b> 6
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**Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):**

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-14	10YR 3/2	100					SiCL	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains.  
<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<p><b>Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted):</b></p> <p><input type="checkbox"/> Histosol (A1)                      <input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Histic Epipedon (A2)              <input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Black Histic (A3)                    <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)              <input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)          <input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)          <input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)          <input type="checkbox"/> Redox Depressions (F8)</p>	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p><sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p><b>Restrictive Layer (if present):</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>              Yes _____              No <u>  X  </u></p>
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**Remarks:**

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<p><u>Primary Indicators (minimum of one required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)                      <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)</p> <p><input type="checkbox"/> High Water Table (A2)                      <input type="checkbox"/> Salt Crust (B11)</p> <p><input type="checkbox"/> Saturation (A3)                              <input type="checkbox"/> Aquatic Invertebrates (B13)</p> <p><input type="checkbox"/> Water Marks (B1)                            <input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)                    <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</p> <p><input type="checkbox"/> Drift Deposits (B3)                            <input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)                      <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Iron Deposits (B5)                            <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)</p> <p><input type="checkbox"/> Surface Soil Cracks (B6)                    <input type="checkbox"/> Other (Explain in Remarks)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p>	<p><u>Secondary Indicators (2 or more required)</u></p> <p><input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Geomorphic Position (D2)</p> <p><input type="checkbox"/> Shallow Aquitard (D3)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p> <p><input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)</p> <p><input type="checkbox"/> Frost-Heave Hummocks (D7)</p>

<p><b>Field Observations:</b></p> <p>Surface Water Present?    Yes _____ No <u>  X  </u>              Depth (inches): _____</p> <p>Water Table Present?      Yes _____ No <u>  X  </u>              Depth (inches): &gt;14" _____</p> <p>Saturation Present?        Yes _____ No <u>  X  </u>              Depth (inches): &gt;14" _____          (includes capillary fringe)</p>	<p><b>Wetland Hydrology Present?</b>              Yes _____              No <u>  X  </u></p>
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**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:**  
Soils were dry throughout.

**WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region**

Project/Site: 14200 Tualatin Sherwood Road City/County: Sherwood/ Washington County Sampling Date: 4/9/2021  
 Applicant/Owner: Cascade Columbia Distribution State: OR Sampling Point: 7  
 Investigator(s): Sonya Templeton, Stacey Reed Section, Township, Range: Sec 28, T2S, R1.W, W.M  
 Landform (hillslope, terrace, etc.): Floodplain Local relief (concave, convex, none): Concave Slope (%): <3%  
 Subregion (LRR): A. Northwest Forests and Coast Lat: 45.387782 Long: -121.56521173 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Wapato silty clay loam (Unit 43); Hydric NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	<b>Is the Sampled Area within a Wetland?</b>	Yes <u>X</u>	No _____
Hydric Soil Present?	Yes <u>X</u>	No _____			
Wetland Hydrology Present?	Yes <u>X</u>	No _____			

**Precipitation:**  
 According to the NWS Portland KGW weather station, 0.00 inches of rainfall was received on the day of the site visit and 0.23 inches within the two weeks prior. Drier than normal conditions.

**Remarks:**

**VEGETATION**

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Fraxinus latifolia</u>	25%	Yes	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)
2. _____				
3. _____				
4. _____				
25% = Total Cover				
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				
1. <u>Corylus cornuta</u>	25%	Yes	FACU	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>1</u> x 1 = <u>1</u> FACW species <u>40</u> x 2 = <u>80</u> FAC species <u>20</u> x 3 = <u>60</u> FACU species <u>27</u> x 4 = <u>108</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>88</u> (A) <u>249</u> (B) Prevalence Index = B/A = <u>2.83</u>
2. <u>Fraxinus latifolia</u>	10%	No	FACW	
3. <u>Rubus armeniacus</u>	10%	No	FAC	
4. <u>Crataegus douglasii</u>	10%	No	FAC	
5. _____				
55% = Total Cover				
Herb Stratum (Plot Size: 5' r or _____)				
1. <u>Juncus effusus</u>	5%	Yes	FACW	<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation (Explain) <sup>1</sup> <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
2. <u>Tellima grandiflora</u>	2%	No	FACU	
3. <u>Carex obnupta</u>	1%	No	OBL	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
9. _____				
10. _____				
11. _____				
8% = Total Cover				
Woody Vine Stratum (Plot Size: 10' r or _____)				
1. _____				<b>Hydrophytic Vegetation Present?</b>
2. _____				
0% = Total Cover				
% Bare Ground in Herb Stratum <u>92%</u>				Yes <u>X</u> No _____

**Remarks:**  
 Bareground covered by leaf litter and moss.

<b>SOIL</b>	<b>Sampling Point:</b> 7
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**Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):**

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-14	10YR 3/1	98	7.5YR 4/4	2	C	M	SIC	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains.  
<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<p><b>Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted):</b></p> <p><input type="checkbox"/> Histosol (A1)                      <input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Histic Epipedon (A2)              <input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Black Histic (A3)                   <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)              <input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11)   <input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)           <input checked="" type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)           <input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)           <input type="checkbox"/> Redox Depressions (F8)</p>	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p><sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p><b>Restrictive Layer (if present):</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b>              Yes <input checked="" type="checkbox"/>              No <input type="checkbox"/></p>
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**Remarks:**

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<p><u>Primary Indicators (minimum of one required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)                      <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)</p> <p><input checked="" type="checkbox"/> High Water Table (A2)                      <input type="checkbox"/> Salt Crust (B11)</p> <p><input checked="" type="checkbox"/> Saturation (A3)                              <input type="checkbox"/> Aquatic Invertebrates (B13)</p> <p><input type="checkbox"/> Water Marks (B1)                              <input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)                      <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</p> <p><input type="checkbox"/> Drift Deposits (B3)                              <input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)                              <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Iron Deposits (B5)                              <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)</p> <p><input type="checkbox"/> Surface Soil Cracks (B6)                              <input type="checkbox"/> Other (Explain in Remarks)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p>	<p><u>Secondary Indicators (2 or more required)</u></p> <p><input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Geomorphic Position (D2)</p> <p><input type="checkbox"/> Shallow Aquitard (D3)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p> <p><input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)</p> <p><input type="checkbox"/> Frost-Heave Hummocks (D7)</p>

<p><b>Field Observations:</b></p> <p>Surface Water Present?      Yes _____ No <input checked="" type="checkbox"/>      Depth (inches): _____</p> <p>Water Table Present?        Yes <input checked="" type="checkbox"/> No _____      Depth (inches): 2"</p> <p>Saturation Present?         Yes <input checked="" type="checkbox"/> No _____      Depth (inches): Surface</p> <p>(includes capillary fringe)</p>	<p><b>Wetland Hydrology Present?</b>              Yes <input checked="" type="checkbox"/>              No <input type="checkbox"/></p>
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**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:**  
 Plot located approximately 2' away from 6" ponded surface water.

**WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region**

Project/Site: 14200 Tualatin Sherwood Road City/County: Sherwood/ Washington County Sampling Date: 4/9/2021  
 Applicant/Owner: Cascade Columbia Distribution State: OR Sampling Point: 8  
 Investigator(s): Sonya Templeton, Stacey Reed Section, Township, Range: Sec 28, T2S, R1.W, W.M  
 Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): Convex Slope (%): <3%  
 Subregion (LRR): A. Northwest Forests and Coast Lat: 45.387796 Long: -121.56519688 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Briedwell stony silt loam (Unit 5B), 0-7 percent; Non-Hydric NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes _____	No <u>X</u>	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	

**Precipitation:**  
 According to the NWS Portland KGW weather station, 0.00 inches of rainfall was received on the day of the site visit and 0.23 inches within the two weeks prior. Drier than normal conditions.

**Remarks:**  
 Plot is located approximately 1' higher in elevation than Plot 7.

**VEGETATION**

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Fraxinus latifolia</u>	25%	Yes	FACW	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>4</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
2. <u>Prunus americana</u>	15%	Yes	FACU	
3. <u>Pseudotsuga menziesii</u>	10%	No	FACU	
4. <u>Quercus garyana</u>	10%	No	FACU	
60% = Total Cover				
<b>Sapling/Shrub Stratum (Plot Size: 10' r or _____)</b>				
1. <u>Rubus armeniacus</u>	40%	Yes	FAC	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>40</u> x 2 = <u>80</u> FAC species <u>50</u> x 3 = <u>150</u> FACU species <u>75</u> x 4 = <u>300</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>165</u> (A) <u>530</u> (B) Prevalence Index = B/A = <u>3.21</u>
2. <u>Holodiscus discolor</u>	20%	Yes	FACU	
3. <u>Oemleria cerasiformis</u>	15%	No	FACU	
4. <u>Fraxinus latifolia</u>	15%	No	FACW	
5. <u>Crataegus douglasii</u>	10%	No	FAC	
100% = Total Cover				
<b>Herb Stratum (Plot Size: 5' r or _____)</b>				
1. <u>Tellima grandiflora</u>	5%	No	FACU	<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation (Explain) <sup>1</sup> <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
5% = Total Cover				
<b>Woody Vine Stratum (Plot Size: 10' r or _____)</b>				
1. _____	_____	_____	_____	<b>Hydrophytic Vegetation Present?</b> Yes _____ No <u>X</u>
2. _____	_____	_____	_____	
0% = Total Cover				
% Bare Ground in Herb Stratum <u>95%</u>				

**Remarks:**  
 Bareground covered by moss.





**WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region**

Project/Site: 14200 Tualatin Sherwood Road City/County: Sherwood/ Washington County Sampling Date: 5/3/2021  
 Applicant/Owner: Cascade Columbia Distribution State: OR Sampling Point: 9  
 Investigator(s): Stacey Reed, PWS Section, Township, Range: Sec 28, T2S, R1.W, W.M  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): <3%  
 Subregion (LRR): A. Northwest Forests and Coast Lat: 45.389863 Long: -121.56313075 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Briedwell stony silt loam (Unit 5B), 0-7 percent; Non-Hydric NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	<b>Is the Sampled Area within a Wetland?</b>	Yes _____	No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>			
Wetland Hydrology Present?	Yes _____	No <u>X</u>			

**Precipitation:**  
 According to the NWS Portland KGW weather station, 0.06 inches of rainfall was received on the day of the site visit and 0.00 inches within the two weeks prior. Conditions are drier than normal.

**Remarks:**  
 Plot is located adjacent to 2' diameter culvert extending east/ west. Culvert was dry.

**VEGETATION**

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Populus balsamifera</u>	60%	Yes	FAC	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>3</u> (B)  Percent of Dominant Species That Are OBL, FACW, or FAC: <u>67%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
60% = Total Cover				
Sapling/Shrub Stratum (Plot Size: 10' r or _____)				
1. <u>Crataegus monogyna</u>	50%	Yes	FAC	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>140</u> x 3 = <u>420</u> FACU species <u>5</u> x 4 = <u>20</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>145</u> (A) <u>440</u> (B) Prevalence Index = B/A = <u>3.03</u>
2. <u>Rubus armeniacus</u>	5%	No	FAC	
3. <u>Populus balsamifera</u>	5%	No	FAC	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
60% = Total Cover				
Herb Stratum (Plot Size: 5' r or _____)				
1. <u>Schedonorus arundinaceus</u>	10%	No	FAC	<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation (Explain) <sup>1</sup> <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
2. <u>Poa species</u>	10%	No	FAC*	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
20% = Total Cover				
Woody Vine Stratum (Plot Size: 10' r or _____)				
1. <u>Rubus ursinus</u>	5%	Yes	FACU	<b>Hydrophytic Vegetation Present?</b> Yes <u>X</u> No _____
2. _____	_____	_____	_____	
5% = Total Cover				
% Bare Ground in Herb Stratum <u>80%</u>				

**Remarks:**  
 \*Assumed FAC

<b>SOIL</b>	<b>Sampling Point:</b> 9
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**Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):**

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-10	10YR 3/2	100					SIL	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains.  
<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<p><b>Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted):</b></p> <p><input type="checkbox"/> Histosol (A1)                      <input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Histic Epipedon (A2)              <input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Black Histic (A3)                    <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)              <input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)          <input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)          <input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)          <input type="checkbox"/> Redox Depressions (F8)</p>	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p><sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p><b>Restrictive Layer (if present):</b></p> <p>Type: <u>          Compacted gravel and concrete          </u></p> <p>Depth (inches): <u>          10"          </u></p>	<p><b>Hydric Soil Present?</b>                      Yes <u>          </u>                      No <u>      X      </u></p>
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**Remarks:**

**HYDROLOGY**

<b>Wetland Hydrology Indicators:</b>	
<p><u>Primary Indicators (minimum of one required; check all that apply)</u></p> <p><input type="checkbox"/> Surface Water (A1)                      <input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)</p> <p><input type="checkbox"/> High Water Table (A2)                      <input type="checkbox"/> Salt Crust (B11)</p> <p><input type="checkbox"/> Saturation (A3)                              <input type="checkbox"/> Aquatic Invertebrates (B13)</p> <p><input type="checkbox"/> Water Marks (B1)                              <input type="checkbox"/> Hydrogen Sulfide Odor (C1)</p> <p><input type="checkbox"/> Sediment Deposits (B2)                      <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)</p> <p><input type="checkbox"/> Drift Deposits (B3)                              <input type="checkbox"/> Presence of Reduced Iron (C4)</p> <p><input type="checkbox"/> Algal Mat or Crust (B4)                              <input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)</p> <p><input type="checkbox"/> Iron Deposits (B5)                              <input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)</p> <p><input type="checkbox"/> Surface Soil Cracks (B6)                              <input type="checkbox"/> Other (Explain in Remarks)</p> <p><input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)</p> <p><input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)</p>	<p><u>Secondary Indicators (2 or more required)</u></p> <p><input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)</p> <p><input type="checkbox"/> Drainage Patterns (B10)</p> <p><input type="checkbox"/> Dry-Season Water Table (C2)</p> <p><input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)</p> <p><input type="checkbox"/> Geomorphic Position (D2)</p> <p><input type="checkbox"/> Shallow Aquitard (D3)</p> <p><input type="checkbox"/> FAC-Neutral Test (D5)</p> <p><input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)</p> <p><input type="checkbox"/> Frost-Heave Hummocks (D7)</p>

<p><b>Field Observations:</b></p> <p>Surface Water Present?    Yes <u>          </u>    No <u>      X      </u>                      Depth (inches): <u>          </u></p> <p>Water Table Present?      Yes <u>          </u>    No <u>      X      </u>                      Depth (inches): <u>      &gt;10"      </u></p> <p>Saturation Present?        Yes <u>          </u>    No <u>      X      </u>                      Depth (inches): <u>      &gt;10"      </u> (includes capillary fringe)</p>	<p><b>Wetland Hydrology Present?</b>                      Yes <u>          </u>                      No <u>      X      </u></p>
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**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:**

**WETLAND DETERMINATION DATA FORM – Western Mountains, Valleys and Coast Region**

Project/Site: 14200 Tualatin Sherwood Road City/County: Sherwood/ Washington County Sampling Date: 5/3/2021  
 Applicant/Owner: Cascade Columbia Distribution State: OR Sampling Point: 10  
 Investigator(s): Stacey Reed, PWS Section, Township, Range: Sec 28, T2S, R1.W, W.M  
 Landform (hillslope, terrace, etc.): Terrace Local relief (concave, convex, none): Concave Slope (%): <3%  
 Subregion (LRR): A. Northwest Forests and Coast Lat: 45.389707 Long: -121.56315769 Datum: \_\_\_\_\_  
 Soil Map Unit Name: Briedwell stony silt loam (Unit 5B), 0-7 percent; Non-Hydric NWI classification: None  
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes \_\_\_\_\_ No X (If no, explain in Remarks)  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ significantly disturbed? Are "Normal Circumstances" present? Yes X No \_\_\_\_\_  
 Are Vegetation \_\_\_\_\_, Soil \_\_\_\_\_, or Hydrology \_\_\_\_\_ naturally problematic? (If needed, explain any answers in Remarks.)

**SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes <u>X</u>	No _____	<b>Is the Sampled Area within a Wetland?</b> Yes _____ No <u>X</u>
Hydric Soil Present?	Yes _____	No <u>X</u>	
Wetland Hydrology Present?	Yes _____	No <u>X</u>	

**Precipitation:**  
 According to the NWS Portland KGW weather station, 0.06 inches of rainfall was received on the day of the site visit and 0.00 inches within the two weeks prior. Conditions are drier than normal.

**Remarks:**

**VEGETATION**

Tree Stratum (Plot Size: 30' r or _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	<b>Dominance Test worksheet:</b> Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)  Total Number of Dominant Species Across All Strata: <u>2</u> (B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
0% = Total Cover				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)
<b>Sapling/Shrub Stratum (Plot Size: 10' r or _____)</b>				
1. <u>Rosa nutkana</u>	10%	Yes	FAC	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	<b>Prevalence Index worksheet:</b> Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>100</u> x 2 = <u>200</u> FAC species <u>10</u> x 3 = <u>30</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>0</u> x 5 = <u>0</u> Column Totals: <u>110</u> (A) <u>230</u> (B) Prevalence Index = B/A = <u>2.09</u>
5. _____	_____	_____	_____	
10% = Total Cover				
<b>Herb Stratum (Plot Size: 5' r or _____)</b>				
1. <u>Phalaris arundinacea</u>	100%	Yes	FACW	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
9. _____	_____	_____	_____	
10. _____	_____	_____	_____	
11. _____	_____	_____	_____	
100% = Total Cover				<b>Hydrophytic Vegetation Indicators:</b> 1 - Rapid Test for Hydrophytic Vegetation X 2 - Dominance Test is >50% X 3 - Prevalence Index is ≤3.0 <sup>1</sup> 4 - Morphological Adaptations <sup>1</sup> (Provide supporting data in Remarks or on a separate sheet) 5 - Wetland Non-Vascular Plants <sup>1</sup> Problematic Hydrophytic Vegetation (Explain) <sup>1</sup> <sup>1</sup> Indicators of hydric soil and wetland hydrology must be present.
<b>Woody Vine Stratum (Plot Size: 10' r or _____)</b>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
0% = Total Cover				
<b>% Bare Ground in Herb Stratum <u>0%</u></b>				

**Remarks:**

<b>SOIL</b>	<b>Sampling Point:</b> 10
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**Profile Description (Describe to the depth needed to document the indicator or confirm the absence of indicators):**

Depth (inches)	Matrix		Redox Features			Loc <sup>2</sup>	Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type <sup>1</sup>			
0-16	10YR 3/2	100					SIL	

<sup>1</sup>Type: C=Concentration, D=Depletion, RM=Reduced Matrix CS=Covered or Coated Sand Grains.  
<sup>2</sup>Location: PL=Pore Lining, M=Matrix.

<p><b>Hydric Soil Indicators (Applicable to all LRRs, unless otherwise noted):</b></p> <p><input type="checkbox"/> Histosol (A1)                      <input type="checkbox"/> Sandy Redox (S5)</p> <p><input type="checkbox"/> Histic Epipedon (A2)              <input type="checkbox"/> Stripped Matrix (S6)</p> <p><input type="checkbox"/> Black Histic (A3)                    <input type="checkbox"/> Loamy Mucky Mineral (F1) (except MLRA 1)</p> <p><input type="checkbox"/> Hydrogen Sulfide (A4)              <input type="checkbox"/> Loamy Gleyed Matrix (F2)</p> <p><input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Depleted Matrix (F3)</p> <p><input type="checkbox"/> Thick Dark Surface (A12)           <input type="checkbox"/> Redox Dark Surface (F6)</p> <p><input type="checkbox"/> Sandy Mucky Mineral (S1)           <input type="checkbox"/> Depleted Dark Surface (F7)</p> <p><input type="checkbox"/> Sandy Gleyed Matrix (S4)          <input type="checkbox"/> Redox Depressions (F8)</p>	<p><b>Indicators for Problematic Hydric Soils<sup>3</sup>:</b></p> <p><input type="checkbox"/> 2 cm Muck (A10)</p> <p><input type="checkbox"/> Red Parent Material (TF2)</p> <p><input type="checkbox"/> Very Shallow Dark Surface (TF12)</p> <p><input type="checkbox"/> Other (Explain in Remarks)</p> <p><sup>3</sup>Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.</p>
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<p><b>Restrictive Layer (if present):</b></p> <p>Type: _____</p> <p>Depth (inches): _____</p>	<p><b>Hydric Soil Present?</b></p> <p>Yes _____ No <u>  X  </u></p>
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**Remarks:**

**HYDROLOGY**

**Wetland Hydrology Indicators:**

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Water-Stained Leaves (B9) (MLRA 1, 2, 4A, and 4B)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Water Marks (B1)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Sediment Deposits (B2)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Drift Deposits (B3)	<input type="checkbox"/> Geomorphic Position (D2)
<input type="checkbox"/> Algal Mat or Crust (B4)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Iron Deposits (B5)	<input type="checkbox"/> FAC-Neutral Test (D5)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Raised Ant Mounds (D6) (LRR A)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Frost-Heave Hummocks (D7)
<input type="checkbox"/> Sparsely Vegetated Concave Surface (B8)	
<input type="checkbox"/> Water-Stained Leaves (B9) (except MLRA 1, 2, 4A, and 4B)	
<input type="checkbox"/> Salt Crust (B11)	
<input type="checkbox"/> Aquatic Invertebrates (B13)	
<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	
<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	
<input type="checkbox"/> Presence of Reduced Iron (C4)	
<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	
<input type="checkbox"/> Stunted or Stressed Plants (D1) (LRR A)	
<input type="checkbox"/> Other (Explain in Remarks)	

<p><b>Field Observations:</b></p> <p>Surface Water Present?    Yes _____ No <u>  X  </u>      Depth (inches): _____</p> <p>Water Table Present?      Yes _____ No <u>  X  </u>      Depth (inches): &gt;16" _____</p> <p>Saturation Present?        Yes _____ No <u>  X  </u>      Depth (inches): &gt;16" _____  (includes capillary fringe)</p>	<p><b>Wetland Hydrology Present?</b></p> <p>Yes _____ No <u>  X  </u></p>
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**Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:**

**Remarks:**



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## **Appendix C: VECO Data Sheets (VECO Plots A, B, & C)**

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<b><u>Site:</u></b>	<u>14200 Tualatin-Sherwood Rd</u>		
<b><u>Job Number:</u></b>	<u>7431</u>		
<b><u>Investigators:</u></b>	<u>Sonya Templeton</u>		
<b><u>Date:</u></b>	<u>April 9, 2021</u>		
<b>Community:</b> Oregon white oak, Pacific poison oak, and common snowberry			
<b>Location:</b> At the edge of buffer zone, northeast of Plot 2			
<b>Plot ID:</b> VECO A			
Tree species, % Cover, Native, Invasive - 30 foot radius, >5% cover:			90%
* <i>Quercus garryana</i>	Oregon white oak	<i>native</i>	80%
* <i>Pseudotsuga menziesii</i>	Douglas-fir	<i>native</i>	10%
Shrub species, % Cover, Native, Invasive - 30 foot radius, >5% cover:			80%
* <i>Toxicodendron diversilobum</i>	Pacific poison-oak	<i>native</i>	20%
* <i>Symphoricarpos albus</i>	common snowberry	<i>native</i>	20%
<i>Crataegus douglasii</i>	black hawthorn	<i>native</i>	10%
<i>Mahonia aquifolium</i>	holly-leaf Oregon-grape	<i>native</i>	10%
<i>Oemleria cerasiformis</i>	oso-berry	<i>native</i>	10%
<i>Acer circinatum</i>	vine maple	<i>native</i>	10%
Herb Species, % Cover, Native, Invasive - 10 foot radius, >5% cover:			45%
* <i>Geranium molle</i>	dovefoot geranium	<i>non-native</i>	20%
* <i>Polystichum munitum</i>	pineland sword fern	<i>native</i>	15%
* <i>Schedonorus arundinaceus</i>	tall false rye grass	<i>non-native</i>	10%
* Dominant			Total Cover 215%
Absolute areal cover			
<b>% Tree canopy:</b>	<b>90%</b>		
% Cover by natives:	185%		
% Invasive:	0%		
% Non-native:	30%		
	215%		
<b>Corridor Condition:</b>	Good		

<b>Site:</b>	<u>14200 Tualatin-Sherwood Rd</u>		
<b>Job Number:</b>	<u>7431</u>		
<b>Investigators:</b>	<u>Sonya Templeton</u>		
<b>Date:</b>	<u>April 9, 2021</u>		
<b>Community:</b> Oregon white oak and dovefoot geranium			
<b>Location:</b> Within on-site portion of vegetated corridor northeast of Plot 3			
<b>Plot ID:</b> VECO B			
Tree species, % Cover, Native, Invasive - 30 foot radius, >5% cover:			60%
* <i>Quercus garryana</i>	Oregon white oak	<i>native</i>	60%
Shrub species, % Cover, Native, Invasive - 30 foot radius, >5% cover:			30%
* <i>Symphoricarpos albus</i>	common snowberry	<i>native</i>	10%
<i>Corylus cornuta</i>	beaked hazelnut	<i>native</i>	5%
<i>Toxicodendron diversilobum</i>	Pacific poison-oak	<i>native</i>	5%
<i>Rosa gymnocarpa</i>	bald-hip rose	<i>native</i>	5%
<i>Oemleria cerasiformis</i>	oso-berry	<i>native</i>	5%
Herb Species, % Cover, Native, Invasive - 10 foot radius, >5% cover:			85%
* <i>Geranium molle</i>	dovefoot geranium	<i>non-native</i>	80%
<i>Polystichum munitum</i>	pineland sword fern	<i>native</i>	5%
* Dominant			Total Cover 175%
Absolute areal cover			
<b>% Tree canopy:</b>	<b>60%</b>		
% Cover by natives:	95%		
% Invasive:	0%		
% Non-native:	80%		
	175%		
<b>Corridor Condition:</b>	Good		

<b>Site:</b>	14200 Tualatin-Sherwood Rd		
<b>Job Number:</b>	7431		
<b>Investigators:</b>	Sonya Templeton		
<b>Date:</b>	April 9, 2021		
<b>Community:</b> Oregon ash and Himalayan blackberry			
<b>Location:</b> Within on-site portion of vegetated corridor, northeast of Plot 8			
<b>Plot ID:</b> VECO C			
Tree species, % Cover, Native, Invasive - 30 foot radius, >5% cover:			60%
* <i>Fraxinus latifolia</i>	Oregon ash	<i>native</i>	25%
* <i>Prunus emarginata</i>	bitter cherry	<i>native</i>	15%
* <i>Pseudotsuga menziesii</i>	Douglas-fir	<i>native</i>	10%
* <i>Quercus garryana</i>	Oregon white oak	<i>native</i>	10%
Shrub species, % Cover, Native, Invasive - 30 foot radius, >5% cover:			100%
* <i>Rubus armeniacus</i>	Himalayan blackberry	<i>invasive</i>	40%
* <i>Holodiscus discolor</i>	creambush	<i>native</i>	20%
<i>Fraxinus latifolia</i>	Oregon ash	<i>native</i>	15%
<i>Oemleria cerasiformis</i>	oso-berry	<i>native</i>	15%
<i>Crataegus douglasii</i>	black hawthorn	<i>native</i>	10%
Herb Species, % Cover, Native, Invasive - 10 foot radius, >5% cover:			5%
* <i>Tellima grandiflora</i>	fragrant fringe-cup	<i>native</i>	5%
* Dominant			
			Total Cover 165%
Absolute areal cover			
<b>% Tree canopy:</b>	<b>60%</b>		
% Cover by natives:	125%		
% Invasive:	40%		
% Non-native:	0%		
	165%		
<b>Corridor Condition:</b>	Good		



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## **Appendix D: Representative Site Photographs**

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**Photo A.** View south of the off-site wetland boundary and Plots 1 & 2 with off-site vegetated corridor.



**Photo B.** View southeast of on-site *good* condition vegetated corridor.



**Photo C.** View northeast of on-site *good* condition vegetated corridor.



**Photo D.** View southwest from upland plot 8 towards the off-site wetland boundary and Plot 7.





**Photo E.** View north of gravel road and on-site existing conditions.



**Photo F.** View east of Plot 9 and existing culvert showing no evidence of defined bed and bank, OHWM, or signs of recent surface water flow.



**Photo G.** View north of on-site existing conditions.



**Photo H.** View east of Plot 10 within reed canary grass patch.

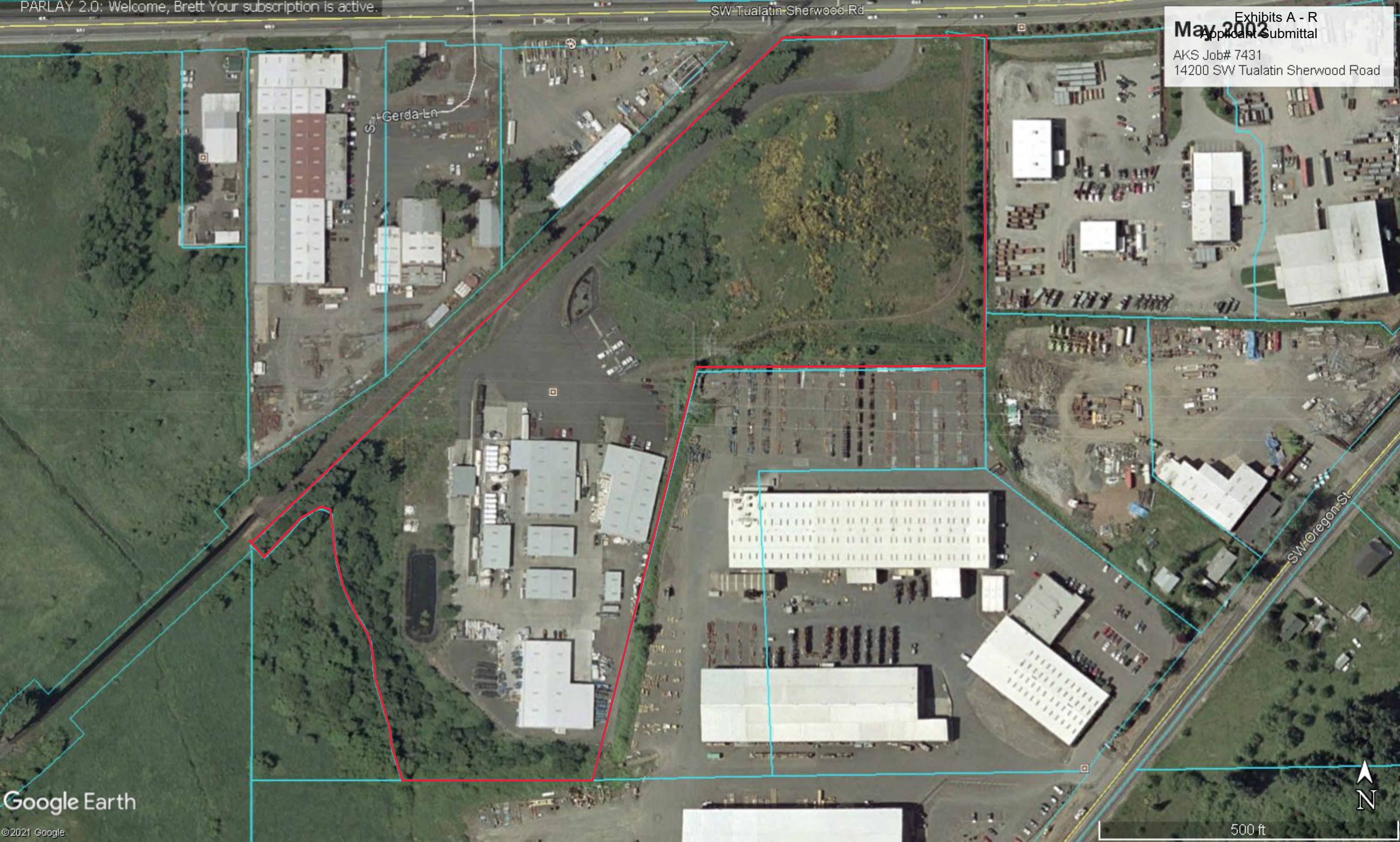


## **Appendix C: 2002 Google Earth Aerial Photograph**

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Exhibits A - R  
Applicant Submittal  
May 2002  
AKS Job# 7431  
14200 SW Tualatin Sherwood Road



St Gerda Ln

SW Oregon St







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## **Exhibit J: Preliminary Tree Preservation and Removal Inventory Table**

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### Detailed Tree Inventory for 14200 SW Tualatin Sherwood Road

AKS Job No. 7431 - Evaluation Date: 10/13/2021 - Evaluated by: BRK

Tree #	DBH (in.)	Avg. Crown Radius (ft)	Tree Species Common Name (Scientific name)	Comments	Health Rating*	Structure Rating**	Remove/Preserve
10035	17	15	Oregon White Oak ( <i>Quercus garryana</i> )	Epicormic sprouts	2	1	Remove
10036	9	9	Oregon Ash ( <i>Fraxinus latifolia</i> )		1	1	Remove
10037	8	12	Oregon Ash ( <i>Fraxinus latifolia</i> )		1	1	Remove
10038	17	15	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
10040	6	6	Oregon White Oak ( <i>Quercus garryana</i> )	Sparse canopy; Epicormic sprouts	2	2	Remove
10041	6	6	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
10042	6	6	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
10047	7	9	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
10048	6	17	Oregon White Oak ( <i>Quercus garryana</i> )	1-sided canopy (W)	1	2	Remove
10049	7	10	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
10050	10	10	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
10051	9,7,6	15	Oregon White Oak ( <i>Quercus garryana</i> )	Codominant base; 1-sided canopy (W)	1	2	Remove
10052	11,11,7,7,6	15	Oregon White Oak ( <i>Quercus garryana</i> )	1-sided canopy (S)	1	2	Remove
10053	10,8,7	16	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
10054	8,6	15	Oregon White Oak ( <i>Quercus garryana</i> )	1-sided canopy (S)	1	2	Remove
10055	10,8	17	Oregon Ash ( <i>Fraxinus latifolia</i> )	1-sided canopy (S)	1	2	Remove
10056	10	15	Oregon Ash ( <i>Fraxinus latifolia</i> )		1	1	Remove
10057	7,6,6,6,6	14	Oregon White Oak ( <i>Quercus garryana</i> )	1-sided canopy (S)	1	2	Remove
10058	8,8,7	15	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
10059	11	11	Oregon Ash ( <i>Fraxinus latifolia</i> )		1	1	Remove
10060	7	16	Oregon White Oak ( <i>Quercus garryana</i> )	Lean (S)	1	2	Remove
10061	9,8,7,6	16	Oregon White Oak ( <i>Quercus garryana</i> )	Tree fallen on top; Broken top; Sparse canopy	2	3	Remove
10062	6	11	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
10063	9	13	Oregon Ash ( <i>Fraxinus latifolia</i> )		1	1	Remove
10064	19	20	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
10065	11	14	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
10066	36	21	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Codominant with included bark; Several leaders	1	2	Remove
10067	13	20	Oregon Ash ( <i>Fraxinus latifolia</i> )		1	1	Remove
10068	6	0	Oregon Ash ( <i>Fraxinus latifolia</i> )	Dead	3	3	Remove
10069	8	18	Oregon Ash ( <i>Fraxinus latifolia</i> )	Crooked bole; 1-sided canopy (S)	1	2	Remove
10070	8,6	13	Oregon White Oak ( <i>Quercus garryana</i> )	Lean (S)	1	2	Remove
10071	9	0	Oregon Ash ( <i>Fraxinus latifolia</i> )	Dead	3	3	Remove
10072	13	14	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11326	23	19	Douglas-fir ( <i>Pseudotsuga menziesii</i> )		1	1	Preserve
11328	8	13	Pacific Madrone ( <i>Arbutus menziesii</i> )		1	1	Preserve
11331	32	25	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11364	25	18	Douglas-fir ( <i>Pseudotsuga menziesii</i> )		1	1	Preserve
11406	11	10	Douglas-fir ( <i>Pseudotsuga menziesii</i> )		1	1	Preserve
11407	6	10	Pacific Madrone ( <i>Arbutus menziesii</i> )		1	1	Preserve
11408	6	10	Pacific Madrone ( <i>Arbutus menziesii</i> )	Lean (N)	1	2	Preserve
11409	47	21	Douglas-fir ( <i>Pseudotsuga menziesii</i> )		1	1	Preserve
11410	25	20	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Dead branches; Epicormic sprouts	2	1	Preserve
11411	15	17	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11412	11	9	Douglas-fir ( <i>Pseudotsuga menziesii</i> )		1	1	Preserve
11413	7	9	Douglas-fir ( <i>Pseudotsuga menziesii</i> )		1	1	Preserve
11418	8	12	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11419	7	11	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11422	12,11,8,9	12	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11426	16	17	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11427	24	15	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Dead top; In significant decline	3	3	Preserve
11465	13	15	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11466	11	16	Oregon White Oak ( <i>Quercus garryana</i> )	1-sided canopy (E)	1	2	Preserve
11467	6	7	Oregon White Oak ( <i>Quercus garryana</i> )	Very sparse canopy; In decline	3	2	Preserve
11469	6	14	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11471	6	9	Oregon White Oak ( <i>Quercus garryana</i> )	1-sided canopy (E)	1	2	Preserve
11473	19	19	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11474	8	9	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11475	16	13	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11476	6	7	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11479	12	13	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11487	11	9	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11502	18	18	Oregon White Oak ( <i>Quercus garryana</i> )	1-sided canopy (SW)	1	2	Preserve
11504	34	21	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Sparse canopy; Epicormic sprouts	2	2	Preserve
11506	16	18	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11508	7	11	Oregon White Oak ( <i>Quercus garryana</i> )	Suppressed; Broken limbs	2	2	Preserve
11511	20	19	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11512	22	18	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11513	14	10	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11514	10	12	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11515	14,8	12	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11516	12	18	Oregon White Oak ( <i>Quercus garryana</i> )	Lean (E)	1	2	Preserve
11517	12	10	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11518	8	11	Oregon White Oak ( <i>Quercus garryana</i> )	Lean (S)	1	2	Preserve
11519	8	7	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11520	10	0	Oregon White Oak ( <i>Quercus garryana</i> )	Dead	3	3	Preserve
11522	13	12	Oregon White Oak ( <i>Quercus garryana</i> )	Broken branches; Sparse canopy	2	2	Preserve

Tree #	DBH (in.)	Avg. Crown Radius (ft)	Tree Species Common Name (Scientific name)	Comments	Health Rating*	Structure Rating**	Remove/Preserve
11523	18	16	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Sparse canopy; Dead branches	2	2	Preserve
11524	6	10	Oregon White Oak ( <i>Quercus garryana</i> )	Suppressed; Broken limbs	2	2	Preserve
11525	6	8	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11527	24,20	19	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11529	8,6	10	Oregon White Oak ( <i>Quercus garryana</i> )	Lean (S); Sparse canopy	2	2	Preserve
11531	13	17	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11536	9	0	Oregon White Oak ( <i>Quercus garryana</i> )	Dead	3	3	Preserve
11537	8	10	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11538	6	0	Oregon White Oak ( <i>Quercus garryana</i> )	Dead	3	3	Preserve
11539	14	15	Oregon White Oak ( <i>Quercus garryana</i> )	1-sided canopy (W)	1	2	Preserve
11540	10,7	15	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11546	9	11	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11548	15	14	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11549	10	11	Oregon White Oak ( <i>Quercus garryana</i> )	1-sided canopy (E); Dead branches	2	2	Preserve
11552	6	0	Oregon White Oak ( <i>Quercus garryana</i> )	Dead	3	3	Preserve
11558	14,12	18	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11559	20	10	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11564	14	14	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11577	24	16	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11578	20	19	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11582	12	10	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11583	8	15	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11584	9	11	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11585	10	9	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11586	28	20	Douglas-fir ( <i>Pseudotsuga menziesii</i> )		1	1	Remove
11587	6	6	Oregon White Oak ( <i>Quercus garryana</i> )	Dead limbs	2	1	Remove
11588	8	0	Oregon White Oak ( <i>Quercus garryana</i> )	Dead	3	3	Remove
11589	8	13	Oregon White Oak ( <i>Quercus garryana</i> )	Lean (S)	1	2	Remove
11590	8	10	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11591	8	17	Oregon White Oak ( <i>Quercus garryana</i> )	Lean (W)	1	2	Remove
11592	8	12	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11593	12,8	11	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11594	16	11	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Butt sweep; Large conk	2	3	Remove
11595	8	0	Oregon Ash ( <i>Fraxinus latifolia</i> )	Dead	3	3	Remove
11596	12	5	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Very sparse canopy; In decline	3	2	Remove
11597	6	7	Oregon White Oak ( <i>Quercus garryana</i> )	Suppressed; Sparse canopy	2	2	Remove
11598	9	15	Oregon Ash ( <i>Fraxinus latifolia</i> )		1	1	Remove
11599	6	12	Oregon White Oak ( <i>Quercus garryana</i> )	Broken branches; Sparse canopy	2	2	Remove
11600	8	10	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11601	12	12	Oregon White Oak ( <i>Quercus garryana</i> )	Broken branches; Sparse canopy	2	2	Remove
11602	9	13	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11603	14	16	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve
11604	7	15	Oregon White Oak ( <i>Quercus garryana</i> )	1-sided canopy (W)	1	2	Preserve
11607	6	6	Willow ( <i>Salix sp.</i> )	Dead top; In decline	3	2	Remove
11609	12	10	Willow ( <i>Salix sp.</i> )	Growing horizontal (E); Cavity with decay; Dead branches	2	2	Remove
11610	10	0	Willow ( <i>Salix sp.</i> )	Dead	3	3	Remove
11613	11	10	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11614	6	5	Oregon White Oak ( <i>Quercus garryana</i> )	Broken top; Sparse canopy	2	3	Remove
11615	7	13	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11618	13,8	12	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11627	12,12	19	Bigleaf Maple ( <i>Acer macrophyllum</i> )		1	1	Remove
11632	24,20	21	Black Cottonwood ( <i>Populus trichocarpa</i> )	Codominant base with included bark	1	2	Remove
11641	9,7,7,6	10	Oregon White Oak ( <i>Quercus garryana</i> )	Sparse canopy; Epicormic sprouts	2	2	Remove
11642	10	16	Oregon White Oak ( <i>Quercus garryana</i> )	Lean (S)	1	2	Remove
11643	15	16	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11644	15	10	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Cavity in base with decay; Crooked bole; Epicormic sprouts	2	2	Remove
11645	6	10	Oregon Ash ( <i>Fraxinus latifolia</i> )		1	1	Remove
11646	6	7	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11647	9,7	4	Oregon White Oak ( <i>Quercus garryana</i> )	Broken top; Very sparse canopy; In decline	3	3	Remove
11648	8	15	Oregon Ash ( <i>Fraxinus latifolia</i> )		1	1	Remove
11649	7	15	Oregon Ash ( <i>Fraxinus latifolia</i> )		1	1	Remove
11650	13	14	Oregon White Oak ( <i>Quercus garryana</i> )	Lean (W)	1	2	Remove
11652	9	15	Oregon Ash ( <i>Fraxinus latifolia</i> )	Butt sweep	1	2	Remove
11653	11,10,7	15	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11654	12	14	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11655	8	13	Oregon Ash ( <i>Fraxinus latifolia</i> )		1	1	Remove
11658	19	17	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11659	6	7	Oregon White Oak ( <i>Quercus garryana</i> )	Suppressed; Sparse canopy	2	2	Remove
11660	6	8	Oregon Ash ( <i>Fraxinus latifolia</i> )		1	1	Remove
11661	6	12	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11662	7	10	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11676	8	14	Oregon Ash ( <i>Fraxinus latifolia</i> )		1	1	Remove
11678	8,7	12	Oregon Ash ( <i>Fraxinus latifolia</i> )		1	1	Remove
11681	10	13	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11682	7,6	13	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11683	11,9	18	Oregon White Oak ( <i>Quercus garryana</i> )	Lean (W)	1	2	Remove
11698	9	12	Oregon Ash ( <i>Fraxinus latifolia</i> )		1	1	Remove
11699	9	12	Oregon Ash ( <i>Fraxinus latifolia</i> )	1-sided canopy (S)	1	2	Remove

Tree #	DBH (in.)	Avg. Crown Radius (ft)	Tree Species Common Name ( <i>Scientific name</i> )	Comments	Health Rating*	Structure Rating**	Remove/Preserve
11700	12	13	Oregon Ash ( <i>Fraxinus latifolia</i> )		1	1	Remove
11701	8	17	Oregon Ash ( <i>Fraxinus latifolia</i> )	Lean (N)	1	2	Remove
11703	8,8	12	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11704	25	15	Douglas-fir ( <i>Pseudotsuga menziesii</i> )		1	1	Remove
11705	9	15	Oregon Ash ( <i>Fraxinus latifolia</i> )	Large cavity with decay; Sparse canopy	2	2	Remove
11706	8	15	Oregon White Oak ( <i>Quercus garryana</i> )	Broken branches; Sparse canopy	2	2	Remove
11707	13	15	Douglas-fir ( <i>Pseudotsuga menziesii</i> )		1	1	Remove
11708	12	16	Oregon Ash ( <i>Fraxinus latifolia</i> )		1	1	Remove
11709	9,8	9	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
11710	7,6	15	Oregon White Oak ( <i>Quercus garryana</i> )	Lean (S)	1	2	Remove
11918	12	0	Black Cottonwood ( <i>Populus trichocarpa</i> )	Dead	3	3	Remove
11919	18	18	Black Cottonwood ( <i>Populus trichocarpa</i> )		1	1	Remove
11920	16	16	Black Cottonwood ( <i>Populus trichocarpa</i> )		1	1	Remove
11922	8,8,7	0	Willow ( <i>Salix sp.</i> )	Dead	3	3	Remove
11929	6	6	Willow ( <i>Salix sp.</i> )		1	1	Remove
11964	14	16	Black Cottonwood ( <i>Populus trichocarpa</i> )		1	1	Remove
11965	14	7	Black Cottonwood ( <i>Populus trichocarpa</i> )	Dead; Some stems remain	3	3	Remove
11968	16	15	Black Cottonwood ( <i>Populus trichocarpa</i> )	Dead limbs; Lean (E)	2	2	Remove
11972	6,6	19	Oregon White Oak ( <i>Quercus garryana</i> )	1-sided canopy (W); Epicormic sprouts	2	2	Remove
11992	13,11	18	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Remove
50001	8	10	Oregon White Oak ( <i>Quercus garryana</i> )		1	1	Preserve

**Total # of Existing Trees Inventoried = 175**

**Total # of Existing Onsite Trees = 175**

Total # of Existing Onsite Trees to be Preserved = 66  
Total # of Existing Onsite Trees to be Removed = 109

**Total # of Existing Line Trees = 0**

Total # of Existing Line Trees to be Preserved = 0  
Total # of Existing Line Trees to be Removed = 0

**Total # of Existing Offsite Trees = 0**

Total # of Existing Offsite Trees to be Preserved = 0  
Total # of Existing Offsite Trees to be Removed = 0

**\*Health Rating:**

1 = Good Health - A tree that exhibits typical foliage, bark, and root characteristics, for its respective species, shows no signs of infection or infestation, and has a high level of vigor and vitality.  
2 = Fair Health - A tree that exhibits some abnormal health characteristics and/or shows some signs of infection or infestation, but may be reversed or abated with supplemental treatment.  
3 = Poor Health - A tree that is in significant decline, to the extent that supplemental treatment would not likely result in reversing or abating its decline.

**\*\*Structure Rating:**

1 = Good Structure - A tree that exhibits typical physical form characteristics, for its respective species, shows no signs of structural defects of the canopy, trunk, and/or root system.  
2 = Fair Structure - A tree that exhibits some abnormal physical form characteristics and/or some signs of structural defects, which reduce the structural integrity of the tree, but are not indicative of imminent physical failure, and may be corrected using arboricultural abatement methods.  
3 = Poor Structure - A tree that exhibits extensively abnormal physical form characteristics and/or significant structural defects that substantially reduces the structural viability of the tree, cannot feasibly be abated, and are indicative of imminent physical failure.

**Arborist Disclosure Statement:**

Arborists are tree specialists who use their education, knowledge, training, and experience to examine trees, recommend measures to enhance the health of trees, and attempt to reduce the risk of living near trees. The Client and Jurisdiction may choose to accept or disregard the recommendations of the arborist, or seek additional advice. Arborists cannot detect every condition that could possibly lead to the structural failure of a tree. Trees are living organisms that fail in ways we do not fully understand. Conditions are often hidden within trees and below ground. Arborists cannot guarantee that a tree will be healthy or safe under all circumstances, or for a specified period of time. Likewise, remedial treatments, like medicine, cannot be guaranteed. Trees can be managed, but they cannot be controlled. To live near trees is to accept some degree of risk. The only way to eliminate all risk associated with trees is to eliminate all trees. Neither this author nor AKS Engineering & Forestry, LLC have assumed any responsibility for liability associated with the trees on or adjacent to this site.

At the completion of construction, all trees should once again be reviewed. Land clearing and removal of adjacent trees can expose previously unseen defects and otherwise healthy trees can be damaged during construction.



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## **Exhibit K: Tree Canopy Calculations**

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Existing Preserved Site Trees

<u>Type</u>	<u>Mature canopy Area</u>	<u>Quantity</u>	<u>Total Canopy Area</u>
Apple	(20' DIA) 314 SF	3	1,884
bigleaf Maple	(50' DIA) 1,963 SF	2	7,852
Cherry	(20' DIA) 314 SF	13	8,164
Cottonwood	(30' DIA) 707 SF	7	9,898
Doug-fir	(40' DIA) 1,257 SF	68	170,952
Hawthorn	(18' DIA) 254 SF	4	2,032
Oregon Ash	(40' DIA) 1,257 SF	6	15,084
Oregon White Oak	(50' DIA) 1,963 SF	57	223,782
Pacific Madrone	(30' DIA) 707 SF	8	11,312
Willow	(20' DIA) 314 SF	2	1,256

<b>Total Retained Canopy:</b>	452,225	452,216
<b>Site Area:</b>	733,986	
<b>30% of Site Area:</b>	220,196	
<b>Additional Canopy Required:</b>	(232,029)	

### Canopy Calculations for 14200 SW Tualatin Sherwood Road

AKS Job No. 7431

Tree #	DBH (in.)	Tree Species Common Name (Scientific name)	Remove/Preserve	Canopy Dia (FT)	Canopy Area (SF)	Retained Canopy Area (SF) x2
10976	8	Apple ( <i>Malus domestica</i> )	Preserve	20	314	628
10977	6	Apple ( <i>Malus domestica</i> )	Preserve	20	314	628
11001	9,7	Apple ( <i>Malus domestica</i> )	Preserve	20	314	628
11061	12,12	Bigleaf Maple ( <i>Acer macrophyllum</i> )	Preserve	50	1,963	3,927
11691	16	Bigleaf Maple ( <i>Acer macrophyllum</i> )	Preserve	50	1,963	3,927
10898	6	Black Cottonwood ( <i>Populus trichocarpa</i> )	Preserve	30	707	1,414
10899	8,10,6,12,6,11,12,8	Black Cottonwood ( <i>Populus trichocarpa</i> )	Preserve	30	707	1,414
10907	14	Black Cottonwood ( <i>Populus trichocarpa</i> )	Preserve	30	707	1,414
10909	7,12,10,12,14,10,12,14	Black Cottonwood ( <i>Populus trichocarpa</i> )	Preserve	30	707	1,414
10916	6	Black Cottonwood ( <i>Populus trichocarpa</i> )	Preserve	30	707	1,414
10917	8	Black Cottonwood ( <i>Populus trichocarpa</i> )	Preserve	30	707	1,414
10919	6	Black Cottonwood ( <i>Populus trichocarpa</i> )	Preserve	30	707	1,414
10980	6	Black Hawthorn ( <i>Crataegus douglasii</i> )	Preserve	18	254	509
11004	6	Black Hawthorn ( <i>Crataegus douglasii</i> )	Preserve	18	254	509
11015	6	Black Hawthorn ( <i>Crataegus douglasii</i> )	Preserve	18	254	509
11018	6	Black Hawthorn ( <i>Crataegus douglasii</i> )	Preserve	18	254	509
10737	24	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
10738	10	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
10739	11	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
10756	14	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
10796	53	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
10802	7	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
10981	10	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
10982	14	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
10983	7	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
10984	8,6	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
10986	12	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
10987	11	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
10988	23	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
10994	18	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
10995	20,13,7	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
10996	14	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
10997	7	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11059	20,18	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11062	17	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11063	17	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11064	19	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11065	25	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11067	25	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11070	27	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11071	21	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11072	17	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11076	19	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11077	23	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11082	13	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11083	15,15	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11084	18,15	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11085	15	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11086	8	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11087	8	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11088	14	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11089	6	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11090	12	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11091	6	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513

Tree #	DBH (in.)	Tree Species Common Name (Scientific name)	Remove/Preserve	Canopy Dia (FT)	Canopy Area (SF)	Retained Canopy Area (SF) x2
11092	7	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11093	9	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11094	6	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11095	9	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11097	39	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11098	42	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11100	6	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11101	8	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11102	10	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11103	7	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11104	12	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11105	11	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11106	6	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11110	37	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11326	23	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11364	25	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11406	11	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11409	47	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11410	25	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11412	11	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11413	7	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11427	24	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11495	36	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11504	34	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11523	18	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11674	36	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11769	8	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11772	10	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11773	8	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11860	16	Douglas-fir ( <i>Pseudotsuga menziesii</i> )	Preserve	40	1,257	2,513
11403	19	Oregon Ash ( <i>Fraxinus latifolia</i> )	Preserve	40	1,257	2,513
11443	7	Oregon Ash ( <i>Fraxinus latifolia</i> )	Preserve	40	1,257	2,513
11677	7	Oregon Ash ( <i>Fraxinus latifolia</i> )	Preserve	40	1,257	2,513
11689	8	Oregon Ash ( <i>Fraxinus latifolia</i> )	Preserve	40	1,257	2,513
11692	14	Oregon Ash ( <i>Fraxinus latifolia</i> )	Preserve	40	1,257	2,513
11693	8	Oregon Ash ( <i>Fraxinus latifolia</i> )	Preserve	40	1,257	2,513
11331	32	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11399	13	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11411	15	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11418	8	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11419	7	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11422	12,11,8,9	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11426	16	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11465	13	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11466	11	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11467	6	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11469	6	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11471	6	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11473	19	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11474	8	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11475	16	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11476	6	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11479	12	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11487	11	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11502	18	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11506	16	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11508	7	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11511	20	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11512	22	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927

Tree #	DBH (in.)	Tree Species Common Name (Scientific name)	Remove/Preserve	Canopy Dia (FT)	Canopy Area (SF)	Retained Canopy Area (SF) x2
11513	14	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11514	10	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11515	14,8	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11516	12	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11517	12	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11518	8	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11519	8	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11520	10	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11522	13	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11524	6	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11525	6	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11527	24,20	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11529	8,6	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11531	13	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11533	7	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11535	16	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11536	9	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11537	8	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11538	6	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11539	14	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11540	10,7	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11541	9	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11546	9	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11548	15	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11549	10	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11552	6	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11558	14,12	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11559	20	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11564	14	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11577	24	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11578	20	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11603	14	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11604	7	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
50001	8	Oregon White Oak ( <i>Quercus garryana</i> )	Preserve	50	1,963	3,927
11075	8	Pacific Madrone ( <i>Arbutus menziesii</i> )	Preserve	30	707	1,414
11099	9	Pacific Madrone ( <i>Arbutus menziesii</i> )	Preserve	30	707	1,414
11107	11	Pacific Madrone ( <i>Arbutus menziesii</i> )	Preserve	30	707	1,414
11108	9	Pacific Madrone ( <i>Arbutus menziesii</i> )	Preserve	30	707	1,414
11109	6	Pacific Madrone ( <i>Arbutus menziesii</i> )	Preserve	30	707	1,414
11328	8	Pacific Madrone ( <i>Arbutus menziesii</i> )	Preserve	30	707	1,414
11407	6	Pacific Madrone ( <i>Arbutus menziesii</i> )	Preserve	30	707	1,414
11408	6	Pacific Madrone ( <i>Arbutus menziesii</i> )	Preserve	30	707	1,414
10733	12	Sweet Cherry ( <i>Prunus avium</i> )	Preserve	20	314	628
10734	7,6	Sweet Cherry ( <i>Prunus avium</i> )	Preserve	20	314	628
10735	8	Sweet Cherry ( <i>Prunus avium</i> )	Preserve	20	314	628
10999	6	Sweet Cherry ( <i>Prunus avium</i> )	Preserve	20	314	628
11007	7	Sweet Cherry ( <i>Prunus avium</i> )	Preserve	20	314	628
11021	12,8	Sweet Cherry ( <i>Prunus avium</i> )	Preserve	20	314	628
11025	8	Sweet Cherry ( <i>Prunus avium</i> )	Preserve	20	314	628
11026	18	Sweet Cherry ( <i>Prunus avium</i> )	Preserve	20	314	628
11027	6	Sweet Cherry ( <i>Prunus avium</i> )	Preserve	20	314	628
11028	6	Sweet Cherry ( <i>Prunus avium</i> )	Preserve	20	314	628
11029	8	Sweet Cherry ( <i>Prunus avium</i> )	Preserve	20	314	628
11034	18	Sweet Cherry ( <i>Prunus avium</i> )	Preserve	20	314	628
11690	11	Sweet Cherry ( <i>Prunus avium</i> )	Preserve	20	314	628
11695	11	Willow ( <i>Salix sp.</i> )	Preserve	20	314	628
11876	8	Willow ( <i>Salix sp.</i> )	Preserve	20	314	628

Tree #	DBH (in.)	Tree Species Common Name ( <i>Scientific name</i> )	Remove/Preserve	Canopy Dia (FT)	Canopy Area (SF)	Retained Canopy Area (SF) x2
<b>Total Retained Canopy:</b>		452,225				
<b>Site Area:</b>		733,986				
<b>30% of Site Area:</b>		220,196				
<b>Additional Canopy Required:</b>		(232,029)				



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## **Exhibit L: Traffic Analysis Memo**

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## Memorandum

To: Robert Code, Cascade Columbia Distribution  
 CC: Maria Miller, AKS Engineering and Forestry, LLC  
 From: Myla Cross  
 Jennifer Danziger, PE  
 Date: May 18, 2022  
 Subject: Cascade Columbia Distribution Expansion  
 Trip Generation and Signal Warrant Analysis



RENEWS: 12/31/2023

### Introduction

This memorandum examines the estimated trip generation of the proposed warehouse expansion at the Cascade Columbia Distribution Facility, located at 14200 SW Tualatin Sherwood Road and evaluates the need for a traffic signal warrant at the site access. The proposed expansion will include the construction of a 12,000-square-foot (SF) warehouse building, and an 8,400-SF covered storage area.

Additionally, the memorandum provides trip generation estimates for two covered outdoor storage areas on the site which have already been constructed but were never reviewed for traffic impacts.

### Project & Location Description

Cascade Columbia Distribution is located on an approximately 16.9-acre parcel (Map No. 2S128C Tax Lot 200), south of SW Tualatin-Sherwood Road, and is surrounded by industrial land uses. Current access to Cascade Columbia Distribution is available via a two-way driveway along SW Tualatin-Sherwood Road.

The proposed development is expected to impact one nearby vicinity roadway, SW Tualatin Sherwood Road. Table 1 provides a description of SW Tualatin Sherwood Road.

**Table 1: Vicinity Roadway Descriptions**

Street Name	Jurisdiction	Functional Classification	Travel Lanes	Speed	Curbs & Sidewalks	On-Street Parking	Bicycle Facilities
SW Tualatin-Sherwood Road	Washington County	Arterial	3	45 mph	Both Sides	None	Bike lanes

*Notes: Functional Classification based on the City of Sherwood Transportation System Plan*

Figure 1 presents an aerial image of the nearby vicinity with the property line outlined in yellow, and the proposed expansions outlined in blue. The existing site includes several structures that have not yet been permitted which will be included in the proposed expansion application. These structures consist of a 4,300-SF canopy and 6,000-SF covered storage area which are highlighted in red.



Figure 1: Site Vicinity

## Trip Generation

To estimate the number of trips that are projected to be generated by the development, trip rates from the *Trip Generation Manual*<sup>1</sup> were used. Specifically, data from the land use code 150, Warehousing is used to estimate the development's trip generation based on the gross floor area. Trip rates were used because the equations grossly overestimate trip generation for small warehouses. Although covered storage is not typically considered to be a trip generator, the covered storage as well as the warehouse space were included in the calculation.

Two trip generation estimates were calculated for the site:

1. The site currently includes two structures, a 4,300-SF canopy and a 6,000-SF covered storage area, which have not yet been permitted and will be included in the proposed expansion application. The two structures predate the traffic counts that were conducted on November 16, 2021; therefore, any trips generated by these structures were already captured in the counts.
2. The proposed expansion will include construction of a 12,000-SF warehouse building and an 8,400-SF covered storage area. These new structures are not expected to change the operations of the site;

<sup>1</sup> Institute of Transportation Engineers (ITE), *Trip Generation Manual*, 11<sup>th</sup> Edition, 2021.

however, a trip generation estimate of potential new trips associated with these site improvements is presented below. These trips will be added to the volumes counted in November 2021.

The resulting trip generation estimates are summarized in Table 2. Detailed trip generation calculations are included in the appendix to this report.

**Table 2: Trip Generation Summary**

Land Use	ITE Code	Size (SF)	Morning Peak Hour			Evening Peak Hour			Weekday Trips
			In	Out	Total	In	Out	Total	
Previously Added Warehousing	150	10,300	2	0	2	1	1	2	18
Proposed New Warehousing	150	20,400	2	1	3	1	3	4	34

The trip generation calculations show that the previously added covered storage areas are estimated to generate 2 morning peak hour trips, 2 evening peak hour trips, and 18 average weekday trips. These trips are already using the driveway and the transportation network.

The proposed expansion will generate an increase of 3 morning peak hour trips, 4 evening peak hour trips, and 34 average weekday trips. These trips will be added to the driveway and the transportation network.

Per the City of Sherwood’s Development Code, Sections 16.106.080.B as well as 16.106.040.K, the preparation of a Traffic Impact Analysis (TIA) is required if the proposed development generates 50 or more evening peak hour trip impacts on OR-99W; 100 or more evening peak hour trip impacts on the local transportation system; or generates 400 average daily trip impacts to the transportation system. Based on the trip generation of the previously added warehousing (10,300 SF) and the proposed new warehousing development (20,400 SF), the trip impact thresholds for requiring a TIA are not met.

### Traffic Volume Estimates

Traffic counts were collected on Tuesday, November 16, 2021. These volumes include the trips generated by the 10,300 SF of previously added covered storage but not the proposed expansion. To estimate the future year volumes, a 2 percent growth rate and 10 percent COVID-19 adjustment factor were applied to the through movements of the existing counts to estimate Year 2022 Background volumes. The trip generation for the proposed expansion was then added to the background volumes to obtain the year 2022 Buildout volumes.

The volume calculations for the major street, SW Tualatin-Sherwood Road, and the minor street, site driveway, are summarized in Table 3.



Table 3: Estimated Peak Hour Volumes

Condition	Morning Peak Hour			Evening Peak Hour		
	Major Street Total	Minor Street		Major Street Total	Minor Street	
		In	Out		In	Out
2021 Existing Unadjusted Volume	1,451	16	7	1,688	1	20
2022 Background Volume	1,626	16	7	1,893	1	20
Proposal Expansion	2	2	1	1	1	3
2022 Buildout Volume	1,628	18	8	1,894	2	23

## Warrant Analysis

Traffic signal warrants were examined for the intersection of SW Tualatin-Sherwood Road at the site access driveway to determine whether the installation of a new traffic signal will be warranted under Year 2022 buildout conditions. The warrant analysis is summarized in Table 4. Detailed analysis worksheets and traffic count data are included in the appendix of this report.

Table 4: Warrant Summary – 2022 Buildout Conditions

Warrant <sup>1</sup>	Minor Street Threshold <sup>2</sup>	Maximum Site Volumes	
		Morning Peak	Evening Peak
Warrant 1, 8-Hour Vehicular Volume, Condition A	105	8	23
Warrant 1, 8-Hour Vehicular Volume, Condition B	53		
Warrant 2, Four Hour Vehicular Volume	60		
Warrant 3, Peak Hour Vehicular Volume	75		

*Notes:*

1. Manual on Uniform Traffic Control Devices Chapter 4C, Sections 4C.02 – 4C.04.

2. Because SW Tualatin-Sherwood Road has a 45-mph posted speed at this location, the 70 percent thresholds were used.

Based on the analysis, traffic signal warrants are not projected to be met under year 2022 Buildout Conditions. Volumes are well below the minimum thresholds for the installation of a traffic signal. Accordingly, no signalization of the intersection is necessary or recommended.

## Conclusions

The proposed site expansion, which includes a 12,000-SF warehouse building and 8,400-SF covered storage area, as well as the existing 4,300-SF canopy and 6,400-SF covered storage area, which were not previously reviewed, will not meet the City of Sherwood’s trip impact thresholds requiring a TIA. No additional analysis is necessary beyond this trip generation memorandum.

Additionally, projected volumes with the proposed warehouse expansion for the site driveway access to SW Tualatin-Sherwood Road will be well below the thresholds for installation of a traffic signal. No signal is warranted at the site driveway.





TRIP GENERATION CALCULATIONS  
Source: Trip Generation Manual, 11th Edition

Land Use: Warehousing  
 Land Use Code: 150  
 Land Use Subcategory: All Sites  
 Setting/Location: General Urban/Suburban  
 Variable: 1000 SF GFA  
 Trip Type: Vehicle  
 Variable Quantity: **10.3**

AM PEAK HOUR

Trip Rate: 0.17

	Enter	Exit	Total
Directional Split	77%	23%	
Trip Ends	2	0	2

PM PEAK HOUR

Trip Rate: 0.18

	Enter	Exit	Total
Directional Split	28%	72%	
Trip Ends	1	1	2

WEEKDAY

Trip Rate: 1.71

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	9	9	18

SATURDAY

Trip Rate: 0.15

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	1	1	2



TRIP GENERATION CALCULATIONS

Source: Trip Generation Manual, 11th Edition

*Land Use:* Warehousing  
*Land Use Code:* 150  
*Land Use Subcategory:* All Sites  
*Setting/Location:* General Urban/Suburban  
*Variable:* 1000 SF GFA  
*Trip Type:* Vehicle  
*Variable Quantity:* **20.4**

AM PEAK HOUR

*Trip Rate:* 0.17

	Enter	Exit	Total
Directional Split	77%	23%	
Trip Ends	2	1	3

PM PEAK HOUR

*Trip Rate:* 0.18

	Enter	Exit	Total
Directional Split	28%	72%	
Trip Ends	1	3	4

WEEKDAY

*Trip Rate:* 1.71

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	17	17	34

SATURDAY

*Trip Rate:* 0.15

	Enter	Exit	Total
Directional Split	50%	50%	
Trip Ends	2	2	4





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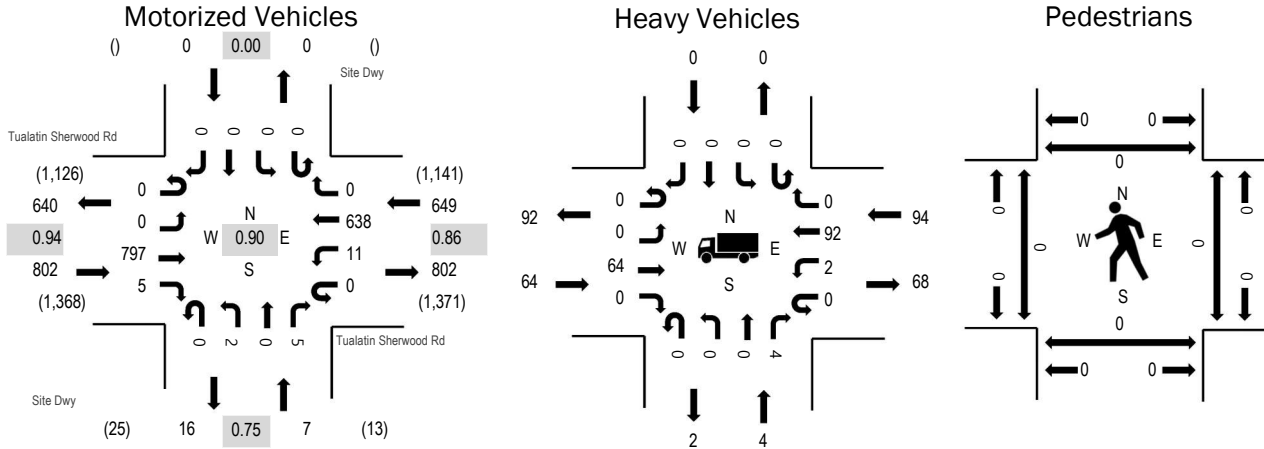
Location: 1 Site Dwy & Tualatin Sherwood Rd AM

Date: Tuesday, November 16, 2021

Peak Hour: 07:25 AM - 08:25 AM

Peak 15-Minutes: 07:25 AM - 07:40 AM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	8.0%	0.94
WB	14.5%	0.86
NB	57.1%	0.75
SB	0.0%	0.00
All	11.1%	0.90

Traffic Counts - Motorized Vehicles

Interval Start Time	Tualatin Sherwood Rd Eastbound				Tualatin Sherwood Rd Westbound				Site Dwy Northbound				Site Dwy Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
7:00 AM	0	0	38	0	0	2	31	0	0	0	0	0	0	0	0	0	71	1,154
7:05 AM	0	0	26	1	1	1	27	0	0	0	0	2	0	0	0	0	58	1,215
7:10 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1,282
7:15 AM	0	0	51	1	0	0	53	0	0	0	0	0	0	0	0	0	105	1,392
7:20 AM	0	0	25	0	0	0	22	0	0	0	0	1	0	0	0	0	48	1,400
7:25 AM	0	0	69	0	0	2	62	0	0	0	0	1	0	0	0	0	134	1,458
7:30 AM	0	0	69	1	0	1	63	0	0	0	0	0	0	0	0	0	134	1,420
7:35 AM	0	0	74	0	0	0	61	0	0	0	0	1	0	0	0	0	136	1,385
7:40 AM	0	0	66	1	0	2	43	0	0	0	0	0	0	0	0	0	112	1,361
7:45 AM	0	0	61	1	0	0	63	0	0	1	0	0	0	0	0	0	126	1,371
7:50 AM	0	0	68	1	0	2	49	0	0	0	0	1	0	0	0	0	121	1,359
7:55 AM	0	0	47	0	0	1	59	0	0	0	0	1	0	0	0	0	108	1,378
8:00 AM	0	0	78	1	0	0	53	0	0	0	0	0	0	0	0	0	132	1,368
8:05 AM	0	0	70	0	0	1	54	0	0	0	0	0	0	0	0	0	125	
8:10 AM	0	0	64	0	0	1	46	0	0	0	0	0	0	0	0	0	111	
8:15 AM	0	0	70	0	0	1	41	0	0	0	0	1	0	0	0	0	113	
8:20 AM	0	0	61	0	0	0	44	0	0	1	0	0	0	0	0	0	106	
8:25 AM	0	0	50	1	0	0	45	0	0	0	0	0	0	0	0	0	96	
8:30 AM	0	0	49	0	0	0	50	0	0	0	0	0	0	0	0	0	99	
8:35 AM	0	0	68	0	0	0	44	0	0	0	0	0	0	0	0	0	112	
8:40 AM	0	0	69	0	0	0	53	0	0	0	0	0	0	0	0	0	122	
8:45 AM	0	0	59	1	0	1	53	0	0	0	0	0	0	0	0	0	114	
8:50 AM	0	0	73	0	0	1	64	0	0	0	0	2	0	0	0	0	140	
8:55 AM	0	0	54	0	0	0	44	0	0	0	0	0	0	0	0	0	98	
Count Total	0	0	1,359	9	1	16	1,124	0	0	2	0	11	0	0	0	0	2,522	
Peak Hour	0	0	797	5	0	11	638	0	0	2	0	5	0	0	0	0	1,458	

Location: 1 Site Dwy & Tualatin Sherwood Rd AM

**Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk**

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
7:00 AM	6	0	5	0	11	7:00 AM	0	0	0	0	0	7:00 AM	0	0	0	0	0
7:05 AM	6	2	1	0	9	7:05 AM	0	0	0	0	0	7:05 AM	0	0	0	0	0
7:10 AM	0	1	0	0	1	7:10 AM	0	0	0	0	0	7:10 AM	0	0	0	0	0
7:15 AM	5	0	9	0	14	7:15 AM	0	0	0	0	0	7:15 AM	0	0	0	0	0
7:20 AM	1	1	4	0	6	7:20 AM	0	0	0	0	0	7:20 AM	0	0	0	0	0
7:25 AM	3	1	14	0	18	7:25 AM	0	0	0	0	0	7:25 AM	0	0	0	0	0
7:30 AM	7	0	8	0	15	7:30 AM	0	0	0	0	0	7:30 AM	0	0	0	0	0
7:35 AM	9	1	7	0	17	7:35 AM	0	0	0	0	0	7:35 AM	0	0	0	0	0
7:40 AM	6	0	8	0	14	7:40 AM	0	0	0	0	0	7:40 AM	0	0	0	0	0
7:45 AM	4	0	7	0	11	7:45 AM	0	0	0	0	0	7:45 AM	0	0	0	0	0
7:50 AM	6	1	5	0	12	7:50 AM	0	0	0	0	0	7:50 AM	0	0	0	0	0
7:55 AM	3	1	7	0	11	7:55 AM	0	0	0	0	0	7:55 AM	0	0	0	0	0
8:00 AM	8	0	10	0	18	8:00 AM	0	0	0	0	0	8:00 AM	0	0	0	0	0
8:05 AM	3	0	10	0	13	8:05 AM	0	0	0	0	0	8:05 AM	0	0	0	0	0
8:10 AM	6	0	6	0	12	8:10 AM	0	0	0	0	0	8:10 AM	0	0	0	0	0
8:15 AM	2	0	6	0	8	8:15 AM	0	0	0	0	0	8:15 AM	0	0	0	0	0
8:20 AM	7	0	6	0	13	8:20 AM	0	0	0	0	0	8:20 AM	0	0	0	0	0
8:25 AM	2	0	8	0	10	8:25 AM	0	0	1	0	1	8:25 AM	0	0	0	0	0
8:30 AM	4	0	11	0	15	8:30 AM	0	0	0	0	0	8:30 AM	0	0	0	0	0
8:35 AM	3	0	5	0	8	8:35 AM	0	0	0	0	0	8:35 AM	0	1	0	0	1
8:40 AM	4	0	13	0	17	8:40 AM	0	0	0	0	0	8:40 AM	0	0	0	0	0
8:45 AM	8	0	8	0	16	8:45 AM	0	0	0	0	0	8:45 AM	0	1	0	0	1
8:50 AM	6	1	11	0	18	8:50 AM	0	0	0	0	0	8:50 AM	0	0	0	0	0
8:55 AM	6	0	7	0	13	8:55 AM	0	0	0	0	0	8:55 AM	0	0	0	0	0
Count Total	115	9	176	0	300	Count Total	0	0	1	0	1	Count Total	0	2	0	0	2
Peak Hour	64	4	94	0	162	Peak Hour	0	0	0	0	0	Peak Hour	0	0	0	0	0



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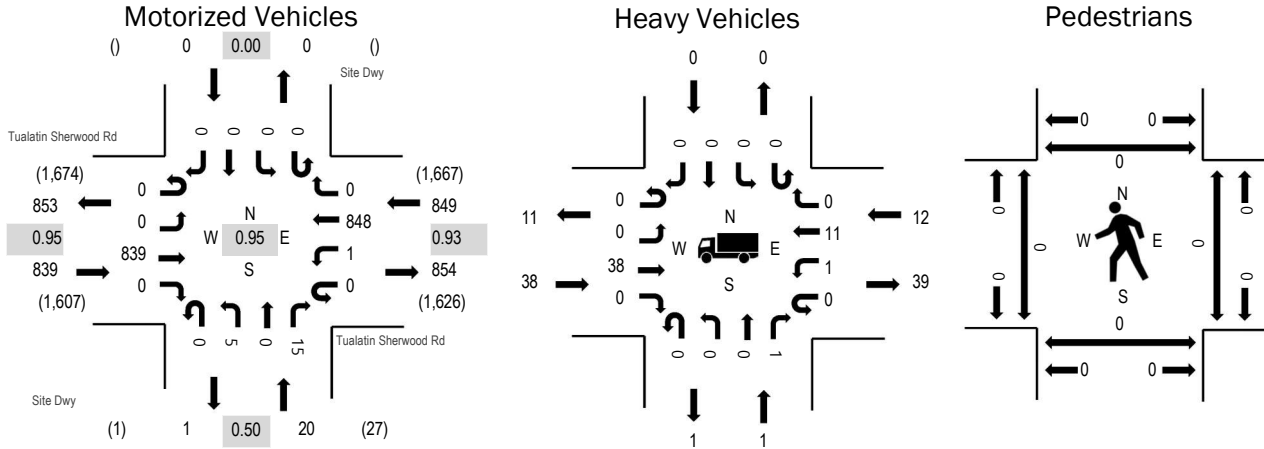
Location: 1 Site Dwy & Tualatin Sherwood Rd PM

Date: Tuesday, November 16, 2021

Peak Hour: 04:35 PM - 05:35 PM

Peak 15-Minutes: 04:35 PM - 04:50 PM

Peak Hour



Note: Total study counts contained in parentheses.

	HV%	PHF
EB	4.5%	0.95
WB	1.4%	0.93
NB	5.0%	0.50
SB	0.0%	0.00
All	3.0%	0.95

Traffic Counts - Motorized Vehicles

Interval Start Time	Tualatin Sherwood Rd Eastbound				Tualatin Sherwood Rd Westbound				Site Dwy Northbound				Site Dwy Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	0	76	0	0	0	72	0	0	0	0	2	0	0	0	0	150	1,682
4:05 PM	0	0	76	0	0	0	75	0	0	0	0	0	0	0	0	0	151	1,697
4:10 PM	0	0	56	0	0	0	80	0	0	0	0	0	0	0	0	0	136	1,686
4:15 PM	0	0	64	0	0	0	76	0	0	0	0	0	0	0	0	0	140	1,692
4:20 PM	0	0	66	0	0	0	70	0	0	1	0	0	0	0	0	0	137	1,686
4:25 PM	0	0	55	0	0	0	55	0	0	1	0	2	0	0	0	0	113	1,687
4:30 PM	0	0	70	0	0	0	65	0	0	0	0	0	0	0	0	0	135	1,705
4:35 PM	0	0	71	0	0	0	80	0	0	0	0	1	0	0	0	0	152	1,708
4:40 PM	0	0	69	0	0	1	85	0	0	0	0	0	0	0	0	0	155	1,680
4:45 PM	0	0	68	0	0	0	71	0	0	1	0	1	0	0	0	0	141	1,649
4:50 PM	0	0	66	0	0	0	64	0	0	0	0	0	0	0	0	0	130	1,631
4:55 PM	0	0	68	0	0	0	73	0	0	1	0	0	0	0	0	0	142	1,625
5:00 PM	0	0	71	0	0	0	89	0	0	1	0	4	0	0	0	0	165	1,619
5:05 PM	0	0	72	0	0	0	65	0	0	0	0	3	0	0	0	0	140	
5:10 PM	0	0	78	0	0	0	62	0	0	1	0	1	0	0	0	0	142	
5:15 PM	0	0	63	0	0	0	70	0	0	0	0	1	0	0	0	0	134	
5:20 PM	0	0	74	0	0	0	62	0	0	1	0	1	0	0	0	0	138	
5:25 PM	0	0	65	0	0	0	65	0	0	0	0	1	0	0	0	0	131	
5:30 PM	0	0	74	0	0	0	62	0	0	0	0	2	0	0	0	0	138	
5:35 PM	0	0	56	0	0	0	68	0	0	0	0	0	0	0	0	0	124	
5:40 PM	0	0	57	0	0	0	67	0	0	0	0	0	0	0	0	0	124	
5:45 PM	0	0	56	0	0	0	67	0	0	0	0	0	0	0	0	0	123	
5:50 PM	0	0	63	0	0	0	60	0	0	1	0	0	0	0	0	0	124	
5:55 PM	0	0	73	0	0	0	63	0	0	0	0	0	0	0	0	0	136	
Count Total	0	0	1,607	0	0	1	1,666	0	0	8	0	19	0	0	0	0	3,301	
Peak Hour	0	0	839	0	0	1	848	0	0	5	0	15	0	0	0	0	1,708	

Location: 1 Site Dwy & Tualatin Sherwood Rd PM

**Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles on Crosswalk**

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	4	0	1	0	5	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:05 PM	3	0	1	0	4	4:05 PM	0	0	0	0	0	4:05 PM	0	0	0	0	0
4:10 PM	0	0	1	0	1	4:10 PM	0	0	0	0	0	4:10 PM	0	0	0	0	0
4:15 PM	3	0	4	0	7	4:15 PM	0	0	0	0	0	4:15 PM	0	0	0	0	0
4:20 PM	4	0	0	0	4	4:20 PM	0	0	0	0	0	4:20 PM	0	0	0	0	0
4:25 PM	5	0	0	0	5	4:25 PM	0	0	0	0	0	4:25 PM	0	1	0	0	1
4:30 PM	3	0	0	0	3	4:30 PM	0	0	0	0	0	4:30 PM	0	0	0	0	0
4:35 PM	4	0	2	0	6	4:35 PM	0	0	0	0	0	4:35 PM	0	0	0	0	0
4:40 PM	1	0	3	0	4	4:40 PM	1	0	0	0	1	4:40 PM	0	0	0	0	0
4:45 PM	2	1	0	0	3	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
4:50 PM	2	0	0	0	2	4:50 PM	0	0	0	0	0	4:50 PM	0	0	0	0	0
4:55 PM	4	0	0	0	4	4:55 PM	0	0	0	0	0	4:55 PM	0	0	0	0	0
5:00 PM	2	0	2	0	4	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:05 PM	8	0	0	0	8	5:05 PM	0	0	1	0	1	5:05 PM	0	0	0	0	0
5:10 PM	1	0	1	0	2	5:10 PM	0	0	0	0	0	5:10 PM	0	0	0	0	0
5:15 PM	2	0	0	0	2	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:20 PM	5	0	1	0	6	5:20 PM	0	0	0	0	0	5:20 PM	0	0	0	0	0
5:25 PM	5	0	3	0	8	5:25 PM	0	0	0	0	0	5:25 PM	0	0	0	0	0
5:30 PM	2	0	0	0	2	5:30 PM	0	0	0	0	0	5:30 PM	0	0	0	0	0
5:35 PM	3	0	1	0	4	5:35 PM	0	0	0	0	0	5:35 PM	0	0	0	0	0
5:40 PM	1	0	0	0	1	5:40 PM	0	0	0	0	0	5:40 PM	0	1	0	0	1
5:45 PM	4	0	0	0	4	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
5:50 PM	3	0	3	0	6	5:50 PM	0	0	0	0	0	5:50 PM	0	0	0	0	0
5:55 PM	6	0	0	0	6	5:55 PM	0	0	0	0	0	5:55 PM	0	0	0	0	0
Count Total	77	1	23	0	101	Count Total	1	0	1	0	2	Count Total	0	2	0	0	2
Peak Hour	38	1	12	0	51	Peak Hour	1	0	1	0	2	Peak Hour	0	0	0	0	0

INTERSECTION INFORMATION					
City:	Sherwood	Condition:	Volumes from Site Access Driveway		
Population:	20000				
Intersection Location: (Rural/Urban)	Urban				
Major Street Name:	Tualatin-Sherwood Road	Minor Street Name:	Site Access Driveway		
Number of Moving Lanes for Each	1	Number of Moving Lanes for Each	1		
Speed: Street	45 mph	Speed: Street	25 mph		
Width:	45 ft	Width:	34 ft		
Direction:	EB WB	Direction:	NB SB		
Hour Beginning:		Hour Beginning:			
12:00 AM		12:00 AM			
1:00 AM		1:00 AM			
2:00 AM		2:00 AM			
3:00 AM		3:00 AM			
4:00 AM		4:00 AM			
5:00 AM		5:00 AM			
6:00 AM		6:00 AM			
7:00 AM	1,628	7:00 AM	8		
8:00 AM		8:00 AM			
9:00 AM		9:00 AM			
10:00 AM		10:00 AM			
11:00 AM		11:00 AM			
12:00 PM		12:00 PM			
1:00 PM		1:00 PM			
2:00 PM		2:00 PM			
3:00 PM		3:00 PM			
4:00 PM	1,894	4:00 PM	23		
5:00 PM		5:00 PM			
6:00 PM		6:00 PM			
7:00 PM		7:00 PM			
8:00 PM		8:00 PM			
9:00 PM		9:00 PM			
10:00 PM		10:00 PM			
11:00 PM		11:00 PM			
24-hour Total	3,522 0	24-hour Total	31 0		

**Warrants Evaluated:**

- Warrant 1, 8-Hour Vehicular Volume - Evaluated for Conditions A & B
- Warrant 2, 4-Hour Vehicular Volume - Evaluated
- Warrant 3, Peak Hour - Evaluated for Conditions A-2, A-3 (A-1 needs to be evaluated separately), and Condition B
- Warrant 4, Pedestrian Volume - Not Analyzed
- Warrant 5, School Crossing - Not Analyzed
- Warrant 6, Coordinated Signal System - Not Analyzed
- Warrant 7, Accident Experience - Not Analyzed
- Warrant 8, Roadway Network - Not Analyzed
- Warrant 9, Intersection Near a Grade Crossing - Not Analyzed

TRAFFIC SIGNAL WARRANTS - BASED ON 2009 MUTCD

**WARRANT 1, 8-HOUR VEHICULAR VOLUME**

	MAJOR			MINOR			<u>A</u>	<u>B</u>	<u>A or B</u>	<u>80% A&amp;B</u>
	EB	WB	Total	NB	SB	Max				
4:00 PM	1,894	0	1,894	23	0	23	N	N	N	N
7:00 AM	1,628	0	1,628	8	0	8	N	N	N	N
11:00 PM	0	0	0	0	0	0	N	N	N	N
10:00 PM	0	0	0	0	0	0	N	N	N	N
9:00 PM	0	0	0	0	0	0	N	N	N	N
8:00 PM	0	0	0	0	0	0	N	N	N	N
7:00 PM	0	0	0	0	0	0	N	N	N	N
6:00 PM	0	0	0	0	0	0	N	N	N	N
5:00 PM	0	0	0	0	0	0	N	N	N	N
3:00 PM	0	0	0	0	0	0	N	N	N	N
2:00 PM	0	0	0	0	0	0	N	N	N	N
1:00 PM	0	0	0	0	0	0	N	N	N	N

Note: The major street has a speed which exceeds 40 mph, therefore these minimum volumes are 70 percent of the regular requirements

**Warrant Requirements:**

Major Street Lanes: 1  
 Minor Street Lanes: 1

**CONDITION A - Minimum Vehicular Volume**

Minimum Volume on Combined Major Street Approaches: 350  
 Minimum Volume on Higher Minor Street Approach: 105

**CONDITION B - Interruption of Continuous Traffic**

Minimum Volume on Combined Major Street Approaches: 525  
 Minimum Volume on Higher Minor Street Approach: 53

IS CONDITION A OF SIGNAL WARRANT 1 MET? NO  
 IS CONDITION B OF SIGNAL WARRANT 1 MET? NO  
 IS COMBINATION OF A OR B MET? NO  
 IS 80% OF CONDITION A AND CONDITION B MET? NO

Note: Signal Warrant 1 is met if either Condition A or Condition B is met.



TRAFFIC SIGNAL WARRANTS - BASED ON 2009 MUTCD

**WARRANT 2, FOUR HOUR VEHICULAR VOLUME**

	MAJOR			MINOR			Calculated Threshold	
	EB	WB	Total	NB	SB	Max		
4:00 PM	1,894	0	1,894	23	0	23	60	N
7:00 AM	1,628	0	1,628	8	0	8	60	N
11:00 PM	0	0	0	0	0	0	500	N
10:00 PM	0	0	0	0	0	0	500	N
9:00 PM	0	0	0	0	0	0	500	N
8:00 PM	0	0	0	0	0	0	500	N
7:00 PM	0	0	0	0	0	0	500	N
6:00 PM	0	0	0	0	0	0	500	N

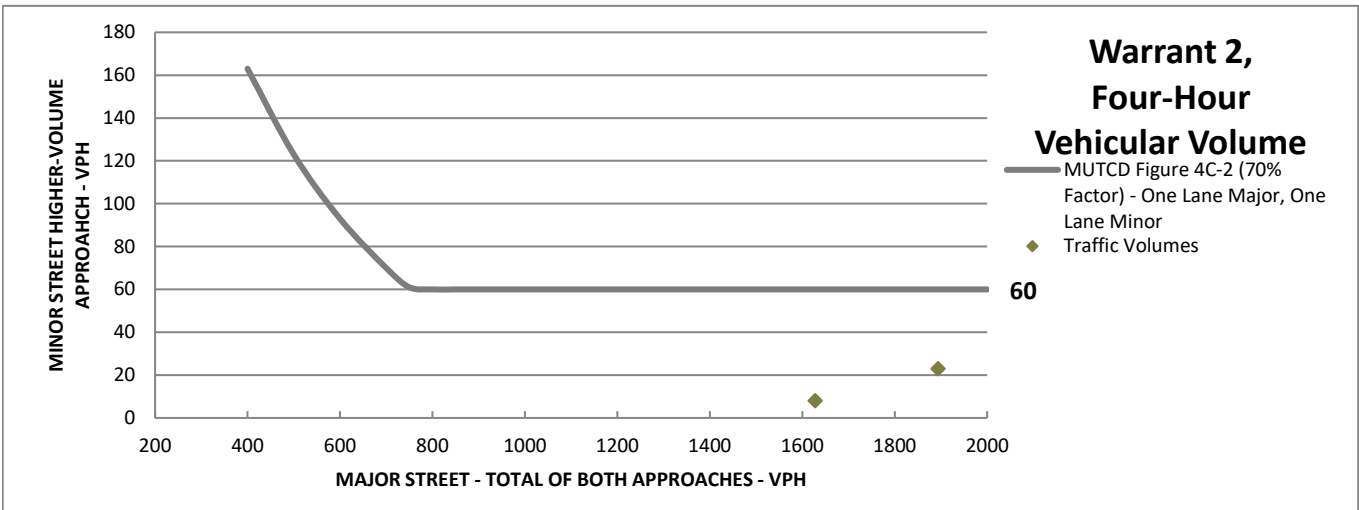
Note: The major street has a speed which exceeds 40 mph, therefore these minimum volumes are 70 percent of the regular requirements

**Warrant Requirements:**

Major Street Lanes: 1

Minor Street Lanes: 1

**IS SIGNAL WARRANT 2 MET? NO**



TRAFFIC SIGNAL WARRANTS - BASED ON 2009 MUTCD

**WARRANT 3, PEAK HOUR VEHICULAR VOLUME**

	MAJOR			MINOR		Calculated Max	Calculated Threshold (B)	A-2&3	B
	EB	WB	Total	NB	SB				
4:00 PM	1,894	0	1,894	23	0	23	75	N	N
7:00 AM	1,628	0	1,628	8	0	8	75	N	N
11:00 PM	0	0	0	0	0	0	610	N	N
10:00 PM	0	0	0	0	0	0	610	N	N

Note: The major street has a speed which exceeds 40 mph, therefore these minimum volumes are 70 percent of the regular requirements

**Warrant Requirements:**

Major Street Lanes: 1  
Minor Street Lanes: 1

**CONDITION A-1 - Stopped Delay**

Cannot be evaluated based on volumes alone. Condition met if traffic on one minor-street approach (one direction only) controlled by STOP sign equals or exceeds: 4 vehicle-hours for a one-lane approach or 5 vehicle-hours for a two-lane approach.

**CONDITION A-2 - Minor Street Volume**

Minimum Volume on Higher Minor Street Approach: 100

**CONDITION A-3 - Total Approach Volume**

Minimum Volume of Total Approaches: 650

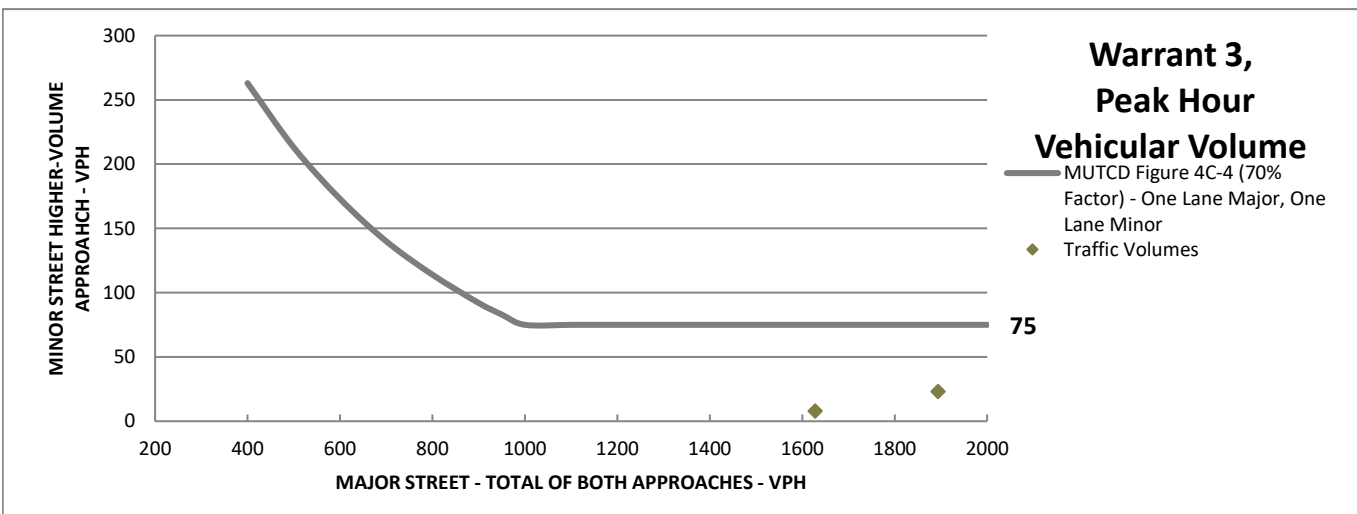
**CONDITION B - Plot of Minor Street Volume (high vol approach) vs. Major Street Volume (Both approaches)**

ARE CONDITIONS A-2 AND A-3 OF SIGNAL WARRANT 3 MET? **NO**

Note: All 3 subsections of Condition A must be met to warrant signal.

IS CONDITION B OF SIGNAL WARRANT 3 MET? **NO**

Note: Signal Warrant 3 is met if either Condition A or Condition B is met.





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## **Exhibit M: Conditions of Approval of the Original Decision (Case # SP 92-7)**

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1993 Condition of Approval	Compliance Response
<b>Administered by TVF&amp;R</b>	
<p><b>1. Chemical Storage:</b>            a. All chemical transfer activities shall be totally enclosed, except where the Tualatin Valley Fire and Rescue (TVFR) determines such enclosures will be detrimental to the public or facility safety. If TVFR cannot determine the appropriate course of conduct, an analysis shall be prepared by a qualified, independent consultant retained by the City, and paid for by the applicant, results of which shall be reviewed and approved by TVFR.</p>	<p>Compliant-TVFR conducts annual reviews and random tours for training purposes.</p>
<p>b. If the TVFR's annual review of the materials inventory list of all chemical substances stored on site is discontinued, the City may hire a qualified professional, at the applicant's expense, to annually review the inventory to ensure compliance with State requirements.</p>	<p>Annual Fire Marshal report is submitted to the State.</p>
<p>c. Empty chemical storage drums shall be separated and handled based on original contents in accordance with Fire Code material separation standards, to TVFR's satisfaction.</p>	<p>All empty containers are stored in marked locations and separated.</p>
<p>d. The facility site plan shall be amended to illustrate and designate empty drum storage areas. The facility shall be managed so that empty drums or other materials are not stored in parked trucks or empty trailers and are handled and stored in the same essential manner as full drums, subject to inspection by TVFR.</p>	<p>Compliant. Parked trucks and trailers are not used for storage.</p>
<p>e. Storage and handling all gaseous products are prohibited, except for those used incidentally in the routine operation and Maintenance of the facility. Prior to the addition of any chemical products that are not within the same classification, as defined by Fire Code, of those products listed in the original approval, the applicant must obtain the permission of the City and TVFR.</p>	<p>Cascade Columbia Distribution does not handle gaseous products, with the exception of propane for forklift use, which is permitted in the course of facility operations.</p>
<p>f. A computerized chemical inventory system identifying and controlling chemical storage locations and volumes, and streamlining inspections, shall be installed and maintained. TVFR shall review and approve the system proposed for installation and may conduct inventory inspections on an as needed basis.</p>	<p>Current inventory retrieval system has been demonstrated to TVFR during hazmat drills.</p>
<b>2. Emergency Provisions</b>	
<p>a. Proof shall be provided to TVFR that facility personnel are trained at First Responder Operator level as certified by Occupational Health and Safety (OSMA), and qualified at First Aid/CPR level.</p>	<p>Annual training is regularly performed to maintain all production personnel and certified First Aid employees staffed.</p>
<p>b. An electronic surveillance system shall be provided to monitor all chemical storage activities and facility security by an Underwriters Laboratory (UL) approved central station regarding the operation and security of this facility. This system shall provide for monitoring of the retention areas, tank levels, and intrusion by unauthorized personnel during non-operating hours. Chemical sensing devices shall be installed to detect flammable air/chemical mixtures caused by ruptured drums or other spill accidents, and to activate the alarm</p>	<p>Wired alarm system (with battery backup), motion, photo beams and security cameras with remote access are all installed and operational. Fire suppression is operational and inspected annually.</p>

<p>system. Provide sensing devices that will automatically activate fire suppression systems and contact the central station in the event of a fire. All electronic systems shall have battery back-up. Owner shall provide a plan for immediate response in the event of any alarm or intrusion. Alarm system and response program shall be reviewed and approved jointly by City Police, City staff, and TVFR.</p>	<p>Emergency Response Plan (ERP) has been written and is trained to.</p>
<p>c. On an annual basis, TVFR shall review and approve the facility's emergency response plan. If such service is discontinued, the City may annually hire, at the applicant's expense, a consultant to analyze the facility's emergency response equipment and materials program as required by State and local agencies responsible for monitoring safety.</p>	<p>TVFR reviews ERP, as does DHS, EPA and the Local Emergency Planning Commission.</p>
<p>d. Storm water containment areas shall be sized to handle rain fall from a six (6) day storm event of a ten (10) year storm intensity, plus contingency capacity accommodating the addition of fire suppression water to such flows. The specific sizing of containment areas shall be determined through consultation between TVFR and the applicant, to TVFR's satisfaction.</p>	<p>No changes have been made over the years to the original design. Detention pond is still fully operational.</p>
<p>e. An emergency response plan that includes fire suppression devices, evacuation plans, and maximum protection for the environment and nearby residents shall be approved by the City and TVFR prior to issuance of any building permits. If sirens or other off-site warning devices are deemed appropriate, they shall be installed and maintained by the applicant. The emergency response plan shall include consultation with and recommendations from appropriate area health care providers. Subsequent to occupancy, modifications to the emergency response plan necessitated by changes to the facilities physical plant or operations shall be reviewed and approved by TVFR in consultation with the City.</p>	<p>Emergency Response Plan is reviewed and updated annually.</p>
<p>f. Provide an all-weather emergency access road, separate from the main driveway access to the rear of the site with its own exit onto a public street to the satisfaction of TVFR. If site or ownership restrictions make this impractical, re-site the facility as necessary to permit such secondary access.</p>	<p>TVF&amp;R is satisfied with the existing access.</p>
<p><b>Administered by the City</b></p>	
<p><b>1. Site Planning</b></p>	
<p>a. Roofing and skirting materials and siding, if necessary, shall be extended over covered storage areas, including Buildings B, C, and D, and the drumming area, to provide additional rain protection as approved by City staff.</p>	<p>This condition was satisfied on the construction plans and compliance was verified during building permit issuance.</p>
<p>b. The final approved site plan shall illustrate the specific use and function of all buildings and tanks. Facilities identified as "future" on the site plan and not constructed as part of the initial building permit shall be subject to additional site plan review, and are not subject to this approval.</p>	<p>This condition was satisfied on the construction plans and compliance was verified during building permit issuance.</p>
<p>c. Comply with, and submit appropriate plans where required, all City site development standards including landscaping, off-street parking</p>	<p>This condition was satisfied on the construction plans</p>

and loading, on-site circulation, on-site outdoor storage, lighting, and signage.	and compliance was verified during building permit issuance.
d. Native plant species shall be used in combination with the maximum feasible retention of existing trees, and vegetation to create full sight-obscuring landscape screening of the facility from Oregon Street, Tualatin-Sherwood Road and Rock Creek Wetlands. A separate landscape plan achieving this end shall be submitted for the City's review and approval prior to issuance of any building permits.	This condition was satisfied on the construction plans and compliance was verified during building permit issuance.
e. Security fencing shall be provided around the entire perimeter of the facility inside the tree line, with the provision that fencing systems shall permit fire, police and other public safety personnel and equipment access in the case of emergency.	This condition was satisfied on the construction plans and compliance was verified during building permit issuance.
f. All storage buildings shall be sprinklered except for areas where chemicals are water reactive, and then other appropriate automatic fire suppression devices shall be installed.	Storage buildings are sprinklered.
<b>2. Storm Water and Pollution Management</b>	Permit on file and inspections conducted by Clean Water Services.
a. As required by the City and Unified Sewerage Agency (USA), as storm water pollution prevention plan specifying physical features, and operational practices and procedures, to contain and manage contamination incidents shall be provided.	
b. All City and USA requirements and standards regarding water supply, erosion control, storm and sanitary sewers, and on-site water quality facilities shall be complied with.	CCDC complies.
c. The City shall review and approve the preliminary design of the storm water drainage/treatment systems to ensure protection of Rock Creek.	No changes have been made to stormwater system since the original design.
d. All facilities for the containment and treatment of chemical spills shall be designed and operated to be drained by pumping rather than through gravity feed valved systems.	All chemical containment requires pumping.
e. Chemical storage and handling and truck parking areas shall be paved and underlaid by an impervious membrane to protect from spills and leakage. The entire paved surface is to be designed to drain into a central containment area, which shall include inspection port or ports to help detect any leakage through the paved surfaces.	Facility was constructed to the approved design, and no changes from the original design and installation.
f. All storm water and other discharges from areas defined in Condition B.2.e., excluding roof run-off, shall be discharged directly into the Rock Creek sanitary sewer after collection in containment areas and appropriate testing and treatment as defined by USA, and other appropriate agencies.	Storm water discharge permit inspected and issued by Clean Water Services. Certificate of Excellence issued to CCDC 2020.
<b>3. Roads and Transportation</b>	Complied.
a. A driveway access permit to Tualatin-Sherwood Road shall be obtained from Washington County.	
b. A non-remonstrance agreement with Washington County and the City for future public improvements shall be executed and recorded.	Complied.



<p>c. Additional right-of-way shall be dedicated along the full frontage of Tax Lot 200:2S128C to provide Tualatin- Sherwood Road with a right-of-way width of 45 feet from center line.</p>	<p>Complied. Washington County is currently in the process of right-of-way acquisition for road widening, Applicant is coordinating with County staff.</p>
<p>d. A one-foot deep non-access reserve strip shall be recorded along the full frontage of Tax Lot 200:2S128C, except at the County approved driveway access.</p>	<p>Complied.</p>
<p>e. Relocate the main driveway access onto Tualatin-Sherwood Road to a point approximately 200 feet east of the edge of the rail right-of-way to ensure eastbound double- trailer trucks can fully clear the rail line before having to begin to make turning movements, subject to City obtaining concurrence of the County.</p>	<p>The existing access is in the approved location. The scope of the current application does not include any changes to the access.</p>
<p>f. Install an on-demand traffic signal on Tualatin-Sherwood Road for vehicles centering and exiting the facility, subject to City obtaining concurrence of the County. If the County does not concur within sixty (60) days, the issue shall be returned to the City Council for further consideration.</p>	<p>The County did not require a traffic signal at the time; neither is a signal warranted at this location today, as demonstrated in the Traffic Analysis Memo prepared by Lancaster Mobley, dated December 2021.</p>
<p><b>4. Generally:</b> a. Proof of compliance with all applicable Federal, State and local regulations shall be provided.</p>	<p>The facility is in full compliance with all applicable Federal, State and local regulations. Required documents were provided at the time of permit issuance.</p>
<p><b>C. General Conditions of Approval</b> 1. An annual site and facility inspection shall be conducted by TVFR or a qualified independent consultant retained by the City and paid by the applicant, as deemed appropriate, the results of which shall be reviewed by the TVFR and other appropriate agencies. The purpose of this inspection is to identify failures or potential failures in the structures, equipment, containment, and primary and secondary impervious layers and to ensure that no chemicals have escaped from the containment area by sampling the adjacent' land and as appropriate. The inspection shall also review compliance with all other conditions of approval with recommendations for changes and improvements. The City may request more frequent inspections as needed.</p>	<p>Annual inspections are performed by TVFR on a regular basis.</p>
<p>2. Revise the site plan in accordance with all the preceding conditions and resubmit to the City staff for review and approval for compliance with those condition</p>	<p>This condition was satisfied prior to building permit issuance.</p>

<p>3. To the extent that any of the conditions imposed herein conflict with the requirements of any oversight agency, including but not limited to Oregon Department of Environmental Quality, Environmental Protection Agency, and TVFR, any necessary changes shall be returned to the City for further review and approval.</p>	<p>This condition was satisfied prior to building permit issuance.</p>
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- b. If the TVFR's annual review of the materials inventory list of all chemical substances stored on site is discontinued, the City may hire a qualified professional, at the applicant's expense, to annually review the inventory to ensure compliance with State requirements.
- c. Empty chemical storage drums shall be separated and handled based on original contents in accordance with Fire Code material separation standards, to TVFR's satisfaction.
- d. The facility site plan shall be amended to illustrate and designate empty drum storage areas. The facility shall be managed so that empty drums or other materials are not stored in parked trucks or empty trailers and are handled and stored in the same essential manner as full drums, subject to inspection by TVFR.
- e. Storage and handling of all gaseous products are prohibited, except for those used incidentally in the routine operation and maintenance of the facility. Prior to the addition of any chemical products that are not within the same classification, as defined by Fire Code, of those products listed in the original approval, the applicant must obtain the permission of the City and TVFR.
- f. A computerized chemical inventory system identifying and controlling chemical storage locations and volumes, and streamlining inspections, shall be installed and maintained. TVFR shall review and approve the system proposed for installation, and may conduct inventory inspections on an as needed basis.

## 2. Emergency Provisions

- a. Proof shall be provided to TVFR that facility personnel are trained at First Responder Operator level as certified by Occupational Health and Safety (OSHA), and qualified at First Aid/CPR level.
- b. An electronic surveillance system shall be provided to monitor all chemical storage activities and facility security by an Underwriters Laboratory (UL) approved central station regarding the operation and security of this facility. This system shall provide for monitoring of the retention areas, tank levels, and intrusion by unauthorized personnel during non-operating hours. Chemical sensing devices shall be installed to detect flammable air/chemical mixtures caused by ruptured drums

or other spill accidents, and to activate the alarm system. Provide sensing devices that will automatically activate fire suppression systems and contact the central station in the event of a fire. All electronic systems shall have battery back-up. Owner shall provide a plan for immediate response in the event of any alarm or intrusion. Alarm system and response program shall be reviewed and approved jointly by City Police, City staff, and TVFR.

- c. On an annual basis, TVFR shall review and approve the facility's emergency response plan. If such service is discontinued, the City may annually hire, at the applicant's expense, a consultant to analyze the facility's emergency response equipment and materials program as required by State and local agencies responsible for monitoring safety.
- d. Storm water containment areas shall be sized to handle rain fall from a six (6) day storm event of a ten (10) year storm intensity, plus contingency capacity accommodating the addition of fire suppression water to such flows. The specific sizing of containment areas shall be determined through consultation between TVFR and the applicant, to TVFR's satisfaction.
- e. An emergency response plan that includes fire suppression devices, evacuation plans, and maximum protection for the environment and nearby residents shall be approved by the City and TVFR prior to issuance of any building permits. If sirens or other off-site warning devices are deemed appropriate, they shall be installed and maintained by the applicant. The emergency response plan shall include consultation with and recommendations from appropriate area health care providers. Subsequent to occupancy, modifications to the emergency response plan necessitated by changes to the facilities physical plant or operations shall be reviewed and approved by TVFR in consultation with the City.
- f. Provide an all-weather emergency access road, separate from the main driveway access, to the rear of the site with its own exit onto a public street to the satisfaction of TVFR. If site or ownership restrictions make this impractical, re-site the facility as necessary to permit such secondary access.

B. The following conditions shall be primarily administered by the City, in consultation with other appropriate agencies:

→ 1. Site Planning:

- a. Roofing and skirting materials and siding, if necessary, shall be extended over covered storage areas, including Buildings B, C, and D, and the drumming area, to provide additional rain protection as approved by City staff.
- b. The final approved site plan shall illustrate the specific use and functions of all buildings and tanks. Facilities identified as "future" on the site plan and not constructed as part of the initial building permit shall be subject to additional site plan review, and are not subject to this approval.
- c. Comply with, and submit appropriate plans where required, all City site development standards including landscaping, off-street parking and loading, on-site circulation, on-site outdoor storage, lighting, and signage.
- d. Native plant species shall be used in combination with the maximum feasible retention of existing trees and vegetation to create full sight-obscuring landscaped screening of the facility from Oregon Street, Tualatin-Sherwood Road and Rock Creek wetlands. A separate landscape plan achieving this end shall be submitted for the City's review and approval prior to issuance of any building permits.
- e. Security fencing shall be provided around the entire perimeter of the facility inside the tree line, with the provision that fencing systems shall permit fire, police and other public safety personnel and equipment access in the case of emergency.
- f. All storage buildings shall be sprinklered except for areas where chemicals are water reactive, and then other appropriate automatic fire suppression devices shall be installed.

2. Storm Water and Pollution Management

- a. As required by the City and Unified Sewerage Agency (USA), a storm water pollution prevention plan specifying physical features, and operational practices and procedures, to contain and manage contamination incidents shall be provided.

- b. All City and USA requirements and standards regarding water supply, erosion control, storm and sanitary sewers, and on-site water quality facilities shall be complied with.
- c. The City shall review and approve the preliminary design of the storm water drainage/treatment systems to ensure protection of Rock Creek.
- d. All facilities for the containment and treatment of chemical spills shall be designed and operated to be drained by pumping rather than through gravity feed valved systems.
- e. Chemical storage and handling and truck parking areas shall be paved and underlaid by an impervious membrane to protect from spills and leakage. The entire paved surface is to be designed to drain into a central containment area, which shall include inspection port or ports to help detect any leakage through the paved surfaces.
- f. All storm water and other discharges from areas defined in Condition B.2.e., excluding roof run-off, shall be discharged directly into the Rock Creek sanitary sewer after collection in containment areas and appropriate testing and treatment as defined by USA, and other appropriate agencies.

### 3. Roads and Transportation

- a. A driveway access permit to Tualatin-Sherwood Road shall be obtained from Washington County.
- b. A non-remonstrance agreement with Washington County and the City for future public improvements shall be executed and recorded.
- c. Additional right-of-way shall be dedicated along the full frontage of Tax Lot 200:2S128C to provide Tualatin-Sherwood Road with a right-of-way width of 45 feet from center line.
- d. A one-foot deep non-access reserve strip shall be recorded along the full frontage of Tax Lot 200:2S128C, except at the County approved driveway access.



e. Relocate the main driveway access onto Tualatin-Sherwood Road to a point approximately 200 feet east of the edge of the rail right-of-way to ensure eastbound double-trailer trucks can fully clear the rail line before having to begin to make turning movements, subject to City obtaining concurrence of the County.

f. Install an on-demand traffic signal on Tualatin-Sherwood Road for vehicles entering and exiting the facility, subject to City obtaining concurrence of the County. If the County does not concur within sixty (60) days, the issue shall be returned to the City Council for further consideration.

4. Generally:

a. Proof of compliance with all applicable Federal, State and local regulations shall be provided.

C. The following are general conditions of approval:

1. An annual site and facility inspection shall be conducted by TVFR or a qualified independent consultant retained by the City and paid by the applicant, as deemed appropriate, the results of which shall be reviewed by the TVFR and other appropriate agencies. The purpose of this inspection is to identify failures or potential failures in the structures, equipment, containment, and primary and secondary impervious layers and to ensure that no chemicals have escaped from the containment area by sampling the adjacent land and as appropriate. The inspection shall also review compliance with all other conditions of approval with recommendations for changes and improvements. The City may request more frequent inspections as needed.
2. Revise the site plan in accordance with all the preceding conditions and resubmit to the City staff for review and approval for compliance with those conditions.
3. To the extent that any of the conditions imposed herein conflict with the requirements of any oversight agency, including but not limited to Oregon Department of Environmental Quality, Environmental Protection Agency, and TVFR, any necessary changes shall be returned to the City for further review and approval.



---

## **Exhibit N: Pride Disposal Approval**

---

**Maria Miller**

---

**From:** Kristen Tabscott <kTabscott@pridedisposal.com>  
**Sent:** Tuesday, November 16, 2021 12:36 PM  
**To:** Nye Underwood  
**Cc:** Maria Miller; Steve Roper  
**Subject:** RE: 14200 SW Tualatin Sherwood Rd - Trash Enclosure Access

**EXTERNAL EMAIL:** This email originated from outside AKS Engineering & Forestry.

Hello,

Thank you for reaching out. It appears according to the site plan that you are not making any changes near the existing trash location, and that the flow of traffic won't be affected at all, correct? If so, this will be fine.

**Kristen Tabscott**  
EXECUTIVE ASSISTANT

—  
**Pride Disposal & Recycling Company**  
503-625-6177  
[pridedisposal.com](http://pridedisposal.com)  
Follow the latest Pride news:  
[Facebook](#) | [Twitter](#) | [newsletter](#)

---

**From:** Nye Underwood <underwoodn@aks-eng.com>  
**Sent:** Monday, November 15, 2021 12:50 PM  
**To:** Kristen Tabscott <kTabscott@pridedisposal.com>  
**Cc:** Maria Miller <mariam@aks-eng.com>; Steve Roper <roper@aks-eng.com>  
**Subject:** 14200 SW Tualatin Sherwood Rd - Trash Enclosure Access

Good afternoon, Kristen,

We're working on a project located at 14200 SW Tualatin-Sherwood Rd., Sherwood, OR that involves adding a new storage building and a new covered storage area to the existing industrial site. I'm reaching out as a precaution to confirm that the existing trash enclosure/service area will continue to be acceptable with Pride given the proposed improvements. Please find attached an exhibit of the project site showing the existing trash enclosure/service area as well as existing and proposed structures/buildings. Please let me know if you have any questions or concerns of the proposed improvements impacting Pride's ability to service this area.

Thank you,  
**Nye Underwood**



**AKS ENGINEERING & FORESTRY, LLC**  
12965 SW Herman Road, Suite 100 | Tualatin, OR 97062  
P: 503.563.6151 Ext. 285 | [www.aks-eng.com](http://www.aks-eng.com) | [underwoodn@aks-eng.com](mailto:underwoodn@aks-eng.com)  
Offices in: Bend, OR | Keizer, OR | Tualatin, OR | Vancouver, WA

*NOTICE: This communication may contain privileged or other confidential information. If you have received it in error, please advise the sender by reply e-mail and immediately delete the message and any attachments without copying or disclosing the contents. AKS Engineering and Forestry shall not be liable for any changes made to the electronic data transferred. Distribution of electronic data to others is prohibited without the express written consent of AKS Engineering and Forestry.*

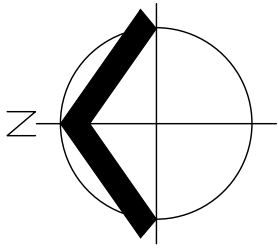
DATE: 11/15/2020

EXHIBIT  
**A**

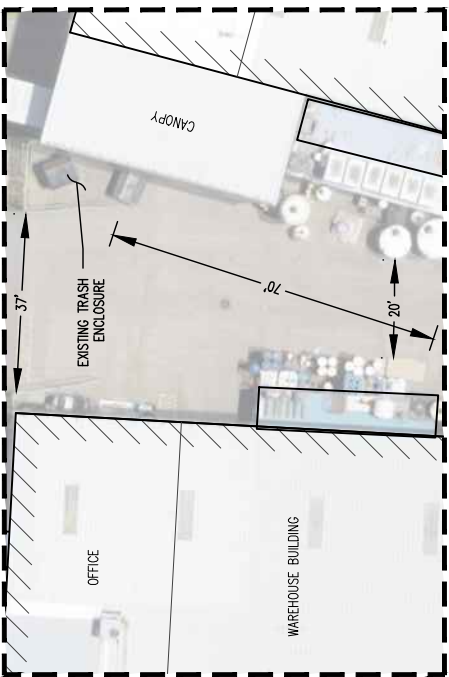
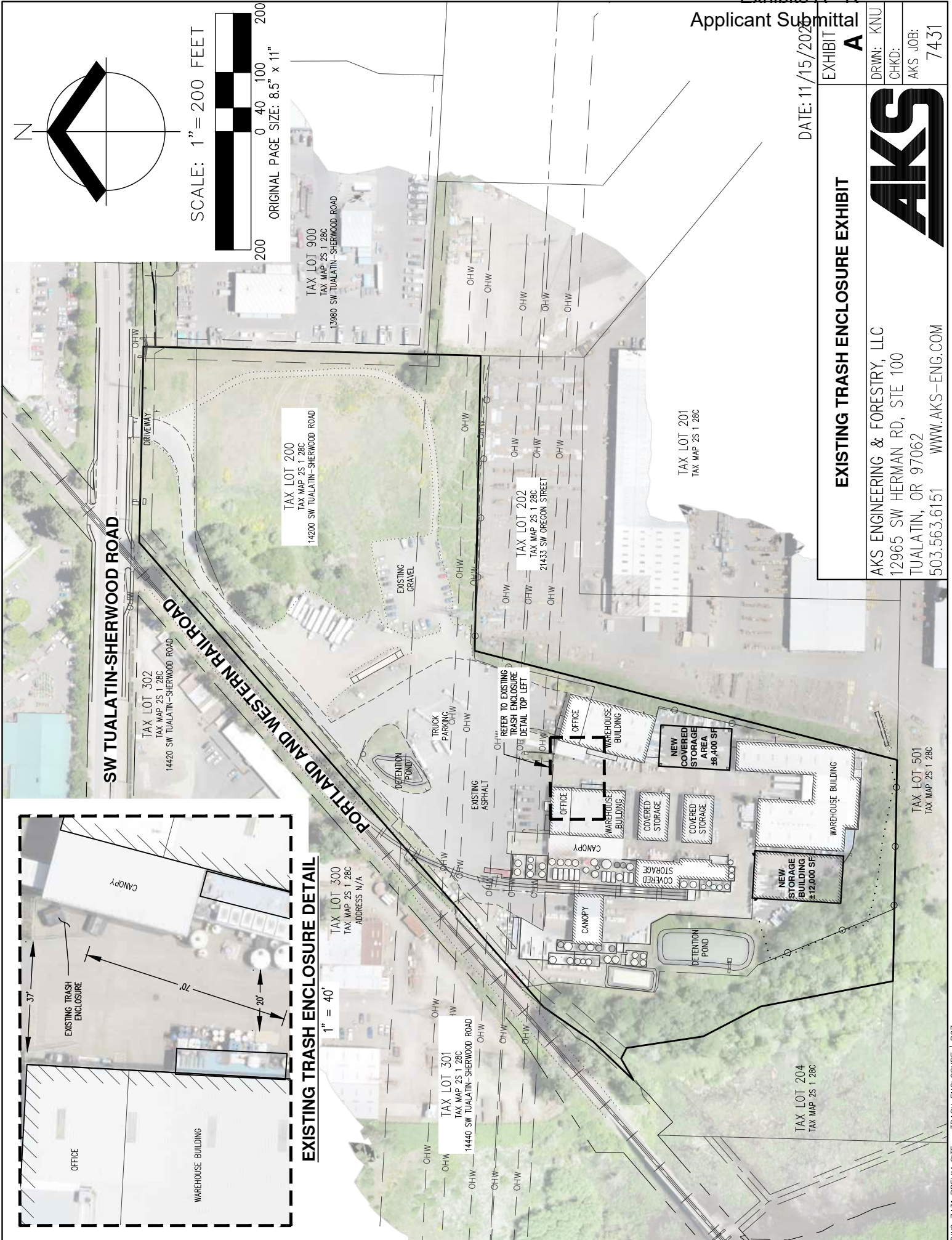
DRWN: KNU  
CHKD:  
AKS JOB:  
7431

**EXISTING TRASH ENCLOSURE EXHIBIT**

AKS ENGINEERING & FORESTRY, LLC  
12965 SW HERMAN RD, STE 100  
TUALATIN, OR 97062  
503.563.6151 WWW.AKS-ENG.COM



SCALE: 1" = 200 FEET



**EXISTING TRASH ENCLOSURE DETAIL**

1" = 40'

TAX LOT 300  
TAX MAP ZS 1 28C  
ADDRESS N/A

TAX LOT 301  
TAX MAP ZS 1 28C  
14440 SW TUALATIN-SHERWOOD ROAD

TAX LOT 200  
TAX MAP ZS 1 28C  
14200 SW TUALATIN-SHERWOOD ROAD

TAX LOT 202  
TAX MAP ZS 1 28C  
21435 SW OREGON STREET

TAX LOT 900  
TAX MAP ZS 1 28C  
13980 SW TUALATIN-SHERWOOD ROAD

TAX LOT 201  
TAX MAP ZS 1 28C

TAX LOT 501  
TAX MAP ZS 1 28C

TAX LOT 204  
TAX MAP ZS 1 28C



---

## **Exhibit O: Preliminary Stormwater Report**

---



# Cascade Columbia Distribution Company Sherwood, Oregon

## Preliminary Stormwater Report

**Date:** May 27, 2022

**Client:** Cascade Columbia Distribution Company  
14200 SW Tualatin-Sherwood Road  
Sherwood, OR 97140

**Engineering Contact:** Steve Roper, PE  
503.563.6151 | ropers@aks-eng.com

**Prepared By:** Nye Underwood

**Engineering Firm:** AKS Engineering & Forestry, LLC  
12965 SW Herman Road  
Suite 100  
Tualatin, OR 97062

**AKS Job Number:** 7431



RENEWAL DATE: 12/31/22



[www.aks-eng.com](http://www.aks-eng.com)

## Contents

<b>1.0 Purpose of Report</b> .....	<b>2</b>
<b>2.0 Project Location/Description</b> .....	<b>2</b>
<b>3.0 Regulatory Design Criteria</b> .....	<b>2</b>
3.1. Stormwater Quantity .....	2
3.2. Stormwater Hydromodification .....	2
3.3. Stormwater Quality.....	3
<b>4.0 Design Methodology</b> .....	<b>3</b>
<b>5.0 Design Parameters</b> .....	<b>3</b>
5.1. Design Storms .....	3
5.2. Pre-Developed Site Conditions .....	3
5.2.1. Site Topography .....	3
5.2.2. Storm System .....	3
5.3. Soil Type .....	4
5.4. Post-Developed Site Conditions.....	4
5.4.1. Site Topography .....	4
5.4.2. Storm System .....	4
5.4.3. Post-Developed Site Parameters .....	5
5.4.4. Description of Off-Site Contributing Basins .....	5
<b>6.0 Stormwater Analyses</b> .....	<b>5</b>
6.1. Proposed Stormwater Conduit Sizing .....	5
6.2. Proposed Stormwater Quality Management.....	5
6.3. Stormwater Hydromodification Management .....	5
6.4. Stormwater Quantity Control Facility Design .....	6
6.5. Downstream Drainage Conditions .....	6

## Tables

Table 5-1: Rainfall Intensities.....	3
Table 5-2: Hydrologic Soil Groupings.....	4
Table 6-1: Impervious Area Summary.....	5
Table 6-2: Storm Filter Sizing .....	5
Table 6-3: Existing and Post Developed Flows.....	6

## Figures

- Figure 1:** Vicinity Map
- Figure 2:** Existing Basin Delineation
- Figure 3:** Post-Developed Basin Delineation

## Appendices

- Appendix A:** HydroCAD Reports for Existing Condition Storm Events
- Appendix B:** HydroCAD Reports for Post-Developed Condition Storm Events
- Appendix C:** Stormwater Quality Calculations
- Appendix D:** USDA-NRCS Soil Resource Report
- Appendix E:** TR-55 Runoff Curve Numbers



---

## Preliminary Stormwater Report

### 14200 SW TUALATIN-SHERWOOD ROAD SHERWOOD, OREGON

#### 1.0 Purpose of Report

The purpose of this report is to analyze the effects the proposed development will have on the existing stormwater conveyance system; document the criteria, methodology, and informational sources used to design the proposed stormwater system; and present the results of the preliminary hydraulic analysis.

#### 2.0 Project Location/Description

The proposed site is located at 14200 SW Tualatin-Sherwood Road, Sherwood, OR 97140, encompassing approximately 16.93 acres (Tax Lot 200, Washington County Assessor's Map 2S 1 28C). The existing site has an industrial use with existing warehouses, office space, rail spur, and associated infrastructure for Cascade Columbia Distribution Company and Northstar Chemical Inc.

The proposed project will add a new covered storage area, new warehouse building, and associated site improvements to the existing site. The site improvements will include grading, underground utilities, paved parking areas, and stormwater facilities. Roof runoff generated by the new covered storage area and the new warehouse building will be conveyed to a new water quality manhole and detained in underground detention pipes prior to discharge to the existing drainage way (Rock Creek). Surface runoff from the new gravel area will sheet flow to the existing retention pond. Surface runoff from the new paved parking area will sheet flow to a new water quality catch basin where it will be directed to the existing drainage way (Rock Creek).

#### 3.0 Regulatory Design Criteria

##### 3.1. Stormwater Quantity

Per Clean Water Services' (CWS) *Design and Construction Standards* (R&O 07-20), *Section 4.02: Water Quantity Control Requirements for Conveyance Capacity*, on-site detention for conveyance capacity (25-year storm event) is required when any of the following conditions exist:

1. *There is an identified downstream deficiency and the District or City determines that detention rather than conveyance system enlargement is the more effective solution.*
2. *There is an identified regional detention site within the boundary of the development.*
3. *Water quantity facilities are required by District-adopted watershed management plans or adopted subbasin master plans.*

No downstream analysis has been conducted. There are no pre-defined deficiencies on the downstream path of runoff, so detention for the 25-year storm event is not required for the subject site based on the above criteria. See section 6.5. Downstream Drainage Conditions for more information.

##### 3.2. Stormwater Hydromodification

Per Clean Water Services' (CWS) *Design and Construction Standards* (R&O 07-20), *Section 4.03: Water Quantity Control Requirements*, stormwater hydromodification is required unless the project meets any of the following criteria:

1. *The project results in the addition and/or modification of less than 12,000 square feet of impervious surface.*
2. *The project is located in an area with a District approved subbasin strategy with an identified regional stormwater management approach for hydromodification.*

Per the above requirements for CWS Hydromodification, the project doesn't meet the exceptions of criteria 1 or 2. After review of the Hydromodification Approach Project Category Table 4-2, the subject site is identified as Category 2. Therefore, the subject project will meet CWS hydromodification requirements by providing peak-flow matching detention, using the criteria established within CWS Section 4.08.6.

### 3.3. Stormwater Quality

Stormwater quality management for this project will be met by using one (1) Contech storm filter cartridge manhole and one (1) Contech storm filter cartridge catch basin designed per the requirements of *Clean Water Services' Design and Construction Standards* (R&O 07-20).

## 4.0 Design Methodology

The Santa Barbara Urban Hydrograph (SBUH) Method was used to analyze stormwater runoff from the site. This method utilizes the Natural Resource Conservation Service (NRCS) Type 1A 24-hour design storm. HydroCAD 10.0 computer software aided in the analysis. Representative runoff Curve Numbers (CN) were obtained from the NRCS *Urban Hydrology for Small Watersheds* (Technical Release 55), and are included in Appendix E.

## 5.0 Design Parameters

### 5.1. Design Storms

Per CWS requirements, the following rainfall intensities and durations were used in analyzing the existing and proposed stormwater facilities:

**Table 5-1: Rainfall Intensities**

Recurrence Interval (Years)	Storm Period (Hours)	Total Precipitation Depth (Inches)
WQ	4	0.36
2	24	2.50
5	24	3.10
10	24	3.45
25	24	3.90

### 5.2. Pre-Developed Site Conditions

#### 5.2.1. Site Topography

Existing on-site grades generally vary from  $\pm 1\%$  to  $\pm 144\%$ , with the site draining towards the west (Rock Creek). The site has a high point of  $\pm 187$  feet near the east property line and a low point of  $\pm 131$  feet near the southwest property corner.

#### 5.2.2. Storm System

The existing site consists of an industrial property with warehouses, office space, a rail spur, gravel and asphalt parking areas, open field space, and wooded areas, and it has three (3) separate onsite storm systems which are identified below.

1. The first system collects roof runoff from southern buildings and discharges runoff on the south end of the wooded slopes on the southwest property line, ultimately draining west to Rock Creek.
2. The second system collects runoff from inside warehouses and from multiple catch basins located on the surrounding hard surfaces near the warehouses. The runoff is conveyed to a retention pond on the west side of the property where the water quality is monitored prior to release. Water is then either discharged to the wooded slopes on the west property line and drains to Rock Creek, or it is discharged to the public sanitary sewer to the north, depending on water quality and volume of water being treated.
3. The third system collects roof runoff from the existing northern most buildings in addition to two (2) parking lot catch basins. This runoff is conveyed to and discharged on the north end of the wooded slope on the west property line and ultimately drains to Rock Creek.

### 5.3. Soil Type

The soil beneath the project site and associated drainage basins are classified as loams, silt loams, and stony silt loams according to the USDA Natural Resources Conservation Service (NRCS) Soil Survey for Washington County. The following table outlines the Hydrologic Soil Group rating for the soil types:

**Table 5-2: Hydrologic Soil Groupings**

NRCS Map Unit Identification	NRCS Soil Classification	Hydrologic Soil Group Rating
5B	Briedwell Stony Silt Loam	B
37A/B/D	Quatama Loam	C
2225A	Huberly Silt Loam	C/D

Further information on this soil type is included in the NRCS Soil Resource Report located in Appendix D of this report.

### 5.4. Post-Developed Site Conditions

#### 5.4.1. Site Topography

The southern on-site slopes will be modified with cuts and fills to accommodate the construction of the new warehouse building, associated gravel area, and paved parking area. The remainder of the proposed site grading will not significantly change from the existing site topography.

#### 5.4.2. Storm System

The post-developed storm system will make minor modifications to the first, second, and third existing storm systems described in section 5.2.2. Modifications to the first storm system involve tying in roof runoff from the new covered storage area and the new warehouse building, adding a Contech storm filter cartridge manhole at the point of confluence for the system, adding an underground detention pipe, adding a flow control manhole, and extending the outlet location further west down the wooded slope on the southwest property line where an outlet protection stilling basin will be constructed to minimize erosion. The second storm system will remain in its existing condition, except surface runoff from the new gravel area will sheet flow to the existing retention pond. The third storm system will have an existing catch basin replaced with a Contech storm filter cartridge catch basin, and surface runoff from the new paved parking area will sheet flow to the new catch basin.

### 5.4.3. Post-Developed Site Parameters

Appendices A and B provide HydroCAD reports and input parameters that were generated for the analyzed storm events with respect to the drainage basins contributing to the redeveloped site. These reports include all the parameters (e.g., impervious/pervious areas, time of concentration, etc.) used to model the site hydrology.

### 5.4.4. Description of Off-Site Contributing Basins

The adjacent site to the east of the subject property discharges runoff to the southeast corner of the subject property. The proposed improvements include the addition of an area drain to pick up offsite runoff from the adjacent site and direct it to the proposed outlet protection stilling basin at the southwest corner. No changes in run-off quantity from the adjacent site are anticipated with this development.

## 6.0 Stormwater Analyses

### 6.1. Proposed Stormwater Conduit Sizing

The proposed storm pipes will be sized to meet CWS sizing requirements using Manning’s equation to convey the peak flows from the 25-year storm event.

### 6.2. Proposed Stormwater Quality Management

This project is comprised of new development and redevelopment. Therefore, per Clean Water Services’ (CWS) *Design and Construction Standards Manual for Sanitary Sewer and Surface Water Management (R&O 19-5)*, Section 4.08 Stormwater Management Approach Sizing, the impervious area requiring treatment is defined as:  $Area = New\ Imp. + 3(Modified\ Imp. - Permanently\ Removed\ Imp.)$ ; up to the total existing site impervious area. The impervious areas are summarized below in Table 6-1:

**Table 6-1: Impervious Area Summary**

New Impervious Area (Sq. Ft.)	Modified Impervious Area (Sq. Ft.)	Area Required to be Treated (Sq. Ft.)
±33,859	±15,734	±81,061

To provide onsite water quality treatment, a Contech storm filter manhole and a Contech storm filter catch basin have been designed per Clean Water Services Design and Construction Standards for Sanitary Sewer and Surface Water Management (R&O 19-05). Table 6-2 below summarizes the water quality flows and required number of filters for the structures.

**Table 6-2: Storm Filter Sizing**

Stormwater Structure	Water Quality Flow (CFS)	Contech Storm Filter Media Type	Storm Filter Height (Inches)	Maximum Allowable Flow Rate (CFS)	Required Number of Filters
Manhole	0.132	ZPG	27	0.05	3
Catch Basin	0.110	ZPG	27	0.05	3

### 6.3. Stormwater Hydromodification Management

The proposed project will generate and redevelop approximately 49,593 square feet of impervious area, thus classifying as a Medium Project. Per CWS Hydromod Planning Tool, the subject site is located within a developed region, discharging into a low risk level existing stream. Based on these parameters and CWS Table 4-2, the subject site is within Category 2 Hydromodification approach.

Per CWS Category 2, the subject site will provide peak-flow matching detention, using design criteria in CWS Section 4.08.6, and evaluating areas per CWS Section 4.08. Specifically, the subject site’s post-developed 2, 5, and 10-year storm event runoff flows will match the site’s existing 50% of 2, 5, and 10-year storm event runoff flows. The stormwater runoff flow comparisons will be evaluated taking into consideration the undisturbed site.

**6.4. Stormwater Quantity Control Facility Design**

The proposed project provides stormwater quantity management by utilizing storm chambers designed per CWS standards. The following table outlines the results of the detention facility outflow which limits the post-development peak flows to equal to or less than the allowable existing peak flows for each storm event, as outlined within CWS stormwater detention and hydromodification management requirements.

**Table 6-3: Existing and Post Developed Flows**

Recurrence Interval (Years)	Existing Peak Flows (CFS)	Detained Post-Development Peak Flows (CFS)	Peak Flow Increase or (Decrease) – (CFS)
2	4.04*	3.97	(0.07)
5	5.44	5.36	(0.08)
10	6.28	6.21	(0.07)
25	7.44	7.77	0.33

\*Presented peak flows determined by subtracting 50% of link 2T (existing areas to be developed and redeveloped) peak flows from link 3T – total existing site condition flow.

The flow control manhole and detention chamber system have been designed per CWS requirements to have a minimum 1-foot freeboard from the top of the manhole during the 25-year storm event. The proposed stormwater facility has sufficient capacity to detain the required post-developed site flows to the allowable existing site flows and meets the requirements established by Clean Water Service’s Design and Construction for Sanitary Sewer and Surface Water Management Manual (R&O 19-05).

**6.5. Downstream Drainage Conditions**

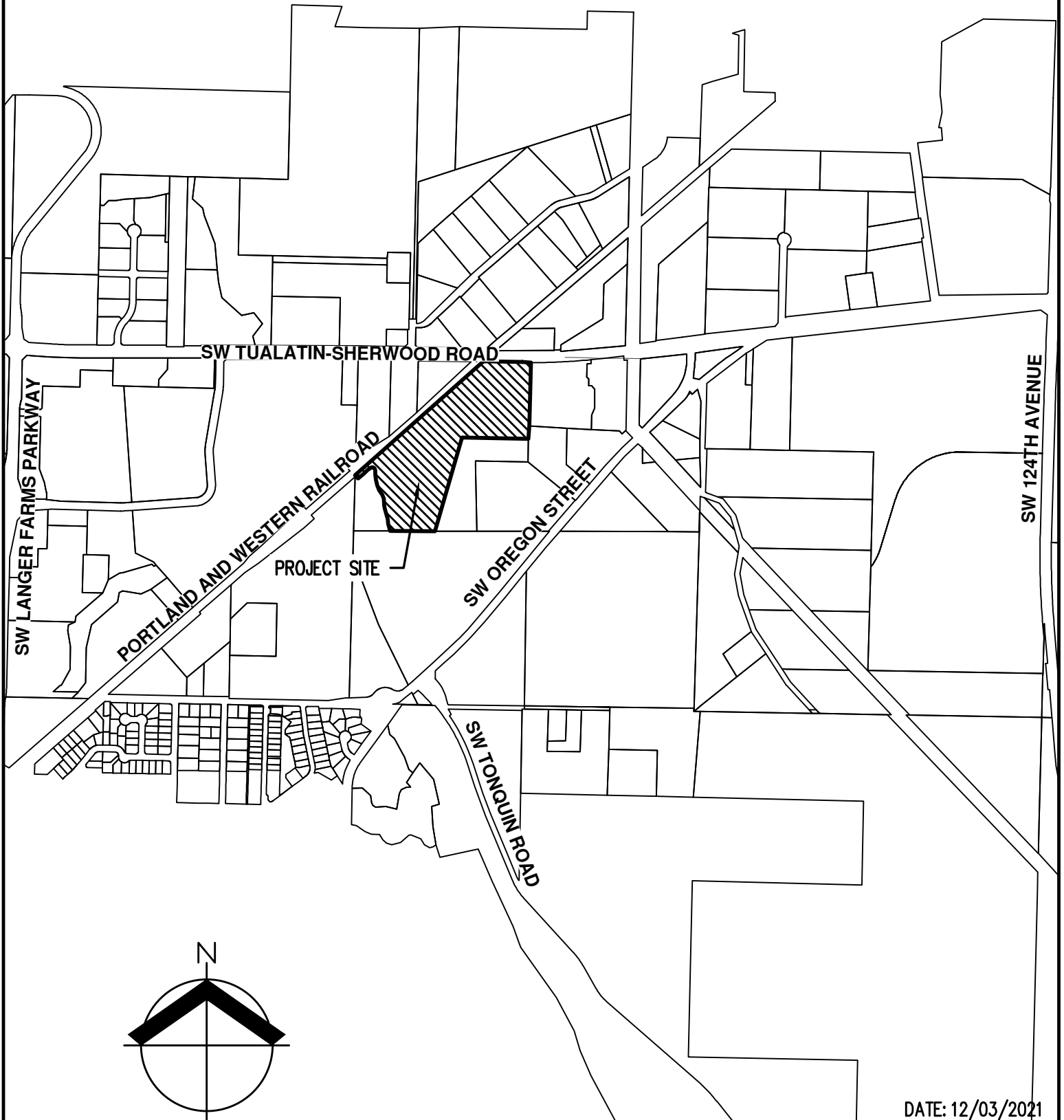
Runoff from the project site discharges to Rock Creek to the west, which flows freely under the railroad trestle bridge to the north. It then flows through a large box culvert under SW Tualatin-Sherwood road, travels roughly a mile through grassy floodplains, under a bridge on Pacific Highway 99 W, and then another half mile to join the Tualatin River. There are no pre-defined deficiencies of the drainage system on the downstream path of runoff.



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## **Figure 1: Vicinity Map**

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SW TUALATIN-SHERWOOD ROAD

SW LANGER FARMS PARKWAY

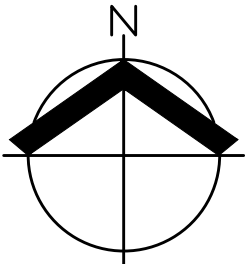
PORTLAND AND WESTERN RAILROAD

PROJECT SITE

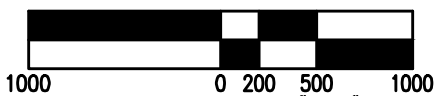
SW OREGON STREET

SW TONQUIN ROAD

SW 124TH AVENUE



SCALE: 1" = 1000 FEET



ORIGINAL PAGE SIZE: 8.5" x 11"

DATE: 12/03/2021

VICINITY MAP

AKS ENGINEERING & FORESTRY, LLC  
12965 SW HERMAN RD, STE 100  
TUALATIN, OR 97062  
503.563.6151 WWW.AKS-ENG.COM



FIGURE  
1

DRWN: KNU

CHKD: SR

AKS JOB:

7431

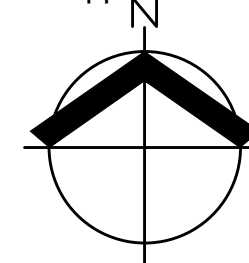


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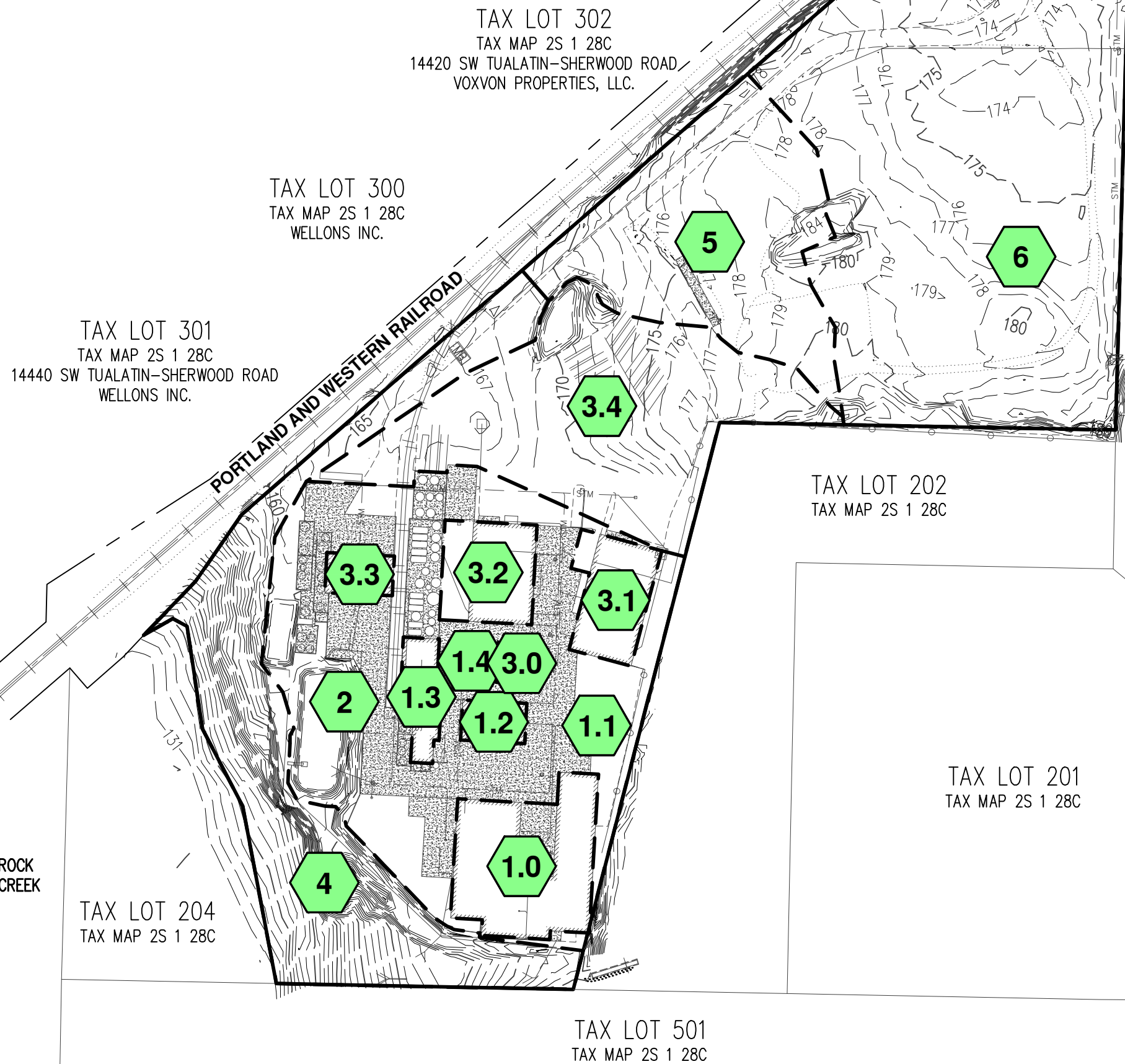
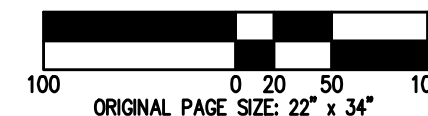
## **Figure 2: Existing Basin Delineation**

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SCALE: 1" = 100 FEET



**CATCHMENT SUMMARY**

- CATCHMENT 1:  
HSG: B AND C  
IMPERVIOUS AREA (EXISTING): 44,038 SF
- CATCHMENT 2:  
HSG: B AND C  
IMPERVIOUS AREA (EXISTING): 135,996 SF  
PERVIOUS AREA: 16,807 SF
- CATCHMENT 3:  
HSG: B AND C  
IMPERVIOUS AREA (EXISTING): 121,474 SF  
PERVIOUS AREA: 11,038 SF
- CATCHMENT 4:  
HSG: B  
IMPERVIOUS AREA (EXISTING): 15,425 SF  
PERVIOUS AREA: 90,095 SF
- CATCHMENT 5:  
HSG: C  
IMPERVIOUS AREA (EXISTING): 56,681 SF  
PERVIOUS AREA: 24,888 SF
- CATCHMENT 6:  
HSG: C AND C/D  
IMPERVIOUS AREA (EXISTING): 24,845 SF  
PERVIOUS AREA: 196,215 SF

DATE: 05/25/2022

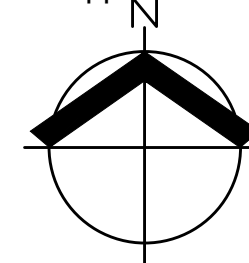
<b>EXISTING BASIN DELINEATION</b>	<b>FIGURE</b>
<b>14200 SW TUALATIN-SHERWOOD ROAD</b>	<b>2</b>
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM	DRWN: KNU CHKD: SR AKS JOB: 7431



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## **Figure 3: Post-Developed Basin Delineation**

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SCALE: 1" = 100 FEET

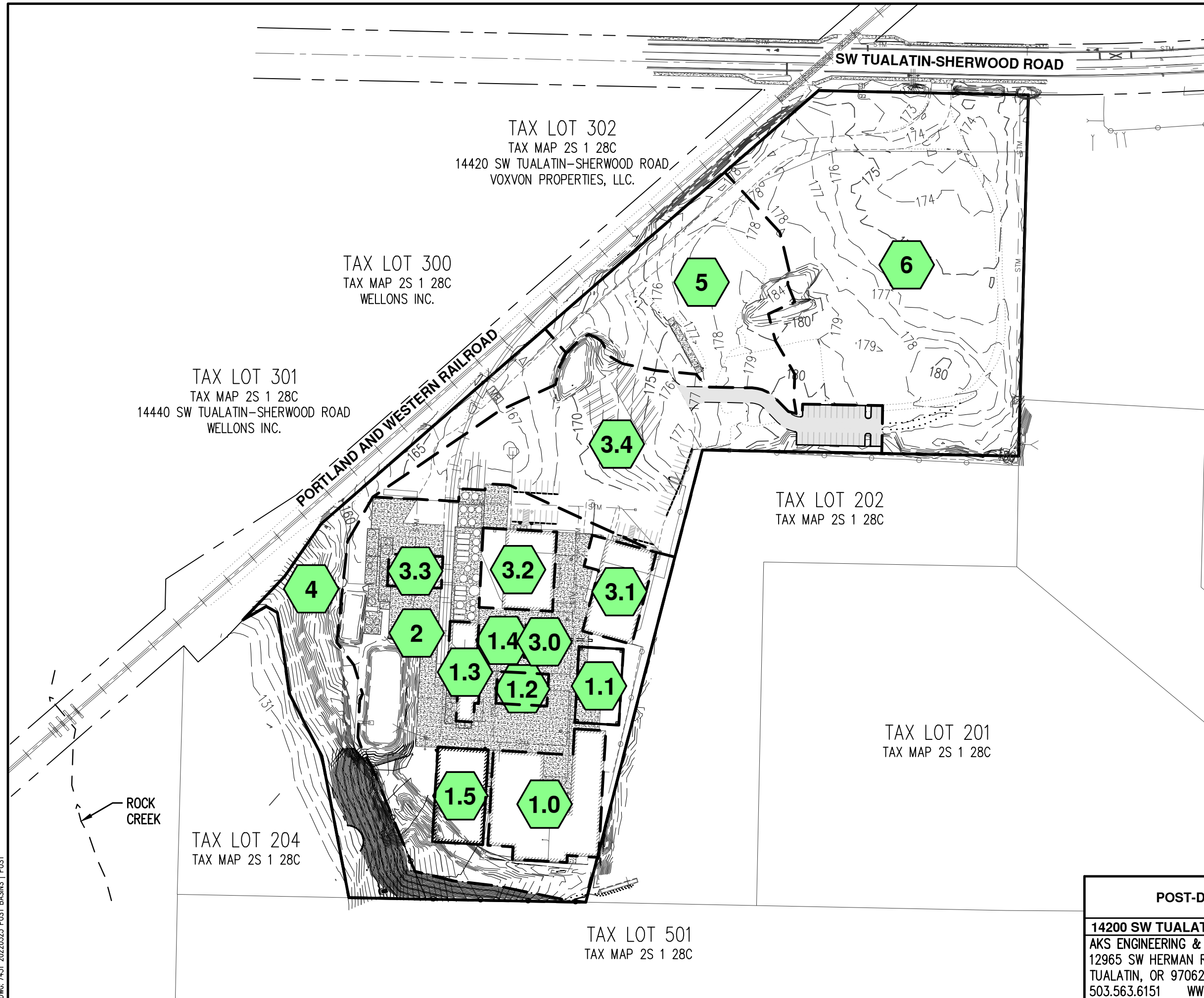


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**CATCHMENT SUMMARY**

- CATCHMENT 1:**  
HSG: B AND C  
IMPERVIOUS AREA (EXISTING): 51,131 SF  
IMPERVIOUS AREA (MODIFIED): 10,052 SF  
IMPERVIOUS AREA (NEW): 1,948 SF
- CATCHMENT 2:**  
HSG: B AND C  
IMPERVIOUS AREA (EXISTING): 118,851 SF  
IMPERVIOUS AREA (NEW): 23,047 SF  
PERVIOUS AREA: 16,831 SF
- CATCHMENT 3:**  
HSG: B AND C  
IMPERVIOUS AREA (EXISTING): 115,940 SF  
IMPERVIOUS AREA (MODIFIED): 5,682 SF  
IMPERVIOUS AREA (NEW): 7,556 SF  
PERVIOUS AREA: 16,565 SF
- CATCHMENT 4:**  
HSG: B  
IMPERVIOUS AREA (EXISTING): 15,425 SF  
PERVIOUS AREA: 65,076 SF
- CATCHMENT 5:**  
HSG: C  
IMPERVIOUS AREA (EXISTING): 54,074 SF  
PERVIOUS AREA: 24,076 SF
- CATCHMENT 6:**  
HSG: C AND C/D  
IMPERVIOUS AREA (EXISTING): 23,580 SF  
IMPERVIOUS AREA (NEW): 1,308 SF  
PERVIOUS AREA: 186,360 SF

DATE: 05/25/2022



<b>POST-DEVELOPED BASIN DELINEATION</b>	<b>FIGURE</b>
<b>14200 SW TUALATIN-SHERWOOD ROAD</b>	<b>3</b>
AKS ENGINEERING & FORESTRY, LLC 12965 SW HERMAN RD, STE 100 TUALATIN, OR 97062 503.563.6151 WWW.AKS-ENG.COM	DRWN: KNU CHKD: SR AKS JOB: 7431

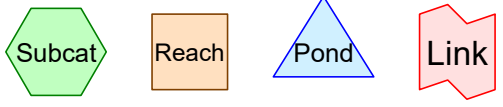
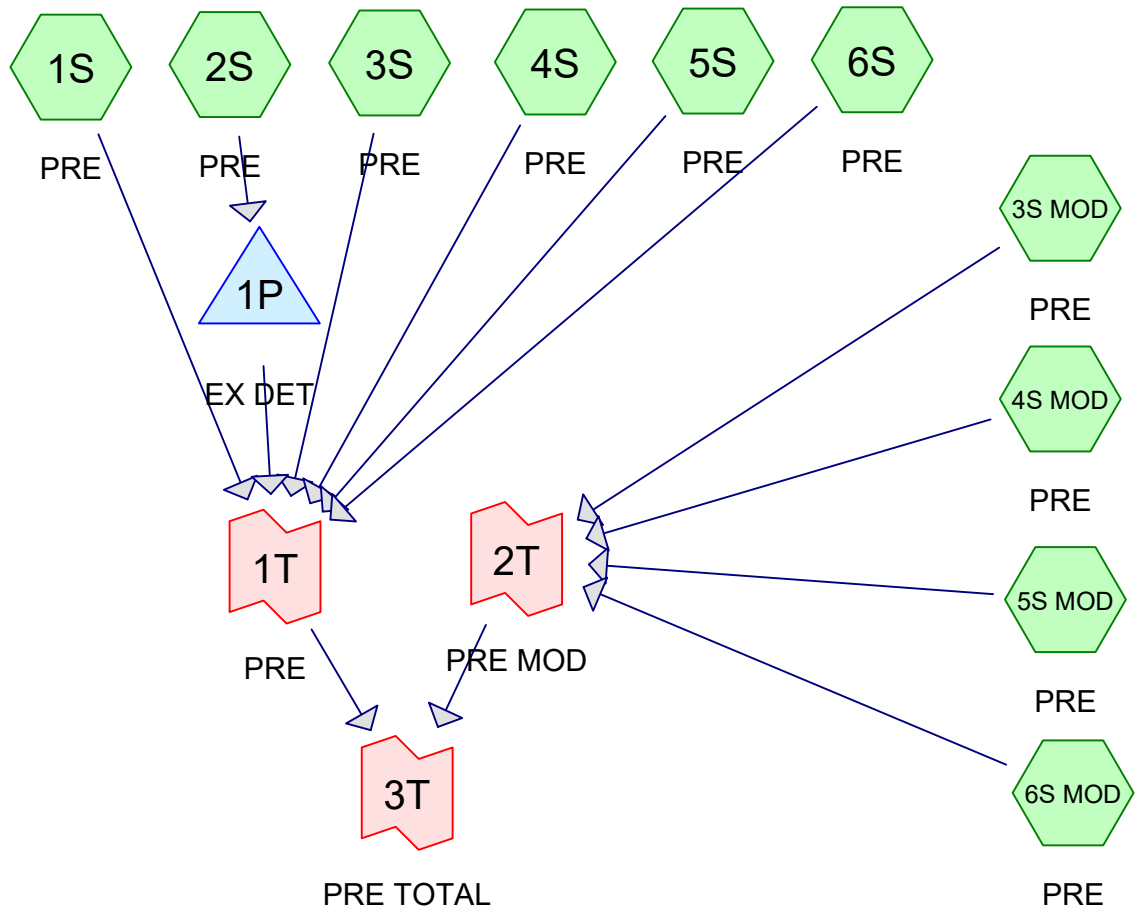




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## **Appendix A: HydroCAD Reports for Existing Condition Storm Events**

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**Routing Diagram for 7431 Stormwater Model**  
 Prepared by AKS Engineering & Forestry, Printed 5/27/2022  
 HydroCAD® 10.00-22 s/n 01338 © 2018 HydroCAD Software Solutions LLC

## 7431 Stormwater Model

Prepared by AKS Engineering & Forestry

Printed 5/27/2022

HydroCAD® 10.00-22 s/n 01338 © 2018 HydroCAD Software Solutions LLC

Page 2

### Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.386	69	50-75% Grass cover, Fair, HSG B (2S)
5.242	79	50-75% Grass cover, Fair, HSG C (3S, 3S MOD, 5S, 5S MOD, 6S, 6S MOD)
8.873	98	IMPERVIOUS EXISTING (1S, 2S, 3S, 4S, 5S, 6S)
0.361	75	IMPERVIOUS MODIFIED (2S, 3S MOD, 5S MOD, 6S MOD)
2.068	60	Woods, Fair, HSG B (4S, 4S MOD)
<b>16.931</b>	<b>86</b>	<b>TOTAL AREA</b>



**7431 Stormwater Model**

Type IA 24-hr CWS 2YR Rainfall=2.50"

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Page 3

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points  
 Runoff by SBUH method, Split Pervious/Imperv.  
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

<b>Subcatchment1S: PRE</b>	Runoff Area=44,038 sf 100.00% Impervious Runoff Depth=2.27" Tc=5.0 min CN=0/98 Runoff=0.583 cfs 0.191 af
<b>Subcatchment2S: PRE</b>	Runoff Area=152,803 sf 82.42% Impervious Runoff Depth=1.96" Tc=5.0 min CN=71/98 Runoff=1.689 cfs 0.572 af
<b>Subcatchment3S: PRE</b>	Runoff Area=130,598 sf 91.56% Impervious Runoff Depth=2.15" Tc=5.0 min CN=79/98 Runoff=1.620 cfs 0.537 af
<b>Subcatchment3S MOD: PRE</b>	Runoff Area=1,914 sf 0.00% Impervious Runoff Depth=0.65" Tc=5.0 min CN=75/0 Runoff=0.004 cfs 0.002 af
<b>Subcatchment4S: PRE</b>	Runoff Area=80,525 sf 19.16% Impervious Runoff Depth=0.58" Flow Length=597' Tc=7.9 min CN=60/98 Runoff=0.198 cfs 0.089 af
<b>Subcatchment4S MOD: PRE</b>	Runoff Area=24,995 sf 0.00% Impervious Runoff Depth=0.17" Flow Length=597' Tc=7.9 min CN=60/0 Runoff=0.008 cfs 0.008 af
<b>Subcatchment5S: PRE</b>	Runoff Area=78,376 sf 72.32% Impervious Runoff Depth=1.87" Tc=5.0 min CN=79/98 Runoff=0.825 cfs 0.281 af
<b>Subcatchment5S MOD: PRE</b>	Runoff Area=3,193 sf 0.00% Impervious Runoff Depth=0.69" Tc=5.0 min CN=76/0 Runoff=0.009 cfs 0.004 af
<b>Subcatchment6S: PRE</b>	Runoff Area=211,621 sf 11.74% Impervious Runoff Depth=1.01" Flow Length=701' Tc=15.0 min CN=79/98 Runoff=0.864 cfs 0.407 af
<b>Subcatchment6S MOD: PRE</b>	Runoff Area=9,439 sf 0.00% Impervious Runoff Depth=0.79" Flow Length=701' Tc=15.0 min CN=78/0 Runoff=0.026 cfs 0.014 af
<b>Pond 1P: EX DET</b>	Peak Elev=152.93' Storage=24,932 cf Inflow=1.689 cfs 0.572 af Outflow=0.000 cfs 0.000 af
<b>Link 1T: PRE</b>	Inflow=4.026 cfs 1.505 af Primary=4.026 cfs 1.505 af
<b>Link 2T: PRE MOD</b>	Inflow=0.039 cfs 0.029 af Primary=0.039 cfs 0.029 af
<b>Link 3T: PRE TOTAL</b>	Inflow=4.063 cfs 1.534 af Primary=4.063 cfs 1.534 af

**Total Runoff Area = 16.931 ac Runoff Volume = 2.107 af Average Runoff Depth = 1.49"**  
**47.59% Pervious = 8.058 ac 52.41% Impervious = 8.873 ac**

**7431 Stormwater Model**

Type IA 24-hr CWS 5YR Rainfall=3.10"

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Page 4

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points  
 Runoff by SBUH method, Split Pervious/Imperv.  
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

<b>Subcatchment1S: PRE</b>	Runoff Area=44,038 sf 100.00% Impervious Runoff Depth=2.87" Tc=5.0 min CN=0/98 Runoff=0.730 cfs 0.242 af
<b>Subcatchment2S: PRE</b>	Runoff Area=152,803 sf 82.42% Impervious Runoff Depth=2.51" Tc=5.0 min CN=71/98 Runoff=2.159 cfs 0.733 af
<b>Subcatchment3S: PRE</b>	Runoff Area=130,598 sf 91.56% Impervious Runoff Depth=2.73" Tc=5.0 min CN=79/98 Runoff=2.049 cfs 0.683 af
<b>Subcatchment3S MOD: PRE</b>	Runoff Area=1,914 sf 0.00% Impervious Runoff Depth=1.03" Tc=5.0 min CN=75/0 Runoff=0.009 cfs 0.004 af
<b>Subcatchment4S: PRE</b>	Runoff Area=80,525 sf 19.16% Impervious Runoff Depth=0.85" Flow Length=597' Tc=7.9 min CN=60/98 Runoff=0.249 cfs 0.131 af
<b>Subcatchment4S MOD: PRE</b>	Runoff Area=24,995 sf 0.00% Impervious Runoff Depth=0.37" Flow Length=597' Tc=7.9 min CN=60/0 Runoff=0.015 cfs 0.018 af
<b>Subcatchment5S: PRE</b>	Runoff Area=78,376 sf 72.32% Impervious Runoff Depth=2.42" Tc=5.0 min CN=79/98 Runoff=1.070 cfs 0.363 af
<b>Subcatchment5S MOD: PRE</b>	Runoff Area=3,193 sf 0.00% Impervious Runoff Depth=1.08" Tc=5.0 min CN=76/0 Runoff=0.016 cfs 0.007 af
<b>Subcatchment6S: PRE</b>	Runoff Area=211,621 sf 11.74% Impervious Runoff Depth=1.45" Flow Length=701' Tc=15.0 min CN=79/98 Runoff=1.356 cfs 0.587 af
<b>Subcatchment6S MOD: PRE</b>	Runoff Area=9,439 sf 0.00% Impervious Runoff Depth=1.20" Flow Length=701' Tc=15.0 min CN=78/0 Runoff=0.046 cfs 0.022 af
<b>Pond 1P: EX DET</b>	Peak Elev=153.92' Storage=31,931 cf Inflow=2.159 cfs 0.733 af Outflow=0.000 cfs 0.000 af
<b>Link 1T: PRE</b>	Inflow=5.368 cfs 2.006 af Primary=5.368 cfs 2.006 af
<b>Link 2T: PRE MOD</b>	Inflow=0.070 cfs 0.050 af Primary=0.070 cfs 0.050 af
<b>Link 3T: PRE TOTAL</b>	Inflow=5.435 cfs 2.055 af Primary=5.435 cfs 2.055 af

**Total Runoff Area = 16.931 ac Runoff Volume = 2.788 af Average Runoff Depth = 1.98"**  
**47.59% Pervious = 8.058 ac 52.41% Impervious = 8.873 ac**

**7431 Stormwater Model**

Type IA 24-hr CWS 10YR Rainfall=3.45"

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Page 5

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points  
 Runoff by SBUH method, Split Pervious/Imperv.  
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

<b>Subcatchment1S: PRE</b>	Runoff Area=44,038 sf 100.00% Impervious Runoff Depth=3.22" Tc=5.0 min CN=0/98 Runoff=0.816 cfs 0.271 af
<b>Subcatchment2S: PRE</b>	Runoff Area=152,803 sf 82.42% Impervious Runoff Depth=2.83" Tc=5.0 min CN=71/98 Runoff=2.437 cfs 0.828 af
<b>Subcatchment3S: PRE</b>	Runoff Area=130,598 sf 91.56% Impervious Runoff Depth=3.07" Tc=5.0 min CN=79/98 Runoff=2.300 cfs 0.768 af
<b>Subcatchment3S MOD: PRE</b>	Runoff Area=1,914 sf 0.00% Impervious Runoff Depth=1.27" Tc=5.0 min CN=75/0 Runoff=0.011 cfs 0.005 af
<b>Subcatchment4S: PRE</b>	Runoff Area=80,525 sf 19.16% Impervious Runoff Depth=1.03" Flow Length=597' Tc=7.9 min CN=60/98 Runoff=0.294 cfs 0.158 af
<b>Subcatchment4S MOD: PRE</b>	Runoff Area=24,995 sf 0.00% Impervious Runoff Depth=0.51" Flow Length=597' Tc=7.9 min CN=60/0 Runoff=0.020 cfs 0.024 af
<b>Subcatchment5S: PRE</b>	Runoff Area=78,376 sf 72.32% Impervious Runoff Depth=2.75" Tc=5.0 min CN=79/98 Runoff=1.215 cfs 0.412 af
<b>Subcatchment5S MOD: PRE</b>	Runoff Area=3,193 sf 0.00% Impervious Runoff Depth=1.33" Tc=5.0 min CN=76/0 Runoff=0.020 cfs 0.008 af
<b>Subcatchment6S: PRE</b>	Runoff Area=211,621 sf 11.74% Impervious Runoff Depth=1.73" Flow Length=701' Tc=15.0 min CN=79/98 Runoff=1.665 cfs 0.699 af
<b>Subcatchment6S MOD: PRE</b>	Runoff Area=9,439 sf 0.00% Impervious Runoff Depth=1.46" Flow Length=701' Tc=15.0 min CN=78/0 Runoff=0.059 cfs 0.026 af
<b>Pond 1P: EX DET</b>	Peak Elev=154.46' Storage=36,070 cf Inflow=2.437 cfs 0.828 af Outflow=0.000 cfs 0.000 af
<b>Link 1T: PRE</b>	Inflow=6.185 cfs 2.308 af Primary=6.185 cfs 2.308 af
<b>Link 2T: PRE MOD</b>	Inflow=0.098 cfs 0.064 af Primary=0.098 cfs 0.064 af
<b>Link 3T: PRE TOTAL</b>	Inflow=6.277 cfs 2.372 af Primary=6.277 cfs 2.372 af

**Total Runoff Area = 16.931 ac Runoff Volume = 3.200 af Average Runoff Depth = 2.27"**  
**47.59% Pervious = 8.058 ac 52.41% Impervious = 8.873 ac**

**7431 Stormwater Model**

Type IA 24-hr CWS 25YR Rainfall=3.90"

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Page 6

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points  
 Runoff by SBUH method, Split Pervious/Imperv.  
 Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

<b>Subcatchment1S: PRE</b>	Runoff Area=44,038 sf 100.00% Impervious Runoff Depth=3.67" Tc=5.0 min CN=0/98 Runoff=0.926 cfs 0.309 af
<b>Subcatchment2S: PRE</b>	Runoff Area=152,803 sf 82.42% Impervious Runoff Depth=3.25" Tc=5.0 min CN=71/98 Runoff=2.797 cfs 0.951 af
<b>Subcatchment3S: PRE</b>	Runoff Area=130,598 sf 91.56% Impervious Runoff Depth=3.51" Tc=5.0 min CN=79/98 Runoff=2.622 cfs 0.878 af
<b>Subcatchment3S MOD: PRE</b>	Runoff Area=1,914 sf 0.00% Impervious Runoff Depth=1.59" Tc=5.0 min CN=75/0 Runoff=0.015 cfs 0.006 af
<b>Subcatchment4S: PRE</b>	Runoff Area=80,525 sf 19.16% Impervious Runoff Depth=1.28" Flow Length=597' Tc=7.9 min CN=60/98 Runoff=0.391 cfs 0.197 af
<b>Subcatchment4S MOD: PRE</b>	Runoff Area=24,995 sf 0.00% Impervious Runoff Depth=0.71" Flow Length=597' Tc=7.9 min CN=60/0 Runoff=0.031 cfs 0.034 af
<b>Subcatchment5S: PRE</b>	Runoff Area=78,376 sf 72.32% Impervious Runoff Depth=3.17" Tc=5.0 min CN=79/98 Runoff=1.403 cfs 0.476 af
<b>Subcatchment5S MOD: PRE</b>	Runoff Area=3,193 sf 0.00% Impervious Runoff Depth=1.66" Tc=5.0 min CN=76/0 Runoff=0.027 cfs 0.010 af
<b>Subcatchment6S: PRE</b>	Runoff Area=211,621 sf 11.74% Impervious Runoff Depth=2.09" Flow Length=701' Tc=15.0 min CN=79/98 Runoff=2.080 cfs 0.847 af
<b>Subcatchment6S MOD: PRE</b>	Runoff Area=9,439 sf 0.00% Impervious Runoff Depth=1.81" Flow Length=701' Tc=15.0 min CN=78/0 Runoff=0.077 cfs 0.033 af
<b>Pond 1P: EX DET</b>	Peak Elev=155.12' Storage=41,437 cf Inflow=2.797 cfs 0.951 af Outflow=0.000 cfs 0.000 af
<b>Link 1T: PRE</b>	Inflow=7.299 cfs 2.706 af Primary=7.299 cfs 2.706 af
<b>Link 2T: PRE MOD</b>	Inflow=0.149 cfs 0.083 af Primary=0.149 cfs 0.083 af
<b>Link 3T: PRE TOTAL</b>	Inflow=7.441 cfs 2.789 af Primary=7.441 cfs 2.789 af

**Total Runoff Area = 16.931 ac Runoff Volume = 3.741 af Average Runoff Depth = 2.65"**  
**47.59% Pervious = 8.058 ac 52.41% Impervious = 8.873 ac**

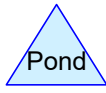
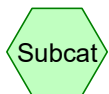
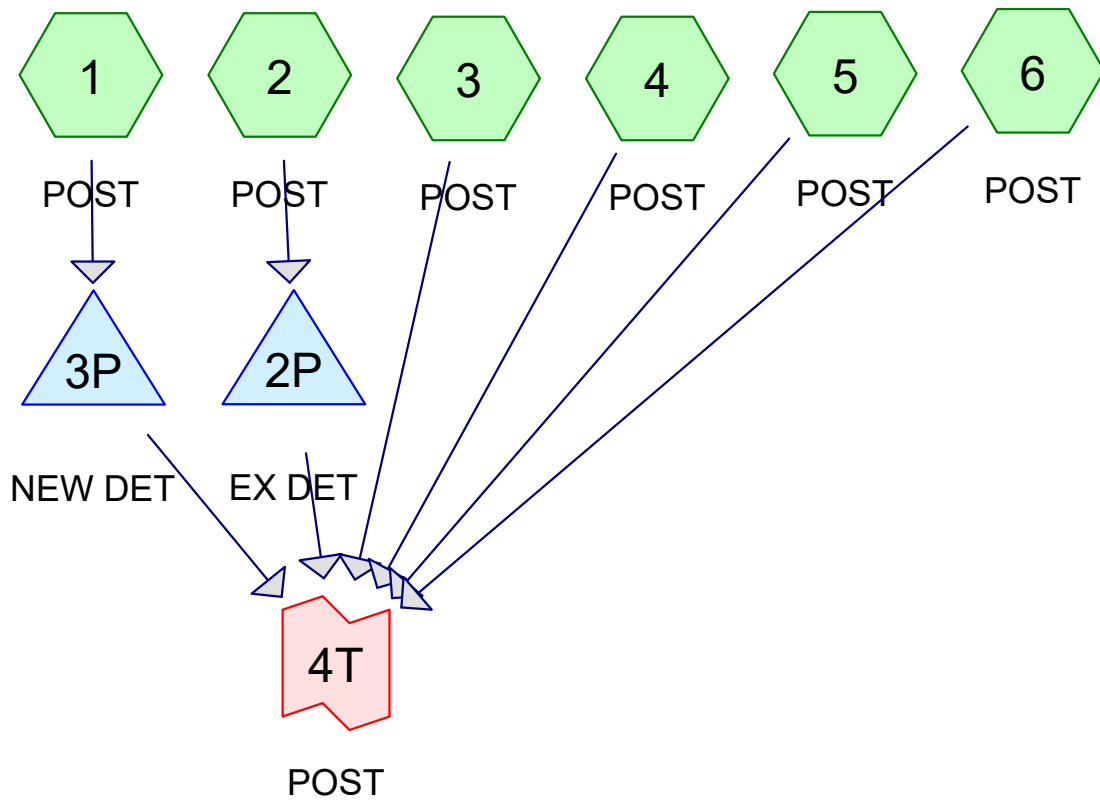


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## **Appendix B: HydroCAD Reports for Post-Developed Condition Storm Events**

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**Routing Diagram for 7431 Stormwater Model**  
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## 7431 Stormwater Model

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Page 2

### Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.386	69	50-75% Grass cover, Fair, HSG B (2)
5.211	79	50-75% Grass cover, Fair, HSG C (3, 5, 6)
8.701	98	IMPERVIOUS EXISTING (1, 2, 3, 4, 5, 6)
0.130	98	IMPERVIOUS MODIFIED (3)
0.777	98	IMPERVIOUS NEW (1, 2, 3, 6)
0.231	98	IMPEVIOUS MODIFIED (1)
1.494	60	Woods, Fair, HSG B (4)
<b>16.931</b>	<b>88</b>	<b>TOTAL AREA</b>



**7431 Stormwater Model**

Type IA 24-hr CWS 2YR Rainfall=2.50"

Prepared by AKS Engineering & Forestry

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Page 3

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points  
Runoff by SBUH method, Split Pervious/Imperv.  
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

<b>Subcatchment1: POST</b>	Runoff Area=63,131 sf 100.00% Impervious Runoff Depth=2.27" Tc=5.0 min CN=0/98 Runoff=0.835 cfs 0.274 af
<b>Subcatchment2: POST</b>	Runoff Area=158,729 sf 89.40% Impervious Runoff Depth=2.07" Tc=5.0 min CN=69/98 Runoff=1.883 cfs 0.630 af
<b>Subcatchment3: POST</b>	Runoff Area=145,743 sf 88.63% Impervious Runoff Depth=2.11" Tc=5.0 min CN=79/98 Runoff=1.766 cfs 0.588 af
<b>Subcatchment4: POST</b>	Runoff Area=80,501 sf 19.16% Impervious Runoff Depth=0.58" Flow Length=597' Tc=7.9 min CN=60/98 Runoff=0.198 cfs 0.089 af
<b>Subcatchment5: POST</b>	Runoff Area=78,150 sf 69.19% Impervious Runoff Depth=1.83" Tc=5.0 min CN=79/98 Runoff=0.799 cfs 0.273 af
<b>Subcatchment6: POST</b>	Runoff Area=211,248 sf 11.78% Impervious Runoff Depth=1.01" Flow Length=701' Tc=15.0 min CN=79/98 Runoff=0.864 cfs 0.407 af
<b>Pond 2P: EX DET</b>	Peak Elev=153.29' Storage=27,441 cf Inflow=1.883 cfs 0.630 af Outflow=0.000 cfs 0.000 af
<b>Pond 3P: NEW DET</b>	Peak Elev=157.35' Storage=0.025 af Inflow=0.835 cfs 0.274 af Outflow=0.438 cfs 0.274 af
<b>Link 4T: POST</b>	Inflow=3.973 cfs 1.631 af Primary=3.973 cfs 1.631 af

**Total Runoff Area = 16.931 ac Runoff Volume = 2.261 af Average Runoff Depth = 1.60"**  
**41.89% Pervious = 7.092 ac 58.11% Impervious = 9.839 ac**

**7431 Stormwater Model**

Type IA 24-hr CWS 2YR Rainfall=2.50"

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Page 1

**Summary for Pond 2P: EX DET**

Inflow Area = 3.644 ac, 89.40% Impervious, Inflow Depth = 2.07" for CWS 2YR event  
 Inflow = 1.883 cfs @ 7.89 hrs, Volume= 0.630 af  
 Outflow = 0.000 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min  
 Primary = 0.000 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
 Peak Elev= 153.29' @ 26.23 hrs Surf.Area= 6,995 sf Storage= 27,441 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)  
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description		
#1	148.00'	58,427 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
148.00	3,486	298.0	0	0	3,486
149.00	4,096	311.0	3,787	3,787	4,186
150.00	4,732	324.0	4,410	8,197	4,915
151.00	5,393	337.0	5,059	13,256	5,675
152.00	6,080	350.0	5,733	18,989	6,464
153.00	6,793	363.0	6,433	25,422	7,283
154.00	7,495	376.0	7,141	32,563	8,133
155.00	8,225	389.0	7,857	40,421	9,012
156.00	8,988	402.0	8,604	49,024	9,920
157.00	9,823	415.0	9,402	58,427	10,859

Device	Routing	Invert	Outlet Devices		
#1	Primary	155.50'	<b>2.0" Horiz. Orifice/Grate</b>	C= 0.600	Limited to weir flow at low heads
#2	Primary	155.50'	<b>2.0" Horiz. Orifice/Grate</b>	C= 0.600	Limited to weir flow at low heads
#3	Primary	155.50'	<b>2.0" Horiz. Orifice/Grate</b>	C= 0.600	Limited to weir flow at low heads
#4	Primary	155.50'	<b>2.0" Horiz. Orifice/Grate</b>	C= 0.600	Limited to weir flow at low heads

**Primary OutFlow** Max=0.000 cfs @ 0.00 hrs HW=148.00' TW=0.00' (Dynamic Tailwater)

- 1=Orifice/Grate ( Controls 0.000 cfs)
- 2=Orifice/Grate ( Controls 0.000 cfs)
- 3=Orifice/Grate ( Controls 0.000 cfs)
- 4=Orifice/Grate ( Controls 0.000 cfs)

**7431 Stormwater Model**

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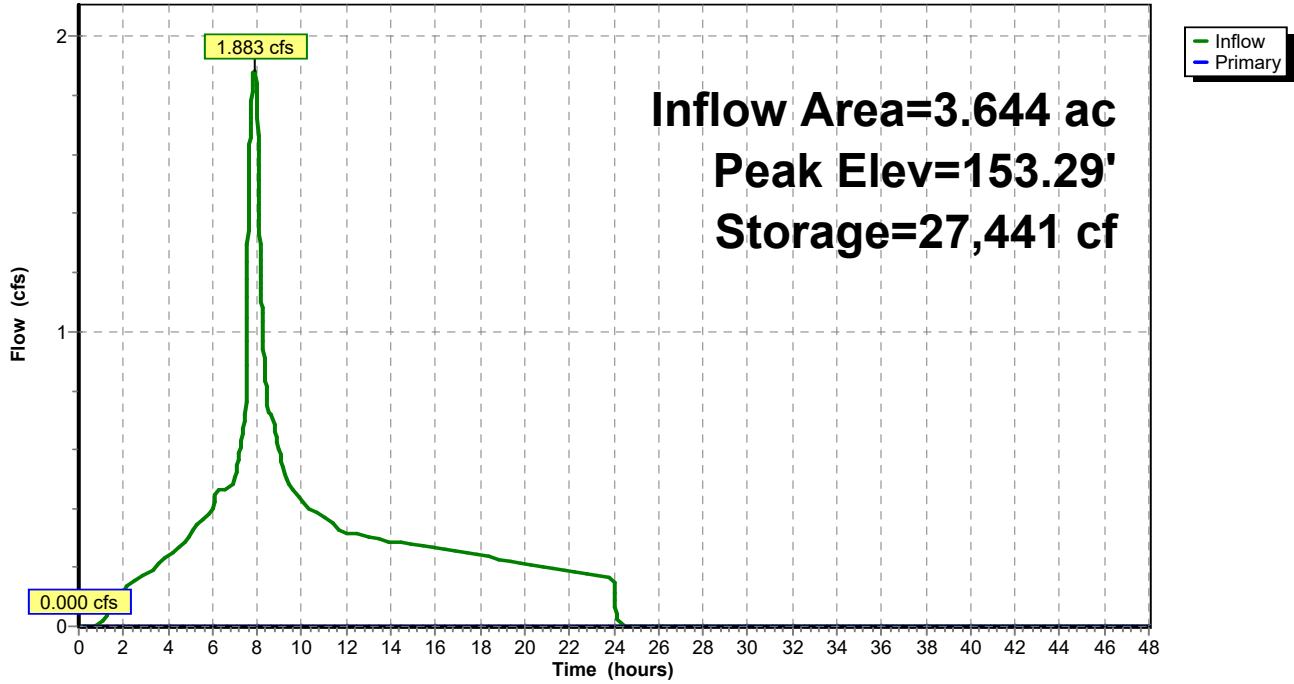
Type IA 24-hr CWS 2YR Rainfall=2.50"

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Page 2

**Pond 2P: EX DET**

Hydrograph



**7431 Stormwater Model**

Type IA 24-hr CWS 2YR Rainfall=2.50"

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Page 3

**Summary for Pond 3P: NEW DET**

Inflow Area = 1.449 ac, 100.00% Impervious, Inflow Depth = 2.27" for CWS 2YR event  
 Inflow = 0.835 cfs @ 7.88 hrs, Volume= 0.274 af  
 Outflow = 0.438 cfs @ 8.26 hrs, Volume= 0.274 af, Atten= 48%, Lag= 22.7 min  
 Primary = 0.438 cfs @ 8.26 hrs, Volume= 0.274 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
 Peak Elev= 157.35' @ 8.26 hrs Surf.Area= 0.013 ac Storage= 0.025 af

Plug-Flow detention time= 13.2 min calculated for 0.274 af (100% of inflow)  
 Center-of-Mass det. time= 13.2 min ( 685.8 - 672.6 )

Volume	Invert	Avail.Storage	Storage Description
#1	155.00'	0.040 af	<b>48.0" Round Pipe Storage</b> L= 140.0'

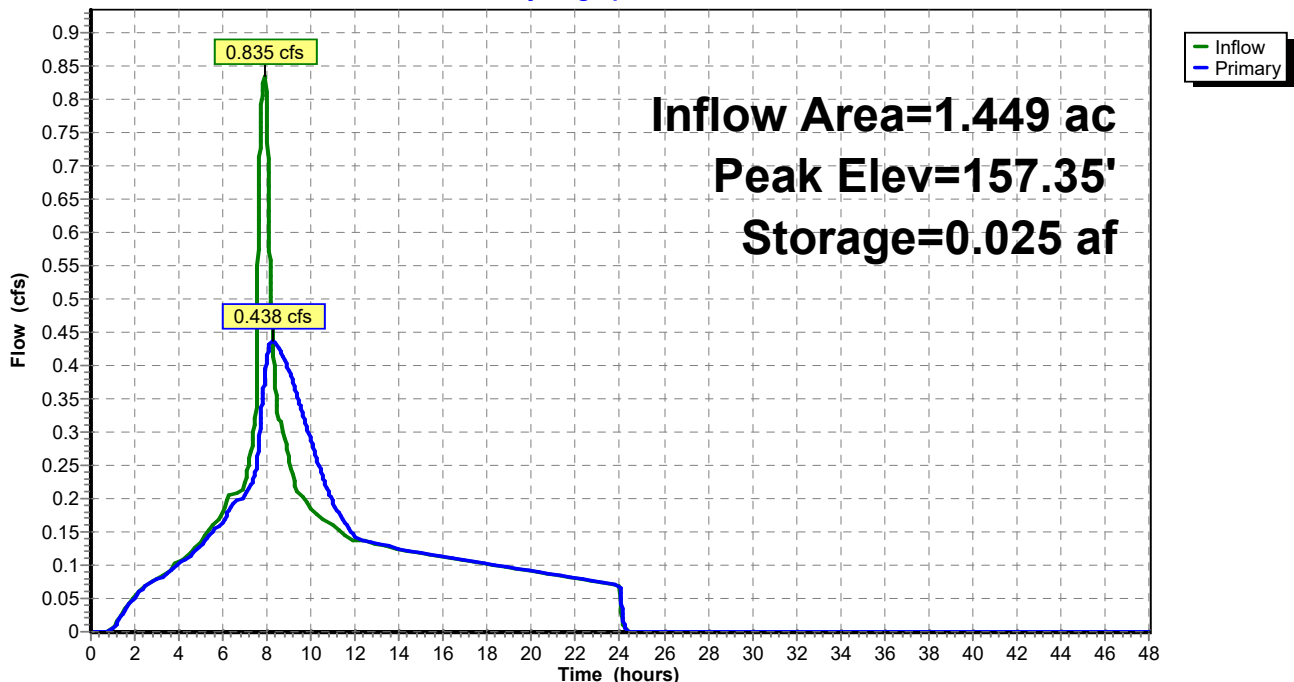
Device	Routing	Invert	Outlet Devices
#1	Primary	155.00'	<b>3.3" Horiz. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads
#2	Primary	157.35'	<b>2.6" Vert. Orifice/Grate</b> C= 0.600
#3	Primary	158.50'	<b>6.0" Horiz. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads

**Primary OutFlow** Max=0.438 cfs @ 8.26 hrs HW=157.35' TW=0.00' (Dynamic Tailwater)

- 1=Orifice/Grate (Orifice Controls 0.438 cfs @ 7.38 fps)
- 2=Orifice/Grate ( Controls 0.000 cfs)
- 3=Orifice/Grate ( Controls 0.000 cfs)

**Pond 3P: NEW DET**

Hydrograph



**7431 Stormwater Model**

Type IA 24-hr CWS 5YR Rainfall=3.10"

Prepared by AKS Engineering & Forestry

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Page 4

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points  
Runoff by SBUH method, Split Pervious/Imperv.  
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

<b>Subcatchment1: POST</b>	Runoff Area=63,131 sf 100.00% Impervious Runoff Depth=2.87" Tc=5.0 min CN=0/98 Runoff=1.047 cfs 0.346 af
<b>Subcatchment2: POST</b>	Runoff Area=158,729 sf 89.40% Impervious Runoff Depth=2.64" Tc=5.0 min CN=69/98 Runoff=2.385 cfs 0.802 af
<b>Subcatchment3: POST</b>	Runoff Area=145,743 sf 88.63% Impervious Runoff Depth=2.69" Tc=5.0 min CN=79/98 Runoff=2.241 cfs 0.749 af
<b>Subcatchment4: POST</b>	Runoff Area=80,501 sf 19.16% Impervious Runoff Depth=0.85" Flow Length=597' Tc=7.9 min CN=60/98 Runoff=0.249 cfs 0.131 af
<b>Subcatchment5: POST</b>	Runoff Area=78,150 sf 69.19% Impervious Runoff Depth=2.37" Tc=5.0 min CN=79/98 Runoff=1.041 cfs 0.355 af
<b>Subcatchment6: POST</b>	Runoff Area=211,248 sf 11.78% Impervious Runoff Depth=1.45" Flow Length=701' Tc=15.0 min CN=79/98 Runoff=1.354 cfs 0.587 af
<b>Pond 2P: EX DET</b>	Peak Elev=154.31' Storage=34,927 cf Inflow=2.385 cfs 0.802 af Outflow=0.000 cfs 0.000 af
<b>Pond 3P: NEW DET</b>	Peak Elev=158.00' Storage=0.032 af Inflow=1.047 cfs 0.346 af Outflow=0.625 cfs 0.346 af
<b>Link 4T: POST</b>	Inflow=5.358 cfs 2.167 af Primary=5.358 cfs 2.167 af

**Total Runoff Area = 16.931 ac Runoff Volume = 2.969 af Average Runoff Depth = 2.10"**  
**41.89% Pervious = 7.092 ac 58.11% Impervious = 9.839 ac**

**7431 Stormwater Model**

Type IA 24-hr CWS 5YR Rainfall=3.10"

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Page 4

**Summary for Pond 2P: EX DET**

Inflow Area = 3.644 ac, 89.40% Impervious, Inflow Depth = 2.64" for CWS 5YR event  
 Inflow = 2.385 cfs @ 7.88 hrs, Volume= 0.802 af  
 Outflow = 0.000 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min  
 Primary = 0.000 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
 Peak Elev= 154.31' @ 26.22 hrs Surf.Area= 7,718 sf Storage= 34,927 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)  
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description		
#1	148.00'	58,427 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
148.00	3,486	298.0	0	0	3,486
149.00	4,096	311.0	3,787	3,787	4,186
150.00	4,732	324.0	4,410	8,197	4,915
151.00	5,393	337.0	5,059	13,256	5,675
152.00	6,080	350.0	5,733	18,989	6,464
153.00	6,793	363.0	6,433	25,422	7,283
154.00	7,495	376.0	7,141	32,563	8,133
155.00	8,225	389.0	7,857	40,421	9,012
156.00	8,988	402.0	8,604	49,024	9,920
157.00	9,823	415.0	9,402	58,427	10,859

Device	Routing	Invert	Outlet Devices		
#1	Primary	155.50'	<b>2.0" Horiz. Orifice/Grate</b>	C= 0.600	Limited to weir flow at low heads
#2	Primary	155.50'	<b>2.0" Horiz. Orifice/Grate</b>	C= 0.600	Limited to weir flow at low heads
#3	Primary	155.50'	<b>2.0" Horiz. Orifice/Grate</b>	C= 0.600	Limited to weir flow at low heads
#4	Primary	155.50'	<b>2.0" Horiz. Orifice/Grate</b>	C= 0.600	Limited to weir flow at low heads

**Primary OutFlow** Max=0.000 cfs @ 0.00 hrs HW=148.00' TW=0.00' (Dynamic Tailwater)

- 1=Orifice/Grate ( Controls 0.000 cfs)
- 2=Orifice/Grate ( Controls 0.000 cfs)
- 3=Orifice/Grate ( Controls 0.000 cfs)
- 4=Orifice/Grate ( Controls 0.000 cfs)

**7431 Stormwater Model**

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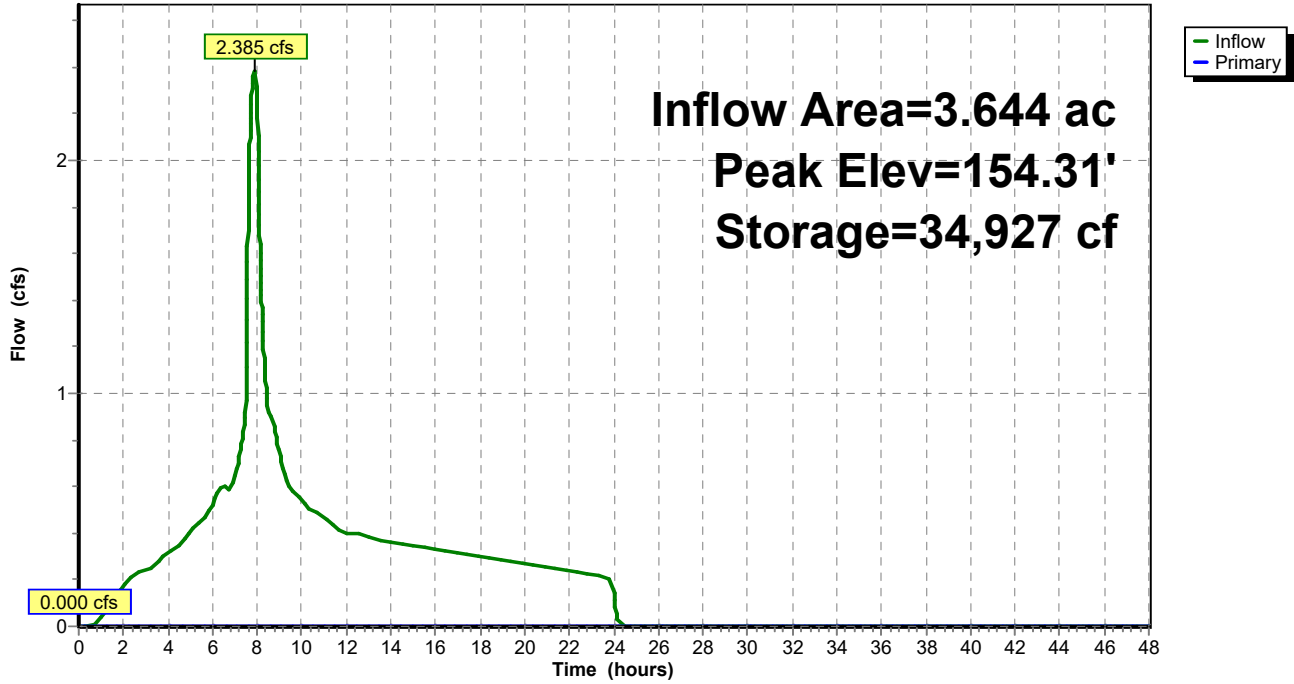
Type IA 24-hr CWS 5YR Rainfall=3.10"

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Page 5

**Pond 2P: EX DET**

Hydrograph





**7431 Stormwater Model**

Type IA 24-hr CWS 5YR Rainfall=3.10"

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Page 6

**Summary for Pond 3P: NEW DET**

Inflow Area = 1.449 ac, 100.00% Impervious, Inflow Depth = 2.87" for CWS 5YR event  
 Inflow = 1.047 cfs @ 7.88 hrs, Volume= 0.346 af  
 Outflow = 0.625 cfs @ 8.18 hrs, Volume= 0.346 af, Atten= 40%, Lag= 18.4 min  
 Primary = 0.625 cfs @ 8.18 hrs, Volume= 0.346 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
 Peak Elev= 158.00' @ 8.18 hrs Surf.Area= 0.011 ac Storage= 0.032 af

Plug-Flow detention time= 16.2 min calculated for 0.346 af (100% of inflow)  
 Center-of-Mass det. time= 16.2 min ( 682.3 - 666.1 )

Volume	Invert	Avail.Storage	Storage Description
#1	155.00'	0.040 af	<b>48.0" Round Pipe Storage</b> L= 140.0'

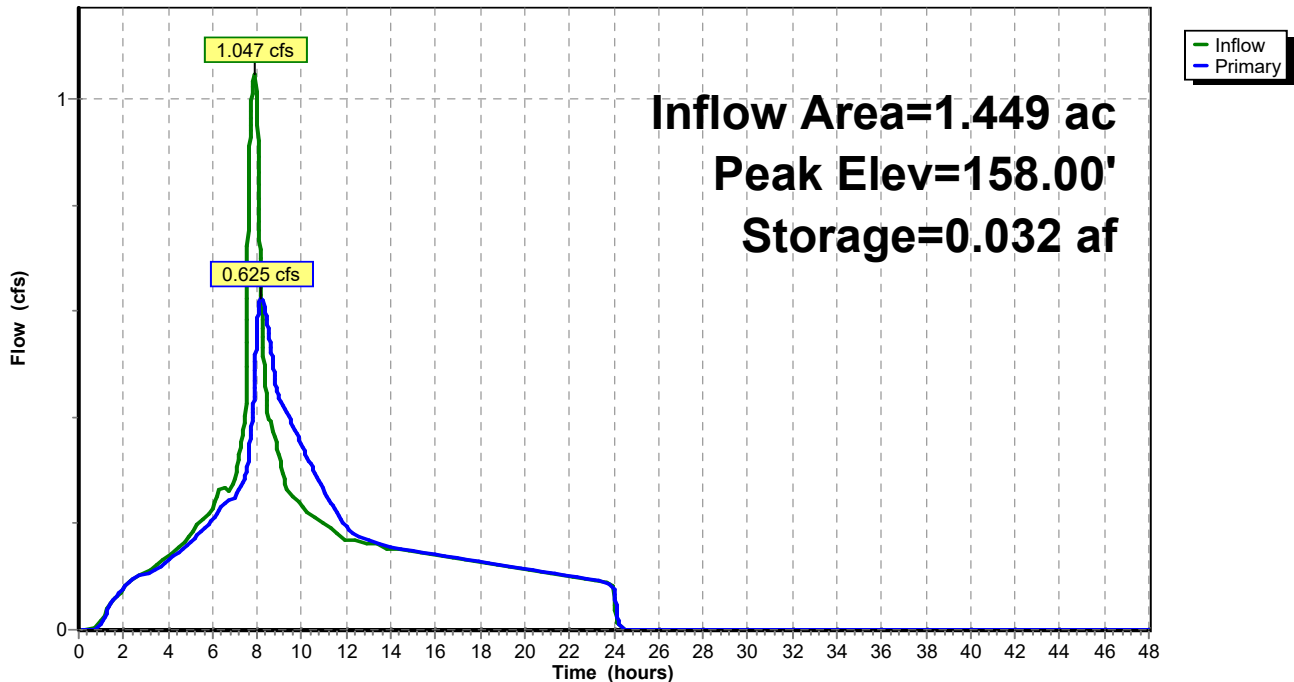
Device	Routing	Invert	Outlet Devices
#1	Primary	155.00'	<b>3.3" Horiz. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads
#2	Primary	157.35'	<b>2.6" Vert. Orifice/Grate</b> C= 0.600
#3	Primary	158.50'	<b>6.0" Horiz. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads

**Primary OutFlow** Max=0.625 cfs @ 8.18 hrs HW=158.00' TW=0.00' (Dynamic Tailwater)

- 1=Orifice/Grate (Orifice Controls 0.495 cfs @ 8.33 fps)
- 2=Orifice/Grate (Orifice Controls 0.130 cfs @ 3.53 fps)
- 3=Orifice/Grate ( Controls 0.000 cfs)

**Pond 3P: NEW DET**

Hydrograph



**7431 Stormwater Model**

Type IA 24-hr CWS 10YR Rainfall=3.45"

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Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points  
Runoff by SBUH method, Split Pervious/Imperv.  
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

<b>Subcatchment1: POST</b>	Runoff Area=63,131 sf 100.00% Impervious Runoff Depth=3.22" Tc=5.0 min CN=0/98 Runoff=1.170 cfs 0.388 af
<b>Subcatchment2: POST</b>	Runoff Area=158,729 sf 89.40% Impervious Runoff Depth=2.97" Tc=5.0 min CN=69/98 Runoff=2.681 cfs 0.903 af
<b>Subcatchment3: POST</b>	Runoff Area=145,743 sf 88.63% Impervious Runoff Depth=3.02" Tc=5.0 min CN=79/98 Runoff=2.519 cfs 0.843 af
<b>Subcatchment4: POST</b>	Runoff Area=80,501 sf 19.16% Impervious Runoff Depth=1.03" Flow Length=597' Tc=7.9 min CN=60/98 Runoff=0.293 cfs 0.158 af
<b>Subcatchment5: POST</b>	Runoff Area=78,150 sf 69.19% Impervious Runoff Depth=2.70" Tc=5.0 min CN=79/98 Runoff=1.185 cfs 0.403 af
<b>Subcatchment6: POST</b>	Runoff Area=211,248 sf 11.78% Impervious Runoff Depth=1.73" Flow Length=701' Tc=15.0 min CN=79/98 Runoff=1.662 cfs 0.698 af
<b>Pond 2P: EX DET</b>	Peak Elev=154.87' Storage=39,332 cf Inflow=2.681 cfs 0.903 af Outflow=0.000 cfs 0.000 af
<b>Pond 3P: NEW DET</b>	Peak Elev=158.46' Storage=0.037 af Inflow=1.170 cfs 0.388 af Outflow=0.710 cfs 0.388 af
<b>Link 4T: POST</b>	Inflow=6.208 cfs 2.491 af Primary=6.208 cfs 2.491 af

**Total Runoff Area = 16.931 ac Runoff Volume = 3.394 af Average Runoff Depth = 2.41"**  
**41.89% Pervious = 7.092 ac 58.11% Impervious = 9.839 ac**

**7431 Stormwater Model**

Type IA 24-hr CWS 10YR Rainfall=3.45"

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Page 7

**Summary for Pond 2P: EX DET**

Inflow Area = 3.644 ac, 89.40% Impervious, Inflow Depth = 2.97" for CWS 10YR event  
 Inflow = 2.681 cfs @ 7.88 hrs, Volume= 0.903 af  
 Outflow = 0.000 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min  
 Primary = 0.000 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
 Peak Elev= 154.87' @ 26.30 hrs Surf.Area= 8,126 sf Storage= 39,332 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)  
 Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description		
#1	148.00'	58,427 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
148.00	3,486	298.0	0	0	3,486
149.00	4,096	311.0	3,787	3,787	4,186
150.00	4,732	324.0	4,410	8,197	4,915
151.00	5,393	337.0	5,059	13,256	5,675
152.00	6,080	350.0	5,733	18,989	6,464
153.00	6,793	363.0	6,433	25,422	7,283
154.00	7,495	376.0	7,141	32,563	8,133
155.00	8,225	389.0	7,857	40,421	9,012
156.00	8,988	402.0	8,604	49,024	9,920
157.00	9,823	415.0	9,402	58,427	10,859

Device	Routing	Invert	Outlet Devices		
#1	Primary	155.50'	<b>2.0" Horiz. Orifice/Grate</b>	C= 0.600	Limited to weir flow at low heads
#2	Primary	155.50'	<b>2.0" Horiz. Orifice/Grate</b>	C= 0.600	Limited to weir flow at low heads
#3	Primary	155.50'	<b>2.0" Horiz. Orifice/Grate</b>	C= 0.600	Limited to weir flow at low heads
#4	Primary	155.50'	<b>2.0" Horiz. Orifice/Grate</b>	C= 0.600	Limited to weir flow at low heads

**Primary OutFlow** Max=0.000 cfs @ 0.00 hrs HW=148.00' TW=0.00' (Dynamic Tailwater)

- 1=Orifice/Grate ( Controls 0.000 cfs)
- 2=Orifice/Grate ( Controls 0.000 cfs)
- 3=Orifice/Grate ( Controls 0.000 cfs)
- 4=Orifice/Grate ( Controls 0.000 cfs)

**7431 Stormwater Model**

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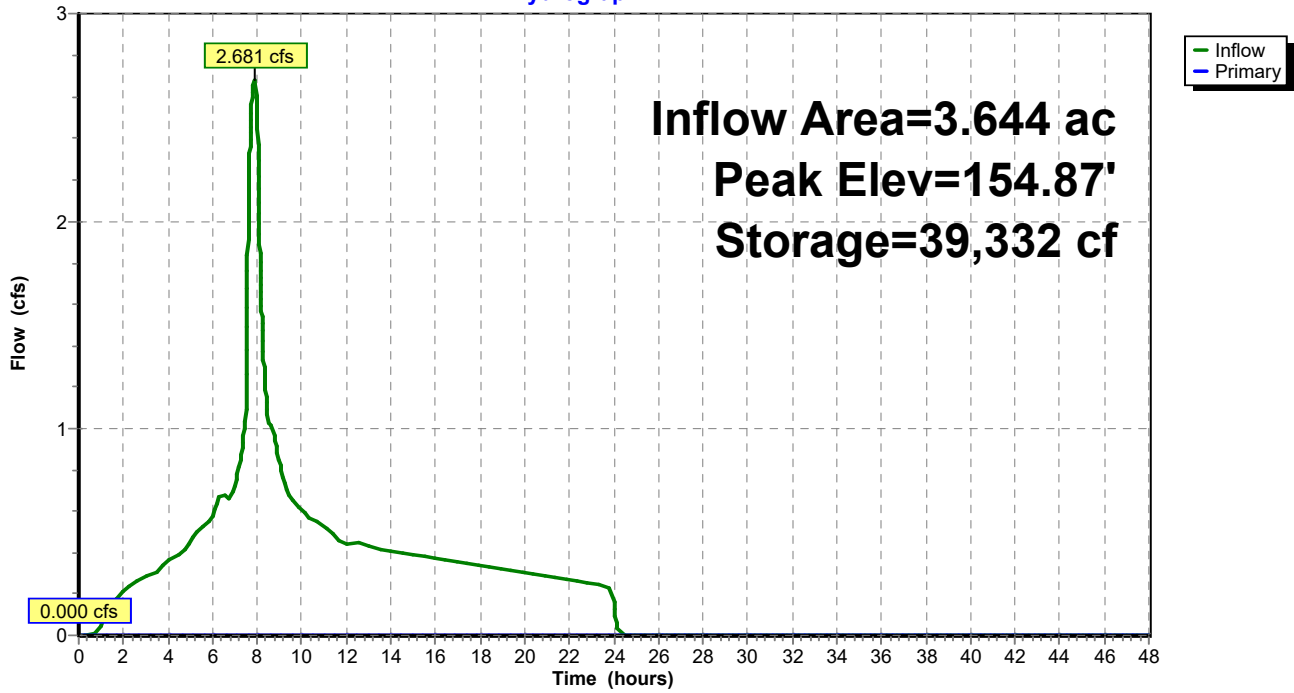
Type IA 24-hr CWS 10YR Rainfall=3.45"

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Page 8

**Pond 2P: EX DET**

Hydrograph



**7431 Stormwater Model**

Type IA 24-hr CWS 10YR Rainfall=3.45"

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Page 9

**Summary for Pond 3P: NEW DET**

Inflow Area = 1.449 ac, 100.00% Impervious, Inflow Depth = 3.22" for CWS 10YR event  
 Inflow = 1.170 cfs @ 7.88 hrs, Volume= 0.388 af  
 Outflow = 0.710 cfs @ 8.18 hrs, Volume= 0.388 af, Atten= 39%, Lag= 17.9 min  
 Primary = 0.710 cfs @ 8.18 hrs, Volume= 0.388 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
 Peak Elev= 158.46' @ 8.18 hrs Surf.Area= 0.009 ac Storage= 0.037 af

Plug-Flow detention time= 17.8 min calculated for 0.388 af (100% of inflow)  
 Center-of-Mass det. time= 17.8 min ( 681.0 - 663.2 )

Volume	Invert	Avail.Storage	Storage Description
#1	155.00'	0.040 af	<b>48.0" Round Pipe Storage</b> L= 140.0'

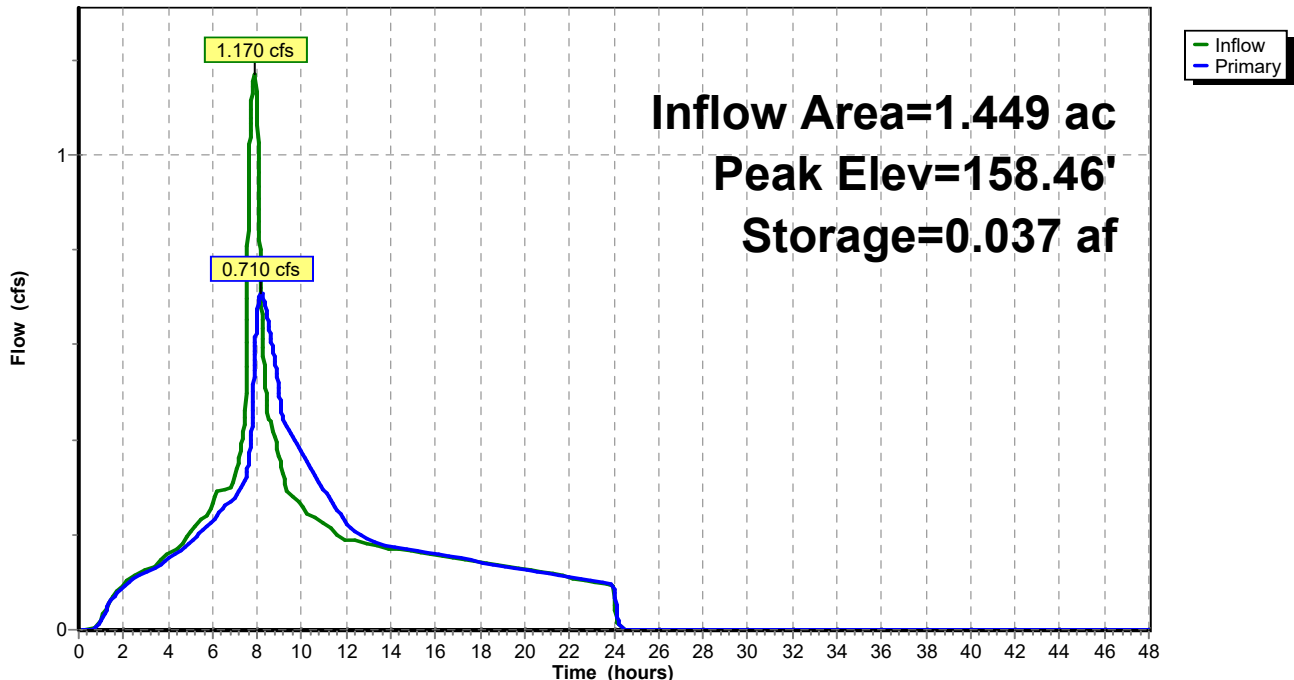
Device	Routing	Invert	Outlet Devices
#1	Primary	155.00'	<b>3.3" Horiz. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads
#2	Primary	157.35'	<b>2.6" Vert. Orifice/Grate</b> C= 0.600
#3	Primary	158.50'	<b>6.0" Horiz. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads

**Primary OutFlow** Max=0.710 cfs @ 8.18 hrs HW=158.46' TW=0.00' (Dynamic Tailwater)

- 1=Orifice/Grate (Orifice Controls 0.532 cfs @ 8.96 fps)
- 2=Orifice/Grate (Orifice Controls 0.178 cfs @ 4.83 fps)
- 3=Orifice/Grate ( Controls 0.000 cfs)

**Pond 3P: NEW DET**

Hydrograph



**7431 Stormwater Model**

Type IA 24-hr CWS 25YR Rainfall=3.90"

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Page 6

Time span=0.00-48.00 hrs, dt=0.01 hrs, 4801 points  
Runoff by SBUH method, Split Pervious/Imperv.  
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

<b>Subcatchment1: POST</b>	Runoff Area=63,131 sf 100.00% Impervious Runoff Depth=3.67" Tc=5.0 min CN=0/98 Runoff=1.328 cfs 0.443 af
<b>Subcatchment2: POST</b>	Runoff Area=158,729 sf 89.40% Impervious Runoff Depth=3.40" Tc=5.0 min CN=69/98 Runoff=3.062 cfs 1.034 af
<b>Subcatchment3: POST</b>	Runoff Area=145,743 sf 88.63% Impervious Runoff Depth=3.46" Tc=5.0 min CN=79/98 Runoff=2.878 cfs 0.965 af
<b>Subcatchment4: POST</b>	Runoff Area=80,501 sf 19.16% Impervious Runoff Depth=1.28" Flow Length=597' Tc=7.9 min CN=60/98 Runoff=0.391 cfs 0.197 af
<b>Subcatchment5: POST</b>	Runoff Area=78,150 sf 69.19% Impervious Runoff Depth=3.12" Tc=5.0 min CN=79/98 Runoff=1.372 cfs 0.466 af
<b>Subcatchment6: POST</b>	Runoff Area=211,248 sf 11.78% Impervious Runoff Depth=2.09" Flow Length=701' Tc=15.0 min CN=79/98 Runoff=2.077 cfs 0.846 af
<b>Pond 2P: EX DET</b>	Peak Elev=155.54' Storage=44,965 cf Inflow=3.062 cfs 1.034 af Outflow=0.053 cfs 0.009 af
<b>Pond 3P: NEW DET</b>	Peak Elev=158.72' Storage=0.039 af Inflow=1.328 cfs 0.443 af Outflow=1.198 cfs 0.443 af
<b>Link 4T: POST</b>	Inflow=7.773 cfs 2.926 af Primary=7.773 cfs 2.926 af

**Total Runoff Area = 16.931 ac Runoff Volume = 3.950 af Average Runoff Depth = 2.80"**  
**41.89% Pervious = 7.092 ac 58.11% Impervious = 9.839 ac**

**7431 Stormwater Model**

Type IA 24-hr CWS 25YR Rainfall=3.90"

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Page 10

**Summary for Pond 2P: EX DET**

Inflow Area = 3.644 ac, 89.40% Impervious, Inflow Depth = 3.40" for CWS 25YR event  
 Inflow = 3.062 cfs @ 7.88 hrs, Volume= 1.034 af  
 Outflow = 0.053 cfs @ 24.14 hrs, Volume= 0.009 af, Atten= 98%, Lag= 975.3 min  
 Primary = 0.053 cfs @ 24.14 hrs, Volume= 0.009 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
 Peak Elev= 155.54' @ 24.14 hrs Surf.Area= 8,632 sf Storage= 44,965 cf

Plug-Flow detention time= 1,509.9 min calculated for 0.009 af (1% of inflow)  
 Center-of-Mass det. time= 920.6 min ( 1,588.6 - 668.0 )

Volume	Invert	Avail.Storage	Storage Description		
#1	148.00'	58,427 cf	<b>Custom Stage Data (Irregular)</b> Listed below (Recalc)		
Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
148.00	3,486	298.0	0	0	3,486
149.00	4,096	311.0	3,787	3,787	4,186
150.00	4,732	324.0	4,410	8,197	4,915
151.00	5,393	337.0	5,059	13,256	5,675
152.00	6,080	350.0	5,733	18,989	6,464
153.00	6,793	363.0	6,433	25,422	7,283
154.00	7,495	376.0	7,141	32,563	8,133
155.00	8,225	389.0	7,857	40,421	9,012
156.00	8,988	402.0	8,604	49,024	9,920
157.00	9,823	415.0	9,402	58,427	10,859

Device	Routing	Invert	Outlet Devices		
#1	Primary	155.50'	<b>2.0" Horiz. Orifice/Grate</b>	C= 0.600	Limited to weir flow at low heads
#2	Primary	155.50'	<b>2.0" Horiz. Orifice/Grate</b>	C= 0.600	Limited to weir flow at low heads
#3	Primary	155.50'	<b>2.0" Horiz. Orifice/Grate</b>	C= 0.600	Limited to weir flow at low heads
#4	Primary	155.50'	<b>2.0" Horiz. Orifice/Grate</b>	C= 0.600	Limited to weir flow at low heads

**Primary OutFlow** Max=0.053 cfs @ 24.14 hrs HW=155.54' TW=0.00' (Dynamic Tailwater)

- 1=Orifice/Grate (Weir Controls 0.013 cfs @ 0.65 fps)
- 2=Orifice/Grate (Weir Controls 0.013 cfs @ 0.65 fps)
- 3=Orifice/Grate (Weir Controls 0.013 cfs @ 0.65 fps)
- 4=Orifice/Grate (Weir Controls 0.013 cfs @ 0.65 fps)



**7431 Stormwater Model**

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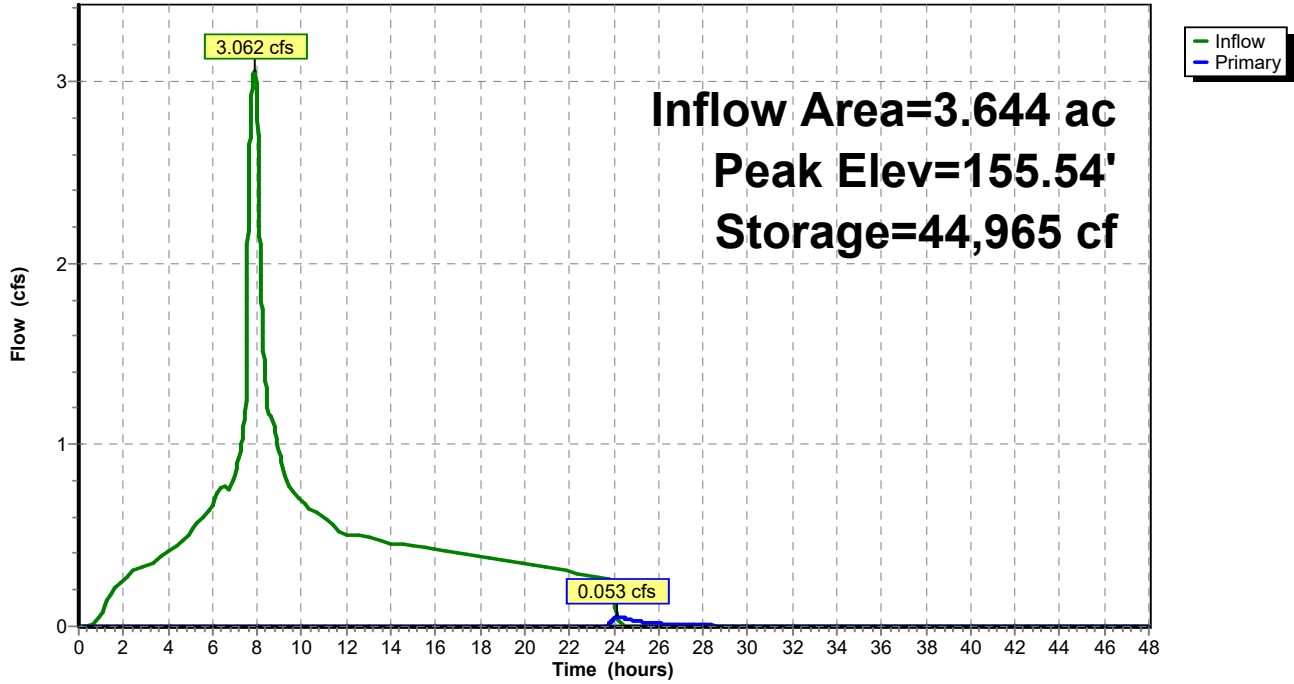
Type IA 24-hr CWS 25YR Rainfall=3.90"

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Page 11

**Pond 2P: EX DET**

Hydrograph



**7431 Stormwater Model**

Type IA 24-hr CWS 25YR Rainfall=3.90"

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Page 12

**Summary for Pond 3P: NEW DET**

Inflow Area = 1.449 ac, 100.00% Impervious, Inflow Depth = 3.67" for CWS 25YR event  
 Inflow = 1.328 cfs @ 7.88 hrs, Volume= 0.443 af  
 Outflow = 1.198 cfs @ 8.02 hrs, Volume= 0.443 af, Atten= 10%, Lag= 8.8 min  
 Primary = 1.198 cfs @ 8.02 hrs, Volume= 0.443 af

Routing by Dyn-Stor-Ind method, Time Span= 0.00-48.00 hrs, dt= 0.01 hrs  
 Peak Elev= 158.72' @ 8.02 hrs Surf.Area= 0.007 ac Storage= 0.039 af

Plug-Flow detention time= 19.2 min calculated for 0.443 af (100% of inflow)  
 Center-of-Mass det. time= 19.2 min ( 679.3 - 660.1 )

Volume	Invert	Avail.Storage	Storage Description
#1	155.00'	0.040 af	<b>48.0" Round Pipe Storage</b> L= 140.0'

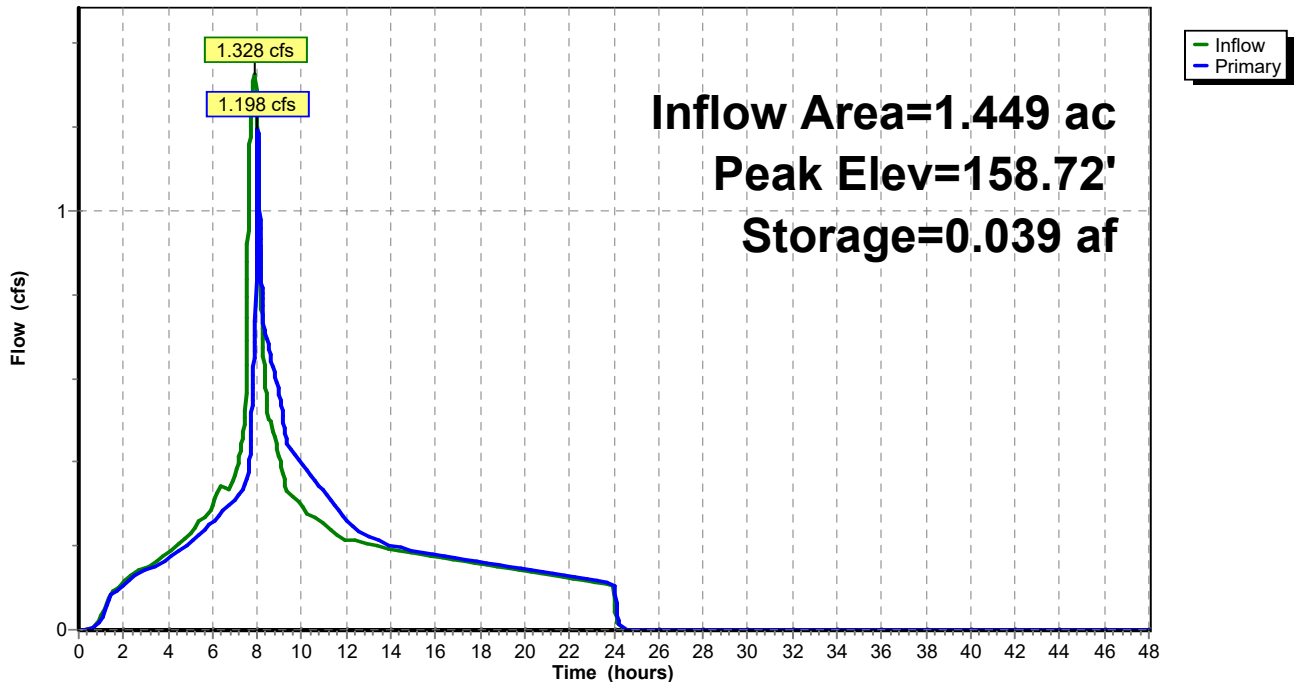
Device	Routing	Invert	Outlet Devices
#1	Primary	155.00'	<b>3.3" Horiz. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads
#2	Primary	157.35'	<b>2.6" Vert. Orifice/Grate</b> C= 0.600
#3	Primary	158.50'	<b>6.0" Horiz. Orifice/Grate</b> C= 0.600 Limited to weir flow at low heads

**Primary OutFlow** Max=1.197 cfs @ 8.02 hrs HW=158.72' TW=0.00' (Dynamic Tailwater)

- 1=Orifice/Grate (Orifice Controls 0.552 cfs @ 9.29 fps)
- 2=Orifice/Grate (Orifice Controls 0.200 cfs @ 5.41 fps)
- 3=Orifice/Grate (Orifice Controls 0.446 cfs @ 2.27 fps)

**Pond 3P: NEW DET**

Hydrograph





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## **Appendix C: Stormwater Quality Calculations**

---



## STORMWATER QUALITY CALCULATIONS

Client: Cascade Columbia Distribution Inc.  
Project: 14200 SW Tualatin-Sherwood Road  
AKS Job No.: 7431  
Date: 5/27/2022  
Done By: KNU  
Checked By: SR

### IMPERVIOUS AREA

Total Site Area: 16.93 acres  
Total Site Area: 737,439 square feet (sf)

Onsite New Impervious Area 33,859 sf  
Onsite Modified/Replaced Impervious Area: 15,734 sf  
Impervious Area Required for Treatment: 81,061 sf  
(New Impervious Area + 3\*Modified/Replaced Impervious Area)

CWS approved Contech 27" ZPG media Catridge flow rate = 0.05 cfs

### STORM WATER QUALITY FLOW (WQF)

(Per CWS 4.08.5a3 - R&O 19-05)

#### **WQ Manhole:**

Contributing Area: 63,131 sf  
$$WQF = \frac{0.36 \times \text{Area (sf)}}{12 \times 4 \times 60 \times 60} = 0.132 \text{ cfs}$$

#### **WQ Catch Basin:**

Contributing Area: 53,012 sf  
$$WQF = \frac{0.36 \times \text{Area (sf)}}{12 \times 4 \times 60 \times 60} = 0.110 \text{ cfs}$$

### WATER QUALITY CATRIDGES REQUIRED

(Per CWS 4.08.5a3 - R&O 19-05)

#### **WQ Manhole:**

No. Catridges =  $\frac{WQF}{0.05} = 2.630 = 3$  - 27" Catridge CB

#### **WQ Catch Basin:**

No. Catridges =  $\frac{WQF}{0.05} = 2.209 = 3$  - 27" Catridge CB

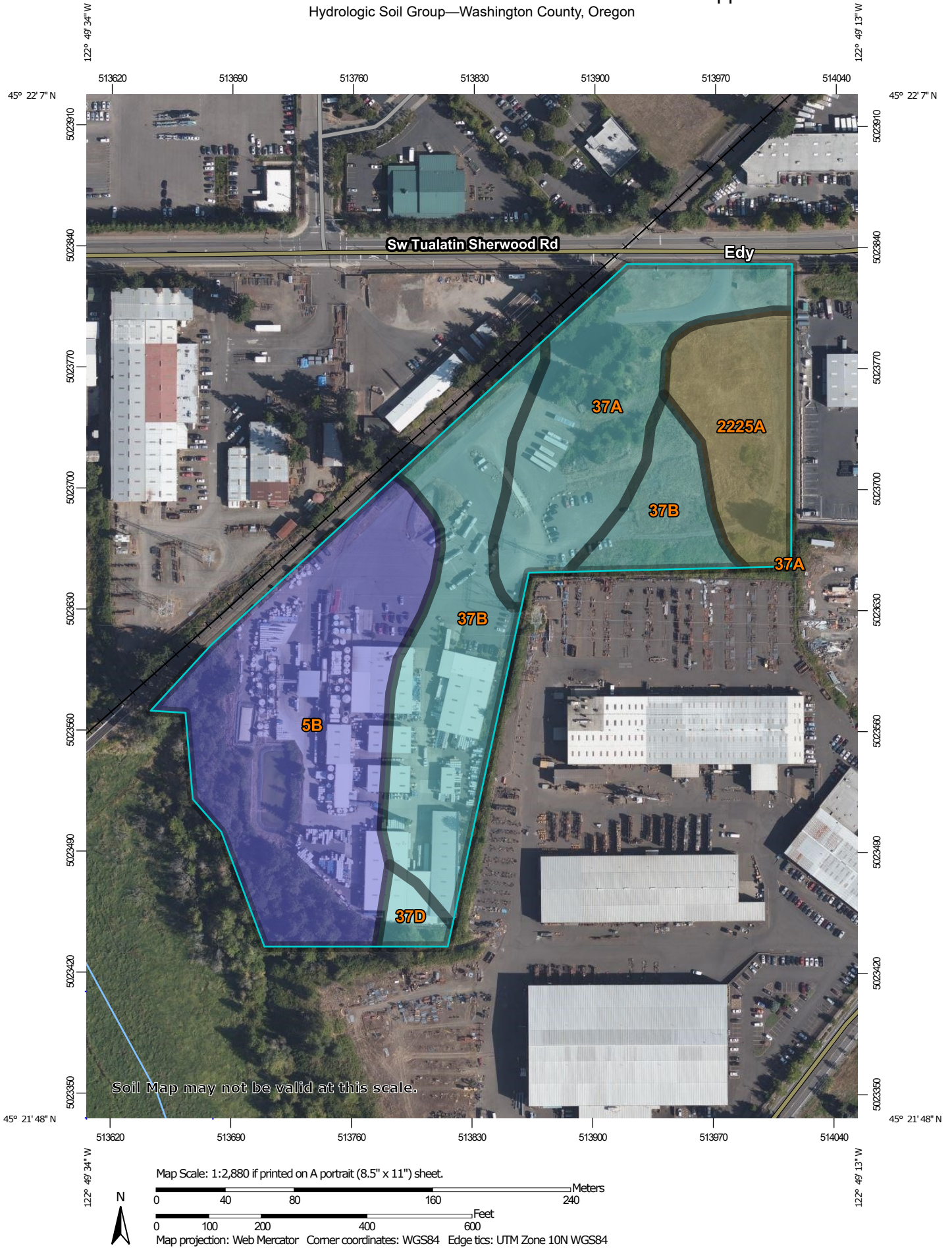


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## **Appendix D: USDA-NRCS Soil Resource Report**

---

Hydrologic Soil Group—Washington County, Oregon





## MAP LEGEND

**Area of Interest (AOI)**  
 Area of Interest (AOI)

**Soils**  
**Soil Rating Polygons**  
 A  
 A/D  
 B  
 B/D  
 C  
 C/D  
 D  
 Not rated or not available

**Soil Rating Lines**  
 A  
 A/D  
 B  
 B/D  
 C  
 C/D  
 D  
 Not rated or not available

**Soil Rating Points**  
 A  
 A/D  
 B  
 B/D

**Water Features**  
 Streams and Canals

**Transportation**  
 Rails  
 Interstate Highways  
 US Routes  
 Major Roads  
 Local Roads

**Background**  
 Aerial Photography

**C**  
 C  
 C/D  
 D  
 Not rated or not available

## 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: Washington County, Oregon  
 Survey Area Data: Version 20, Aug 26, 2021

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

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.



## Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
5B	Briedwell stony silt loam, 0 to 7 percent slopes	B	6.2	36.6%
37A	Quatama loam, 0 to 3 percent slopes	C	3.5	20.7%
37B	Quatama loam, 3 to 7 percent slopes	C	4.9	28.9%
37D	Quatama loam, 12 to 20 percent slopes	C	0.3	2.0%
2225A	Huberly silt loam, 0 to 3 percent slopes	C/D	2.0	11.9%
<b>Totals for Area of Interest</b>			<b>16.9</b>	<b>100.0%</b>

## Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

## Rating Options

*Aggregation Method:* Dominant Condition

*Component Percent Cutoff:* None Specified

*Tie-break Rule:* Higher



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## **Appendix E: TR-55 Runoff Curve Numbers**

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**Table 2-2a** Runoff curve numbers for urban areas <sup>1/</sup>

Cover description	Average percent impervious area <sup>2/</sup>	Curve numbers for hydrologic soil group			
		A	B	C	D
<b>Fully developed urban areas (vegetation established)</b>					
Open space (lawns, parks, golf courses, cemeteries, etc.) <sup>3/</sup> :					
Poor condition (grass cover < 50%) .....		68	79	86	89
Fair condition (grass cover 50% to 75%) .....		49	69	79	84
Good condition (grass cover > 75%) .....		39	61	74	80
Impervious areas:					
Paved parking lots, roofs, driveways, etc. (excluding right-of-way) .....					
		98	98	98	98
Streets and roads:					
Paved; curbs and storm sewers (excluding right-of-way) .....					
		98	98	98	98
Paved; open ditches (including right-of-way) .....					
		83	89	92	93
Gravel (including right-of-way) .....					
		76	85	89	91
Dirt (including right-of-way) .....					
		72	82	87	89
Western desert urban areas:					
Natural desert landscaping (pervious areas only) <sup>4/</sup> .....					
		63	77	85	88
Artificial desert landscaping (impervious weed barrier, desert shrub with 1- to 2-inch sand or gravel mulch and basin borders) .....					
		96	96	96	96
Urban districts:					
Commercial and business .....	85	89	92	94	95
Industrial .....	72	81	88	91	93
Residential districts by average lot size:					
1/8 acre or less (town houses) .....	65	77	85	90	92
1/4 acre .....	38	61	75	83	87
1/3 acre .....	30	57	72	81	86
1/2 acre .....	25	54	70	80	85
1 acre .....	20	51	68	79	84
2 acres .....	12	46	65	77	82
<b>Developing urban areas</b>					
Newly graded areas (pervious areas only, no vegetation) <sup>5/</sup> .....					
		77	86	91	94
Idle lands (CN's are determined using cover types similar to those in table 2-2c).					

<sup>1</sup> Average runoff condition, and  $I_a = 0.2S$ .

<sup>2</sup> The average percent impervious area shown was used to develop the composite CN's. Other assumptions are as follows: impervious areas are directly connected to the drainage system, impervious areas have a CN of 98, and pervious areas are considered equivalent to open space in good hydrologic condition. CN's for other combinations of conditions may be computed using figure 2-3 or 2-4.

<sup>3</sup> CN's shown are equivalent to those of pasture. Composite CN's may be computed for other combinations of open space cover type.

<sup>4</sup> Composite CN's for natural desert landscaping should be computed using figures 2-3 or 2-4 based on the impervious area percentage (CN = 98) and the pervious area CN. The pervious area CN's are assumed equivalent to desert shrub in poor hydrologic condition.

<sup>5</sup> Composite CN's to use for the design of temporary measures during grading and construction should be computed using figure 2-3 or 2-4 based on the degree of development (impervious area percentage) and the CN's for the newly graded pervious areas.

**Table 2-2b** Runoff curve numbers for cultivated agricultural lands <sup>1/</sup>

Cover description			Curve numbers for hydrologic soil group			
Cover type	Treatment <sup>2/</sup>	Hydrologic condition <sup>3/</sup>	A	B	C	D
Fallow	Bare soil	—	77	86	91	94
	Crop residue cover (CR)	Poor	76	85	90	93
		Good	74	83	88	90
Row crops	Straight row (SR)	Poor	72	81	88	91
		Good	67	78	85	89
	SR + CR	Poor	71	80	87	90
		Good	64	75	82	85
	Contoured (C)	Poor	70	79	84	88
		Good	65	75	82	86
	C + CR	Poor	69	78	83	87
		Good	64	74	81	85
	Contoured & terraced (C&T)	Poor	66	74	80	82
		Good	62	71	78	81
C&T+ CR	Poor	65	73	79	81	
	Good	61	70	77	80	
Small grain	SR	Poor	65	76	84	88
		Good	63	75	83	87
	SR + CR	Poor	64	75	83	86
		Good	60	72	80	84
	C	Poor	63	74	82	85
		Good	61	73	81	84
	C + CR	Poor	62	73	81	84
		Good	60	72	80	83
	C&T	Poor	61	72	79	82
		Good	59	70	78	81
C&T+ CR	Poor	60	71	78	81	
	Good	58	69	77	80	
Close-seeded or broadcast legumes or rotation meadow	SR	Poor	66	77	85	89
		Good	58	72	81	85
	C	Poor	64	75	83	85
		Good	55	69	78	83
	C&T	Poor	63	73	80	83
		Good	51	67	76	80

<sup>1</sup> Average runoff condition, and  $I_a=0.2S$

<sup>2</sup> Crop residue cover applies only if residue is on at least 5% of the surface throughout the year.

<sup>3</sup> Hydraulic condition is based on combination factors that affect infiltration and runoff, including (a) density and canopy of vegetative areas, (b) amount of year-round cover, (c) amount of grass or close-seeded legumes, (d) percent of residue cover on the land surface (good  $\geq 20\%$ ), and (e) degree of surface roughness.

Poor: Factors impair infiltration and tend to increase runoff.

Good: Factors encourage average and better than average infiltration and tend to decrease runoff.

**Table 2-2c** Runoff curve numbers for other agricultural lands <sup>1/</sup>

Cover description	Hydrologic condition	Curve numbers for hydrologic soil group			
		A	B	C	D
Pasture, grassland, or range—continuous forage for grazing. <sup>2/</sup>	Poor	68	79	86	89
	Fair	49	69	79	84
	Good	39	61	74	80
Meadow—continuous grass, protected from grazing and generally mowed for hay.	—	30	58	71	78
Brush—brush-weed-grass mixture with brush the major element. <sup>3/</sup>	Poor	48	67	77	83
	Fair	35	56	70	77
	Good	30 <sup>4/</sup>	48	65	73
Woods—grass combination (orchard or tree farm). <sup>5/</sup>	Poor	57	73	82	86
	Fair	43	65	76	82
	Good	32	58	72	79
Woods. <sup>6/</sup>	Poor	45	66	77	83
	Fair	36	60	73	79
	Good	30 <sup>4/</sup>	55	70	77
Farmsteads—buildings, lanes, driveways, and surrounding lots.	—	59	74	82	86

<sup>1</sup> Average runoff condition, and  $I_a = 0.2S$ .

<sup>2</sup> **Poor:** <50% ground cover or heavily grazed with no mulch.

**Fair:** 50 to 75% ground cover and not heavily grazed.

**Good:** > 75% ground cover and lightly or only occasionally grazed.

<sup>3</sup> **Poor:** <50% ground cover.

**Fair:** 50 to 75% ground cover.

**Good:** >75% ground cover.

<sup>4</sup> Actual curve number is less than 30; use CN = 30 for runoff computations.

<sup>5</sup> CN's shown were computed for areas with 50% woods and 50% grass (pasture) cover. Other combinations of conditions may be computed from the CN's for woods and pasture.

<sup>6</sup> **Poor:** Forest litter, small trees, and brush are destroyed by heavy grazing or regular burning.

**Fair:** Woods are grazed but not burned, and some forest litter covers the soil.

**Good:** Woods are protected from grazing, and litter and brush adequately cover the soil.

**Table 2-2d** Runoff curve numbers for arid and semiarid rangelands <sup>1/</sup>

Cover description		Curve numbers for hydrologic soil group			
Cover type	Hydrologic condition <sup>2/</sup>	A <sup>3/</sup>	B	C	D
Herbaceous—mixture of grass, weeds, and low-growing brush, with brush the minor element.	Poor		80	87	93
	Fair		71	81	89
	Good		62	74	85
Oak-aspen—mountain brush mixture of oak brush, aspen, mountain mahogany, bitter brush, maple, and other brush.	Poor		66	74	79
	Fair		48	57	63
	Good		30	41	48
Pinyon-juniper—pinyon, juniper, or both; grass understory.	Poor		75	85	89
	Fair		58	73	80
	Good		41	61	71
Sagebrush with grass understory.	Poor		67	80	85
	Fair		51	63	70
	Good		35	47	55
Desert shrub—major plants include saltbush, greasewood, creosotebush, blackbrush, bursage, palo verde, mesquite, and cactus.	Poor	63	77	85	88
	Fair	55	72	81	86
	Good	49	68	79	84

<sup>1</sup> Average runoff condition, and  $I_a$ , = 0.2S. For range in humid regions, use table 2-2c.

<sup>2</sup> Poor: <30% ground cover (litter, grass, and brush overstory).

Fair: 30 to 70% ground cover.

Good: > 70% ground cover.

<sup>3</sup> Curve numbers for group A have been developed only for desert shrub.





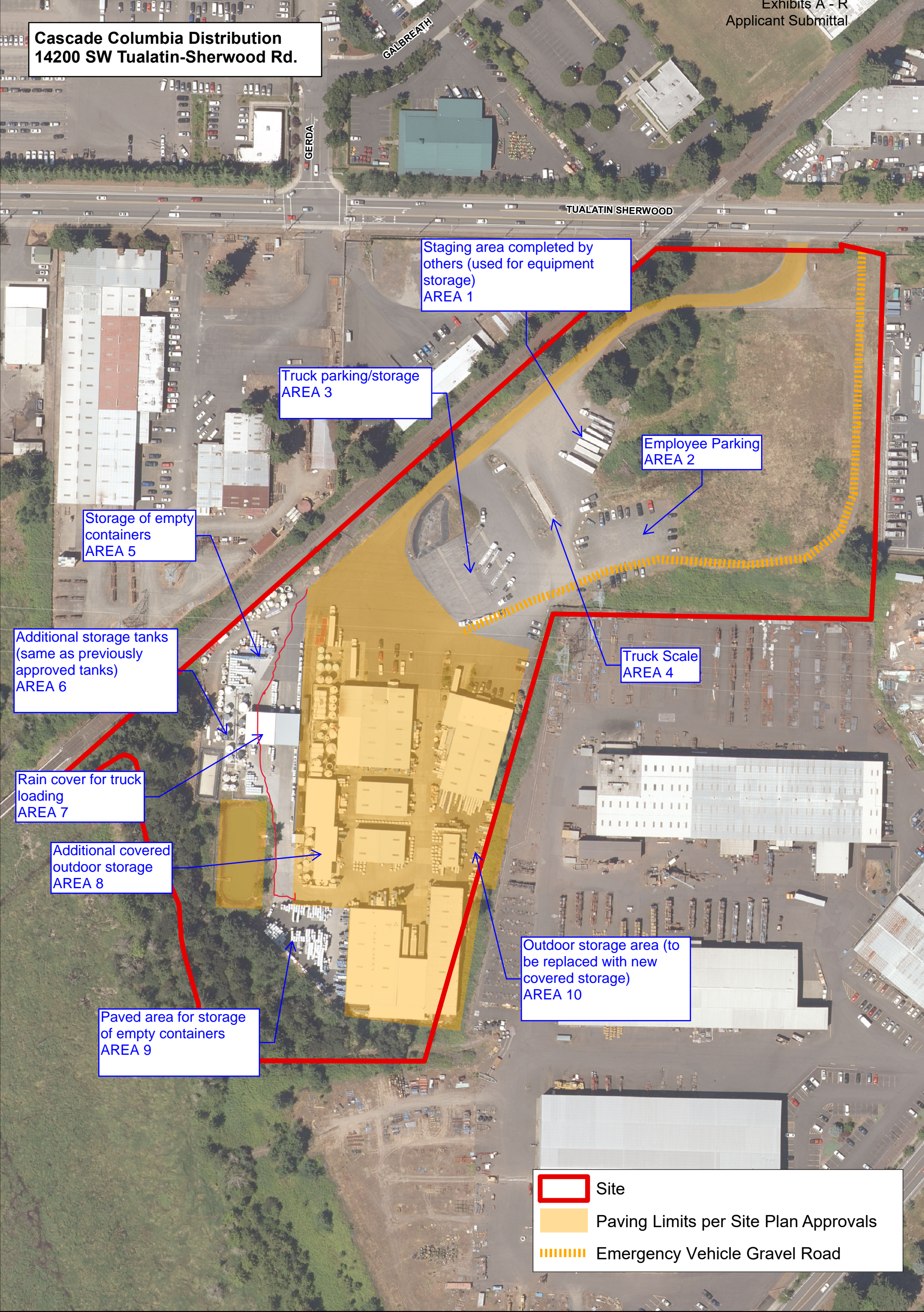
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## **Exhibit P: Existing Site Improvements Requiring Retroactive Approval**

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**Cascade Columbia Distribution  
14200 SW Tualatin-Sherwood Rd.**



Staging area completed by others (used for equipment storage)  
AREA 1

Truck parking/storage  
AREA 3

Employee Parking  
AREA 2

Storage of empty containers  
AREA 5

Additional storage tanks (same as previously approved tanks)  
AREA 6

Truck Scale  
AREA 4

Rain cover for truck loading  
AREA 7

Additional covered outdoor storage  
AREA 8

Outdoor storage area (to be replaced with new covered storage)  
AREA 10

Paved area for storage of empty containers  
AREA 9

- Site
- Paving Limits per Site Plan Approvals
- Emergency Vehicle Gravel Road



Date: 5/1/2022 Created by: Eric Rutledge

Map data provided by METRO and the City of Sherwood. The City of Sherwood's infrastructure records, drawings, and other documents have been gathered over many years, using many different formats and standards. While the data provided is generally believed to be accurate, occasionally it proves to be incorrect; thus its accuracy is not guaranteed.





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## Exhibit Q: Clean Water Services Permit

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# Industrial Wastewater Discharge Permit

Permit Number 111211

Effective Date of Permit: January 31, 2017

Expiration Date of Permit: January 30, 2022

In accordance with the provisions of Clean Water Services' (District) Resolution & Order 09-1, or as amended, Industry Name: **Cascade Columbia Distribution Co** (Herein known as Permittee), located at: 14200 SW Tualatin Sherwood RD , Sherwood OR 97140; Tax Map/Lot No 2S12BC000200, discharging to the Durham Wastewater Treatment Plant is hereby authorized to discharge wastewater from the above identified facility, and through the discharge points identified in Section 1.A., into the public sanitary sewer system in accordance with the conditions set forth in this permit. The Permittee is identified as a **Non-Significant Industrial User**, and is responsible to comply with the conditions identified in the District's Rules and Regulations.

This permit is effective on **January 31, 2017**, and will expire on **January 30, 2022**. This permit is issued based upon the information provided in the Application for Industrial Waste Discharge Permit, submitted on **December 30, 2016**. Discharges not identified in the Application may be cause for enforcement as identified in the following paragraph. Compliance with this permit does not relieve the Permittee of its obligation to comply with any or all applicable pretreatment regulations, standards or requirements under local, State, and Federal laws, including any such regulations, standards, requirements, or laws that may become effective during the term of this permit. Noncompliance with any term or condition of this permit, or any compliance schedule, shall constitute a violation of the District's Sewer Use Ordinance(s), and may be grounds for administrative action or enforcement proceedings including civil or criminal penalties (of up to \$25,000 per day per violation), injunctive relief, and summary abatement, as identified in Ordinance 27 and Resolution and Order No. 09-1, or as amended.

In no case shall this permit be transferred to another owner, partnership or corporation without prior written permission from the District. Permittees wishing to transfer a permit to a new owner must notify the District in writing at least 60 days in advance of any anticipated transfer. Written notification must include information by the new owner which certifies the new owner's intent not to change the facility's operations or processes; identifies the specific date on which the transfer is to occur; and acknowledges full responsibility for complying with the wastewater discharge permit.

Failure to provide advance notice of a transfer renders the wastewater permit void on the date of the facility transfer. In the event ownership of the permitted discharge changes, the owner of this permit shall provide a copy of this permit to the new owner or operator.

A Permittee may be required to re-apply for an Industrial Waste Discharge Permit at least 90 days prior to the expiration date, in accordance with the requirements of the District's Resolution & Order 09-1, Sections 3.03 and 3.11, or as amended.

By: [Signature] Issued this 25<sup>th</sup> Day of January, 2017  
District Representative

[Signature] Date: 1/25/17 [Signature] Date: 2-9-17  
Source Control Investigator Industry Representative

Acknowledge Receipt of Permit



# Industrial Wastewater Discharge Permit

Permit Number 111211

Effective Date of Permit: January 31, 2017

Expiration Date of Permit: January 30, 2022

## SECTION 1 MONITORING REQUIREMENTS/EFFLUENT LIMITATIONS

1.A. Applicable Regulation(s) for this permit: Ordinance # 27

1.B. Permitted Outfall(s)

During the effective period of this permit, the Permittee is authorized to discharge process wastewater from the outfall(s) listed in the Application and further defined below: (Refer to diagram(s) on last page of this permit for Outfall location(s)).

Outfall	SAMP LOC NAME:
1	Final Effluent Tanks

The discharge(s) from the following outfall(s) shall not exceed the specified effluent limitations. The Permittee shall monitor and report the information from the above-identified outfall(s) for the following parameters, at the indicated frequency:

### Effluent Limitations

Outfall	Parameter	Min Daily Conc	Monthly Avg Conc	Max Daily Conc	Unit	Sample Frequency	Sample Type
1	Chronic pH Excursions (Minutes)	----	----	0	Minutes	Once/Batch	Grab
1	pH - Grab (Gross Violation)	5.0	----	12.49	S.U.	Once/Batch	GRAB
1	pH - Permit Limits	6.0	----	11	S.U.		GRAB
1	Total Chemical O2 Demand	----	----	----	mg/L	Once/Batch	GRAB
1	Total Suspended Solids	----	----	----	mg/L	Once/Batch	GRAB

1.C. Best Management Practices

The District may develop Best Management Practices (BMPs) to implement local prohibitions. In cases where the Pretreatment Standard requires compliance with a Best Management Practice (BMP) or pollution prevention alternative, the Industrial User must submit documentation required by the District or the Pretreatment Standard necessary to determine the compliance status of the User.

1.D. Additional Permit Conditions

The following additional permit conditions apply for purposes of this discharge permit. By accepting this permit, the user acknowledges that all known constituents that could be disposed of into the sanitary sewer system have been disclosed to the District.

The following additional conditions are established for this permit:

Any accidental spills or drops from the hauling or repacking process operations shall be dealt with in accordance with instructions provided in the On-Site Chemical Management and Spill Plan. Notify the District of any non-routine discharge potential as soon as possible.



# Industrial Wastewater Discharge Permit

Permit Number 111211

Effective Date of Permit: January 31, 2017

Expiration Date of Permit: January 30, 2022

Relating to the operation of the retention pond, the additional protocol shall be adopted:

- Evaluate pH and conductivity when accumulated retention pond water reaches stage where discharge is contemplated. If there is evidence that a chemical product release to the pond has occurred, a pH and conductivity assessment must be obtained prior to discharge.
- If the evaluated pH is <5.5 or >11.5 Standard Units, accumulated water must be pretreated to Industrial Wastewater Permit Standards (> or equal to 6.0 and <11.0 SU) and discharged to the public sanitary sewer under the requirements of Industrial Wastewater Permit #111211.
- If the measured conductivity exceeds 300 millivolts (mV) during the period from October 1st thru April 30th, or exceeds 150 mV during the period May 1st thru September 30th, the accumulated water must be discharged to the public sanitary sewer system under the requirements of Industrial Wastewater Discharge Permit Number #111211.

## 1.E. Additional Sampling and Testing Provision

In the event compliance monitoring shows any constituent regulated under local limits not otherwise specified in this permit to be approaching the limit, additional sampling and testing will be required.

## 1.F. Proper Sampling and Analysis Procedures

All collection, preservation, handling and laboratory analyses of samples for compliance monitoring shall be performed in accordance with 40 CFR Part 136, and amendments thereto, unless specified otherwise in this permit. If a commercial laboratory performs sampling and/or analysis on behalf of the Permittee, it is the Permittee's responsibility to ensure that all sampling & analyses are performed in accordance with 40 CFR Part 136, or as otherwise specified.

## 1.G. Grab vs. Composite Sample Pollutants

For any constituents listed under Section 1.B. of this permit, grab samples must be used for pH (unless using a chart recorder), cyanide, total phenols, oil & grease, sulfide and volatile organic compounds. For all other pollutants, 24-hour composite samples must be obtained through flow-proportional composite sampling techniques, unless time-proportional composite sampling or grab sampling is authorized by the District. If time-proportional or grab sampling is authorized, the samples must be representative of the discharge and the decision to allow such sampling techniques must be documented in the Industrial User's file.

## Prohibitions

### 1.H. Federal and Local General Discharge Prohibitions

The Permittee shall not discharge, cause or permit to be discharged, directly or indirectly, any pollutant or wastewater, which will cause interference or pass through at the treatment plant(s). These general and specific prohibitions apply to all users of the District's wastewater system whether or not they are subject to Categorical Pretreatment Standards or any other national, state or local pretreatment standards or requirements.



# Industrial Wastewater Discharge Permit

Permit Number 111211

Effective Date of Permit: January 31, 2017

Expiration Date of Permit: January 30, 2022

## 1.I. Specific Discharge Prohibitions

Per the District's Resolution & Order 09-1, Section 2.02, or as amended, the Permittee shall not discharge wastewater containing any of the following prohibitions from any of their permitted outfalls:

- Flammable or explosive materials with a closed cup flashpoint of <140 deg F
- Corrosive materials with a pH < 5.0 or caustic materials with a pH >= 12.5
- Solid (greater than ½ inch in any dimension) or viscous materials which will obstruct flow in the Publicly Owned Treatment Works (POTW)
- Any pollutant, including oxygen demanding pollutants (COD, etc.) released in a discharge at a flow rate and/or pollutant concentration which will cause interference with the POTW
- Heated wastewater >104 deg F at its point of entry into the POTW
- Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through at the POTW
- Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems
- Trucked or hauled pollutants

## SECTION 2 REPORTING REQUIREMENTS

### 2.A. Application Provision for New or Changed Discharges

At least 90 days prior to commencement of discharge, new sources, including existing users which have changed operations or processes so as to become new sources shall be required to submit a Baseline Monitoring Report (Industrial Wastewater Discharge Permit Application). The District may also request new Applications if facility changes are of a magnitude that warrant additional or updated information on the processes, ownership, or use.

### 2.B. Self-Monitoring Report Submission

Any Permittee subject to sampling, testing and reporting schedules set out in the permit shall submit Periodic Compliance Reports. The reports are due on the tenth (10th) day of the month following discharge and shall indicate the volume, nature and concentration of all pollutants in the effluent for which sampling and analyses were performed during the calendar month preceding the submission of each report. This includes the measured highest single daily value (Daily Maximum) and the average of total monthly (Monthly Average) flows. All reports shall be submitted to the District Source Control Division as requested.

### 2.C. Submittal of Additional Pollutant Analysis

If the Permittee subject to reporting requirements (Periodic Compliance Reports) monitors any regulated pollutant more frequently than required by the District, using the procedures specified in 40 CFR Part 136, and from the location identified on the last page of this permit, the results of this monitoring shall be included in the compliance report.

### 2.D. Violation Notification Requirement

If sampling performed by the Permittee indicates a permit violation, the Permittee shall notify the District within 2, but in no case more than 24 hours, once aware of the violation. The Permittee shall also repeat the sampling and analysis and submit the results of the repeat analysis to the District within 30 days after becoming aware of the violation. The Permittee must continue the notification and re-sampling requirement until compliance is achieved.





# Industrial Wastewater Discharge Permit

Permit Number 111211

Effective Date of Permit: January 31, 2017

Expiration Date of Permit: January 30, 2022

## 2.E. Notification of Significant Changes

The Permittee shall immediately report any significant changes (permanent or temporary) to the premises or operations that cause substantial changes in production, volume or character of the wastewater discharge, or deviate from the terms and conditions of this permit. Unless emergency situations prevail, the District requires that changes be reported prior to being implemented. Permit violations may occur if notification requirements are not followed. All categorical and non-categorical Industrial Users shall notify Clean Water Services immediately of all discharges that could cause problems to the POTW including any slug loadings.

## 2.F. Hazardous Waste Notification Provision

Notification from the Permittee is required to the District, the EPA RCRA Director, and the Oregon State Hazardous Waste Director within 90 days of the effective date of a published RCRA ruling, of a discharge (or changed discharge) of either a listed or characteristic hazardous waste to the sanitary sewer. The District requests notification even if the results of the hazardous material sampling are submitted on self-monitoring reports (Periodic Compliance Reports).

## 2.G. Affirmative Defense

An upset, and an affirmative defense for such, shall not be allowed under circumstances where non-compliance has been caused by operational error, improperly designed or inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation. In case of an upset or upon reduction, loss or failure of its treatment facility, the permittee shall control production and/or all discharges to the extent necessary to maintain compliance with applicable pretreatment standards until treatment is restored or an alternative method of treatment is provided. This requirement also applies in situations where the primary source of power for the treatment facility is reduced, lost or fails.

## 2.H. Bypass

The intentional diversion of one or more wastestreams or processes from any portion of the Permittees treatment facility is prohibited per the District's Industrial Sewer Rules and Regulations (R&O 09-1).

## 2.I. Legal Authority for SNC Inclusion

An Industrial User is in significant non-compliance if the POTW determines a violation or a group of violations of the user's Best Management Practices will adversely affect the operation or implementation of the local pretreatment program.

## 2.J. Non-Categorical Periodic Reports on Continued Compliance

In the case of reporting requirements for industrial users not subject to categorical Pretreatment Standards where a local limit requires compliance with a BMP or pollution prevention alternative, the user must submit documentation as required by the District in order to determine the compliance status of the user.

## SECTION 3 NOTIFICATION AND RECORD KEEPING REQUIREMENTS

### 3.A. Sample and Analysis Records Requirements

Any Permittee subject to reporting requirements shall retain and preserve all records, books, documents, memoranda, reports, correspondence and any and all summaries thereof, relating to monitoring, sampling and chemical analyses made by or on behalf of the Permittee in connection with its discharge.

CleanWater Services  
2550 SW Hillboro Highway  
Hillsboro, Oregon 97123-9379  
(503) 881-3600  
Source Control Fax: (503) 881-5138

# Industrial Wastewater Discharge Permit

Permit Number 111211

Effective Date of Permit: January 31, 2017

Expiration Date of Permit: January 30, 2022

Documentation of activities to demonstrate compliance with any BMP requirements must also be retained by the permittee. Such records shall be subject to review by the District, and shall include for all samples:

- The date, exact place, time, and methods of sampling or measurements, and sampling preservation techniques;
- Who performed the sampling or measurements;
- The date(s) the analyses were performed;
- Who performed the analyses;
- The analytical techniques or methods used; and
- The results of such analyses.

### 3.B. Record Retention and Availability

The Permittee shall retain for a minimum of three years all such records defined in Section 3.A. above, and shall make such records available for inspection and copying by the District, the DEQ Director and the EPA Regional Administrator. **This period may be extended by the District, the DEQ Director or the EPA at any time.** All records that pertain to matters which are the subject of special orders or any other enforcement or litigation activities brought by the District shall be retained and preserved by the permittee until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired.

### 3.C. Retention of Faxed Records

For any information faxed to the District, the original shall be retained on the Permittee's premises for a minimum of three (3) years; or the original may be mailed to the District as a follow-up to the fax. This section does not supersede Section 3B above.

## SECTION 4 STANDARD CONDITIONS

### 4.A. Permit Modification

The District reserves the right to amend any Wastewater Discharge Permit issued hereunder for good cause including, but not limited to the following:

- To incorporate any new or revised local, State or Federal pretreatment standards or requirements;
- Alterations or additions to the Permittee's operations, processes, discharge volume or characteristic not considered in drafting the original permit;
- A change in any condition at the Permittee's facility or the Publicly Owned Treatment Works (POTW) requiring a temporary or permanent reduction or elimination of the authorized discharge;
- Information indicating that the permitted discharge poses a threat to the POTW's collection or treatment systems, personnel or receiving waters;
- Violation of any terms or conditions of the permit;
- Misrepresentation or failure to disclose fully all relevant facts in the permit application or any required reporting;
- To correct typographical or other errors in the permit;
- To reflect transfer of the facility ownership and/or operation to a new owner/operator;
- Upon request of the permitted Industrial User, provided the request does not violate any requirements, standards, laws, rules or regulations.

# Industrial Wastewater Discharge Permit

Permit Number 111211

Effective Date of Permit: January 31, 2017

Expiration Date of Permit: January 30, 2022

## 4.B. Dilution Prohibition

The permittee shall not increase the use of potable or process water in any way for the purpose of diluting a discharge as a partial or complete substitute for adequate treatment to achieve compliance with the standards set forth in this discharge permit or any District ordinances, or in lieu of proper disposal of any material as solid waste. The District may impose mass limitations on dischargers which, in its judgment, appear to be using dilution to meet applicable pretreatment standards or requirements of this section, or in cases where the imposition of mass limitations is otherwise deemed appropriate by the District.

## 4.C. Representative Sampling

Samples and measurements taken as required by this permit shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring points specified in this permit, and unless otherwise specified, before the permitted discharge joins or is diluted by any other wastestreams, body of water or substance. Samples must also be taken in accordance with 40 CFR Part 136 methodology.

All equipment used for sampling and analyses must be routinely calibrated, inspected and maintained to ensure its accuracy. Monitoring points shall not be changed without notification to, and prior District approval.

## 4.D. Inspection and Entry

The District may inspect the facilities of any Permittee to determine compliance with the requirements of the District rules and regulations. The Permittee shall allow the District or its representatives to enter upon the premises of the Permittee at all reasonable hours without being unreasonably detained (not to exceed 15 minutes) and without prior notification by the District, for the purposes of inspection, sampling, and records examination and copying. The District shall have the right to set upon the Permittee's property such devices as are necessary to conduct sampling, inspection, compliance monitoring and/or metering operations. Unusual clearance requirements for purposes of security may be considered unreasonable for purposes of this section.

## 4.E. Signatory Requirements/Certification Statement

The signed certification statement defined in Appendix A of the Industrial Wastewater Discharge Application shall accompany all reports and testing results submitted by any Permittee.

## SECTION 5 SPECIAL CONDITIONS

### 5.A. Accidental Spill Prevention Plan

An Accidental Spill Prevention Plan (ASPP) is required for identification and correction of potential problems. This plan is necessary to assess and condition the emergency planning of the Permittee in case of a slug load or chemical spill at the facility. If Clean Water Services decides an Accidental Spill Prevention Plan is needed, it shall contain at a minimum:

A description of discharge practices, including non-routine batch discharges;

A description/listing of stored chemicals;

Procedures for immediately notifying Clean Water Services of slug discharges with procedures for follow-up written notification within five (5) business days;

  
CleanWater Services  
2550 SW Hillsboro Highway  
Hillsboro, Oregon 97123-9379  
(503) 681-3600  
Source Control Fax: (503) 681-5138

# Industrial Wastewater Discharge Permit

Permit Number 111211

Effective Date of Permit: January 31, 2017

Expiration Date of Permit: January 30, 2022

If necessary, procedures to prevent adverse impact from accidental spills, including inspection/maintenance of storage areas, handling and transfer of materials, loading and unloading operations, control of plant site run-off, worker training, building of containment structures or equipment, measures for containing toxic organic pollutants (including solvents), and/or measures and equipment for emergency response.

Conditions of an approved Accidental Spill Prevention Plan are enforceable under this permit. Industrial Users are required to notify Clean Water Services immediately of any changes at their facility affecting the potential for a slug discharge.

An ASPP has been received and approved by the District on: *November 19, 2009*.

## 5.B. Biannual Sampling

Biannual sampling, if required, may be performed at any time during the periods of January to June, and July to December. The results need to be reported to the District as indicated in Section 1.A., unless a violation has occurred, in which case the requirements of violation notification period specified in Section 2.D. and re-sampling/resubmitting shall prevail. In no case shall the interval of required biannual sampling exceed six (6) months.

## 5.C. Special Discharge Permit Conditions

### Flow Volume Limits

This permit is issued based on the following purchased capacity:

Monthly average: 5,690 Gallons per Day

Any applicable flow meters are to be read and recorded daily on the Self-Monitoring Report form. The total flow volume is to be calculated as directed. These flow values are to be reported with any other Self-Monitoring requirements established in Section 1 of this permit.

Administrative penalties defined in the District's Resolution and Order 09-1, or as amended, will apply for volumes discharged beyond these purchased capacities.

# Industrial Wastewater Discharge Permit

Permit Number 111211

Effective Date of Permit: January 31, 2017

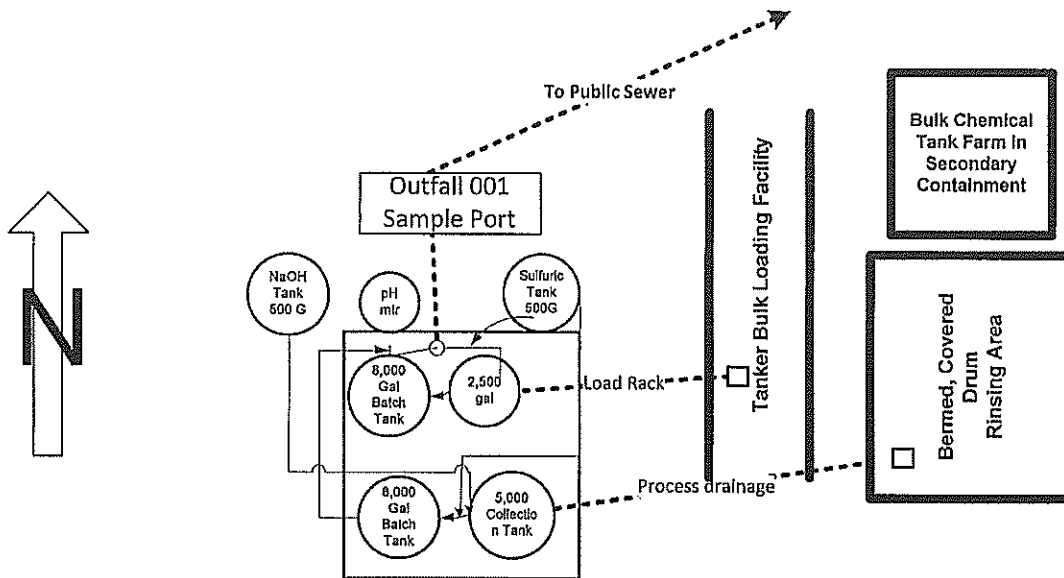
Expiration Date of Permit: January 30, 2022

## SAMPLE SITE LOCATION

The following Outfall sample sites are the official District and Permittee sample collection locations. If required, a separate cyanide sampling point is included. All samples collected for compliance monitoring must be obtained from these sites.



## Cascade Columbia Distribution



**External Sender**

Steve,

We have been short staffed and are working on your nondomestic pretreatment permit, as you are currently covered under your current permit which has been administratively extended. I am sorry for the delay. You can forward this email to the city of Sherwood as Environmental Services program is only involved in the sanitary discharge of your site, as your facility does not qualify 1200-Z stormwater permit.

Industrial Permit Status for Cascade Columbia Distribution (CCD).

- Clean Water Services-Environmental Services program is currently working on the renewing the Industrial- Nondomestic Waste Discharge permit #111211 for CCD.
- CCD has submitted all the required renewal forms at this time for industrial permit renewal.
- The CWS will be providing a draft renewal permit to CCD for their review, and then will re-issue the permit to this facility..
- At this time there are no substantial changes for the sanitary discharge expected to the nondomestic waste discharge permit #111211.
- CCD Standard Industrial Code (SIC) is not required to have coverage under the DEQ General Industrial Stormwater permit at this time.

If the City has any additional questions for CWS-Environmental Service please have the City of Sherwood contact Joy Ramirez at 503.681.5147 or 928.522.4142.

Thank you,

**Joy Ramirez** (she,her) | Environmental Services Supervisor  
[Clean Water Services](#) | Regulatory Affairs  
2550 SW Hillsboro Hwy | Hillsboro OR 97123  
o 503.681.5147 | sc: 503.681.5175  
[email: [ramirezj@cleanwaterservices.org](mailto:ramirezj@cleanwaterservices.org)]  
[engage news](#) | [facebook](#) | [twitter](#)

**From:** Steve Durrell <[steved@cascapecolumbia.com](mailto:steved@cascapecolumbia.com)>  
**Sent:** Wednesday, May 04, 2022 10:10 AM  
**To:** Joy Ramirez <[RamirezJ@CleanWaterServices.org](mailto:RamirezJ@CleanWaterServices.org)>; Jerry Orlando <[OrlandoJ@CleanWaterServices.org](mailto:OrlandoJ@CleanWaterServices.org)>  
**Cc:** Matt Keinonen <[MattK@cascapecolumbia.com](mailto:MattK@cascapecolumbia.com)>  
**Subject:** New Permit

**EXTERNAL EMAIL**

Joy,

I have not seen a copy of our current permit yet. We are needing this for our Land Use Application with the city of Sherwood. Would it be possible to get this completed?

**Steve Durrell** | General Manager



14200 SW Tualatin-Sherwood Rd. Sherwood, OR 97140

**Phone:** 503.625.5293 | **Fax:** 503.625.4335

**Email:** [steved@cascadecolumbia.com](mailto:steved@cascadecolumbia.com)





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## **Exhibit R: Transmission Line Easement**

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3959  
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Tract No. 00-K-34

### TRANSMISSION LINE EASEMENT

The GRANTOR, herein so styled whether one or more, **MILLARD S. ROSENBLATT and CAROLYN G. ROSENBLATT, husband and wife, and I. C. BRILL and ISOBEL BRILL, husband and wife,**

for and in consideration of the sum of **FIVE THOUSAND** ----- Dollars (\$5,000.00)

in hand paid by the UNITED STATES OF AMERICA, receipt of which is hereby acknowledged, hereby grants, bargains, sells, and conveys to the UNITED STATES OF AMERICA and its assigns, a perpetual easement and right to enter and erect, operate, maintain, repair, rebuild, and patrol one or more electric power transmission lines and appurtenant signal lines, poles, towers, wires, cables, and appliances necessary in connection therewith, in, upon, over, under, and across the following-described parcel of land in the County of Washington, in the State of Oregon, to wit:

That portion of that part of the NE 1/4 of Section 28, Township 2 South, Range 1 West of the Willamette Meridian, Washington County, Oregon, lying southeasterly of the Southern Pacific Company right-of-way, which lies within a strip of land 250 feet in width, the boundaries of said strip lying 62.5 feet distant southerly from and 187.5 feet distant northerly from and parallel to the survey line of the Oregon City-Keeler section of the Big Eddy-Keeler transmission line as now located and staked on the ground over, across, upon and/or adjacent to the above-described property, said survey line being particularly described as follows:

Beginning at survey station 5306+45.9, a point on the North-South quarter section line of Section 28, Township 2 South, Range 1 West, W.M., said point being N. 1°37'40" E. a distance of 1202.7 feet from the quarter section corner on the south line of said Section 28; thence N. 42°59'00" W. a distance of 1007.1 feet to survey station 5316+53.0; thence N. 86°50'50" W. a distance of 1926.4 feet to survey station 5335+79.4, a point on the west line of said Section 28, said point being S. 2°31'00" W. a distance of 658.3 feet from the quarter section corner on the west line of said Section 28.

The right to cut danger trees is limited to strips of land 77.5 feet in width on both sides of and beyond the outside limits of the right-of-way between survey stations 5328+04 and 5337+83.

The Grantors reserve the right to construct railroad track spurs across the right-of-way in a manner that will not interfere with the construction, operation and maintenance of the transmission line facilities.



304

3959-2

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together with the right to clear said parcel of land and keep the same clear of all brush, timber, structures, and fire hazards, provided however, the words "fire hazards" shall not be interpreted to include growing crops; and also the present and future right to top, limb, fell, and remove all growing trees, dead trees or snags (collectively called "danger trees") located on Grantor's land adjacent to said parcel of land, which could fall upon or against said transmission and signal line facilities.

TO HAVE AND TO HOLD said easement and rights unto the UNITED STATES OF AMERICA and its assigns, forever.

The Grantor covenants to and with the UNITED STATES OF AMERICA and its assigns that the title to all brush and timber cut and removed from said parcel of land and also all growing trees, dead trees or snags (collectively called "danger trees") cut and removed from Grantor's land adjacent to said parcel of land, is and shall be vested in the UNITED STATES OF AMERICA and its assigns and that the consideration paid for conveying said easement and rights herein described is accepted as full compensation for all damages incidental to the exercise of any of said rights.

The Grantor also covenants to and with the UNITED STATES OF AMERICA that Grantor is lawfully seized and possessed of the lands aforesaid; has a good and lawful right and power to sell and convey same; that same are free and clear of encumbrances, except as above indicated; and that Grantor will forever warrant and defend the title to said easement and the quiet possession thereof against the lawful claims and demands of all persons whomsoever.

Dated this 9<sup>th</sup> day of Feb, 1957

*Millard S. Rosenblatt*  
Millard S. Rosenblatt

*Carolyn G. Rosenblatt*  
Carolyn G. Rosenblatt

*J. C. Brill*  
J. C. Brill

*Isobel Brill*  
Isobel Brill

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BPA 177

Rev. 9-19-52

(Standard form of acknowledgment approved for use with all conveyances in Washington and Oregon)

3959-3

STATE OF OREGON )

COUNTY OF Multnomah )

ss:

On the 19th day of February, 1957, personally came before me, a notary public in and for said County and State, the within-named **MILLARD S. ROSENBLATT and CAROLYN G. ROSENBLATT, husband and wife**, to me personally known to be the identical persons described in and who executed the within and foregoing instrument and acknowledged to me that they executed the same as their free and voluntary act and deed, for the uses and purposes therein mentioned.

GIVEN under my hand and official seal the day and year last above written.



Rose C. Nelson  
Notary Public in and for the  
State of Oregon  
Residing at Portland

My commission expires: June 25, 1958

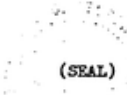
STATE OF OREGON )

County of Multnomah )

ss:

On the 19th day of February, 1957, personally came before me, a notary public in and for said County and State, the within-named **I. C. BRILL and ISCHEL BRILL, husband and wife**, to me personally known to be the identical persons described in and who executed the within and foregoing instrument, and acknowledged to me that they executed the same as their free and voluntary act and deed, for the uses and purposes therein mentioned.

GIVEN under my hand and official seal the day and year last above written.



Rose C. Nelson  
Notary Public in and for the  
State of Oregon  
Residing at Portland

My commission expires: June 25, 1958

STATE OF OREGON, )

COUNTY of Washington County, )

ss:

I CERTIFY that the within instrument was received for the record on the 28 day of February, 1957, at 10:45 AM., and recorded in book 391 on page 804, records of said County.

Witness my hand and seal of County affixed.

ROGER THOMSSON, County Clerk

By Louis Cook  
Deputy.

After recording, please return to:

TITLE SECTION, BRANCH OF LAND  
DONOVILLE POWER ADMINISTRATION  
P.O. BOX No. 3537  
PORTLAND 8, OREGON

hm



# Engineering Land Use Application Comments

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To: Eric Rutledge, Associate Planner

From: Craig Christensen, P.E., Engineering Department

Project: Cascade Columbia Major Modification (LU 2021-025)

Date: June 14, 2022

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Engineering staff has reviewed the information provided for the above cited project. Final construction plans will need to meet the standards established by the City of Sherwood Engineering Department and Public Works Department, Clean Water Services (CWS) and Tualatin Valley Fire & Rescue in addition to requirements established by other jurisdictional agencies providing land use comments. City of Sherwood Engineering Department comments are as follows:

## Sanitary Sewer

Currently a public sanitary sewer main exists along the northwest side of the subject property and along the north side of the subject property along the full frontage of SW Tualatin Sherwood Road. No public sanitary sewer main extension is required. The proposed warehouse building will obtain sanitary sewer via the existing on-site sanitary sewer system.

CONDITION: Prior to Issuance of a Plumbing Permit, the proposed development shall design the private sanitary sewer to be in compliance with the current Oregon Plumbing Specialty Code.

## Water

Currently there is a public water main existing within SW Tualatin-Sherwood Road along the full frontage of the subject property frontage. No public water main extension is required. The proposed warehouse building will obtain domestic and fire water via the existing on-site water system.

CONDITION: Prior to Issuance of a Plumbing Permit, water flows calculations (domestic, irrigation and fire) shall be provided by the developer.

CONDITION: Prior to Issuance of a Plumbing Permit, the proposed development shall design for private water lines to be in compliance with the current Oregon Plumbing Specialty Code.



Project: Cascade Columbia Major Modification (LU 2021-025)  
Date: June 14, 2022  
Page: 2 of 4

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### Storm Sewer

Currently the subject property consists of 2 drainage basins. The north basin flows to a ditch which flows to culvert pipes crossing SW Tualatin-Sherwood Road. The south basin discharges to a vegetative corridor along Rock Creek. The proposed site improvements are all within the south basin. No public storm sewer main extension required. All new storm facilities are proposed to be built on-site.

Currently there are no water quality/hydro-modification facilities existing on the site to accommodate the subject development.

The subject development will need to provide on-site water quality/hydro-modification facilities in compliance with Clean Water Services (CWS) standards for any new/modified impervious area to be installed or installed previously without a permit unless otherwise approved for a payment-in-lieu by the City of Sherwood and CWS.

CONDITION: Prior to Approval of the Engineering Public Improvement Plans, the proposed development shall design to provide water quality and hydro-modification in compliance with Clean Water Services' standards unless otherwise approved for a payment-in-lieu by the City of Sherwood and CWS. This includes impervious area installed previously within the subject property without a permit.

CONDITION: Prior to Final Acceptance of Public Improvements, private water quality/hydro-modification facilities shall have a recorded Private Stormwater Facility Access and Maintenance Covenant. An Operation and Maintenance Plan for all private hydro-modification facilities is also required to be submitted to the Sherwood Engineering Department.

CONDITION: Prior to Issuance of a Plumbing Permit, the proposed development shall design for private storm water runoff within the subject property to be collected and conveyed in accordance with the current Oregon Plumbing Specialty Code.

### Transportation

The subject property has frontage on SW Tualatin-Sherwood Road (Washington County Arterial). The existing street section is a 3-lane street with bike lane and curb-tight sidewalk.

Currently Washington County is in process of widening SW Tualatin-Sherwood Road to a 5-lane street. Since the county project will bring the frontage improvements up to standards, no street improvements will be required for the subject development unless conditioned by Washington County.

### Grading and Erosion Control:

City policy requires that a grading and erosion control permit be obtained for any site work that disturbs over 500 square feet of area. This permit is obtained from the Building Department.

Project: Cascade Columbia Major Modification (LU 2021-025)  
Date: June 14, 2022  
Page: 3 of 4

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CONDITION: Prior to Approval of the Engineering Public Improvement Plans, a grading and erosion control permit shall be obtained.

Other Engineering Issues:

Clean Water Services (CWS) has issued a Service Provider Letter for the subject development. Vegetative corridor does exist within the subject development. CWS has issued conditions associated with the vegetative corridor.

Due to required vegetative corridor restoration by Clean Water Services, public improvement plans (aka vegetative corridor restoration) will need City of Sherwood and CWS approval.

CONDITION: Prior to Final Acceptance of Public Improvements, all conditions of the Clean Water Services' Service Provider Letter shall be met (includes recording of easement dedication).

Currently there is no PUE along the subject property frontage of SW Tualatin-Sherwood Road. Washington County will be widening SW Tualatin-Sherwood Road along the frontage of the subject property. With said widening improvements additional right-of-way will be needed in order to construct said improvements. However Washington County will not be obtaining a PUE along the subject property street frontage. The developer will need to dedicate a minimum 8-foot wide PUE along the subject property frontage of SW Tualatin-Sherwood Road outside of the new/future right-of-way line.

CONDITION: Prior to Final Acceptance of Public Improvements, a minimum 8-foot wide PUE shall be dedicated to the City of Sherwood outside of the new/future right-of-way line as established by the Washington County widening of SW Tualatin-Sherwood Road.

Currently there is no Sherwood Broadband existing along the subject property frontage of SW Tualatin-Sherwood Road. The developer will either need to install vaults and conduit for Sherwood Broadband along the subject property frontage at the location of the new PUE or make a payment in lieu of.

CONDITION: Prior to Approval of the Engineering Public Improvement Plans, the developer shall either design for the installation of Sherwood Broadband facilities (vaults and conduit) along the subject property of SW Tualatin-Sherwood Road or make a payment-in lieu thereof.

CONDITION: Prior to Approval of the Engineering Public Improvement Plans, a Storm Water Connection Permit Authorization shall be obtained from Clean Water Services.

CONDITION: Prior to Issuance of Building or Plumbing Permit, Approval of the Engineering Public Improvement Plans and an Engineering Compliance Agreement shall be obtained from the City of Sherwood Engineering Department.



Project: Cascade Columbia Major Modification (LU 2021-025)  
Date: June 14, 2022  
Page: 4 of 4

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END OF COMMENTS.



# WASHINGTON COUNTY

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# OREGON

June 16, 2022

**To: Eric Rutledge – Associate Planner**

**From: Naomi Vogel – Associate Planner**

**RE: Cascade Columbia Distribution MOD**  
City File Number: **LU 2021-025 MM**  
**County File Number: CP22-908**  
Tax Map and Lot Number: **2S128C000200**  
Location: **14200 SW Tualatin-Sherwood Road**

Washington County Department of Land Use and Transportation has reviewed the above noted development application for a new 12,000 SF warehousing building and 8,400 SF covered storage building on an existing industrial site. The existing development was approved by the City in 1992 under Site Plan Approval 92-7. Access to the site is proposed from the existing driveway along SW Tualatin-Sherwood Road, a County-maintained Arterial. There are no changes proposed to the existing driveway on SW Tualatin-Sherwood Road.

The County has obtained the right-of-way identified in the County's Transportation System Plan (TSP) from the subject site for the MSTIP Tualatin-Sherwood Road (Langer Farms Parkway to Teton Avenue) Capital project. The county's project will expand SW Tualatin-Sherwood Road to a 5-lane arterial. Additional improvements along the site's SW Tualatin-Sherwood Road frontage are not required at this time.

## CONDITIONS OF APPROVAL

### I. PRIOR TO APPROVAL OF A GRADING/EROSION CONTROL PERMIT BY THE CITY OF SHERWOOD:

- A. Obtain a **Washington County** Right-of Way Permit(s) from the Operations Division (503.846.7623) via the **Public Permitting and Services Portal** (WashCoORACA.com) for the following:

**Department of Land Use & Transportation**  
**Operations and Maintenance**

1400 SW Walnut Street, MS 51, Hillsboro, OR 97123-5625  
phone: 503-846-7623 • fax: 503-846-7620  
[www.co.washington.or.us/lut](http://www.co.washington.or.us/lut) • [lutops@co.washington.or.us](mailto:lutops@co.washington.or.us)

- a. All work proposed within SW Tualatin-Sherwood Road right-of-way, including construction access if required.

**If you have any questions, please contact me at 503-846-7639.**

Cc: Operations Division (Permits Section)  
Transportation File

**M E M O R A N D U M**

**Date:** May 17, 2022  
**To:** Eric Rutledge, Associate Planner, City of Sherwood  
**From:** Jackie Sue Humphreys, Clean Water Services (CWS)  
**Subject:** Cascade Columbia Distribution, LU 2021-025 MM, 2S128C000200

Please include the following comments when writing your conditions of approval:

**PRIOR TO ANY WORK ON THE SITE**

A Clean Water Services (CWS) Storm Water Connection Permit Authorization must be obtained. Application for CWS Permit Authorization must be in accordance with the requirements of the Design and Construction Standards, Resolution and Order No. 19-5 as amended by R&O 19-22, or prior standards as meeting the implementation policy of R&O 18-28, and is to include:

- a. Detailed plans prepared in accordance with Chapter 2, Section 2.04.
- b. Detailed grading and erosion control plan. An Erosion Control Permit will be required. Area of Disturbance must be clearly identified on submitted construction plans.
- c. Detailed plans showing the development having direct access by gravity to public storm and sanitary sewer.
- d. Provisions for water quality in accordance with the requirements of the above named design standards. Water Quality is required for all new development and redevelopment areas per R&O 19-5, Section 4.04. Access shall be provided for maintenance of facility per R&O 19-5, Section 4.07.6.
- e. If use of an existing offsite or regional Water Quality Facility is proposed, it must be clearly identified on plans, showing its location, condition, capacity to treat this site and, any additional improvements and/or upgrades that may be needed to utilize that facility.

- f. If private lot LIDA systems proposed, must comply with the current CWS Design and Construction Standards. A private maintenance agreement, for the proposed private lot LIDA systems, needs to be provided to the City for review and acceptance.
- g. Show all existing and proposed easements on plans. Any required storm sewer, sanitary sewer, and water quality related easements must be granted to the City.
- h. Application may require additional permitting and plan review from CWS Source Control Program. For any questions or additional information, please contact Source Control at (503) 681-5175.
- i. Applicant shall comply with the conditions as set forth in the Service Provider Letter No. 21-002637, dated November 9, 2021.
- j. Clean Water Services shall require an easement over the Vegetated Corridor conveying storm and surface water management to Clean Water Services that would prevent the owner of the Vegetated Corridor from activities and uses inconsistent with the purpose of the corridor and any easements therein.
- k. Detailed plans showing the sensitive area and corridor delineated, along with restoration and enhancement of the corridor.
- l. If there is any activity within the sensitive area, the applicant shall gain authorization for the project from the Oregon Department of State Lands (DSL) and US Army Corps of Engineers (USACE). The applicant shall provide Clean Water Services or its designee (appropriate city) with copies of all DSL and USACE project authorization permits.
- m. Any proposed offsite construction activities will require an update or amendment to the current Service Provider Letter for this project.

## CONCLUSION

This Land Use Review does not constitute CWS approval of storm or sanitary sewer compliance to the NPDES permit held by CWS. CWS, prior to issuance of any connection permits, must approve final construction plans and drainage calculations.



## Wetland Land Use Notice Response

### Response Page

Department of State Lands (DSL) WN# \*

WN2022-0381

### Responsible Jurisdiction

<b>Staff Contact</b>	<b>Jurisdiction Type</b>	<b>Municipality</b>
Eric Rutledge	City	Sherwood
<b>Local case file #</b>	<b>County</b>	
LU 2021-025	Washington	

### Activity Location

<b>Township</b>	<b>Range</b>	<b>Section</b>	<b>QQ section</b>	<b>Tax Lot(s)</b>
02S	01W	28		200

Street Address

14200 SW Tualatin-Sherwood Rd

Address Line 2

City

Sherwood

State / Province / Region

OR

Postal / Zip Code

97140

Country

Washington

**Latitude**

45.364735

**Longitude**

-122.824475

### Wetland/Waterway/Other Water Features

- The National Wetlands Inventory shows wetland, waterway or other water features on the property
- The county soil survey shows hydric (wet) soils on the property. Hydric soils indicate that there may be wetlands.

### Your Activity

- A state permit will not be required for the proposed project because, based on the submitted site plan, the project avoids impacts to jurisdictional wetlands, waterways, or other waters.

### Applicable Oregon Removal-Fill Permit Requirement(s)

- A state permit is required for 50 cubic yards or more of fill removal or other ground alteration in wetlands, below ordinary high water of waterways, within other waters of the state, or below highest measured tide.

## Closing Information



### Additional Comments

Based on review of available information and site plan submitted, proposed site plan appears to avoid impacts to jurisdiction wetlands or Rock Creek. Therefore, no state permit is needed. Please note that the Local Wetland Inventory boundary used in the site plan should be used for guidance only.

**This is a preliminary jurisdictional determination and is advisory only.**

This report is for the State Removal-Fill law only. City or County permits may be required for the proposed activity.

A Federal permit may be required by The Army Corps of Engineers: (503)808-4373

### Contact Information

- o For information on permitting, use of a state-owned water, wetland determination or delineation report requirements please contact the respective DSL Aquatic Resource, Proprietary or Jurisdiction Coordinator for the site county. The current list is found at: <http://www.oregon.gov/dsl/ww/pages/wwstaff.aspx>
- o The current Removal-Fill permit and/or Wetland Delineation report fee schedule is found at: <https://www.oregon.gov/dsl/WW/Documents/Removal-FillFees.pdf>

### Response Date

5/23/2022

### Response by:

Matthew Unitis

### Response Phone:

503-986-5262



**From:** [ODOT\\_R1\\_DevRev](#)  
**To:** [MOHS Kurt A](#); [Eric Rutledge](#); [ODOT\\_R1\\_DevRev](#)  
**Subject:** RE: LU 2021-025 MM Cascade Columbia Distribution - Opportunity to Comment  
**Date:** Thursday, April 21, 2022 9:56:16 AM  
**Attachments:** [image001.jpg](#)

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**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you are expecting this email and/or know the content is safe.

Good morning,

Kurt thanks for your input. The comments I included were from the pre-application conference (DRS# 12246) from Bob Stolle last August 2021.

I appreciate you clarifying Eric. The comments I included are more of an FYI for the applicant, which they likely already know from their pre app, rather than formal comments from ODOT since we it's a private crossing on site as Kurt mentioned.

Let us know if you have any further questions.

Have a good day,

**Diana Powers (she/they)**

Associate Transportation Planner

[diana.powers@odot.oregon.gov](mailto:diana.powers@odot.oregon.gov)

**Development Review Program- ODOT Region 1**

[ODOT\\_R1\\_DevRev@odot.oregon.gov](mailto:ODOT_R1_DevRev@odot.oregon.gov) ← NOTE NEW EMAIL

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**From:** MOHS Kurt A <[Kurt.A.MOHS@odot.oregon.gov](mailto:Kurt.A.MOHS@odot.oregon.gov)>  
**Sent:** Thursday, April 21, 2022 8:59 AM  
**To:** Eric Rutledge <[RutledgeE@SherwoodOregon.gov](mailto:RutledgeE@SherwoodOregon.gov)>; [ODOT\\_R1\\_DevRev@odot.oregon.gov](mailto:ODOT_R1_DevRev@odot.oregon.gov)  
**Subject:** RE: LU 2021-025 MM Cascade Columbia Distribution - Opportunity to Comment

I have no preference as to which comments you use, but the first comments referred to what we don't do. I don't know who provided those first comments (I can guess) but we put our focus on regulating public crossings and that is what I base my comments on.

Kurt

---

**From:** Eric Rutledge <[RutledgeE@SherwoodOregon.gov](mailto:RutledgeE@SherwoodOregon.gov)>  
**Sent:** Thursday, April 21, 2022 8:48 AM  
**To:** [ODOT\\_R1\\_DevRev@odot.oregon.gov](mailto:ODOT_R1_DevRev@odot.oregon.gov)  
**Cc:** MOHS Kurt A <[Kurt.A.MOHS@odot.oregon.gov](mailto:Kurt.A.MOHS@odot.oregon.gov)>

**Subject:** RE: LU 2021-025 MM Cascade Columbia Distribution - Opportunity to Comment

This message was sent from outside the organization. Treat attachments, links and requests with caution. Be conscious of the information you share if you respond.

Hi Diana and Kurt,

I received comments from both of you on this application. I'm not sure if you're addressing different standards or if I should use just one of the comments submitted?

Diana's comments are below with Kurt indicating no comments or concerns.

Thanks,

Eric Rutledge  
City of Sherwood  
Associate Planner  
[rutledgee@sherwoodoregon.gov](mailto:rutledgee@sherwoodoregon.gov)  
Desk 503.625.4242  
Work Cell 971.979.2315

---

**From:** ODOT\_R1\_DevRev <[ODOT\\_R1\\_DevRev@odot.oregon.gov](mailto:ODOT_R1_DevRev@odot.oregon.gov)>  
**Sent:** Wednesday, April 20, 2022 2:42 PM  
**To:** Eric Rutledge <[RutledgeE@SherwoodOregon.gov](mailto:RutledgeE@SherwoodOregon.gov)>  
**Subject:** RE: LU 2021-025 MM Cascade Columbia Distribution - Opportunity to Comment

**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you are expecting this email and/or know the content is safe.

Good afternoon Eric,

ODOT has reviewed the formal application for the Cascade Columbia Distribution. We have no additional comments beyond what was provided at the previous pre-application conference regarding the Portland & Western rail line that goes through the property. I am including past comments from ODOT Rail Division below for your reference.

*We do not require a crossing order for private crossing as it is just an agreement between the property owner and the railroad. We do regulate what is stated below so if we observe a private crossing we would only care about the two items listed. We typically do not inspect private crossings because of their location but if they can be seen and are deficient we would contact the railroad to let them know they need to make corrections.*

**741-115-0060 Stop Signs at Private Crossings**

*(1) Unless otherwise ordered by the Department under ORS 824.224, the railroad shall cause to be*

*installed one vehicle stop sign (24-inch minimum) on each side of any private or farm crossing at grade that is not equipped with automatic protective devices.*

*(2) The railroad shall also cause to be installed an auxiliary sign identifying the crossing as a private crossing by stating the words "PRIVATE CROSSING" in letters at least two inches high. The color of the sign shall be black letters on a white background (see Figure 5). Optional information such as the words "NO TRESPASSING," the name of the railroad from which permission must be secured for use of the crossing and permit number may be included on the auxiliary sign.*

**Statutory/Other Authority:** ORS 184.616, 184.619, 823.011, 824.202 & 824.220

Please let me know if you have any questions.

Thank you,

**Diana Powers (she/they)**

Associate Transportation Planner

[diana.powers@odot.oregon.gov](mailto:diana.powers@odot.oregon.gov)

**Development Review Program- ODOT Region 1**

[ODOT\\_R1\\_DevRev@odot.oregon.gov](mailto:ODOT_R1_DevRev@odot.oregon.gov) ← NOTE NEW EMAIL

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**From:** Eric Rutledge <[RutledgeE@SherwoodOregon.gov](mailto:RutledgeE@SherwoodOregon.gov)>

**Sent:** Thursday, April 14, 2022 2:00 PM

**To:** Eric Rutledge <[RutledgeE@SherwoodOregon.gov](mailto:RutledgeE@SherwoodOregon.gov)>

**Subject:** LU 2021-025 MM Cascade Columbia Distribution - Opportunity to Comment

This message was sent from outside the organization. Treat attachments, links and requests with caution. Be conscious of the information you share if you respond.

Hi Agency Partners:

The City of Sherwood Planning Department is requesting agency comments on the following land use application:

- **Project Name:** LU 2021-025 MM – Cascade Columbia Distribution
- **Proposal:** The applicant is proposing a new 12,000 SF warehousing building and 8,400 SF covered storage building on an existing industrial site located at 14200 SW Tualatin-Sherwood Rd. The site is occupied by Cascade Columbia Distribution and Northstar Chemical, two chemical storage and distribution companies. The existing development was approved by the City in 1992 under Site Plan Approval 92-7. The proposed expansion will support Cascade Columbia Distribution’s growing business in the food and beverage industry. Access to the site is proposed from the existing driveway along SW Tualatin-Sherwood Rd.
- **Location:** 14200 SW Tualatin-Sherwood Rd., Sherwood OR 97140 (Tax Lot 2S128C000200)
- **Comment Deadline:** Friday April 29, 2022 for consideration in the staff report

- **Hearing Date:** Tuesday May 10, 2022 at 7pm; In-Person at Sherwood City Hall with opportunity for virtual participation
- **Applicable code criteria:** SZCDC Chapter 16.31 Industrial Land Use Districts; Chapter 16.72 Procedures for Processing Development Permits; Chapter 16.90 Site Planning; Chapter 16.92 Landscaping; Chapter 16.94 Off-Street Parking and Loading; Chapter 16.96 On-Site Circulation; Chapter 16.98 On-Site Storage; Chapter 16.110 Sanitary Sewers; Chapter 16.112 Water Supply; Chapter 16.114 Storm Water; Chapter 16.116 Fire Protection; Chapter 16.118 Public and Private Utilities; Chapter 16.142 Parks, Trees, and Open Spaces; Chapter 16.144 Wetland, Habitat, and Natural Areas
- **Application materials:** <https://www.sherwoodoregon.gov/planning/project/lu-2021-025-mm-cascade-columbia-distribution>

Eric Rutledge  
City of Sherwood  
Associate Planner  
[rutledgee@sherwoodoregon.gov](mailto:rutledgee@sherwoodoregon.gov)  
Desk 503.625.4242  
Work Cell 971.979.2315



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See top of page  
7. f.

Exhibit X



90 NW Park Steet  
Sherwood, Oregon 97140  
503/625-5522 □ FAX 625-5524

TAX LOT: 200:2S1 28C  
CASE NO: SP 92-7  
DATE MAILED: March 16, 1993

NOTICE OF DECISION

TO: Cascade Columbia Dist.                      CIDA  
Company    9045 SW Barbur Blvd. No. 4  
P.O. Box 9247                                      Portland, Oregon 97219  
Seattle, WA 98109-0247

Richard Vial  
5285 SW Meadows Road, Suite 350  
Lake Oswego, Oregon 97035

On March 10, 1993, the City Council of the City of Sherwood, Oregon decided to approve your application for a Site Plan to construct a chemical distribution warehouse.

The decision was based on the following major findings:

See Findings, Conclusions and Order for SP 92-7 and staff reports dated October 12, and November 24, 1992.

The following conditions were placed on approval of the application:

- A. The following conditions shall be primarily administered by Tualatin Valley Fire and Rescue (TVFR), in consultation with the City:
  - 1. Chemical Storage:
    - a. All chemical transfer activities shall be totally enclosed, except where the Tualatin Valley Fire and Rescue (TVFR) determines such enclosures will be detrimental to the public or facility safety. If TVFR cannot determine the appropriate course of conduct, an analysis shall be prepared by a qualified, independent consultant retained by the City, and paid for by the applicant, results of which shall be reviewed and approved by TVFR.

- b. If the TVFR's annual review of the materials inventory list of all chemical substances stored on site is discontinued, the City may hire a qualified professional, at the applicant's expense, to annually review the inventory to ensure compliance with State requirements.
- c. Empty chemical storage drums shall be separated and handled based on original contents in accordance with Fire Code material separation standards, to TVFR's satisfaction.
- d. The facility site plan shall be amended to illustrate and designate empty drum storage areas. The facility shall be managed so that empty drums or other materials are not stored in parked trucks or empty trailers and are handled and stored in the same essential manner as full drums, subject to inspection by TVFR.
- e. Storage and handling of all gaseous products are prohibited, except for those used incidentally in the routine operation and maintenance of the facility. Prior to the addition of any chemical products that are not within the same classification, as defined by Fire Code, of those products listed in the original approval, the applicant must obtain the permission of the City and TVFR.
- f. A computerized chemical inventory system identifying and controlling chemical storage locations and volumes, and streamlining inspections, shall be installed and maintained. TVFR shall review and approve the system proposed for installation, and may conduct inventory inspections on an as needed basis.

## 2. Emergency Provisions

- a. Proof shall be provided to TVFR that facility personnel are trained at First Responder Operator level as certified by Occupational Health and Safety (OSHA), and qualified at First Aid/CPR level.
- b. An electronic surveillance system shall be provided to monitor all chemical storage activities and facility security by an Underwriters Laboratory (UL) approved central station regarding the operation and security of this facility. This system shall provide for monitoring of the retention areas, tank levels, and intrusion by unauthorized personnel during non-operating hours. Chemical sensing devices shall be installed to detect flammable air/chemical mixtures caused by ruptured drums

or other spill accidents, and to activate the alarm system. Provide sensing devices that will automatically activate fire suppression systems and contact the central station in the event of a fire. All electronic systems shall have battery back-up. Owner shall provide a plan for immediate response in the event of any alarm or intrusion. Alarm system and response program shall be reviewed and approved jointly by City Police, City staff, and TVFR.

- c. On an annual basis, TVFR shall review and approve the facility's emergency response plan. If such service is discontinued, the City may annually hire, at the applicant's expense, a consultant to analyze the facility's emergency response equipment and materials program as required by State and local agencies responsible for monitoring safety.
- d. Storm water containment areas shall be sized to handle rain fall from a six (6) day storm event of a ten (10) year storm intensity, plus contingency capacity accommodating the addition of fire suppression water to such flows. The specific sizing of containment areas shall be determined through consultation between TVFR and the applicant, to TVFR's satisfaction.
- e. An emergency response plan that includes fire suppression devices, evacuation plans, and maximum protection for the environment and nearby residents shall be approved by the City and TVFR prior to issuance of any building permits. If sirens or other off-site warning devices are deemed appropriate, they shall be installed and maintained by the applicant. The emergency response plan shall include consultation with and recommendations from appropriate area health care providers. Subsequent to occupancy, modifications to the emergency response plan necessitated by changes to the facilities physical plant or operations shall be reviewed and approved by TVFR in consultation with the City.
- f. Provide an all-weather emergency access road, separate from the main driveway access, to the rear of the site with its own exit onto a public street to the satisfaction of TVFR. If site or ownership restrictions make this impractical, re-site the facility as necessary to permit such secondary access.



B. The following conditions shall be primarily administered by the City, in consultation with other appropriate agencies:

→ 1. Site Planning:

- a. Roofing and skirting materials and siding, if necessary, shall be extended over covered storage areas, including Buildings B, C, and D, and the drumming area, to provide additional rain protection as approved by City staff.
- b. The final approved site plan shall illustrate the specific use and functions of all buildings and tanks. Facilities identified as "future" on the site plan and not constructed as part of the initial building permit shall be subject to additional site plan review, and are not subject to this approval.
- c. Comply with, and submit appropriate plans where required, all City site development standards including landscaping, off-street parking and loading, on-site circulation, on-site outdoor storage, lighting, and signage.
- d. Native plant species shall be used in combination with the maximum feasible retention of existing trees, and vegetation to create full sight-obscuring landscaped screening of the facility from Oregon Street, Tualatin-Sherwood Road and Rock Creek wetlands. A separate landscape plan achieving this end shall be submitted for the City's review and approval prior to issuance of any building permits.
- e. Security fencing shall be provided around the entire perimeter of the facility inside the tree line, with the provision that fencing systems shall permit fire, police and other public safety personnel and equipment access in the case of emergency.
- f. All storage buildings shall be sprinklered except for areas where chemicals are water reactive, and then other appropriate automatic fire suppression devices shall be installed.

2. Storm Water and Pollution Management

- a. As required by the City and Unified Sewerage Agency (USA), a storm water pollution prevention plan specifying physical features, and operational practices and procedures, to contain and manage contamination incidents shall be provided.

- b. All City and USA requirements and standards regarding water supply, erosion control, storm and sanitary sewers, and on-site water quality facilities shall be complied with.
- c. The City shall review and approve the preliminary design of the storm water drainage/treatment systems to ensure protection of Rock Creek.
- d. All facilities for the containment and treatment of chemical spills shall be designed and operated to be drained by pumping rather than through gravity feed valved systems.
- e. Chemical storage and handling and truck parking areas shall be paved and underlaid by an impervious membrane to protect from spills and leakage. The entire paved surface is to be designed to drain into a central containment area, which shall include inspection port or ports to help detect any leakage through the paved surfaces.
- f. All storm water and other discharges from areas defined in Condition B.2.e., excluding roof run-off, shall be discharged directly into the Rock Creek sanitary sewer after collection in containment areas and appropriate testing and treatment as defined by USA, and other appropriate agencies.

### 3. Roads and Transportation

- a. A driveway access permit to Tualatin-Sherwood Road shall be obtained from Washington County.
- b. A non-remonstrance agreement with Washington County and the City for future public improvements shall be executed and recorded.
- c. Additional right-of-way shall be dedicated along the full frontage of Tax Lot 200:2S128C to provide Tualatin-Sherwood Road with a right-of-way width of 45 feet from center line.
- d. A one-foot deep non-access reserve strip shall be recorded along the full frontage of Tax Lot 200:2S128C, except at the County approved driveway access.

e. Relocate the main driveway access onto Tualatin-Sherwood Road to a point approximately 200 feet east of the edge of the rail right-of-way to ensure eastbound double-trailer trucks can fully clear the rail line before having to begin to make turning movements, subject to City obtaining concurrence of the County.

f. Install an on-demand traffic signal on Tualatin-Sherwood Road for vehicles entering and exiting the facility, subject to City obtaining concurrence of the County. If the County does not concur within sixty (60) days, the issue shall be returned to the City Council for further consideration.

4. Generally:

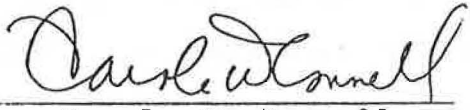
a. Proof of compliance with all applicable Federal, State and local regulations shall be provided.

C. The following are general conditions of approval:

1. An annual site and facility inspection shall be conducted by TVFR or a qualified independent consultant retained by the City and paid by the applicant, as deemed appropriate, the results of which shall be reviewed by the TVFR and other appropriate agencies. The purpose of this inspection is to identify failures or potential failures in the structures, equipment, containment, and primary and secondary impervious layers and to ensure that no chemicals have escaped from the containment area by sampling the adjacent land and as appropriate. The inspection shall also review compliance with all other conditions of approval with recommendations for changes and improvements. The City may request more frequent inspections as needed.
2. Revise the site plan in accordance with all the preceding conditions and resubmit to the City staff for review and approval for compliance with those conditions.
3. To the extent that any of the conditions imposed herein conflict with the requirements of any oversight agency, including but not limited to Oregon Department of Environmental Quality, Environmental Protection Agency, and TVFR, any necessary changes shall be returned to the City for further review and approval.

Appeal

Persons who are a party to this decision and who have a basis for an appeal based on an issue that has been raised, are eligible to appeal this decision not more than 21 days after the date on which the action took place. For the applicant, the 21 days are counted from the date this decision was mailed.

Signed:   
Carole W. Connell  
Planning Director

  X   Final Action



**CASCADE  
COLUMBIA  
DISTRIBUTION  
COMPANY**

SEATTLE MAILING ADDRESS - P.O. BOX 9247 - SEATTLE, WA 98109-0247  
PORTLAND WAREHOUSE • 11400 N.W. ST. HELENS • PORTLAND, OR 97231

1503625524 P.01  
JK/RS Exhibit X

Attn: CAROLLE Cornell

Per our phone conversation this AM CASCOB is hopeful about occupying our facility on or about June 1. We will NOT BE FULLY operational at that time. (We would be warehousing only - no bulk tanks in operation)

Tim Houlard indicated a willingness to work with us on BLOB Code/occupancy as far as his dept. is concerned. Contract is being made directly with USA & TVFR.

Re: Conditions

(A) TVFR

2b. Fire alarm activated, alarm Company contacted  
Security system activated when bulk tanks installed. (doors & gates locked)

(B) a. done ✓  
b. BLOB & NOT complete? May need to go back to PC

c. pre-approved plans anticipated landscaping complete end of 1995 -  
OK SPRING 1996. ROAD GRAVEL (100' near public Road will be surfaced

→ by winter 1995 (to prevent dragout) Temporary address sign in place.

law/eng

d. extension requested  
e. perimeter fencing complete

No (f) Complete  
2 a. USA pending approval  
b. Complied  
c. Complied Need DEA app  
d. pre plans  
e. done  
f. Completed pre plans

3 a-f Complied

(C) 1-3 Complied

Summary:  
Security System  
Landscaping  
paving  
Issues open

Please contact me if this is acceptable  
Thanks Bob Cole.

**SUPPLEMENTAL STAFF REPORT**

DATE: November 24, 1992

TO: Sherwood Planning Commission

FROM: Carole W. Connell, Planning Director

RE: **SP 92-7 Cascade Columbia Distributing**

**I. Introduction**

The purpose of this Staff Report is to supplement the original City Staff Report dated October 12, 1992 (attached). This report considers all evidence received since that date, and the testimony presented at the October 20 and November 3, 1992 public hearing before the Planning Commission.

The public hearing was closed by motion of the Planning Commission on November 3, 1992. The hearing may be re-opened if, in the Commission's judgment, there is relevant new evidence to be considered, and if the applicant agrees to a re-opening.

The following summarizes the particulars of the project, issues and concerns raised during the hearing and by the evidence that has been assembled, the City's site plan review criteria and the project's compliance, or lack of compliance, with those criteria, and conclusions and a recommendation.

**II. Project and Site Summary**

Cascade Columbia proposes to locate a chemical distribution warehouse on a portion of a 19.7 acre industrial parcel adjoining Rock Creek, the Southern Pacific Railroad line and Tualatin-Sherwood Road. BPA and PGE power line easements and facilities bisect the parcel east-west. The warehouse is proposed for siting to the interior of the parcel in a treed area some distance back from Tualatin-Sherwood Road. Cascade Columbia plans to handle 109,000 gallons of chemicals in a tank farm, 1,878,000 pounds of chemicals in tanks, drums and bags in buildings A, B and C and 965 drums each holding 55 gallons of chemicals in areas B and D. Please refer to the previously distributed site plan for the location of these features. There are to be a maximum of three employees at the warehouse to transfer and truck the chemicals, and manage the office.



The nearest City residential zone is about 1400 feet south, on Oregon Street. Adjoining properties (Allied Systems, Pride Disposal, Wellons) are zoned industrial, General Industrial (GI) on the east side of Rock Creek and Light Industrial (LI) on the west side of the creek. All proposed access to the proposed facility is from Tualatin-Sherwood Road and the railroad.

The channel of Rock Creek is about 670 feet from the nearest tank or storage area as proposed by the applicant, and 600 feet from proposed paving (note: mislabeling on the site plan submitted by the applicant gives the impression that the creek channel is much closer). The edge of the 100-year floodplain is about 270 feet from those same features and 200 feet from areas proposed for paving. Rock Creek flows north through industrial land before leaving the Urban Growth Boundary (UGB), and entering the broad Onion Flats floodplain some 2000 feet north of the site. There are no City water wells in the area, or anywhere within the Rock Creek drainage, although the City does own a future well site on Murdock Road, over 4,000 feet south of the warehouse site. There are a few private residential wells in the portion of the Rock Creek drainage within the UGB. To the City's knowledge, all such wells are over 2,000 feet or more distant from the Cascade site.

The parcel slopes down from the proposed facility site to the creek. The lowest elevation of the facility site is 160 feet. The elevation of the 100-year floodplain is 135 feet. Prior to making application for this proposed facility, the applicant donated to the City 2.036 acres of Rock Creek flood plain on the west side of the facility. This is planned to remain as an open space, as part of the City's Rock Creek Greenway (which is planned to incorporate all land within the 100-year floodplain).

The proposed Tualatin River National Wildlife Refuge Study Area includes the entire property on which the facility is proposed to be sited. Actual refuge boundaries will only be developed gradually over many years based on US Fish and Wildlife Service funding and habitat priorities. The area within this Study boundary is generally not expected to ever be totally acquired by USFW. The refuge study boundary is shown on the City Parks and Open Space Plan Map, and the City Parks Plan does pledge to administer the greenway in a manner consistent with Fish and Wildlife practices. In fact, it is the City's expectation to deed the 2.036-acre parcel to Fish and Wildlife in the near future.

Based on prior discussions with USFW, the portion on this property most likely to be included within the actual refuge is the aforementioned 2.036-acre donation to the City greenway. The wooded area may also be of some interest to U.S. Fish and Wildlife. This portion of the property would have to be acquired by Fish and Wildlife. There are no City Plan or Code policies specifically



protecting the refuge, nor could there be as the refuge does not yet exist. The City greenway, however, whatever its ultimate disposition as part of the refuge, is most certainly subject to City policies regarding protection of the floodplain, open space, and water quality.

The treeless portion of the parcel fronting more directly onto Tualatin-Sherwood Road and north of power line easements is proposed by the applicant to be left undeveloped at this time. The applicant chose the rear area for the warehouse because the distance from public rights-of-ways and extensive tree cover would better screen the facility. Soils in this front area are wet, and the area is occasionally covered by water. The City's engineering consultant, David Evans and Associates (DEA) investigated this portion of the site on November 10, 1992. Ms. Susan Cunningham of DEA reported that the area may have once been a wetland but it appears to have been filled, and can no longer be so classified. The City does not know specifically when this fill occurred; or if it was done by the present or a past landowner, or by someone else such as contractors working on the 1990-1991 Tualatin-Sherwood Road rebuild.

### **III. Potential Problems with the Facility and Solutions to Consider**

Several concerns were raised by staff in the original Staff Report, by DEA, by an industrial chemist (Dr. Michael Kay) hired by DEA (reports attached), and by area residents at the two-night public hearing. After the hearing, the City received several more telephone calls and letters in opposition of the proposal. The comments are in the file, but are not included in the record because the hearing was closed before they were received. Generally, residents are strongly opposed to locating the facility in Sherwood because of concerns over the potential for accidents and chemical spills that may pollute the creek, damage the area within the wildlife refuge study area, and public health hazards. Because there is no method to fully guarantee the prevention of accidents, the responding residents generally believe the application should be denied. The City also has concerns about creek pollution and chemical spills. Several specific methods to address the concerns have been proposed. The following is a summarized list of the concerns expressed and recommended solutions.

**A. Chemical transfer accidents may pollute Rock Creek or discharge airborne vapors into the community. The Commission may require the following solutions to mitigate potential accidents:**

1. Extend roofing over open storage areas for additional rainfall protection.

2. Relocate the rail spur and tank farm to the east side of the facility.

3. Discharges from containment sumps should be pumped out rather than gravity drained through valved systems.

4. Provide for total enclosure of all chemical transfer activities, including airborne containment with negative pressure air.

5. Require pollution insurance protecting the creek and indemnifying the City from future creek contamination clean-up costs or other damage to the environment and adjacent properties.

6. Re-locate the entire facility northeastward towards Tualatin-Sherwood Road, further away from the creek and the wooded area.

**B. Company personnel may be unqualified in the event of an on-site emergency. The City could require existing and new personnel to be trained at First Responder Operations Level and that all personnel be First Aid/CPR qualified.**

**C. According to DEA, an interpretation by OSHA is needed regarding handling and storage of 40,000 lbs. of formaldehyde. OSHA may rule this material is covered by the Process Safety Management Standard. This is not a City matter, and should be handled through OSHA. The City could require proof of compliance prior to building permit issuance or occupancy.**

**D. According to DEA, a risk assessment and hazard analysis is needed for truck and train transferring of Nitric and Hydrochloric Acid and Aqueous Ammonia. This is not a City matter and should be handled through the Fire Marshal. The City could require proof of compliance prior to building permit or occupancy.**

**E. New, dangerous chemicals could be added to the facility without City knowledge. Notification of storage and clean-up details of additional new chemical storage is a current requirement of the Fire Marshal. There may be no need for the City to also monitor this, but the City could require proof of compliance at fixed intervals.**

**F. The facility may be unstaffed or lightly staffed at times, and leaks and spills could go undetected for extended periods.** The City could require 24-hour site security to help ensure timely emergency response. This is important because the manager for the proposed facility lives in Hillsboro and the nearest TVFR "Hazmat" team is located near Washington Square, about 20 minutes away.

**G. Chemical handling practices and employee safety provisions may be inadequate.** Staff believes the City must rely on involved agencies such as OSHA and the TVFR to monitor activities inside the facility. The City does not have the staff, the expertise, or the responsibility to oversee daily business practices. The City could require copies of all facility plans and policies, as well as any reports or citations from other agencies on any changes or violations.

**H. The following conditions were generally recommended in the original Staff Report, and in some cases have been modified or added to for this supplemental report.**

1. Provide proof of compliance with OSHA, DEQ, EPA, ODOT, Washington County, and TVFR Fire Marshal regulations.

2. Provide an engineers certification of compliance with City environmental performance standards.

3. Provide proof of presence on-site of adequate types of emergency response materials including fire fighting foam, appropriate absorbents, and measures to prevent surface or ground water contamination.

4. In accordance with City standards, provide for: landscape development and maintenance, parking stall wheel stops, screened exterior solid waste containment, and lighting. If the facility is sited as originally proposed, provide a tree removal plan to be reviewed and approved by the City.

5. Prepare a traffic impact analysis analyzing the safety of locating the facility access driveway close to the railroad crossing and determine if an eastbound deceleration lane or other driveway or street improvements are needed. Once a driveway location is identified, obtain driveway access approval from Washington County.

6. Sign and record a non-remonstrance agreement with the County for future road improvements to Tualatin-Sherwood Road, and dedicate additional right-of-way along the full frontage of the facility parcel providing 45 feet from the centerline of Tualatin-Sherwood Road.

7. Establish a one-foot non-access reserve strip along the parcels Tualatin-Sherwood Road frontage, except at the approved driveway access location.

8. Provide written verification from the rail operator that rail service will be available to the site on an ongoing basis. If continued rail service cannot be verified, revise the traffic analysis to account for increased volumes of truck traffic and make appropriate changes to driveway and street improvement requirements.

9. Comply with City and USA requirements regarding water supply, erosion control, public storm and sanitary sewer, on-site water quality, and verification of the 100-year floodplain. The proposal includes storm drainage control that directs site water run-off to either a grassy swale, the sanitary sewer pipe, or Rock Creek. This approach has been approved by USA and may be accepted. However, the City will make a final determination in following review of the preliminary design of the storm water drainage/treatment system to ensure protection of Rock Creek.

10. Identify on the site plan the specific uses of all buildings and tanks illustrated.

#### IV. Site Plan Criteria

##### 5.102.04 Required Findings

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

A. The proposed development meets applicable zoning district standards and all provisions of Code Chapters 5, 6, 8, and 9.

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

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



D. The proposed development preserves significant natural features to the maximum feasible extent, including but not limited to natural drainageways, wetlands, trees, vegetation, scenic views, and topographical features, and conforms to the applicable provisions of Chapter 8 of the Code and Chapter 5 of the Community Development [Plan].

Of concern to the applicant, and the City, is the extent to which conditions can be applied to a site plan approval, and whether the application can be denied based on non-compliance with general site plan criteria. It is the City Attorney's opinion that Code site plan provisions are not written so as to permit discretionary denial of a permitted use. Site planning has to do with whether a development proposal conforms with Plan and Code policies and standards with respect to utilities and other services, transportation, dimensional standards, open space and environmental quality goals, appearance and design.

According to the City Attorney, compliance with the aforementioned standards does not include governmental budgetary and staffing issues. Some public testimony on this proposal has asserted that the application should be denied on the perception that City staffing levels and expertise is not adequate to monitor, control and mitigate impacts of this particular warehouse operation.

Further, site plan review is not the same as "conditional use" review, which typically is somewhat discretionary and allows considerable latitude in imposing use restrictions and other conditions. One difficulty in this review is that many of the concerns raised in the public hearing are subjective. Site planning review in Sherwood does not set out specific standards for reviewing a chemical distribution facility or any other named use. General standards are applied to such uses. Therefore, the Commission must rely on these more general Plan and Code provisions to determine compliance.

## V. Compliance with Criteria

As required by the City Ordinances and State statute, the four site plan criteria contained in Code Section 5.102.04 (listed on Page 6 of this Staff Report) must be met for the Commission to approve a site plan application. Compliance with these criteria was reviewed in the original Staff Report, dated October 12, 1992. Staff reported that the proposal as submitted at that time was not in conformance with criteria regarding public safety, and storm water pollution prevention. Staff also raised several concerns regarding compliance with Chapter 5 of the Sherwood Community Development Plan (Environmental Resources) and Chapter 8 of the Sherwood Community Zoning and Development Code (Environmental Resources).

The following is a second look at these criteria, considering hearing testimony and additional evidence received to date.

***Section 5.102.04 (A): The proposed development meets applicable zoning district standards and all provisions of Chapters 5, 6, 8, and 9 of the Zoning Code.***

A. The application as presented generally meets the use, dimensional, and floodplain provisions of the General Industrial zone, Section 2.111, and most of the community design (Section 2.111.06) provisions. The Zoning Code specifically allows the use, "provided the use meets environmental performance standards contained in Chapter 8, Environmental Resources", which is discussed below. The proposal complies with all dimensional and coverage requirements of Section 2.111.

B. Zoning Code, Chapter 5, Community Design and Appearance.

To assist the Commission in understanding the purpose of site planning, the objectives of this type of land use permit are listed below. Concern has been raised by the applicant as to how much discretion the Commission has in a site plan review. Typically, site plan review is not a question of use, but rather a review of the project's physical lay-out in relation to siting standards. However, in Sherwood, the Code has been broadened to ensure that site plan review incorporates a close review of environmental performance and resource protection (Code Sections 2.110.02 and 5.104.04 (A) and Zoning Code Chapter 8). The objectives of site plan review, as enunciated in Zoning Code Section 5.101.02, are:

Site Planning review is intended to:

A. Encourage development that is compatible with the existing natural and manmade environment, existing community activity patterns, and community identity.

B. Minimize or eliminate adverse visual, aesthetic or environmental effects caused by the design and location of new development, including but not limited to effects from:

1. The scale, mass, height, areas, appearance and architectural design of buildings and other development structures and features.
2. Vehicular and pedestrian ways and parking areas.

**3. Existing or proposed alteration of natural topographic features, vegetation and water-ways.**

In response to the site plan objectives above, it would be difficult to prove that the proposal is absolutely compatible with maximizing the open space, water quality, wildlife, and other attributes of the City's Rock Creek greenway and its associated wetlands and floodplain. The same could be asserted for existing industrial businesses in the area, however, although potentially perhaps not to such a degree. A human error or natural disaster at one of these other industries could also result in pollution of the creek, as can commercial, institutional, and residential uses. Almost by definition, human activity poses a risk to natural features and aesthetic values. The site plan objectives do not require a "no impact" standard, however, only that the effects be "minimized."

The proposed industrial use is consistent with existing industrial activities and zoning in the area.

The facility as originally proposed is not necessarily consistent with the Comprehensive Plan's total vision of new industrial uses or the protection of natural resources. Further, public testimony on this matter reflects the opinion of many that the use is not compatible with the community's image. Plan policies which the original proposal as submitted by the applicant do not clearly comply with include the following (see Plan Chapters 4 and 5):

- Industrial uses will be located in areas where they will be compatible with adjoining uses, and where necessary services and natural amenities are favorable."

- "Only non-polluting industries meeting specific performance standards relating to noise, glare, water, air and land pollution will be allowed."

- The City will encourage clean, capital and labor intensive industries to locate in Sherwood."

- Locate industrial development so as to assure its compatibility with the natural environment and adjoining uses."

- General Industrial (GI) uses are to be located "where industrial uses will not unduly detract from existing environmental assets."

- Protect fish and wildlife habitats and Significant Natural Areas where feasible."



- "Water quality will be protected from erosion and other forms of degradation."

- "The City will follow DEQ standards relating to land and air quality except where additional standards or more restrictive standards are required to address locally perceived environmental problems."

- "Where there are conflicting uses proposed for identified open space, natural or scenic resources, the City will permit only those uses justified by analysis of economic, social, environmental and energy consequences (ESEE analysis)."

The Plan goes on to recognize that no single development will likely meet all policies equally or be entirely without some level of conflict. The Plan states therefore that the City shall "establish a community design review procedure to evaluate the consequences of conflicting uses for identified resources and to protect such resources where possible, as development occurs."

The Zoning Code's site planning review chapter (Chapter 5) and associated Chapters (6 and 8 in particular) provide the vehicle for resolving plan policy conflicts in the context of this development application.

As a part of the recent Periodic Review of the City's Comprehensive Plan, LCDC Goal 5 required a natural resource inventory based on an ESEE analysis. In 1983, Washington County performed an ESEE analysis for Sherwood's natural resources, including Rock Creek. DLCDC accepted the City's Goal 5 Natural Resource Inventory based on the County's work when the Sherwood Periodic Review Order was submitted in 1991. The County's inventory addressed Rock Creek in general, not on a site-by-site or use-by-use basis.

Zoning Code Section 5.101.02 (B) authorizes the Commission to "minimize or eliminate the adverse visual, aesthetic or environmental effects of the proposed use." Review of the proposal to this point has focused on ways to minimize the effect of spills impacting the Rock Creek greenway and its associated wetland, open water, riparian, and floodplain habitats. The applicant proposes to locate the facility in a tree covered area to minimize the visual and aesthetic impacts of the facility, particularly on motorists and pedestrians using Tualatin-Sherwood Road. In this particular case, environmental and aesthetic considerations are not necessarily compatible.

To make some of the suggested changes to the site plan to decrease the potential negative impact on the creek (see Part III of this report, pages 3-6), the Commission would have to find that environmental quality takes precedence over aesthetic concerns.

The Commission could require that the facility be moved northeastward on the parcel to the flat open area near Tualatin-Sherwood Road, require full on-site retention and treatment of storm water runoff, and so forth. These modifications, however, would result in a more negative visual and aesthetic impact by locating the tank farm in full view of the road. It is important to remember, however, that, the issue of what is being warehoused aside, this is an industrial warehouse and its appearance will in essence be no different in aesthetics and visual impact than other existing and adjacent industrial uses highly visible from Tualatin-Sherwood Road (Wellons, Allied Systems, Pride Disposal, West Coast Auto Auction). One positive aesthetic impact of moving the facility closer to Tualatin-Sherwood Road is that the stand of trees proposed by the applicant for facility siting would be better preserved.

Zoning Code Chapter 5 is intended to establish a process and define a set of development standards to guide physical development in the City consistent with the Community Development Plan and the Zoning Code. The original Staff Report addressed specific Code site plan standards concerning landscaping, parking, signage, loading, circulation and storage. With the incorporation of the changes resulting from these recommended conditions, **the proposal meets specific site plan standards outlined in Zoning Code Chapter 5**. The original proposal does not, however, clearly meet the general site plan objectives to "encourage development that is compatible with the natural environment," or to "minimize or eliminate adverse environmental effects caused by the location of the development," next to the creek. The proposal also does not clearly reflect the industrial and natural resource policies of the Comprehensive Plan. Additional amendments and conditions to the site plan as suggested in this Supplemental Staff Report would mitigate these concerns.

#### C. Zoning Code Chapter 6, Public Improvements

The purpose of Zoning Code Chapter 6 is "to ensure the health, safety, and the economic stability of the community, and to establish a quality system of public improvements, the City shall require proposed buildings and development for which public facilities and public rights-of-way are not fully provided or improved to current standards, to install said improvements."

Public improvements are reviewed specifically in the original Staff Report, in the context of the provision of public services to the proposed development. Issues of transportation access, turning radius for emergency vehicles, hydrants, surface water flows, sewer and water connections, etc., are of concern in site planning review. These issues are well-covered in the Uniform Building

Code, City public facility standards, the Fire Code, and other reviews by USA, EPA, DEQ and OSHA. These specific site plan criteria are not so broad as to include more subjective aspects of public safety, such as potential or future environmental hazards resulting from natural disaster or human error.

Certain site planning improvements to prevent storm water run-off pollution into Rock Creek have been proposed by the applicant. However, as stated in the two reports submitted by Dr. Michael Kay and DEA (attached), additional safeguards are needed. These include pollution insurance, extended roof eaves, and fully contained transfer sites. Additionally, full on-site containment and treatment of all storm water run-off prior to discharge into the floodplain should be provided to ensure creek and floodplain protection.

Confirmation of the adequacy of the transportation access proposed by the applicant should be justified by a traffic impact report. The safety of locating the access drive so near a railroad crossing has not been shown. Further, turning on and off Tualatin-Sherwood Road may require additional safety improvements (for instance, deceleration lanes). Finally, the City has recently learned that the Southern Pacific Railroad through Sherwood may be abandoned in the relatively near future. Southern Pacific is in the process of leasing all its Western Willamette Valley short-haul lines to Genesee & Wyoming. If the "Rex Hill" line through Sherwood was abandoned, Cascade may have to significantly increase its trucking activity, changing the site and traffic impact evaluation in that regard. The applicant should be required to obtain a letter from Southern Pacific and Genesee & Wyoming to clarify the status of the rail service.

With satisfaction of the aforementioned conditions and those others recommended to date regarding proper agency review and permitting, and compliance with those site improvement suggestions received from USA, the City, Dr. Kay and DEA, **the proposal meets the provisions of Zoning Code Chapter 6.**

#### D. Zoning Code Chapter 8, Environmental Resources

Zoning Code Chapter 8 "is intended to protect, preserve, and otherwise properly manage the City's natural and environmental resources for the benefit of the general public, to regulate land development so as to protect the public from natural and environmental hazards, and to establish performance standards allowing the City to properly and uniformly assess the impact of residential, commercial, industrial and institutional development and activities on the quality of the City's environment."

Concerns raised include protection of the creek's water quality, associated fish and wildlife habitat, and protection of the public from chemical accidents or disasters. The intent of the Code allows the City to "regulate development" and "establish performance standards" to assess the impact of the industrial development on the environment. **The City has no performance standards that specifically regulate chemical distribution facilities.** Performance standards in the Zoning Code enunciate environmental policies and goals for urban uses in general.

For this proposal, the City has relied on agency and expert review to help interpret these standards to ensure the proposed facility can or will be properly built to protect the environment. The City may regulate the development through site plan review by imposing the several conditions listed in Section III of this supplemental Staff Report to ensure such protection. If adequate conditions, as outlined in this and the original Staff Report, are imposed and complied with, **the proposal can meet the provisions of Zoning Code Chapter 8.**

***Section 5.102.04 (B). The proposed development can be adequately served by services conforming to the Community Development Plan, including but not limited to water, sanitary facilities, storm water, solid waste, parks and open space, public safety, electric power, and communications.***

The original Staff Report stated that the proposed development can be adequately served by City water, sanitary sewer, streets and private utilities. There is a concern regarding proper storm water management. USA and DEA have recommended improvements to ensure adequate storm water management.

Staff raised a concern about the meaning of the term "public safety" under this criteria. The City Attorney clarified that public safety refers to public safety services, not whether a permitted use should be denied on the subjective grounds that the use seems to pose higher risks than some believe acceptable. Public safety issues that relate to how the property is developed are within the scope of proper site review. **The City cannot base a decision on speculation of the outcomes of an unknown future disaster that may effect public safety, such as a regional disaster with the magnitude of an earthquake.**

If there are valid issues identified that other agencies or codes do not cover, site plan approval could incorporate contingency features (such as full containment and treatment of all types of flows in the event of a spill). To decide whether a risk-cost-



benefit of such measures are reasonable, the City may also decide that a pre-approval engineering evaluation may be provided. It appears that DEA, USA and the City have provided recommendations to ensure public safety and storm water controls. If these are incorporated into an approval, the proposal meets the provisions for adequate services.

***Section 5.102.04 (C). Covenants, agreements, and other specific documents are adequate, in the City's determination, to assure an acceptable method of ownership, management, and maintenance of structures, landscaping, and other on-site features.***

The original Staff Report raised a concern about proper management and maintenance of the proposed facility. Further, there was extensive research and public testimony about perceived deficiencies in the company's operations at their existing Seattle and Portland facilities. The City is concerned about the adequacy of staff training and emergency response, and the potential for the occasional absence of employees at the Sherwood facility. Public testimony raised some serious concerns about the potential for improperly stored chemicals and unsafe working conditions at the Sherwood facility.

The applicant believes that Section 5.102.04 (C) is unrelated to an industrial site plan, and is intended to control common ownership of facilities or land in a residential planned unit development or condominium project. Staff does not believe the Section is necessarily limited to such uses. Nothing in the Zoning Code explicitly or implicitly suggests that Section 5.102.04 (C) is so limited. Covenants are certainly used in PUDs and condominiums, but the term "agreements and other specific documents" is broad and could refer to an agreement between the City and the owner ensuring adequate staff training, adequate emergency response provisions, and other provisions for proper site management and maintenance. For instance, a good suggestion to ensure better emergency response is that the warehouse have 24-hour security.

There are limits, however, to what the City can require. City staff is not available, nor has the expertise, to monitor and evaluate daily plant operations. The City has to rely on other agencies to monitor the aspects of the facility's operation as required by Federal, State and local statute. This is not to say that the City shouldn't require copies of all reporting, permitting, and abatements issued by other agencies or by the applicant, and reserve the right to make comment or objection, or initiate its own abatement or Code violation procedures if warranted.

If conditions are imposed to ensure adequate management and maintenance of structures and on-site features, **the proposal can comply with Section 5.102.04 (C).**

***Section 5.102.04 (D). The proposed development preserves significant natural features to the maximum feasible extent, including but not limited to natural drainageways, wetlands, trees, vegetation, scenic views, and topographic features, and conforms to the applicable provisions of Chapter 8 of the Code and Chapter 5 of the Community Development [Plan].***

The applicant has complied with Plan and Code provisions and standards to dedicate the Rock Creek greenway, as discussed in the original Staff Report. Provisions regarding Code Chapter 8 and Plan Chapter 5 were discussed earlier in this supplemental Staff Report.

The location of the facility does not preserve the integrity of the creek and site vegetation "to the maximum extent feasible." Maximum protection of natural features would, of course, imply no development of the site whatsoever for any industrial or other urban use. Preservation of the natural drainage way, trees and vegetation "to the maximum extent feasible" suggests moving the site for the proposed facility out of the tree cover and further away from the creek, to the front portion of the parcel nearer to Tualatin-Sherwood Road. **The proposal would better comply with Section 5.102.04 (D) if the facility were moved to the treeless area further away from Rock Creek and closer to Tualatin-Sherwood Road.**

## VI. Conclusion

The proposal generally meets the use, dimensional and site coverage provisions of the General Industrial zone. With site improvements, the proposal can meet the specific site plan standards of Zoning Code Chapter 5. The proposal does not meet all of the general site plan objectives and Plan policies regarding industrial development and protection of natural resources. The City Comprehensive Plan and Zoning Code recognize that Sherwood's diverse Plan policies cannot all be ideally satisfied in any given development proposal and specifically incorporate the site plan review process to adjudicate these differences.

With the many recommended improvements and conditions suggested by this and the original Staff Report, the proposal can provide for adequate public protection from environmental hazards, short of a regional disaster such as an earthquake. Since there are no specific environmental performance standards to review a chemical warehouse, and since the applicant has donated the floodplain and is recommended to be required to provide full protection of the creek from spills and storm water pollution (including moving the facility farther away from the potentially impacted natural resource), staff concludes that the proposal can comply with the general policy to protect environmental resources (Chapter 8).

The original proposal can be adequately served by most public services, except storm water. Additional conditions and provisions guarantees proper storm water runoff and adequate emergency response will provide compliance with Zoning Code Chapter 6. Agreements with the City to ensure 24 hour security and compliance with appropriate agency rules regarding proper facility management and maintenance result in compliance with site plan criteria referring to public safety and adequate facility management.

#### **VII. Recommendation**

Based on the original Staff Report and this supplemental report, the applicant's report, the responses from affected agencies and the City Engineer, and the testimony received at the public hearing, Staff recommends the following:

That the application by Cascade Columbia Distributing Company to construct a chemical distribution and warehouse facility on Tax Lot 200:28C off of Tualatin-Sherwood Road be APPROVED subject to the following conditions. No building or site development permits shall be issued until all conditions are fulfilled, except where a condition clearly is dependent on reaching the stage of facility construction or operation. All conditions will require written acceptance by the City before they are deemed fulfilled:

1. The proposed facility shall be relocated to the northeast portion of the applicant's tax lot, closer to Tualatin-Sherwood Road and north of the BPA power line easement.
2. Roofing shall be extended over open storage areas for additional rainfall protection.
3. All chemical transfer activities shall be totally enclosed, and include vapor containment, except where the Fire Marshal determines such enclosure will be detrimental to public or facility safety.



4. Pollution insurance protecting Rock Creek and its associated wetlands and floodplain, and indemnifying the City from contamination clean-up costs or other damage to the environment or adjacent properties shall be provided.
5. Proof that facility personnel are trained at First Responder Operator level as certified by OSHA, and qualified at First Aid/CPR, shall be provided.
6. A semiannual materials inventory of all chemical substances stored on site shall be provided to the City in a form identical to that required for submission to the Fire Marshal.
7. 24-hour a day, 365-day a year security personnel shall be provided at the facility.
8. Proof of compliance with all applicable OSHA, ODEQ, EPA, ODOT and Fire Marshal regulations shall be provided.
9. Certification of compliance with City environmental performance standards shall be provided by a professional engineer qualified to make such certification.
10. A certified inventory of all emergency response materials on site shall be provided to the City on a semi-annual basis.
11. An emergency response plan and storm water pollution prevention plan specifying physical features, and operational practices and procedures, to contain and manage contamination incidents shall be provided.
12. A driveway access permit to Tualatin-Sherwood Road shall be obtained from Washington County.
13. A non-remonstrance agreement with Washington County and the City for future public improvements shall be executed and recorded.
14. Additional right-of-way shall be dedicated along the full frontage of Tax Lot 200:28C to provide Tualatin-Sherwood Road with a right-of-way width of 45 feet from center line.
15. A one-foot deep non-access reserve strip shall be recorded along the full frontage of Tax Lot 200:28C, except at the County approved driveway access.
16. All City and Unified Sewerage Agency requirements and standards regarding water supply, erosion control, storm and sanitary sewers, and on-site water quality facilities shall be complied with.

17. The final approved site plan shall illustrate the specific use and functions of all buildings and tanks. Facilities identified as "future" on the site plan and not constructed as part of the initial building permit shall be subject to additional site plan review, and are not subject to this approval.
18. A traffic analysis and report shall be provided and the applicant shall comply with any suggested modifications or improvements to the site plan, such as relocation of driveway access, construction of deceleration lanes, road widening, etc.
19. A commitment letter from the rail operator shall be provided stating that rail service will be available for the foreseeable future. If rail service is to be abandoned, the traffic analysis shall be accordingly revised and the applicant shall comply with any suggested modifications or improvements.
20. Comply with, and submit appropriate plans where required, all City site development standards including landscaping, off-street parking and loading, on-site circulation, on-site storage, lighting, and signage.
21. Submit a plan or report indicating how existing trees or vegetation on the site will be impacted by the proposal and make provisions that retain as much of the existing tree cover as possible.
22. The City shall review and approve the preliminary design of the storm water drainage/treatment systems to ensure protection of Rock Creek.
23. All facilities for the containment and treatment of chemical spills shall be designed and operated to be drained by pumping rather than through gravity feed valved systems.
24. Revise the site plan in accordance with all the preceding conditions and resubmit to the City for review and approval along with the required Traffic Analysis and railroad commitment letter.

This approval is valid for one (1) year.

**STAFF REPORT**

TO: City of Sherwood  
Planning Commission

DATE MAILED: October 12, 1992

FROM: Carole W. Connell  
Planning Director

FILE NO: SP 92-7  
Cascade Columbia Distributing

SUBJECT: Site Plan approval request to construct a chemical distribution facility on 19.73 acres on the south side of Tualatin-Sherwood Road.

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**I. PROPOSAL DATA**

Applicant: Commercial Industrial Design Architecture  
9045 SW Barbur Blvd. Suite 4  
Portland, Oregon 97219

Owner: Cascade Columbia Distribution Company  
3231 17th Ave. West  
Seattle, Washington 98119

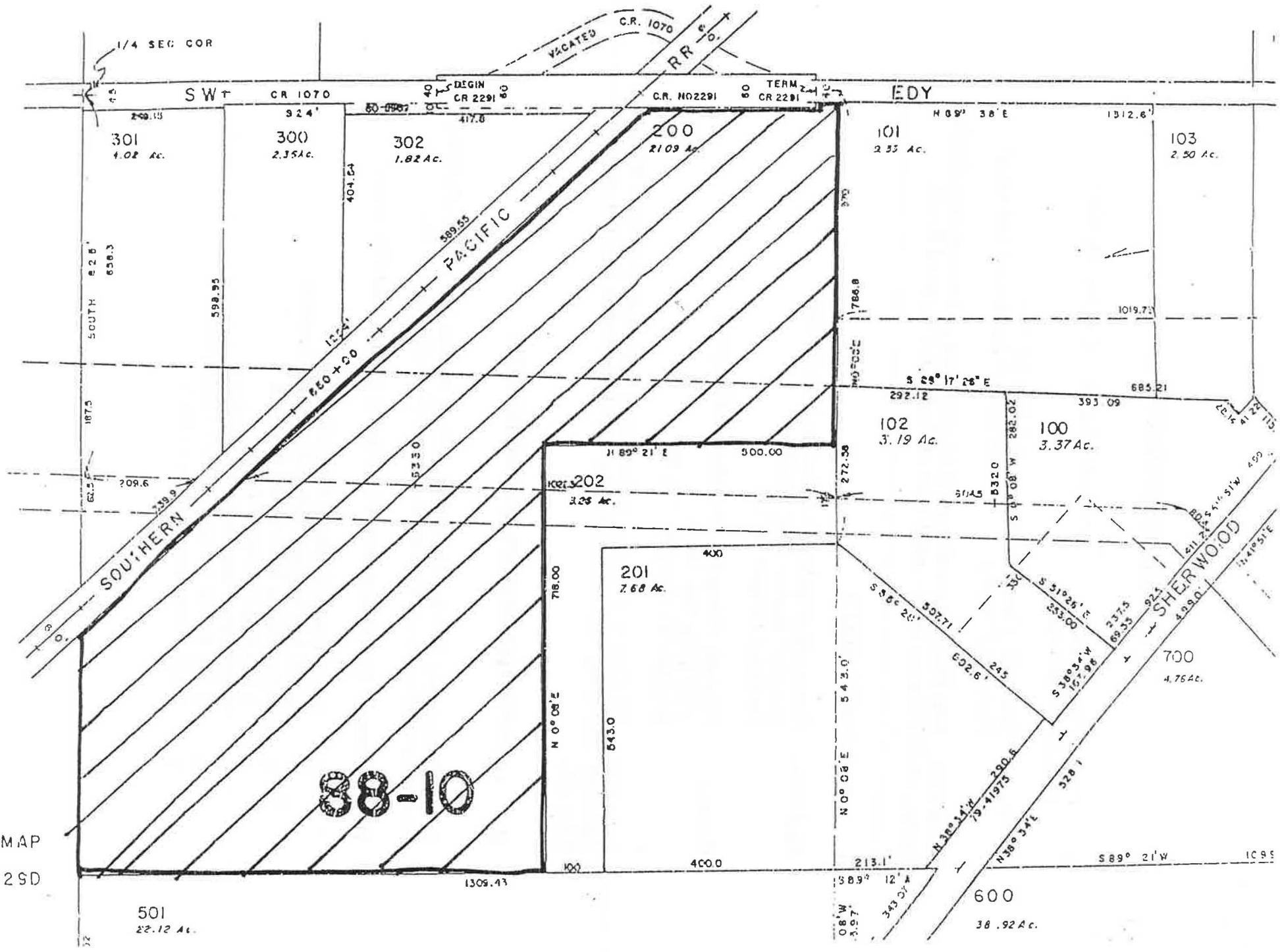
Location: SE Corner of Tualatin-Sherwood Road and Southern Pacific Railroad, including 19.73 acres and further described as Tax Lot 200, Map 2S 1 28C.

**II. COMPREHENSIVE PLAN PROVISIONS**

A. Community Development Plan Part 2, industrial, transportation, environmental resource protection and public facilities policies.

B. Community Development Plan Part 3, Zoning Code Sections;

1. 2.111 General Industrial (GI) Zone
2. 3.100 Application Materials and Submittal
3. 3.200 Public Notice and Hearing
4. 4.100 Application Content
5. 5.102 Site Plan Required Findings
6. 6.100 Public Improvement Requirements
7. 8.100 Environmental Resources



### III. FINDINGS OF FACT

A. **Site Characteristics.** The subject parcel is 19.73 acres and irregular in shape and topography. It is bordered on the north by Tualatin-Sherwood Road, northwest by Southern Pacific Railroad tracks, southwest by the Rock Creek drainage channel and southeast by Allied Systems, Inc. The BPA right-of-way and high voltage transmission line passes east - west through the central portion of the site. On September 9, 1992 the applicant donated to the City 2.036 acres of Rock Creek floodplain, defined as beginning at the 135 foot elevation.

Site elevations range from about 130 to 190 feet. The maximum gradient is 28% near Rock Creek. Vegetation consists of grasses, berry bushes and shrubs in the south portion of the site. Mixed grasses, shrubs, deciduous and coniferous trees exist in the central area. Grasses and shrubs cover the northern portion, with some fir trees bordering the railroad.

Soil characteristics are described for the applicant by Applied Geotechnology Inc. The report states that ..."areas of standing water several inches thick were observed on the northeast portion of the site near Tualatin-Sherwood Road in February, 1990, due to high groundwater, low soil permeability and a depression in the southwest portion of the site. SCS maps indicate that the Rock Creek channel floods commonly between December and April. The native silt soils are above the optimum moisture content and will require drying prior to compaction. Poor construction vehicle support should be anticipated in all but the driest summer months."

B. **Application.** The applicant submitted a several page site plan including elevations, topography, landscaping, grading, utilities and floor plans. Also included is a written narrative responding to the site plan criteria and application requirements. A geotechnical reconnaissance and Level 1 Environmental Risk Assessment for the proposed facility is provided by Applied Geotechnology Inc. A Conformance Statement claiming compliance with the City's environmental performance standards is signed by the project architect. These materials comprise a complete site plan application as per Section 4.100.

C. **Public Notice.** The applicant submitted a list of adjacent property owners. These citizens have been notified of the hearing and the decision criteria for a site plan. Also, agency referrals for this application included Washington County, ODOT, TVFRD, USA and the City Engineer. Their responses are included in this report or are attached.

D. **Site Plan Required Findings.**

**(A) No site plan shall be granted unless...the proposed development meets the applicable zoning district standards and all provisions of Chapters 5, 6, 8, and 9.**

1. Permitted Uses in the General Industrial Zone

The permitted uses section of the General Industrial Zone allows the "manufacturing, compounding, processing, assembling, packaging, treatment, or fabrication of the following articles or products:

(1) Drugs, cosmetics, chemicals and allied products, except as prohibited in Section 2.111.04."

Section 2.111.04 Prohibited Uses expressly prohibits the "manufacturing of the following substances:

(1) Abrasives, acids, disinfectants, dyes and paints, bleaching powder and soaps and similar products.

(2) Ammonia, chlorine, sodium compounds and similar chemicals...'

The Code permits the assembling, packaging and treatment of chemicals, but not the manufacturing of many chemicals, Distribution of chemicals is a handling of the product, similar to assembling, packaging and treating. Distribution of chemicals is not the same as manufacturing chemicals. Therefore, the proposed facility is a permitted use in the GI zone.

2. Dimensional Standards.

The 20 acre parcel meets the minimum lot size requirement for 20,000 square feet , and the lot width requirement of 100 feet in a GI zone. There are no building setback requirements where a parcel zoned GI is surrounded by industrially zoned land. The proposed buildings range from 18 to 24 feet high, under the permitted 50 foot height limit.

3. Chapter 5 Community Design

a) Landscaping Plan

**All areas not occupied by structures, paved roadways, walkways, or patios shall be landscaped...according to an approved site plan (5.201).**



## Landscaping Materials

The applicant is required to use an appropriate combination of evergreen or deciduous trees and shrubs, evergreen ground cover and perennial plantings. The proposed landscape plan meets this standard because it lists the following species: Shore Pine, Red Maple, Broadmoor Juniper, Red Rhododendron, Japanese Holly, mixed grasses and wildflowers.

Staff is uncertain whether the landscaping plan will allow for the establishment of "healthy growth and size" in vegetation. The plan indicates that trees will be 10 to 15 feet tall, and most shrubs will be two gallon or 12 to 18 inches. There are no specifications illustrating adequate preparation of topsoil and subsoil during planting. There is no water service to the landscaped areas.

Twenty-six (26) existing trees are illustrated, three (3) of which are proposed to be removed.

**A minimum of ten percent (10%) of the lot area used for parking must be landscaped.**

The site plan illustrates nine (9) parking stalls with adequate landscaping on three sides.

**A landscaped strip of at least ten (10) feet in width must be provided between off-street parking and rights-of-way.**

There is no area on the site where parking adjoins public right-of-way.

**A minimum of fifty percent (50%) of the required parking area landscaping must be placed in the interior of the parking area; and individual landscaped areas must be no less than sixty-four (64) square feet and be provided after every fifteen (15) parking stalls in a row.**

There are only nine stalls total, therefore the above standard does not apply.

## Landscaping at points of access.

The site plan illustrates landscaping at the point of access onto Tualatin-Sherwood Road including seven (7) Red Maples and grass in a twenty (20) foot wide strip adjoining the road. The fifteen (15) foot clear vision area at the intersection is provided.



## Visual Corridors

A fifteen (15) foot wide visual landscaped corridor is required along Tualatin-Sherwood Road. The plan provides for the corridor as illustrated on the site plan.

## Landscape Maintenance

It appears that water service to the site will be extended to the buildings only.

### b) Off-Street Parking Standards

The Code requires one ( 1) parking stall per employee. The applicant states that there will be three (3) employees. The proposed nine (9) parking stalls exceeds the City's standard. Stall dimensions are adequate. The site plan does not illustrate wheel stops for each stall. There are no provisions for bicycle parking. For an industrial use the Code recommends two (2) or one (1) per forty (40) parking spaces. Since there are only to be three (3) employees such facilities may not be needed.

### c) Off-Street Loading Standards

Loading is an important aspect of the subject business. Provisions for truck and train loading are provided on the plans. Loading areas are separate from the parking area. Later in the report is a discussion of the adequacy of these loading facilities.

### d) Access to Major Roadways

Access to the site is exclusively from one driveway onto Tualatin-Sherwood Road (formerly Edy Rd.), near the railroad intersection. The 40 foot wide driveway meets the 25 foot width requirement for industrial buildings. This is a county road, and the county was notified of this request. Their comments are as follows:

1. The proposed driveway is within the county's required 600 foot separation standard. The applicant is encouraged to find an alternative access point with an adjoining property such as Allied Systems. Otherwise, approval of a Modification to the Washington County Uniform Road Improvement Design Standards must be obtained by the applicant.

2. The property owner shall sign a waiver not to remonstrate against the formation of a local improvement district or other mechanism to improve the base road facility.

3. **The property owner shall dedicate additional right-of-way to provide 45 feet from centerline of SW Edy Road to the development site.**

4. **Establish a one-foot, non-access strip along the site's frontage of Edy Road, except at the approved access location.**

5. **Provide adequate illumination at the access to Edy Road, if approved.**

The above recommendations should be included as conditions if the proposal is approved.

e) Sidewalks and Curbs

Sidewalks and curbs may be required in industrial zones at the discretion of the Commission. The proposed development abuts Tualatin-Sherwood Road which has recently been re-built and includes new sidewalks and curbs across the property's frontage.

Sidewalks on-site should connect parking areas with building entrances. The nine (9) parking stalls adjoining building A can access the building by a short cross-walk in front of the building entry. Since there are only three employees, a sidewalk system between buildings is probably not necessary. However, if the facility expands significantly and additional employees are hired, sidewalks should be incorporated.

f) On-Site Storage

The owner is required to comply with the City's on-site storage regulations, which include provisions for solid waste, industrial materials, hazardous materials and outdoor displays.

g) Signs

Signage is not proposed at this time.

3. Chapter 6 Public Improvements

a) Streets

The proposed development does not include nor does it require the creation of new public streets.

b) Sanitary Sewer

The applicant proposes to extend sanitary sewer to the facility from an existing ten (10) inch line on site adjoining the railroad.

c) Water

The applicant proposes to connect to an existing twelve (12) inch water line in Edy Road.

d) Storm Sewer

The applicant proposes a storm sewer line from each building that drains into Rock Creek after going through site filtration and monitoring in accordance with USA's requirements. The exception is that the rear building will drain into an adjoining grassy swale. The USA was notified and their comments are attached. They recommended approval of the site plan subject to the following conditions:

1. **An erosion control plan in conformance with the Agency's R & O 91-47, Chapter 5, as amended by 91-75, and consistent with current construction guidelines.**

2. **All new public storm and sanitary sewer designs shall conform to the Agency's R & O 91-47, Chapter 3, as amended by 91-75.**

3. **On-site water quality facilities should be required.**

4. **Verification of Flood Plain status shall be made with the Agency.**

e) Fire Protection

The Tualatin Valley Fire and Rescue District was notified of this request and had the following comments:

**"The fire district has been working in close conjunction with Commercial Industrial Design Architecture on the application, We believe that all of the plans forwarded to this office in the planning packet comply with Uniform Fire Code and fire district requirements. The Fire district will provide a formal and complete review upon submission for construction of this project."**

4. Chapter 8 Environmental Resources

a) Greenways

The subject site includes land in the Rock Creek flood plain designated greenway in the Comprehensive Plan and the Parks and Open Space Master Plan. Section 8.202.02 of the Code requires that any new development subject to site plan review that includes land designated greenway or land within the base flood area of Rock or Cedar Creeks shall be dedicated to the public. The Federal Emergency Management Agency (FEMA) designates the 135 ft. elevation in this area as the base flood line. The Parks Plan and FEMA maps are attached. **The applicant has donated 2.036 acres to the City, the land below the 135 ft. elevation, as required by the Code.**

b) Flood Plain Development

There will be no development in or alteration of the Rock Creek flood plain, therefore, the application is not subject to those Code requirements.

c) Environmental Resource Standards

Chapter 8 of the Code "is intended to protect, preserve, and otherwise properly manage the City's natural and environmental resources for the benefit of the general public , to regulate land development so as to protect the public from natural and environmental hazards, and to establish performance standards allowing the City to properly and uniformly assess the impact of residential, commercial, industrial and institutional development and activities on the quality of the City's environment."

Section 8.301.02 states that "conformance with the standards of Section 8.300 shall, at a minimum, be certified in writing by a professional engineer." The applicant, an architect, has provided such a conformance statement with the application. The letter refers to the City's performance standards on noise, vibration, air quality, odors, heat and glare. The proposed use to distribute chemicals will not impact the City's air quality and will not cause excessive noise, vibration, odor, heat or glare. **Potential problems with the use concern unexpected chemical spills that reach Rock Creek, or areas beyond. See attached Oregonian article dated September 20, 1992, regarding national problems with comparable uses. The City has no standards for such disasters. Therefore, the City asked DEA to have a professional evaluate the proposal.**

1) Environmental Analysis

Attached is a report by Dr. Michael A. Kay of DESCO Industrial Group, 10157 Barbur Blvd., Portland, Oregon evaluating the proposed facility. The report describes that many of the chemicals are hazardous. If a spill or leak occurs evacuation is necessary. Depending on the chemical, evacuation for a

chlorine release, for instance, is 1500 feet in all directions and up to 5 miles downwind. Please refer to the report for specifics.

The analysis by Dr. Kay states that the "facility is by no means state-of-the-art. Although it may meet storage separation distances, it cannot be called "good practice" to leave the materials outdoors exposed to the elements. Rain in Oregon is often wind-driven to become almost horizontal. **Totally enclosed rail car transfer systems would be approaching state-of-the-art, and vapor containment of all transfers should now be standard,**" (p. 2).

Another concern by the consultant is staff training and site management. Since two of the chemical materials trigger the Oregon OSHA Process Safety Management Standard, **the consultant recommends that the applicant inform the City of proposed staffing, training and compliance with OSHA, DEQ, EPA and Fire Marshal Regulations.**

The consultant states there is a potential problem with open storage areas and large impervious areas of the facility so near Rock Creek. **He recommends submittal of a detailed Storm Water Pollution Prevention Plan.**

In case of a spill or fire, **the consultant also recommends assured availability of emergency response materials, such as water, fire fighting foam, absorbents, and measures to prevent surface or ground water contamination.**

Finally, the consultant questions the tank storage capability for sulfuric acid, which increases in volume when water is absorbed from the air.

The City recommends that the Commission address the consultant's concerns in the form of specific conditions of approval, or by requiring a detailed response from the applicant.

### **Key Review Criteria (Continued)**

**B) No site plan approval shall be granted unless...the proposed development can be adequately served by services conforming to the Community Development Plan.**

Previous sections of this report demonstrate that the development can be adequately served by City water and sanitary sewer, streets and private utilities. The applicant has donated the base flood plain in compliance with greenway standards. This report raises a concern regarding proper storm water management. Staff recommends conditions to strengthen those provisions. Other services such as solid waste are provided by private utilities. Staff believes the general provision for public safety has not been sufficiently addressed. The applicant needs to better provide for safety



measures in case of chemical leaks, spills or accidents. **As proposed, the facility does not fully comply with the criteria regarding public safety and adequate storm water provisions.**

**D) No site plan approval shall be granted unless...covenants, agreements, and other documents are adequate...to assure an acceptable method of ownership, management, and maintenance....**

A concern has been raised by the City's consultant regarding assurance of staff training in compliance with State regulations. A concern has also been raised about the facility not meeting state-of-the-art storage and transfer provisions. **As proposed, the development does not adequately comply with this criteria regarding acceptable management and maintenance of the facility.**

**E) No site plan approval shall be granted unless...the proposed development preserves significant natural features to the maximum extent feasible...**

The applicant complies with Plan and Code policies and standards to dedicate the Rock Creek greenway. As discussed in this report, 2.036 acres of flood plain has been donated to the City for park purposes.

The existing trees should be retained wherever possible.

#### **IV. CONCLUSION AND RECOMMENDATION**

Based on the above findings of fact, **the proposed development does not fully comply with the required findings for site plan approval.** The following issues need to be addressed by the applicant at a subsequent meeting, or they need to be made a condition of approval.

1. Provide a detailed Storm Water Pollution Prevention Plan to be approved by the City.
2. Provide evidence of staff training in compliance with OSHA, DEQ, EPA and Fire Marshal Regulations.
3. Provide proof of compliance with DEQ and EPA requirements and permits for the facility.
4. Provide an engineers certification of compliance with City environmental performance standards.
5. Provide totally enclosed rail car transfer of chemicals. Provide vapor containment of all chemical transfers.

6. Provide proof of adequate emergency response materials including water, fire fighting foam, appropriate absorbents, and measures to prevent surface or ground water contamination.
7. Provide for :
  - landscape maintenance
  - wheel stops at each parking stall
  - screened solid waste container if outside
  - lighting at the entry
  - retaining all trees possible
8. Obtain driveway access approval from Washington County. Sign and record a non-remonstrance agreement with the County for future road improvements to Tualatin-Sherwood Road. Dedicate additional right-of-way to provide 45 from centerline of Tualatin-Sherwood Road adjacent to the development. Establish a one-foot, non-access reserve strip along the site's Tualatin-Sherwood Road frontage, except at the approved access location.
9. Provide proof of compliance with TVFRD detailed construction standards.
10. Comply with City and USA requirements regarding adequate water supply, erosion control, public storm and sanitary sewer designs, on-site water quality facilities, and verification of the base flood plain.



February 23, 1993

THE FOLLOWING LETTER WAS  
ADDRESSED TO EACH MEMBER  
OF THE CITY COUNCIL.

Walter Hitchcock, Mayor  
Sherwood City Hall  
90 N.W. Park  
Sherwood, OR 97140

Dear Mayor Hitchcock,

We attended the Sherwood City Council meeting on February 10, 1993, and are very concerned about the direction this community is taking.

We thought we were moving into a neighborhood of homes. Instead, we find we are sitting on the edge of a potential chemical wasteland.

In our opinion, Cascade Columbia Distribution Company of Seattle Washington has chosen to build in Sherwood for two reasons. Those reasons are in their best interest only, with no regard for the people who actually live here.

1. This company has located a small city with zoning laws and ordinances that are amicable to its interests only, with little or no consideration for the city of Sherwood.
2. The attorney for the applicant pointed out that the companies aim was to provide products, services, and employment to our community. This is absolutely not true. The primary goal for any "for profit" business is just that, PROFIT! Cascade Columbia Distribution Company is moving to Sherwood because it feels it can reduce its expenses in a place that does not have established standards to regulate this type of business.

By our estimate, Sherwood Commons is located approximately 2000 feet from the proposed construction site. This places us dangerously close to a potential hazard.

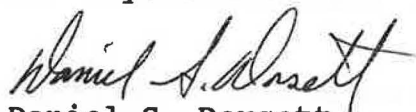
We are very concerned about the health threat this chemical distribution facility poses to our family and friends. In addition, we are very concerned about the impact this will have on the single largest investment we will probably ever make, our home.

According to the Oregon Department of Revenue, for the period 07/01/91 through 06/30/92, Washington County properties had a 23% increase in assessed value. This is second only to Deschutes Counties 40% increase. We expect to see an increase of at least half this 23% for the period 07/01/92 through 06/30/93. We realize that this is only an estimate, however, it is very realistic given the history of property value in Washington County.

Speaking honestly, we do not want a chemical distribution and storage facility next to our home. We have noticed several pieces of property for sale on Tualatin-Sherwood Road between Oregon Street and Avery Street. These areas are already heavily industrialized. We do not want any further encroachment on residential areas.

We would appreciate it very much if you would consider our comments and the concerns of your constituency when making the final decisions on the issues surrounding Cascade Columbia Distribution Company.

Thank you.



Daniel S. Dorsett  
Sherwood, Oregon



Joyce P. Dorsett  
Sherwood, Oregon

CC: Sherwood City Council  
Joyce Cohen, State Senator Dist. #13  
Ron Adams, State Representative  
Elizabeth Furse, United States Representative



Home of the Tualatin River National Wildlife Refuge

## FAST-TRACK SITE PLAN REVIEW NOTICE OF DECISION

TAX LOT: 200  
MAP NO: 2S 1 28C  
CASE NO: SP 04-06  
DATE OF DECISION: May 3, 2004  
DECISION TYPE: II

**Cascade Columbia**  
**14200 SW Tualatin-Sherwood Rd.**  
**Sherwood, OR 97140**

**Applicant and Owner:**  
Cascade Columbia  
Contact: Joe Price  
14200 SW Tualatin-Sherwood Rd.  
Sherwood, OR 97140

**Contact:**  
Mark Ellingson  
C/o Pacific Northwest Engineering  
4242 Silver Falls Drive N.  
Silverton, OR 97381

Based on the findings contained in the attached staff report dated April 30, 2004, staff **APPROVES** your request for the construction of a 10,000 square foot hazardous materials storage building. This approval is subject to the following conditions:

### Conditions of Approval

A. General Conditions:

1. Compliance with the Conditions of Approval is the responsibility of the owner.
2. This land use approval shall be limited to the plans submitted by Pacific Northwest Engineering, Inc. on March 10, 2004. Additional development or change of use may require a new development application and approval.
3. This approval is valid for a period of two (2) years from the date of the decision notice. Extensions may be granted by the City as afforded by the Community Development Code.

B. Ongoing Conditions

1. The continual operation of the property shall comply with the applicable requirements of the Sherwood Zoning and Community Development Code and those of other applicable agencies.

Signed:   
Anne Elvers  
Associate Planner

**ATTACHMENTS**

- A. Staff Report dated April 30, 2004

**APPEAL**

As per Section 3.402 of the Sherwood Zoning and Community Development Code (SZCDC), the decision of Staff detailed above will become final unless an appeal is received by the City Recorder from a person who has testified in writing. The appeal deadline is **5:00 PM on May 19, 2004 (14 calendar days from the date this decision was made and mailed).**

STATE OF OREGON            )  
  )  
Washington County         )

I, Roxanne Gibbons, Administrative Assistant for the Planning Department of the City of Sherwood, State of Oregon, in Washington County, do hereby certify that the Notice of Decision on Case No. SP 04-06 Cascade Columbia Fast Track Site Plan was placed in a U.S. Postal receptacle on May 5, 2004.

  
Planning Department  
City of Sherwood

**END OF REPORT**


**CITY OF SHERWOOD**  
**Staff Report**

**Date: April 30, 2004**  
**File No: SP 04-06 Cascade Columbia Building "D" (Fast Track)**

**TO:** Joe Price  
 C/o Cascade Columbia  
 14200 SW Tualatin-Sherwood Road  
 Sherwood, OR 97140

Submittal Date 03/10/2004  
 Completion Date: 04/14/2004  
 Report Date: 04/30/2004  
 120-Day Deadline: 08/12/2004

**FROM:** PLANNING DEPARTMENT

  
 \_\_\_\_\_  
 Anne Elvers  
 Associate Planner

### I. APPLICATION INFORMATION

- A. Applicant and Owner:  
 Joe Price  
 C/o Cascade Columbia  
 14200 Tualatin-Sherwood Rd.  
 Sherwood, OR 97140
- Contact:  
 Mark Ellingson  
 C/o Pacific NW Engineering  
 4242 Silver Falls Drive North  
 Silverton, OR 97381
- B. Location: 14200 SW Tualatin-Sherwood Road. Tax Map 2S128C and TL 200.
- C. Improvement Area: 10,000 square foot hazardous materials storage building
- D. Existing Development and Site Characteristics: The site is developed for and used as a manufacturing facility.
- E. Request: The applicant is requesting approval of a site plan for the addition of a hazardous materials storage building. A new casting slab, approximately 11,400 square feet in area, is also being added to create additional parking spaces.
- F. Zoning Classification and Comprehensive Plan Designation: General Industrial (GI)
- G. Adjacent Zoning and Land Use: Adjacent land is zoned GI with commercial and industrial uses.
- H. Review Type: Type II, Fast-Track Site Plan Review. The building area is being expanded by no more than 20% with this application.

- I. Public Notice and Hearing: The site was posted, notice placed in five public locations and property owners within 100 feet of the site were mailed notice of the application.
- J. Review Criteria: Required findings for site plan approval are found in Section 5.102.04 of the Sherwood Zoning and Community Development Code.

## II. PUBLIC COMMENTS

No public comments were received as of the date of this report.

## III. AGENCY COMMENTS

The City requested comments from affected agencies. All original documents are contained in the planning file and are a part of the official record on this case. The following information briefly summarizes those comments:

- A. City Engineer: The Engineering Department has reviewed this project and has no comments.
- B. Deputy Fire Marshal: Eric McMullen indicated in comments dated April 6, 2004 that a complete automatic and manual fire alarm system would be an acceptable alternative to providing a turnaround near Building D. The proposed building must meet all TVF&R requirements.

## IV. SITE PLAN REVIEW – REQUIRED FINDINGS (SECTION 5.102.04)

- A. **Required findings for a Site plan Review are found in Section 5.102.04 of the Community Development Code. Section 5.102.04.A. requires the proposed development to meet the applicable zoning district standards and all provisions of Chapters 2, 5, 6, 8 and 9.**

1. **Chapter 2 - Land Use and Development**

- General Industrial Zoning (2.112.02)

- Findings:** The warehousing of the chemicals listed under Section 2.112.03 may be permitted as a conditional use; however, Cascade Columbia has been operating on the property since its site plan was approved in 1992 as a legally permitted use, storing and repackaging chemicals.

2. **Chapter 5 – Community Design and Appearance**

- Landscaping Standards (5.203)

The portion of the Cascade Columbia site where the additional parking is proposed is between Buildings "B" and "D" towards the rear of the property and is adjacent to the Pride Disposal site. Also, a privacy fence along the property line screens this area from Pride Disposal. Because of these factors and the industrial use of the site, no parking lot landscaping will be required.

Off-Street Parking Standards (5.302)

*The minimum off-street parking required for an industrial use is 1.6 spaces per 1,000 square feet of gross leasable area. Parking stall standard is 9'x20'.*

**Finding:** The addition of a 10,000 square foot building would require 16 parking stalls. The plans indicate 14 new spaces on the new casting slab. The proposed hazardous materials storage use will not contain office space--it will be used solely for storage. Combining the 14 new spaces with the existing striped stalls on-site will provide adequate parking for this addition. The new stalls meet dimensional standards.

3. **Chapter 6 – Public Improvements**

**Finding:** There is no proposal to alter or increase sanitary sewer, storm or electric service on this site. The existing services will be utilized.

4. **Chapter 8 - Environmental Resources**

**Finding:** Clean Water Services has indicated that the proposed project will not significantly impact the existing sensitive area found near the site in a pre-screening assessment dated March 3, 2004.

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

**Findings:** All public utilities currently exist on the site.

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

**Findings:** The site is private property and will be maintained by the property owner.

- D. The proposed development preserves significant natural features to the maximum feasible extent, including but not limited to natural drainageways, wetlands, trees, vegetation, scenic views and topographical features, and conforms to the applicable provisions of Chapters 5 and 8 of this Code.**



**Findings:** Building "D" will not be located in or near the floodplain, and CWS has stated that the proposal will not significantly affect the nearby sensitive area.

- E. For a proposed site plan in the Neighborhood Commercial (NC), Office Commercial (OC), Office Retail (OR), Retail Commercial (RC), General Commercial (GC), Light Industrial (LI), and General Industrial (GI) zones, except in the Old Town Overlay Zone, the proposed use shall satisfy the requirements of Section 6.307 Highway 99W Capacity Allocation Program, unless excluded herein.**

**Findings:** The City Engineer indicated that the CAP ordinance does not apply to this proposal based on Section 6.307B, because the addition of a hazardous materials storage building would not increase traffic flow.

## **V. DECISION**

See notice of decision dated May 3, 2004

**END OF REPORT**

**From:** [Maria Miller](#)  
**To:** [Eric Rutledge](#)  
**Cc:** [Chris Goodell](#); [Kathrine Lindsey](#)  
**Subject:** RE: 120-Day Extension Form  
**Date:** Monday, May 2, 2022 3:00:10 PM  
**Attachments:** [image001.png](#)

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**CAUTION:** This email originated from outside of the organization. Do not click links or open attachments unless you are expecting this email and/or know the content is safe.

Hi Eric –

The attached time extension form requests an extension until 9/20/22 to allow us to resubmit the project, including existing improvements that have been completed since the last site permit. For the planning commission hearing, we would like to request a continuance to a date certain of June 28.

Thank you,

**Maria Miller, AICP**

**AKS ENGINEERING & FORESTRY, LLC**

P: 503.563.6151 Ext. 259 | [www.aks-eng.com](http://www.aks-eng.com) | [mariam@aks-eng.com](mailto:mariam@aks-eng.com)

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**From:** Eric Rutledge <[RutledgeE@SherwoodOregon.gov](mailto:RutledgeE@SherwoodOregon.gov)>

**Sent:** Monday, May 2, 2022 11:42 AM

**To:** Maria Miller <[mariam@aks-eng.com](mailto:mariam@aks-eng.com)>

**Subject:** 120-Day Extension Form

**EXTERNAL EMAIL:** This email originated from outside AKS Engineering & Forestry.

Hi Maria,

Here's the 120-day extension form. The owner or owner's rep (AKS) can sign and send back.

Thanks,

Eric Rutledge  
City of Sherwood  
Associate Planner  
[rutledgee@sherwoodoregon.gov](mailto:rutledgee@sherwoodoregon.gov)  
Desk 503.625.4242  
Work Cell 971.979.2315



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**Time Extension Form**

I, Maria Miller, on behalf of Cascade Columbia Distribution, pursuant to ORS 227.178(5), hereby request to

extend the 120-day period set forth in ORS 227.178(1) and/or the 100-day period set forth in ORS

197.311, whichever may be applicable, for LU 2021-025 (LU case file #). Any applicable

statutory deadline(s) for final action on the above-referenced matter(s) is/are hereby extended to \_\_\_\_\_

September 20th, 2022.

*Maria Miller*

May 2, 2022

Signed

Date