

Avery Industrial

Narrative Architectural Review Application

Prepared for:

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Summary

PROJECT DESCRIPTION

This project proposes a two structure, industrial facility with associated parking, loading, landscape and utilities.

SITE DESCRIPTION

The project site is a flag lot located at 10700 SW Tualatin Sherwood Rd. in Tualatin, OR. The project site is undeveloped and will be 7.4 acres in size, after the associate PLA is approved. The project site does not abut any residential uses and backs up to a rail line. The project site is zoned MG – General Manufacturing.

APPLICABLE STANDARDS

The following narrative addresses the compliance of this project with all applicable codes and standards of the Tualatin Development Code (TDC) and the Tualatin Municipal Code (TMC).

Tualatin Development Code:

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Tualatin Development Code

CHAPTER 32 – Procedures

32.120. - Neighborhood/Developer Meetings.

Response: A Neighborhood Meeting was held as required. Please refer to the neighborhood meeting documentation included in the application submittal.

32.140. - Application Submittal.

(1) Submittal Requirements. Land use applications must be submitted on forms provided by the city. A land use application may not be accepted in partial submittals. All information supplied on the application form and accompanying the application must be complete and correct as to the applicable facts. Unless otherwise specified, all of the following must be submitted to initiate completeness review under TDC 32.160:

Response: As submitted, the Architectural Review submittal package includes all the required materials.

CHAPTER 33 – Applications and Approval Criteria

TDC 33.020 – Architectural Review

(3) Types of Architectural Review Applications—Procedure Type.

(d) Large Commercial, Industrial, and Multifamily Development. Development applications that propose any of the following are subject to Type III Review by the Architectural Review Board as the hearing body:

(ii) New Industrial Buildings 150,000 square feet and larger; and

Response: This application will be a Type II, Architectural Review.

(5) Approval Criteria.

(c) Large Commercial, Industrial, and Multifamily Development. Applications for Large Commercial, Industrial, and Multifamily Development must comply with the applicable standards and objectives in TDC Chapter 73A through 73G.

Response: This document addresses the development standards and objectives for this type of development. Please see 73A – 73D.

TDC 33.110. - Tree Removal Permit/Review.

(3) *Procedure Type.* Tree Removal Permit applications are subject to Type II Review in accordance with TDC Chapter 32. Tree Removal Permit applications submitted with an Architectural Review, Subdivision, or Partition application will be processed in conjunction with the Architectural Review, Subdivision, or Partition decision.

Response: The tree removal permit is included in this Architectural Review package.

(4) *Specific Submittal Requirements.* In addition to the general submittal requirements in TDC 32.140 (Application Submittal), an applicant must submit the following:

(a) *Tree Preservation Plan.* A tree preservation plan drawn to scale must include:

(b) *Tree Assessment Report.* A tree assessment prepared by a certified arborist must include:

(c) *Tree Tags.* All trees on-site must be physically identified and numbered in the field with an arborist-approved tagging system that corresponds to the Tree Preservation Plan and Tree Assessment Report.

Response: A tree plan is included, see sheet L1.0. An Arborist report is included and the site trees have been tagged.

(5) Approval Criteria.

(a) An applicant must satisfactorily demonstrate that at least one of the following criteria are met:

(i) The tree is diseased and:

(ii) The tree represents a hazard which may include but not be limited to:

(iii) It is necessary to remove the tree to construct proposed improvements based on Architectural Review approval, building permit, or approval of a Subdivision or Partition Review.

(b) If none of the conditions in TDC 33.110(5)(a) are met, the certified arborist must evaluate the condition of each tree.

(7) Conditions of Approval. Any tree required to be retained must be protected in accordance with the TDC 73B and 73C

Response: Please see the Arborist report and sheet L1.0 for tree removal specifics.

CHAPTER 61 – General Manufacturing Planning District

TDC 61.200. Use Categories.

**Table 61-1
Use Categories in the MG Zone**

USE CATEGORY	STATUS	LIMITATIONS AND CODE REFERENCES
Warehouse and Freight Movement	P/C	Conditional use required for warehousing of building materials and supplies. All other uses permitted outright.

Response: Warehouse and Freight Movement is a permitted use.

TDC 61.210. - Additional Limitations on Use

Response: This project proposes Warehouse and freight movement. As such none of the standards of this section apply.

TDC 61.300. - Development Standards.

MINIMUM SETBACKS		
Front	30 feet	
Front Setback Adjacent to Residential or Manufacturing Park Zone	50 feet	
Side	0-50 feet	Determined through Architectural Review process. No minimum setback if adjacent to railroad right-of-way or spur track.
Side Setback Adjacent to Residential or Manufacturing Park Zone	50 feet	
Rear	0-50 feet	Determined through Architectural Review process. No minimum setback if adjacent to railroad right-of-way or spur track.
Rear setback adjacent to Residential or Manufacturing Park Zone	50 feet	
Parking and Circulation Areas	5 feet	No minimum setback required adjacent to joint access approach in accordance with TDC 73C .
Parking and Circulation Areas Adjacent to Residential or Manufacturing Park Zone	10 feet	
Fences	10 feet	From public right-of-way.

Response: The property abuts like zoning.

As proposed, the Site Plan complies with the required setbacks as illustrated below.

BUILDING A

Front (NW side of building)

Building Setback: 80'-0"

Parking and Circulation Setback: 5'-6"

Side (SW side of building)

Building Setback: 39'-0"

Parking and Circulation Setbacks: 6'-0"

Rear (SE side of building)

Building Setback: Varies, 39'-8" min.

Parking and Circulation Setback: Varies, 7'-2" min.

BUILDING B

Front (S side of building)

Building Setback: Varies, 87'-8" min.

Parking and Circulation Setback: Varies, 6'-0" min.

Side (W side of building)

Building Setback: 57'-0"

Parking and Circulation Setbacks: 5'-6" min.

Rear (N side of building)
Building Setback: 10'-0"
Parking and Circulation Setback: N/A

CHAPTER 63 – Industrial Uses – Environmental Regulations

TDC 63.020. - Applicability.

The regulations of this Chapter apply to:

- (1) All industrial uses and utilities, regardless of the Planning District in which they are located, and
- (2) All Manufacturing Planning Districts, regardless of the use category.

Response: These standards apply to this project.

TDC 63.051. - Noise.

All uses and development must comply with the Oregon State Department of Environmental Quality standards relating to noise and the City of Tualatin noise ordinance in, TMC 6-14.

Response: Tenants will be held to this standard.

TDC 63.052. - Vibration.

(1) Restrictions. All uses and development must not cause or permit ground vibration into the property of another person that exceeds the limits set forth below in this section.

Response: Tenants will be held to this standard.

TDC 63.053 - Air Quality.

(1) Restrictions. All uses and development must comply with the most recent air quality standards adopted by the Oregon Department of Environmental Quality. Plans of construction and operations must comply with the recommendations and regulations of the State Department of Environmental Quality.

Response: Tenants will be held to this standard.

TDC 63.054. - Odors.

All uses and development must not emit odors in such quantities as to create a nuisance condition at any point beyond the subject property line of the emitting use.

Response: Tenants will be held to this standard.

TDC 63.055. - Heat and Glare.

(1) All uses and development must conduct all operations producing heat or glare entirely within an enclosed building.

(2) All uses and development may utilize exterior lighting, but the exterior lighting must be screened, baffled or directed away from residential planning districts.

Response: Tenants will be held to this standard. The property does not abut a residential planning district.

TDC 63.056. - Storage and Stored Materials.

(1) All uses and development must store all materials, including wastes, in a manner that will not attract or aid the propagation of insects or rodents, or in any other way create a health or safety hazard.

(2) All uses and development that utilize open storage that would otherwise be visible at the property line must conceal it from view at the abutting property line by a sight obscuring fence not less than six feet high and not accessible to the general public to protect public safety.

Response: Tenants will be held to this standard. Any exterior storage will be screened as required.

TDC 63.057. - Liquid or Solid Waste Materials.

All uses and development are prohibited from disposing waste onto the site or into adjacent drainage ditches, creeks or other natural waterways in violation of State of Oregon DEQ standards, Clean Water Services Standards, City Standards, or in a manner that causes harm to wildlife.

Response: Tenants will be held to this standard.

TDC 63.058. - Dangerous Substances.

All uses and development are prohibited from the storage, transfer, or processing of hazardous, toxic, or radioactive waste.

Response: Tenants will be held to this standard.

CHAPTER 73A - Site Design Standards

TDC 73A.010. - Site and Building Design Standards Purpose and Objectives.

(1) *Purpose.* The purpose of the site and building design objectives and standards found in TDC 73A through TDC 73G is to promote functional, safe, innovative, and attractive sites and buildings that are compatible with the surrounding environment, including, but not limited to:

(a) The building form, articulation of walls, roof design, materials, and placement of elements such as windows, doors, and identification features; and

(b) The placement, design, and relationship of proposed site elements such as buildings, vehicular parking, circulation areas, bikeways and bike parking, accessways, walkways, buffer areas, and landscaping.

(2) *Objectives.* The objectives of site and building design standards in TDC 73A through TDC 73G are to:

(a) Enhance Tualatin through the creation of attractively designed development and streetscapes;

(b) Encourage originality, flexibility, and innovation in building design;

(c) Create opportunities for, or areas of, visual and aesthetic interest for occupants and visitors to the site;

(d) Provide a composition of building elements which responds to function, land form, identity and image, accessibility, orientation and climatic factors;

(e) Conserve, protect, and restore fish and wildlife habitat areas, and maintain or create visual and physical corridors to adjacent fish and wildlife habitat areas;

(f) Enhance energy efficiency through the use of landscape and architectural elements; and

(g) Minimize disruption of natural site features such as topography, trees, and water features.

Response: The building has been designed to articulate entries and features through the varied height of the roof parapet, the use of reveals, paint locations, canopies and windows to provide an aesthetically interesting building for occupants and visitors. Walkway are provided between the two building entrances as well as connecting to right -of-way, via the flag lot pole.

TDC 73A.500. - Industrial Design Standards.

The following standards are minimum requirements for industrial development in all zones:

(1) *Walkways*. Industrial development must provide walkways as follows:

(a) Walkways must be a minimum of five feet in width;

(b) Walkways must be constructed of asphalt, concrete, or a pervious surface such as pavers or grasscrete (not gravel or woody material);

(c) Walkways must meet ADA standards applicable at time of construction or alteration;

(e) Walkways must be provided between the main building entrances and other on-site buildings, accessways, and sidewalks along the public right-of-way;

(f) Walkways through parking areas, drive aisles, and loading areas must be of a different appearance than the adjacent paved vehicular areas; and

(g) Outdoor Recreation Access Routes must be provided between the development's walkway and bikeway circulation system and parks, bikeways and greenways where a bike or pedestrian path is designated.

Response: Walkways are provided between the two building entrances as well as connecting to the existing sidewalk that connects to the right-of-way. (within the flag lot pole portion of the lot).

(4) *Safety and Security*. Industrial development must provide safety and security features as follows:

(a) Locate windows and provide lighting in a manner that enables tenants, employees, and police to watch over pedestrian, parking, and loading areas;

(b) Locate windows and interior lighting to enable surveillance of interior activity from the public right-of-way;

(c) Locate, orient, and select exterior lighting to facilitate surveillance of on-site activities from the public right-of-way without shining into public rights-of-way or fish and wildlife habitat areas;

(d) Provide an identification system which clearly locates buildings and their entries for patrons and emergency services; and

(e) Above ground sewer or water pumping stations, pressure reading stations, water reservoirs, electrical substations, and above ground natural gas pumping stations must provide a minimum six-foot-tall security fence or wall.

Response: The proposed development locates windows for lighting and security toward public areas and street frontage. Exterior lighting is proposed that complies with dark sky initiatives. Building addresses will be prominently displayed. No

above ground sewer, water pumping stations, pressure reading stations, water reservoirs, electrical substations, or above ground natural gas pumping stations are proposed as part of this development.

(5) *Service, Delivery, and Screening.* Industrial development must provide service, delivery, and screening features as follows:

(a) Above grade and on-grade electrical and mechanical equipment such as transformers, heat pumps and air conditioners must be screened with sight obscuring fences, walls or landscaping;

(b) Outdoor storage must be screened with a sight obscuring fence, wall, berm or dense evergreen landscaping; and

(c) Above ground pumping stations, pressure reading stations, water reservoirs; electrical substations, and above ground natural gas pumping stations must be screened with sight-obscuring fences or walls and landscaping.

Response: Outdoor storage of trucks/trailers is proposed and has been screened accordingly. All other identified items have been screened as required.

(6) *Adjacent to Transit.* Industrial development adjacent to transit must comply with the following:

Response: The closest transit stop to this property is at SW Warm Springs and Boones Ferry. From that transit stop the walking distance to the project site is approximately 1.4 miles.

CHAPTER 73B - Landscaping Standards

TDC 73B.020. - Landscape Area Standards Minimum Areas by Use and Zone.

Minimum Area Requirement - 15 percent of the total area to be developed

Response: Please see below landscape calculations for the site.

TOTAL SITE AREA	323,090 SF
LANDSCAPE AREA REQUIRED 15% OF SITE	48,464 SF
LANDSCAPE AREA PROPOSED 17% OF SITE	55,309 SF

TDC 73B.060. - Additional Minimum Landscaping Requirements for Industrial Uses.

(1) *General.* In addition to requirements in TDC 73B.020, industrial uses must comply with the following:

(a) All areas not occupied by buildings, parking spaces, driveways, drive aisles, pedestrian areas, or undisturbed natural areas must be landscaped.

(i) This standard does not apply to areas subject to the Hedges Creek Wetlands Mitigation Agreement.

(b) Minimum 5-foot-wide landscaped area must be located along all building perimeters viewable by the general public from parking lots or the public right-of-way, but the following may be used instead of the 5-foot-wide landscaped area requirement:

(i) Pedestrian amenities such as landscaped plazas and arcades; and

(ii) Areas developed with pavers, bricks, or other surfaces, for exclusive pedestrian use and contain pedestrian amenities, such as benches, tables with umbrellas, children's play areas, shade trees, canopies.

(c) Five-foot-wide landscaped area requirement does not apply to:

(i) Loading areas,

(ii) Bicycle parking areas,
(iii) Pedestrian egress/ingress locations, and
(iv) Where the distance along a wall between two vehicle or pedestrian access openings (such as entry doors, garage doors, carports and pedestrian corridors) is less than eight feet.

(d) Development that abuts an RL or MP Zone must have landscaping approved through Architectural Review and must provide and perpetually maintain dense, evergreen landscaped buffers between allowed uses and the adjacent RL and MP zones.

Response: The project does not abut a RL or MP zone. A 5-foot wide landscape strip is located along all building perimeters viewable by the general public, parking lots, or the public right-of-way. All Areas of the site that are disturbed are landscaped. Please see the Landscape Plan included in this application.

TDC 73B.080. - Minimum Landscaping Standards for All Zones.

The following are minimum standards for landscaping for all zones.

(1) Required Landscape Areas:

- Must be designed, constructed, installed, and maintained so that within three years the ground must be covered by living grass or other plant materials.
- The foliage crown of trees cannot be used to meet this requirement.
- A maximum of ten percent of the landscaped area may be covered with un-vegetated areas of bark chips, rock or stone.
- Must be installed in accordance with the provisions of the American National Standards Institute ANSI A300 (Part 1) (Latest Edition).
- Must be controlled by pruning, trimming, or otherwise so that:
- It will not interfere with designated pedestrian or vehicular access; and
- It will not constitute a traffic hazard because of reduced visibility.

Response: The landscape plan meets the above minimum requirements. Please see sheets L1.1- L1.3.

(2) Fences:

Landscape plans that include fences must integrate any fencing into the plan to guide wild animals toward animal crossings under, over, or around transportation corridors.

Response: Fencing is not proposed.

(3) Tree Preservation:

Trees and other plant materials to be retained must be identified on the landscape plan and grading plan.

During construction:

Must provide above and below ground protection for existing trees and plant materials identified to remain;

Trees and plant materials identified for preservation must be protected by chain link or other sturdy fencing placed around the tree at the drip line;

If it is necessary to fence within the drip line, such fencing must be specified by a qualified arborist;

Top soil storage and construction material storage must not be located within the drip line of trees designated to be preserved;

Where site conditions make necessary a grading, building, paving,

trenching, boring, digging, or other similar encroachment upon a preserved tree's drip-line area, such grading, paving, trenching, boring, digging, or similar encroachment must only be permitted under the direction of a qualified arborist. Such direction must assure that the health needs of trees within the preserved area can be met; and

Tree root ends must not remain exposed.

Landscaping under preserved trees must be compatible with the retention and health of the preserved tree.

When it is necessary for a preserved tree to be removed in accordance with TDC 33.110 (Tree Removal Permit) the landscaped area surrounding the tree or trees must be maintained and replanted with trees that relate to the present landscape plan, or if there is no landscape plan, then trees that are complementary with existing, landscape materials. Native trees are encouraged

100 percent of the area preserved under any tree or group of trees (Except for impervious surface areas) retained in the landscape plan must apply directly to the percentage of landscaping required for a development

Response: Please see the Tree removal and protection plan, L1.0, for trees to be removed and protected, the arborist report and the landscape plan for proposed new trees to be planted.

(4) Grading:

After completion of site grading, top-soil is to be restored to exposed cut and fill areas to provide a suitable base for seeding and planting.

All planting areas must be graded to provide positive drainage.

Soil, water, plant materials, mulch, or other materials must not be allowed to wash across roadways or walkways.

Impervious surface drainage must be directed away from pedestrian walkways, dwelling units, buildings, outdoor private and shared areas and landscape areas except where the landscape area is a water quality facility.

Response: After grading, top soil will be restored and planting areas will provide positive drainage that does not wash across other impervious areas. All site grading achieves positive drainage and direct stormwater away from walkways and buildings.

(5) Irrigation

Landscape areas must be irrigated with an automatic underground or drip irrigation system.

Response: A design build/underground irrigation system is proposed.

(6) Re-vegetation in Un-landscaped Areas:

Vegetation must be replanted in all areas where vegetation has been removed or damaged in areas not affected by the landscaping requirements and that are not to be occupied by structures or other improvements.

Plant materials must be watered at intervals sufficient to ensure survival and growth for a minimum of two growing seasons.

The use of native plant materials is encouraged to reduce irrigation and maintenance demands.

Disturbed soils should be amended to an original or higher level of porosity to regain infiltration and stormwater storage capacity.

Response: All disturbed areas as a result of construction will be vegetated.

TDC 73B.090. - Minimum Standards Trees and Plants.

The following minimum standards apply to the types of landscaping required to be installed for all zones.

(1) Deciduous Shade Trees:

- One and on-half inch caliper measured six inches above ground;
- Balled and burlapped; bare root trees will be acceptable to plant during their dormant season;
- Reach a mature height of 30 feet or more;
- Cast moderate to dense shade in summer;
- Live over 60 years;
- Do well in urban environments, tolerate pollution, heat, and resistant to drought;
- Require little maintenance and mechanically strong;
- Insect- and disease-resistant;
- Require little pruning; and
- Barren of fruit production.

Response: Deciduous Shade trees are specified at 1.5 inch caliper B&B, mature at 30 feet min., are long lived and do well in an urban environment. Please see the Landscape Plan for Tree species, size and specifications.

(2) Deciduous Ornamental Trees:

- One and on-half inch caliper measured six inches above ground;
- balled and burlapped; bare root trees will be acceptable to plant during their dormant season; and
- Healthy, disease-free, damage-free, well-branched stock, characteristic of the species

Response: Ornamental trees are specified at 1.5 inch caliper B&B. Please see the Landscape Plan for Tree species, size and specifications.

(3) Coniferous Trees:

- Five feet in height above ground;
- Balled and burlapped; bare root trees will be acceptable to plant during their dormant season; and
- Healthy, disease-free, damage-free, well-branched stock, characteristic of the species.

Response: Evergreen trees are specified at 5 feet tall B&B. Please see the Landscape Plan for Evergreen Tree species, size and specifications.

(4) Evergreen and Deciduous Shrubs:

- One to five-gallon size;
- Healthy, disease-free, damage-free, well-branched stock, characteristic of the species; and
- Side of shrub with best foliage must be oriented to public view.

Response: Please see the Landscape Plan for Shrub species, size and specifications.

(5) Groundcovers:

- Fully rooted;
- Well branched or leafed;
- Healthy, disease-free, damage-free, well-branched stock, characteristic of the species; and
- English ivy (*Hedera helix*) is prohibited.

Response: Please see the Landscape Plan for groundcover species, size and specifications. No Hedera helix is proposed.

(6) Lawns:

Consist of grasses, including sod, or seeds of acceptable mix within the local landscape industry;

100 percent coverage and weed free; and

Healthy, disease-free, damage-free, characteristic of the species.

Response: Please see the Landscape plan and specifications.

CHAPTER 73C - Parking Standards

TDC 73C.100. - Off-Street Parking Minimum/Maximum Requirements.

(1) The following are the minimum and maximum requirements for off-street motor vehicle parking in the City, except these standards do not apply in the Core Area Parking District. The Core Area Parking District standards are in TDC 73C.110.

Response: The project site is not within the Core Area Parking District. The following off-street parking requirements apply.

(f) Industrial

(i) Manufacturing

Minimum Vehicle Parking - 1.60 spaces per 1,000 SF of gross floor area

Maximum Vehicle Parking - None

Bicycle Parking - 2, or 0.10 spaces per 1,000 GSF, whichever is greater

% Bicycle Parking/Covered - First 5 spaces or 30%, whichever is greater

(ii) Warehousing

Minimum Vehicle Parking - 0.30 spaces per 1,000 SF of gross floor area

Maximum Vehicle Parking - Zone B: 0.5 spaces per 1,000 SF of gross floor area

Bicycle Parking - 2, or 0.10 spaces per 1,000 GSF, whichever is greater

% Bicycle Parking/Covered - First 5 spaces or 30%, whichever is greater

Response: Overall the site proposes 25% manufacturing and 75% warehousing.

BUILDING A: 81,175 SF

Manufacturing (25%)

- **1.6/1000 = 33 minimum spaces**
- **No maximum spaces**
- **.1/1000 = 3 bike spaces required.**
- **first 5 bike spaces covered.**

Warehouse (75%)

- **0.30/1000= 19 spaces minimum**
- **No maximum combined with Manufacturing**
- **.1/1000 = 7 bike spaces required.**
- **first 5 bike spaces covered.**

<u>Required Total</u>	<u>Total Provided</u>
52 vehicular spaces (min.)	52 vehicular spaces
10 bike parking spaces/ covered	10 bike parking spaces

BUILDING B: 31,100 SF

Manufacturing (25%)

- 1.6/1000 = 13 minimum spaces
- No maximum spaces
- .1/1000 = 1 bike space required.
- first 5 bike spaces covered.

Warehouse (75%)

- 0.30/1000= 7 spaces minimum
- No maximum combined with Manufacturing
- .1/1000 = 3 bike spaces required.
- first 5 bike spaces covered.

<u>Required Total</u>	<u>Total Provided</u>
20 vehicular spaces (min.)	20 vehicular spaces
4 bike parking spaces/covered	5 bike parking spaces
Total Provided on Site:	72 Vehicular parking spaces
	15 Bike parking spaces

(2) In addition to the general parking requirements in subsection (1), the following are the minimum number of off-street vanpool and carpool parking for commercial, institutional, and industrial uses.

<u>Number of Required Parking Spaces</u>	<u>Number Vanpool/Carpool spaces</u>
0-10 spaces	1 space
10-25 spaces	2 spaces
26 spaces and greater	1/each 25 spaces

Response: Off street vanpool/carpool has been provided as required.

BUILDING A:

**Vanpool/Carpool Required -3 spaces
 Provided -3 spaces**

BUILDING B:

**Vanpool/Carpool Required -2 spaces
 Provided – 2 spaces**

TDC 73C.120. - Off-Street Loading Facilities Minimum Requirements.

(1) The minimum number of off-street loading berths for commercial, industrial, and institutional users as follows:

<u>Industrial</u>	<u># of Berths</u>	<u>Dimensions</u>	<u>Unobstructed Clearance</u>
Less than 5,000 SF	0	0	0
5,000 - 25,000	1	12' x 60'	14'
25,000 - 60,000	2	12' x 60'	14'
60,000 and over	3	12' x 60'	14'

Response: Off street loading has been provided as required.

BUILDING A:

**Off-street loading Required - 3 berths
 Provided - 20 berths**

BUILDING B:

**Off-street Loading Required - 2 berths
 Provided – 7 berths**

(2) Loading berths must not use the public right-of-way as part of the required off-street loading area.

Response: The loading areas for both buildings are designed with adequate maneuvering room to eliminate the use of the right-of-way.

(3) Required loading areas must be screened from public view, public streets, and adjacent properties by means of sight-obscuring landscaping, walls or other means, as approved through the Architectural Review process.

Response: Landscape is used to screen these areas from adjacent properties.

(4) Required loading facilities must be installed prior to final building inspection and must be permanently maintained as a condition of use.

Response: The loading facilities will be installed prior to final building inspection and will be maintained to the highest standard.

(5) The off-street loading facilities must in all cases be on the same lot or parcel as the structure they are intended to serve. In no case must the required off-street loading spaces be part of the area used to satisfy the off-street parking requirements.

Response: The loading areas for both buildings are located on the lot, with the building it serves.

TDC 73C.130. - Parking Lot Driveway and Walkway Minimum Requirements.

Parking lot driveways and walkways must comply with the following requirements:

(3) *Industrial Use.* Ingress and egress for industrial uses must not be less than the following:

<u>Required Spaces</u>	<u>Min. # Required</u>	<u>Min. Pavement</u>	<u>Min. walkways</u>
1 -250	1	36' for 1st 50' ROW 24' thereafter	No curbs or walkways required

Response: Per the submitted Site Plan the project meets these requirements.

(6) *Maximum Driveway Widths and Other Requirements.*

(a) Unless otherwise provided in this chapter, maximum driveway widths for Commercial, Industrial, and Institutional uses must not exceed 40 feet.

(b) Driveways must not be constructed within five feet of an adjacent property line, unless the two adjacent property owners elect to provide joint access to their respective properties, as provided by TDC73C.040.

(d) There must be a minimum distance of 40 feet between any two adjacent driveways on a single property unless a lesser distance is approved by the City Manager.

(e) Must comply with the distance requirements for access as provided in TDC 75.

(f) Must comply with vision clearance requirements in TDC 75.

Response: These dimensional requirements have been met.

Parking Lot Landscape

TDC 73C.240. - Industrial Parking Lot Landscaping Requirements.

Industrial uses must comply with the following landscaping requirements for parking lots in all zones.

(1) *General*. Locate landscaping or approved substitute materials in all areas not necessary for vehicular parking and maneuvering.

(2) *Clear Zone*. Clear zone required for the driver at ends of on-site drive aisles and at driveway entrances, vertically between a maximum of 30 inches and a minimum of eight feet as measured from the ground level.

(a) Exception: does not apply to parking structures and underground parking.

(3) *Perimeter*. Minimum five feet in width in all off-street parking and vehicular circulation areas, including loading areas and must comply with the following:

(a) Deciduous trees located not more than 30 feet apart on average as measured on center;

(b) Shrubs or ground cover, planted so as to achieve 90 percent coverage within three years;

(c) Plantings which reach a mature height of 30 inches in three years which provide screening of vehicular headlights year round;

(d) Native trees and shrubs are encouraged; and

(e) Exception: Not required where off-street parking areas on separate lots are adjacent to one another and connected by vehicular access.

Response: Parking is surrounded by a minimum 5'-0" landscape buffer planted with trees, evergreen hedge and groundcovers. A continuous evergreen hedge is proposed that will reach a mature height of 30 inches in three years. Ground cover is proposed and will achieve 90% coverage in three years.

(4) *Landscape Island*. Minimum 25 square feet per parking stall must be improved with landscape island areas and must comply with the following.

(a) May be lower than the surrounding parking surface to allow them to receive stormwater run-off and function as water quality facilities as well as parking lot landscaping;

(b) Must be protected from vehicles by curbs, but the curbs may have spaces to allow drainage into the islands;

(c) Islands must be utilized at aisle ends to protect parked vehicles from moving vehicles and emphasize vehicular circulation patterns;

(d) Landscape separation required for every eight continuous spaces in a row;

(e) Must be planted with one deciduous shade trees for every four parking spaces; Required trees must be evenly dispersed throughout the parking lot;

(f) Must be planted with groundcover or shrubs;

(g) Native plant materials are encouraged;

(h) Landscape island areas with trees must be a minimum of five feet in width (from inside of curb to curb);

(i) Required plant material in landscape islands must achieve 90 percent coverage within three years; and

(j) Exception: Landscape square footage requirements do not apply to parking structures and underground parking.

(5) *Landscaping Along Driveway Access*. For lots with 12 or more parking spaces:

- (a) Landscape area at least five (5) feet in width on each side of an accessway;
- (b) Landscape area must extend 30 feet back from the property line; and
- (c) Exceptions: does not apply to parking structures and underground parking which must be determined through the Architectural Review process.

Response: Landscape islands are provided at every eight parking spaces and at the ends of parking spaces. Each island is planted with a deciduous shade tree and groundcover. Driveway access landscaping is proposed along each side a minimum of 5 feet wide and extends 30 feet into the property.

CHAPTER 73D - Waste and Recyclables Management Standards

TDC 73D.020. - Design Methods.

An applicant required to provide mixed solid waste and source separated recyclables storage areas must comply with one of following methods:

- (1) The minimum standards method in TDSC 73D.030;
- (2) The waste assessment method in TDC 73D.040;
- (3) The comprehensive recycling plan method in TDC 73D.050; or
- (4) The franchised hauler review method in TDC 73D.060.

Response: The minimum standard method has been used to size the solid waste and recycling storage areas.

TDC 73D.030. - Minimum Standards Method.

This method specifies a minimum storage area requirement based on the size and general use category of the new or expanded development. This method is most appropriate when specific use of a new or expanded development is not known. It provides specific dimensional standards for the minimum size of storage areas by general use category.

- (1) The size and location of the storage area(s) must be indicated on the site plan. Requirements are based on an assumed storage area height of four feet for mixed solid waste and source separated recyclables. Vertical storage higher than four feet, but no higher than seven feet may be used to accommodate the same volume of storage in a reduced floor space (potential reduction of 43 percent of specific requirements). Where vertical or stacked storage is proposed, submitted plans must include drawings to illustrate the layout of the storage area and dimensions for containers.
- (2) The storage area requirement is based on uses. If a building has more than one use and that use occupies 20 percent or less of the gross leasable area (GLA) of the building, the GLA occupied by that use must be counted toward the floor area of the predominant use(s). If a building has more than one use and that use occupies more than 20 percent of the GLA of the building, then the storage area requirement for the whole building must be the sum of the area of each use. Minimum storage area requirements by use is as follows:

- (a) Common wall residential five to ten units must provide 50 square feet.
- (b) Common wall residential greater than ten units must provide 50 square feet plus an (additional five square feet per unit above ten.
- (c) Commercial, industrial, and institutional developments must provide a minimum storage area of ten square feet plus:
 - (i) Office—Four square feet/1,000 square feet gross leasable area (GLA);

- (ii) Retail—Ten square feet/1,000 square feet GLA;
- (iii) Wholesale/Warehouse/Manufacturing—Six square feet/1,000 square feet GLA;
- (iv) Educational and Institutional—Four square feet/1,000 square feet GLA; and
- (v) All other uses—Four square feet/1,000 square feet GLA.

(3) Mixed solid waste and source separated recyclables storage areas for multiple tenants on a single site may be combined and shared.

Response: 498 square feet of trash/recycling storage is required for Building A 197 square feet of trash/recycling storage is required for Building B. 3 trash enclosures are provided which total 630 square feet, these have been approved by the waste hauler, Republic Services. Please see the service provider letter included in this submittal. Additional trash and recycling locations inside the buildings will be provided to satisfy the size requirements above.

TDC 73D.070. - Location, Design and Access Standards.

The following location, design, and access standards are applicable to all storage areas:

(1) *Location Standards.*

(a) The storage area for source separated recyclables may be collocated with the storage area for mixed solid waste.

(b) Storage area space requirements can be satisfied with a single location or multiple locations, and can combine both interior and exterior locations.

(c) Exterior storage areas must:

(i) Be located in central and visible locations on the site to enhance security for users;

(ii) Be located in a parking area; and

(iii) Not be located within a required front yard setback or in a yard adjacent to a public or private street.

(2) *Design Standards.*

(a) The dimensions of the storage area must accommodate containers consistent with current methods of local collection at time of construction or alteration.

(b) Indoor and outdoor storage areas must comply with Oregon Building and Fire Code requirements.

(c) Exterior storage areas must be enclosed by a sight obscuring fence or wall at least six feet in height.

(d) Evergreen plants must be placed around the enclosure walls, excluding the gate or entrance openings for common wall, commercial, and institutional developments.

(e) Gate openings for haulers must be a minimum of ten feet wide and must be capable of being secured in a closed and open position.

(f) Horizontal clearance must be a minimum of ten feet and a vertical clearance of eight feet is required if the storage area is covered.

(g) A separate pedestrian access must also be provided in common wall, commercial, and institutional developments.

(h) Exterior storage areas must have either a concrete or asphalt floor surface.

(i) Storage areas and containers must be clearly labeled to indicate the type of material accepted.

(3) *Access Standards.*

(a) Storage areas must be accessible to users at convenient times of the day, and to hauler personnel on the day and approximate time they are scheduled to provide hauler service.

(b) Storage areas must be designed to be easily accessible to hauler trucks and equipment, considering paving, grade, gate clearance and vehicle access.

(c) Storage areas must be accessible to hauler trucks without requiring backing out of a driveway onto a public street. If only a single access point is available to the storage area, adequate turning radius must be provided to allow hauler trucks to safely exit the site in a forward motion.

(d) Storage areas must be located so that pedestrian and vehicular traffic movement are not obstructed on site or on public streets adjacent to the site.

(e) The following is an exception to the access standard:

(i) Access may be limited for security reasons.

Response: The proposed enclosure is 10-feet x 21 feet-4 inches. Trash/recycling enclosures will comply with the requirements above. Please refer to the Trash Enclosure detail. Enclosure locations are called out on the Site Plan.

CHAPTER 74: Public Improvement Requirements

IMPROVEMENTS

Section 74.110 Phasing of Improvements.

The applicant may build the development in phases. If the development is to be phased the applicant shall submit a phasing plan to the City Engineer for approval with the development application. The timing and extent or scope of public improvements and the conditions of development shall be determined by the City Council on subdivision applications and by the City Engineer on other development applications.

Response: Phasing is not proposed.

Section 74.120 Public Improvements.

(1) Except as specially provided, all public improvements shall be installed at the expense of the applicant. All public improvements installed by the applicant shall be constructed and guaranteed as to workmanship and material as required by the Public Works Construction Code prior to acceptance by the City. No work shall be undertaken on any public improvement until after the construction plans have been approved by the City Engineer and a Public Works Permit issued and the required fees paid.

(2) In accordance with the Tualatin Basin Program for fish and wildlife habitat the City intends to minimize or eliminate the negative affects of public streets by modifying right-of-way widths and street improvements when appropriate. The City Engineer is authorized to modify right-of-way widths and street improvements to address the negative affects on fish and wildlife habitat.

Response: Any public improvements completed as a result of the AR process shall be installed at expense of applicant.

Section 74.130 Private Improvements.

All private improvements shall be in-stalled at the expense of the applicant. The property owner shall retain maintenance responsibilities over all private improvements.

Response: All private improvements to be installed at expense of the applicant.

Section 74.140 Construction Timing.

(1) All the public improvements required under this chapter shall be completed and accepted by the City prior to the issuance of a Certificate of Occupancy; or, for subdivision and partition applications, in accordance with the requirements of the Subdivision regulations.

(2) All private improvements required under this chapter shall be approved by the City prior to the issuance of a Certificate of Occupancy; or for subdivision and partition applications, in accordance with the requirements of the Subdivision regulations. [Ord. 895-93, 5/24/1993]

Response: All improvements to be done before issuance of Certificate of Occupancy.

RIGHT-OF-WAY

Section 74.210 Minimum Street Right-of-Way Widths.

The width of streets in feet shall not be less than the width required to accommodate a street improvement needed to mitigate the impact of a proposed development. In cases where a street is required to be improved according to the standards of the TDC, the width of the right-of-way shall not be less than the minimums indicated in TDC Chapter 74, Public Improvement Requirements, Figures 74-2A through 74-2G.

(2) For development applications other than subdivisions and partitions, wherever existing or future streets adjacent to property proposed for development are of inadequate right-of-way width, the additional right-of-way necessary to comply with TDC Chapter 74, Public Improvement Requirements, Figures 74-2A through 74-2G of the Tualatin Community Plan shall be dedicated to the City for use by the public prior to issuance of any building permit for the proposed development. This right-of-way dedication shall be for the full width of the property abutting the roadway and, if required by the City Engineer, additional dedications shall be provided for slope and utility easements if deemed necessary.

Response: The project does not propose any improvements of the right-of-way since the project site does not have right-of-way frontage.

Section 74.330 Utility Easements.

(1) Utility easements for water, sanitary sewer and storm drainage facilities, telephone, television cable, gas, electric lines and other public utilities shall be granted to the City.

(2) For subdivision and partition applications, the on-site public utility easement dedication area shall be shown to be dedicated to the City on the final subdivision or partition plat prior to approval of the plat by the City; and

(3) For subdivision and partition applications which require off-site public utility easements to serve the proposed development, a utility easement shall be granted to the City prior to approval of the final plat by the City. The City may elect to exercise eminent domain and condemn necessary off-site public utility easements at the applicant's request

and expense. The City Council shall determine when condemnation proceedings are to be used.

(4) For development applications other than subdivisions and partitions, and for both on-site and off-site easement areas, a utility easement shall be granted to the City; building permits shall not be issued for the development prior to acceptance of the easement by the City. The City may elect to exercise eminent domain and condemn necessary off-site public utility easements at the applicant's request and expense. The City Council shall determine when condemnation proceedings are to be used.

(5) The width of the public utility easement shall meet the requirements of the Public Works Construction Code. All subdivisions and partitions shall have a 6-foot public utility easement adjacent to the street and a 5-foot public utility easement adjacent to all side and rear lot lines.

Response: Easements will be granted for any onsite public utilities as required.

TDC 74.440. - Streets, Traffic Study Required.

(1) The City Manager may require a traffic study to be provided by the applicant and furnished to the City as part of the development approval process as provided by this Code, when the City Manager determines that such a study is necessary in connection with a proposed development project in order to:

(2) The required traffic study must be completed prior to the approval of the development application.

(3) The traffic study must include, at a minimum:

(4) The applicant must implement all or a portion of the improvements called for in the traffic study as determined by the City Manager.

Response:

TDC 74.450. - Bikeways and Pedestrian Paths.

Response: Bicycle and pedestrian accessways have been provided as required and shown on the Site Plan.

UTILITIES

TDC 74.610. - Water Service.

(1) Water lines must be installed to serve each property in accordance with the Public Works Construction Code. Water line construction plans must be submitted to the City Manager for review and approval prior to construction.

Response: The development plans show the proposed water service on the Utility Sheet.

TDC 74.620. - Sanitary Sewer Service.

(1) Sanitary sewer lines must be installed to serve each property in accordance with the Public Works Construction Code. Sanitary sewer construction plans and calculations must be submitted to the City Manager for review and approval prior to construction.

Response: Submitted plans show proposed sanitary service.

TDC 74.630. - Storm Drainage System.

(1) Storm drainage lines must be installed to serve each property in accordance with City standards. Storm drainage construction plans and calculations must be submitted to the City Manager for review and approval prior to construction.

(2) The storm drainage calculations must confirm that adequate capacity exists to serve the site. The discharge from the development must be analyzed in accordance with the City's Storm and Surface Water Regulations.

Response: The proposed design includes separate stormwater systems for each building located within their own property. A general stormwater agreement will also be put into place between the two properties for some drainage area overlaps. Although all piping and structures for each properties systems will be completely contained within the subject property.

Response: Submitted plans and storm drainage calculations conform to the City of Tualatin and Clean Water Services (CWS) current design standards.

TDC 74.640. - Grading.

(1) Development sites must be graded to minimize the impact of storm water runoff onto adjacent properties and to allow adjacent properties to drain as they did before the new development.

(2) A development applicant must submit a grading plan showing that all lots in all portions of the development will be served by gravity drainage from the building crawl spaces; and that this development will not affect the drainage on adjacent properties. The City Manager may require the applicant to remove all excess material from the development site.

Response: Submitted grading plans show that all runoff is contained within the development area. No changes to drainage of adjacent sites will occur.

TDC 74.650. - Water Quality, Storm Water Detention and Erosion Control.

The applicant must comply with the water quality, storm water detention and erosion control requirements in the Surface Water Management Ordinance. If required:

(2) On all other development applications, prior to issuance of any building permit, the applicant must arrange to construct a permanent on-site water quality facility and storm water detention facility and submit a design and calculations indicating that the requirements of the Surface Water Management Ordinance will be met and obtain a Stormwater Connection Permit from Clean Water Services.

(3) For on-site private and regional non-residential public facilities, the applicant must submit a stormwater facility agreement, which will include an operation and maintenance plan provided by the City, for the water quality facility for the City's review and approval. The applicant must submit an erosion control plan prior to issuance of a Public Works Permit. No construction or disturbing of the site must occur until the erosion control plan is approved by the City and the required measures are in place and approved by the City.

Response: Submitted plans and storm drainage calculations conform to the City of Tualatin and Clean Water Services (CWS) current design standards. A stormwater facility agreement will be provided with construction permit applications.

TDC 74.660. - Underground.

(1) All utility lines including, but not limited to, those required for gas, electric, communication, lighting and cable television services and related facilities must be placed underground. Surface-mounted transformers, surface-mounted connection boxes and meter cabinets may be placed above ground. Temporary utility service facilities, high capacity electric and communication feeder lines, and utility transmission lines operating at 50,000 volts or above may be placed above ground. The applicant must make all necessary arrangements with all utility companies to provide the underground services. The City reserves the right to approve the location of all surface-mounted transformers.

(2) Any existing overhead utilities may not be upgraded to serve any proposed development. If existing overhead utilities are not adequate to serve the proposed development, the applicant must, at their own expense, provide an underground system. The applicant must be responsible for obtaining any off-site deeds and/or easements necessary to provide utility service to this site; the deeds and/or easements must be submitted to the City Manager for acceptance by the City prior to issuance of the Public Works Permit.

Response: Franchise utilities will be installed underground. Additionally, the applicant will obtain any off-site deeds and/or easements as required.

TDC 74.765. - Street Tree Species and Planting Locations.

All trees, plants or shrubs planted in the right-of-way of the City must conform in species and location and in accordance with the street tree plan and City standards, including Table 74-1. If the City Manager determines that none of the species in City standards, including Table 74-1 is appropriate or finds appropriate a species not listed, the City Manager may substitute an unlisted species.

Response: Street trees are not part of the proposed project.

Tualatin Municipal Code

CHAPTER 3-02 - Sewer Regulations

TMC 3-2-030 - Material and Manner of Construction

(1) All building sewers, side sewers and connections to the main sewer shall be so constructed as to conform to the requirements of the Oregon State Plumbing Laws and rules and regulations and specifications for sewerage construction of the City.

(2) Old building sewers may be used in connection with new buildings only when they are found, upon examination and test by the City Inspector, to meet all requirements of the City.

Response: Submitted plans show sewer construction per Oregon laws and City requirements.

TMC 3-2-050 - Industrial Wastes.

(1) The admission into the public sewers of any waters or wastes having

Response: Industrial wastes as described in this code section will not be produced by potential uses and tenants.

TMC 3-2-160 Construction Standards

All sewer line construction and installation of services and equipment shall be in conformance with the City of Tualatin Public Works Construction Code. In addition, whenever a property owner extends a sewer line, the extension shall be carried to the opposite property line or to such other point as determined by the Public Works Director.

Response: Submitted plans show sewer construction per the City of Tualatin Public Works Construction Code.

CHAPTER 3-03 - Water Service

TMC 3-3-040 Separate Services Required.

Except as authorized by the City Engineer, a separate service and meter to supply regular water service or fire protection services shall be required for each building, residential unit of structure served. For the purposes of this section, trailer parks and multi-family residences of more than four dwelling units shall constitute a single unit unless the City Engineer determines that separate services are required.

Response: Submitted plans show a separate water and fire protection service for the site.

TMC 3-3-080 - Fire Protection Service.

Fire protection facilities will be allowed under the following conditions:

- (1) The owner of a fire protection system shall furnish and install a service meter approved by the City.
- (2) When a building has a fire protection service which is separate from the regular water service to the building, an appropriate backflow device, but not less than a double check detector check, approved by the Operations Director, shall be used in place of a service meter. Water supplied through this service shall not be used for any purpose except for suppressing a fire or testing of the fire protection system. If registration of regular water usage is recorded on the detector check meter, the City may require installation of a service meter or removal of the fire protection service.
- (3) The service meter shall be owned and maintained by the City and the appropriate backflow device shall be owned and maintained by the owner.
- (4) No charge shall be made for water used in the extinguishing of a fire or system testing if the customer reports the use to the City in writing within ten days of the use.
- (5) Water may be obtained from fire protection facilities for filling a tank connected with the fire service, but only if written permission is secured from the City in advance and an approved means of measurement is available and utilized. The water used shall be charged at the rates for general use.
- (6) Charges for fire protection service shall be as specified in the rates and charges.

Response: Submitted plans show code compliant fire protection service for the site.

TMC 3-3-100 - Meters.

- (1) Meters up to and including two inches will be furnished by the City. Meters larger than two inches may be furnished by the customer upon approval of the Operations Director.

(2) All meters, including those for fire protection service, shall be located within the public right-of-way or within an access easement approved by the City Engineer.

Response: Submitted plans show City water meter located within an easement in the ROW.

TMC 3-3-110 Construction Standards.

All water line construction and installation of services and equipment shall be in conformance with the City of Tualatin Public Works Construction Code. In addition, whenever a property owner extends a water line, which upon completion, is intended to be dedicated to the City as part of the public water system, said extension shall be carried to the opposite property line or to such other point as determined by the City Engineer. Water line size shall be determined by the City Engineer in accordance with the City's Development Code or implementing ordinances and the Public Works Constr. Code.

Response: General utility notes indicate work is to conform to the current building, plumbing, and fire codes and to the requirements of the City of Tualatin and Tualatin Valley Fire and Rescue.

TMC 3-3-120 Backflow Prevention Devices and Cross Connections.

The owner of property to which City water is furnished for human consumption shall install in accordance with City standards an appropriate backflow prevention device on the premises where any of the following circumstances exist:

Except as otherwise provided in this subsection, all irrigation systems shall be installed with a double check valve assembly. Irrigation system backflow prevention device assemblies installed before the effective date of this ordinance, which were approved at the time they were installed but are not on the current list of approved device assemblies maintained by the Oregon State Health Division, shall be permitted to remain in service provided they are properly maintained, are commensurate with the degree of hazard, are tested at least annually, and perform satisfactorily. When devices of this type are moved, or require more than minimum maintenance, they shall be replaced by device assemblies which are on the Health Division list of approved device assemblies.

Response: Submitted plans show backflow prevention for the site.

General utility notes indicate work is to conform to the current building, plumbing, and fire codes and to the requirements of the City of Tualatin and Tualatin Valley Fire and Rescue.

TMC 3-3-130 Control Valves.

The customer shall install a suitable valve, as close to the meter location as practical, the operation of which will control the entire water supply from the service. The operation by the customer of the curb stop in the meter box is prohibited.

Response: The project site is served by an existing meter with the required control valves as required.

CHAPTER 3-05 - Soil Erosion, Surface Water Management, Water Quality
Facilities, and Building and Sewers

TMC 3-5-050 Erosion Control Permits

(1) Except as noted in subsection (3) of this section, no person shall cause any change to improved or unimproved real property that causes, will cause, or is likely to cause a temporary or permanent increase in the rate of soil erosion from the site without first obtaining a permit from the City and paying prescribed fees. Such changes to land shall include, but are not limited to, grading, excavating, filling, working of land, or stripping of soil or vegetation from land.

(2) No construction, land development, grading, excavation, fill, or the clearing of land is allowed until the City has issued an Erosion Control Permit covering such work, or the City has determined that no such permit is required. No public agency or body shall undertake any public works project without first obtaining from the City an Erosion Control Permit covering such work, or receiving a determination from the City that none is required.

(3) No Erosion Control Permit from City is required for the following:

Response: Erosion and sediment control plans and permit applications conforming to the requirements of the City of Tualatin, CWS, and Oregon Department of Environmental Quality will be provided with the construction permit submittal documents.

TMC 3-5-060 Permit Process

(1) *Applications for an Erosion Control Permit.* Application for an Erosion Control Permit shall include an Erosion Control Plan which contains methods and interim facilities to be constructed or used concurrently and to be operated during construction to control erosion. The plan shall include either:

Response: Erosion and sediment control plans and permit applications conforming to the requirements of the City of Tualatin, CWS, and Oregon Department of Environmental Quality will be provided with the construction permit submittal documents.

TMC 3-5-110 - Air Pollution—Dust, Fumes, Smoke and Odors.

(1) Dust shall be minimized to the extent practicable, utilizing all measures necessary, including, but not limited to:

Response: BMPs and construction means and methods will be provided to prevent air pollution from leaving the site.

TMC 3-5-120 - Maintaining Water Quality.

(4) All sediment-laden water from construction operations shall be routed through stilling basins, filtered or otherwise treated to reduce the sediment load.

Response: Erosion control measures and construction means and methods will be in place to prevent water contamination onsite or leaving the site.

TMC 3-5-140 - Control of Noise Levels.

Construction noise shall be minimized by the use of proper engine mufflers, protective sound reducing enclosures, and other sound barriers. Construction activities producing

excessive noise that cannot be reduced by mechanical means shall be restricted to locations where their sound impact is reduced to a minimum at the edge of work area.

Response: The contractor will be required to have methods in place to reduce noise pollution to meet standards during construction.

TMC 3-5-150 - Natural Vegetation.

(1) As far as is practicable, the natural vegetation shall be protected and left in place. Work areas shall be carefully located and marked to reduce potential damage. Trees shall not be used as anchors for stabilizing working equipment.

(2) During clearing operations, trees shall not be permitted to fall outside the work area. In areas designated for selective cutting or clearing, care in falling and removing trees and brush shall be taken to avoid injuring trees and shrubs to be left in place.

(3) Where natural vegetation has been removed, or the original land contours disturbed, the site shall be revegetated, and the vegetation established, as soon as practicable after construction has commenced, except where construction of sewers will be followed by paving.

Response: A Tree protection plan will be followed see the Tree protection plan and removal plan. All areas of disturbance will be re-vegetated per the Landscape plan.

TMC 3-5-180 - Contaminated Soils.

If the construction process reveals soils contaminated with hazardous materials or chemicals the contractor shall stop work immediately, ensure no contaminated material is hauled from the site, remove the contractor's work force from the immediate area of the contaminated area, leaving all machinery and equipment, and secure the area from access by the public until such time as a mitigation team has relieved them of that responsibility. Contractor shall notify the City and an emergency response team (911) of the situation upon its discovery. No employees who may have come in contact with the contaminated material shall be allowed to leave the site until such time as the emergency response team releases them.

Response: No contaminated soils are known to be on site, but if encountered the contractor will export them off site for treatment at one of the approved treatment facilities.

TMC 3-5-190 - Soil Erosion Control Matrix and Methods.

(1) *Establishing Primary Access Point.* As one of the initial activities at the start of any earthwork, a gravel driveway shall be established. The driveway shall meet the following:

(2) *Additional Access.* Construction and delivery vehicles and equipment shall use the primary access point (the gravel driveway). Vehicles and equipment shall not access the property from any other point (shall not "hop the curb"), unless required due to the physical layout of the parcel, and not simply due to convenience.

Response: A construction entrance is proposed and will be shown on the permit plans.

If is necessary to access the site at other than the primary access point:

(a) A second temporary or permanent crushed rock access point shall be established if there is an ongoing need to access the property at a second point. Large or difficult properties may require more than one permanent access point

(b) If there is only a one time or infrequent need to access the property at other than an established access point, then the vehicle or equipment may "hop the curb". Each time the vehicle or equipment reenters the street any mud, dirt, or other such debris that falls or is deposited on the street shall be immediately cleaned using hand labor or mechanical means.

Immediate means within five minutes of the mud, dirt, or debris being deposited on the street. Mud, dirt and debris shall not be allowed to accumulate to be cleaned up at the end of the day or "later". Under no circumstance shall mud, dirt or debris be washed into the storm and surface water system.

(c) Under no circumstance shall vehicles or equipment enter a property adjacent to a stream, water course, or other storm and surface water facility, or a wetland such that it would not be possible to avoid contaminating or depositing mud, dirt, or debris into the water or wetland.

(3) *Silt Barriers*. Silt barriers shall be installed concurrent with grading, and will be inspected prior to "footing" inspection. They shall be installed downhill of all graded, filled and stripped areas, and across the path of concentrated flows. They shall be designed and installed to capture erosion on site. Silt barriers can be:

(6) *Protection Measure Removal*. The erosion control facilities and techniques shall remain in place and be maintained in good condition until all disturbed soil areas are permanently stabilized by installation of landscaping, seeding, mulching or otherwise covered and protected from erosion.

(7) *Miscellaneous*. Filter systems may not be used on catch basins in public streets as a part of single family erosion control plans. Plastic sheeting should generally not be used as an erosion control measure in single family house construction. Plastic sheeting may be used to protect small, highly erodible areas, or temporary stock-piles of material. If used, the path of concentrated flow from the plastic must be protected.

Response: Erosion and sediment control plans and permit applications conforming to the requirements of the City of Tualatin, CWS, and Oregon Department of Environmental Quality will be provided with the construction permit submittal documents.

ADDITIONAL SURFACE WATER MANAGEMENT STANDARDS

TMC 3-5-200 - Downstream Protection Requirement.

Each new development is responsible for mitigating the impacts of that development upon the public storm water quantity system. The development may satisfy this requirement through the use of any of the following techniques, subject to the limitations and requirements in TMC 3-5-210:

(1) Construction of permanent on-site stormwater quantity detention facilities designed in accordance with this title;

(2) Enlargement of the downstream conveyance system in accordance with this title and the Public Works Construction Code;

(3) The payment of a Storm and Surface Water Management System Development Charge, which includes a water quantity component designated to meet these requirements.

Response: The submitted plans and drainage calculations provide stormwater quantity design.

TMC 3-5-220 - Criteria for Requiring On-Site Detention to be Constructed.

The City shall determine whether the onsite facility shall be constructed. If the onsite facility is constructed, the development shall be eligible for a credit against Storm and Surface Water System Development Charges, as provided in City ordinance.

On-site facilities shall be constructed when any of the following conditions exist:

Response: The submitted plans and drainage calculations provide on-site detention design.

TMC 3-5-230 - On-Site Detention Design Criteria.

(1) Unless designed to meet the requirements of an identified downstream deficiency as defined in TMC 3-5.210, stormwater quantity onsite detention facilities shall be designed to capture run-off so the run-off rates from the site after development do not exceed predevelopment conditions, based upon a 25-year, 24-hour return storm.

(2) When designed to meet the requirements of an identified downstream deficiency as defined in TMC 3-5.210, stormwater quantity on-site detention facilities shall be designed such that the peak runoff rates will not exceed predevelopment rates for the two through 100 year storms, as required by the determined downstream deficiency.

(3) Construction of on-site detention shall not be allowed as an option if such a detention facility would have an adverse effect upon receiving waters in the basin or subbasin in the event of flooding, or would increase the likelihood or severity of flooding problems downstream of the site.

Response: The submitted plans and drainage calculations provide onsite detention design for the required storm events.

TMC 3-5-240 - On-Site Detention Design Method.

(1) The procedure for determining the detention quantities is set forth in Section 4.4 Retention/Detention Facility Analysis and Design, King County, Washington, Surface Water Design Manual, January, 1990, except subchapters 4.4.5 Tanks, 4.4.6 Vaults and Figure 4.4.4G Permanent Surface Water Control Pond Sign. This reference shall be used for procedure only. The design criteria shall be as noted herein. Engineers desiring to utilize a procedure other than that set forth herein shall obtain City approval prior to submitting calculations utilizing the proposed procedure.

(3) All developments other than single family and duplex, whether residential, multi-family, commercial, industrial, or other uses, the sizing of stormwater quantity detention facilities shall be based on the impervious area to be created by the development, including structures and all roads and impervious areas which are assessed a surface water management monthly fee under Unified Sewerage Agency rules. Impervious surfaces shall be determined based upon building permits, construction plans, site visits or other appropriate methods deemed reliable by City.

Response: The project provides a detention design facility based on the design methods set forth in the sections mentioned above.

TMC 3-5-280 - Placement of Water Quality Facilities.

Title III specifies that certain properties shall install water quality facilities for the purpose of removing phosphorous. No such water quality facilities shall be constructed

within the defined area of existing or created wetlands unless a mitigation action, approved by the City, is constructed to replace the area used for the water quality facility.

Response: No wetlands are present on the project site.

PERMANENT ON-SITE WATER QUALITY FACILITIES

TMC 3-5-350 - Phosphorous Removal Standard.

The stormwater quality control facilities shall be designed to remove 65 percent of the phosphorous from the runoff from 100 percent of the newly constructed impervious surfaces. Impervious surfaces shall include pavement, buildings, public and private roadways, and all other surfaces with similar runoff characteristics.

Response: The submitted plans and drainage calculations provide on-site storm runoff treatment as mandated in the City of Tualatin and CWS standards.

TMC 3-5-360 - Design Storm.

The stormwater quality control facilities shall be designed to meet the removal efficiency of TMC 3-5-350 for a mean summertime storm event totaling 0.36 inches of precipitation falling in four hours with an average return period of 96 hours.

Response: The submitted plans and drainage calculations provide a design based on the required design storms.

TMC 3-5-370 - Design Requirements.

TMC 3-5-430 - Placement of Water Quality Facilities.

No water quality facilities shall be constructed within the defined area of existing or created wetlands unless a mitigation action is approved by the City, and is constructed to replace the area used for water quality.

Response: The submitted plans and drainage calculations provide on-site storm runoff treatment as mandated in the City of Tualatin and CWS standards.

MC 3-5-440 - General Provisions.

(1) The specifications contained in this Title III, together with the State of Oregon Uniform Plumbing Code and all other applicable requirements of federal, state and local law, shall govern the installation of all building and side sewers.

Response: As submitted plans show construction will meet all federal, state, and local law.

TMC 3-5-450 - Building Sewers.

(1) *Materials.* Pipes for building sewers shall be one of the following types or approved equal:

(2) *Joints.* The ends of pipes, collars, gaskets and retaining clamps shall be kept clean and free of foreign material when pipe is laid. All joints shall be made watertight and gastight.

(3) *Cleanouts.* All changes in direction shall be made with long radius bends, 45 degrees, 22½ degrees, tee or wye branches with straight-through opening plugged for a cleanout. Cleanouts shall be installed in the building sewer between the building outlet and the side sewer when the distance is greater than 100 feet. All bends within the sewer shall not

exceed 135 degrees without an additional cleanout. Cleanouts shall be plugged to prevent entrance of dirt, roots, or ground water. Plugs shall be sealed with rubber gaskets and secured against back pressure.

(4) *Size.* The minimum size of any building sewer shall be determined on the basis of the total number of fixture units drained by such sewer in accordance with Table 4-3 of the Oregon State Plumbing Code.

(5) *Installation.*

(6) *Excavation.* All excavations required for the installation of a building sewer shall be open trench work unless otherwise approved by the City.

(7) *Alignment.* All pipe shall be true to grade with the bells upgrade. Pipe shall be carefully centered prior to jointing. The bottom of the trench shall be smooth and free from rocks which may injure the pipe. The pipe shall be laid on four inches of 3/4-inch minus crushed rock throughout its entire length, and any such piping laid in fill shall be laid on a bed of approved materials and shall be adequately supported to the satisfaction of the City.

(8) *Grade.* All sewers shall be laid on a grade of not less than 1/4 inch per foot for a four-inch pipe and 3/16-inch per foot for a six-inch pipe.

(9) *Backfill.* If common material is available which is free from rocks one inch in diameter, it may be used to backfill the remainder of the ditch. If suitable material is not available, 3/4-inch minus granular material shall be used to backfill the trench to a point six inches above the top of the pipe. The remainder of the ditch may then be backfilled with common material.

A modified method of backfilling shall be used where the house service laterals cross lawn, shrub, or planting areas between the curb and the property line. In this area, backfill shall be modified so that a minimum of 18 inches and a maximum of 36 inches of compacted top soil shall be provided in the upper portions of the trench. The lower portions of the trench shall be backfilled as described above.

(10) *Cover.* Cover on private property shall be not less than 12 inches from top of pipe to finished grade.

(11) *Sewer and Water Lines.* Building sewers or drainage piping of materials which are not approved for use within a building shall not be laid in the same trench with water service pipes unless both of the following requirements are met.

(12) *Testing.* All building sewers shall be tested for leakage 15 minutes prior to the City inspection and prior to backfilling the trench. Sewers shall be tested by plugging the building sewer at its point of connection with the side sewer and completely filling the building sewer with water from the lowest point to the highest point thereof. The building sewer shall be watertight and have no visible leakage.

A tee shall be installed at the property line at the expense of the installer. After the test is complete, a plug shall be inserted in the tee. After a satisfactory test has been performed, the trench shall be backfilled.

Response: As submitted, plans show proposed sewers are designed to meet applicable standards.