City of Tualatin
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April 24, 2018

ARCHITECTURAL REVIEW
FINDINGS AND DECISION

** APPROVAL WITH CONDITIONS **

Case #:	AR-17-0009
Project:	Air Liquide Gas Depot
Location:	10500 SW Tualatin-Sherwood Road (Tax Lot: 2S126B000105)
Applicant:	Matt Oullette, 131 Third Ave. Longview, Washington 98632
Project Contact:	Eric Lanciault 3200 SE 164th Ave., suite 302 Vancouver, WA 98683

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I. INTRODUCTION

Arrangements can be made to provide these materials in alternative formats such as large type or audio recording. Please contact the Planning Division at 503-691-3026 and allow as much lead time as possible.

A. Project Description

JH Kelly LLC is proposing a gas bottle storage facility comprised of five structures. Only a portion of the site proposes new development. The remainder of the site will remain forested. The five buildings proposed for the site are:

- Building 100 - gas cylinder storage, 4,500 square feet.
- Building 200 - gas cylinder storage, 4,580 square feet.
- Building 300 - office trailer with plumbing, 675 square feet.
- Building 400 - electrical/mechanical services and forklift storage, 687 square feet.
- Building 500 - refuse enclosure, 308 square feet.

Buildings 100, 200, 400, and 500 will be low -profile steel and masonry buildings designed to blend with surrounding industrial structures. Building 300 will be a standard type site trailer intended for long term use (therefore treated like it were a building). Landscaping and existing trees will generally buffer all structures from adjacent properties. The entire site is 5.8 acres and has a General Manufacturing (MG) Planning District Designation.

B. Site Description

The property is a flag lot with access to SW Tualatin-Sherwood Road through access easements shared with existing, developed industrial sites to the north of the property. SW Tualatin-Sherwood Road is classified as a Major Arterial in the City of Tualatin Transportation System Plan (TSP) and Figure 11-1 in the Tualatin Development Code. The Trimet 97 Bus Line runs along SW Tualatin-Sherwood Road fronting the property.

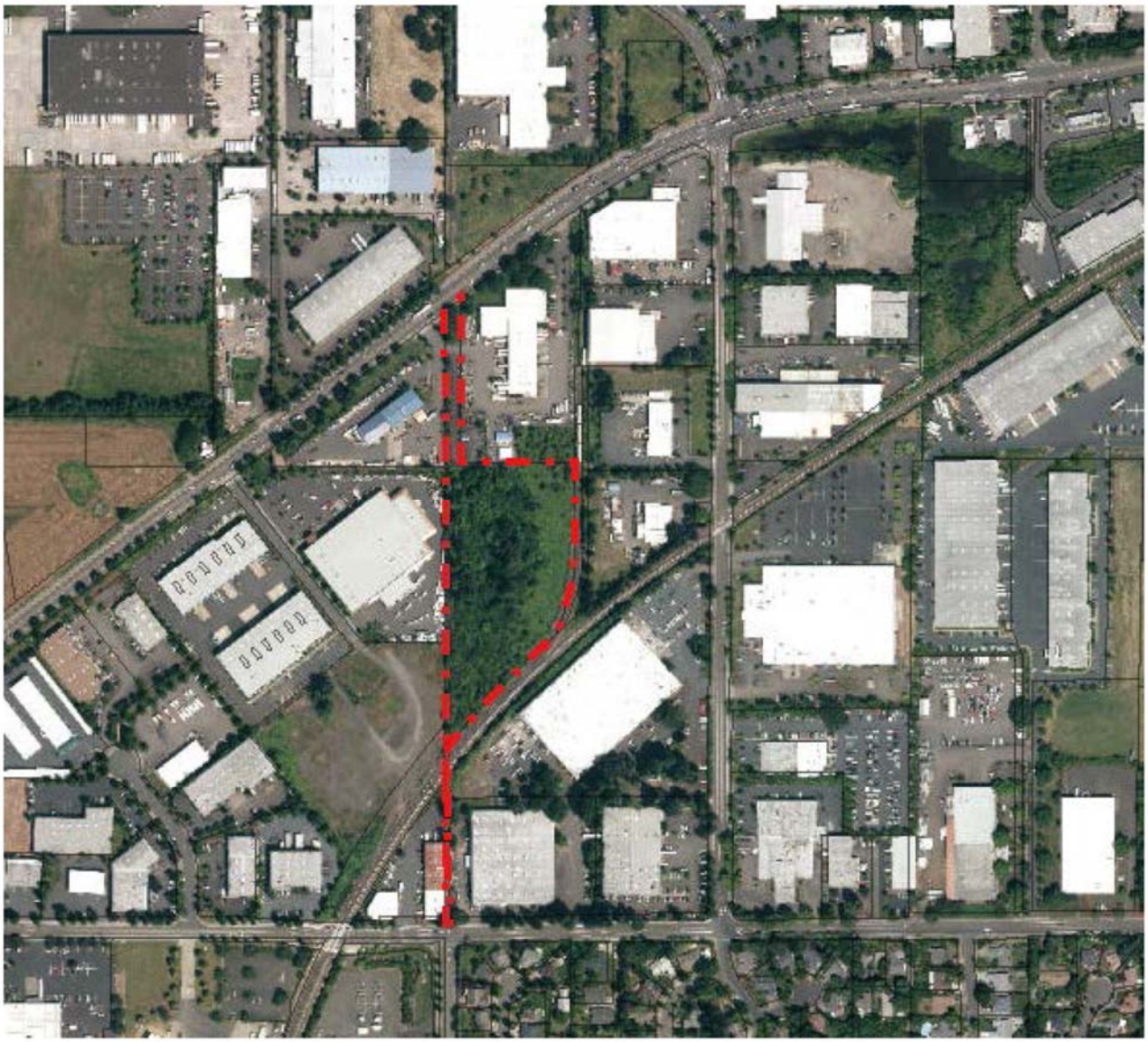
The subject site is bound by existing industrial buildings to the north, east and west. An active rail line spans the property to the south, this line is shared with Trimet for the WES commuter rail service. The entire site is not visible from any public right of way. The site is currently wooded and the applicant is proposing to develop only a portion of the existing property, along the north side of the property, leaving a significant wooded buffer between the development and the rail line to the south of the site.

C. Project Schedule

The applicant attended a pre-application conference for this project with the City of Tualatin on August 23, 2017. A neighborhood/developer meeting was held on September 6, 2017 where five people were in attendance. No comments were recorded from attendees. The application was submitted October 3, 2017, an incomplete letter was sent on November 11, 2017, revised exhibits were submitted on February 16, 2018 and the project was deemed complete on March 14, 2018. The application included a narrative binder with several exhibits, full size site plan, floor plans, elevations, landscape plans, and a traffic impact analysis.

Notice of application was mailed to owners of property within 1,000 ft of the subject site pursuant to Tualatin Development Code (TDC) 31.064(1). Staff received two written comments from local agencies during the comment period that ended April 3, 2018, as attached in Exhibit 103-104. Clean Water Services and Tualatin Valley Fire & Rescue have provided recommended conditions of approval.

Figure 1.02.1 Aerial Map of Subject Site



II. CONDITIONS OF APPROVAL

Based on the Findings and Conclusions presented, AR-17-0009 is approved, subject to the following Architectural Review conditions of approval:

CONDITIONS OF APPROVAL DOCUMENTATION:

AR-1 Prior to obtaining building permits on the subject site, the applicant shall submit one revised paper plan set – 24 x 36, a paper narrative, and electronically in Adobe PDF file format – for review and approval to the Planning Division that meet the conditions of approval below. The narrative shall explain how and on what page each condition of approval has been met. The submittal shall contain page numbers and a table of contents. No piecemeal submittals will be accepted. Each submittal shall be given directly to planning staff and will be reviewed in two weeks.

PRIOR TO APPLICATION FOR A GRADING PERMIT:

AR-2 All trees depict and identified on landscape plans (or similar) must be retained unless modified in accordance with TDC 73.100(1)

PRIOR TO ISSUANCE OF BUILDING PERMITS:

AR-3 The applicant shall provide a photometric plan to demonstrate that all lighting within the project site remains on the project site. TDC 73.220(1)(a)

AR-4 The applicant shall revise the appropriate sheets to illustrate that the project site shall feature full irrigation. TDC 73.280

AR-5 The site plan shall be revised to show where the required four (4) long term bicycle parking spaces are located and to assure that at least two of them are covered. TDC 73.73.370(1)(r)

AR-6 The applicant shall revise the appropriate sheets to illustrate one vanpool and/or carpool spaces. TDC 73.370(3)

AR-7 The applicant shall comply with the incorporated Public Facilities Recommendation (PFR) from the Engineering Division.

PRIOR TO CERTIFICATE OF OCCUPANCY:

AR-8 The applicant shall construct proposed buildings and all site improvements as illustrated on approved plans and conditions of approval.

AR-9 The applicant shall revise the plans to show at least one access ramp into the office trailer, and install the ramp prior to occupancy. TDC 73.160(5)

PLEASE NOTE THE FOLLOWING CODE REQUIREMENTS APPLY TO THE SITE IN AN ON-GOING MANNER:

- The applicant must submit sign permit applications separately from this AR for any proposed signage.
- Accessways shall be constructed, owned and maintained by the property owner. TDC 73.160(1)(g)
- All building exterior improvements approved through the Architectural Review Process must be continually maintained, including necessary painting and repair, so as to remain substantially similar to original approval through the Architectural Review Process, unless subsequently altered with Community Development Director's approval. TDC 73.100(2)
- All landscaping approved through architectural review (AR) must be continually maintained, including necessary watering, weeding, pruning and replacement, in a manner substantially similar to that originally approved by the AR decision, unless subsequently altered with Community Development Director's approval. TDC 73.100(1)
- Site landscaping and street trees shall be maintained to meet the vision clearance requirements of TDC 73.400(16).

PLEASE BE ADVISED:

- The plan sets for the Planning Division must contain sheets relevant to AR conditions of approval while also not being a full building permit set. For example, because the Planning Division needs no erosion control or roof framing plan sheets, exclude them.
- Following Planning Division approval of revised plans and when the constructed site is ready, the applicant must contact the Planning Division for a site inspection in order to obtain a certificate of occupancy (CO). This inspection is separate from inspection(s) done by the Building Division. Staff recommends scheduling a Planning inspection at least three business days in advance of the desired inspection date.

III. FINDINGS

Reviewing this application in terms of the Tualatin Development Code (**TDC**) and other ordinances, the following findings are relevant. All references are to sections in the TDC unless otherwise noted.

A. Previous Related Land Use Actions:

- None

B. Planning Districts and Adjacent Land Uses:

The subject property is located in the **General Manufacturing (MG) Planning District** where various manufacturing uses are permitted pursuant to TDC **61.020** /**61.030**.

Adjacent planning districts and land uses are clockwise:

North:	General Manufacturing (MG)	Praxair Welding Gas & Supply Center
East:	General Manufacturing (MG)	Air Products and Chemicals & Airgas
South:	Light Manufacturing (MG)	Vacant industrial building
West:	General Manufacturing (MG)	Lakeside Lumber

C. General Manufacturing Planning District Uses:

TDC 61 General Manufacturing Planning District (MG)
Section 61.020 Permitted Uses.
(5) Chemical warehouse and distribution.

The proposed use is the storage and distribution of gasses, which are considered chemicals. Staff notes the proposal meets this requirement.

D. Lot Sizes, Setback Requirements, Structure Height:

Section 61.050 Lot Size.
Except for lots for public utility facilities, natural gas pumping stations and a wireless communication facility which shall be established through the Subdivision, Partition or Lot Line Adjustment process, the following requirements shall apply:
(1) The minimum lot size shall be 20,000 square feet.
(2) The minimum lot width shall be 100 feet.
(3) The minimum average lot width at the street shall be 100 feet.
(4) The minimum lot width at the street shall be 100 feet.
(5) For Flag Lots the minimum lot width at the street shall be sufficient to comply with at least the minimum access requirements contained in TDC 73.400(8) to (12).

Applicant Response:
1. Actual lot area = 255,112 SF, 5.85 acres
2. Actual lot width = 373’-10”
3. Average lot width at building line = 373’-10”
4. Actual lot width at SW Tualatin-Sherwood Road is 54’-4”; no change is proposed and modifications are impracticable.
5. Not applicable

Staff notes that the applicant incorrectly indicated that the project could not comply with 4 and that 5 did not apply. The lot is currently a flag lot with a 40’ access steam connecting the larger portion of the site with SW Tualatin-Sherwood Road. Therefore, number 4 does not apply and number 5 does. Code section 73.400(8) to (12) addresses access, and is addressed fully later in this report. The project complies with the access provisions and meets all lot size requirements.

Section 61.065 Central Urban Renewal Area - Lot Sizes.

The subject site is not located in the Central Urban Renewal Area, as demonstrated on Map 9-3. This requirement does not apply.

Section 61.060 Setback Requirements.
(1) Front yard. The minimum front yard setback is 30 feet.
(2) Side Yard. The minimum setback is 0 to 50 feet, as determined by the Architectural Review process. When the side yard is adjacent to a property line or across the street from a residential or Manufacturing Park (MP) District, a side yard setback of 50 feet is required.
(3) Rear yard. The minimum setback is 0 to 50 feet, as determined by the Architectural Review process. When the side yard is adjacent to a property line or across the street from a residential or Manufacturing Park (MP) District, a side yard setback of 50 feet is required.
(5) The minimum parking and circulation area setback is 5 feet, except when a yard is adjacent to public streets or Residential or Manufacturing Park District, the minimum setback is 10 feet. No setback is required from lot lines within ingress and egress areas shared by abutting properties in accordance with TDC 73.400(2).
(6) No spur rail trackage shall be permitted within 200 feet of an adjacent residential district.
(7) No setbacks are required at points where side or rear property lines abut a rail-road right-of-way or spur track.
(8) No fence shall be constructed within 10 feet of a public right-of-way.

Staff finds that the building setback standard is met per Table 1 below. The proposed development is not located on a corner lot. Fencing is proposed, however all fencing is located more than 5 feet from the right-of-way. The parking area is located more than 5 feet from the property line. The project does not propose any spur rail lines.

Table 1. Setback Requirements

Attribute	*Yard*	*Direction*	*Min Required*	*Proposed Lineal Feet*
Proposed	Front	North	30	80’
	Rear	South	0 to 50	200’
	Side 1	West	0 to 50	155’
	Side 2	East	0 to 50	100’

Section 61.080 Structure Height.
(1) Except as provided in TDC 61.080(2)-(4), no structure shall exceed a height of 60 feet.
(2) The maximum permitted structure height in TDC 61.080(1) may be increased to no more than 100 feet, provided that all yards adjacent to the structure are not less than a distance equal to the height of the structure.

Staff notes that all structures are below 60 feet. The requirement has been met.

E. Site Planning:

TDC 73 Community Design Standards
Section 73.160 Standards.
The following standards are minimum requirements for commercial, industrial, public and semi-public development, and it is expected that development proposals shall meet or exceed these minimum requirements.
(1) Pedestrian and Bicycle Circulation.
(a) For commercial, public and semi-public uses…

Staff notes that the project is industrial, this section does not apply.

(b) For Industrial Uses:

(i) a walkway shall be provided from the main building entrance to sidewalks in the public right-of way and other on-site buildings and accessways. The walkway shall be a minimum of 5 feet wide and constructed of concrete, asphalt, or a pervious surface such as pavers or grasscrete, but not gravel or woody material, and be ADA compliant, if applicable.
(ii) Walkways through parking areas, drive aisles and loading areas shall have a different appearance than the adjacent paved vehicular areas.
(iii) Accessways shall be provided as a connection between the development's walkway and bikeway circulation system and an adjacent bike lane;
(iv) Accessways may be gated for security purposes;
(v) Outdoor Recreation Access Routes shall be provided between the development's walkway and bikeway circulation system and parks, bikeways and greenways where a bike or pedestrian path is designated.

Applicant Response: (i) A 5'-0" wide asphalt walkway is proposed along the existing access driveway.
(ii) The proposed walkway is separated from the vehicular traffic along the access driveway by painted striping. The walkway asphalt is conterminous with the vehicle asphalt.
(iii) No adjacent bike lane exists.
(iv) No accessway is proposed.
(V) No outdoor recreation access route is proposed.

Staff notes that sidewalks and bike lanes currently exist on SW Tualatin Sherwood Road. The project is providing a proposed 5' concrete sidewalk and painted connection across the entry to a 5' sidewalk that will span the distance of the access strip along the flag lot. This will provide accessway connections between the site and the public street.

(c) Curb ramps shall be provided wherever a walkway or accessway crosses a curb.
(d) Accessways shall be a minimum of 8 feet wide and constructed in accordance with the Public Works Construction Code if they are public accessways, and if they are private access-ways they shall be constructed of asphalt, concrete or a pervious surface such as pervious asphalt or concrete, pavers or grasscrete, but not gravel or woody material, and be ADA compliant, if applicable.
(e) Accessways to undeveloped parcels or undeveloped transit facilities need not be constructed at the time the subject property is developed. In such cases the applicant for development of a parcel adjacent to an undeveloped parcel shall enter into a written agreement with the City guaranteeing future performance by the applicant and any successors in interest of the property being developed to construct an accessway when the adjacent undeveloped parcel is developed. The agreement shall be subject to the City's review and approval.

Applicant Response: No walkway crosses a curb, no accessways are included or required for the project.

These requirements do not apply.

(f) Where a bridge or culvert would be necessary to span a designated greenway or wetland to provide a connection to a bike or pedestrian path, the City may limit the number and location of accessways to reduce the impact on the greenway or wetland.
(g) Accessways shall be constructed, owned and maintained by the property owner.

Staff finds that greenways or wetlands are not located on site. This requirement does not apply.

(2) Drive-up Uses.

Staff notes that no drive-up uses are proposed. This section does not apply to the proposal.

(3) Safety and Security.

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

Applicant Response: The site will have pole mounted lighting adequate for safety and security.

Staff notes that the site is very secluded, given the nature of the flag lot. The storage area will not be visible from any public right-of-way. The applicant has indicated that site will require a certain level of security due to the requirements of the Department of Homeland Security. This criteria has been met.

(b) In commercial, public and semi-public development and where possible in industrial development, locate windows and provide lighting in a manner which enables surveillance of interior activity from the public right-of-way.

Applicant Response: No surveillance of interior activity from the public right-of-way is proposed for department of Homeland Safety compliance purposes.

Staff notes that the site is secluded and not considered public, or viewable from any public right-of-way. This was intended by the applicant and factored into the design of the project. This standard does not apply.

(c) Locate, orient and select on-site 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.

Applicant Response: No surveillance of the interior activity from the public right-of-way is proposed.

Staff notes that there are no public rights-of-way or fish or wildlife areas near the project site. This standard does not apply.

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

Applicant Response: Each building will be individually identified and entries marked.

Staff notes that the site does not anticipate patrons, only deliveries and distribution of gas supplies. With identification of individual buildings this standard is met.

(e) Shrubs in parking areas must not exceed 30 inches in height. Tree canopies must not extend below 8 feet measured from grade.

Applicant Response: Landscape requirements are met and identified. Please refer to Sheet L1.0 herewith submitted.

Staff notes this specification is included on the Landscape Plan (sheet L1.0, dated 10/5/17). The shrubs surrounding the parking area are called out as Goldflame Spirea with an average height of 15" the trees are called out as Incense Cedar and European Hornbeams. A note has been added under the conditions of approval that states landscaping must be continually maintained in a manner substantially similar to that originally approved by the AR decision. This standard is met.

(f) Above ground sewer or water pumping stations, pressure reading stations, water reservoirs, electrical substations, and above ground natural gas pumping stations shall provide a minimum 6' tall security fence or wall.

No pumping stations, pressure reading stations, reservoirs, or substations are included as part of this proposal. This section does not apply to the proposal.

(4) Service, Delivery and Screening.

(a) On and above grade electrical and mechanical equipment such as transformers, heat pumps and air conditioners shall be screened with sight obscuring fences, walls or landscaping.

Applicant Response: All equipment is screened by site obscuring fencing or building walls.

Staff notes that screening is intended to block unsightly views from the public. In this case, the entire site is fully obscured from any public views, so this requirement does not apply.

(b) Outdoor storage, excluding mixed solid waste and source separated recyclables storage areas listed under TDC 73.227, shall be screened with a sight obscuring fence, wall, berm or dense evergreen landscaping.

Applicant Response: No storage is proposed.

Staff notes that all storage on the property is within structures. No additional screening is required.

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

No pumping stations, reading stations, reservoirs, or substations are included as part of this proposal. This section does not apply to the proposal.

(5) The Federal Americans with Disabilities Act (ADA) applies to development in the City of Tualatin. Although TDC, Chapter 73 does not include the Oregon Structural Specialty Code' s (OSSC) accessibility standards as requirements to be reviewed during the Architectural Review process, compliance with the OSSC is a requirement at the Building Permit step. It is strongly recommended all materials submitted for Architectural Review show compliance with the OSSC.

Applicant Response: Please see site plan herewith submitted for ADA compliance.

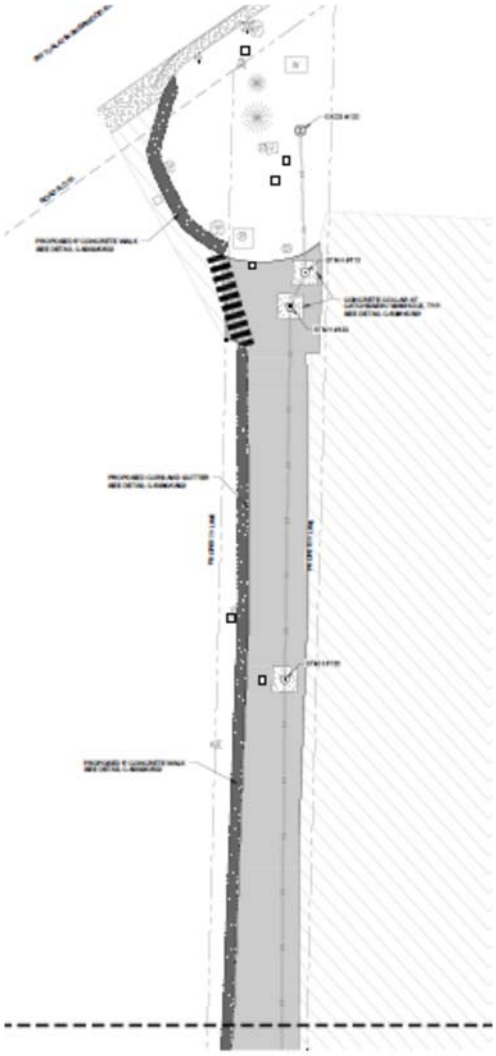
Staff notes that sidewalks are proposed to connect pedestrian walkways from the parking areas and public rights-of-way. Two ADA stalls are also being proposed. The office trailer features two entry doors, both of which have stair access, no ramps are shown on the plans. A condition of approval has been added to require at least one ramp for trailer access. Additionally, the placement of the trailer will require a building permit which will be reviewed by the Building Department for full ADA compliance.

Condition of Approval: The applicant shall revise the plans to show at least one access ramp into the office trailer, and install the ramp prior to occupancy.

(6) Development on Transit Designated Street
(a) All industrial, institutional, retail and office development on a transit street designated in TDC Chapter 11 (Figure 11-5) shall provide either a transit stop pad on-site, or an on-site or public sidewalk connection to a transit stop along the subject property's frontage on the transit street.

Applicant Response: Per TDC Chapter 11 figure 11-5 Tualatin – Sherwood Road is scheduled for expansion of fixed route bus transit service. Sidewalk is being provided along access driveway, however access driveway is served by common vehicle apron serving several properties and does not extend directly to public right-of-way. Therefore, sidewalk cannot attach to pedestrian walk along SW Tualatin – Sherwood Road.

Staff notes that while the narrative shown above indicates that the sidewalk cannot be attached, sheet C452 and detail C-5002/C502 show the proposed addition of a sidewalk to the east side of the existing multi-user driveway apron located just off site of the northern portion of the flag lot steam (where the applicant is proposing to access SW Sherwood-Tualatin Road). While the sidewalk cannot cross the drive aisle, stripping is shown to connect the proposed sidewalk addition to the proposed sidewalk located on the applicant's property along the flag steam. This combination of proposed improvements meets the intent of the 73.160(6)(a). See illustration on right. This requirement is met. Additionally, Tri-met Line 97 now runs along SW Tualatin-Sherwood from Tualatin to Sherwood.



(b) In addition to (a) above, new retail, office and institutional uses abutting major transit stops as designated in TDC Chapter 11 (Figure 11-5) shall:
[…]

The subject site does not abut the major transit stop. This section does not apply.

F. Structure Design:

Section 73.220 Standards.
The following standards are minimum requirements for commercial, industrial, public and semi-public development and it is expected that development proposals shall meet or exceed these minimum requirements.
(1) Safety and Security.
a) Locate, orient and select on-site lighting to facilitate surveillance of on-site activities from the public right-of-way or other public areas without shining into public rights-of-way or fish and wildlife habitat areas.

Applicant Response: No interior activity surveillance from the public's right-of-way is proposed. Site lighting fixtures are shielded as much as practicable to minimize shining into public right-of-way and wildlife habitats while providing necessary on-site safety and security.

Staff notes that wall mounted lighting is proposed uniformly around the buildings. A photometric plan was not provided. A condition of approval has been added requiring that all lighting remain on site and not shine (spill) outside the limits of the proposed development. No wildlife habitat is located in the vicinity of this project. With the proposed condition of approval, this standard is met.

Condition of approval: The applicant shall provide a photometric plan to demonstrate that all lighting within the project site.

(b) Provide an identification system which clearly identifies and locates buildings and their entries.

Applicant Response: Each building is clearly labeled with unique numbering, 100, 200, 300, 400 and 500.

This standard is met.

(c) Shrubs in parking areas shall not exceed 30 inches in height, and tree canopies must not extend below 8 feet measured from grade, except for parking structures and underground parking where this provision shall not apply.

Applicant Response: Proposed landscaping meets requirements.

Staff notes this specification is included on the Landscape Plan (sheet L1.0, dated 10/5/17). The shrubs surrounding the parking area are called out as Goldflame Spirea with an average height of 15" the trees are called out as Incense Cedar and European Hornbeams. A note has been added under the conditions of approval that states landscaping must be continually maintained in a manner substantially similar to that originally approved by the AR decision. This standard is met.

G. Mixed Solid Waste and Source Separated Recyclables Storage Areas:

Section 73.227 Standards.
The following standards are minimum requirements for mixed solid waste and source separated recyclables storage areas. To provide for flexibility in designing functional storage areas, this section provides four different methods to meet the objectives of providing adequate storage for mixed solid waste and source separated recyclables and improving the efficiency of collection. An applicant shall choose and implement one of the following four methods to demonstrate compliance: 1) minimum standards; 2) waste assessment; 3) comprehensive recycling plan; or 4) franchised hauler review, as more fully described in subsections (2), (3), (4) and (5) of this section.
(1) The mixed solid waste and source separated recyclables storage standards shall apply to all new or expanded multi-family residential developments containing five or more units and to new or expanded commercial, industrial, public and semi-public development.

Staff notes that the proposal is for a new industrial development. The applicant has chosen to implement the Minimum Standards Method.

(2) 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.
(a) The size and location of the storage area(s) shall be indicated on the site plan. Compliance with the requirements set forth below are reviewed through the Architectural Review process.
(v) Commercial, industrial, public and semi-public developments shall provide a minimum storage area of 10 square feet plus: Wholesale/Warehouse/Manufacturing - 6 square feet/1000 square feet GLA.

Applicant Response: Minimum Standards, sub-section (1) is proposed for designing the functional storage area, building 500.

Table 73.227.1 Trash Enclosure Requirements			
Building	Use	Required(SF)	Provided(SF)
100	Warehouse	6/1000= 27	
200	Warehouse	6/100= 27.5	
300	Office	4/1000=2.7	
400	Warehouse	6/1000= 4.1	
Additional 10 SF		10	
Total		71.3	308

Staff notes that the trash area is building 500. The standard is met.

(3) Waste Assessment Method. […]
(4) Comprehensive Recycling Plan Method. […]
(5) Franchised Hauler Review Method. […]

The applicant has chosen to implement the minimum standards method for solid waste storage and is not seeking implementation of any of the remaining three methods. This section does not apply to the proposal.

(6) Location, Design and Access Standards for Storage Areas. The following location, design and access standards are applicable for storage areas:
(a) Location Standards
(i) To encourage its use, the storage area for source separated recyclables may be co-located with the storage area for mixed solid waste.

Applicant Response: All waste is collocated.

The standard is met.

(ii) Indoor and outdoor storage areas shall comply with Building and Fire Code requirements.

Applicant Response: refuse enclosure is all non-combustible construction.

The applicant will comply with the Building and Fire Code requirements through Building Permit review and approval of proposed improvements. The standard is met.

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

Applicant Response: A single refuse enclosure is proposed.

The applicant is proposing one single exterior mixed solid waste storage area on the project site, labeled as building 500. The standard is met.

(iv) Exterior storage areas shall not be located within a required front yard setback or in a yard adjacent to a public or private street.

Applicant Response: The refuse container is not located within any setbacks.

The standard is met.

(v) Exterior storage areas shall be located in central and visible locations on the site to enhance security for users.

Applicant Response: The refuse enclosure is highly visible from within the development area.

The applicant has sited the storage area on the southwest corner of the project area. The standard is met.

(vi) Exterior storage areas can be located in a parking area, if the proposed use provides parking spaces required through the Architectural Review process. Storage areas shall be appropriately screened according to TDC 73.227(6)(b)(iii).

Applicant Response: The refuse enclosure is located adjacent to the site vehicular circulation and is composed of perimeter walls at least 6'-0" high.

The standard is met.

(vii) Storage areas shall be accessible for collection vehicles and located so that the storage area will not obstruct pedestrian or vehicle traffic movement on site or on public streets adjacent to the site.

Applicant Response: The refuse enclosure location will not obstruct vehicle or pedestrian traffic because a separate on-site vehicular drive area is provided.

The applicant provided a letter from Republic Services dated October 2, 2017 indicating that the design and location of the enclosure are acceptable to Republic. The standard is met

(b) Design Standards
(i) The dimensions of the storage area shall accommodate containers consistent with current methods of local collection at the time of Architectural Review approval.

Applicant Response: The refuse enclosure meets Republic Services' methods for collection.

The applicant provided a letter from Republic Services dated October 2, 2017 indicating that the design and location of the enclosure are acceptable to Republic. The standard is met.

(ii) Storage containers shall meet Fire Code standards and be made and covered with water proof materials or situated in a covered area.

Applicant Response: The refuse enclosure is constructed of non-combustible materials including steel roof.

The applicant shall use standard dumpster containers or other storage containers that meet Fire Code standards. The standard is met.

(iii) Exterior storage areas shall be enclosed by a sight obscuring fence or wall at least 6 feet in height. In multi-family, commercial, public and semi-public developments evergreen plants shall be placed around the enclosure walls, excluding the gate or entrance openings. Gate openings for haulers shall be a minimum of 10 feet wide and shall be capable of being secured in a closed and open position. A separate pedestrian access shall also be provided in multi-family, commercial, public and semi-public developments.

Applicant Response: The refuse enclosure includes a perimeter wall of at least 6'-0" high. Gate openings exceed 10'-0" and can be secured in both open and closed positions.

Staff notes that the project is industrial and does not require any landscape screening. This standard does not apply.

(iv) Exterior storage areas shall have either a concrete or asphalt floor surface.

Applicant Response: The refuse enclosure has concrete floors.

The standard is met.

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

Applicant Response: Storage areas and containers will be clearly labeled to indicate the type of material accepted prior to occupancy.

The standard is met.

(c) Access Standards
(i) Access to storage areas can be limited for security reasons. However, the storage areas shall 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.

Applicant Response: Due to security requirements, access to the refuse enclosure will be restricted. Air Liquide will schedule access times with Republic Services.

The standard is met.

(ii) Storage areas shall be designed to be easily accessible to hauler trucks and equipment, considering paving, grade, gate clearance and vehicle access. A minimum of 10 feet horizontal clearance and 8 feet vertical clearance is required if the storage area is covered.

Applicant Response: A minimum of 10 feet horizontal clearance and 8 feet vertical clearance is provided.

Compliance is reflected on the applicants' architectural plans. The standard is met.

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

Applicant Response: Access to the refuse enclosure by collection vehicle does not require these vehicles to be in the public right of way.

As previously mentioned, Republic Services has reviewed and approved the proposed storage enclosure plans. The property is a flag lot and the refuse containers are well outside of any right of way. This standard has been met.

Landscaping:
Section 73.240 Landscaping General Provisions.
(1) The following standards are minimum requirements.
(3) The minimum area requirement for landscaping for uses in CO, CR, CC, CG, ML and MG Planning Districts shall be fifteen (15) percent of the total land area to be developed, except within the Core Area Parking District, where the minimum area requirement for landscaping shall be 10 percent. When a dedication is granted in accordance with the planning district provisions on the subject property for a fish and wildlife habitat area, the minimum area requirement for landscaping may be reduced by 2.5 percent from the minimum area requirement as determined through the AR process.

Applicant Response: As shown in the table below and in the attached plans (see sheet L2.0), 54% of the proposed development will be landscaped.

Table 73.240.1 Landscape Coverage	
Use	Area
Development (SF)	116,464
Landscape Area (SF)	63,119
Landscape %	54.0%

Staff notes the property has an MG – General Manufacturing Planning District Designation. The development area is 116,464 sq ft and the applicant is proposing 63,119 sq ft of landscaping, which is 54% landscaping. The site is not within the core area parking district and not subject to any fish or wildlife limitations. A large portion of the property will remain forested. This standard is met.

(9) Yards adjacent to public streets, except as described in the Hedges Creek Wetlands Mitigation Agreement, TDC 73.240(7), shall be planted to lawn or live groundcover and trees and shrubs and be perpetually maintained in a manner providing a park-like character to the property as approved through the Architectural Review process.

The site is a flag lot and has very little frontage on SW Tualatin-Sherwood Road. The area that does front the street has been landscaped for some time. No changes are proposed to the frontage landscaping with this proposal. The existing landscape fully complies with these requirements.

(10) Yards not adjacent to public streets or Low Density Residential (RL) or Manufacturing Park (MP) Planning Districts shall be planted with trees, shrubs, grass or other live groundcover, and maintained consistent with a landscape plan indicating areas of future expansion, as approved through the Architectural Review process.

All areas not proposed for hard surfaces are proposed to be landscaped. This standard is met.

(11) Any required landscaped area shall be designed, constructed, installed, and maintained so that within three years the ground shall be covered by living grass or other plant materials. (The foliage crown of trees shall not be used to meet this requirement.) A maximum of 10% of the landscaped area may be covered with un-vegetated areas of bark chips, rock or stone. Disturbed soils are encouraged to be amended to an original or higher level of porosity to regain infiltration and stormwater storage capacity.

The Landscape Plans, sheets L1.0 and L 1.2 demonstrate that with adequate maintenance, the ground will be covered in plantings within three years of planting. Note 16 on the plans explains that the landscape plans and the applicant are required to assure the standards from the code are maintained. This standard is met.

(13) Landscape plans for required landscaped areas that include fences should carefully integrate any fencing into the plan to guide wild animals toward animal crossings under, over, or around transportation corridors.

Fencing is shown, and due to security details, they are not designed to facilitate animal movement; nor are there any requirements for such. This standard is met.

Section 73.250 Tree Preservation.
(1) Trees and other plant materials to be retained shall be identified on the landscape plan and grading plan.
(2) During the construction process:

(a) The owner or the owner's agents shall provide above and below ground protection for existing trees and plant materials identified to remain.
(b) Trees and plant materials identified for preservation shall be protected by chain link or other sturdy fencing placed around the tree at the drip line.
(c) If it is necessary to fence within the drip line, such fencing shall be specified by a qualified arborist as defined in TDC 31.060.
(d) Neither top soil storage nor construction material storage shall be located within the drip line of trees designated to be preserved.
(e) 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 shall 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.
(f) Tree root ends shall not remain exposed.
(3) Landscaping under preserved trees shall be compatible with the retention and health of said tree.
(4) When it is necessary for a preserved tree to be removed in accordance with TDC 34.210 the landscaped area surrounding the tree or trees shall 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, nearby landscape materials. Native trees are encouraged
(5) Pruning for retained deciduous shade trees shall be in accordance with National Arborist Association "Pruning Standards For Shade Trees," revised 1979.
(6) Except for impervious surface areas, one hundred percent (100%) of the area preserved under any tree or group of trees retained in the landscape plan (as approved through the Architectural Review process) shall apply directly to the percentage of landscaping required for a development.

Applicant Response: All existing vegetation within the site development area is proposed to be removed. However, existing vegetation will be preserved in all areas of the site that lie outside the site development area. The proposed fence surrounding the development area will function as tree protection fencing for trees in undeveloped areas of the site. Existing trees have been inventoried in a report by the project arborist. Existing tree canopy has been shown on a tree plan by the project landscape architect. Please refer to the Arborist Report, see Exhibit L and Tree Plan for further information.

Section TDC 34.210 explains that any trees that are proposed to be removed as part of the development must show those trees to be removed as part of the Architectural Review Process. The Landscape Plans clearly show the trees that are proposed be removed (those within the development area) and those to remain. An arborist report is provided as Exhibit L, from Teragan & Associates, Inc. Arboricultural Consultants dated October 5, 2017. The report indicates that the tree canopy within the entire 5.5 acres site is about 3.8 acres, and about 1.7 acres of that is proposed for removal (all minus the stem on the flag lot). The trees are not located within a CWS sensitive area or vegetated corridor. The specific analysis of the tree removal is addressed later in this report, under the analysis for Section 34.230.

Section 73.260 Tree and Plant Specifications.
(1) The following specifications are minimum standards for trees and plants:
(a) Deciduous Trees:
Deciduous shade and ornamental trees shall be a minimum one and one-half inch (1 1/2") caliper measured six inches (6") above ground, balled and burlapped. Bare root trees will be acceptable to plant during their dormant season. Trees shall be characteristically shaped specimens.

The Applicant is proposing 1.5" caliper trees that include European Hornbeam. This requirement has been met.

(b) Coniferous Trees.

No coniferous trees are proposed.

(c) Evergreen and Deciduous Shrubs.

Evergreen and deciduous shrubs shall be at least one (1) to five (5) gallon size. Shrubs shall be characteristically branched. Side of shrub with best foliage shall be oriented to public view.

The Plant Legend menu identifies evergreen and deciduous one-gallon shrubs, meeting the requirement.

(d) Groundcovers.
Groundcovers shall be fully rooted and shall be well branched or leafed. English ivy (Hedera helix) is considered a high maintenance material which is detrimental to other landscape materials and buildings and is therefore prohibited.

The Plant Legend menu identifies a menu of perennial plants and groundcovers in 4"-6" pots, Hedera helix is not proposed.

(e) Lawns.
Lawns shall consist of grasses, including sod, or seeds of acceptable mix within the local landscape industry. Lawns shall be 100 percent coverage and weed free.

Applicant Response: Plants that have a track record for being tough and durable have been selected for this industrial site. The proposed shrubs and grasses have the ability to be cut to the ground and regenerate from the ground. This is a useful in the event that they are accidently run over by a truck or cut down by an overzealous maintenance person.

Section 73.280 Irrigation System Required.
Except for townhouse lots, landscaped areas shall be irrigated with an automatic underground or drip irrigation system.

Applicant Response: Irrigation will be provided (design/build) by the owner or contractor. The irrigation system will be a fully automatic underground or drip system capable of adequately watering plants all year.

The application materials did not include an irrigation system plan. A condition of approval has been added to require full irrigation.

Condition of Approval: The applicant shall revise the appropriate sheets to illustrate that the project site shall feature full irrigation. The applicant shall also install the irrigation system pursuant to the plans.

Section 73.290 Re-vegetation in Un-landscaped Areas.
The purpose of this section is to ensure erosion protection, and in appropriate areas to encourage soil amendment, for those areas not included within the landscape percentage requirements so native plants will be established, and trees will not be lost.
(1) 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, vegetation shall be replanted.
(2) Plant materials shall be watered at intervals sufficient to ensure survival and growth for a minimum of two growing seasons.
(3) The use of native plant materials is encouraged to reduce irrigation and maintenance demands.
(4) Disturbed soils should be amended to an original or higher level of porosity to regain infiltration and stormwater storage capacity.

Applicant Response: Plant materials will be watered by an irrigation system. The landscape architect has used several native species in the landscape design. The owner or contractor shall provide an amended topsoil for all planting beds.

Staff notes that an irrigation plan will insure that plant material is adequately watered and that many native plant materials are proposed. This requirement has been met.

Section 73.310 Landscape Standards - Commercial, Industrial, Public and Semi-Public Uses.
(1) A minimum 5-foot-wide landscaped area must be located along all building perimeters which are viewable by the general public from parking lots or the public right-of-way, excluding loading areas, bicycle parking areas and pedestrian egress/ingress locations. Pedestrian amenities such as landscaped plazas and arcades may be substituted for this requirement. This requirement shall not apply 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 8 feet.

(2) Areas exclusively for pedestrian use that are developed with pavers, bricks, etc., and contain pedestrian amenities, such as benches, tables with umbrellas, children's play areas, shade trees, canopies, etc., may be included as part of the site landscape area requirement.

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

Applicant Response: The site is accessed by a flag stem and is not visible to the general public. All areas within the site development not occupied by buildings, parking spaces, driveways, drive aisles, pedestrian areas or undisturbed natural areas will be landscaped.

According to the Landscape plans sheet L1.0 the minimum 5 feet of landscaping has been provided around structures. This standard is met.

Section 73.340 Off-Street Parking Lot and Loading Area Landscaping - Commercial, Industrial, Public and Semi-Public Uses, and Residential and Mixed Use Residential Uses within the Central Design District.
(1) A clear zone shall be provided 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 8 feet as measured from the ground level, except for parking structures and underground parking where this provision shall not apply.

Applicant Response: All parking lot landscaping proposed for the project has been designed to comply with this section of the design guidelines.

Staff notes that hedges are provided at the end of the flag lot driveway. This requirement has been met.

(2) Perimeter site landscaping of at least 5 feet in width shall be provided in all off-street parking and vehicular circulation areas (including loading areas).
(a) The landscape area shall contain:
(i) Deciduous trees on average of not more than 30 feet on center. The trees shall meet the requirements of TDC 73.360(7).
(ii) Plantings which reach a mature height of 30 inches in three years which provide screening of vehicular headlights year round.
(iii) Shrubs or ground cover, planted so as to achieve 90 percent coverage within three years.
(iv) Native trees and shrubs are encouraged.

Applicant Response: All parking lot landscaping proposed for the project has been designed to comply with this section of the design guidelines.

Staff notes that the parking area internal to the site features landscaping on two of the three sides. The third side features a forklift storage facility, which features landscaping to the north of the structure. The two sides of the parking with landscaping fully comply with the requirements of this section. The loading area located on the south of the property is also features landscaping compliant with this section of requirements. This requirement has been met.

(b) Where off-street parking areas on separate lots are adjacent to one another and are connected by vehicular access, the landscaped strips required in subsection (2) of this section are not required.

Staff notes that all parking is located on the primary lot, this standard does not apply.

Section 73.360 Off-Street Parking Lot Landscape Islands - Commercial, Industrial, Public, and Semi-Public Uses.
(1) A minimum of 25 square feet per parking stall shall be improved with landscape island areas. They 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. They shall be protected from vehicles by curbs, but the curbs may have spaces to allow drainage into the islands. They shall be dispersed throughout the parking area [see TDC 73.380(3)]. They shall be planted with groundcover or shrubs that will completely cover the island area within 3 years. They shall be planted with deciduous shade trees when needed to meet the parking lot shade tree requirements. Native plant materials are encouraged. Landscape square footage requirements shall not apply to parking structures and underground parking.
(2) Landscaped island areas with deciduous parking lot shade trees shall be a minimum of 5 feet in width (from inside of curb to curb).
(3) A minimum of one deciduous shade tree shall be provided for every four (4) parking spaces to lessen the adverse impacts of glare, reduce heat from paved surfaces, and to emphasize circulation patterns. Required shade trees shall be uniformly distributed throughout the parking lot (see TDC 73.380(3)), except that within the Central Design District landscape islands and shade trees may be placed to frame views of the Tualatin Commons water feature or identified architectural focal elements. The trees shall meet the requirements of TDC 73.360(7). Parking lot shade tree requirements shall not apply to parking structures and underground parking.
(4) Landscape islands shall be utilized at aisle ends to protect parked vehicles from moving vehicles and emphasize vehicular circulation patterns. Landscape island location requirements shall not apply to parking structures and under-ground parking.
(5) Required plant material in landscape islands shall achieve 90 percent coverage within three years. Native shrubs and trees are encouraged.

Applicant Response: The project is proposing 7 parking stalls. 175 square feet of parking lot island space is required and 2 shade trees are required. The project is proposing in excess of 175 square feet of island space at the ends of the parking stall row and 3 shade trees adjacent to the parking stalls. All other applicable requirements in this section have been met or exceeded by the landscape plan.

Staff notes that the project does not show any islands within the project. The gas bottle storage and distribution facility, not open to the public, is not designed in a way that islands are practical or advised. The parking area does feature landscaping that complies with this requirement, however, given the nature of the project, actual islands are provided. The intent of this section is to assure that the public visitors have shade and that a certain aesthetic is achieved. Given the sites secluded location and the fact that the site is not open to the general public, these provisions do not apply.

(6)(a) Except as in (b) below, site access from the public street shall be defined with a landscape area not less than 5 feet in width on each side and extend 25 feet back from the property line for commercial, public, and semi-public development with 12 or more parking spaces and extend 30 feet back from the property line for industrial development, except for parking structures and under-ground parking which shall be determined through the Architectural Review process.

Staff notes that the property is a flag lot. A small portion of the flag stem meets the public right-of-way on SW Tualatin- Sherwood Road. The access to the property uses a neighboring driveway through access easement agreements. The portion of the flag lot that actually touches the public right-of-way is already fully landscaped. No changes are proposed or required. The project meets these requirements.

(7) Deciduous shade trees shall meet the following criteria:
(a) Reach a mature height of 30 feet or more;
(b) Cast moderate to dense shade in summer;
(c) Long lived, i.e., over 60 years;
(d) Do well in an urban environment:

(i) Pollution tolerant.
(ii) Tolerant of direct and reflected heat.
(e) Require little maintenance:
(i) Mechanically strong.
(ii) Insect- and disease-resistant.
(iii) Require little pruning.
(f) Be resistant to drought conditions;
(g) Be barren of fruit production.

Staff notes that European Hornbeam trees are proposed in the parking perimeter landscaping. This species of tree generally reach 40-60 feet in height from the birch family thus have a hearty canopy. They are often used in landscape medians because the roots tend to grow down and not out. They like direct sunlight and are usually very hearty.

H. Tree Preservation:

Section 34.230 Tree Removal Criteria.
The Community Development Director shall consider the following criteria when approving, approving with conditions, or denying a request to cut trees.
(1) An applicant must satisfactorily demonstrate that any of the following criteria are met:
(a) The tree is diseased…
(b) The tree represents a hazard…
(c) 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.

The property is currently densely wooded. The Landscape Plans clearly show the trees that are proposed be removed (those within the development area) and those to remain. An arborist report is provided as Exhibit L, from Teragan & Associates, Inc. Arboricultural Consultants dated October 5, 2017. The report indicates that the tree canopy within the entire 5.5 acres site is about 3.8 acres, and about 1.7 acres of that is proposed for removal (all minus the stem on the flag lot). The tree study has created an inventory of the trees on the portion of the property that is proposed for development. 156 trees are planned to be removed, these vary in condition. All trees outside the development are intended to remain on site. Criteria C above indicates that the trees may be removed if they are necessary for the development. The applicant has demonstrated that the trees are currently located where development is proposed and therefore are planned to be removed. This criteria is met.

I. Off-Street Parking and Loading:

Section 73.370 Off-Street Parking and Loading.
(1) General Provisions.
(a) At the time of establishment of a new structure or use, or change in use, or change in use of an existing structure, within any planning district of the City, off-street parking spaces, off-street vanpool and carpool parking spaces for commercial, institutional and industrial uses, off-street bicycle parking, and off-street loading berths shall be as provided in this and following sections, unless greater requirements are otherwise established by the conditional use permit or the Architectural Review process, based upon clear findings that a greater number of spaces are necessary at that location for protection of public health, safety and welfare or that a lesser number of vehicle parking spaces will be sufficient to carry out the objectives of this section. In the Central Design District, the Design Guidelines of TDC 73.610 shall be considered. In case of conflicts between guidelines or objectives in TDC Chapter 73, the proposal shall provide a balance.

The applicant is proposing a new industrial development, subject to the off-street parking and loading standards.

73.370(1) (n) Bicycle parking facilities shall either be lockable enclosures in which the bicycle is stored, or secure stationary racks which accommodate a bicyclist's lock securing the frame and both wheels.

73.370(1)(o) Each bicycle parking space shall be at least 6 feet long and 2 feet wide, and overhead clearance in covered areas shall be at least 7 feet, unless a lower height is approved through the Architectural Review process.
73.370(1) (p) A paved 5-foot-wide bicycle maneuvering area shall be provided and maintained beside or between each row of bicycle parking.
73.370(1) (q) Access to bicycle parking shall be provided by an impervious surface at least 3 feet in width.
73.370(1) (r) Required bicycle parking shall be located in convenient, secure, and well lighted locations approved through the Architectural Review process.
73.370(1) (s) Bicycle parking facilities may be provided inside a building in suitable secure and accessible locations.
73.370(1) (u) Bicycle parking areas and facilities shall be identified with appropriate signing as specified in the Manual on Uniform Traffic Control Devices (MUTCD) (latest edition). At a minimum, bicycle parking signs shall be located at the main entrance and at the location of the bicycle parking facilities.

The applicant did not provide a direct response to the bike requirements other than the inclusion of a table (see next page) indicating the correct number of spaces had been provided. The site plan does not show where the bike parking is located. A condition of approval has been added to show where the required long term bike parking is located.

Condition of approval: The site plan shall be revised to show where the required four (4) long term bicycle parking spaces are located and to assure that at least two of them are covered.

(2) Off-Street Parking Provisions.
(a) The following are the minimum and maximum requirements for off-street motor vehicle parking in the City, except for minimum parking requirements for the uses in TDC 73.370(2)(a) (Residential Uses: iii, iv, v, vi, vii; Places of Public Assembly: I, ii, iv; Commercial Amusements: I, ii; and Commercial: I, ii, xi, xii, xiv) within the Core Area Parking District (CAPD). Minimum standards for off-street motor vehicle parking for the uses in 73.370(2) (a) Residential Uses: iii, iv, v, vi, vii; Places of Public Assembly: I, ii, iv; Commercial Amusements: I, ii; and Commercial: I, ii, xi, xii, xiv in the CAPD are in TDC 73.370(2)(b). The maximum requirements are divided into Zone A and Zone B, as shown on the Tualatin Parking Zone Map, Figure 73-3. The following are exempt from calculation of maximum parking requirements: parking structures; fleet parking; parking for vehicles for sale, lease or rent; car/vanpool parking; dedicated valet parking; and user-paid parking.

Applicant Response:

Table 73.370.1 Required				
Use	Minimum Motor Vehicle	Maximum Motor Vehicle	Bicycle	Percentage Covered Bicycle
Warehousing (9,769sf)	0.30 spaces per 1,000sf (3) Required	0.40 spaces per 1,000sf (4) Required	2 or 0.10 spaces per 1000sf, whichever is greater (2) Required	First 5 spaces or 30%, whichever is greater (1) Required
General Office (757sf)	2.70 spaces per 1,000sf (2) Required	3.4 spaces per 1000sf (3) Required	2 or 0.50 spaces per 1000sf, whichever is greater (2) Required	First 10 spaces or 40%, whichever is greater (1) Required
Total	5	7	4	2%

Table 73.370.3 Provided				
Use	Minimum Motor Vehicle	Maximum Motor Vehicle	Bicycle	Percentage Covered Bicycle
Warehousing* (9,769sf)	3	4	2	1%
General Office (757sf)	2	3	2	1%
Total	5	7	4	2%

*For calculation purposes, Service Building 400 is considered as Warehousing.

Staff agrees with the analysis provided by the applicant. This requirement has been met.

(3) Off-Street Vanpool and Carpool Parking Provisions.
The minimum number of off-street Vanpool and Carpool parking for commercial, institutional and industrial uses is as follows:

Number of Required Parking Spaces	Number of Vanpool or Carpool Spaces
0 to 10	1
10 to 25	2
26 and greater	1 for each 25 spaces

Staff notes that the site plan provides seven (7) parking spaces, thus requires at least 1 vanpool and Carpool parking space. None are shown on the plan. A condition of approval has been added to require one of the spaces to be marked as a Vanpool/Carpool parking space.

Condition of Approval: The applicant shall revise the appropriate sheets to illustrate one vanpool and/or carpool spaces.

Section 73.380 Off-Street Parking Lots.
A parking lot, whether an accessory or principal use, intended for the parking of automobiles or trucks, shall comply with the following:
(1) Off-street parking lot design shall comply with the dimensional standards set forth in Figure 73-1 of this section, except for parking structures and underground parking where stall length and width requirements for a standard size stall shall be reduced by .5 feet and vehicular access at the entrance if gated shall be a minimum of 18 feet in width.

Applicant Response: Please see site plan for parking space layout.

Sheet C451 illustrates that parking stalls are 9 x 20 ft and two way access aisles are 24 ft wide at narrowest point. Figure 73-1 requires a stall depth of 18.5 ft for 90 degree parking. The standard is met.

(2) Parking stalls for sub-compact vehicles shall not exceed 35 percent of the total parking stalls required by TDC 73.370(2). Stalls in excess of the number required by TDC 73.370(2) can be sub-compact stalls.

Applicant Response: No sub-compact parking spaces are proposed.

(3) Off-street parking stalls shall not exceed eight continuous spaces in a row without a landscape separation, except for parking structures and underground parking. For parking lots within the Central Design District that are designed to frame views of the central water feature or identified architectural focal elements as provided in TDC 73.350(3), this requirement shall not apply and the location of parking lot landscape islands shall be determined through the Architectural Review process.

Applicant Response: Parking spaces are less than eight contiguous spaces.

Staff notes that the subject site is not located in the Central Design District.

(4) Parking lot drive aisles shall be constructed of asphalt or concrete, including pervious concrete. Parking stalls shall be constructed of asphalt or concrete, or a pervious surface such as pavers or grasscrete, but not gravel or woody material. Drive aisles and parking stalls shall be maintained adequately for all-weather use and drained to avoid water flow across sidewalks. Pervious surfaces such as pervious concrete, pavers and grasscrete, but not gravel or woody material, are encouraged for parking stalls in or abutting the Natural Resource Protection Overlay District, Other Natural Areas identified in Figure 3-4 of the Parks and Recreation Master Plan, or in a Clean Water Services Vegetated Corridor. Parking lot landscaping shall be provided pursuant to the requirements of TDC 73.350 and TDC 73.360. Walkways in parking lots shall be provided pursuant to TDC 73.160.

Applicant Response: Parking spaces and drive aisle are constructed of asphalt.

This standard is met.

(5) Except for parking to serve residential uses, parking areas adjacent to or within residential planning districts or adjacent to residential uses shall be designed to minimize disturbance of residents.

Applicant Response: No residential parking is proposed.

Staff notes that the project is not adjacent to any residential districts.

(6) Artificial lighting, which may be provided, shall be deflected to not shine or create glare in a residential planning district, an adjacent dwelling, street right-of-way in such a manner as to impair the use of such way or a Natural Resource Protection Overlay District, Other Natural Areas identified in Figure 3-4 of the Parks and Recreation Master Plan, or a Clean Water Services Vegetated Corridor.

Applicant Response: No lighting will shine or create glare in a residential planning district, and dwelling or street right-of-way.

This standard does not apply.

(7) Groups of more than 4 parking spaces shall be so located and served by driveways that their use will require no backing movements or other maneuvering within a street right-of-way other than an alley.

All parking stalls are served by a drive aisle. This standard is met.

(8) Service drives to off-street parking areas shall be designed and constructed to facilitate the flow of traffic, provide maximum safety of traffic access and egress, and maximum safety of pedestrians and vehicular traffic on the site.

All service drives are designed to allow easy through movement for trucks. This standard is met.

(9) Parking bumpers or wheel stops or curbing shall be provided to prevent cars from encroaching on the street right-of-way, adjacent landscaped areas, or adjacent pedestrian walkways.

Staff notes that sheet C451 shows wheel stops at all parking stalls. This standard has been met.

(10) Disability parking spaces and accessibility shall be provided in accordance with applicable federal and state requirements.

The Applicant is proposing to include 2 ADA stalls out of 7 spaces. The standard is met.

(11) On-site drive aisles without parking spaces, which provide access to parking areas with regular spaces or with a mix of regular and sub-compact spaces, shall have a minimum width of 22 feet for two-way traffic and 12 feet for one-way traffic. On-site drive aisles without parking spaces, which provide access to parking areas with only sub-compact spaces, shall have a minimum width of 20 feet for two-way traffic and 12 feet for one-way traffic.

The proposed ingress-access drive aisles are 24-32 ft. in width. This standard is met.

Section 73.390 Off-Street Loading Facilities.
(1) The minimum number of off-street loading berths for commercial, industrial, public and semi-public uses is as follows:

Square Feet of Floor Area	Number of Berths
Less than 5,000	0

(2) Loading berths shall conform to the following minimum size specifications.
(a) Commercial, public and semi-public uses of 5,000 to 25,000 square feet shall be 12' x 25' and uses greater than 25,000 shall be 12' x 35'
(c) Berths shall have an unobstructed height of 14'
(d) Loading berths shall not use the public right-of-way as part of the required off-street loading area.
(3) Required loading areas shall be screened from public view from public streets and adjacent properties by means of sight-obscuring landscaping, walls or other means, as approved through the Architectural Review process.

(4) Required loading facilities shall be installed prior to final building inspection and shall be permanently maintained as a condition of use.
(6) The off-street loading facilities shall in all cases be on the same lot or parcel as the structure they are intended to serve. In no case shall the required off-street loading spaces be part of the area used to satisfy the off-street parking requirements.

Applicant Response: The projects main function is loading and unloading gas cylinders; no truck berths are proposed.

This standard is met.

J. Access:

Section 73.400 Access.
(1) The provision and maintenance of vehicular and pedestrian ingress and egress from private property to the public streets as stipulated in this Code are continuing requirements for the use of any structure or parcel of real property in the City of Tualatin. Access management and spacing standards are provided in this section of the TDC and TDC Chapter 75. No building or other permit shall be issued until scale plans are presented that show how the ingress and egress requirement is to be fulfilled. If the owner or occupant of a lot or building changes the use to which the lot or building is put, thereby increasing ingress and egress requirements, it shall be unlawful and a violation of this code to begin or maintain such altered use until the required increase in ingress and egress is provided.
(2) Owners of two or more uses, structures, or parcels of land may agree to utilize jointly the same ingress and egress when the combined ingress and egress of both uses, structures, or parcels of land satisfies their combined requirements as designated in this code; provided that satisfactory legal evidence is presented to the City Attorney in the form of deeds, easements, leases or contracts to establish joint use. Copies of said deeds, easements, leases or contracts shall be placed on permanent file with the City Recorder.

Applicant Response: The site has an existing driveway accessed from a joint-use road apron contiguous with SW Tualatin – Sherwood Road. No changes are proposed.

Staff notes that the current flag lot stem is being used by the neighbor to the north, Praxis. They have a small parking area located just off the stem. Access to the neighbor's parking lot is not shown on the site plans. A conversation with the applicant's representatives indicate that they are not planning to alter the current access to the Praxis parking area. The gate for the project is located at the base of the flag lot stem, thus not presenting any challenges for the continued use of the stem by Praxis. Because the continued use of the access by Praxis does not limit or impinge on the project proposed by the applicant, the access would be a civil issue between the two neighbors and beyond the scope of this review. This standard is met.

(3) Joint and Cross Access.
(a) Adjacent commercial uses may be required to provide cross access drive and pedestrian access to allow circulation between sites.

The applicant has provided access easement documents[1] related to the applicants use of the neighboring property for primary access off of SW Tualatin-Sherwood Road. This standard has been met.

(4) Requirements for Development on Less than the Entire Site
(a) To promote unified access and circulation systems, lots and parcels under the same ownership or consolidated for the purposes of development and comprised of more than one building site shall be reviewed as one unit in relation to the access standards. The number of access points permitted shall be the minimum number necessary to provide reasonable access to these properties, not the maximum available for that frontage. All necessary easements, agreements, and stipulations shall be met. This shall

[1] See Exhibit U in the applicant's narrative, specifically Doc: 95071339 Rect: 151900 dated September 26, 1995

also apply to phased development plans. The owner and all lessees within the affected area shall comply with the access requirements.
(b) All access must be internalized using the shared circulation system of the principal commercial development or retail center. Driveways should be designed to avoid queuing across surrounding parking and driving aisles.

The project is only proposing development on about half of the existing flag lot parcel. No development is proposed on the other half, no phasing is proposed. This standard does not apply.

(5) Lots that front on more than one street may be required to locate motor vehicle accesses on the street with the lower functional classification as determined by the City Engineer.

This requirement does not apply.

(6) Except as provided in TDC 53.100, all ingress and egress shall connect directly with public streets.

Staff notes the existing ingress and egress connect directly to SW Tualatin-Sherwood Road using easements that have been provided to the City.

(7) Vehicular access for residential uses shall be brought to within 50 feet of the ground floor entrances or the ground floor landing of a stairway, ramp or elevator leading to dwelling units.

No residential uses are proposed as part of this proposal. This section does not apply to the proposal.

(8) To afford safe pedestrian access and egress for properties within the City, a sidewalk shall be constructed along all street frontage, prior to use or occupancy of the building or structure proposed for said property. […]

There are existing sidewalks along SW Tualatin-Sherwood Road. This requirement has been met.

(12) Minimum Access Requirements for Industrial Uses.
Ingress and egress for industrial uses shall not be less than the following:

Required Parking Spaces	Minimum Number Required	Minimum Pavement Width	Minimum Pavement Walkways, Etc.
1-250	1	36 ft for first 50 ft from ROW, 24 ft thereafter	No curbs or walkway required

Access for the project is through a neighboring property, with easements, then down the stem of the flag lot. Staff finds the existing condition meets this requirement. The first 50 feet of the access is existing, and is larger than 36 feet in width. The pavement down the stem of the flag lot is 24 feet wide. This requirement is met.

(14) Maximum Driveway Widths and Other Requirements.
(a) Unless otherwise provided in this chapter, maximum driveway widths shall not exceed 40 feet.

The driveway is existing and no changes are proposed. The existing driveway provides access to a number of developments in the area. This requirement has been met.

(b) Except for townhouse lots, no driveways shall be constructed within 5 feet of an adjacent property line, except when two adjacent property owners elect to provide joint access to their respective properties, as provided by Subsection (2).

The subject site has a non-exclusive easement for ingress and egress at this access. This standard has been met.

(c) There shall 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 Engineer.

(15) Distance between Driveways and Intersections.
Except for single-family dwellings, the minimum distance between driveways and intersections shall be as provided below. Distances listed shall be measured from the stop bar at the intersection.
(a) At the intersection of collector or arterial streets, driveways shall be located a minimum of 150 feet from the intersection.
(b) At the intersection of two local streets, driveways shall be located a minimum of 30 feet from the intersection.
(c) If the subject property is not of sufficient width to allow for the separation between driveway and intersection as provided, the driveway shall be constructed as far from the intersection as possible, while still maintaining the 5-foot setback between the driveway and property line as required by TDC 73.400(14)(b).
(d) When considering a public facilities plan that has been submitted as part of an Architectural Review plan in accordance with TDC 31.071(6), the City Engineer may approve the location of a driveway closer than 150 feet from the intersection of collector or arterial streets, based on written findings of fact in support of the decision. The written approval shall be incorporated into the decision of the City Engineer for the utility facilities portion of the Architectural Review plan under the process set forth in TDC 31.071 through 31.077.

No new driveway is proposed. These requirements do not apply.

(16) Vision Clearance Area.
(c) Vertical Height Restriction - Except for items associated with utilities or publicly owned structures such as poles and signs and existing street trees, no vehicular parking, hedge, planting, fence, wall structure, or temporary or permanent physical obstruction shall be permitted between 30 inches and 8 feet above the established height of the curb in the clear vision area (see Figure 73-2 for illustration).

Applicant Response: The site has an existing driveway accessed from a joint-use road apron contiguous with SW Tualatin – Sherwood Road. No changes are proposed.

No new driveway is proposed. This requirement does not apply.

K. Signs:

Except code required signs for street number, disabled parking and car/vanpool, no signs are proposed by this application and none are approved. The applicant shall submit separate sign permit applications for any future signage.

L. Time Limit on Approval:

73.056 Architectural Review approvals shall expire after two years unless:
(1) A building, or grading permit submitted in conjunction with a building permit application, has been issued and substantial construction pursuant thereto has taken place and an inspection performed by a member of the Building Division; or
(2) The Architectural Review (AR) applicant requests in writing an extension and the City approves it. If the Community Development Director and City Engineer or their designees approved the AR. then the Community Development Director and City Engineer shall decide upon the extension request. If the Architectural Review Board (ARB) approved the AR. then the ARB shall decide upon the extension request. The applicant shall provide notice of extension request to past recipients of the AR notice of application and post a sign pursuant to TDC 31.064. Before approving an extension, the deciding party shall find the request meets these criteria:
(a) The applicant submitted a written extension request prior to the original expiration date.
(b) There have been no significant changes in any conditions, ordinances, regulations or other standards of the City or applicable agencies that affect the previously approved project so as to warrant its resubmittal for AR.

(c) If the previously approved application included a special study, the applicant provided with the extension a status report that shows no significant changes on the site or within the vicinity of the site. A letter from a recognized professional also would satisfy this criterion if it states that conditions have not changed after the original approval and that no new study is warranted.
(d) If the AR applicant neglected site maintenance and allowed the site to become blighted, the deciding party shall factor this into its decision.
(e) The deciding party shall grant no more than a single one-year extension for an AR approval.
(f) If the Community Development Director and City Engineer or their designees are the deciding party, then they shall decide within thirty (30) days of receipt of the request. If the ARB is the deciding party, then the ARB shall decide within sixty (60) days of receipt of the request. If the deciding party fails to decide within the applicable time period, the decision shall default to approval.

IV. APPEAL

The Architectural Review portion of this decision will be final after 14 calendar days on **May 8, 2018** unless a written appeal is received by the **Community Development Department – Planning Division at 18880 Martinazzi Avenue, Tualatin, Oregon 97062 before 5:00 p.m., May 8, 2018**. **The appeal must be submitted on the City appeal form with all the information requested provided thereon and signed by the appellant.** The plans and appeal forms are available at the Tualatin Library and at the Community Development Department – Planning Division offices. Appeals of a staff Architectural Features decision are reviewed by the Architectural Review Board (ARB).

Submitted by:

Matt Straite
Contract Planner

Issued by:

Aquilla Hurd-Ravich
Community Development Director

Attachments:
101. Application Materials
102. PFR decision, dated April 24, 2018
103. CWS Comments, dated April 6, 2018
104. TVF&R Comments, dated April 4, 2018
105. Washington County Comments, Dated March 29, 2018

file: AR-17-0009

City of Tualatin

www.tualatinoregon.gov

"NECESSARY PARTIES" MARKED BELOW

NOTICE OF APPLICATION SUBMITTAL

☐ ANNEXATION ☐ CONDITIONAL USE PERMIT ☐ PLAN TEXT AMENDMENT
☒ ARCHITECTURAL REVIEW ☐ PLAN MAP AMENDMENT ☐ OTHER:

CASE/FILE: AR17-0009 (Community Development Dept.: Planning Division)

PROPOSAL	
	To construct site improvements to a portion of the site and construct two bottle gas storage buildings, one service building, one refuse enclosure, and place one office trailer at 10500 SW Tualatin-Sherwood Road for Air Liquide.

PROPERTY						
☐ n/a	**Name of Application**	AIR LIQUIDE GAS DEPOT				
	Street Address	10500 SW Tualatin-Sherwood Road				
	Tax Map and Lot No(s).	2S1 26BO 00105				
	Planning District	General Manufacturing (MG)	**Overlays** ☐	**NRPO** ☐	**Flood Plain** ☐	
	Previous Applications	N/A	**Additional Applications:** N/A		**CIO** COMMERCIAL	

DATES				CONTACT	
Receipt of application	10/18/2017	**Deemed Complete**	03/14/2018		**Name:** Matt Straite
Notice of application submittal			03/14/2018		**Title:** Contract Planner
Project Status / Development Review meeting			03/20/2018		**E-mail:** MSTRAITE@tualatin.gov
Comments due for staff report			03/30/2018		**Phone:** 503-691-3029
Public meeting: ☐ **ARB** ☐ **TPC** ☒ **n/a**					**Notes:** You may view the application materials through this City web page: www.tualatinoregon.gov/projects
City Council (CC) ☒ **n/a**					

City Staff
- ☒ City Manager
- ☒ Building Official
- ☒ Chief of Police
- ☒ City Attorney
- ☒ City Engineer
- ☒ Community Development Director
- ☒ Community Services Director
- ☒ Economic Development liaison
- ☒ Engineering Associate*
- ☒ Finance Director
- ☒ GIS technician(s)
- ☒ IS Manager
- ☒ Operations Director*
- ☒ Parks and Recreation Coordinator
- ☒ Planning Manager
- ☒ Street/Sewer Supervisor
- ☒ Water Supervisor

Neighboring Cities
- ☐ Durham
- ☐ King City Planning Commission
- ☐ Lake Oswego
- ☐ Rivergrove PC
- ☐ Sherwood Planning Dept.
- ☐ Tigard Community Development Dept.
- ☐ Wilsonville Planning Division

Counties
- ☐ Clackamas County Dept. of Transportation and Development
- ☒ Washington County Dept. of Land Use and Transportation (ARs)
- ☐ Washington County Long Range Planning (LRP) (Annexations)

Regional Government
- ☒ Metro

School Districts
- ☐ Lake Oswego School Dist. 7J
- ☐ Sherwood SD 88J
- ☐ Tigard-Tualatin SD 23J (TTSD)
- ☐ West Linn-Wilsonville SD 3J

State Agencies
- ☐ Oregon Dept. of Aviation
- ☒ Oregon Dept. of Environmental Quality (DEQ)
- ☐ Oregon Dept. of Land Conservation and Development (DLCD) (via proprietary notice)
- ☒ Oregon Dept. of State Lands: Wetlands Program
- ☒ Oregon Dept. of Transportation (ODOT) Region 1
- ☐ ODOT Maintenance Dist. 2A
- ☒ ODOT Rail Division
- ☐ OR Dept. of Revenue

Utilities
- ☒ Republic Services
- ☒ Clean Water Services (CWS)
- ☒ Comcast [cable]*
- ☒ Frontier Communications [phone]
- ☒ Northwest Natural [gas]
- ☒ Portland General Electric (PGE)
- ☒ TriMet
- ☒ Tualatin Valley Fire & Rescue (TVF&R)
- ☒ United States Postal Service (USPS) (Washington; 18850 SW Teton Ave.)
- ☐ USPS (Clackamas)
- ☒ Washington County Consolidated Communications Agency (WCCCA)

Additional Parties
- ☒ Tualatin Citizen Involvement Organization (CIO)

***Paper Copies**

- ☐ *1.032: Burden of Proof*
- ☒ *31.071 Architectural Review Procedure*
- ☒ *31.074 Architectural Review Application Review Process*
- ☐ *31.077 Quasi-Judicial Evidentiary Hearing Procedures*
- ☐ *Metro Code 3.09.045 Annexation Review Criteria*
- ☐ *32.030 Criteria for Review of Conditional Uses*
- ☐ *33.020 Conditions for Granting a Variance that is not a Sign or a Wireless Communication Facility*
- ☐ *33.022 Criteria for Granting a Sign Variance*
- ☐ *33.024 Criteria for Granting a Minor Variance*
- ☐ *33.025 Criteria for Granting a Variance*
- ☐ *34.200 Tree Cutting on Private Property without Architectural Review, Subdivision or Partition Approval, or Tree Removal Permit Prohibited*
- ☐ *34.210 Application for Architectural Review, Subdivision or Partition Review, or Permit*
- ☐ *34.230 Criteria (tree removal)*
- ☐ *35.060 Conditions for Granting Reinstatement of Nonconforming Use*
- ☐ *36.160 Subdivision Plan Approval*
- ☐ *36.230 Review Process (partitioning)*
- ☐ *36.330 Review Process (property line adjustment)*
- ☐ *37.030 Criteria for Review (IMP)*
- ☐ *40.030 Conditional Uses Permitted (RL)*
- ☐ *40.060 Lot Size for Conditional Uses (RL)*
- ☐ *40.080 Setback Requirements for Conditional Uses (RL)*
- ☐ *41.030 Conditional Uses Permitted (RML)*
- ☐ *41.050 Lot Size for Conditional Uses (RML)*
- ☐ *41.070 Setback Requirements for Conditional Uses (RML)*
- ☐ *42.030 Conditional Uses Permitted (RMH)*
- ☐ *42.050 Lot Size for Conditional Uses (RMH)*
- ☐ *42.070 Setback Requirements for Conditional Uses (RMH)*
- ☐ *43.030 Conditional Uses Permitted (RH)*
- ☐ *43.060 Lot Size for Conditional Uses (RH)*
- ☐ *43.090 Setback Requirements for Conditional Uses (RH)*
- ☐ *44.030 Conditional Uses Permitted (RH-HR)*
- ☐ *44.050 Lot Size for Conditional Uses (RH-HR)*
- ☐ *44.070 Setback Requirements for Conditional Uses (RH-HR)*
- ☐ *49.030 Conditional Uses (IN)*
- ☐ *49.040 Lot Size for Permitted and Conditional Uses (IN)*
- ☐ *49.060 Setback Requirements for Conditional Uses (IN)*
- ☐ *50.020 Permitted Uses (CO)*
- ☐ *50.030 Central Urban Renewal Plan – Additional Permitted Uses and Conditional Uses (CO)*
- ☐ *50.040 Conditional Uses (CO)*
- ☐ *52.030 Conditional Uses (CR)*
- ☐ *53.050 Conditional Uses (CC)*
- ☐ *53.055 Central Urban Renewal Area – Conditional Uses (CC)*
- ☐ *54.030 Conditional Uses (CG)*
- ☐ *56.030 Conditional Uses (MC)*
- ☐ *56.045 Lot Size for Conditional Uses (MC)*
- ☐ *57.030 Conditional Uses (MUCOD)*
- ☐ *60.040 Conditional Uses (ML)*
- ☐ *60.041 Restrictions on Conditional Uses (ML)*
- ☐ *61.030 Conditional Uses (MG)*
- ☐ *61.031 Restrictions on Conditional Uses (MG)*
- ☐ *62.030 Conditional Uses (MP)*
- ☐ *62.031 Restrictions on Conditional Uses (MP)*
- ☐ *64.030 Conditional Uses (MBP)*
- ☐ *64.050 Lot Size for Permitted and Conditional Uses (MBP)*
- ☐ *64.065 Setback Requirements for Conditional Uses (MBP)*
- ☐ *68.030 Criteria for Designation of a Landmark*
- ☐ *68.060 Demolition Criteria*
- ☐ *68.070 Relocation Criteria*
- ☐ *68.100 Alteration and New Construction Criteria*
- ☐ *68.110 Alteration and New Construction Approval Process*
- ☒ *73.130 Standards*
- ☒ *73.160 Standards*
- ☐ *73.190 Standards – Single-Family and Multi-Family Uses*
- ☐ *73.220 Standards*
- ☐ *73.227 Standards*
- ☒ *73.230 Landscaping Standards*
- ☐ *73.300 Landscape Standards – Multi-Family Uses*
- ☒ *73.310 Landscape Standards – Commercial, Industrial, Public and Semi-Public Uses*
- ☒ *73.320 Off-Street Parking Lot Landscaping Standards*
- ☐ *73.470 Standards*
- ☐ *73.500 Standards*

1.05 SUMMARY

The proposed storage and office buildings meet all applicable Architectural Review standards. Where practicable, the development will be compatible with current and existing surrounding uses, and is designed to comply with the zoning requirements of the General Manufacturing District. This application complies with City requirements, will result in economic growth for the area, and merits approval as requested. The use of this site is consistent with adjacent uses. An existing gas cylinder storage facility is located on the parcel north and abutting this site. For reference, an HMIS report, Exhibit K, is herewith submitted.

City of Tualatin

www.tualatinoregon.gov

APPLICATION FOR ARCHITECTURAL REVIEW

Direct Communication to:

Name: Eric Lanciault | Title: Architect

Company Name: EL Architects

Current address: 3200 SE 164th Ave Suite 302

City: Vancouver | State: WA | ZIP Code: 98683

Phone: 360.798.3801 | Fax: | Email: eric@elaaaa.com

Applicant

Name: Matt Ouellette | Company Name: JH Kelly

Address: 2311 East First St.

City: Vancouver | State: WA | ZIP Code: 98661

Phone: 360-431-9647 | Fax: | Email: mouellet@jhkelly.com

Applicant's Signature: *Matt Ouellette* | Date: 10.3.17

Property Owner

Name: Air Liquide Electronics Attn: Matt Layland

Address: 9101 LBJ Fwy | Suite 800

City: Dallas | State: TX | ZIP Code: 97243

Phone: 214.893.0717 | Fax: | Email: matt.layland@airliquide.com

Property Owner's Signature: Eric Lanciault | Date 10.04.2017

(Note: Letter of authorization is required if not signed by owner)

Architect

Name: Eric Lanciault

Address: 3200 SE 164th Ave | Suite 302

City: Vancouver | State: WA | ZIP Code: 98683

Phone: 360.798.3801 | Fax: | Email: eric@elaaaa.com

Landscape Architect

Name: Jamie Clark

Address: 9901 NE 7th Ave | Building A | Suite 214

City: Vancouver | State: WA | ZIP Code: 98685

Phone: 360.921.4445 | Fax: | Email: jclark@clarklanddesign.com

Engineer

Name: VAA Attn: David Selinsky

Address: 2300 Berkshire Lane North | Suite 200

City: Plymouth | State: MN | ZIP Code: 55441

Phone: 763.577.9142 | Fax: | Email: dselinsky@vaaeng.com

Project

Project Title: Air Liquide Tualatin Cylinder Storage Depot

Address: 10500 SW Tualatin-Sherwood Rd

City: Tualatin | State: OR | ZIP Code: 97062

Brief Project Description: New gas bottle storage & handling facility; (5) Bldgs & associated infrastructure

Proposed Use: Warehousing & office

Value of Improvements:	$1,496,083

AS THE PERSON RESPONSIBLE FOR THIS APPLICATION, I HEREBY ACKNOWLEDGE THAT I HAVE READ THIS APPLICATION AND STATE THAT THE INFORMATION ABOVE, ON THE FACT SHEET, AND THE SURROUNDING PERTY OWNER MAILING LIST IS CORRECT. I AGREE TO COMPLY WITH ALL APPLICABLE CITY AND COUNTY ORDINANCES AND STATE LAWS REGARDING BUILDING CONSTRUCTION AND LAND USE.

Applicant's Signature:	*Matt Ouellette*	Date:	10.3.17

Office Use

Case No:	Date Received:	Received by:
Fee: Complete Review :	Receipt No:	
Application Complete as of:	ARB hearing date (if applicable):	
Posting Verification:	6 copies of drawings (folded)	
1 reproducible 8 ½" X 11" vicinity map	1 reproducible 8 ½" X 11" site, grading, LS, Public Facilities plan	
Neighborhood/Developer meeting materials		

EL,A

Project: Air Liquide

Project No.: 673

Re.: Developer Meeting

File No.: D00

Date: 10.9.2017

Developer Meeting

Meeting Date: September 6, 2017. 10:00 am
Meeting Location: The Grand Hotel at Bridgeport
Presenters: Matt Layland(ML), John Hoover(JH), Don Sweetnam(DS)
Attendees: Melinda Anderson(MA), Phil Beatty(PB), Erin Engman(EE), Luke Orem(LO), Rob Harris(PR), Scott Iburg(SI), Victoria Ailes(VI), Linnus Carleton(LC), Keven Subbent(KS), Andrew Helimich(AH), Melinda Robinfan(MR)

New Items:

- Don presented an overview of Air Liquide's history, market focus, and distribution system.
- John presented the project plans:
    - The new facility is essentially a relocation of Air Liquide's depot directly North of the site.
    - Develop ~1.5 acre within the 5 acre Site.
    - Traffic impact is minimal. Roughly two employees.
    - This will be Air Liquide's only storage facility in the region.
    - Various detection systems will be employed.
    - Routinely monitor for oxygen depletion.
    - Specific product sensors will be in place to detect any fugitive emissions.
    - No production at this facility; only storage.
    - Not a Class I Division 1 facility- likely to be Division 2.
    - Uses natural ventilation and forced air.
    - The occupancy classification will be H.
    - Various hazard classes will be stored.
    - No plans for rail development/use.
    - No anticipation of processing gasses on-site.
    - Truck Traffic 2-4 trips per week.
    - No future construction is planned; if anything were to be developed, it would go through same process.
    - Construction will be ~3 months.
    - Small construction crew.

End of Minutes

Stewart Title Company
1000 SW Broadway, Suite 1600
Portland, OR 97205
Phone: (503) 290-5500

PRELIMINARY TITLE REPORT

Date: September 28, 2017

Escrow Officer: Janice Mann
Phone: (503) 290-5561
Email: Jan.Mann@stewart.com

Title Officer: Meg Clark-Kilcoyne
Email: Meg.ClarkKilcoyne@stewart.com

Order Number: 01049-30420

Property Address: 10450 SW Tualatin Sherwood Rd., Tualatin, OR 97062

	Liability	Premium
ALTA 2006 Owner's Policy Standard	**To Be Determined**	
(Underwriting fee - 11%)		
Proposed Insured:		
ALTA 2006 Loan Policy Extended	**To Be Determined**	
(Underwriting fee - 11%)		
Proposed Insured: To be determined		

Stewart Title Company is prepared to issue on request and on recording of the appropriate documents, a policy or policies of Stewart Title Guaranty Company, as applied for, with coverages as indicated, based on this preliminary report. As of **September 25, 2017** at 8:00 A.M. title to the property described herein is vested in:

Air Liquide America Specialty Gasses LLC

Subject only to the exceptions shown herein and to the terms, conditions and stipulations contained in the policy form. No liability is assumed until a full premium has been paid and a policy issued.

LEGAL DESCRIPTION: SEE EXHIBIT "A" ATTACHED HERETO

EXHIBIT "A"
LEGAL DESCRIPTION

A tract of land in part of Sections 23 and 26, Township 2 South, Range 1 West of the Willamette Meridian, in the City of Tualatin, County of Washington, and State of Oregon, described as follows:

Beginning at a point on the West line of said Section 26 which is South 00°00'53" West 811.25 feet from the Northwest corner of said Section 26, said point of beginning is also located on the Northwesterly right-of-way line of the Burlington Northern Railroad; thence North 00°00'53" East 811.25 feet to the Northwest corner of said Section 26; thence continuing North, along the West line of said Section 23, North 00° 04'41" West 479.73 feet to a point on the Southerly right-of-way line of the Tualatin-Sherwood Road (County Road No. 492); thence North 55°25'50" East 48.55 feet; thence South 00°04'41" East 507.23 feet to a point 40.0 feet East from the intersection of Sections 23, 26, 27, and 22; thence North 89°55'19" East 333.8 feet, along this line to a point on the West line of a tract conveyed to Elwyn G. Kinney be deed recorded February 24, 1972 in Book 855, Page 523, Deed Records of Washington County; thence South 00°09'47" West 319.53 feet, along said West line; thence Southwesterly, along the arc of a 383.07 feet radius curve to the right (the long chord bears South 14°13'10" West 186.08 feet), a distance of 187.96 feet to a point on the Northerly right-of-way line of the Burlington Northern Railroad, said point being the Southwesterly corner of said Kinney tract; thence continuing Southwesterly, along the Northerly right-of-way line of the Burlington Northern Railroad, along the arc of a 2890.0 feet radius curve to the left (the long chord bears South 43°59'33" West 469.36 feet), a distance of 469.88 feet to the point of beginning.

EXCEPTING THEREFROM that portion conveyed to Washington County by Dedication Deed recorded April 24, 1992 as Fee No. 92027734, Washington County Records..

TOGETHER WITH a perpetual non-exclusive roadway easement for ingress and egress as conveyed from the Halton Company to LAI Holding, Inc. by the Access Easement recorded October 3, 1995 as Fee No. 95071339, Washington County Records.

SCHEDULE B

GENERAL EXCEPTIONS

1. Taxes or assessments which are not shown as existing liens by the records of any taxing authority that levies taxes or assessments on real property or by the public records; proceedings by a public agency which may result in taxes or assessments, or notices of such proceedings, whether or not shown by the records of such agency or by the public records.

2. Facts, rights, interests or claims which are not shown by the public records but which could be ascertained by an inspection of said land or by making inquiry of persons in possession thereof.

3. Easements, or claims of easement, not shown by the public records; reservations or exceptions in patents or in Acts authorizing the issuance thereof; water rights, claims or title to water.

4. Any encroachment (of existing improvements located on the subject land onto adjoining land or of existing improvements located on adjoining land onto the subject land), encumbrance, violation, variation, or adverse circumstance affecting the title that would be disclosed by an accurate and complete land survey of the subject land.

5. Any lien or right to a lien, for services, labor, material, equipment rental or workers compensation heretofore or hereafter furnished, imposed by law and not shown by the public records.

6. Minerals of whatsoever kind, subsurface and surface substances, including but not limited to coal, lignite, oil, gas, uranium, clay, rock, sand and gravel in, on, under and that may be produced from the Land, together with all rights, privileges, and immunities relating thereto, whether or not appearing in the Public Records or listed in Schedule B. The Company makes no representation as to the present ownership of any such interests. There may be leases, grants, exceptions or reservations of interests that are not listed.

SPECIAL EXCEPTIONS:

7. 2017-2018 taxes, a lien not yet payable.

8. City liens, if any, of the City of Tualatin.

9. The herein described premises are within the boundaries of and subject to the statutory powers, including the power of assessment of Clean Water Services.

10. Rights of the public in and to any portion of the herein described premises lying within the boundaries of streets, roads, or highways.

11. Easement, including the terms and conditions thereof,

Granted to:	Oregon Electric Railway Company
Recorded:	January 19, 1971
Book:	804
Page:	186
Recording No.:	8358
Purpose:	railroad right-of-way
Affects:	a portion of the Easterly 12.5 feet

12. Easement, including the terms and conditions thereof,

Granted to:	City of Tualatin
Recorded:	September 17, 1982
Recording No.:	82024281
Purpose:	waterline
Affects:	10 feet wide area along the West line of the Northerly portion

13. Easement, including the terms and conditions thereof,
    Granted to: Tri-County Metropolitan Transportation District of Oregon, a mass transit district
    Recorded: March 6, 2007
    Recording No.: 2007-024967
    Purpose: slopes
    Affects: Southeasterly portion

14. Easement, including the terms and conditions thereof, as disclosed by
    Instrument: Notice of Supplemental Final Order and Judgment
    Granted to: AT&T Corp. and AT&T Communications - East, Inc. (formerly AT&T Communications)
    Recorded: November 17, 2008
    Fee No.: 2008-093292
    Purpose: permanent telecommunications system
    Affects: 16-1/2 feet wide area, exact location not shown

15. Partial Assignment of Access Easement, including the terms and conditions thereof,
    Granted to: Praxair Distribution, Inc.
    Recorded: January 4, 2016
    Recording No.: 2016-000183
    Affects: Easement recorded October 3, 1995 as Fee No. 95071339
    We note that the instrument incorrectly refers to Fee No. 95071139.

16. Access Easement Agreement, including the terms and conditions thereof:
    By and Between: Air Liquide America Specialty Gasses LLC
    And: Praxair Distribution, Inc.
    Recorded: January 4, 2016
    Fee No.: 2016-000184
    Affects: the Northerly portion

17. Unrecorded leaseholds, rights of parties in possession, and security interests in trade fixtures, personal property, or unattached improvements, if any.

18. No search has been made for Financing Statements filed in the office of the Secretary of State. Exception may be taken to such matters as may be shown thereby.

19. Current and/or advance personal property taxes that may become due upon transfer or sale of the premises herein described. Please contact the Washington County Treasurer's office for further information.

20. The requirement that a copy of the Operating Agreement and Articles of Organization of Air Liquide America Specilty Gasses LLC, a Delaware limited liability company, be submitted to us for examination. Any conveyance or encumbrance by said Company should be executed in accordance with the Operating Agreement of said Company.

21. The requirement that a copy of the Operating Agreement and Articles of Organization of Airgas USA, LLC, a Delaware limited liability company, be submitted to us for examination. Any conveyance or encumbrance by said Company should be executed in accordance with the Operating Agreement of said Company.

22. The attached Commercial Title Affidavit must be completed in full, notarized, and submitted to the Company for review prior to closing.

23. Parties in possession, or claiming to be in possession, other than the vestees shown herein. For purpose of ALTA Extended coverage, we will require an Affidavit of Possession be completed and returned to us. Exception may be taken to such matters as may be shown thereby.

24. Statutory liens for labor or materials, including liens for contributions due to the State of Oregon for unemployment compensation and for workmen's compensation, which have now gained or hereafter may gain priority over the lien of the insured mortgage where no notice of such liens appear of record.

END OF EXCEPTIONS

NOTES:

NOTE (a): We find no judgments or Federal Tax Liens against the vestee herein.

NOTE (b): We find no judgments or Federal Tax Liens against Airgas USA, LLC.

NOTE: (c): We find that Air Liquide America Specialty Gasses LLC is listed as inactive according to the Office of the Secretary of State for Oregon. Any limitation that such status may place on the rights of said party, including but not limited to those limitations as provided by stature, is hereby excepted.

NOTE (d): We find that Airgas USA, LLC is a Delaware limited liability company, is active in Oregon, according to the Office of the Secretary of State for Oregon.

NOTE (e):	Taxes paid in full for 2016-2017:
Levied Amount:	$12,945.39
Account No.:	R541211
Levy Code:	027.76
Map No.:	2S126B-00105

NOTE (f):	Taxes paid in full for 2016-2017:
Levied Amount:	$42.83
Account No.:	R541202
Levy Code:	023.76
Map No.:	2S126B-00104
Affects:	other property also

NOTE (g):	As disclosed by the county tax rolls, the uncertified 2017-2018 real market value for said property is:
Land:	$1,297,980.00
Improvements:	$0.00
Total:	$1,397,980.00
Affects:	Account No. R541211

NOTE (h):	As disclosed by the county tax rolls, the uncertified 2017-2018 real market value for said property is:
Land:	$2,860.00
Improvements:	$0.00
Total:	$2,860.00
Affects:	Account No. R541202

NOTE (i):	We find the following Deeds of record on the subject property recorded within the last 24 months:
Type of Document:	Warranty Deed
Recorded:	December 23, 2015
Fee No.:	2015-104807

NOTE: Any map or sketch enclosed as an attachment herewith is furnished for information purposes only to assist in property location with reference to streets and other parcels. No representation is made as to accuracy and the company assumes no liability for any loss occurring by reliance thereon.

After the issuance of a preliminary title report, if a transaction is consummated in reliance thereon, but without requiring the issuance of the title policy applied for, the full scheduled charge applicable to the type of coverage normally issued on such transactions will apply.

Stewart Title Company

Meg Clark-Kilcoyne, Title Officer

bdm

If you have any questions regarding this report or your escrow, please contact your Escrow Officer Janice Mann ◆ Phone: (503) 290-5561 ◆ Fax: (866) 739-5724.

ESCROW OFFICER LOCATION:

Stewart Title Company
5005 SW Meadows Road
Suite 120
Lake Oswego, OR 97035
Jan.Mann@stewart.com

STG Privacy Notice
Stewart Title Companies

WHAT DO THE STEWART TITLE COMPANIES DO WITH YOUR PERSONAL INFORMATION?

Federal and applicable state law and regulations give consumers the right to limit some but not all sharing. Federal and applicable state law regulations also require us to tell you how we collect, share, and protect your personal information. Please read this notice carefully to understand how we use your personal information. This privacy notice is distributed on behalf of the Stewart Title Guaranty Company and its title affiliates (the Stewart Title Companies), pursuant to Title V of the Gramm-Leach-Bliley Act (GLBA).

The types of personal information we collect and share depend on the product or service that you have sought through us. This information can include social security numbers and driver's license number.

All financial companies, such as the Stewart Title Companies, need to share customers' personal information to run their everyday business—to process transactions and maintain customer accounts. In the section below, we list the reasons that we can share customers' personal information; the reasons that we choose to share; and whether you can limit this sharing.

Reasons we can share your personal information.	Do we share	Can you limit this sharing?
For our everyday business purposes— to process your transactions and maintain your account. This may include running the business and managing customer accounts, such as processing transactions, mailing, and auditing services, and responding to court orders and legal investigations.	Yes	No
For our marketing purposes— to offer our products and services to you.	Yes	No
For joint marketing with other financial companies	No	We don't share
For our affiliates' everyday business purposes— information about your transactions and experiences. Affiliates are companies related by common ownership or control. They can be financial and non-financial companies. *Our affiliates may include companies with a Stewart name; financial companies, such as Stewart Title Company*	Yes	No
For our affiliates' everyday business purposes— information about your creditworthiness.	No	We don't share
For our affiliates to market to you — For your convenience, Stewart has developed a means for you to opt out from its affiliates marketing even though such mechanism is not legally required.	Yes	Yes, send your first and last name, the email address used in your transaction, your Stewart file number and the Stewart office location that is handling your transaction by email to optout@stewart.com or fax to 1-800-335-9591.
For non-affiliates to market to you. Non-affiliates are companies not related by common ownership or control. They can be financial and non-financial companies.	No	We don't share

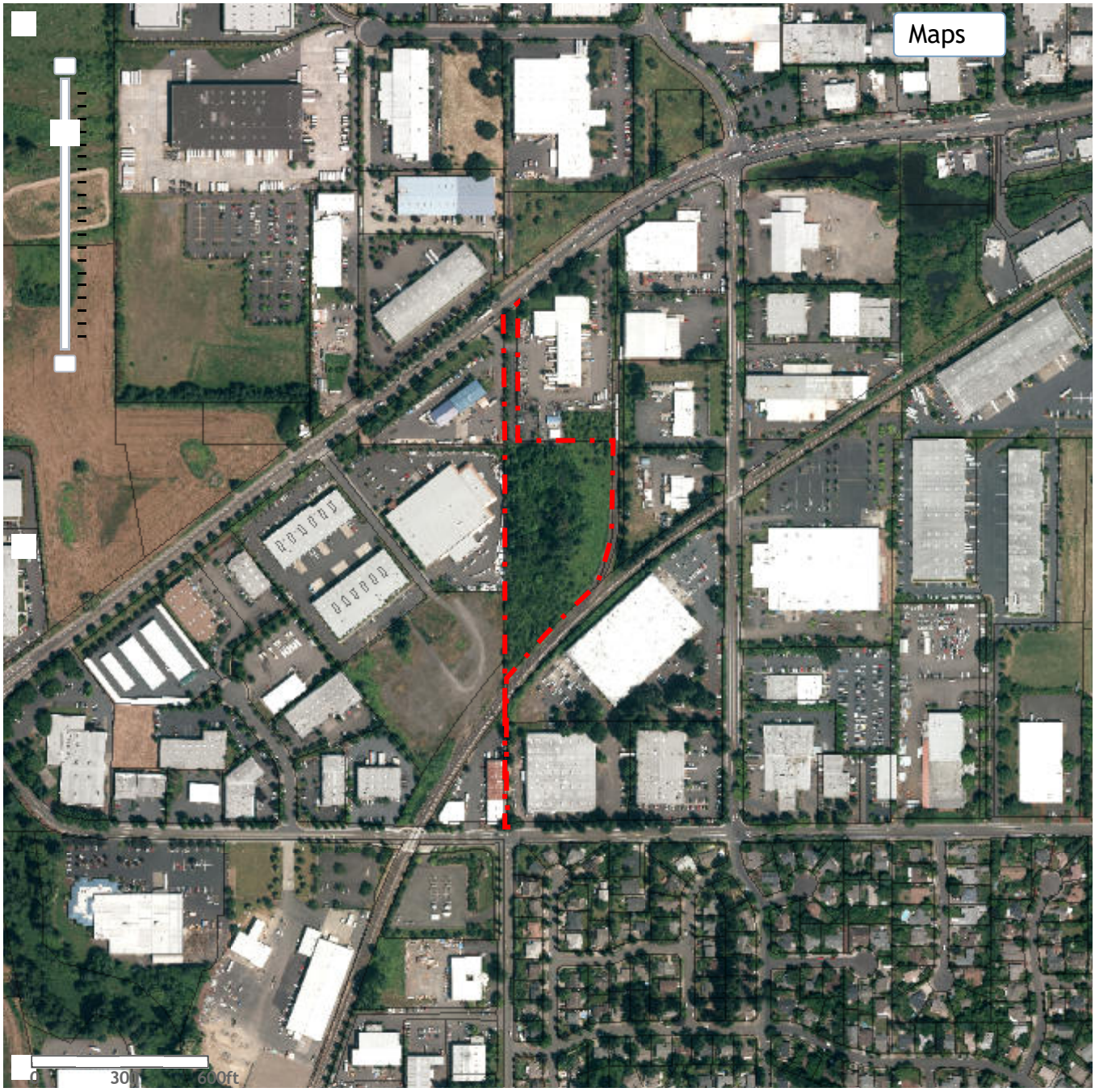
We may disclose your personal information to our affiliates or to non-affiliates as permitted by law. If you request a transaction with a non-affiliate, such as a third party insurance company, we will disclose your personal information to that non-affiliate. [We do not control their subsequent use of information, and suggest you refer to their privacy notices.]

SHARING PRACTICES

How often do the Stewart Title Companies notify me about their practices?	We must notify you about our sharing practices when you request a transaction.
How do the Stewart Title Companies protect my personal information?	To protect your personal information from unauthorized access and use, we use security measures that comply with federal law. These measures include computer, file, and building safeguards.
How do the Stewart Title Companies collect my personal information?	We collect your personal information, for example, when you ▪ request insurance-related services ▪ provide such information to us We also collect your personal information from others, such as the real estate agent or lender involved in your transaction, credit reporting agencies, affiliates or other companies.
What sharing can I limit?	Although federal and state law give you the right to limit sharing (e.g., opt out) in certain instances, we do not share your personal information in those instances.

Contact us: If you have any questions about this privacy notice, please contact us at: **Stewart Title Guaranty Company, 1980 Post Oak Blvd., Privacy Officer, Houston, Texas 77056**

Geographic Information Systems



Base maps and air photo service are provided by Metro

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EXHIBITS

A. Application Form and Fact Sheet
B. Affidavit of Posting AR Notice - Forthcoming
C. CWS Service Provider Letter
D Neighborhood/Developer Meeting Materials
E. Legal Description
F. Aerial Map
G. Republic Services Approval Letter
H. Property Owner Signature(s)
I. Pre-Application Evidence
J. Hydronic Model Worksheet
K. HMIS
L. Arborist Report
M. Geotech Report
N. Stormwater Management Plan
O. Fire Flow
P. Public Facilities Narrative
Q. Transport Impact Analysis
R. Lighting Cut Sheets and Plans
S. Tax Map
T. 11”x17” Plans
U. Access Easement

ATTATCHED SEPARATELY:

(1) Architectural Review Submittal Checklist
(1) Mailing Labels
(3) 24”x36” Plans
(1) Traffic Impact Analysis

1.01 PROJECT SUMMARY

Applicant: JH Kelly, LLC
Attention: Matt Oullette
131 Third Avenue
Longview, Washington 98632

Applicant's Representative/
Project Contact: EL, Architects, PS
Eric Lanciault
eric@elaooa.com
3200 SE 164th Ave, Ste, 302
Vancouver, WA 98683
(360) 798-3801

Plan District Designation: MG (General Manufacturing)

Site Address: 10500 SW Tualatin – Sherwood Road
Tualatin, Oregon

Site Size: 255,112 SF (5.8 acres)

Tax Map/Lots: 2S126B000105

Request: Architectural Review for two gas cylinder storage buildings,
One service building, one office trailer, and one refuse enclosure.

Applicable Criteria: TDC Chapter 61: General Manufacturing Planning District

61.020 Permitted Uses
- 61.021 Restrictions on Permitted Uses
- 61.030 Conditional Uses
- 61.035 Special Setbacks for Commercial Users from Arterial Streets and Commercial Services Overlay
- 61.040 Prohibited Uses

61.050 Lot Size
61.060 Setback Requirements
- 61.065 Central Urban Renewal Area-Lot Sizes
- 61.075 Sound Barrier Construction
- 61.080 Structure Height
- 61.090 Access

TDC Chapter 73: Community Design Standards
73.010 Purpose
- 73.020 Findings and Objectives for the Architectural Review Process
- 73.030 Establishment of the Architectural Review Board
- 73.031 Qualification of Members
- 73.032 Appointment and Term
- 73.033 Vacancies and Removal
- 73.034 Chairman
- 73.035 Voting
- 73.036 Meetings and Records

1.02 INTRODUCTION AND PROPOSAL

This application package includes narrative, plans, drawings, and additional documentation in support of an Architectural Review (AR) for two bottle gas storage buildings, one service building, one office trailer, and one refuse enclosure at 10500 SW Tualatin – Sherwood Road for Air Liquide. The applicant is JH Kelly and the project contact is EL, Architects, PS.

Site Description

The subject site is specifically described as map 2S126B, lot 105. The subject lot and surrounding properties are industrially zoned MG – General Manufacturing Planning District. Surrounding properties are predominantly developed parcels.

The site can be described as a flag lot bounded on the north by SW Tualatin – Sherwood Road and existing developed industrial property on the north and west property lines. The south and east edges of the property are bounded by WES Commuter Rail the right-of-way.

The property has no previous development and is generally thickly wooded. The north portion of the site extending from Tualatin – Sherwood Road to the "flag" portion of the site is already developed with an existing driveway with landscaping and fencing on each side.

Proposal

Only the portion of the site necessary for new structures, delivery access, and parking will be developed with the remainder of the site remaining forested. Five buildings are proposed for the site:

- Building 100 - gas cylinder storage, 4,500 square feet.
- Building 200 - gas cylinder storage, 4,580 square feet.
- Building 300 - office trailer with plumbing, 675 square feet.
- Building 400 - electrical/mechanical services and forklift storage, 687 square feet.
- Building 500- refuse enclosure, 308 square feet.

Buildings 100, 200, 400, and 500 will be low -profile steel and masonry buildings designed to blend with surrounding industrial structures. Building 300 will be a standard type site trailer. Landscaping and existing trees will generally buffer all structures from adjacent properties.

Figure 1.02.1 Aerial Map of Subject Site

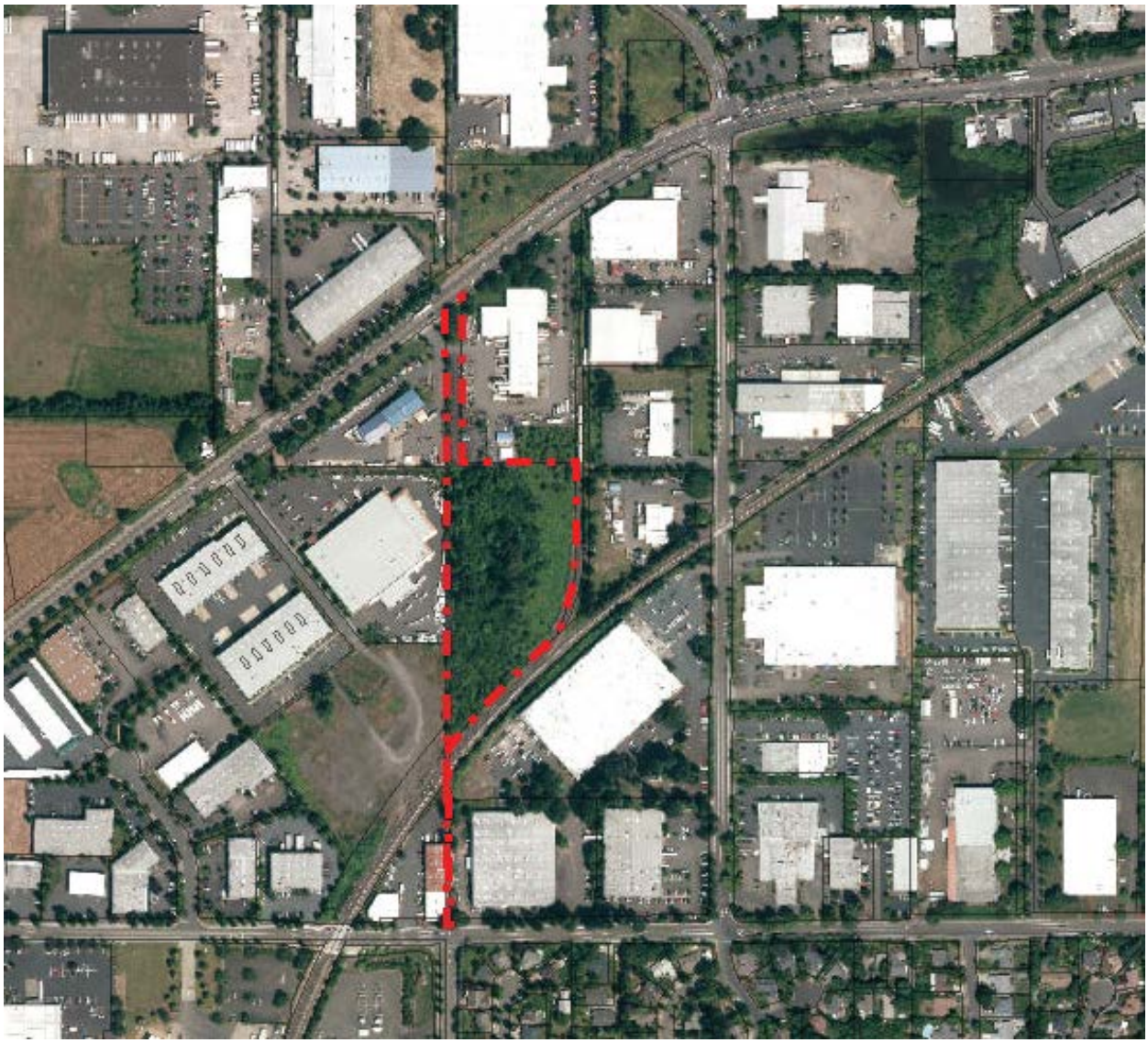
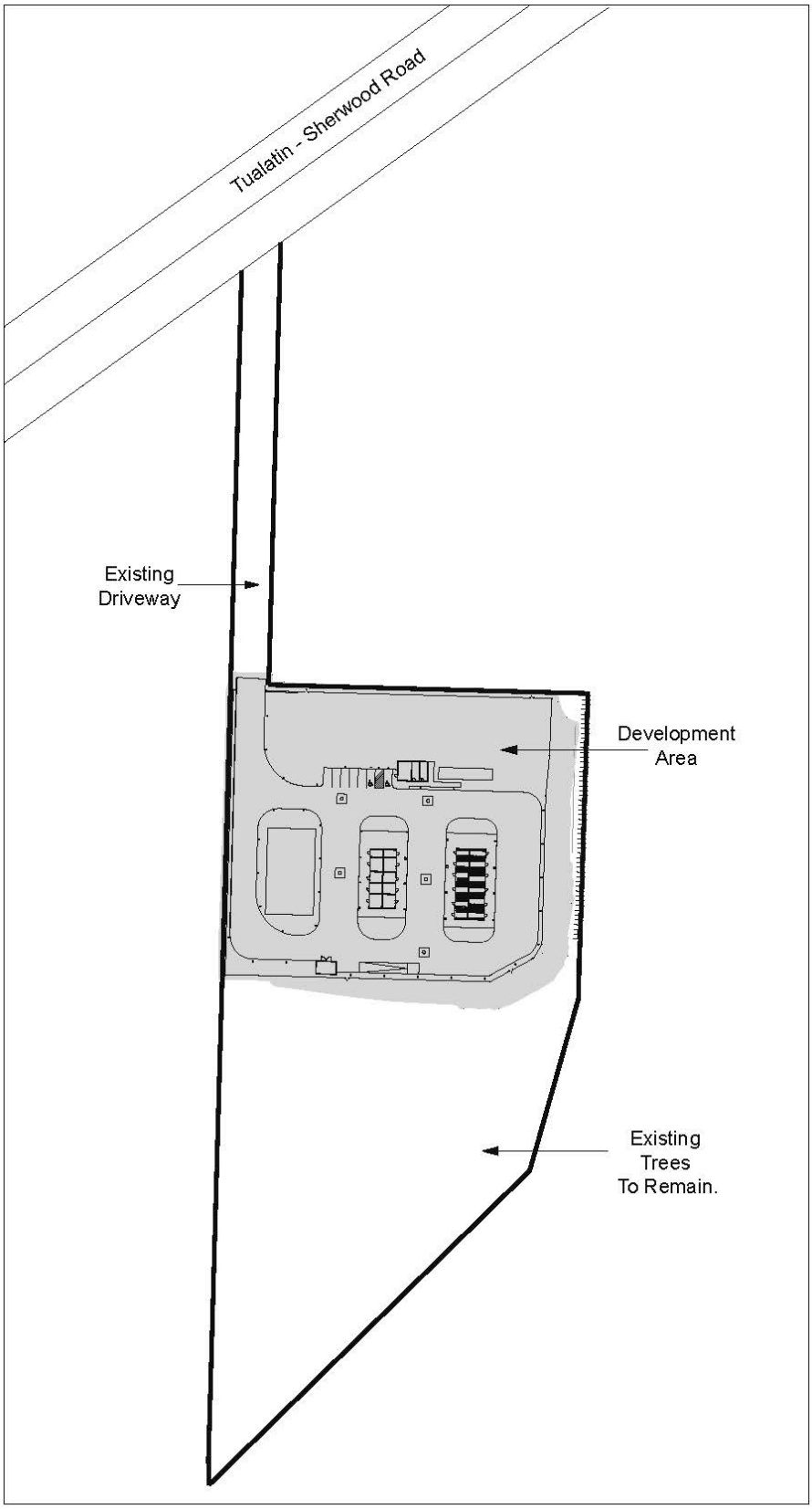


Figure 1.02.2 Development Area



1.03 Development Code Compliance Overview

The proposed development complies with City of Tualatin Development Code standards, as shown below. In accordance with City of Tualatin planning requirements, a scoping meeting was held on April 21, 2017. A neighborhood developer meeting was held on September 6, 2017. Neighborhood Developer meeting minutes, sign-in sheet, invitation letter, affidavit of mailing, certification of sign notice posting and mailing labels are herein included as Exhibit D.

This application requests AR approval for five structures and supporting infrastructure on 5.8 acres.

Table 1.03.1 Analysis

	BLDG 100	BLDG 200	BLDG 300	BLDG 400	BLDG 500	Site Total
Lot Area (SF)						**255,112**
Building Area (SF)	4500	4580	675	687	308	10,750
Building Coverage Of Lot (%)	1.76%	1.79%	.26%	.27%	.12%	**4.2%**
Landscape Area (SF)						**63119**
Landscape %						**54%**
Total Parking						7
Accessible Parking						
Van/Carpool Parking						
Bicycle Parking						

On-Site Development

This application proposes five buildings: 4,500 SF, 4,580 SF,675 SF, 687 SF, 308 SF. The buildings are designed for gas bottle storage, service, refuse enclosure, and office uses (see sheet C301). The site is zoned MG – General Manufacturing and the proposed uses are permitted outright.

Buildings 100, 200, 400 and 500 will be pre-engineered steel structures with CMU walls with metal roofs. Building 300 will be a metal-clad office trailer. The general color scheme will represent the Air Liquide corporate colors of blue and white. Road service around the buildings is a racetrack design with two interior connectors. The west portion of the site between the entrance drive and first interior connector will be prepared for a future building pad. The future building is not included in this AR request. Loading for buildings 100 and 200 will occur along each interior connector and the east portion of the racetrack loop. Buildings 300, 400 and 500 will be accessed from the restricted loop drive. Parking will be located adjacent to Building 400.

Buildings 100 and 200 are the tallest structure with a gable roof ridge height of 20 feet.

The location of the refuse enclosure has been reviewed and approved by Republic Services; please see Exhibit G.

Undeveloped areas of the site will remain wooded and developed portions will be landscaped in accordance with City of Tualatin standards.

Stormwater

The Air Liquide site improvements project has been evaluated to meet or exceed the standards of the Clean Water service, Chapter 4 (Revision April 2017) guidelines, which require the peak runoff rates shall not exceed pre-development rates for the specific range of storms, 65% phosphorus removal, and water quality be treated for 0.36 inches of runoff at a minimum of 0.4 feet.

The proposed site improvements consist of 5 new buildings and bituminous driveways to access them. The improvements will increase the impervious area of the site by 1.54ac. The majority of the impervious runoff will be captured by storm water inlets and will be piped to a proposed treatment pond. A small portion of runoff will sheet flow directly to the pond, and an even smaller portion of the runoff will sheet flow to the existing driveway.

Flow from the south that typically flows through the site will be captured in a grassed swale, and will be routed to the east and then to the north until it reaches the proposed treatment pond.

Sanitary Sewer System

Building 300 will be plumbed. The sanitary sewer and domestic water systems will connect to the existing laterals extending south along the existing entry drive.

Streets

All vehicle traffic for the site will enter from SW Tualatin – Sherwood Road, utilizing the existing driveway.

1.04 Architectural Review Approval Criteria

This application addresses the necessary approval standards of the Tualatin Development Code relevant to Architectural Review for industrial development. As described in the following narrative, the proposal meets the standards of TDC *Chapter 61: General Manufacturing Planning District (MG)* and TDC *Chapter 73: Community Design Standards*.

The following table identifies applicable development standards and how the proposed development satisfies each.

Table 104.2 Development Standards

	City of Tualatin (MG District)	Proposed (Bldgs100,200,300,400,500)
Setback Requirements Front Yard Side Yard Rear Yard	 30' 0' 0'	(from property line to building) 81' minimum 91' minimum 405' minimum
Parking and Circulation		50' minimum
Maximum Structure Height	60'	20'
Landscaping	15% of total site area	54% of total site area
Minimum Parking (per 1,000 GSF) Warehousing (Bldgs.100, 200, 400)* General Office (Bldg. 300)	Zone A 0.3 2.7	2.7 per 1,000 Average
Maximum Parking (per 1,000 GSF) Warehousing (Bldgs.100, 200, 400)* General Office (Bldg. 300)	Zone A 0.4 3.4	
Minimum Bicycle Parking	Warehousing:2, or 0.1 per 1,000 GSF, whichever is greater Office: 2, or 0.5 per 1,000GSF	4
Bicycle Parking to be Covered	First 5 spaces or 30% of parking spaces, whichever is greater	2%

*****For calculation purposes, Service Building 400 is considered as Warehousing.

Chapter 61: General Manufacturing Planning District

Section 61.020 Permitted Use.

No building, structure or land shall be used, except for the following uses as restricted in TDC 61.021.

(1) All uses permitted by TDC 60.020 and 60.037 in the Light Manufacturing Planning District.
(2) Assembly, packaging, processing, and other treatment of beer, coffee, and canned goods.
(3) Assembly of electrical appliances, such as refrigerators, freezers, washing machines, and dryers.
(4) Auto body and/or paint shop; auto machine shop; auto radiator repair shop; general auto and light truck repair, including but not limited to, repairing and rebuilding engines and repair of transmissions, drivelines and rearends except not allowed in the Special Commercial Setback, TDC 61.035(1-3).
(5) Chemical warehouse and distribution.
(6) Cold storage plant.
(7) Concrete batch plant, except not allowed in the Leveton Tax Increment District.
(8) Manufacture of the following types of products:

(a) Batteries.
(b) Boilers.
(c) Bottles.
(d) Brick, tiles, or terra cotta.
(e) Cans.
(f) Chainsaws.
(g) Electric generators.
(h) Electric motors.
(i) Electric transformers.
(j) Engines, larger gasoline or diesel.
(k) Heating and cooling equipment.
(l) Industrial gases, excluding chlorine.
(m) Ladders.
(n) Lawnmowers.
(o) Manufactured Dwellings.
(p) Motor vehicles.
(q) Paint.
(r) Pet food.
(s) Prefabricated building or structural members for buildings.
(t) Rototillers.
(u) Signs and display structures.
(v) Windows.

(9) Marijuana facility, subject to the provisions in TDC Chapter 80.
(10) Metal casting (small to large size).
(11) Metal fabrication (light to medium) (of unfinished or semi-finished metals). **:** *(12) Petroleum product distribution and storage.*
(13) Planning mill.
(14) Processing, assembly, packaging, and other treatment of small products manufactured from sheet metal, wire larger than 1/4 inch (0.25") in diameter, or tobacco.
(15) Production of agricultural crops.(16) Sale, service and rental of industrial machinery including

machine tools, processing, and packaging machinery, forklifts, hoists and conveyors.
(17) Sandblasting.
(18) Storage and retail sale of rock, gravel, barkdust, sawdust, coal or topsoil except not allowed in the Special Commercial Setback, TDC 60.035(1-3).
(19) Structural-mechanical testing laboratories.
(20) Welding shop.
(21) Wireless communication facility attached.
(22) Wireless communication facility.(23) Other uses of a similar character found by the Planning Director to meet the purpose of this district, as provided in TDC 31.070.
(24) Sale, service and rental of construction and industrial equipment to contractors and industrial firms only.

[Ord. 592-83, 6/13/83; Ord. 621-84, 2/13/84; Ord. 812-90, 9/24/90; Ord. 819-91, 1/14/91; Ord. 911-94, 2/14/94; Ord. 913-94, 2/28/94; Ord. 965-96, 12/9/96; and Ord. 988-97, 12/8/97;. Ord. 1003-98, 4/27/98; Ord. 1026-99, 8/9/99; Ord. 2046-00, 2/14/00; Ord. 1133-03, 03/24/03; Ord. 1122-02, 11/25/02; Ord. 1212-06, 06/26/06; Ord. 1370-14 §9, 3/24/14; Ord. 1379-15, § 4 03/23/2015]

Response: the structures are for chemical warehousing and distribution.

Section 61.021 Restrictions on Permitted Uses

The following restrictions shall apply to those uses listed as permitted uses in TDC 61.020:

(1) The use must be conducted wholly within a completely enclosed building, except off-street parking and loading, utility facilities, wireless communication facilities, outdoor storage of materials and products directly related to the permitted use and outdoor play areas of child day care centers as required by state day care certification standards.
(2) The retail sale of products manufactured, assembled, packaged or wholesaled on the site is allowed provided that the retail sale area, including the showroom area, shall be no greater than 5% of the gross floor area of the building not to exceed 1,500 square feet.
(3) For other retail uses, excluding retail sales of products manufactured, assembled, packaged or wholesaled on the site, the following restrictions shall apply:

(a) Retail uses on land designated Employment Area or Corridor on Map 9-4 shall not be greater than 60,000 square feet of gross floor area per building or business.
(b) Retail commercial, retail service and professional service uses on land designated Industrial Area on Map 9-4 shall not be greater than 5,000 square feet of sales or service area in a single outlet, or not greater than 20,000 square feet of sales or service area for multiple outlets in a single building or in multiple buildings that are part of the same development project, with the following two exceptions, which shall not be subject to the size limitations stated in this subsection:

(i) Commercial uses within the Special Setbacks for Commercial Uses Area, shown on Map 9-5, and as specified in TDC 61.035, except 61.035(4)(b).
(ii) Development approved through the application of the Industrial Business Park Overlay District to certain properties, as specified in TDC Chapter 69.
(iii) Development approved through the application of standards for additional small-scale mixed uses in ML as specified in TDC 60.037-60.038.

(4) Marijuana facilities are subject to the provisions in TDC Chapter 80. To the extent there is a conflict between the provisions in this Chapter and the provisions in TDC Chapter 80, the provisions in TDC Chapter 80 apply.

[Ord. 1212-06, 06/26/06; Ord. 1370-14 §10, 3/24/14; Ord. 1379-15, § 5 03/23/2015]
Response: the buildings will be enclosed.

Section 61.030 Conditional Uses

The following uses are permitted in accordance with TDC Chapter 32 and as restricted in TDC 61.031:
(1) All conditional uses listed in TDC 60.040, which are not otherwise permitted in TDC 61.020, except schools for kindergarten through 12, which are not permitted.
(2) Resource recovery facility except not allowed in the Special Commercial Setback, TDC 60.035(1-3).
(3) Refuse transfer station except not allowed in the Special Commercial Setback, TDC 60.035(1-3). (4) Bus maintenance and storage facility. [Ord. 592-83 §97, 6/13/83; Ord. 621-84 §11, 2/13/84; Ord. 913-94 §8, 2/28/94; Ord. 1003-98 §7, 4/27/98; Ord. 1026-99 §83, 8/9/99; Ord. 1046-00 §17, 2/14/00; Ord. 1050-00 §6. 3/13/00; Ord. 1133-03, 03/24/03; Ord. 1122-02, 11/25/02; Ord. 1103-02, 03/25/02; Ord. 1212-06, 06/26/06]
Response: The proposed uses do not require Conditional Use permitting.

Restrictions on Conditional Uses Section 61.031.

(1) The retail sale of products manufactured, assembled, packaged or wholesaled on the site is allowed provided the retail sale area, including the showroom area, is no more than 5% of the gross floor area of the building not to exceed 1,500 square feet.
(2) For other retail uses, excluding retail sales of products manufactured, assembled, packaged or wholesaled on the site, the following restrictions shall apply:
(a) Retail uses on land designated Employment Area or Corridor on Map 9-4 shall not be greater than 60,000 square feet of gross floor area per building or business.
(b) Retail commercial, retail service and professional service uses on land designated Industrial Area on Map 9-4 shall not be greater than 5,000 square feet of sales or service area in a single outlet, or not greater than 20,000 square feet of sales or service area for multiple outlets in a single building or in multiple buildings that are part of the same development project, with the following two exceptions, which shall not be subject to the size limitations stated in this sub-section:

(i) Commercial uses within the Special Setbacks for Commercial Uses Area, shown on Map 9-5, and as specified in TDC 61.035, except 61.035(4)(b).
(ii) Development approved through the application of the Industrial Business Park Overlay District, as specified in TDC Chapter 69. [Ord. 1212-06, 06/26/06]
Response: No retail activities will occur on this site.

Section 61.035 Special Setbacks for Commercial Uses from Arterial Streets and Commercial Services Overlay.

(1) Commercial uses listed in TDC 60.020 and 60.040 as subject to the Special Setback for Commercial Uses shall be set back at least 300 feet from the centerline of SW Tualatin Sherwood Road and SW 124th Avenue and 350 feet from the centerline of SW Pacific Highway 99W west of Cipole Road.
(2) No part of the use, including required parking and outdoor storage or display, is allowed in the Special Setback.
(3) The Special Setback applies in the following specific areas. The areas are generally illustrated on Map 9-5.

(a) On the east side of SW 124th Avenue from SW Tualatin Road to SW Tualatin Sherwood Road and on the west side from SW Pacific Highway to SW Tualatin Sherwood Road.
(b) On the south side of SW Tualatin Sherwood Road from the east property line of Lot 8, Itel Industrial Park to SW 120th Avenue and on the north side of SW Tualatin Sherwood Road from SW 95th Avenue to SW Cipole Road.
(c) On the south side of SW Pacific Highway 99W from Cipole Road west to the Urban Growth Boundary.

(4) Additional uses listed below are permitted in the Commercial Services Overlay on properties shown in the specific areas illustrated on Map 9-5 and only when conducted within an enclosed building.
(a) Automobile glass shop; Automobile accessory sales and auto parts retailing and wholesaling; auto and light truck service shop, including but not limited to, service for air conditioners, electrical, brakes, washing, detailing, mufflers, oil, or lubrication, sound, tune-up, and upholstery; auto tire shop and ancillary truck tire sales; canopy sales and repair; automobile body and/or auto paint shop; auto radiator repair shop; general auto and light truck repair, including but not limited to, repairing and rebuilding engines and repair of transmissions, drivelines, and rearends.
(b) Truck-mounted camper sales with all sales and storage conducted entirely within an enclosed building and not to exceed 10,000 square feet of building floor area.
(c) Tool and equipment rental. [Ord. 1133-03, 3/24/03; Ord. 1191-05, 6/27/05]
Response: This project is not a commercial use and does not fall under the Commercial Services Overlay.

Section 61.040 Prohibited Uses.

The following uses are prohibited:

(1) Residential dwellings, except as otherwise provided in TDC 61.030.
(2) Commercial uses defined by TDC Chapters 50, 51, 52, 53 and 54, except as otherwise provided in TDC 61.020 and 61.030.
(3) Others:
(a) Auto wrecking.
(b) Commercial radio or TV broadcasting antennas.
(c) Creosote treatment of products.
(d) Distillation of bones.
(e) Distillation of oil, coal, wood or tar compounds.
(f) Fat rendering.
(g) Forge plants.
(h) Junk or salvage yard.
(i) Manufacture of the following products:
(i) Acid.
(ii) Ammonia.
(iii) Bleaching powder.
(iv) Celluloid pyroxylin.
(v) Cement, lime, gypsum and plaster of paris.
(vi) Chlorine gas.
(vii) Creosote.
(viii) Disinfectant.
(ix) Dye stuffs.
(x) Explosives.

(xi) Fertilizer.
(xii) Herbicides.
(xiii)Insect poison.
(xiv) Radioactive materials.
(xv) Soap.
(xvi)Sodium compounds.
(xvii) Tar roofing, water-proofing and other tar products.
(j) Rock crushing.
(k) Rolling mills.
(l) Saw mill.
(m) Slaughter of livestock or poultry.
(4) Handling, storage, processing, or other activities dealing with hazardous, toxic, or radioactive waste. [Ord. 592-83 §98, 6/13/83; Ord. 621-84 §12, 2/13/84; Ord. 1026-99 §84, 8/9/99; Ord. 1046-00 §18, 2/14/00; Ord. 1050-00 §8, 3/13/00]
Response: No hazardous, toxic, or radioactive waste will be handled, stored, or processed on site. The site will only be used for storage and handling of bottled gasses. Please see chemical HMIS herewith submitted as Exhibit K.

Section 61.050 Lot Size.

Except for lots for public utility facilities, natural gas pumping stations and wireless communication facility which shall be established through the Subdivision, Partition or Lot Line Adjustment process, the following requirements shall apply:
(1) The minimum lot area shall be 20,000 square feet.
(2) The minimum lot width shall be 100 feet.
(3) The minimum average lot width at the building line shall be 100 feet.
(4) The minimum lot width at the street shall be 100 feet.
(5) For flag lots, the minimum lot width at the street shall be sufficient to comply with at least the minimum access requirements contained in TDC 73.400(8) to (12).
(6) The minimum lot width at the street shall be 50 feet on a cul-de-sac street. [Ord. 866-92, 4/27/92; Ord. 965-96, 12/9/96]
Response: 1. Actual lot area=255,112 SF, 5.85 acres
2. Actual lot width=373'-10"
3. Average lot width at building line= 373'-10"
4. Actual lot width at SW Tualatin – Sherwood Road is 50'-4"; no change is proposed and modifications are impracticable.
5. Not applicable.

Section 61.060 Setback Requirements.

(1) Front yard. The minimum setback is 30 feet. When the front yard is across the street from a residential or Manufacturing Park (MP) district, a front yard setback of 50 feet is required. When a fish and wildlife habitat area is placed in a Tract and dedicated to the City at the City's option, dedicated in a manner approved by the City to a non-profit conservation organization or is retained in private ownership by the developer, the minimum setback is 10 – 30 feet, as determined in the Architectural Review process, with the exception of front yards across the street from a residential or MP District, provided the buildings are located farther away from fish and wildlife habitat areas.
(2) Side yard. The minimum setback is 0 to 50 feet, as determined through the Architectural Review process. When the side yard is adjacent to a property line or

across the street from a residential or Manufacturing Park (MP) District, a side yard setback of 50 feet is required.
(3) Rear yard. The minimum setback is 0 to 50 feet, as determined through the Architectural Review process. When the rear yard is adjacent to a property line or across the street from a residential or Manufacturing Park (MP) District, a rear yard setback of 50 feet is required.
(4) Corner lot yards. The minimum set-back is the maximum setback prescribed for each yard for a sufficient distance from the street intersections and driveways to provide adequate sight distance for vehicular and pedestrian traffic at intersections and driveways, as determined through the Architectural Review process.
(5) The minimum parking and circulation area setback is 5 feet, except when a yard is adjacent to public streets or Residential or Manufacturing Park District, the minimum setback is 10 feet. No setback is required from lot lines within ingress and egress areas shared by abutting properties in accordance with TDC 73.400(2).
(6) No spur rail trackage shall be permitted within 200 feet of an adjacent residential district.
(7) No setbacks are required at points where side or rear property lines abut a rail-road right-of-way or spur track.
(8) No fence shall be constructed within 10 feet of a public right-of-way.
(9) Setbacks for a wireless communication facility shall be established through the Architectural Review process, shall consider TDC 73.510, shall be a minimum of 5 feet, and shall be set back from an RL District, or an RML District with an approved small lot subdivision, no less than 175 feet for a monopole that is no more than 35 feet in height and the setback shall increase five feet for each one foot increase in height up to 80 feet in height, and the setback shall increase 10 feet for each one foot increase in height above 80 feet. [Ord. 592-83 §99, 6/13/83; Ord. 621-84 §13, 2/13/84; Ord. 862-92 §42, 3/23/92; Ord. 904-93 §42, 9/13/93; Ord. 965-96 §75, 12/9/96; Ord. 1026-99 §85, 8/9/99; Ord. 1050-00 §9, 3/13/00; Ord. 1098-02, 2/11/02; Ord. 1224-06 §19, 11/13/06]
Response: See Table 104.2 above.

Section 61.065 Central Urban Renewal Area-Lot Sizes.

The minimum lot size in the Central Urban Renewal District shall conform to the lot sizes described on Map 9-3. [Ord. 635-84 §29, 6/11/84; Ord. 694-86 §6, 5/27/86; Ord. 1026-99 §86, 8/9/99; Ord. 1046-00 §19, 2/14/00]
Response: This project is not in the Central Urban Renewal District.

Section 61.070 [Repealed by Ord. 862-92 §43, 3/23/92]

Section 61.075 Sound Barrier Construction

(1) Sound barrier construction shall be used to intercept all straight-line lateral paths of 450 feet or less between a residential property within a residential planning district and any side edge of an overhead door or other doorway larger than 64 square feet, at a minimum height of eight feet above the floor elevation of the doorway.
(2) Sound barrier construction shall be used to intercept all straight-line lateral paths of 450 feet or less between a residential property within a residential planning district and any building mechanical device at a minimum height equal to the height of the mechanical object to be screened.
(3) Sound barrier construction shall consist of masonry walls or earth berms located so as to reflect sound away from, rather than toward, noise sensitive properties. This may

include masonry "wing walls" attached to a building, detached masonry walls (such as at the perimeter of the site), earth berms, or combinations of the three.
(4) Wing walls must be at least as tall as the tallest overhead door they are designed to screen at the point where they meet the building. The height of the wall may be reduced along a maximum incline formed by a horizontal distance twice the vertical change in height, or 26.5 degrees from horizontal.
(5) "Straight-line lateral path" shall mean a direct line between two points as measured on a site plan. "Wing wall" shall mean a wall that is attached to a building on one side and meets the screening requirements of (1) and (2) of this section. "Building mechanical device" shall include, but is not necessarily limited to, heating, cooling and ventilation equipment, compressors, waste evacuation systems, electrical transformers, and other motorized or powered machinery located on the exterior of a building.
(6) Where existing structures (on or off site) are located such that they will reflect sound away from residential areas and will function as a sound barrier, on-site sound barrier construction shall not be required, except that at the time such structures are removed, sound barrier construction shall be required.
(7) New construction, including additions or changes to existing facilities, shall comply with the provisions of this section. When additions or changes to existing facilities are proposed, existing structures on the property may be required to comply with the provisions of this section, as determined through the Architectural Review process. Where buildings or outdoor use areas located on more than one parcel are all part of a single use as determined through the Architectural Review process, all of the parcels may be required to comply with the provisions of this section. [Ord. 812-90, §7, 9/24/90]
Response: Sound emanating from the site will be restricted to truck motor noise and reversing klaxons. All sounds will be at least 450 feet from residential areas.

103.1 Section 61.080 Structure Height.

(1) Except as provided in TDC 61.080(2) - (4), no structure shall exceed a height of 60 feet and flagpoles which display the flag of the United States of America either alone or with the State of Oregon flag shall not exceed 100 feet above grade provided that the setbacks are not less than a distance equal to the flagpole height.
(2) The maximum permitted structure height in TDC 61.080(1) may be increased to no more than 100 feet, provided that all yards adjacent to the structure are not less than a distance equal to the height of the structure.
(3) Height Adjacent to a Residential District. Where a property line, street or alley separates MG land from land in a residential district, a building, flagpole or wireless communication support structure shall not be greater than 28 feet in height at the required 50 foot setback line. No building or structure, including flagpoles, shall extend above a plane beginning at 28 feet in height at the required 50 foot setback line and extending away from and above the setback line at a slope of 45 degrees, subject always to the maximum height limitation in TDC 61.080(1) and (2).
(4) Wireless Communication Support Structure. The maximum structure height for a wireless communication support structure and antennas is 100 feet unless the wireless communication support structure and antennas are located within 300 feet of the centerline of I-5, in which case the maximum structure height is 120 feet. [Ord. 792-90 §6, 1/8/90; Ord. 965-96 §76, 12/9/96; Ord. 1026-99 §87, 8/9/99; Ord. 1046-00 §20, 2/14/00; Ord. 1116-02, 8/26/02]
Response: No structure exceeds 60 feet.

103.1 Section 61.090 Access

All lots created after September 1, 1979, shall abut a public street, except secondary condominium lots, which shall conform to TDC 73.400 and TDC Chapter 75. Lots and

tracts created to preserve wetlands, green-ways, Natural Areas and Storm Water Quality Control Facilities identified by Chapters 71, 72, Figure 3-4 of the Parks and Recreation Master Plan and the Surface Water Management Ordinance, TMC 3-5, as amended, respectively, or for the purpose of preserving park lands in accordance with the Parks and Recreation Master Plan, may not be required to abut a public street. [Ord. 872-92 §17, 6/29/92; Ord. 979-97 §26, 7/14/97; Ord. 1026-99 §88, 8/9/99; Ord. 1046-00 §21, 2/14/00]
Response: This lot abuts SW Tualatin – Sherwood Road.

103.1 Section 61.100 Off-Street Parking and Loading.
Refer to TDC Chapter 73.

103.1 Section 61.110 Environmental Standards.
Refer to TDC Chapter 63.

Section 61.120 Floodplain District.
Refer to TDC Chapter 70.

Section 61.130 Wetlands Protection District.
Refer to TDC Chapter 71.

Section 61.140 Community Design Standards.
Refer to TDC Chapter 73.

Section 61.150 Landscape Standards.
Refer to TDC Chapter 73. [Ord. 725-87, 6/22/87; Ord. 862-92, 3/23/92]

Chapter 73: Community Design Standards

Section 73.010 Purpose.

Purpose.
To provide a process and definable standards to improve the aesthetic quality of the City's physical development. [Ord. 862-92, §51, 3/23/92]

Section 73.020 Findings and Objectives for the Architectural Review Process.

(1) The City Council finds that excessive uniformity, dissimilarity, inappropriateness, or poor quality of design in the exterior appearance of structures and the lack of proper attention to site development and landscaping, in the business, commercial, industrial, and certain residential areas of the City hinders the harmonious development of the City; impairs the desirability of residence, investment or occupation in the City; limits the opportunity to attain the optimum use and value of land and improvements; adversely affects the stability and value of property; produces degeneration of property in such areas with attendant deterioration of conditions affecting the peace, health and welfare of the City; and destroys a proper relationship between the taxable value of property and the cost of municipal services therefore.
(2) The City Council declares that the purposes and objectives of community design standards are to:
(a) Encourage originality, flexibility and innovation in site planning and development, including the architecture, landscaping and graphic design of development.

(b) Discourage monotonous, drab, unsightly, dreary and inharmonious development.
(c) Promote the City's natural beauty and visual character and charm by ensuring that structures and other improvements are properly related to their sites, and to surrounding sites and structures, with due regard to the aesthetic qualities of the natural terrain, natural environment, and landscaping. Exterior appearances of structures and other improvements should enhance these qualities.
(d) Encourage site planning and development to incorporate bikeways, pedestrian facilities, greenways, wetlands, and other natural features of the environment and provide incentives for dedication of access easements and property to the public through shift of residential density, system development charge credits, landscaping credits and setback allowances.
(e) Protect and enhance the City's appeal to tourists and visitors and thus support and stimulate business and industry and promote the desirability of investment and occupancy in business, commercial and industrial properties.
(f) Stabilize and improve property values and prevent blighted areas and thus increase tax revenues.
(g) Achieve the beneficial influence of pleasant environments for living and working on behavioral patterns and thus decrease the cost of governmental services.
(h) Foster civic pride and community spirit so as to improve the quality and quantity of citizen participation in local government and in community growth, change and improvement.
(i) Sustain the comfort, health, safety, tranquility and contentment of residents and attract new residents by reason of the City's favorable environment and thus pro-mote and protect the peace, health and welfare of the City.
(j) Determine the appropriate yard setbacks, building heights, minimum lot sizes when authorized to do so by City ordinance. [Ord. 862-92, §51, 3/23/92; Ord. 864-92, §11, 4/13/92; Ord. 933-94, §45, 11/28/94]

ARCHITECTURAL REVIEW BOARD

Section 73.030 Establishment of the Architectural Review Board.

(1) There is hereby established an Architectural Review Board whose members, terms, officers and manner of transacting business shall be as prescribed by TDC 73.030 to 73.037.
(2) The Architectural Review Board shall be responsible for reviewing and commenting upon applications which may be directed to it through the development process in accordance with TDC 31.073(4) and requests for review of planning staff decisions concerning architectural features. Additionally, projects for commercial buildings 50,000 square feet and larger, industrial buildings 150,000 square feet and larger, multi-family projects of 100 units or more or for any number of multi-family units adjacent to a Low Density Residential (RL) Planning District shall be reviewed directly by the Architectural Review Board in accordance with TDC 31.077. The City Council may direct the Board to review and comment on other matters that the Council determines are or may be within the Board's areas of expertise. [Ord. 743-88, §38, 3/28/88; Ord. 862-92, §51, 3/23/92; Ord. 864-92, §12, 4/13/92; Ord. 894-93, §10, 5/24/93; Ord. 1096-02 §36, 1/28/02]

Section 73.031 Qualification of Members.

The Board shall consist of seven regular members and three alternate members as follows: one member of the City Council; one registered professional architect and one alternate member who shall be a registered professional architect; one registered

professional landscape architect and one alternate member who shall be a registered professional landscape architect; one registered professional engineer or registered engineer in training and one alternate member who shall be a registered professional engineer or registered engineer in training; and three lay members. Of the three lay members, at least two shall reside in the City. [Ord. 637-84, §1, 6/11/84; Ord. 1188-05, 5/23/05]

Section 73.032 Appointment and Term.

The members of the Board shall be appointed by the Mayor and approved by the City Council. Whenever possible, the Mayor shall appoint individuals who are either property owners, residents, or actively engaged in business or employment in the City. Of the members first appointed, 3 members shall be appointed for terms of 1 year, and 4 members for terms of 2 years. Subsequent appointments shall be for terms of 2 years, or until successors are appointed. Terms of office shall commence on the dates of appointment of the respective members. The term of any alternate member designated in TDC 73.031 shall be the same as the term of the professional member for whom the alternate member is designated. [Ord. 862-92, §51, 3/23/92]

Section 73.033 Vacancies and Removal.

Any vacancy shall be filled for the remainder of the unexpired term of the original appointment. The Mayor, with the approval of the City Council, may remove any regular or alternate member of the Board for misconduct or nonperformance. Unexcused absences from 3 consecutive meetings, including regular and special work sessions, or unexcused absences from more than 50 percent of such meetings held during the calendar year, shall constitute nonperformance. An excused absence may be obtained by contacting the Chairman or Secretary of the Board at least 24 hours prior to any scheduled Board meeting. No member of the Board may be excused for more than 3 Board meetings during any calendar year. Misconduct means conviction of a crime or violation of the Code of Ethics, ORS 244,040, or laws concerning conflicts of interest, ORS 244.120. [Ord. 862-92, §51, 3/23/92]

Section 73.034 Chairman.

The City Council member of the Board shall serve as Chairman. [Ord. 637-84, §2, 6/11/84]

Section 73.035 Voting.

Four members shall constitute a quorum for the transaction of business. The Chairman shall be counted to determine a quorum and shall have the same voting powers as other members of the Board. Each member shall have one vote. A majority vote of the members shall be required for all Board actions. An alternate member shall have the same voting rights as the professional member for whom the alternate member is designated. [Ord. 862-92, §51, 3/23/92]

Section 73.036 Meetings and Records.

The Board shall hold two regular meetings each month. However, the regular meetings need not be held if there are no drawings or plans submitted for review by the Board.

The deliberations and proceedings of the Board shall be public. [Ord. 637-84, §3, 6/11/84]

Section 73.037 Rules.

The Board may adopt and amend rules to govern the conduct of its business, consistent with the provisions of this Code. [Ord. 862-92, §51, 3/23/92]

Section 73.038 Ex Officio Member Under Eighteen (18) Years of Age.

In addition to the regular members of the Board, the City Council may appoint not more than one ex officio member under the age of eighteen (18) years, who shall serve a one-year term which may be renewed for one additional year. Except as otherwise provided, such ex officio member shall be treated as a board member, i.e., by receiving a copy of the agenda and staff report, and by full participation in the Board's discussion. Such ex officio member shall not be counted for purposes of establishing a quorum for the conduct of Board business and shall not be permitted to vote on motions or other action taken by regular Board members. The qualification of members of the Board under 73.031 shall not apply to the ex officio member. In addition to other criteria deemed relevant by the Council for appointment or removal, the Council may consider the effect of participation on the Board on such person's academic performance. [Ord. 888-93, §11, 3/23/83]

ARCHITECTURAL REVIEW APPROVAL

Section 73.040 Architectural Review Plan Approval Required.

(1) Except for an addition or alteration to an existing single-family dwelling when it results in less than a 35% expansion of the structure's existing footprint or less than a 35% alteration of an existing wall plane or only affects the wall plane of the side of the dwelling located in a side yard where the side yard of the dwelling abuts the side yard of an adjacent dwelling, as permitted by these standards, no new building, condominium, townhouse, single family dwelling, addition or alteration to an existing single-family dwelling when it results in a 35% or more expansion of the structure's existing footprint or a new second or higher story or a 35% or more alteration of an existing wall plane (except for the wall plane of a side of the dwelling located in a side yard where the side yard of the dwelling abuts the side yard of an adjacent dwelling), manufactured dwelling park, small-lot subdivision, landscape improvement (excluding greenways, parks and other Parks and Recreation Department road side improvements), parking lot improvement or expansion, above ground public utility facility (sewer or water pump stations, pressure reading stations and water reservoir), electrical substation, above ground natural gas pumping station, installation of decorative lighting (e.g. neon), exterior painting, awnings, murals, wireless communication facility, attached wireless communication facility or exterior major remodeling shall occur until the architectural review plan required under TDC 31.071 has been reviewed and approved by the Community Development Director and City Engineer or their designees, or by the Architectural Review Board or City Council for conformity with applicable standards or criteria.
(2) No new single-family dwelling or addition or alteration to an existing single-family dwelling when it results in a 35% or more expansion of the structure's existing footprint or a new second or higher story or a 35% or more alteration of an existing wall plane (except for the wall plane of a side of the dwelling located in a side yard where the side

yard of the dwelling abuts the side yard of an adjacent dwelling), as permitted by these standards, shall occur until the architectural review application under TDC 31.071(7) has been reviewed and approved by the Community Development Director or their designee for conformity with the applicable standards or criteria.
(3) Construction, site development and landscaping shall be carried out in substantial accord with the approved architectural review plan or application. Review of the proposed architectural review plan or application and any changes thereto shall be conducted in accordance with TDC Chapter 31. [Ord. 743-88 §32, 3/28/88; Ord. 844-91 §8, 10/14/91; Ord. 862-91 §51, 3/23/92; Ord. 864-94 §13, 4/13/92; Ord. 904-93 §43, 9/13/93; Ord. 965-96 §81, 12/9/96; Ord. 988-97 §12, 12/8/97; Ord. 979-97 §49, 7/14/97; Ord. 988-97 §12, 12/8/97; Ord. 1025-99 §31, 7/26/99; Ord. 1026-99 §95, 8/9/99; Ord. 1260-08 §6, 5/12/08]
Response: No residential use is proposed on this site.

Section 73.050 Criteria and Standards.

(1) In exercising or performing his or her powers, duties, or functions, the Community Development Director shall determine whether there is compliance with the following:
(a) The proposed site development, including the site plan, architecture, landscaping, parking and graphic design, is in conformance with the standards of this and other applicable City ordinances insofar as the location, height, and appearance of the proposed development are involved;
(b) The proposed design of the development is compatible with the design of other developments in the general vicinity; and
(c) The location, design, size, color and materials of the exterior of all structures are compatible with the proposed development and appropriate to the design character of other developments in the vicinity.
(2) In making his or her determination of compliance with the above requirements, the Community Development Director shall be guided by the objectives and standards set forth in this chapter. If the architectural review plan includes utility facilities or public utility facilities, then the City Engineer shall determine whether those aspects of the proposed plan comply with applicable standards.
(3) In determining compliance with the requirements set forth, the Community Development Director shall consider the effect of his or her action on the availability and cost of needed housing. The Community Development Director shall not use the requirements of this section to exclude needed housing types. However, consideration of these factors shall not prevent the Community Development Director from imposing conditions of approval necessary to meet the requirements of this section. The costs of such conditions shall not unduly increase the cost of housing beyond the minimum necessary to achieve the purposes of this Code. As part of the Architectural Review process, the Community Development Director has no authority to reduce dwelling unit densities.
(4) As part of Architectural Review, the property owner may apply for approval to remove trees, in addition to those exemptions allowed in TDC 34.200(3), by submitting information concerning proposed tree removal, pursuant to TDC 34.210(1). The granting or denial of a tree removal permit shall be based on the criteria in TDC 34.230.
(5) Conflicting Standards. In addition to the MUCOD requirements, the requirements in TDC Chapter 73 (Community Design Standards) and other applicable Chapters apply. If TDC Chapters 57, 73 and other applicable Chapters, conflict or are different, they shall be resolved in accordance with TDC 57.200(2). [Ord. 637-84, §5, 6/11/84; Ord. 725-87, §2, 6/22/87; Ord. 743-88, §33, 3/28/88; Ord. 862-92, §51, 3/23/1992; Ord. 864-92, §14, 4/13/82; Ord. 963-96, §5, 6/24/96; Ord. 1025-99, §32, 7/26/99; Ord. 1062.00, §22,

12/11/00; Ord. 1062-00, 1/3/01; Ord. 1227-07 §12, 2/12/07]
Response: A tree plan is herewith submitted. Please see drawing L2.0 herewith submitted.

Section 73.055 Conditions Placed on Architectural Review Approvals.

(1) An architectural review approval may include restrictions and conditions. These restrictions and conditions shall be reasonably conceived to:
(a) Protect the public from the potentially deleterious effects of the proposal;
(b) Fulfill the need for public facilities and services created by the proposal, or increased or in part attributable to the proposal;
(c) Further the implementation of the requirements of the Tualatin Development Code.
(2) The following types of conditions are specifically contemplated by subsection (1) of this section and the listing below is illustrative only and not a limitation of the authority granted by this section.
(a) Development Schedule--A reasonable time schedule may be placed on construction activities associated with the proposed development, or portion of the development.
(b) Dedications, Reservation--Dedication or reservation of land, or the granting of an easement for park, open space, rights-of-way, bicycle or pedestrian paths, Greenway, Natural Area, Other Natural Area, riverbank, the conveyance of title or easements to the City or a non-profit conservation organization, or a homeowners' association.
(c) Construction and Maintenance Guarantees--Security from the property owners in such an amount that will assure compliance with approval granted.
(d) Plan Modifications--Changes in the design or intensity of the proposed development, or in proposed construction methods or practices, necessary to assure compliance with this chapter.
(e) Off-Site Improvements--Improvements in public utility facilities not located on the project site where necessary to assure adequate capacity and where service demand will be created or increased by the proposed development if the cost of providing services to others will be increased as a result of the development. The costs of such improvements may be paid for in full while allowing for recovery of costs from users on other development sites, or they may be prorated to the proposed development in proportion to the service demand projected to be created or increased by the project. For development on land where the Industrial Business Park Overlay District is applied, conditions of approval may be included to address the impact, or the cumulative impact, of the development generated by the underlying ML or MG District uses and the Overlay District uses, including but not limited to the traffic impacts generated by non-industrial uses. For development on land where the Mixed Use Commercial Overlay District (MUCOD) is applied, conditions of approval may be included to address the impact, or the cumulative impact, of the development generated by the underlying CG District uses and the MUCOD uses, including but not limited to the traffic impacts generated by noncommercial uses.
(f) Other Approvals--Evaluation, inspections or approval by other agencies, jurisdictions, public utilities, or consultants, may be required for all or any part of the proposed development.
(g) Access Limitation--The number, location and design of street accesses to a proposed development may be limited or specified where necessary to maintain the capacity of streets to carry traffic safely, provided that sufficient access to the development is maintained.
(h) Public Utility Facilities--Must be constructed in accordance with the City's Public Works Construction Code. [Ord. 743-88 §24, 3/28/88; Ord. 862-92 §51, 3/23/92; Ord.

933-94 §46, 11/28/94; Ord. 979-97 §50, 7/14/97; Ord. 1040-99 §10, 12/13/99; Ord. 1062.00, §21, 12/11/00; Ord. 1062-00, 1/3/01]

Section 73.056 Time Limit on Approval.

Architectural Review approvals shall expire after two years unless:

(1) A building, or grading permit submitted in conjunction with a building permit application, has been issued and substantial construction has taken place pursuant to the permit and an inspection has been performed by a member of the Building Division; or
(2) The Architectural Review (AR) applicant requests in writing an extension and the City approves it. If the Community Development Director and the City Engineer or their designees approved the AR, then the Community Development Director and City Engineer shall decide upon the extension request. If the Architectural Review Board (ARB) approved the AR, then the ARB shall decide upon the extension request. The applicant shall provide notice of extension request to past recipients of the AR notice of application and post a sign pursuant to TDC 31.064. Before approving an extension, the deciding party shall find the request meets these criteria:
(a) The applicant submitted a written extension request prior to the original date.
(b) There have been no significant changes in any conditions, ordinances, regulations or other regulations or other standards of the City or applicable agencies that affect the previously approved project so as to warrant its resubmittal for AR.
(c) If the previously approved application included a special study, the applicant provided with the extension a status report that shows no significant changes on the site or within the vicinity of the site. A letter from a recognized professional also would satisfy this criterion if it states that conditions have not changed after the original approval and that no new study is warranted.
(d) If the AR applicant neglected site maintenance and allowed the site to become blighted, the deciding party shall factor this into its decision.
(e) The deciding party shall grant no more than a single one-year extension for an AR approval.
(f) If the Community Development Director and City Engineer or their designees are the deciding party, then they shall decide within thirty (30) days of receipt of the request. If the ARB is the deciding party, then the ARB shall decide within sixty (60) days of receipt of the request. If the deciding party fails to decide within the applicable time period, the decision shall default to approval.
(3) The Architectural review approval was granted on or after January 1, 2007 through September 30, 2009. In those cases approval shall be extended to December 31, 2012. Such approval shall not be eligible for extension under TDC 73.056(2). This subsection (3) shall terminate on January 2, 2013, without further action of the City Council. [Ord. 862-92, §51, 3/23/92; Ord. 904-93, §44, 9/13/93; Ord. 1291-09 §1, 10/26/09; Ord. 1324-11 §1, 06/13/11: Ord. 1333-11 §4, 9/12/11]

PROCEDURE

Section 73.060 [Repealed by Ord. 743-88, §34, passed 3/28/88]
Section 73.065 [Repealed by Ord. 743-88, §34, passed 3/28/88]
Section 73.067 [Repealed by Ord. 743-88, §34, passed 3/28/88]
Section 73.070 [Repealed by Ord. 743-88, §34, passed 3/28/88]
Section 73.075 [Repealed by Ord. 743-88, § 34, passed 3/28/88]
Section 73.080 [Repealed by Ord. 743-88, § 34, passed 3/28/88]

Section 73.085 [Repealed by Ord. 743-88, § 34, passed 3/28/88]
Section 73.090 [Repealed by Ord. 862-92, § 51, passed 3/28/88]

OCCUPANCY

Section 73.095 Occupancy Requirements.

(1) Except as allowed by Subsection (2), all landscaping and exterior improvements required as part of the Community Development Director's, Architectural Review Board's or City Council's approval shall be completed in addition to Fire and Life Safety, and Engineering/Building Department requirements prior to the issuance of any certificate of occupancy.
(2) A temporary certificate of occupancy may be issued by the Building Official prior to the complete installation of all required on-site landscaping, landscaping in the public right-of-way and on-site exterior improvements if security equal to 110 percent of the cost of the landscaping and exterior improvements, as determined by the Community Development Director, is filed with the City, assuring such installation within a time specified by the Community Development Director, but not to exceed 6 months after granting of temporary occupancy. The applicant shall provide a list of uncompleted items along with specific cost estimates of on-site landscaping and on-site exterior improvements, including materials and installation to the satisfaction of the Community Development Director prior to approval of the security. "Security" may consist of a corporate surety bond issued by a surety company authorized to transact business in the State of Oregon, a cash deposit, an assignment of bank funds, an irrevocable letter of credit, cash in escrow or a certified check; and the form shall meet with the approval of the City Attorney. If installation of the on-site landscaping or other on-site exterior improvements is not completed within the period specified by the Community Development Director, the security may be used by the City to complete the installation. Upon completion of the installation, any portion of the remaining security deposited with the City shall be returned to the party posting the security. The final landscape and exterior improvement inspection shall be made by the Planning Department prior to the return of any securities. Any portion of the plan not installed, not installed properly, or not properly maintained shall cause the inspection to be postponed until the project is completed, or shall cause the security to be used by the City. [Ord. 637-84, §14, 6/11/84; Ord. 862-92, §51, 3/23/92]

LANDSCAPE AND BUILDING MAINTENANCE

Section 73.100 Landscape Installation and Maintenance.

(1) All landscaping approved through the Architectural Review Process shall be continually maintained, including necessary watering, weeding, pruning and replacement, in a manner substantially similar to that originally approved through the Architectural Review Process, unless subsequently altered with Community Development Director approval.
(2) All building exterior improvements approved through the Architectural Review Process shall be continually maintained including necessary painting and repair so as to remain substantially similar to original approval through the Architectural Review Process, unless subsequently altered with Community Development Director approval. [Ord. 862-92, § 51, 3/23/92; Ord. 904-93, § 45, 9/13/93]

DESIGN STANDARDS

Section 73.110 Site Planning – Multi-family Uses.

The purpose of multi-family, including townhouse, site planning design objectives and standards is to implement the purposes and objectives of TDC 73.020(2) by focusing on the placement, design and relationship of proposed site elements such as buildings, vehicular parking and circulation areas, bikeways and bike parking areas, outdoor shared areas, private areas, walkways, accessways, buffer areas and landscaping. Except as otherwise provided in this Code, multi-family site planning objectives and standards shall apply to all residential and mixed use residential developments within the Central Design District. [Ord. 862-92, §51, 3/23/92; Ord. 882-92, §12, 12/14/92; Ord. 895-93, §3, 5/24/93; Ord. 1025-99 §33, 7/26/99]
Response: No multi-family uses are proposed for this site.

Section 73.120 Objectives.

All multi-family projects, including townhouses, should strive to meet the following objectives to the maximum extent practicable. Architects and developers should consider these elements in designing new projects. In the case of conflicts between objectives, the proposal shall provide a desirable balance between the objectives. Townhouses may necessitate a different balancing than multi-family developments, such as apartments. In the Central Design District, the Design Guidelines of TDC 73.610 shall be considered. Site elements shall be placed and designed, to the maximum extent practicable, to:
(1) Retain and incorporate existing trees and other significant natural features and habitat such as drainage-ways and wetlands.
(2) Minimize soil removal from the site and grade changes.
(3) Minimize the effects of noise and dust pollution on areas surrounding and within the site.
(4) Create areas for recreation which are suitable for passive and active uses.
(5) Provide the opportunity for residents to watch over shared outdoor areas, entry areas and vehicular parking areas through placement and orientation of kitchen or living room windows, or both.
(6) Provide protection from adverse climate conditions such as summer overheating and winter storms. Architectural and landscape elements such as porches, trellises, awnings, trees and shrubs including native species, are examples of items which may mitigate these impacts.
(7) Parking lot location and design should minimize distances between resident vehicular parking and entry areas while providing a suitable transition in materials and scale between vehicular areas and living areas.
(8) Protect parked vehicles from moving vehicles.
(9) Select and locate plant materials to appropriately articulate space, frame views and vistas, provide seasonal variety, create usable ground surfaces, discourage intrusion into private outdoor areas, and curtail erosion.
(10) Provide shade and break up the appearance of large expanses of paved areas.
(11) Screen vehicular headlights from shining into residential units.
(12) Screen elements such as mechanical and electrical facilities from view.
(13) Avoid barriers to disabled individuals.
(14) Create opportunities for, or areas of, visual and aesthetic interest for occupants and visitors to the site.
(15) Provide, protect and maintain visual and physical corridors to adjacent wetlands, waterways, Natural Areas and Greenways.
(16) Provide safe and convenient walk-ways for pedestrians to move from parking areas to building entrances.

(17) Provide and maintain a circulation system of safe and convenient walkways and bikeways that link buildings on the site with adjacent public streets and accessways.
(18) Provide direct and convenient accessways between the development and publicly-owned land intended for general public use; arterial and collector streets where a transit stop and a bike lane is provided or designated; and abutting residential, commercial and semi-public property. Accessways should be designed and located in a manner which does not restrict or inhibit opportunities for developers of adjacent properties to connect with an accessway and which provides continuity from property to property for pedestrians and bicyclists to use the accessway. [Ord. 862-92, §51, 3/23/92; Ord. 895-93, §4, 5/24/93; Ord. 898-93, § 3, 6/4/93; Ord. 979-97, §51, 7/14/97; Ord. 1025-99, §34, 7/26/99; Ord. 1097-02, 2/11/02; Ord. 1224-06 §20, 11/13/06]
Response: No multi-family uses are proposed for this site.

Section 73.130 Standards.

The following standards are minimum requirements for multi-family and townhouse development:

(1) Private Outdoor Areas.

(a) Except within the Central Design District, or within the Mixed Use Commercial Overlay District in which case the Architectural Review process shall determine the appropriate outdoor area, a separate outdoor area of not less than 80 square feet shall be attached to each ground level dwelling unit. These areas shall be separated from common outdoor areas in a manner which enables the resident to control access from separate to common areas with elements, such as walls, fences or shrubs.
(b) Except for townhouses, a separate outdoor area of not less than 48 square feet in the form of balconies, terraces, or loggias shall be provided for each unit located above the ground level, except that within the Central Design District or the Mixed Use Commercial Overlay District such outdoor areas may be less than 48 square feet.

(2) Entry Areas.

(a) Except as provided in TDC 73.130(2)(b), a private main entry area shall be provided in addition to required private outdoor areas and designed so that they are considered a private extension of each dwelling unit. Except for townhouses, each entrance area shall be a minimum of 24 square feet in area for each dwelling unit and may be combined to serve more than a single unit, subject to the following mini-mum area requirements:

(i) Two dwelling units for one-story buildings or two-story townhouses (48 square feet).
(ii) Four dwelling units for two-story buildings (96 square feet).
(iii) Six dwelling units for three-story buildings (144 square feet).
(iv) Unlimited for four-story and greater and for buildings with dwelling unit entries from interior corridors.

(b) Within the Central Design District, or within the Mixed Use Commercial Overlay District as determined in the Architectural Review process, a private main entry area need not meet the minimum square footage requirements in TDC 73.130(2)(a).
(c) Entry areas shall be separated from on-site parking areas and public streets with landscaping, change of grade, low fences, walls or other means that enable the resident to supervise and control access and to retain privacy.

(3) Shared Outdoor Areas and Children's Play Areas.

(a) Except for townhouses, projects with 12 or more dwelling units shall provide year-round shared outdoor areas for both active and passive recreation (gazebos and other covered spaces are encouraged to satisfy part of this requirement) totaling not less than 450 square feet per dwelling unit. Except adult only projects, a minimum of 150 square feet of the 450 square feet shall be provided as a children's play area.
(b) The shared outdoor and children's play areas shall be located and designed in a manner which:

(i) Provides approximately the same accessibility to the maximum number of dwelling units possible;
(ii) Allows residents to watch over these areas from windows in at least two adjacent dwelling units. These windows must provide viewing from the kitchen, living room, dining room or other activity room (bedrooms or bathrooms are not included);
(iii) Provides a separation from all entryway and parking areas with a landscaped transition area measuring a minimum of 10 feet wide;
(iv) Controls access to shared outdoor areas from off-site as well as from on-site parking and entrance areas with features such as fencing, walls and landscaping;
(v) Provides both sunny and shady spots; and
(vi) Provides a usable floor surface (material such as lawn, decks, wood chips, sand and hard surface materials qualify).

(c) These standards shall not apply to townhouses or within the Central Design District or within the Mixed Use Commercial Overlay District. Within the Mixed Use Commercial Overlay District, the amount of shared outdoor areas and children's play areas shall be consistent with the intent of the Mixed Use Commercial Overlay District and shall be appropriate for the design and scale of residential use proposed as determined through the Architectural Review process.

(4) Safety and Security.

(a) Except for townhouses, private outdoor areas shall be separated from shared outdoor areas and children's play areas with elements such as walls, buildings, landscaping, and changes in grade in a manner which enables residents to utilize these areas as an extension of their units.
(b) Windows shall be located to encourage watching over entry areas, shared outdoor areas, walkways and parking areas.
(c) An outdoor lighting system shall be provided which facilitates police observation and resident observation through strategic location, orientation and brightness without shining into residential units, public rights-of-way, or fish and wildlife habitat areas.
(d) An identification system shall be established which clearly orients visitors and emergency services as to the location of residential units. Where possible, this system should be evident from the primary vehicle entryway.

(5) Service, Delivery and Screening.

(a) Provisions for postal delivery shall be conveniently located and efficiently designed for residents and mail delivery personnel.
(b) Safe pedestrian access from unit entries to postal delivery areas, shared activity areas, and parking areas shall be provided. Elements such as, but not limited to, concrete paths, raised walkways through vehicular areas or bark chip trails will meet this requirement.
(c) On and above grade electrical and mechanical equipment such as transformers, heat pumps and air conditioners shall be screened with sight obscuring fences, walls or landscaping.

(6) Accessways.

(a) Accessways shall be constructed, owned and maintained by the property owner.
(b) Accessways shall be provided between the development's walkway and bikeway circulation system and all of the following locations that apply:

(i) adjoining publicly-owned land intended for public use, including schools, parks, or bike lanes. Where a bridge or culvert would be necessary to span a designated greenway or wetland to provide a connection, the City may limit the number and location of accessways to reduce the impact on the greenway or wetland;
(ii) adjoining arterial or collector streets upon which transit stops or bike lanes are provided or designated;
(iii) adjoining undeveloped residential or commercial property; and
(iv) adjoining developed sites where an accessway is planned or provided.

(c) Accessways to undeveloped parcels or undeveloped transit facilities need not be constructed at the time the subject property is developed. In such cases the applicant for development of a parcel adjacent to a vacant parcel shall enter into a written agreement with the City guaranteeing future performance by the applicant and any successors in interest of the property being developed to construct an accessway when the adjacent undeveloped parcel is developed. The agreement shall be subject to the City's review and approval.
(d) Accessways for multi-family development shall:

(i) be a minimum of 8 feet in width;
(ii) be constructed in accordance with the Public Works Construction Code if they are public accessways, and if they are private accessways they shall be constructed of asphalt, concrete or a pervious surface such as pervious asphalt or concrete, pavers or grasscrete, but not gravel or woody material, and be ADA compliant, if applicable;
(iii) not have fences or gates which prevent pedestrian and bike access at the entrance to or exit from any accessway; and
(iv) have curb ramps wherever the accessway crosses a curb.

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

(7) Walkways.

(a) Except for townhouses, walkways for multi-family development shall be a minimum of 6 feet in width and be constructed of asphalt, concrete, or a pervious surface such as pavers or grasscrete, but not gravel or woody material, and be ADA compliant, if applicable.
(b) Curb ramps shall be provided wherever a walkway crosses a curb.
(8) The Federal Americans With Disabilities Act (ADA) applies to development in the City of Tualatin. Although TDC Chapter 73, does not include the Oregon Structural Specialty Code' s (OSSC) accessibility standards as requirements to be reviewed during the Architectural Review process, compliance with the OSSC is a requirement at the Building Permit step. It is strongly recommended all materials submitted for Architectural Review show compliance with the OSSC. [Ord. 725-87, §4, 6/22/87; Ord. 862-92, §51, 3/23/92; Ord. 882-92, §13, 12/14/92; Ord. 895-93, §6, 5/24/93; Ord. 898-93, §4, 6/14/93; Ord. 904-93, §46, 9/13/93 Ord. 947-95, §6, 7/24/95; Ord. 1008-98, §1-5, 7/13/98; Ord. 1025-99, §35, 7/26/99; Ord. 1224-06 §21, 11/13/06; Ord. 1252-08 §1, 2/11/08]
Response: No multi-family uses are proposed for this site.

Section 73.140 Site Planning – Commercial, Industrial, Public and Semi-Public Uses.

The purpose of commercial, industrial, public and semi-public site planning design objectives is to implement the purposes and objectives of TDC 73.020(2) by focusing on the placement, design and relationship of proposed site elements such as buildings, vehicular parking and circulation areas, bikeways and bike parking, accessways, walkways, buffer areas and landscaping. [Ord. 862-92, §51, 3/23/92; Ord. 895-93, §7, 5/24/93]

Section 73.150 Objectives.

All commercial, industrial, public and semi-public projects should strive to meet the following objectives to the maximum extent practicable. Architects and developers should consider these elements in designing new projects. In the Central Design District, the Design Guidelines of TDC 73.610 shall be considered. In the case of conflicts between objectives, the proposal shall provide a desirable balance between the objectives. Site elements shall be placed and designed, to the maximum extent practicable, to:

(1) Provide convenient walkways and crosswalks which separate pedestrians from vehicles and link primary building entries to parking areas, other on-site buildings and the public right-of-way.
(2) Avoid barriers to disabled individuals.
(3) Locate and design drive-through facilities in a manner which does not conflict with pedestrian routes or other vehicular circulation and minimizes adverse impacts on adjacent properties.
(4) Break up parking areas with landscaping (trees, shrubs and walkways) and buildings to lessen the overall impact of large paved areas.
(5) Utilize landscaping in parking areas to direct and control vehicular movement patterns, screen headlights from adjacent properties and streets, and lessen the visual dominance of pavement coverage.
(6) Provide vehicular connections to adjoining sites.
(7) Emphasize entry drives into commercial complexes and industrial park developments with special design features, such as landscaped medians, water features and sculptures.
(8) Locate, within parking lots, pedestrian amenities and/or landscaping in areas which are not used for vehicle maneuvering and parking.
(9) Encourage outdoor seating areas which provide shade during summer and sun during winter, trash receptacles and other features for pedestrian use. Plantings with a variety of textures and color are encouraged.
(10) Create opportunities for, or areas of, visual and aesthetic interest for occupants and visitors to the site.
(11) Conserve, protect and restore fish and wildlife habitat areas, and maintain or create visual and physical corridors to adjacent fish and wildlife habitat areas.
(12) Provide safe pathways for pedestrians to move from parking areas to building entrances.
(13) Design the location of buildings and the orientation of building entrances for commercial, public and semi-public uses such as churches, schools and hospitals to provide adequate pedestrian circulation between buildings and to provide preferential access for pedestrians to existing or planned transit stops and transit stations.
(14) Provide accessways between commercial, public and semi-public development and publicly-owned land intended for general public use; arterial and collector streets where a transit stop and/or a bike lane is provided or designated; and abutting residential, commercial and semi-public property.
(15) Provide accessways between industrial development and abutting greenways where a bikeway or pedestrian path is provided or designated.

(16) Accessways should be designed and located in a manner which does not restrict or inhibit opportunities for developers of adjacent properties to connect with an accessway, and provide continuity from property to property for pedestrians and bicyclists to use the accessway.
(17) Provide preferential parking for carpool and vanpools to encourage employees to participate in carpools and vanpools.
(18) Screen elements such as mechanical and electrical equipment, above ground sewer or water pump stations, pressure reading stations and water reservoirs from view.
(19) Parking structure exteriors and underground parking should be designed to be harmonious with surrounding buildings and architecturally compatible with the treatment of buildings they serve.
(20) When a fish and wildlife habitat area abuts or is on the subject property the applicant and decision authority for a development application should consider locating buildings farther away from the fish and wildlife habitat area. [Ord. 635-84, § 36, 6/11/84; Ord. 649-84, §7, 11/26/84; Ord. 661-85, §10, 3/25/85; Ord. 827-91, §6 and 7, 3/25/91; Ord. 849-91, §38 and 39, 11/25/91; Ord. 862-92, §51, 3/23/92; Ord. 895-93, §8, 5/24/93; Ord. 904-93, §47, 9/13/93; Ord. 920-94, §17, 4/11/94; Ord. 965-96, §82, 12/9/96; Ord. 979-97, §52, 7/14/97; Ord. 1097-02, 2/11/02; Ord. 1224-06 §22, 11/13/06]
Response:
1) Due to the existing construction of the site's access driveway to Tualatin – Sherwood Road, a painted pedestrian walkway along one side of the access driveway is proposed for pedestrian access to SW Tualatin – Sherwood Road from the proposed area of development.
2) To the greatest extent practicable, the site will befree of barriers to disabled individuals.
3) No drive-through facility is proposed.
4) To the greatest extent possible while still retaining the site's functionality for the proposed uses, all buildings and parking areas are accessed from the paved circulation areas and as much existing forest is preserved as practicable.
5) As much of the existing forested has been maintained to buffer vehicles from adjacent properties.
6) No vehicular connections to adjoining sites are proposed.
7) The site is neither a commercial complex nor an industrial park development.
8) Due to necessary vehicular circulation, no pedestrian amenities or landscaping areas are proposed.
9) No outdoor seating areas are proposed.
10) No visual or aesthetic interest features are proposed.
11) As much as practicable, the site's forested area is protected for the wildlife habitat.
12) A separate pedestrian sidewalk connects all parking with building 300(office trailer).
13) The proposed site use is industrial.
14) The proposed site use is industrial.
15) No abutting greenway or pedestrian path is present.
16) No accessway is proposed.
17) One vanpool parking space is proposed,
18) All mechanical and electrical equipment is located within proposed structures and screened from public view.
19) No parking structure is proposed.
20) The proposed buildings are located as far to the north property line to maximize the amount of wildlife habitat remaining on site.

Section 73.160 Standards.

The following standards are minimum requirements for commercial, industrial, public and semi-public development, and it is expected that development proposals shall meet or exceed these minimum requirements.

(1) Pedestrian and Bicycle Circulation.

(a) For commercial, public and semi-public uses:

(i) a walkway shall be provided between the main entrance to the building and any abutting public right-of-way of an arterial or collector street where a transit stop is designated or provided. The walkway shall be a minimum of 6 feet wide and shall be constructed of concrete, asphalt, or a pervious surface such as pavers or grasscrete, but not gravel or woody material, and be ADA compliant, if applicable;
(ii) walkways shall be provided between the main building entrances and other on-site buildings and accessways. The walkways shall be a minimum of 6 feet wide and shall be constructed of concrete, asphalt, or a pervious surface such as pavers or grasscrete, but not gravel or woody material, and be ADA compliant, if applicable;
(iii) walkways through parking areas, drive aisles, and loading areas shall be visibly raised and of a different appearance than the adjacent paved vehicular areas;
(iv) accessways shall be provided as a connection from the development's internal bikeways and walkways to all of the following locations that apply: abutting arterial or collector streets upon which transit stops or bike lanes are provided or designated; abutting undeveloped residential or commercial areas; adjacent undeveloped sites where an agreement to provide an accessway connection exists; and to abutting publicly-owned land intended for general public use, including schools;
(v) fences or gates which prevent pedestrian and bike access shall not be allowed at the entrance to or exit from any accessway.
(vi) bikeways shall be provided which link building entrances and bike facilities on the site with the adjoining public right-of-way and accessways.
(vii) Outdoor Recreation Access Routes shall be provided between the development's walkway and bikeway circulation system and parks, bikeways and greenways where a bike or pedestrian path is designated.

(b) For Industrial Uses:

(i) a walkway shall be provided from the main building entrance to sidewalks in the public right-of-way and other on-site buildings and accessways. The walkway shall be a minimum of 5 feet wide and constructed of concrete, asphalt, or a pervious surface such as pavers or grasscrete, but not gravel or woody material, and be ADA compliant, if applicable.
(ii) Walkways through parking areas, drive aisles and loading areas shall have a different appearance than the adjacent paved vehicular areas.
(iii) Accessways shall be provided as a connection between the development's walkway and bikeway circulation system and an adjacent bike lane;
(iv) Accessways may be gated for security purposes;
(v) Outdoor Recreation Access Routes shall be provided between the development's walkway and bikeway circulation system and parks, bikeways and greenways where a bike or pedestrian path is designated.

(c) Curb ramps shall be provided wherever a walkway or accessway crosses a curb.
(d) Accessways shall be a minimum of 8 feet wide and constructed in accordance with the Public Works Construction Code if they are public accessways, and if they are private access-ways they shall be constructed of asphalt, concrete or a pervious surface such as pervious asphalt or concrete, pavers or grasscrete, but not gravel or woody material, and be ADA compliant, if applicable.
(e) Accessways to undeveloped parcels or undeveloped transit facilities need not be constructed at the time the subject property is developed. In such cases the applicant for development of a parcel adjacent to an undeveloped parcel shall enter into a written agreement with the City guaranteeing future performance by the applicant and any successors in interest of the property being developed to construct an accessway when the adjacent undeveloped parcel is developed. The agreement shall be subject to the City's re-view and approval.
(f) Where a bridge or culvert would be necessary to span a designated greenway or wetland to provide a connection to a bike or pedestrian path, the City may limit the number and location of accessways to reduce the impact on the greenway or wetland.
(g) Accessways shall be constructed, owned and maintained by the property owner.

(2) Drive-up Uses.

(a) Drive-up uses shall provide a minimum stacking area clear of the public right-of-way and parking lot aisles from the window serving the vehicles as follows:

(i) Banks--each lane shall pro-vide a minimum capacity for five automobiles.
(ii) Restaurants--each lane shall provide a minimum capacity for eight automobiles.
(iii) Other Drive-Up Uses--each lane shall provide a minimum capacity for two to eight automobiles, as determined through the architectural review process.
(iv) For purposes of this Section, an automobile shall be considered no less than twenty feet in length. The width and turning radius of drive-up aisles shall be approved through the architectural review process.

(b) Parking maneuvers shall not occur in the stacking area. The stacking area shall not interfere with safe and efficient access to other parking areas on the property.
(c) Locate drive-up aisles and windows a minimum of 50 feet from residential planning districts to avoid adverse impacts. A wall or other visual or acoustic may be required through the architectural review process.

(3) Safety and Security.

(a) Locate windows and provide lighting in a manner which enables tenants, employees and police to watch over pedestrian, parking and loading areas.
(b) In commercial, public and semi-public development and where possible in industrial development, locate windows and provide lighting in a manner which enables surveillance of interior activity from the public right-of-way.
(c) Locate, orient and select on-site 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.
(e) Shrubs in parking areas must not exceed 30 inches in height. Tree canopies must not extend below 8 feet measured from grade.
(f) Above ground sewer or water pumping stations, pressure reading stations, water reservoirs,

electrical substations, and above ground natural gas pumping stations shall provide a minimum 6' tall security fence or wall.

(4) Service, Delivery and Screening.

(a) On and above grade electrical and mechanical equipment such as transformers, heat pumps and air conditioners shall be screened with sight obscuring fences, walls or landscaping.
(b) Outdoor storage, excluding mixed solid waste and source separated recyclables storage areas listed under TDC 73.227, shall be screened with a sight obscuring fence, wall, berm or dense evergreen landscaping.
(c) Above ground pumping stations, pressure reading stations, water reservoirs; electrical substations, and above ground natural gas pumping stations shall be screened with sight-obscuring fences or walls and landscaping.

(5) The Federal Americans with Disabilities Act (ADA) applies to development in the City of Tualatin. Although TDC, Chapter 73 does not include the Oregon Structural Specialty Code' s (OSSC) accessibility standards as requirements to be reviewed during the Architectural Review process, compliance with the OSSC is a requirement at the Building Permit step. It is strongly recommended all materials submitted for Architectural Review show compliance with the OSSC.
(6) (a) All industrial, institutional, retail and office development on a transit street designated in TDC Chapter 11 (Figure 11-5) shall provide either a transit stop pad on-site, or an on-site or public sidewalk connection to a transit stop along the subject property's frontage on the transit street.
(b) In addition to (a) above, new retail, office and institutional uses abutting major transit stops as designated in TDC Chapter 11 (Figure 11-5) shall:

(i) locate any portion of a building within 20 feet of the major transit stop or provide a pedestrian plaza at the transit stop;
(ii) provide a reasonably direct pedestrian connection between the major transit stop and a building entrance on the site;
(iii) provide a transit passenger landing pad accessible to disabled persons;
(iv) provide an easement or dedication for a passenger shelter as determined by the City; and
(v) provide lighting at the major transit stop. [Ord. 862-92, §51, 3/23/92; Ord. 895-93, §9, 5/24/93; Ord. 898-93, §5, 6/14/93; Ord. 904-93, §48, 49 and 50, 9/13/93; Ord. 947-95, §8, 9, 10 and 11, 7/24/95; Ord. 965-96, §83 and 84, 12/9/96; Ord. 1008-98, §6, 7/13/98; Ord. 1046-00 §35, 2/14/00; Ord. 1103-02, , 3/25/02; Ord. 1224-06 §23, 11/13/06: Ord. 1354-13 §11, 02/25/13]

Response:

(1) (a) The proposed use is industrial.

(b) (i) A 5'-0" wide asphalt walkway is proposed along the existing access driveway.

(ii) The proposed walkway is separated from the vehicular traffic along the access driveway by painted striping. The walkway asphalt is conterminous with the vehicle asphalt.

(iii) No adjacent bike lane exists.

(iv) No accessway is proposed.

(V) No outdoor recreation access route is proposed.

(c) No walkway crosses a curb.

(d) No accessway is proposed.

(2) No drive-up use is proposed.

(3) (a) The site will have pole-mounted lighting adequate for safety and security.

(b) No surveillance of interior activity from the public right-of-way is proposed for department of Homeland Security compliance purposes. Air Liquide has decades of experience with secure and safe handling of gases. The company has developed key safety and security protocols for cylinder deport design including:

- **Separation/Segregation: Incompatible materials are separated by safe distances or by durable walls to prevent unintended mixing. All separation and segregation design elements meet or exceed applicable building codes. Several concentric layers of fence and gates delay access to materials by intruders.**
- **Rated Construction Materials: Durable materials such as steel, concrete masonry and synthetic insulators are used to ensure control of heat and the effect it has on stored materials.**
- **Fire Suppression: Automatic fire suppression systems will trigger and extinguish flames.**
- **Ventilation: Natural and forced ventilation are employed to dilute fugitive emissions. Ventilation rates are calculated to dilute flammables to less than LFL.**
- **Ambient Air Monitoring: Electronic sensors are installed to alert operators of low levels of fugitive emissions. Early detection helps address small issues before they grow.**
- **Facility Monitoring: All safety systems are remotely mon9tored by operations personnel for off-hours responses if needed. Automated alerts trigger investigations. Back-up power is applied when utility power fails.**
- **Security: State of the art security measures employed to Delay, Deter and Detect.**

(c) No surveillance of interior activity from the public right-of-way is proposed.
(d) Each building will be individually identified and entries marked.
(e) Landscape requirements are met and identified. Please refer to Sheet L1.0 herewith submitted.
(f) No above-ground structures of these types are proposed.
(4) (a) All equipment is screened by a site-obscuring fencing or building walls.
(b) No storage is proposed.
(5) Please see site plan herewith submitted for ADA compliance.
(6) Per TDC Chapter 11 figure 11-5 Tualatin – Sherwood Road is scheduled for expansion of fixed route bus transit service. Sidewalk is being provided along access driveway, however access driveway is served by common vehicle apron serving several properties and does not extend directly to public right-of-way. Therefore, sidewalk cannot attach to pedestrian walk along SW Tualatin – Sherwood Road.

Section 73.170 Structure Design – Single-family and Multi-family Uses.

(1) Purpose – Single-family Uses.
The purpose of single-family building design objectives and standards is to implement the purposes and objectives of TDC 73.020(2). The objectives and standards are intended to promote functional, safe, innovative and attractive buildings that are compatible with the surrounding environment. This concerns the building form including the articulation of walls, roof design, materials, and placement of elements such as windows, doors, and identification features.
(2) Purpose – Multi-family Uses.
The purpose of multi-family, including townhouse, building design objectives and standards is to implement the purposes and objectives of TDC 73.020(2). The objectives and standards are

intended to promote functional, safe, innovative and attractive buildings which are compatible with the surrounding environment. This concerns the building form including the articulation of walls, roof design, materials, colors, placement of elements such as windows, doors, mechanical equipment and identification features. [Ord. 862-92, §51, 3/23/92. Ord. 1025-99, §36, 7/26/99; Ord. 1260-08 §7, 5/12/08]

Response: No residential uses are proposed.

Section 73.180 Objectives – Single-family and Multi-family Uses.

(1) Objectives – Single-family Uses.
All new single-family dwellings, including an addition or alteration to an existing single-family dwelling when it results in a 35% or more expansion of the structure's existing footprint or a new second or higher story or a 35% or more alteration of an existing wall plane (except for the wall plane of a side of the dwelling located in a side yard where the side yard of the dwelling abuts the side yard of an adjacent dwelling), should strive to meet the following objectives to the maximum extent practicable. Architects and developers should consider these elements in designing new projects. Development subject to Level I (Clear and Objective) Single-family Architectural Re-view approval may be permitted to vary from one or more of the clear and objective standards set forth in TDC 73.190(1)(a), provided that the Level II (Discretionary) approval criteria set forth in TDC 73.190(1)(b) are considered. New single-family dwellings, including an addition or alteration to an existing single-family dwelling when it results in a 35% or more expansion of the structure's existing footprint or a new second or higher story or a 35% or more alteration of an existing wall plane (except for the wall plane of a side of the dwelling located in a side yard where the side yard of the dwelling abuts the side yard of an adjacent dwelling), shall be designed, to the maximum extent practicable, to:

(a) Enhance Tualatin through the creation of attractively designed housing and streetscapes.
(b) Encourage originality, flexibility and innovation in structure design.
(c) Avoid stark unarticulated building façades (elevations) and encourage sufficient relief in façades of dwellings to avoid a single block or box appearance by mixing contrasting vertical and horizontal elements in the roof and walls of structures.
(d) Provide continuity in design by utilizing architectural materials and style employed on the front façade (elevation) on the remaining sides of the structure.
(e) Discourage monotonous, drab, unsightly, dreary and inharmonious development.
(f) Provide guidelines for good design at reasonable costs and with multiple options to achieve the purposes of TDC 73.170(1).

(2) Objectives – Multi-family Uses.

All multi-family projects, including town-houses, should strive to meet the following objectives to the maximum extent practicable. Architects and developers should consider these elements in designing new projects. In the Central Design District, the Design Guidelines of TDC 73.610 shall be considered. In the case of conflicts between objectives, the proposal shall provide a desirable balance between the objectives. Townhouses may necessitate a different balancing than multi-family developments, such as apartments. Buildings shall be designed, to the maximum extent practicable, to:

(a) Provide a composition of building elements which responds to function, land form, identity and image, accessibility, orientation and climatic factors.
(b) Enhance energy efficiency through the use of landscape and architectural elements, such as arcades, sun-screens, lattice, trellises, roof overhangs and window orientation.

(c) Create subclusters and stagger unit alignments.
(d) Utilize functional building elements such as carports and garages, balconies, entry areas and sun screens where possible to accomplish unit identity, pride of place and visual diversity.
(e) Give consideration to organization, design and placement of windows as viewed on each elevation. The system may be a variation on a theme or consistent symmetry and must operate in concert with the provision of adequate interior privacy, safety, daylight and ventilation.
(f) Select building materials which contribute to the project's identity, form and function, as well as to the existing site and surrounding natural landscape and development.
(g) Select colors in consideration of lighting conditions under which the structure is viewed, the ability of the material to absorb, reflect or transmit light, and the color's functional role (whether to blend into the environment, express a particular character, discriminate materials, define form and volume or simply as an identification feature such as with color coding).

(h) Minimize disruption of natural site features such as topography, trees and water features. [Ord. 727-87, §7, 7/13/87; Ord. 862-92, §51, 3/23/92; Ord. 1025-99, §37, 7/26/99; Ord. 1097-02, 02/11/02; Ord. 1260-08 §8, 5/12/08]
Response: No residential uses are proposed.

Section 73.190 Standards – Single-family and Multi-family Uses.

(1) Standards - Single-family Uses.
Except for the side of a single-family dwelling located in a side yard where the side yard of the dwelling abuts the side yard of an adjacent dwelling, the standards in this section shall apply to all sides of a new single-family dwelling or to an addition or alteration to an existing single-family dwelling when it results in a 35% or more expansion of the structure's existing footprint or a new second or higher story or a 35% or more alteration of an existing wall plane. The wall plane shall be defined as all vertical surfaces on one side of a dwelling from the base of the main floor level up including walls, garage doors, entries, gable ends, dormers, etc., and excluding any roof areas. Garage door windows may be counted toward the required window coverage percentage in TDC 73.190(1)(a). Cornices, eaves, canopies, decks, sunshades, gutters, chimneys, flues, belt courses, leaders, sills, pilasters, lintels, ornamental features, and other similar architectural features may extend or project into a required front or rear yard set-back area not more than three feet (3') and into a required side yard not more than two feet (2'), or into the required open space as established by coverage standards in TDC Chapter 40 Low Density Residential Planning District (RL) or Chapter 41 Medium Low Density Residential Planning District (RML).

(a) Level I (Clear and Objective) Single-family Architectural Review. Dwellings shall:

(i) On the front façade (elevation), provide windows that occupy at least twelve percent (12%) of the wall plane, pro-vide at least three (3) of the Residential Roof Design Elements in TDC 73.190(1)(a)(iv) and provide at least five (5) of the Residential Wall Design Elements in TDC 73.190(1)(a)(v). The amount of required window coverage on the front façade (elevation) may be reduced in two percent (2%) increments to not less than eight percent (8%) of the wall plane for each additional Residential Wall Design Element provided.
(ii) On each side elevation, except for a side of a single-family dwelling located in a side yard where the side yard of the dwelling abuts the side yard of an adjacent dwelling, provide windows that occupy at least eight percent (8%) of the wall plane, provide at least two (2) of the Residential Roof Design Elements in TDC 73.190(1)(a)(iv) and provide at least four (4) of the Residential Wall Design Elements in TDC 73.190(1)(a)(v). The amount of required window coverage on each side elevation may be reduced by two percent (2%) to not less than six percent (6%) of the wall plane if one (1) additional Residential Wall Design Element is provided on the same side elevation as that

on which the reduction is made.
(iii) On the rear elevation, provide windows that occupy at least twelve percent (12%) of the wall plane, provide at least two (2) of the Residential Roof Design Elements in TDC 73.190(1)(a)(iv) and provide at least four (4) of the Residential Wall Design Elements in TDC 73.190(1)(a)(v). The amount of required window coverage on the rear elevation may be reduced by two percent (2%) to not less than ten percent (10%) of the wall plane if one (1) additional Residential Wall Design Element is provided.
(iv) Residential Roof Design Elements.

(A) Dormer, such as hipped, gabled, shed, or eyebrow dormer design, which is a projecting structure built out from a sloping roof and housing a window, vent, or decorative element.
(B) Pitched or sloping roof, such as a gable roof, which slopes down-ward in two parts from a central ridge forming a gable at each end, or hip roof, which has sloping ends and sides that meet at an inclined projecting angle.
(C) Roof eave of at least twelve inches (12").
(D) Roof overhang (barge-board or verge board) of at least six inches (6") measured outward from the face of the dwelling wall or wall plane.
(E) Window, decorative vent, door, decorated verge boards, trusses, false beams, corbels, brackets, or other decorative element(s) in gable ends.
(F) Variation in roof pitch, height of roof planes, or roof orientation, such as in a roof with multi-level eaves.

(v) Residential Wall Design Elements.

(A) Recessed entry – front façade only.
(B) Portico – front façade only. A roofed porch-like space, open along at least one side, connected to the main dwelling entrance, supported by columns or pillars, and either protruding from or recessed within the main dwelling structure.
(C) Covered porch at least thirty-six square feet (36 sq. ft.) in area and at least four feet (4') deep.
(D) Balcony, which projects from the wall plane and is enclosed by a railing or parapet (low protective wall).
(E) Vertical offsets, at least two (2), either projecting or recessed, and at least six inches (6") deep and a minimum of four feet (4') long.
(F) Horizontal offset, either projecting or recessed, at least five inches (5") deep.
(G) Bay window, box window, or box bay, which projects at least six inches (6") outward from the wall plane and forms a bay, alcove, or window seat.
(H) Column or pilaster, either complete or engaged (where one part of its surface is in contact with a wall plane), and in the wall plane, at a change in wall plane, or at a corner of the dwelling.
(I) Exterior chimney of brick, stone, composite masonry or similar materials.
(J) Engaged tower, either square, rectangular, circular or polygonal in form.
(K) Window trim or surround (casing) at least three and one-half inches (3.5") wide that completely surrounds the window, either with or without a sill beneath the window.
(L) Window grids, windows with multi-paned sashes, or elliptical, palladian, segmental arch, semicircular, or similarly shaped windows.
(M) Lintel, arch, or similar decorative header casing on windows, the main entry door, portico, garage door(s), or other opening in the wall plane.
(N) Shutters, as a matched pair for or on a window, either movable or fixed, designed to cover a window and filter light, and usually of wood or similar construction and paneled or fitted with louvers.
(O) Variation in wall cladding, wall-surface pattern, or decorative materials such as shakes, shingles, brick, stone or other similar.

(P) Decorative or "architectural" garage door(s), with or without windows, and including patterning relief at least five-eighths inch (5/8") deep over the door(s) surface, excepting the window area if windows are present.
(Q) Decorative trellis or trellis-work, consisting of open rafter ends or beams and cross pieces to create the appearance of a structure over which climbing plants might be trained to grow.
(R) Band, band course, band molding, belly band, belt course, or similar horizontal element of relatively slight projection marking a division in the wall plane and adding architectural interest to a façade or elevation.

(b) Level II (Discretionary) Single-family Architectural Review. Dwellings shall demonstrate consistency with the objectives of the specific standard from which relief is sought as outlined in TDC 73.180(1), in light of the following discretionary guidelines:

(i) All roofs should be pitched or sloping and articulated by use of such elements as dormers, gables, overhangs or eaves, and should have variations in roof pitch, height of roof planes, or roof orientation to create visual interest and avoid monotony in appearance.
(ii) Architectural articulation and other design elements, such as balconies, porches, dormers, bay windows, vertical or horizontal offsets, variations in cladding, or moldings should be used on all sides of the dwelling (except for a side of a single-family dwelling located in a side yard where the side yard of the dwelling abuts the side yard of an adjacent dwelling) to avoid stark unarticulated building façades (elevations), to minimize the scale and visual impact of a continuous flat wall surface, and to create a sense of visual interest for passersby and neighboring property owners.
(iii) The architectural character (i.e., exterior materials, architectural articulation, design elements, etc.) of the front façade (elevation) of the dwelling should be utilized on all sides of the structure to create a unified appearance and to avoid a single block or box appearance.
(iv) New dwellings should be de-signed and situated on a property in order to create and maintain a visual sense of harmony with surrounding development and should not overwhelm the scale of surrounding development.
(v) The overall architectural de-sign of the dwelling should foster a compatible, positive relationship with the scale and character of the street, and the scale and character of surrounding existing development.

(2) Standards - Multi-family Uses.

The following standards are minimum requirements for multi-family and townhouse development.

(a) Storage.

(i) Except as provided in Subsection (a)(ii), enclosed storage areas are required and shall be attached to the exterior of each dwelling unit to accommodate garden equipment, patio furniture, barbecues, bicycles, etc. Garages are not intended to satisfy storage requirements. Each storage area shall be a minimum of 6 feet in height and have a minimum floor area of:

(A) 24 square feet for studio and one-bedroom units;
(B) 36 square feet for two bed-room units; and
(C) 48 square feet for greater than two-bedroom units.

(ii) For townhouses and residential and mixed use residential developments in the Central Design District, or within the Mixed Use Commercial Overlay District as determined in the Architectural Review process, some provision shall be made for outdoor storage adjacent to private outdoor

areas. Such provisions shall be reviewed for adequacy through Architectural Review and shall be designed to accommodate barbecues or other small deck equipment.

(b) Carports and Garages.

(i) If carports and garages are provided for multi-family development, except townhouses, the form, materials, color and construction shall be compatible with the complex they serve.
(ii) At least one garage space shall be provided for townhouses. [Ord. 705-86, § 6, 9/8/86; Ord. 862-92, § 51, 3/23/92; Ord. 882-92, § 14, 12/14/92; Ord. 1025-99, §38, 7/26/99; Ord. 1252-08 §2, 2/11/08; Ord. 1260-08 §9, 5/12/08]
Response: No residential uses are proposed.

Section 73.200 Structure Design – Commercial, Industrial, Public and Semi-Public Uses.

The purpose of commercial, industrial, public and semi-public building design objectives and standards is to implement the purpose and objectives of TDC 73.020(2) and are intended to promote functional, safe, innovative and attractive buildings which are compatible with the surrounding environment. This concerns the building form including the articulation of walls and roof design, materials, colors, placement of elements such as windows, doors, mechanical equipment and identification features. [Ord. 705-86, §6, 9/8/86]

Section 73.210 Objectives.

All commercial, industrial, public and semi-public projects should strive to meet the following objectives to the maximum extent practicable. Architects and developers should consider these elements in designing new projects. In the Central Design District, the Design Guidelines of TDC 73.610 shall be considered. In case of conflicts between objectives, the proposal shall provide a desirable balance between the objectives. Buildings shall be designed, to the maximum extent practicable, to:

(1) Minimize disruption of natural site features such as topography, trees and water features.
(2) Provide a composition of building elements which is cohesive and responds to use needs, site context, land form, a sense of place and identity, safety, accessibility and climatic factors. Utilize functional building elements such as arcades, awnings, entries, windows, doors, lighting, reveals, accent features and roof forms, whenever possible, to accomplish these objectives.
(3) Where possible, locate loading and service areas so that impacts upon surrounding areas are minimized. In industrial development loading docks should be oriented inward to face otherbuildings or other loading docks. In commercial areas loading docks should face outward towards the public right-of-way or perimeter of the site or both.
(4) Enhance energy efficiency in commercial and industrial development through the use of landscape and architectural elements such as arcades, sunscreens, lattice, trellises, roof overhangs and window orientation.
(5) Locate and design entries and loading/service areas in consideration of climatic conditions such as prevailing winds, sun and driving rains.
(6) Give consideration to organization, design and placement of windows as viewed on each elevation having windows. Surveillance over parking areas from the inside, as well as visual surveillance from the outside in, should be considered in window placement.
(7) Select building materials which contribute to the project's identity, form and function, as well as to the surrounding environment.
(8) Select colors in consideration of lighting conditions and the context under which the structure is

viewed, the ability of the material to absorb, reflect or transmit light and the color's functional role (e.g., to identify and attract business, aesthetic reasons, image-building).
(9) Where possible, locate windows and provide lighting in a manner which enables tenants, employees and police to watch over pedestrian, parking and loading areas.
(10) Where practicable locate windows and provide lighting in a manner which enables surveillance of interior activity from the public right-of-way or other public areas. [Ord. 904-93, §51, 9/13/93; Ord. 1097-02, 2/11/02]

Response:

(1) to the greatest extent practicable, the existing forested area is maintained.
(2) All storage buildings have a cohesive appearance, including materials and rooflines in common.
(3) To the greatest extent practicable, loading areas are oriented inward to face other buildings.
(4) The proposed buildings will consume minimal amounts of energy. No unique features are proposed to enhance energy efficiency.
(5) All structures are oriented on site to minimize site disturbance; no climatic conditions are considered for their orientation.
(6) Building 300's windows surveil site operations.
(7) The building forms are a direct response to their function. Building colors reflect Air Liquide's identity by using their corporate colors.
(8) The building colors are selected for corporate identity only.
(9) Building 300's windows surveil on-site functions.
(10) No interior activity surveillance from the public's right of way is proposed for compliance with Homeland Security requirements.

Section 73.220 Standards.

The following standards are minimum requirements for commercial, industrial, public and semi-public development and it is expected that development proposals shall meet or exceed these minimum requirements.

(1) Safety and Security.

(a) Locate, orient and select on-site lighting to facilitate surveillance of on-site activities from the public right-of-way or other public areas without shining into public rights-of-way or fish and wildlife habitat areas.
(b) Provide an identification system which clearly identifies and locates buildings and their entries.
(c) Shrubs in parking areas shall not exceed 30 inches in height, and tree canopies must not extend below 8 feet measured from grade, except for parking structures and underground parking where this provision shall not apply. [Ord. 904-93, §52, 9/13/93; Ord. 20-94, §18, 4/11/94; Ord. 1224-06 §24, 11/13/06]

Response:

(1) (a) No interior activity surveillance from the public's right-of-way is proposed. Site lighting fixtures are shielded as much as practicable to minimize shining into public right-of-way and wildlife habitats while providing necessary on-site safety and security.

(b) Each building is clearly labeled with unique numbering, 100, 200, 300, 400, and 500
and entries are clearly designated. Please see sheets 101 and 102.
(c) Proposed landscaping meets requirements.

Section 73.221 Purpose and Objectives.

(1) Purpose. The purpose of fence design standards in the RL and RML Planning Districts for access-restricted lot lines and property lines abutting major and minor collector and arterial and expressway streets and interstate highways (I-5 or I-205) is to implement the community design objectives of TDC 10.020.
(2) Objectives. Fences shall be designed to the maximum extent practicable, to achieve the following:

(a) Rear yards and side yards adjacent collector, arterial and expressway streets and interstate highways shall be screened from public view.
(b) Fences shall be constructed of highly durable materials that are low-maintenance and weather-resistant.
(c) Fence materials and design shall be compatible and harmonious with the required fence design type detailed in TDC 34.330 and 34.340. The design shall incorporate stone-look or brick-look elements. Colors shall be subdued and natural earth-tones, brown-tones, or grey-tones. [Ord. 1244-07 §5, 7/23/07, Ord. 1285-09 §4, 7/13/09]
Response: The site is not included in the RL or RML Planning Districts.

Section 73.222 Fence Standards.

Minimum requirements for construction of fences in a RL or a RML Planning District, where an access-restricted lot line or property line abuts a public street right-of-way classified as a major or minor collector or arterial or expressway street, or a property line of a state-owned interstate highway are set forth in TDC 34.330 and 34.340. [Ord. 1244-07 §6, 7/23/07, Ord. 1285-09 §5, 7/13/09]
Response: The site is not located in a RL or a RML Planning District.

Section 73.225 Mixed Solid Waste and Source Separated Recyclables Storage Areas for New or Expanded Multi-Unit Residential, Including Townhouses, Commercial, Industrial, Public and Semi-Public Development.

The purpose of mixed solid waste and source separated recyclables storage areas objectives and standards is to implement the purposes and objectives of TDC 73.020(2). The objectives and standards are intended to be flexible, easy and efficient to administer, and allow creativity. [Ord. 898-93, §6, 6/14/93. Ord. 1025-99, §39, 7/26/99; Ord. 1097-02, 2/11/02]

Section 73.226 Objectives.

All new or expanded multi-family, including townhouses, commercial, industrial, public and semi-public projects should strive to meet the following objectives to the maximum extent practicable. Architects and developers should consider these elements in designing new projects. In the Central Design District, the Design Guidelines of TDC 73.610 shall be considered. In the case of conflicts between objectives, the proposal shall provide a desirable balance between the objectives. Townhouses may necessitate a different balancing than multi-family developments

such as apartments. Mixed solid waste and source separated recyclable storage areas shall be designed to the maximum extent practicable, to:

(1) Screen elements such as garbage and recycling containers from view.
(2) Ensure storage areas are centrally located and easy to use.
(3) Meet dimensional and access requirements for haulers.
(4) Designed to mitigate the visual impacts of storage areas.
(5) Provide adequate storage for mixed solid waste and source separated recyclables.
(6) Improve the efficiency of collection of mixed solid waste and source separated recyclables.
[Ord. 898-93, §7, 6/14/93. Ord. 1025-99, §40, 7/26/99; Ord. 1097-02, 2/11/02]
Response:
(1) Building 500, refuse enclosure, screens containers from view.
(2) Building 500 is located as equidistant among buildings as practicable.
(3) Building 500 meets Republic Services' criteria. Please see Exhibit G herewith submitted.
(4) Building 500 is located at the edge of the proposed development area.
(5) Building 500 provides adequate refuse storage area. Please see Exhibit G herewith submitted.
(6) Building 500 is located for Republic Services' efficient access. Please see Exhibit G herewith submitted.

Section 73.227 Standards.

The following standards are minimum requirements for mixed solid waste and source separated recyclables storage areas. To provide for flexibility in designing functional storage areas, this section provides four different methods to meet the objectives of providing adequate storage for mixed solid waste and source separated recyclables and improving the efficiency of collection. An applicant shall choose and implement one of the following four methods to demonstrate compliance: 1) minimum standards; 2) waste assessment; 3) comprehensive recycling plan; or 4) franchised hauler review, as more fully described in subsections (2), (3), (4) and (5) of this section.

(1) The mixed solid waste and source separated recyclables storage standards shall apply to all new or expanded multi-family residential developments containing five or more units and to new or expanded commercial, industrial, public and semi-public development.
(2) 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.

(a) The size and location of the storage area(s) shall be indicated on the site plan. Compliance with the requirements set forth below are reviewed through the Architectural Review process.

(i) The storage area requirement is based on the area encompassed by predominant use(s) of the building (e.g., residential, office, retail, wholesale/warehouse/manufacturing, educational/institutional or other) as well as the area encompassed by other distinct 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 shall 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 shall be the sum of the area of each use.
(ii) Storage areas for multiple uses on a single site may be combined and shared.
(iii) The specific requirements are based on an assumed storage area height of 4 feet for mixed

solid waste and source separated recyclables. Vertical storage higher than 4 feet, but no higher than 7 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 shall include drawings to illustrate the layout of the storage area and dimensions for containers.
(iv) Multi-family residential developments containing 5-10 units shall provide a minimum storage area of 50 square feet. Multi-family residential developments containing more than 10 units shall provide 50 square feet plus an additional 5 square feet per unit for each unit above 10.
(v) Commercial, industrial, public and semi-public developments shall provide a minimum storage area of 10 square feet plus: Office - 4 square feet/1000 square feet gross leasable area (GLA); Retail - 10 square feet/1000 square feet GLA; Wholesale/ Warehouse/ Manufacturing - 6 square feet/1000 square feet GLA; Educational and institutional - 4 square feet/1000 square feet GLA; and other - 4 square feet/1000 square feet GLA.

(3) Waste Assessment Method. This method tailors the storage area size to a waste assessment and management program for the specific user of a new or expanded building. It is most appropriate when the specific use of a building is known and the type and volume of mixed solid waste to be generated can be estimated. A pre-application conference is required if the waste assessment method is proposed. The applicant shall obtain a waste assessment form from the Planning Department. The form shall be used to estimate the volumes of both mixed solid waste and source separated recyclables generated. From this information, the applicant can design a specific management, storage and collection system.
Techniques such as a compactor or cardboard baler may be implemented to minimize the square footage of the storage area. If this method of compliance is selected the waste assessment form shall be completed and submitted as part of the Architectural Review application. The plans must identify the size and location of interior, or exterior storage area(s) or both, specialized equipment to be used, and collection schedule required to accommodate the volumes of waste projected in the waste assessment. The application shall demonstrate that the mixed solid waste and source separated recyclable volumes expected to be generated can be stored in less space than required by the Minimum Standards Method. If the application does not demonstrate that the waste assessment method requires less space, through the Architectural Review process the minimum standards method may be required. The waste assessment method shall be reviewed and approved as part of the Architectural Review process.

(4) Comprehensive Recycling Plan Method. The comprehensive recycling plan method is most appropriate when an applicant has independently developed a comprehensive recycling plan which addresses mixed solid waste and source separated recyclable collection and storage for the proposed use. This method can be used when a comprehensive recycling plan has been developed for a specific development. It is most suited to uses such as hospitals, schools and industrial developments. The comprehensive recycling plan shall be submitted at the time plans are submitted for Architectural Review. The applicant shall submit plans and text that show how mixed solid waste and source separated recyclables generated by the proposed development will be served under a comprehensive recycling plan.
The application shall also demonstrate that the mixed solid waste and source separated recyclables volumes expected to be generated can be stored in less space than is required by the Minimum Standards Method. If the application does not demonstrate that the comprehensive recycling plan method requires less space, through the Architectural Review process the minimum standards method may be required. The comprehensive recycling plan method shall be reviewed and approved as part of the Architectural Review process.

(5) Franchised Hauler Review Method. The franchised hauler review method provides for a coordinated review of the pro-posed site plan by the franchised hauler serving the subject property. This method can be used when there are unique conditions associated with the site, use, or waste stream that make compliance with any of the three other methods impracticable. The objective of this method is to match a specific hauler program (types of equipment, frequency of collection, etc.) to the unique characteristic(s) of the site or development. The applicant shall coordinate with the franchised hauler to develop a plan for storage and collection of mixed solid waste and source separated recyclables to be generated. A narrative describing how the proposed site meets one or more unique conditions, plus site plan and architectural drawings showing the size and location of storage area(s) required to accommodate anticipated volumes shall be submitted for Architectural Review. Additionally, a letter from the franchised hauler shall be submitted with the application that de-scribes the level of service to be provided by the hauler, including any special equipment and collection frequency, which will keep the storage area from exceeding its capacity. For purposes of this subsection the following constitute unique conditions:

(a) Use of either of the three other methods of compliance would interfere with the use of the proposed development by reducing the productive space of the proposed development, or make it impossible to comply with the minimum off-street parking requirements of the underlying planning district, or
(b) The site is of an irregular shape or possesses steep slopes that do not allow for access by collection vehicles typically used by the franchised hauler to serve uses similar in size and scope to the proposed use, or
(c) The proposed use will generate unique wastes that can be stacked, folded, or easily consolidated without the need for specialized equipment, such as a compactor, and can therefore be stored in less space than is required by the Minimum Standards Method.
If the application does not demonstrate that the franchised hauler method requires less space, through the Architectural Review process the minimum standards method may be required. The franchised hauler method shall be reviewed and approved as part of the Architectural Review process.

(6) Location, Design and Access Standards for Storage Areas. The following location, design and access standards are applicable for storage areas:

(a) Location Standards

(i) To encourage its use, the storage area for source separated recyclables may be co-located with the storage area for mixed solid waste.
(ii) Indoor and outdoor storage areas shall comply with Building and Fire Code requirements.
(iii) Storage area space requirements can be satisfied with a single location or multiple locations, and can combine both interior and exterior locations.
(iv) Exterior storage areas shall not be located within a required front yard setback or in a yard adjacent to a public or private street.
(v) Exterior storage areas shall be located in central and visible locations on the site to enhance security for users.
(vi) Exterior storage areas can be located in a parking area, if the proposed use provides parking spaces required through the Architectural Review process. Storage areas shall be appropriately screened according to TDC 73.227(6)(b)(iii).
(vii) Storage areas shall be accessible for collection vehicles and located so that the storage area will not obstruct pedestrian or vehicle traffic movement on site or on public streets adjacent to the site.

(b) Design Standards

(i) The dimensions of the storage area shall accommodate containers consistent with current methods of local collection at the time of Architectural Review approval.
(ii) Storage containers shall meet Fire Code standards and be made and covered with water proof materials or situated in a covered area.
(iii) Exterior storage areas shall be enclosed by a sight obscuring fence or wall at least 6 feet in height. In multi-family, commercial, public and semi-public developments evergreen plants shall be placed around the enclosure walls, excluding the gate or entrance openings. Gate openings for haulers shall be a minimum of 10 feet wide and shall be capable of being secured in a closed and open position. A separate pedestrian access shall also be provided in multi-family, commercial, public and semi-public developments.
(iv) Exterior storage areas shall have either a concrete or asphalt floor surface.
(v) Storage areas and containers shall be clearly labeled to indicate the type of material accepted.

(c) Access Standards

(i) Access to storage areas can be limited for security reasons. However, the storage areas shall 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.
(ii) Storage areas shall be designed to be easily accessible to hauler trucks and equipment, considering paving, grade, gate clearance and vehicle access. A minimum of 10 feet horizontal clearance and 8 feet vertical clearance is required if the storage area is covered.
(iii) Storage areas shall be accessible to collection vehicles without requiring backing out of a driveway onto a public street. If only a single access point is available to the storage area, adequate turning radius shall be provided to allow vehicles to safely exit the site in a forward motion. [Ord. 898-93, §8, 6/4/93]

Response:

(2) (a) Minimum Standards, sub-section (1) is proposed for designing the functional storage area, Building 500

Table 73.227.1 Trash Enclosure Requirements			
Building	**Use**	**Required(SF)**	**Provided(SF)**
100	**Warehouse**	**6/1000= 27**	
200	**Warehouse**	**6/100= 27.5**	
300	**Office**	**4/1000=2.7**	
400	**Warehouse**	**6/1000= 4.1**	
Additional 10 SF		**10**	
Total		**71.3**	**308**

(6) (a) (i) All waste is collocated.
(ii) Refuse enclosure is all non-combustible construction.
(iii) A single refuse enclosure is provided.
(iv) The refuse enclosure is not located within any setbacks.
(v) The refuse enclosure is highly visible from within the development area.
(vi) The refuse enclosure is located adjacent to the site vehicular circulation and is composed of perimeter walls at least 6'-0" high.
(vii) The refuse enclosure location will not obstruct vehicle or pedestrian traffic because a separate on-site vehicular drive area is provided.
(b) (i) The refuse enclosure meets Republic Services' methods for collection.
(ii) The refuse enclosure is constructed of non-combustible materials including steel roof.
(iii) The refuse enclosure includes a perimeter wall at least 6'-0" high. Gate openings exceed 10'-0" and can be secured in both open and closed positions.
(iv) The refuse enclosure has a concrete floor surface.
(v) Storage areas and containers will be clearly labeled to indicate the type of material accepted prior to occupancy.
(c) (i) Due to security requirements, access to the refuse enclosure will be restricted. Air Liquide will schedule access times with Republic Services.
(ii) A minimum of 10 feet horizontal clearance and 8 feet vertical clearance is provided.
(iii) Access to the refuse enclosure by collection vehicles does not require these vehicles to be in the public right-of-way.

LANDSCAPING

Section 73.230 Landscaping Standards.

The purpose of this section is to establish standards for landscaping within Tualatin in order to enhance the environmental and aesthetic quality of the City:

(1) By encouraging the retention and protection of existing trees and requiring the planting of trees in new developments;
(2) By using trees and other landscaping materials to temper the effects of the sun, wind, noise, and air pollution.
(3) By using trees and other landscaping materials to define spaces and the uses of specific areas; and
(4) Through the use of trees and other landscaping materials as a unifying element within the urban environment. [Ord. 705-86, §6, Sept. 8, 1986]

Section 73.231 Landscape Guide-lines for the Central Design District.

(1) Purpose. The purpose of the landscaping guidelines section is to enhance the environmental and aesthetic quality of the Central Design District.
(2) All multi-family residential, commercial, industrial, public and semi-public projects in the Central Design District should strive to meet the Design Guidelines of TDC 73.610 for landscaping to the maxi-mum extent practicable. Landscape Architects and developers shall consider the landscaping elements of TDC 73.610 in designing new projects. In case of conflicts between guidelines and or between guidelines and objectives in TDC Chapter 73, the proposal shall provide a balance. [Ord. 1097-02, 02/11/02]

Section 73.240 Landscaping General Provisions.

(1) The following standards are minimum requirements.
(2) The minimum area requirement for landscaping for conditional uses for RL, RML, RMH, RH and RH/HR Planning Districts, listed in TDC 40.030, 41.030, 42.030, 43.030 and 44.030, excluding 40.030(3), 40.030 (4)(j), 40.030 (4)(m), 40.030 (4)(n) and 41.030(2) shall be twenty-five (25) percent of the total area to be developed. When a dedication is granted in accordance with the planning district provisions on the subject property for a fish and wildlife habitat area, the minimum area requirement for landscaping shall be twenty (20) percent of the total area to be developed as determined through the AR process.
(3) The minimum area requirement for landscaping for uses in CO, CR, CC, CG, ML and MG Planning Districts shall be fifteen (15) percent of the total land area to be developed, except within the Core Area Parking District, where the minimum area requirement for landscaping shall be 10 percent. When a dedication is granted in accordance with the planning district provisions on the subject property for a fish and wildlife habitat area, the minimum area requirement for landscaping may be reduced by 2.5 percent from the minimum area requirement as determined through the AR process.
(4) The minimum area requirement for landscaping for uses in IN, CN, CO/MR, MC and MP Planning Districts shall be twenty-five (25) percent of the total land area to be developed. When a dedication is granted in accordance with the planning district provisions on the subject property for a fish and wildlife habitat area, the minimum area requirement for landscaping may be reduced by 2.5 percent from the minimum area requirement as determined through the AR process.
(5) The minimum area requirement for landscaping for uses in the Industrial Business Park Overlay Planning District and the Manufacturing Business Park Planning District shall be twenty (20) percent of the total land area to be developed.
(6) The minimum area requirement for landscaping for approved Industrial Master Plans shall be 20% of the total land area to be developed.
(7) For properties within the Hedges Creek Wetland Protection District which have signed the "Wetlands Mitigation Agreement", the improved or unimproved wetland buffer area may reduce the required landscaping to 12.5 percent as long as all other landscape requirements are met.
(8) Developments not in a Low Density Residential (RL) or Manufacturing Park (MP) Planning District, but which abut an RL or MP Planning District shall provide and perpetually maintain dense, evergreen landscaped buffers between allowed uses in the district and the adjacent Low Density Residential (RL) or Manufacturing Park (MP) Planning District as approved through the Architectural Review process.
(9) Yards adjacent to public streets, except as described in the Hedges Creek Wetlands Mitigation Agreement, TDC 73.240(7), shall be planted to lawn or live groundcover and trees and shrubs and be perpetually maintained in a manner providing a park-like character to the property as approved through the Architectural Review process.
(10) Yards not adjacent to public streets or Low Density Residential (RL) or Manufacturing Park (MP) Planning Districts shall be planted with trees, shrubs, grass or other live groundcover, and maintained consistent with a landscape plan indicating areas of future expansion, as approved through the Architectural Review process.
(11) Any required landscaped area shall be designed, constructed, installed, and maintained so that within three years the ground shall be covered by living grass or other plant materials. (The foliage crown of trees shall not be used to meet this requirement.) A maximum of 10% of the landscaped area may be covered with un-vegetated areas of bark chips, rock or stone. Disturbed soils are encouraged to be amended to an original or higher level of porosity to regain infiltration and stormwater storage capacity.

(12) In the MP District, wetland buffer areas up to 50 feet in width may be counted toward the required percentage of site landscaping, subject to the following:

(a) The amount of wetland buffer area which may be counted as landscaping is limited to a maximum of two and one-half percent (2.5 percent) of the total land area to be developed.

(b) All portions of the required buffer area to be counted as landscape shall be within the boundaries of the subject property. No credit may be claimed for wetland buffer areas lying outside the lot lines of the subject parcel.
(c) Where wetlands mitigation in the buffer has not yet occurred at the time of development, the developer shall perform, or bear the cost of, all necessary mitigation work in the course of site development, in accordance with a Removal/Fill Permit or permits issued by the Oregon Division of State Lands and the US Army Corps of Engineers and the Unified Sewerage Agency.
(d) Where wetlands mitigation in the buffer has already been performed in accordance with a Removal/Fill Permit or permits issued by the Oregon Division of State Lands and the US Army Corps of Engineers, the developer shall include an enhanced mitigation plan approved by the Oregon Division of State Lands and the Unified Sewerage Agency as part of the Architectural Review submittal. The developer shall complete all work required by the enhanced wetland mitigation plan in conjunction with development of the site.

(13) Landscape plans for required landscaped areas that include fences should carefully integrate any fencing into the plan to guide wild animals toward animal crossings under, over, or around transportation corridors. [Ord. 882-92 §15, 12/14/92; Ord. 890-93 §9, 4/12/93; Ord. 904-93 §53 and 54, 9/13/93; Ord. 993-94 §48, 11/28/94; Ord. 1025-99 §41, 7/26/99; Ord. 1035-99 §16, 11/8/99; Ord. 1070-01 §11, 4/9/01; Ord. 1070-01, 4/9/01; Ord. 1216-06, 7/24/06; Ord. 1224-06 §25, 11/13/06; Ord. 1321-11 §49, 4/25/11]
Response: Response: As shown in the table below and in the attached plans (see sheet L2.0), 54% of the proposed development will be landscaped.

Table 73.240.1
Landscape Coverage

Use	Area
Development (SF)	116,464
Landscape Area (SF)	63,119
Landscape %	54.0%

Section 73.250 Tree Preservation.

(1) Trees and other plant materials to be retained shall be identified on the landscape plan and grading plan.

(2) During the construction process:

(a) The owner or the owner's agents shall provide above and below ground protection for existing trees and plant materials identified to remain.
(b) Trees and plant materials identified for preservation shall be protected by chain link or other

sturdy fencing placed around the tree at the drip line.
(c) If it is necessary to fence within the drip line, such fencing shall be specified by a qualified arborist as defined in TDC 31.060.
(d) Neither top soil storage nor construction material storage shall be located within the drip line of trees designated to be preserved.
(e) 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 shall 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.
(f) Tree root ends shall not remain exposed.

(3) Landscaping under preserved trees shall be compatible with the retention and health of said tree.
(4) When it is necessary for a preserved tree to be removed in accordance with TDC 34.210 the landscaped area surrounding the tree or trees shall 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, nearby landscape materials. Native trees are encouraged
(5) Pruning for retained deciduous shade trees shall be in accordance with National Arborist Association "Pruning Standards For Shade Trees," revised 1979.
(6) Except for impervious surface areas, one hundred percent (100%) of the area preserved under any tree or group of trees retained in the landscape plan (as approved through the Architectural Review process) shall apply directly to the percentage of landscaping required for a development. [Ord. 904-93, §55, 9/13/93; Ord. 1224-06, §26, 11/13/06]

Response:

All existing vegetation within the site development area is proposed to be removed. However, existing vegetation will be preserved in all areas of the site that lie outside the site development area. The proposed fence surrounding the development area will function as tree protection fencing for trees in undeveloped areas of the site. Existing trees have been inventoried in a report by the project arborist. Existing tree canopy has been shown on a tree plan by the project landscape architect. Please refer to the Arborist Report, see Exhibit L and Tree Plan for further information.

Section 73.260 Tree and Plant Specifications.

(1) The following specifications are minimum standards for trees and plants:

(a) Deciduous Trees:
Deciduous shade and ornamental trees shall be a minimum one and one-half inch (1 1/2") caliper measured six inches (6") above ground, balled and burlapped. Bare root trees will be acceptable to plant during their dormant season. Trees shall be characteristically shaped specimens.
(b) Coniferous Trees.
Coniferous trees shall be a minimum five feet (5') in height above ground, balled and burlapped. Bare root trees will be acceptable to plant during their dormant season. Trees shall be well branched and characteristically shaped specimens.
(c) Evergreen and Deciduous Shrubs.
Evergreen and deciduous shrubs shall be at least one (1) to five (5) gallon size. Shrubs shall be characteristically branched. Side of shrub with best foliage shall be oriented to public view.
(d) Groundcovers.
Groundcovers shall be fully rooted and shall be well branched or leafed. English ivy (Hedera helix)

is considered a high maintenance material which is detrimental to other landscape materials and buildings and is therefore prohibited.
(e) Lawns.
Lawns shall consist of grasses, including sod, or seeds of acceptable mix within the local landscape industry. Lawns shall be 100 percent coverage and weed free.

(2) Landscaping shall be installed in accordance with the provisions of Sunset New Western Garden Book (latest edition), Lane Publishing Company, Menlo Park, California or the American Nurserymen Association Standards (latest edition).
(3) The following guidelines are suggested to ensure the longevity and continued vigor of plant materials:

(a) Select and site permanent landscape materials in such a manner as to produce a hardy and drought-resistant landscaped area.
(b) Consider soil type and depth, spacing, exposure to sun and wind, slope and contours of the site, building walls and overhangs, and compatibility with existing native vegetation preserved on the site or in the vicinity.

(4) All trees and plant materials shall be healthy, disease-free, damage-free, well-branched stock, characteristic of the species.
(5) All plant growth in landscaped areas of developments shall be controlled by pruning, trimming or otherwise so that:

(a) It will not interfere with designated pedestrian or vehicular access; and
(b) It will not constitute a traffic hazard because of reduced visibility. [Ord. 904-93, §57, 9/13/93]
Response:
Plants that have a track record for being tough and durable have been selected for this industrial site. The proposed shrubs and grasses have the ability to be cut to the ground and regenerate from the ground. This is a useful in the event that they are accidently run over by a truck or cut down by an overzealous maintenance person. Trees have been located away from stormwater lines to prevent damage from roots.

Section 73.270 Grading.

(1) 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.
(2) All planting areas shall be graded to provide positive drainage.
(3) Neither soil, water, plant materials nor mulching materials shall be allowed to wash across roadways or walkways.
(4) Impervious surface drainage shall 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:
The landscape contractor and general contractor will grade the site in accordance with this section.

Section 73.280 Irrigation System Required.

Except for townhouse lots, landscaped areas shall be irrigated with an automatic underground or drip irrigation system. [Ord. 1025-99, §42, 7/26/99]
Response:

Irrigation will be provided (design/build) by the owner or contractor. The irrigation system will be a fully automatic underground or drip system capable of adequately watering plants all year.

Section 73.290 Re-vegetation in Un-landscaped Areas.

The purpose of this section is to ensure erosion protection, and in appropriate areas to encourage soil amendment, for those areas not included within the landscape percentage requirements so native plants will be established, and trees will not be lost.

(1) 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, vegetation shall be replanted.

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

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

(4) Disturbed soils should be amended to an original or higher level of porosity to regain infiltration and storm water storage capacity. [Ord. 1224-06 §27, 11/13/06]
Response:
Plant materials will be watered by an irrigation system. The landscape architect has used several native species in the landscape design. The owner or contractor shall provide an amended topsoil for all planting beds.

Section 73.300 Landscape Standards – Multi-family Uses.

All areas within a development, including townhouses, not occupied by buildings, parking spaces, driveways, drive aisles, pedestrian areas, or undisturbed natural areas shall be landscaped. Townhouse developments may include hard surfaces in outdoor areas such as patios and storage areas as determined in the Architectural Review process. [Ord. 1025-99, §43, 7/2/99]
Response: No multi-family uses are proposed.

Section 73.310 Landscape Standards- Commercial, Industrial, Public and Semi-Public Uses.

(1) A minimum 5-foot-wide landscaped area must be located along all building perimeters which are viewable by the general public from parking lots or the public right-of-way, excluding loading areas, bicycle parking areas and pedestrian egress/ingress locations. Pedestrian amenities such as landscaped plazas and arcades may be substituted for this requirement. This requirement shall not apply 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 8 feet.

(2) Areas exclusively for pedestrian use that are developed with pavers, bricks, etc., and contain pedestrian amenities, such as benches, tables with umbrellas, children's play areas, shade trees, canopies, etc., may be included as part of the site landscape area requirement.

(3) All areas not occupied by buildings, parking spaces, driveways, drive aisles, pedestrian areas or undisturbed natural areas shall be landscaped. [Ord. 882-92, §16, 12/14/92; Ord. 904-93, §58, 9/13/93]

Response:
The project proposes a secure, fenced and gated gas bottle storage facility off-limits to the general public. The site is also accessed by a flag stem and is not visible to the general public from the nearest right-of-way. As such, the requirement for 5-foot landscaped area along all building perimeters (Section 73.310(1)) does not apply. However, perimeter landscaping in accordance with this requirement has been provided around buildings wherever it does not interfere with pedestrian access or loading areas. All areas within the site development not occupied by buildings, parking spaces, driveways, drive aisles, pedestrian areas or undisturbed natural areas will be landscaped.

OFF-STREET PARKING LOT LANDSCAPING

Section 73.320 Off-Street Parking Landscaping Standards.

(1) General Provisions. In addition to the goals stated in TDC 73.110 and 73.140, the goals of the off-street parking lot standards are to create shaded areas in parking lots, to reduce glare and heat buildup, provide visual relief within paved parking areas, emphasize circulation patterns, reduce the total number of spaces, reduce the impervious surface area and stormwater runoff and enhance the visual environment. The design of the off-street parking area shall be the responsibility of the developer and should consider visibility of signage, traffic circulation, comfortable pedestrian access, and aesthetics. Trees shall not be cited as a reason for applying for or granting a variance on placement of signs.

(2) Application. Off-street parking lot landscaping standards shall apply to any surface vehicle parking or circulation area.
[Ord. 904-93, §59, 9/13/93; Ord. 1224-06 §28, 11/13/06]

Section 73.330 Parking Lot Landscaping – Multi-family Uses.

(1) Locate landscaping or approved substitute materials in all areas not necessary for vehicular parking and maneuvering.
(2) A clear zone shall be provided 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 8 feet as measured from the ground level.
(3) Except for townhouse lots, a minimum 10-foot landscape setback shall be provided between the property lines and parking areas. This area shall be planted with deciduous trees an average of not more than 30 feet on center and shrubs at least 30 inches in height which provide screening of vehicular headlights. Trees shall meet the requirements of TDC 73.360(7). Native trees and shrubs are encouraged.
(4) Except for townhouse lots, provide a landscaped transition area of at least 10 feet in width between parking and vehicle circulation areas and buildings and shared outdoor areas. Deciduous shade trees located at not less than 30 feet on center shall be located in this transition area. The trees shall meet the requirements of TDC 73.360(7). Groundcover plants mixed with low shrubs must completely cover the remainder of this area within three years. Native trees and shrubs are encouraged. [Ord. 882-92, §17, 12/14/92. Ord. 1025-99, §44, 7/26/99; Ord. 1224-06 §29, 11/13/06]
Response: No multi-family uses are proposed.

Section 73.340 Off-Street Parking Lot and Loading Area Landscaping – Commercial, Industrial, Public and Semi-Public Uses, and Residential and Mixed Use Residential Uses within the Central Design District.

(1) A clear zone shall be provided 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 8 feet as measured from the ground level, except for parking structures and underground parking where this provision shall not apply.
(2) Perimeter site landscaping of at least 5 feet in width shall be provided in all off-street parking and vehicular circulation areas (including loading areas). For conditional uses in multifamily residential planning districts the landscape width shall be at least 10 feet except for uses allowed by TDC 40.030(3), 40.030(5)(j), 40.030(5)(m), 40.030(5)(n) and 41.030(2).

(a) The landscape area shall contain:

(i) Deciduous trees an average of not more than 30 feet on center. The trees shall meet the requirements of TDC 73.360(7).
(ii) Plantings which reach a mature height of 30 inches in three years which provide screening of vehicular headlights year-round.
(iii) Shrubs or ground cover, planted so as to achieve 90 percent coverage within three years.
(iv) Native trees and shrubs are encouraged.

(b) Where off-street parking areas on separate lots are adjacent to one another and are connected by vehicular access, the landscaped strips required in subsection (2) of this section are not required. [Ord. 882-92, §18, 12/14/92; Ord. 904-93, § 61, 9/13/93; Ord. 920-94, §19, 4/11/94; Ord. 1224-06 §30, 11/13/06]
Response: Perimeter landscape beds, a minimum of 5-feet wide, have been provided around the site perimeter and parking areas. This includes trees 30-feet apart, shrubs, and groundcover in accordance with Section 73.340. All parking lot landscaping proposed for the project has been designed to comply with this section of the design guidelines.

Section 73.350 Off-Street Parking Lot Landscape Island Requirements – Multi-family Uses.

(1) Except for townhouse lots that are not required to have landscape island areas, a minimum of 25 square feet per parking stall shall be improved with landscape island areas. They 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. They shall be protected from vehicles by curbs, but the curbs may have spaces to allow drainage into the islands. They shall be dispersed throughout the parking area (see TDC 73.380(3). They shall be planted with groundcover or shrubs. They shall be planted with deciduous shade trees when needed to meet the parking lot shade tree requirements. Native plant materials are encouraged. Landscape square footage requirements shall not apply to parking structures and underground parking.
(2) Landscape island areas with trees shall be a minimum of 5 feet in width (from inside of curb to curb).
(3) A minimum of one deciduous shade tree shall be provided for every four parking spaces to lessen the adverse impacts of glare, reduce heat from paved surfaces, and to emphasize circulation patterns. Required shade trees shall be within 5 feet of the face of a perimeter parking lot curb and shall be uniformly distributed throughout the parking lot (see TDC 73.380(3)), except that within the Central Design District landscape islands and shade trees may be placed to frame views of the Tualatin Commons water feature or identified architectural focal elements. The trees shall meet the requirements of TDC 73.360(7).
(4) Required plant material in landscape islands shall achieve 90 percent coverage within three years. Native shrubs and trees are encouraged. [Ord. 882-92, §19, 12/14/92; Ord. 904-93, §62, 9/13/93; Ord. 1025-99, §45, 7/26/99; Ord. 1224-06 §31, 11/13/06]

Response: No multi-family uses are proposed.

Section 73.360 Off-Street Parking Lot Landscape Islands – Commercial, Industrial, Public and Semi-Public Uses.

(1) A minimum of 25 square feet per parking stall shall be improved with landscape island areas. They may be lower than the surrounding parking surface to al-low them to receive stormwater run-off and function as water quality facilities as well as parking lot landscaping. They shall be protected from vehicles by curbs, but the curbs may have spaces to allow drainage into the islands. They shall be dispersed throughout the parking area [see TDC 73.380(3)]. They shall be planted with groundcover or shrubs that will completely cover the island area within 3 years. They shall be planted with deciduous shade trees when needed to meet the parking lot shade tree requirements. Native plant materials are encouraged. Landscape square footage requirements shall not apply to parking structures and underground parking.
(2) Landscaped island areas with deciduous parking lot shade trees shall be a minimum of 5 feet in width (from inside of curb to curb).
(3) A minimum of one deciduous shade tree shall be provided for every four (4) parking spaces to lessen the adverse impacts of glare, reduce heat from paved surfaces, and to emphasize circulation patterns. Required shade trees shall be uniformly distributed throughout the parking lot (see TDC 73.380(3)), except that within the Central Design District landscape islands and shade trees may be placed to frame views of the Tualatin Commons water feature or identified architectural focal elements. The trees shall meet the requirements of TDC 73.360(7). Parking lot shade tree requirements shall not apply to parking structures and underground parking.
(4) Landscape islands shall be utilized at aisle ends to protect parked vehicles from moving vehicles and emphasize vehicular circulation patterns. Landscape island location requirements shall not apply to parking structures and under-ground parking.
(5) Required plant material in landscape islands shall achieve 90 percent coverage within three years. Native shrubs and trees are encouraged.
(6) (a) Except as in (b) below, site access from the public street shall be defined with a landscape area not less than 5 feet in width on each side and extend 25 feet back from the property line for commercial, public, and semi-public development with 12 or more parking spaces and extend 30 feet back from the property line for industrial development, except for parking structures and under-ground parking which shall be determined through the Architectural Review process.

(b) In the Central Design District where driveway access is on local streets, not collectors or arterials, and the building(s) on the property is(are) less than 5,000 square feet in gross floor area, or parking is the only use on the property, site access from the public street shall be defined with a landscape area not less than 5 feet in width on each side and extend 5 feet back from the property line, except for parking structures and underground parking which shall be determined through the Architectural Review process.

(7) Deciduous shade trees shall meet the following criteria:

(a) Reach a mature height of 30 feet or more;
(b) Cast moderate to dense shade in summer;
(c) Long lived, i.e., over 60 years;
(d) Do well in an urban environment:

(i) Pollution tolerant.
(ii) Tolerant of direct and reflected heat.

(e) Require little maintenance:

(i) Mechanically strong.
(ii) Insect- and disease-resistant.
(iii) Require little pruning.

(f) Be resistant to drought conditions;
(g) Be barren of fruit production. [Ord. 882-92, §20, 12/14/92; Ord. 904-93, §64, 9/13/93; Ord. 920-94, §20, 4/11/94; Ord. 945-95, §1, 5/8/95; Ord. 1224-06 §32, 11/13/06]
Response:
The project is proposing 7 parking stalls. 175 square feet of parking lot island space is required and 2 shade trees are required. The project is proposing in excess of 175 square feet of island space at the ends of the parking stall row and 3 shade trees adjacent to the parking stalls. All other applicable requirements in this section have been met or exceeded by the landscape plan.

Section 73.370 Off-Street Parking and Loading

(1) General Provisions.

(a) At the time of establishment of a new structure or use, or change in use, or change in use of an existing structure, within any planning district of the City, off-street parking spaces, off-street vanpool and carpool parking spaces for commercial, institutional and industrial uses, off-street bicycle parking, and off-street loading berths shall be as provided in this and following sections, unless greater requirements are otherwise established by the conditional use permit or the Architectural Review process, based upon clear findings that a greater number of spaces are necessary at that location for protection of public health, safety and welfare or that a lesser number of vehicle parking spaces will be sufficient to carry out the objectives of this section. In the Central Design District, the Design Guidelines of TDC 73.610 shall be considered. In case of conflicts between guidelines or objectives in TDC Chapter 73, the proposal shall provide a balance.
(b) At the time of enlargement of an existing multi-family residential, commercial, institutional or industrial structure or use, TDC 73.370 shall apply to the existing and enlarged structure or use.
(c) Except where otherwise specified, the floor area measured shall be the gross floor area of the building primary to the function of the particular use of the property other than space devoted to off-street parking or loading.
(d) Where employees are specified, the term shall apply to all persons, including proprietors, working on the premises during the peak shift.
(e) Calculations to determine the number of required parking spaces and loading berths shall be rounded to the nearest whole number.
(f) If the use of a property changes, thereby increasing off-street parking or loading requirements, the increased parking/loading area shall be provided prior to commencement of the new use.
(g) Parking and loading requirements for structures not specifically listed herein shall be determined by the Community Development Director, based upon requirements of comparable uses listed.
(h) When several uses occupy a single structure, the total requirements for off-street parking may be the sum of the requirements of the several uses computed separately or be computed in accordance with TDC 73.370(1)(m), Joint Use Parking.
(i) Off-street parking spaces for dwellings shall be located on the same lot with the dwelling. Other required parking spaces may be located on a separate parcel, provided the parcel is not greater than five hundred (500) feet from the entrance to the building to be served, measured along the shortest pedestrian route to the building. The applicant must prove that the parking located on

another parcel is functionally located and that there is safe vehicular and pedestrian access to and from the site. The parcel upon which parking facilities are located shall be in the same ownership as the structure.
(j) Required parking spaces shall be available for the parking of operable passenger automobiles of residents, customers, patrons and employees and shall not be used for storage of vehicles or materials or for the parking of trucks used in conducting the business.
(k) Institution of on-street parking, where none is previously provided, shall not be done solely for the purpose of relieving crowded parking lots in commercial or industrial planning districts.
(l) Parking facilities may be shared by users on adjacent parcels if the following standards are met:

(i) One of the parcels has excess parking spaces, considering the present use of the property; the other parcel lacks sufficient area for required parking spaces.
(ii) The total number of parking spaces meets the standards for the sum of the number of spaces which would be separately required for each use.
(iii) Legal documentation, to the satisfaction of the City Attorney, shall be submitted verifying permanent use of the excess parking area on one lot by patrons of the uses deficient in required parking area.
(iv) Physical access between adjoining lots shall be such that functional and reasonable access is actually provided to uses on the parcel deficient in parking spaces.
(v) Adequate directional signs shall be installed specifying the joint parking arrangement.
(vi) Areas in the Natural Resource Protection Overlay District, Other Natural Areas identified in Figure 3-4 of the Parks and Recreation Master Plan, or a Clean Water Services Vegetated Corridor would be better protected.

(m) Joint Use Parking. Joint use of parking spaces may occur where two or more separate developments or multiple uses in a development are able to jointly use some or all of the same required parking spaces because their parking demands occur at different times. Joint use of parking spaces may be allowed if the following standards are met:

(i) There shall be no substantial conflict in the principal operating hours of the buildings or uses for which the joint use parking is proposed. Future change of use, such as expansion of a building or establishment of hours of operation which conflict with or affect a joint use parking agreement are prohibited, unless approval is obtained through the Architectural Review process;
(ii) The joint use parking spaces shall be located no more than 500 feet from a building or use to be served by the joint use parking;
(iii) The number and location of parking spaces, hours of use and changes in operating hours of uses subject to joint use shall be approved through the Architectural Review process;
(iv) Legal documentation, to the satisfaction of the City Attorney, shall be submitted verifying the joint use parking between the separate developments. Joint use parking agreements may include provisions covering maintenance, liability, hours of use and cross easements; and
(v) The City Attorney approved legal documentation shall be recorded by the applicant at the Washington or Clackamas County Recorder’s Office and a copy of the recorded document submitted to the Planning Department prior to issuance of a building permit.
(vi) Areas in the Natural Resource Protection Overlay District, Other Natural Areas identified in Figure 3-4 of the Parks and Recreation Master Plan, or a Clean Water Services Vegetated Corridor would be better protected.

(n) Bicycle parking facilities shall include long-term parking that consists of covered, secure stationary racks, lockable enclosures, or rooms (indoor or outdoor) in which the bicycle is stored and short-term parking provided by secure stationary racks (covered or not covered), which accommodate a bicyclist's lock securing the frame and both wheels. The Community Development

Director, their designee, or the Architectural Review Board may approve a form of bicycle parking not specified in these provisions but that meets the needs of long-term and/or short-term parking pursuant to Section 73.370.
(o) Each bicycle parking space shall be at least 6 feet long and 2 feet wide, and overhead clearance in covered areas shall be at least 7 feet, unless a lower height is approved through the Architectural Review process.
(p) A 5-foot-wide bicycle maneuvering area shall be provided beside or between each row of bicycle parking. It shall be constructed of concrete, asphalt or a pervious surface such as pavers or grasscrete, but not gravel or woody material, and be maintained.
(q) Access to bicycle parking shall be provided by an area at least 3 feet in width. It shall be constructed of concrete, asphalt or a pervious surface such as pavers or grasscrete, but not gravel or woody material, and be maintained.
(r) Required bicycle parking shall be located in convenient, secure, and well-lighted locations approved through the Architectural Review process. Lighting, which may be provided, shall be deflected to not shine or create glare into street rights-of-way or fish and wildlife habitat areas.
(s) Long-term bicycle parking facilities may be provided inside a building in suitable secure and accessible locations.
(t) Bicycle parking may be provided within the public right-of-way in the Core Area Parking District subject to approval of the City Engineer and provided it meets the other requirements for bicycle parking.
(u) Bicycle parking areas and facilities shall be identified with appropriate signing as specified in the Manual on Uniform Traffic Control Devices (MUTCD) (latest edition). At a minimum, bicycle parking signs shall be located at the main entrance and at the location of the bicycle parking facilities.
(v) Required bicycle parking spaces shall be provided at no cost to the bicyclist, or with only a nominal charge for key deposits, etc. This shall not preclude the operation of private for-profit bicycle parking businesses.
(w) Parking on existing residential, commercial and industrial development may be redeveloped as a transit facility as a way to encourage the development of transit supportive facilities such as bus stops and pullouts, bus shelters and park and ride stations. Parking spaces converted to such uses in conjunction with the transit agency and approved through the Architectural Review process will not be required to be replaced.
(x) Required vanpool and carpool parking shall meet the 9-foot parking stall standards in Figure 73-1 and be identified with appropriate signage.

(2) Off-Street Parking Provisions.

(a) The following are the minimum and maximum requirements for off-street motor vehicle parking in the City, except for minimum parking requirements for the uses in TDC 73.370(2)(a) (Residential Uses: iii, iv, v, vi, vii; Places of Public Assembly: I, ii, iv; Commercial Amusements: I, ii; and Commercial: I, ii, xi, xii, xiv) within the Core Area Parking District (CAPD). Minimum standards for off-street motor vehicle parking for the uses in 73.370(2) (a) Residential Uses: iii, iv, v, vi, vii; Places of Public Assembly: I, ii, iv; Commercial Amusements: I, ii; and Commercial: I, ii, xi, xii, xiv in the CAPD are in TDC 73.370(2)(b). The maximum requirements are divided into Zone A and Zone B, as shown on the Tualatin Parking Zone Map, Figure 73-3. The following are exempt from calculation of maximum parking requirements: parking structures; fleet parking; parking for vehicles for sale, lease or rent; car/vanpool parking; dedicated valet parking; and user-paid parking.

USE	MINIMUM MOTOR VEHICLE PARKING REQUIREMENT	MAXIMUM MOTOR VEHICLE PARKING REQUIREMENT	BICYCLE PARKING REQUIREMENT	PERCENTAGE OF BICYCLE PARKING TO BE COVERED
Residential Uses:				
(i) Detached single-family dwelling, residential home, residential facilities (located in low density (RL) planning districts) Townhouse	2.00 vehicle parking spaces per dwelling unit, residential home or residential facility (stalls or spaces within a residential garage not included, except as approved in Architectural Review).	None	None Required	N/A
(ii) Multi-family dwellings in subdivisions	1.50 spaces per unit, in addition to garage	None	Developments with four or more units; none required if a garage is provided as an integral element of a unit; otherwise 1.00 space per unit	100
(iii) Multi-family dwellings in complexes with private internal driveways	1.0 space/studio, 1.25 space/1 bedr., 1.50 space/2 bedr., 1.75 space/3= bedr. in addition to	None	Developments with four or more units; none required if a garage is provided as an integral element of a unit; otherwise 1.00 space per unit	100

	garage			
(iv) Retirement housing facility	1.00 space per dwelling unit	None	0.50 space per unit	50
(v) Boarding house, lodging	1.00 space per guest house accommodation	None	0.25 space per guest house accommodation	50
(vi) Congregate care, assisted living and residential care facilities	0.50 space per dwelling unit	None	2, or 0.20 spaces per dwelling unit, whichever is greater	50
(vii) Residential facilities (located in other than low density residential planning districts)	1.00 space per 3 beds, plus 1.00 space per employee	None	2, or 1.00 space for every 6 beds, whichever is greater	50
(viii) Dwelling units within the Central Design District except as specified in (d), (e), and (f) above	1.50 space per dwelling unit, including garage	None	Developments with four or more units; none required if a garage is provided as an integral element of a unit; otherwise 1.00 space per unit	100
Institutions:				
(i) Convalescent home, nursing home or sanitarium	1.00 space per 2 beds for patients or residents	None	2, or 1.00 space for every 6 beds, whichever is greater	50
Places of Public Assembly:				

(i) Library, reading room	1.00 space per 400 sq. ft. of public area	None	2, or 1.5 spaces per 1,000 gross sq. ft., whichever is greater	10
(ii) Nursery, primary, elementary or middle school, child day care center	2.00 spaces per employee	None	4, or 1.00 space per 5 students based on the design capacity of the facility, whichever is greater	75
(iii) Senior high school	0.2 spaces per student and staff	Zone A and Zone B: 0.3 spaces per student plus 1.00 space per staff	4, or 1.00 space per 5 students based on the design capacity of the facility, whichever is greater	25
(iv) Other places of public assembly, including churches	1.00 space per 4 seats or 8 feet of bench length	Zone A: 0.6 spaces per seat Zone B: 0.5 spaces per seat	1.0 space per 40 seats or 80 feet of bench length	35
<u>Commercial Amusements:</u>				
(i) Theater	1.00 space per 4 seats	Zone A: 0.4 spaces per seat Zone B: 0.5 spaces per seat	1.0 space per 30 seats	10
(ii) Bowling alley	5.00 spaces per lane	None	4, or 0.50 spaces per lane, whichever is greater	40
(iii) Dance hall, skating rink	4.3 spaces per 1,000 sq. ft. gross floor area	Zone A: 5.4 spaces per 1,000 sq. ft. gross floor area Zone B: 6.5	2.0 spaces per 1,000 sq. ft. of floor area	50

		spaces per 1,000 sq. ft. gross floor area		
(iv) Racquet court, health club	1.00 space per 1,000 sq. ft. gross floor area	Zone A: 1.3 spaces per 1,000 sq. ft. gross floor area Zone B: 1.5 spaces per 1,000 sq. ft. gross floor area	2.0 spaces per 1,000 sq. ft. of exercise area	50
<u>Commercial</u>				
(i) Retail shops (under 100,000 sq. ft. gross floor area)	4.00 spaces per 1,000 sq. ft. of gross floor area	Zone A: 5.1 spaces per 1,000 sq. ft. gross floor area Zone B: 6.2 spaces per 1,000 sq. ft. gross floor area	0.50 space per 1,000 sq. ft. of gross floor area	50
(ii) Retail store handling exclusively bulky merchandise such as furniture or automobiles and service or repair shops	1.00 space per 400 sq. ft. of sales floor area	Zone A: 5.1 spaces per 1,000 sq. ft. gross floor area Zone B: 6.2 spaces per 1,000 sq. ft. gross floor area	2, or 0.20 space per 1,000 sq. ft. of sales floor area, whichever is greater	50
(iii) Shopping center (over 100,000 sq. ft. of gross floor area)	4.1 spaces per 1,000 sq. ft. of gross floor area	Zone A: 5.1 spaces per 1,000 sq. ft. gross floor area Zone B: 6.2 spaces per 1,000 sq. ft. gross floor area	0.50 space per 1,000 sq. ft. of gross floor area	50

(iv) Banks/Savings and loans	4.30 spaces per 1,000 sq. ft. of gross floor area	Zone A: 5.4 spaces per 1,000 sq. ft. gross floor area Zone B: 6.5 spaces per 1,000 sq. ft. gross floor area	2, or 0.33 spaces per 1,000 sq. ft. whichever is greater	10
(v) Medical & dental offices	3.90 spaces per 1,000 sq. ft. of gross floor area	Zone A: 4.9 spaces per 1,000 sq. ft. gross floor area Zone B: 5.9 spaces per 1,000 sq. ft. gross floor area	2, or 0.33 spaces per 1,000 gross sq. ft. ;whichever is greater	First 10 spaces or 40%, whichever is greater
(vi) General office	2.70 spaces per 1,000 sq. ft. of gross floor area	Zone A: 3.4 spaces per 1,000 sq. ft. gross floor area Zone B: 4.1 spaces per 1,000 sq. ft. gross floor area	2, or 0.50 spaces per 1,000 gross sq. ft. whichever is greater	First 10 spaces or 40%, whichever is greater
(viii) Restaurant	10.00 spaces per 1,000 sq. ft. of gross floor area	Zone A: 19.1 spaces per 1,000 sq. ft. gross floor area Zone B: 23.0 spaces pe 1,000 sq. ft. gross floor area	2.00 spaces per 1,000 gross sq. ft.	25
(ix) Drive-up restaurant	9.90 spaces per 1,000 sq. ft. of gross floor area	Zone A: 12.4 spaces per 1,000 sq. ft. gross floor area Zone B: 14.9 spaces per	2.00 spaces per 1,000 gross sq. ft	25

		1,000 sq. ft. gross floor area		
(x) Motel	1.00 space per room	None	0.20 space per room	10
(xi) Mortuary	1.00 space per 4 seats or an 8 feet of bench length in chapels	None	1.0 space per 40 seats or 80 feet of bench length	10
(xii) Office furniture and office furniture sales	1.00 space per 550 gross sq. ft.	None	2, or 0.20 space per 1,000 sq. ft. of sales floor area, whichever is greater	10
(xiii) Park and ride lots	None	None	5% of auto spaces	100
(xiv) Major transit stops (not Park and Ride lots)	None	None	4	100
(xv) Wireless communication facility	1.0 space	None	N/A	N/A
<u>Industrial</u>				
(i) Manufacturing	1.60 spaces per 1,000 sq. ft. of gross floor area	None	2, or 0.10 spaces per 1,000 gross sq. ft., whichever is greater	First 5 spaces or 30%, whichever is greater
(ii) Warehousing	0.30 spaces per 1,000 sq. ft. of gross floor area	Zone A: 0.4 spaces per 1,000 sq. ft. gross floor area Zone B: 0.5 spaces per 1,000 sq. ft. gross floor area	2, or 0.10 spaces per 1,000 gross sq. ft., whichever is greater	First 5 spaces or 30%, whichever is greater

(iii) Wholesale establishment	3.00 spaces per 1,000 sq. ft. of gross floor area	None	2, or 0.50 spaces per 1,000 gross sq. ft., whichever is greater	First 5 spaces or 30%, whichever is greater

(b) The following are the minimum requirements for off-street motor vehicle parking in the Core Area Parking District (CAPD) for the uses in TDC 73.370(2)(a)(Residential Uses: iii, iv, v, vi, vii; Places of Public Assembly: i, ii, iv; Commercial Amusements: i, ii; and Commercial: i, ii, xi, xii, xiv).

(i) Core Area Parking District (CAPD) off-street motor vehicle parking standards are required at 75% of the applicable off-street motor vehicle parking requirements identified in TDC 73.370(1)(h), 73.370(1)(m) and 73.370(2)(a).
(ii) Off-street motor vehicle parking requirements: (Refer to Core Area Parking District Ordinance TMC Chapter 11-3 for fee schedules and regulations regarding the Core Area Parking District.)

(A) Commercial, semi-public, and public uses except as outlined under TDC 73.370(2)(b)(ii)(B). A minimum of 75% of required CAPD off-street motor vehicle parking shall be provided for the first two floors of gross leasable area for commercial, semi-public, and public uses above grade, except as outlined under TDC 73.370(2)(b)(ii)(B).
(B) Development of a publicly-owned community center on Tract 8 of the Tualatin Commons shall be exempt from providing off-street motor vehicle parking and the impact fee within the CAPD.
(C) Residential Uses:

(1) Common-wall Dwellings including townhouses and condominiums. A minimum of 75% of required CAPD off-street motor vehicle parking shall be provided.
(2) Multi-Family Dwellings. A minimum of 75% of required CAPD off-street motor vehicle parking shall be provided for the first two floors of living units, above grade.
(3) Retirement Housing, Residential Homes and Residential Facilities. A minimum of 75% of required CAPD off-street motor vehicle parking shall be provided for the first two floors of dwelling units, above grade.

(iii) CAPD off-street motor vehicle parking required under TDC 73.370(2)(b)(i) shall be provided for residential uses and gross leasable area of commercial, semi-public, and public uses below grade and above the second floor, except as outlined under TDC 73.370(2)(b)(ii)(B).
(iv) At the time of enlargement of an existing structure or use there shall be no net loss of existing off-street motor vehicle parking in addition to providing new off-street motor vehicle parking required under TDC 73.370(2)(b).
(v) Outdoor dining facilities are exempt from providing off-street motor vehicle parking within the CAPD

(3) Off-Street Vanpool and Carpool Parking Provisions.
The minimum number of off-street Vanpool and Carpool parking for commercial, institutional and industrial uses is as follows:

Number of Required Parking Spaces	Number of Vanpool or Carpool Spaces
0 to 10	1
10 to 25	2
26 and greater	1 for each 25 spaces

[Ord. 882-92 §1, 12/14/92; Ord. 895-93 §10, 11 and 12, 5/24/93; Ord. 904-93 §66 and 67, 9/13/93; Ord. 920-94 §21, 4/11/94; Ord. 930-94 §2, 8/8/94; Ord. 956-96 §37, 1/8/96; Ord. 965-96 §85, 12/9/96; Ord. 1025-99 §96, 7/26/99; Ord. 1026-99, 8/9/99; Ord. 1046-00 §36, 2/14/00; Ord. 1097-02, 2/11/02; Ord. 1224-06 §33, 11/13/06, Ord. 1277-09 §3, 3/9/09; Ord. 1345-12 §1, 5/14/12; Ord. 1354-13 §12 & 13, 02/25/13]

Response:

Table 73.370.1 Required				
Use	**Minimum Motor Vehicle**	**Maximum Motor Vehicle**	**Bicycle**	**Percentage Covered Bicycle**
Warehousing (9,769sf)	**0.30 spaces per 1,000sf (3) Required**	**0.40 spaces per 1,000sf (4) Required**	**2 or 0.10 spaces per 1000sf, whichever is greater (2) Required**	**First 5 spaces or 30%, whichever is greater (1) Required**
General Office (757sf)	**2.70 spaces per 1,000sf (2) Required**	**3.4 spaces per 1000sf (3) Required**	**2 or 0.50 spaces per 1000sf, whichever is greater (2) Required**	**First 10 spaces or 40%, whichever is greater (1) Required**
Total	**5**	**7**	**4**	**2%**

Table 73.370.3 Provided

Use	Minimum Motor Vehicle	Maximum Motor Vehicle	Bicycle	Percentage Covered Bicycle
Warehousing* (9,769sf)	**3**	**4**	**2**	**1%**
General Office (757sf)	**2**	**3**	**2**	**1%**
Total	**5**	**7**	**4**	**2%**

***For calculation purposes, Service Building 400 is considered as Warehousing.**

Section 73.380 Off-Street Parking Lots.

A parking lot, whether an accessory or principal use, intended for the parking of automobiles or trucks, shall comply with the following:

(1) Off-street parking lot design shall comply with the dimensional standards set forth in Figure 73-1 of this section, except for parking structures and underground parking where stall length and width requirements for a standard size stall shall be reduced by .5 feet and vehicular access at the entrance if gated shall be a minimum of 18 feet in width.
(2) Parking stalls for sub-compact vehicles shall not exceed 35 percent of the total parking stalls required by TDC 73.370(2). Stalls in excess of the number required by TDC 73.370(2) can be sub-compact stalls.
(3) Off-street parking stalls shall not exceed eight continuous spaces in a row without a landscape separation, except for parking structures and underground parking. For parking lots within the Central Design District that are designed to frame views of the central water feature or identified architectural focal elements as provided in TDC 73.350(3), this requirement shall not apply and the location of parking lot landscape islands shall be determined through the Architectural Review process.
(4) Parking lot drive aisles shall be constructed of asphalt or concrete, including pervious concrete. Parking stalls shall be constructed of asphalt or concrete, or a pervious surface such as pavers or grasscrete, but not gravel or woody material. Drive aisles and parking stalls shall be maintained adequately for all-weather use and drained to avoid water flow across sidewalks. Pervious surfaces such as pervious concrete, pavers and grasscrete, but not gravel or woody material, are encouraged for parking stalls in or abutting the Natural Resource Protection Overlay District, Other Natural Areas identified in Figure 3-4 of the Parks and Recreation Master Plan, or in a Clean Water Services Vegetated Corridor.Parking lot landscaping shall be provided pursuant to the requirements of TDC 73.350 and TDC 73.360. Walkways in parking lots shall be provided pursuant to TDC 73.160.
(5) Except for parking to serve residential uses, parking areas adjacent to or within residential planning districts or adjacent to residential uses shall be designed to minimize disturbance of

residents.
(6) Artificial lighting, which may be pro-vided, shall be deflected to not shine or create glare in a residential planning district, an adjacent dwelling, street right-of-way in such a manner as to impair the use of such way or a Natural Resource Protection Overlay District, Other Natural Areas identified in Figure 3-4 of the Parks and Recreation Master Plan, or a Clean Water Services Vegetated Corridor.
(7) Groups of more than 4 parking spaces shall be so located and served by driveways that their use will require no backing movements or other maneuvering within a street right-of-way other than an alley.
(8) Service drives to off-street parking areas shall be designed and constructed to facilitate the flow of traffic, provide maximum safety of traffic access and egress, and maximum safety of pedestrians and vehicular traffic on the site.
(9) Parking bumpers or wheel stops or curbing shall be provided to prevent cars from encroaching on the street right-of-way, adjacent landscaped areas, or adjacent pedestrian walkways.
(10) Disability parking spaces and accessibility shall be provided in accordance with applicable federal and state requirements.
(11) On-site drive aisles without parking spaces, which provide access to parking areas with regular spaces or with a mix of regular and sub-compact spaces, shall have a minimum width of 22 feet for two-way traffic and 12 feet for one-way traffic. On-site drive aisles without parking spaces, which provide access to parking areaswith only sub-compact spaces, shall have a minimum width of 20 feet for two-way traffic and 12 feet for one-way traffic. [Ord. 882-92, §22, 12/14/92; Ord. 904-93, §68, 69 and 70, 9/13/93; Ord. 920-94, §22, 4/11/94; Ord. 956-96, §38, 1/8/96; Ord. 1224-06 §34, 11/13/06; Ord. 1354-13 §14, 02/25/13]
Response:
(1) Please see site plan for parking space layout.
(2) No sub-compact parking spaces are proposed.
(3) Parking spaces are less than (8) contiguous.
(4) Parking spaces and drive aisle are constructed of asphalt.
(5) No residential use is proposed.
(6) No lighting will shine or create glare in a residential planning district, and adjacent dwelling or
street right-of-way.

Section 73.390 Off-Street Loading Facilities.

(1) The minimum number of off-street loading berths for commercial, industrial, public and semi-public uses is as follows:

Square Feet of Floor Area	Number of Berths
Less than 5,000	0
5,000 - 25,000	1
25,000 - 60,000	2
60,000 and over	3

(2) Loading berths shall conform to the following minimum size specifications.

(a) Commercial, public and semi-public uses of 5,000 to 25,000 square feet shall be 12' x 25' and uses greater than 25,000 shall be 12' x 35'
(b) Industrial uses - 12' x 60'
(c) Berths shall have an unobstructed height of 14'
(d) Loading berths shall not use the public right-of-way as part of the required off-street loading area.

(3) Required loading areas shall be screened from public view from public streets and adjacent properties by means of sight-obscuring landscaping, walls or other means, as approved through the Architectural Review process.
(4) Required loading facilities shall be installed prior to final building inspection and shall be permanently maintained as a condition of use.
(5) A driveway designed for continuous forward flow of passenger vehicles for the purpose of loading and unloading children shall be located on the site of a school or child day care center having a capacity greater than 25 students.
(6) The off-street loading facilities shall in all cases be on the same lot or parcel as the structure they are intended to serve. In no case shall the required off-street loading spaces be part of the area used to satisfy the off-street parking requirements.
(7) Subject to Architectural Review approval, the Community Development Director may allow the standards in this Section to be relaxed within the Central Design District, where a dense mix of uses is desirable in close proximity, pedestrian circulation is strongly emphasized, and the orientation of structures around a central water feature virtually eliminates the possibility of reserving any side of a building solely for truck access. Adjustments may include, but are not limited to, reduction in the number of loading berths required, adjustment of loading berth size specifications and right-of-way restrictions, shared loading berths and maneuvering areas for use by more than one building, alteration or elimination of screening requirements, and requirements for maintenance of berths in a clean and visually appealing condition. The Community Development Director, their designee, or the Architectural Review Board may allow a loading area adjacent to or within a street right-of-way in the Central Design District where the loading and unloading operations meet all of the following criteria:

(a) short in duration (i.e., less than one hour);
(b) infrequent (fewer than three operations daily);
(c) does not obstruct traffic during peak traffic hours;
(d) does not interfere with emergency response services;
(e) is acceptable to the applicable roadway authority; and
(f) the design standards for the abut-ting road allow on-street parking. [Ord. 882-92, §23, 12/14/92; Ord. 956-96, §39, 1/8/96; Ord. 1354-13 §15, 02/25/13]
Response: The project's main function is loading and unloading gas cylinders; no truck berths
are proposed.

Section 73.400 Access.

(1) The provision and maintenance of vehicular and pedestrian ingress and egress from private property to the public streets as stipulated in this Code are continuing requirements for the use of any structure or parcel of real property in the City of Tualatin. Access management and spacing standards are provided in this section of the TDC and TDC Chapter 75. No building or other permit shall be issued until scale plans are presented that show how the ingress and egress requirement is to be fulfilled. If the owner or occupant of a lot or building changes the use to which the lot or building is put, thereby increasing ingress and egress requirements, it shall be unlawful and a

violation of this code to begin or maintain such altered use until the required increase in ingress and egress is provided.
(2) Owners of two or more uses, structures, or parcels of land may agree to utilize jointly the same ingress and egress when the combined ingress and egress of both uses, structures, or parcels of land satisfies their combined requirements as designated in this code; provided that satisfactory legal evidence is presented to the City Attorney in the form of deeds, easements, leases or contracts to establish joint use. Copies of said deeds, easements, leases or contracts shall be placed on permanent file with the City Recorder.

(3) Joint and Cross Access.

(a) Adjacent commercial uses may be required to provide cross access drive and pedestrian access to allow circulation between sites.
(b) A system of joint use driveways and cross access easements may be required and may incorporate the following:

(i) a continuous service drive or cross access corridor extending the entire length of each block served to provide for driveway separation consistent with the access management classification system and standards.
(ii) a design speed of 10 mph and a maximum width of 24 feet to accommodate two-way travel aisles designated to accommodate automobiles, service vehicles, and loading vehicles;
(iii) stub-outs and other design features to make it visually obvious that the abutting properties may be tied in to provide cross access via a service drive;
(iv) a unified access and circulation system plan for coordinated or shared parking areas.

(c) Pursuant to this section, property owners may be required to:

(i) Record an easement with the deed allowing cross access to and from other properties served by the joint use driveways and cross access or service drive;
(ii) Record an agreement with the deed that remaining access rights along the roadway will be dedicated to the city and pre-existing driveways will be closed and eliminated after construction of the joint-use driveway;
(iii) Record a joint maintenance agreement with the deed defining maintenance responsibilities of property owners;
(iv) If (i-iii) above involve access to the state highway system or county road system, ODOT or the county shall be contacted and shall approve changes to (i-iii) above prior to any changes.

(4) Requirements for Development on Less than the Entire Site.

(a) To promote unified access and circulation systems, lots and parcels under the same ownership or consolidated for the purposes of development and comprised of more than one building site shall be reviewed as one unit in relation to the access standards. The number of access points permitted shall be the minimum number necessary to provide reasonable access to these properties, not the maximum available for that frontage. All necessary easements, agreements, and stipulations shall be met. This shall also apply to phased development plans. The owner and all lessees within the affected area shall comply with the access requirements.
(b) All access must be internalized using the shared circulation system of the principal commercial development or retail center. Driveways should be designed to avoid queuing across surrounding parking and driving aisles.

(5) Lots that front on more than one street may be required to locate motor vehicle accesses on the street with the lower functional classification as determined by the City Engineer.
(6) Except as provided in TDC 53.100, all ingress and egress shall connect directly with public streets. [Ord. 882-92, § 24,12/14/92]
(7) Vehicular access for residential uses shall be brought to within 50 feet of the ground floor entrances or the ground floor landing of a stairway, ramp or elevator leading to dwelling units.
(8) To afford safe pedestrian access and egress for properties within the City, a sidewalk shall be constructed along all street frontage, prior to use or occupancy of the building or structure proposed for said property. The sidewalks required by this section shall be constructed to City standards, except in the case of streets with inadequate right-of-way width or where the final street design and grade have not been established, in which case the sidewalks shall be constructed to a design and in a manner approved by the City Engineer. Sidewalks approved by the City Engineer may include temporary sidewalks and sidewalks constructed on private property; provided, however, that such sidewalks shall provide continuity with sidewalks of adjoining commercial developments existing or proposed. When a sidewalk is to adjoin a future street improvement, the sidewalk construction shall include construction of the curb and gutter section to grades and alignment established by the City Engineer.
(9) The standards set forth in this Code are minimum standards for access and egress, and may be increased through the Architectural Review process in any particular instance where the standards provided herein are deemed insufficient to protect the public health, safety, and general welfare.
(10) Minimum access requirements for residential uses:

(a) Ingress and egress for single-family residential uses, including townhouses, shall be paved to a minimum width of 10 feet. Maximum driveway widths shall not exceed 26 feet for one and two car garages, and 37 feet for three or more car garages. For the purposes of this section, driveway widths shall be measured at the property line.
(b) Ingress and egress for multi-family residential uses shall not be less than the following:

Dwelling Units	Minimum Number Required	Minimum Width	Walkways, Etc.
2	1	16 feet	No walkways or curbs required
3-19	1	24 feet	No walkways or curbs required
20-49	1 or 2	24 feet 16 feet (one way)	6-foot walkway, 1 side only; curbs required

50-499	1 or 2	32 feet 24 feet	6-foot walkway, 1 side only; curbs required
Over 500	As required by City Engineer	As required by City Engineer	As required by City Engineer

(11) Minimum Access Requirements for Commercial, Public and Semi-Public Uses.
In the Central Design District, when driveway access is on local streets, not collectors or arterials and the building(s) on the property is(are) less than 5,000 square feet in gross floor area, or parking is the only use on the property, ingress and egress shall not be less than 24 feet. In all other cases, ingress and egress for commercial uses shall not be less than the following:

Required Parking Spaces	**Minimum Number Required**	**Minimum Pavement Width**	**Minimum Pavement Walkways, Etc.**
1-99	1	32 feet for first 50 feet from ROW, 24' thereafter	Curbs required; walkway 1 side only
100-249	2	32 feet for first 50 feet from ROW, 24' thereafter	Curbs required; walkway 1 side only
Over 250	As required by City Engineer	As required by City Engineer	As required by City Engineer

(12) Minimum Access Requirements for Industrial Uses.
Ingress and egress for industrial uses shall not be less than the following:

Required Parking Spaces	**Minimum Number Required**	**Minimum Pavement Width**	**Minimum Pavement Walkways, Etc.**
1-250	1	36 feet for first 50' from ROW, 24' thereafter	No curbs or walkway required
Over 250	As required by City Engineer	As required by City Engineer	As required by City Engineer

(13) One-way Ingress or Egress.

When approved through the Architectural Review process, one-way ingress or egress may be used to satisfy the requirements of Subsections (7), (8), and (9). However, the hard-surfaced pavement of one-way drives shall not be less than 16 feet for multi-family residential, commercial, or industrial uses.
(14) Maximum Driveway Widths and Other Requirements.

(a) Unless otherwise provided in this chapter, maximum driveway widths shall not exceed 40 feet.
(b) Except for townhouse lots, no driveways shall be constructed within 5 feet of an adjacent property line, except when two adjacent property owners elect to provide joint access to their respective properties, as provided by Subsection (2).
(c) There shall 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 Engineer.

(15) Distance between Driveways and Intersections.

Except for single-family dwellings, the minimum distance between driveways and intersections shall be as provided below. Distances listed shall be measured from the stop bar at the intersection.

(a) At the intersection of collector or arterial streets, driveways shall be located a minimum of 150 feet from the intersection.
(b) At the intersection of two local streets, driveways shall be located a minimum of 30 feet from the intersection.
(c) If the subject property is not of sufficient width to allow for the separation between driveway and intersection as provided, the driveway shall be constructed as far from the intersection as possible, while still maintaining the 5-foot setback between the driveway and property line as required by TDC 73.400(14)(b).
(d) When considering a public facilities plan that has been submitted as part of an Architectural Review plan in accordance with TDC 31.071(6), the City Engineer may approve the location of a driveway closer than 150 feet from the intersection of collector or arterial streets, based on written findings of fact in support of the decision. The written approval shall be incorporated into the decision of the City Engineer for the utility facilities portion of the Architectural Review plan under the process set forth in TDC 31.071 through 31.077.

(16) Vision Clearance Area.

(a) Local Streets - A vision clearance area for all local street intersections, local street and driveway intersections, and local street or driveway and railroad intersections shall be that triangular area formed by the right-of-way lines along such lots and a straight line joining the right-of-way lines at points which are 10 feet from the intersection point of the right-of-way lines, as measured along such lines (see Figure 73-2 for illustration).
(b) Collector Streets - A vision clearance area for all collector/arterial street intersections, collector/arterial street and local street intersections, and collector/arterial street and railroad intersections shall be that triangular area formed by the right-of-way lines along such lots and a straight line joining the right-of-way lines at points which are 25 feet from the intersection point of the right-of-way lines, as measured along such lines. Where a driveway intersects with a collector/arterial street, the distance measured along the driveway line for the triangular area shall be 10 feet (see Figure 73-2 for illustration).
(c) Vertical Height Restriction - Except for items associated with utilities or publicly owned

structures such as poles and signs and existing street trees, no vehicular parking, hedge, planting, fence, wall structure, or temporary or permanent physical obstruction shall be permitted between 30 inches and 8 feet above the established height of the curb in the clear vision area (see Figure 73-2 for illustration).

(17) Major driveways, as defined in 31.060, in new residential and mixed-use areas are required to connect with existing or planned streets except where prevented by topography, rail lines, freeways, pre-existing development or leases, easements or covenants, or other barriers. [Ord. 895-93 §3, 5/24/93; Ord. 945-95, 5/8/95; Ord. 1025-99, §7, 7/26/99; Ord. 1026-99 §97, 8/9/99; Ord. 1103-02, 3/25/02; Ord. 1096-02, 1/28/02; Ord. 1354-13 §16, 02/25/13]

General Response: The site has an existing driveway accessed from a joint-use road apron contiguous with SW Tualatin – Sherwood Road. The joint-use was established by an access easement dated September 26, 1995 recorded in Washington County as document 95071339. The easement is a perpetual nonexclusive roadway easement for the sole purpose of ingress and egress to the property. The easement specifically allows for "road construction, reconstruction, maintenance and repair", therefore, the work proposed for this project is allowed under this easement's constraints.

The access easement document is herewith attached as Exhibit U.

Response:

(1) No increase ingress or egress is required, therefore, no modifications to the joint-use road apron necessary. Work in the apron area will be limited to installation of underground utilities and construction of new sidewalk access to SW Tualatin-Sherwood Road.

(2) Joint access easement attached as Exhibit U.

(3) (a) A cross access drive exists in the existing joint use apron. No marked pedestrian access exists, however, sidewalk pedestrian access is proposed through the joint use apron from SW Tualatin-Sherwood Road to the flagpole portion of the site.
(b)(i) The existing service drive is not clearly defined and does not provide driveway separation for attached parcels. Due to SW Tualatin-Sherwood Road's skewed relationship to the site parcels and the close proximity of these parcels to one another as well as SW Tualatin-Sherwood Road, no remedy for the poorly defined access apron is proposed.
(ii) The existing access apron exceeds 24 feet in width due to the geometric relationship among the parcels abutting it.
(iii) The existing access apron is too short to allow for stub outs or other physical indicators to make visually obvious the abutting properties are tied in via a service drive.
(iv) No parking areas are included in the existing joint access apron; none are proposed.
(c)(i) A joint use easement has been recorded in Washington County.
(ii) No evidence of a recorded agreement with the deed stating remaining access rights along the roadway will be dedicated to the city and pre-existing driveways will be closed and eliminated after construction of the joint-use driveway has been found.
(iii) No joint maintenance agreement with the deed has been recorded.
(iv) No changes to the joint access apron are proposed with exception of required pedestrian access, therefore, this requirement not applicable.

(4) (a) The pertinent lot is owned by a sole entity. Therefore, this does not apply.

(b) Due to the small size of the existing site access apron, this does not apply.
(5) Lot fronts only SW Tualatin-Sherwood Road.
(6) Ingress to and egress from the existing shared apron is across the existing shared access driveway fronting SW Tualatin-Sherwood Road.
(7) Not a residential use, therefore not applicable.
(8) An existing sidewalk abuts SW Tualatin-Sherwood Road.
(9) Acknowledged.
(10) Not a residential use, therefore not applicable.
(11) Project is industrial use, therefore not applicable.
(12) Existing apron along SW Tualatin-Sherwood Road meets 36' feet width requirement and subsequent 50 feet meets minimum 24 feet wide requirement. A new sidewalk is proposed on one side of the access route.
(13) Access is not one-way, therefore not applicable.
(14) (a) Existing driveway width on this parcel does not exceed 40 feet.
(b) Existing driveways constructed under joint use easement terms.
(c) Not applicable.
(15)(a) through (d), not applicable.
(16)(a) through (c), not applicable. Subject property does not have direct access frontage to SW Tualatin-Sherwood Road. Rather, it has access to SW Tualatin-Sherwood Road through an adjacent property's frontage.
(17) Not applicable.

Section 73.410 Street Tree Plan.

A person who desires to plant a street tree shall comply with TDC 74.765, which comprises the street tree plan. [Ord. 1279-09, §2, 3/23/09]
Response: No street trees are proposed.

Section 73.450 Wireless Communication Facility and Wire-less Communication Facility attached Site Design.

The purpose of wireless communication facility and attached facility design objectives and standards is to implement the purpose and objectives of TDC 73.020(2) by focusing on the placement, design and relationship of proposed site elements such as support structure location, lighting, screening, fencing and landscaping. [Ord. 965-96, §86, 12/9/96]
Response: No wireless communication facility is proposed.

Section 73.460 Objectives.

All wireless communication facilities and attached facilities should strive to meet the following objectives to the maximum extent practicable. Architects and developers should consider these elements in designing new projects. In the case of conflicts between objectives, the proposal shall provide a desirable balance between the objectives. Site elements shall be placed and designed, to the maximum extent practicable, to:

(1) Be aesthetically located to be compatible with the surrounding environment and analyze co-location before seeking new sites.
(2) Minimize disruption of natural site features such as topography, trees, and water features.
(3) Take into consideration the existing topography of the site and surrounding vicinity.

(4) Locate a wireless communications facility within stands of existing vegetation and trees to reduce the visual impact of the support structure.
(5) Screen elements such as mechanical and electrical equipment from view.
(6) Locate a wireless communication facility attached to existing rooftop mechanical equipment before placement on the exterior wall of a building.
(7) Co-locate wireless communication facility or attached facility.
(8) Construct wireless communication support structures at the minimum height necessary to serve the operational requirements of the system.
(9) Separate wireless communication support structures from each other. [Ord. 965-96, §87, 12/9/96; Ord. 1098-02, 2/11/02; Ord. 1116-02, 8/26/02]
Response: No wireless communication facility is proposed.

Section 73.470 Standards.

The following standards are minimum requirements for a wireless communication facility or wireless communication facility attached development. Development proposals shall meet or exceed these minimum requirements.

(1) A wireless communication facility attached shall not be attached to buildings which are designed solely for single family residential use.
(2) Attempt to locate wireless communication facility attached antennas to existing rooftop mechanical equipment before placement on the exterior wall of a building.
(3) A wireless communication facility shall be located to take full advantage of existing site conditions such as surrounding vegetation and trees.
(4) Mechanical and electrical equipment and the bottom 6' of the support structure for a wireless communication facility shall be screened from the public right-of-way and abutting property by the use of a minimum 6' tall security fence or wall consisting of chain link fencing with vinyl slats, solid wood fencing, concrete masonry unit block, or brick.
(5) A wireless communication facility support structure shall be constructed to the minimum height necessary to serve the operational requirements of the facility.
(6) Obsolete or unused wireless communication support structures and associated equipment and antennas shall be removed within 12 months of cessation of operations at a site.
(7) No new wireless communication support structure shall be permitted unless the applicant submits a co-location report showing whether or not any existing tower or support structure within one-half mile of the proposed site can accommodate the applicant's proposed antennae. The report shall address the following:

(a) Do existing towers or support structures, or approved but not yet constructed towers or support structures located within the geographic area meet the applicant engineering requirements;
(b) Are existing towers or support structures of sufficient height to meet the applicant's engineering requirements;
(c) Do existing towers or support structures have sufficient structural strength to support the applicants proposed antennae and related equipment;
(d) Would the applicant's proposed antennae cause electromagnetic interference with the antennae on the existing tower or support structure, or would existing antennae cause interference with the applicant's proposed antennae; and
(e) Are there other limiting factors that render existing towers and support structures unsuitable or unavailable.

(8) No new wireless communication support structure shall be permitted unless the applicant submits a coverage report inclusive of an overall system plan for the City, showing facilities

presently constructed or approved and future expansion plans.
(9) The minimum distance between WCF monopoles shall be 1500 feet. Separation shall be measured by following a straight line from one monopole to the next. For purposes of this section, a wireless communication facility monopole shall include wireless communication facility monopole for which the City has issued a development permit, or for which an application has been filed and not denied. [Ord. 965-96, §88, 12/9/96; Ord. 1098-02, 2/11/02; Ord. 1116-02, 8/26/02]
Response: No wireless communication facility is proposed.

Section 73.480 Wireless Communication Facility and Wire-less Communication Facility Attached Structure Design.

The purpose of wireless communication facility design objectives and standards is to implement the purpose and objectives of TDC 73.020(2) and are intended to promote functional, safe, innovative and attractive designs which are compatible with the surrounding environment. This concerns the support structure form, materials, colors, antenna design and screening. [Ord. 965-96, §89, 12/9/96]
Response: No wireless communication facility is proposed.

Section 73.490 Objectives.

All wireless communication facilities should strive to meet the following objectives to the maximum extent practicable. Architects and developers should consider these elements in designing new projects. In the case of conflicts between objectives, the proposal shall provide a desirable balance between the objectives. To the maximum extent practicable, support structures and antennas shall be designed to:

(1) Be aesthetically and architecturally designed to be compatible with the surrounding environment while recognizing that wireless communication facilities are unique designs due to their function.
(2) Select colors in consideration of lighting conditions and the context under which the structure is viewed, the ability of the material to absorb, reflect or transmit light and the color's functional role, e.g., aesthetic reasons.
(3) Select platform and antenna designs which minimize their size and visual appearance to surrounding development.
(4) Provide a composition of structural material elements which is cohesive and responds to use needs, site context, land form, a sense of place and identity, safety, and climatic factors.
(5) Select materials which contribute to the project's form and function, as well as to the surrounding environment. [Ord. 965-96, §90, 12/9/96; Ord. 1098-02, 2/11/02]
Response: No wireless communication facility is proposed.

Section 73.500 Standards.

The following standards are minimum requirements for a wireless communication facility or wireless communication facility attached development. Development proposals shall meet or exceed these minimum requirements.

(1) Monopoles shall be used in all residential, institutional, and commercial planning districts.
(2) Monopoles shall be used in all industrial planning districts.
(3) Equipment shelters, buildings or cabinets to house radio electronics equipment shall be concealed, camouflaged, vegetatively screened, or placed underground.
(4) A wireless communication facility shall be designed to allow co-location of facilities.

(5) Wireless communication facility attached antennas shall be painted to match the color of the mechanical screen wall or building to which it is attached.
(6) Antennas and platforms shall be de-signed to minimize their size and appearance to surrounding development. [Ord. 965-96, §91, 12/9/96; Ord. 1098-02, 2/11/02; Ord. 1216-06, 7/24/06]
Response: No wireless communication facility is proposed.

Section 73.510 Setbacks.

The Community Development Director shall, in making the determination of compliance for setbacks for Wireless Communication Facilities and Wireless Communication Support Structures, consider the following factors:

(1) If the abutting property is in the Low Density Residential (RL) Planning District or in the Medium-Low Density Residential (RML) Planning District with an approved small lot subdivision, and if natural vegetation, such as evergreen trees, does not exist to act as a screen, then a greater setback than the minimum required may be appropriate. If such natural vegetation exists, then the minimum required setback may be appropriate.
(2) If the abutting property is in the Low Density Residential (RL) Planning District or in the Medium-Low Density Residential (RML) Planning District with an approved small lot subdivision, and it is vacant or its use is a single-family dwelling, then a greater setback than the minimum required may be appropriate. If the use is not a single-family dwelling, then the minimum required setback may be appropriate.
(3) If the abutting property is in the Low Residential Density (RL) Planning District or in the Medium-Low Density Residential (RML) Planning District with an approved small lot subdivision, and it is vacant or its use is a single family dwelling and it is at a lower elevation than the subject property, then a greater setback than the minimum required may be appropriate. [Ord. 965-96, §92, 12/9/96]
Response: No wireless communication facility is proposed.

Section 73.600 Central District Design Guidelines.

Purpose and Applicability.

(1) The “Central Tualatin Concept Plan and Design Guidelines, October 2001” were developed for the Tualatin Commons Enhancement Strategy Work Plan and are intended to enhance the identity of the Tualatin Commons area. The purpose of the Guidelines is to: Provide prospective developers and designers with a checklist of issues that must be addressed in Central Design District proposals; Provide the City of Tualatin with an overall conceptual approach that will enable determinations on proposals that are in concert with and add to the Central Tualatin Concept Plan; Provide the City of Tualatin with a method of evaluating public and private development or redevelopment on a consistent basis.
(2) The Design Guidelines apply to the Central Design District as shown on TDC Figure 73-4. The Design Guidelines are structured into four topic areas: Central Tualatin Concept; City Connections; Spaces and Landscapes; and Buildings. [Ord. 1097-02, 2/11/02]

Section 73.610 Design Guidelines.

All development in the Central Design District should strive to meet the following guidelines to the maximum extent practicable. Architects and developers shall consider these guidelines and the provisions of TDC 73.050(1) in designing new projects in Central Design District and shall include

in the Architectural Review application a narrative explaining how the development considered each of the Design Guidelines and how the guidelines are balanced. Consideration of the guidelines includes an evaluation of how the proposal is or is not consistent with each guideline. In case of conflicts between guidelines or between guidelines and other objectives in TDC Chapter 73, the proposal should provide a balance. To the maximum extent practicable, development in the Central Design District should be designed to:

CENTRAL TUALATIN CONCEPT

(1) Draw People and Activity into Central Tualatin.
Central Tualatin is strategically situated to be both a local and regional focal point. Developments should lend themselves to attracting a variety of pedestrian activities at the core of Central Tualatin. Entry points into Central Tualatin should establish a sense of arrival.
02+(2) Encourage Further Development.
Buildings and spaces should reflect an analysis of historic and existing design principles, as well as create design opportunities for new adjunct development.
(3) All Seasons City.
Building uses and exterior spaces should lend themselves to use throughout all four seasons. Designs should include protected spaces and pathways to enable year-round use by visitors and inhabitants.
(4) 24 Hour / 7 Day City.
Developments should foster the idea of extended hours of use throughout the week. Where uses are subject to “business hour” operation, the development should include amenities that provide for external enjoyment of buildings at all times of day.
(5) Heart of a Great City.
Buildings and spaces between them should be carefully designed and crafted to reinforce each other. This reinforcing design should be of high importance for buildings which front public improvements and major circulation systems.
(6) Sustainable Design.
New development should embody current “green” building techniques wherever possible. Energy efficient design options should be explored as well as alternative building products which have less impact on the local as well as world environment.
(7) Buildings as Good Neighbors.
Each building should be designed to fit into the evolving context of Central Tualatin and should contribute and enhance the public experience, not only of itself, but of the buildings that provide its context. Undesirable elements of buildings should either be screened or hidden from view.
(8) A Place of Multiple Activities.
When practicable, include multiple uses in building structures, as well as flexibility in the use of exterior spaces.
(9) Scale of the Street.
Building heights adjacent to a street edge should be at least as tall as half the width of the right-of-way. Street trees can also be used in meeting the height goal. A combination of buildings and trees are generally the best solution to create the framework of the street.
(10) Pedestrian Interaction.
Buildings and exterior space should foster activity and interaction of citizens at a pedestrian scale. Encourage a variety of uses within walking distance for residents, employees, and visitors.
(11) Building Setbacks.
Buildings within Central Tualatin must meet zoning regulations but should be encouraged to front the street edge. In addition, buildings placed close to side and rear property lines should be designed with sensitivity to future development on adjacent properties.

CITY CONNECTIONS

(12) Visual Linkages.
Design interior and exterior spaces that recognize and promote visual linkages to other defining elements, such as monuments, civic spaces, and other natural and urban landmarks that orient the user.
(13) Clustering of Attractors.
Connections between major downtown attractors should be strengthened in order to create an easily walkable and friendly atmosphere. Reinforcement of connections could include new signage, landscaping and visual cues.
(14) Axial Relationships and Monuments.
Recognize existing and potential axial relationships of places and buildings and incorporate, in building form or in monuments, extensions or terminations of these relationships.
(15) Places and Connections.
Provide a safe, inviting series of interconnected “places,” both interior and exterior to the building structures. Provide linkages to adjacent neighborhoods for pedestrians, bicycles, and automobiles.
(16) Transit Dynamics.
Public transit is fundamental to the future of Central Tualatin and its connection to the region. Both existing and future public transit expansion should be considered in any new development plans.
(17) Driving and Parking.
In the design of streets and parking are-as, functional requirements of vehicular activity should not compromise, but should enhance, the pedestrian environment.
(18) Pedestrian Opportunities.
Integrate pedestrian circulation systems with existing and planned systems, both indoor and outdoor, that connect public rights-of-way and spaces, activities and uses, utilizing furniture and landscaping that are convenient to use and in character with the public improvements.
(19) Connection to the River.
The Tualatin River and Hedges Creek are valuable and unique community re-sources. Development should be sensitive to the natural character of the river and creekfront. Provide linkages from Central Tualatin to these resources for pedestrian and bicycle access.
(20) Green Streets.
Promote creation of “green” streets and surface parking areas utilizing features like permeable paving, solar powered lighting, and native landscaping. City design standards should be flexible to allow designs that have a minimal impact on non-renewable natural resources.
(21) Connections through Buildings.
Promote design that allows for public interaction with buildings. Encourage pedestrian walkways through, and elevated connections between, sections of the building.

SPACES AND LANDSCAPES

(22) Civic Rooms.
Development of public spaces within and around Central Tualatin should contribute to the formation of “civic rooms.” Within these rooms, specific commercial and public uses, circulation patterns, public art, and architectural character will be encouraged to reinforce the “room” and its linkage to the overall Central Tualatin area.
(23) Areas of Many Functions.
Create pathways, open spaces and en-closed or sheltered public spaces to be flexible and to accommodate a number of functions, whether organized or casual.
(24) The Street.
Define the street through delineation of right-of-way with the building edge, landscaping, lighting and signing appropriate to the function of the street and the area of Central Tualatin it serves.

Street trees spaced at no more than 30' on center is critical to establishing the character of a street.
(25) The Intersections.
Consider intersections as a "room" within the City. Maintain vehicular flow requirements while providing safe and convenient pedestrian access. When possible, focus the location of building entries, building details, street lighting, and signage at intersections.
(26) Courtyards and Plazas.
In private development, design court-yards and plazas that provide a continuity of experience between the inside and outside of the building and between the public and private realm.
(27) Open Space Defined By Buildings.
The spaces between buildings should enhance the public experience through building design, form and organization.
(28) Inside and Outside.
Ground floor activities in buildings within Central Tualatin should present an interesting and enticing addition to the pedestrian experience. Exterior walls abutting public rights-of-way shall have more than 50% of the surface in windows, showcases, displays, art or pedestrian access elements.
(29) Roofscaping.
The rooftops of buildings within Central Tualatin present an opportunity for "green" design and upper level activities. New development should be encouraged to create eco-roofs and/or opportunities for places where activity could enhance the street.
(30) Street Trees.
Selection of trees along street edges should create a unifying canopy for the street. Trees with strong vertical shapes should be used sparingly to avoid a discontinuous or "lollipop" appearance.
(31) Signage.
Business identity signs, while conforming to other requirements of the sign ordinance, should add to the quality and character of the street. Signs should also relate to the building's character and provide identity and focus for the use.

BUILDINGS

(32) Building Form.
Single-purpose buildings should be treated as "stand-alone" structures with style and size appropriate to use. Mixed-use buildings should be designed to relate contextually to the surrounding buildings. In general, all new development should compliment adjacent buildings.
(33) Adaptable Design.
As Central Tualatin evolves over time, the market will dictate changes in uses and densities. Design of buildings should consider flexibility in use and density over the life of the building.
(34) Active Buildings along Linkage Streets.
Where linkage streets are identified within Central Tualatin, active uses should be developed to support them. A retail corridor along the major street edges would help to reinforce the pedestrian link between focal points or attractors.
(35) Solar Access.
New development in Central Tualatin should be designed to provide solar access and to minimize the impact of shadows on neighboring buildings and spaces. The use of upper floor setbacks and sloping roofs is encouraged.
(36) The Outside Wall.
The "outside wall," the building's presentation both to passers-by and to users, should invite participation. Upper levels of buildings facing the street should incorporate decks, balconies or other devices that activate the wall enclosing the street.

(37) Craft of Building.
In designing buildings, recognize the “craft of building” as fundamental in creating appropriate building detail. Lasting materials are strongly encouraged and the way buildings are assembled is important to the final product and its relationship to Central Tualatin.
(38) Building Entrances.
Building entrances should support and enhance the pedestrian oriented quality of Central Tualatin. Design entrances to give identity to buildings and uses therein.
(39) Parking Relationship to Building.
Parking areas are to be integrated into the building design. Surface parking should be limited to one-half block areas. Delineate surface parking from pedestrian ways by low vertical elements, such as masonry walls, fences or landscaping.
(40) Service Areas.
Since service access and trash holding areas are expected to be adjacent to road-ways and open spaces, care must be taken to avoid a back-door appearance to the building faces adjacent to pedestrian areas and other buildings. Employ screening and landscaping to reduce the visual impact of service areas.
(41) Interior Working Environment.
Interior design of buildings in Central Tualatin should recognize the need for quality work environments for all its users. Natural lighting and ventilation should be utilized to the maximum extent possible. [Ord. 1097-02, 2/11/02].
Response: The site is not located within the Central Design District.

1.05 SUMMARY

The proposed storage and office buildings meet all applicable Architectural Review standards. Where practicable, the development will be compatible with current and existing surrounding uses, and is designed to comply with the zoning requirements of the General Manufacturing District. This application complies with City requirements, will result in economic growth for the area, and merits approval as requested. The use of this site is consistent with adjacent uses. An existing gas cylinder storage facility is located on the parcel north and abutting this site. For reference, an HMIS report, Exhibit K, is herewith submitted.

EL,A

3.16.2018

City of Tualatin
Attention: Engineering Department
18880 SW Martinazzi Avenue
Tualatin, OR 97062-7092

Re: Air Liquide Gas Depot
Public Facilities Narrative - REVISED

Dear Tualatin Engineering:

An application for Architectural Review (AR) was filed by EL, Architects, PS to build an approximately 116,464 square foot gas cylinder storage facility composed of five structures. The development area consists of approximately 2.8 acres.

Air Liquide, represented by Eric Lanciault, proposes to develop the site with five buildings. The property is currently undeveloped, but public improvements have been constructed with previous development of a site access driveway.

The site is bounded by industrial developments to the north and west and the WES Commuter Rail right-of-way along the south and east.

The applicant had a scoping meeting on April 21, 2017. The neighborhood/developer meeting was held on September 6, 2017.

The following are the Public Facilities findings related to the site. All references to sections in the Tualatin Development Code (TDC) or Tualatin Municipal Code (TMC) unless otherwise noted.

TDC 74.120 …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.

TDC 74.04 (1) All the Public improvements required under this chapter shall be completed and accepted by the City prior to issuance of a Certificate of Occupancy.

TDC 74.330 Utility Easements
(1) Utility easements for water, sanitary sewer and storm drainage facilities, telephone, television, television cable, gas, electric lines and other public utilities shall be granted to the City

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vancouver, washington 98683
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(4) …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.

(5) The width of the public utility easement shall meet the requirements of the Public Works Construction Code.

TMC 4-1.010 This development is subject to all applicable building code requirements and all applicable building and development fees.

1. *Fire and Life Safety:*
   TMC 4-2.010 (1) Every application for a building permit and accompanying plans shall be submitted to the Building Division for review of water used for fire protection, the approximate location and size of hydrants to be connected, and the provisions for access and egress for firefighting equipment. If upon such review it is determined that the fire protection facilities are not required or that they are adequately provided for in the plans, the Fire and Life Safety Reviewer shall recommend approval to the City Building Official.
   Response: There is one existing fire hydrant located at the north end of the existing driveway. Please see site plan following this letter. One new fire hydrant will be located north of Building 100. Buildings 100 and 200 will be fully sprinklered. Buildings 300, 400 and 500 will not be sprinklered.
   The existing fire water service to the site is adequate for this project and will not require any public improvements. Please see Walter L. Cook, PE report, Exhibit O.

2. *Transportation:*
   TDC 11.610 Transportation Goals and Objectives (2) (e) For development applications, including, but not limited to subdivisions and architectural reviews, a LOS of at least D and E are encouraged for signalized and unsignalized intersections, respectively.
   Response: A Trip Generation Assessment prepared for this project indicates minimal impact to SW Tualatin – Sherwood Road near Teton Avenue and recommends the City support the development without requiring a detailed traffic impact study.

   TDC 73.400 (5)… a sidewalk shall be constructed along all street frontage, prior To use or occupancy of the building or structure proposed for said property. The sidewalks required by this section shall be constructed to City standards,…
   Response: An existing sidewalk along SW Tualatin – Sherwood Road serves the site.

   TDC 74.420 (6) All required street improvements shall include curbs, sidewalks, storm drainage, streetlights, street signs, and, where designated, bikeways and transit facilities.

   TDC74.425 Street Design Standards
   Response: No changes or improvements are proposed along SW Tualatin – Sherwood Road.

TDC 74.430 Streets, Modifications of Requirements in Cases of Unusual Conditions.
Response: No modifications to standards in cases of unusual conditions are proposed as part of this development.

TDC 74.440 Streets, Traffic Study Required
Response: A traffic assessment memo has been prepared by a professional engineer and is included with this Architectural Review application.

TDC 74.450 Bikeways and Pedestrian Paths
Response: No bikeways or pedestrian paths are proposed as part of this development.

TDC 74.470 Street Lights

(1) Street light poles and luminaries shall be installed in accordance with the Public Works Construction Code.
(2) The applicant shall submit a street lighting plan for all interior streets on the proposed development prior to issuance of a Public Works Permit.
Response: No street lighting improvements are proposed as part of this development.

TDC 74.485 Street Trees

(1) Prior to approval of a residential subdivision or partition final plat, the applicant shall pay the City a non-refundable fee equal to the cost of the purchase and installation of street trees. The location, placement, and cost of the trees shall be determined by the City. This sum shall be calculated on the interior and exterior streets as indicated on the final subdivision or partition plat.
(2) In nonresidential subdivisions and partitions street trees shall be planted by the owners of the individual lots as development occurs.
(3) The Street Tree Ordinance specifies the species of tree which is to be planted and the spacing between trees. [Ord. 119-05, 7/25/05]
Response: No street trees are proposed as a part of this development.

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 shall 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 shall make all necessary arrangements with all utility companies to provide the underground services. The City reserves the right to approve of the location of all surface-mounted transformers.
Response: All proposed utilities will be placed underground in accordance with this requirement. Surface-mounted transformers will be placed internal to the development, screened from adjacent right-of-way.

TDC 75.060 Existing Driveways and Street Intersections (2) The city engineer may restrict existing driveways and street intersections to right-in and right-out by construction of raised median barriers or other means.
Response: No restriction of existing driveway is anticipated as a part of this application.

3) Access:
TDC 73.400 Access
(2) Owners of two or more uses, structures, or parcels of land satisfies their combined requirements as designated in this code; provided that satisfactory legal evidence is presented to the City Attorney in the form of deeds, easements, leases or contracts to establish joint use.
(10) Minimum access requirements for residential uses: Ingress and egress for multi-family residential uses shall not be less than the following:…for50-499 parking spaces a minimum of one 32-foot wide access or two 24-foot wide accesses are required.
(11) Minimum Access Requirements for Commercial, Public and Semi-Public Uses. If 1-99 parking spaces are required, only one access is required. If 100-249 parking spaces are required, two accesses are required. Ingress and egress shall not be less than 32 feet wide for the first 50 feet from the right-of-way and 24 feet thereafter.
(12) Minimum Access Requirements for Industrial Uses. If 1-250 parking spaces are required, only one access is required. Ingress and egress shall not be less than 36 feet wide for the first 50 feet from the right-of-way and 24 feet thereafter.
(14) (a) Unless otherwise herein provided, maximum driveway widths shall not exceed 40 feet.
(15) Distance between Driveways and Intersections. Distances listed shall be measured from the stop bar at the intersection. (a) At the intersection of collector or arterial streets, driveways shall be located a minimum of 150 feet from the intersection.
Response: the site is served by an existing driveway accessed from SW Tualatin – Sherwood Road through an existing asphalt entrance apron serving multiple parcels. An access easement is granted to the existing site's driveway as a perpetual non-exclusive roadway easement for ingress and egress as conveyed from the Halton Company to LAI Holding, Inc. by the Access Easement recorded October 3, 1995 as indicated in Exhibit E of the Stewart Title preliminary title report dated September 28, 2017 submitted with the Architectural Review submittal.

TDC 75.120 Existing Streets
(4) Tualatin – Sherwood Road
Response: No new access from SW Tualatin – Sherwood Road is Proposed.

4. Water:
TDC 74.610 (1) Water lines shall be installed to serve each property in accordance with the Public Works Construction Code. Water line construction plans shall be submitted to the City Engineer for review and approval prior to construction.

TMC 3-3.040 (2) for nonresidential uses, separate meters shall be provided for each structure.
TMC 3-3.120 (2) 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: (b) Where there is a fire protection service, and irrigation service or a nonresidential service connection which is two inches or larger in size;
TMC 3-3.120 (4) requires all irrigation systems to be installed with a double check valve assembly.
TDC 74. 74.610 (3) As set forth in TDC Chapter 12, Water Service, the City has three water service levels. All development applicants shall be required to connect the proposed development site to the service level in which the development site is located.
Response TDC 74.610 (1): An existing 8" water line extends approximately 320 lineal feet onto the property. The line runs north-south along the west property line, paralleling the existing flagpole drive. A new 8" water line will connect to this existing stub and continue south to serve the site. No building is served by domestic water; a stub for a future building is provided. External showers located north of Buildings 100 and 200 are connected to domestic water.

5. *Sanitary Sewer:*
TDC 74.330 (1) Sanitary sewer lines shall be installed to serve each property in accordance with the Public Works Construction Code. Sanitary sewer construction plans and calculations shall be submitted to the City Engineer for review and approval prior to construction.
Response: An existing 6" sanitary line extends approximately 340 lineal feet onto the property. The line runs north-south down the centerline of the existing flagpole drive. A new sanitary manhole will be installed within the drive and a 6" line will continue south to serve the site. Building 400 will connect to this waste line; Buildings 100, 200, 300 and 500 do not require sanitary connections. A manhole is provided for connection to a future building. The system will be gravity type.

TDC 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.
Response: Utility easements for water, sanitary sewer and storm drainage facilities, telephone, television cable, gas, electrical lines and other public utilities will be granted to the City as needed. An existing easement is in place for the existing waterline serving the development area.

6. *Storm Drainage & Water Quality:*
TDC 74. 74.630 Storm Drainage System
   (1) Storm drainage lines shall be installed to serve each property in accordance with City standards. Storm drainage construction plans and calculations shall be submitted to the City Engineer for review and approval prior to construction.
   (2) The storm drainage calculations shall confirm that adequate capacity exists to serve the site. The discharge from the

development shall be analyzed in accordance with the City's Storm and Surface Water Regulations.

Response: Stormwater and water quality for each building and associated impervious surface will be accommodated on site; no connection to City storm system is proposed.

TDC 74.650 Water Quality, Stormwater Detention and Erosion Control

(2) On all other development applications, prior to issuance of any building permit, the applicant shall 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 shall 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 shall submit an erosion control plan prior to issuance of a Public Works Permit. No construction or disturbing of the site shall occur until the erosion control plan is approved by the City and the required measures are in place and approved by the City.

TMC 3-50220 Criteria for Requiring On-Site Detention to be constructed.

(1) There is an identified downstream deficiency, as defined in TMC 3-5.210, and a detention rather than conveyance system enlargement is determined to be the more effective solution.

(2) There is an identified regional detention site within the boundary of the development.

TMC 3-5-330 Permit Required. Except as provided in TMC 3-5.310, no person shall cause any change to improved or unimproved property that will, or is likely to, increase the rate or quantity of run-off or pollution from the site without first obtaining a permit from the City and following the conditions of the permit.

TMC 3-5-380 Criteria for Granting Exemptions to Construction of On-Site Water Quality Facilities. A regional public facility may be constructed to serve private non-residential development provided:

(1) The facility serves more than one lot; and

(2) All owners sign a stormwater facility agreement; and

(3) Treatment accommodates reasonable worst case impervious area for full build-out, stormwater equivalent to existing or proposed roof area is privately treated in LIDA facilities, and any detention occurs on each lot.

Response: Stormwater and water quality for each building and associated impervious surface will be accommodated on-site.

7. Grading

TDC 74.640 (1) Development sites shall 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 shall 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 Engineer may require the applicant to remove all excess material from the development site.
Response: The proposed grading plan minimizes the impact of stormwater runoff to adjacent properties and allows adjacent properties to drain as they did before the development.

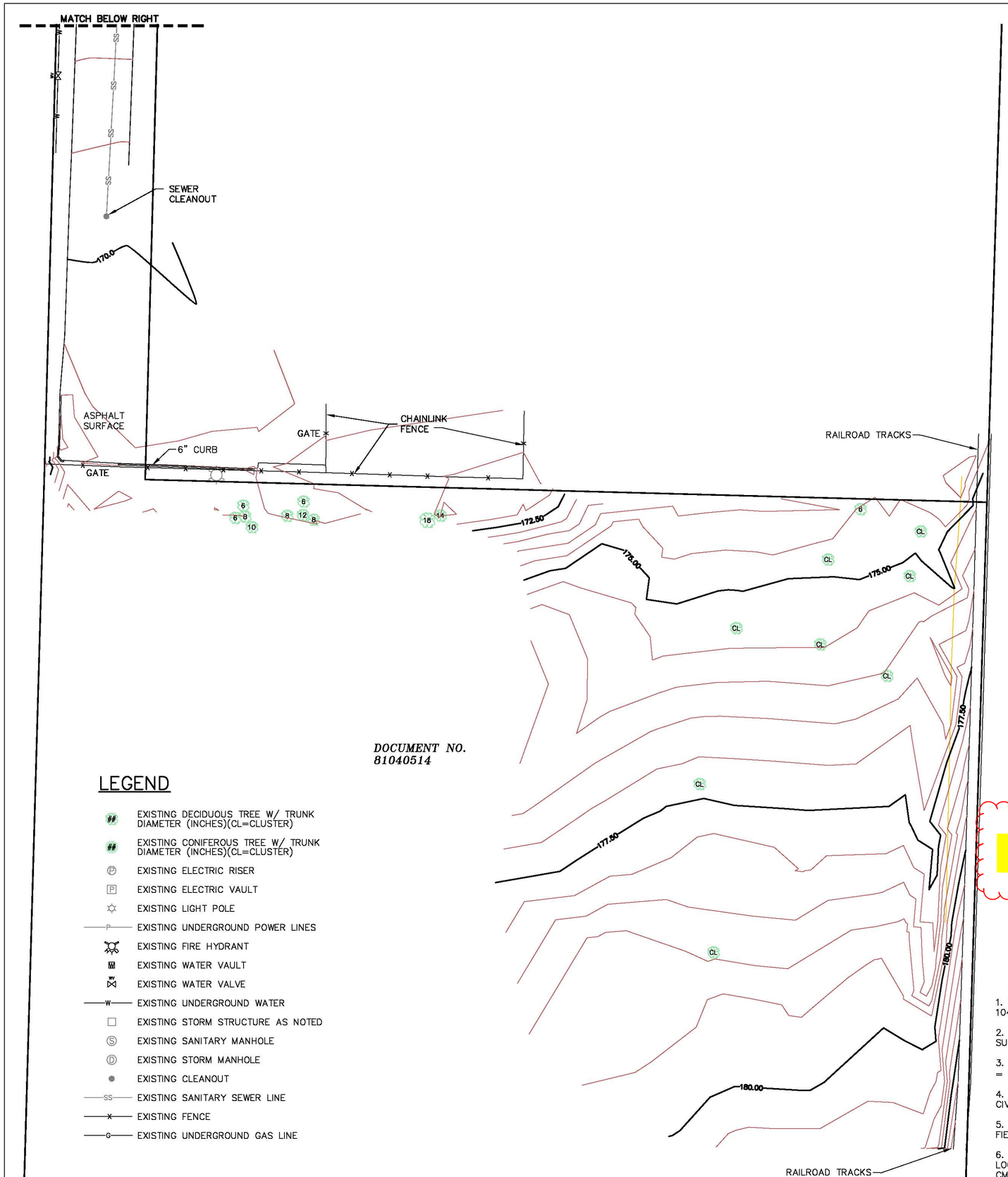
8. *Erosion Control:*
TDC 74.650 (3) For on-site private and regional non-residential public facilities, the applicant shall submit a stormwater facility agreement, which will include an operation and maintenance plan provided by the City, for the water quality facility for the City's review and approval. The applicant shall submit an erosion control plan prior to issuance of a Public Works Permit. No construction or disturbing of the site shall occur until the erosion control plan is approved by the City and the required measures are in place and approved by the City.
Response: An erosion control plan will be submitted prior to approval of a Public Works Permit.

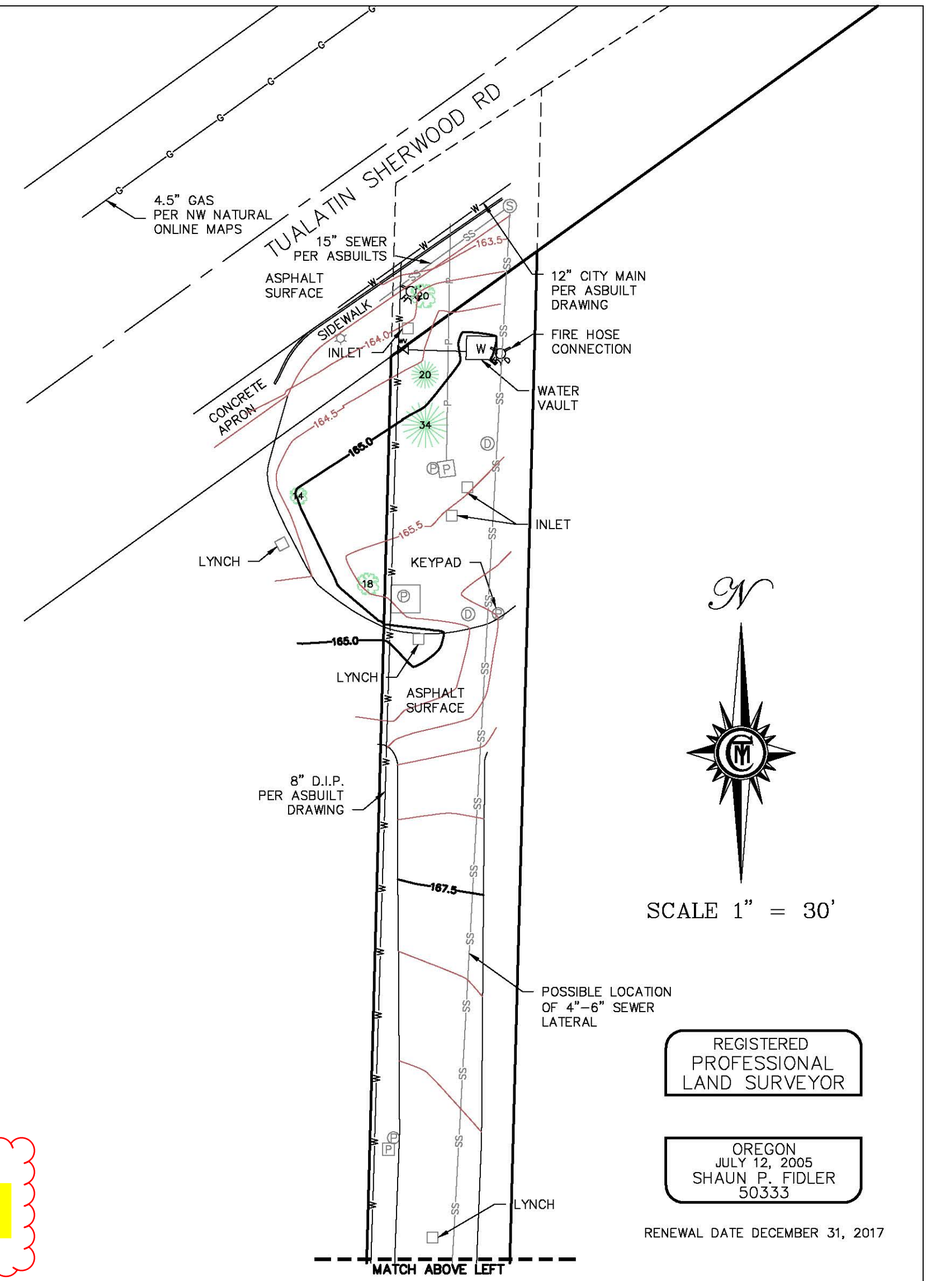
9. *Stormwater Connection Permit:*
TDC 74.650 Water Quality, Stormwater Detention and Erosion Control (2) On all other development applications, prior to issuance of any building permit, the applicant shall arrange to construct a permanent on-site water quality facility and stormwater detention facility 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 form the Unified Sewerage Agency.
Response: A CWS Service Provider Letter (SPL) is included with the Architectural Review Application.

If you have any questions regarding this application, please feel free to contact me at 360-798-3801.

Sincerely,

Eric Lanciault
Principal, Eric Lanciault, Architect





SCALE 1" = 30'

DOCUMENT NO.
81040514

LEGEND

- EXISTING DECIDUOUS TREE W/ TRUNK DIAMETER (INCHES)(CL=CLUSTER)
- EXISTING CONIFEROUS TREE W/ TRUNK DIAMETER (INCHES)(CL=CLUSTER)
- EXISTING ELECTRIC RISER
- EXISTING ELECTRIC VAULT
- EXISTING LIGHT POLE
- EXISTING UNDERGROUND POWER LINES
- EXISTING FIRE HYDRANT
- EXISTING WATER VAULT
- EXISTING WATER VALVE
- EXISTING UNDERGROUND WATER
- EXISTING STORM STRUCTURE AS NOTED
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING CLEANOUT
- EXISTING SANITARY SEWER LINE
- EXISTING FENCE
- EXISTING UNDERGROUND GAS LINE

NOTES

1. THE PURPOSE OF THIS MAP WAS TO SHOW THE EXISTING CONDITIONS FOR 10450 SW TUALATIN-SHERWOOD ROAD.
2. THE BASIS OF BEARINGS WAS PER SN 28,357 WASHINGTON COUNTY SURVEY RECORDS.
3. LOCAL DATUM WAS ESTABLISHED BY GPS STATIC OBSERVATION, ELEVATION = 170.39' (NAVD88)
4. THIS MAP WAS PREPARED FOR THE EXCLUSIVE USE OF JH KELLY. FOR CIVIL ENGINEER DESIGN.
5. THIS MAP WAS PREPARED BY PLAT RECORDS, CALCULATED DATA, AND FIELD MEASUREMENTS, A RECORDED BOUNDARY SURVEY WILL NOT BE FILED.
6. ALL UTILITY LOCATIONS ARE SHOWN BY ABOVE GROUND FEATURES AND LOCATION OF PAINT MARKS SUPPLIED BY THE LOCAL UTILITY COMPANIES. CMT TAKES NO RESPONSIBILTY OF UNDERGROUND LOCATION. PLEASE NOTIFY THE UTILITY NOTIFICATION CENTER BEFORE ANY DIGGING 1-800-332-2344.

REGISTERED PROFESSIONAL LAND SURVEYOR

OREGON
JULY 12, 2005
SHAUN P. FIDLER
50333

RENEWAL DATE DECEMBER 31, 2017

TOPOGRAPHIC SURVEY

10450 SW TUALATIN SHERWOOD RD

SW 1/4 SEC. 23
T 2 S., R 1 W., W.M.
CITY OF TUALATIN
WASHINGTON COUNTY, OREGON
AUGUST 17, 2017
DRAWN: DMR CHECKED: SPF
SCALE 1"=30' ACCOUNT # 209
Z:\209-008\DWG\209-008BASE

CMT SURVEYING AND CONSULTING
9136 SE ST HELENS ST, SUITE J
PO BOX 3251
CLACKAMAS, OR 97015
PHONE (503) 850-4672 FAX (503) 850-4590

REPUBLIC SERVICES

10295 SW Ridder Road, Wilsonville, OR 97070
O: 503.404.2135 F: 503.682.9004 republicservices.com

February 2, 2018

Matt Ouellette
Project Manager
JH Kelly, LLC

Re: Air Liquide project Tualatin Oregon

Dear Matt;

Thank you, for sending me the site plans and enclosure designs for Air Liquide Project being built in Tualatin.

My Company: Republic Services of Clackamas & Washington Counties has the franchise agreement to service this area with the City of Tualatin. We provide complete Commercial waste removal services and recycling services as needed on a weekly basis for this location.

I do not see any interference of where the enclosure is being planned that will affect your garbage & recycling services, or my ability to safely enter and exit the property. I will be able to drive between Building 100 and the site called Future Building to directly approach the enclosure. The size of the enclosure as stated in your notes of being 22' X 14' is fine for both trash and recycling containers. As noted please make sure the gates can open at least 120 degrees and be able to lock in the open position. Thank you for making the adjustment for the gates to be full width of the front.

Thanks Matt, for your help and concerns for our services prior to this project being developed.

Sincerely,

Frank J. Lonergan
Operations Manager
Republic Services Inc.

STORM WATER MANAGEMENT PLAN

CALCULATIONS AND SUMMARIES

Air Liquide

Tualatin, OR

VAA Comm. No. 170359

~~October 6, 2017~~

Revised January 26, 2018

Engineer:
VAA
2300 Berkshire Ln
Plymouth, MN 55441
Ph. (763) 587-7323

Owner:
Air Liquide

Calculation and Analysis completed by or completed under the direction of:
Jeffery Schrock, PE
Oregon # 81970PE

Table of Contents

I HEREBY CERTIFY THAT THIS REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM DULY LICENSED AS AN ENGINEER, IN THE STATE OF OREGON.

_____

Jeffrey Schrock, PE, 81970PE

Storm Water Summary

Design Standards –
The Air Liquide site improvements project has been evaluated to meet or exceed the standards of the Clean Water Service, Chapter 4 (*Revision April 2017*) guidelines, which require the peak runoff rates shall not exceed pre-development rates for the specific range of storms, 65% phosphorus removal, and water quality be treated for 0.36 inches of runoff at a minimum of 0.4 feet.

Existing Site Description-
This 5.73-acre subject site is situated in a heavy industrial district of the City of Tualatin. The site surrounded on all sides by industrial sites. A rail line passes across the southern and eastern edges of the subject site. The surrounding properties include Matheson (Welding Gas Supplier), Lakeside Limber (Hardware Store), EleMar Oregon (Granite Supplier), Air Products & Chemical Inc (Professional Services) and Airgas Operations (Manufacturer). The surrounding parcels range in size from 2.02 acres to 7.81 acres.

There are currently no stormwater controls on site or adjacent to the site to connect to.

Existing Geology Description-
A soil exploration and geotechnical report was completed Rapid Soil Solutions on July 18, 2017. A total of three (3) hand augur were excavated in the area of the new building and one test pit in the parking area to develop a pavement design. The locations of the borings are shown on figure 3 in the appendix. An EIT, engineer in training observed the drilled and logged the subsurface materials. The soil logs were compiled by a geotechnical engineer. The logs were created using the Unified Soil Classification and Visual Manual Procedure (ASTM-D 2488). The soil conditions were stiff CLAY (CL), to a depth of 12 feet. Groundwater was not encountered. Moisture contents varied from 27 to 32.1%.

Existing Terrain Description-
The site is high along the east and southern borders of the site. Drainage from the east and south west and north is pitched to the, which conveys runoff to the existing driveway. Storm sewer is located in Tualatin-Sherwood Road.

Proposed Runoff Description-
The proposed site improvements consist of 4 new buildings and bituminous driveways to access them. The improvements will increase the impervious area of the site by 1.54ac. The majority of the impervious runoff will be captured by storm water inlets and will be piped to a proposed treatment pond. A small portion of runoff will sheet flow directly to the pond, and an even smaller portion of the runoff will sheet flow to the existing driveway.

Flow from the south that typically flows through the site will be captured in a grassed swale, and will be routed to the east and then to the north until in reaches the proposed treatment pond.

Proposed Runoff Treatment-
Water Quality Volume (WQV) was calculated for the site. The WQV is the volume of water that is produced by the water quality storm. The WQV equals 0.36 inches over the impervious area that is required to be treated as shown in the formula below:

Water Quality Volume (CF) = $\frac{0.36 \text{ (in.)} \times \text{Area (sq.ft.)}}{12 \text{ (in./ft.)}} = \frac{0.36 \text{ (in.)} \times 62{,}050 \text{ (sq.ft.)}}{12 \text{ (in./ft.)}} = 1{,}862$ CF

The WQV is the volume of water from the bottom of the pond to the discharge point of the outlet control structure (5 inches above the bottom). See Table 1 below.

Table 1

WATER QUALITY VOLUME				
		VOLUME		
CONTOUR	AREA	STAGE		CUM'TIVE
	SF	CF		CF
171.40	4,002			
171.80	5,582	1,917	100%	1,917

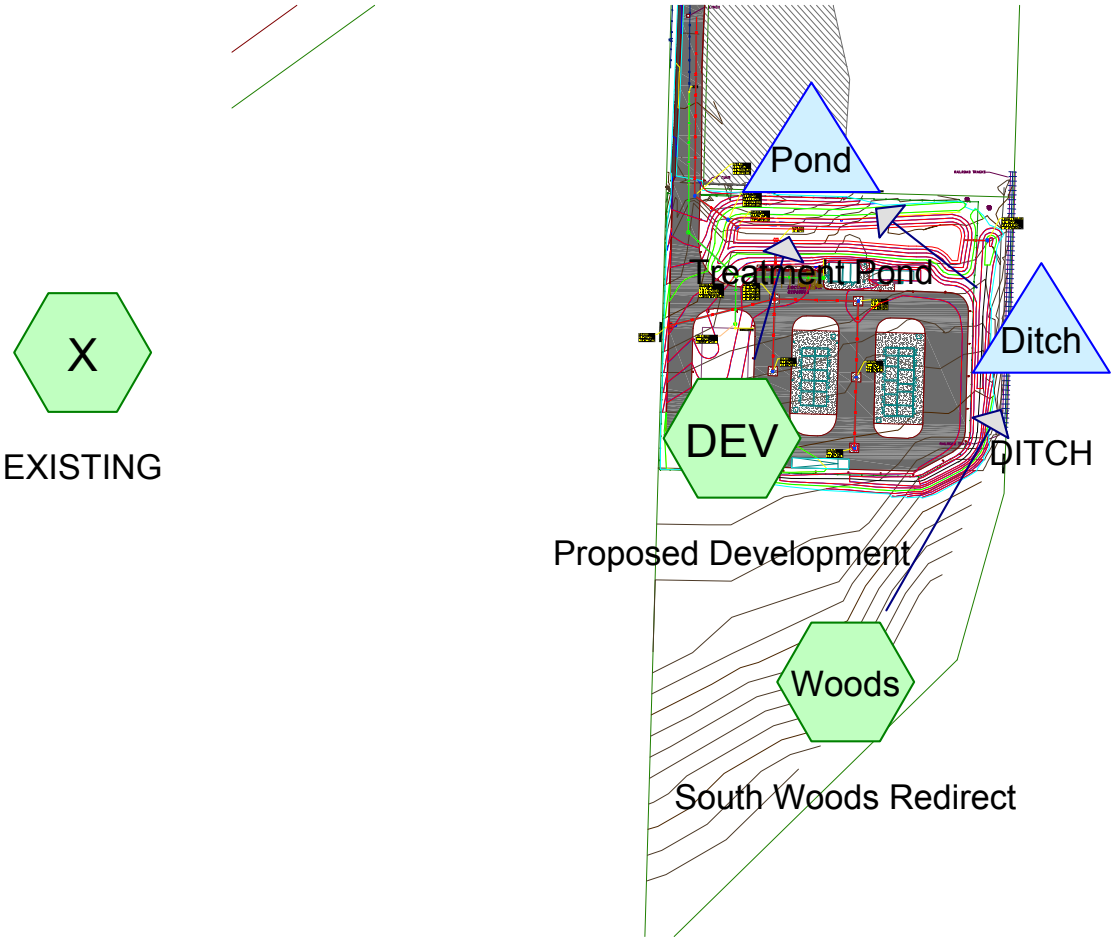
The system was also designed for rate control. The stormwater quantity on-site detention facilities have be designed to capture runoff so the post-development runoff rates from the site, and do not exceed the pre-development runoff rates from the site, based on 24-hour storm events ranging from the 2-year return storm to the 25-year return storm. Specifically, the 2, 10, and 25-year post-development runoff rates will not exceed their respective 2, 10, and 25-year pre-development runoff rates. Runoff rates were determined using the NOAA ATLAS 2 Isopluvial maps for 24-HR precipitation maps, and calculation flow rates using HydroCAD software. See Table 2 below.

Rate is substantially decreased in the proposed condition. Excess runoff that enters the pond will flow through a double manhole - outlet control structure. The first manhole's only outlet is a 4" PVC pipe. This outlet will limit the flow out of the pond. The second manhole is for overflow or clogging of the first manhole.

Table 2

RUNOFF RATES			
STORM	EXISTING	PROPOSED	REDUCTION
EVENT	RATE	OCS RATE	
	(CFS)	(CFS)	
2-YR	*1.44*	**0.74**	50%
10-YR	*3.01*	**0.83**	72%
25-YR	*3.88*	**0.87**	78%

Appendix A



Subcat Reach Pond Link

Routing Diagram for 170359 HYDRO 01-25-18
Prepared by VAA, Printed 1/26/2018

Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment DEV: Proposed Development Runoff Area=1.957 ac 74.20% Impervious Runoff Depth>1.78"
Tc=10.0 min CN=93 Runoff=5.11 cfs 0.290 af

Subcatchment Woods: South Woods Runoff Area=3.438 ac 0.00% Impervious Runoff Depth>0.76"
Flow Length=1,000' Tc=89.3 min CN=78 Runoff=0.97 cfs 0.219 af

Subcatchment X: EXISTING Runoff Area=5.395 ac 0.00% Impervious Runoff Depth>0.72"
Flow Length=600' Slope=0.0300 '/' Tc=86.6 min CN=77 Runoff=1.44 cfs 0.322 af

Pond Ditch: DITCH Peak Elev=174.31' Storage=159 cf Inflow=0.97 cfs 0.219 af
Outflow=0.97 cfs 0.217 af

Pond Pond: Treatment Pond Peak Elev=172.81' Storage=8,573 cf Inflow=5.11 cfs 0.507 af
Outflow=0.72 cfs 0.457 af

Summary for Subcatchment DEV: Proposed Development

Runoff = 5.11 cfs @ 12.01 hrs, Volume= 0.290 af, Depth> 1.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-YR Rainfall=2.50"

	Area (ac)	CN	Description
*	1.452	98	Pavement
	0.505	80	>75% Grass cover, Good, HSG D
	1.957	93	Weighted Average
	0.505		25.80% Pervious Area
	1.452		74.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment Woods: South Woods Redirect

Runoff = 0.97 cfs @ 13.08 hrs, Volume= 0.219 af, Depth> 0.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-YR Rainfall=2.50"

Area (ac)	CN	Description
2.686	79	Woods, Fair, HSG D
0.752	73	Brush, Good, HSG D
3.438	78	Weighted Average
3.438		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
86.6	600	0.0300	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.50"
2.7	400	0.0100	2.45	17.13	**Channel Flow,** Area= 7.0 sf Perim= 16.0' r= 0.44' n= 0.035 Earth, dense weeds
89.3	1,000	Total			

Summary for Subcatchment X: EXISTING

Runoff = 1.44 cfs @ 13.02 hrs, Volume= 0.322 af, Depth> 0.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 2-YR Rainfall=2.50"

Area (ac)	CN	Description
3.857	79	Woods, Fair, HSG D
1.538	73	Brush, Good, HSG D
5.395	77	Weighted Average
5.395		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
86.6	600	0.0300	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.50"

Summary for Pond Ditch: DITCH

Inflow Area = 3.438 ac, 0.00% Impervious, Inflow Depth > 0.76" for 2-YR event
Inflow = 0.97 cfs @ 13.08 hrs, Volume= 0.219 af
Outflow = 0.97 cfs @ 13.10 hrs, Volume= 0.217 af, Atten= 0%, Lag= 1.1 min
Primary = 0.97 cfs @ 13.10 hrs, Volume= 0.217 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 174.31' @ 13.10 hrs Surf.Area= 426 sf Storage= 159 cf

Plug-Flow detention time= 5.9 min calculated for 0.217 af (99% of inflow)
Center-of-Mass det. time= 2.8 min (922.4 - 919.6)

Volume	Invert	Avail.Storage	Storage Description
#1	173.80'	4,065 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
173.80	50	0	0
174.00	350	40	40
175.00	600	475	515
176.00	3,000	1,800	2,315
176.50	4,000	1,750	4,065

Device	Routing	Invert	Outlet Devices
#1	Primary	173.00'	**10.0" Round Culvert** L= 20.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 173.00' / 172.30' S= 0.0350 '/' Cc= 0.900 n= 0.013, Flow Area= 0.55 sf
#2	Primary	176.20'	**10.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Device 1	174.00'	**2.0' long x 0.5' breadth INLET GRATE** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=0.97 cfs @ 13.10 hrs HW=174.31' (Free Discharge)
- **1=Culvert** (Passes 0.97 cfs of 2.18 cfs potential flow)
  - **3=INLET GRATE** (Weir Controls 0.97 cfs @ 1.58 fps)
- **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond Pond: Treatment Pond

Inflow Area = 5.395 ac, 26.91% Impervious, Inflow Depth > 1.13" for 2-YR event
Inflow = 5.11 cfs @ 12.01 hrs, Volume= 0.507 af
Outflow = 0.72 cfs @ 13.98 hrs, Volume= 0.457 af, Atten= 86%, Lag= 118.1 min
Primary = 0.72 cfs @ 13.98 hrs, Volume= 0.457 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 172.81' @ 13.98 hrs Surf.Area= 7,644 sf Storage= 8,573 cf

Plug-Flow detention time= 157.9 min calculated for 0.457 af (90% of inflow)
Center-of-Mass det. time= 109.6 min (962.6 - 852.9)

Volume	Invert	Avail.Storage	Storage Description
#1	171.40'	34,006 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
171.40	4,708	0	0
172.00	5,800	3,152	3,152
173.00	8,087	6,944	10,096
174.00	10,577	9,332	19,428
175.00	13,200	11,889	31,316
175.20	13,700	2,690	34,006

Device	Routing	Invert	Outlet Devices
#1	Primary	169.00'	**8.0" Round Outlet Pipe** L= 47.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 169.00' / 168.06' S= 0.0200 '/' Cc= 0.900 n= 0.013, Flow Area= 0.35 sf
#2	Device 1	174.90'	**27.0" x 24.0" Horiz. Structure #2 Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	169.50'	**4.0" Round Connection Pipe** L= 11.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 169.50' / 169.28' S= 0.0200 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#4	Device 3	171.80'	**24.0" x 27.0" Horiz. Structure #1 Grate X 0.80** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.72 cfs @ 13.98 hrs HW=172.81' (Free Discharge)
- **1=Outlet Pipe** (Passes 0.72 cfs of 2.75 cfs potential flow)
  - **2=Structure #2 Grate** (Controls 0.00 cfs)
  - **3=Connection Pipe** (Barrel Controls 0.72 cfs @ 8.29 fps)
    - **4=Structure #1 Grate** (Passes 0.72 cfs of 17.39 cfs potential flow)

Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment DEV: Proposed Development Runoff Area=1.957 ac 74.20% Impervious Runoff Depth>2.73"
Tc=10.0 min CN=93 Runoff=7.68 cfs 0.445 af

Subcatchment Woods: South Woods Runoff Area=3.438 ac 0.00% Impervious Runoff Depth>1.46"
Flow Length=1,000' Tc=89.3 min CN=78 Runoff=1.97 cfs 0.417 af

Subcatchment X: EXISTING Runoff Area=5.395 ac 0.00% Impervious Runoff Depth>1.39"
Flow Length=600' Slope=0.0300 '/' Tc=86.6 min CN=77 Runoff=3.01 cfs 0.626 af

Pond Ditch: DITCH Peak Elev=174.48' Storage=236 cf Inflow=1.97 cfs 0.417 af
Outflow=1.97 cfs 0.416 af

Pond Pond: Treatment Pond Peak Elev=173.85' Storage=17,845 cf Inflow=7.83 cfs 0.861 af
Outflow=0.83 cfs 0.790 af

Summary for Subcatchment DEV: Proposed Development

Runoff = 7.68 cfs @ 12.01 hrs, Volume= 0.445 af, Depth> 2.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-YR Rainfall=3.50"

	Area (ac)	CN	Description
*	1.452	98	Pavement
	0.505	80	>75% Grass cover, Good, HSG D
	1.957	93	Weighted Average
	0.505		25.80% Pervious Area
	1.452		74.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment Woods: South Woods Redirect

Runoff = 1.97 cfs @ 13.02 hrs, Volume= 0.417 af, Depth> 1.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-YR Rainfall=3.50"

Area (ac)	CN	Description
2.686	79	Woods, Fair, HSG D
0.752	73	Brush, Good, HSG D
3.438	78	Weighted Average
3.438		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
86.6	600	0.0300	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.50"
2.7	400	0.0100	2.45	17.13	**Channel Flow,** Area= 7.0 sf Perim= 16.0' r= 0.44' n= 0.035 Earth, dense weeds
89.3	1,000	Total			

Summary for Subcatchment X: EXISTING

Runoff = 3.01 cfs @ 13.00 hrs, Volume= 0.626 af, Depth> 1.39"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 10-YR Rainfall=3.50"

Area (ac)	CN	Description
3.857	79	Woods, Fair, HSG D
1.538	73	Brush, Good, HSG D
5.395	77	Weighted Average
5.395		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
86.6	600	0.0300	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.50"

Summary for Pond Ditch: DITCH

Inflow Area = 3.438 ac, 0.00% Impervious, Inflow Depth > 1.46" for 10-YR event
Inflow = 1.97 cfs @ 13.02 hrs, Volume= 0.417 af
Outflow = 1.97 cfs @ 13.05 hrs, Volume= 0.416 af, Atten= 0%, Lag= 1.9 min
Primary = 1.97 cfs @ 13.05 hrs, Volume= 0.416 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 174.48' @ 13.05 hrs Surf.Area= 469 sf Storage= 236 cf

Plug-Flow detention time= 4.1 min calculated for 0.415 af (99% of inflow)
Center-of-Mass det. time= 2.2 min (904.3 - 902.1)

Volume	Invert	Avail.Storage	Storage Description
#1	173.80'	4,065 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
173.80	50	0	0
174.00	350	40	40
175.00	600	475	515
176.00	3,000	1,800	2,315
176.50	4,000	1,750	4,065

Device	Routing	Invert	Outlet Devices
#1	Primary	173.00'	**10.0" Round Culvert** L= 20.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 173.00' / 172.30' S= 0.0350 '/' Cc= 0.900 n= 0.013, Flow Area= 0.55 sf
#2	Primary	176.20'	**10.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Device 1	174.00'	**2.0' long x 0.5' breadth INLET GRATE** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=1.97 cfs @ 13.05 hrs HW=174.48' (Free Discharge)
- **1=Culvert** (Passes 1.97 cfs of 2.39 cfs potential flow)
  - **3=INLET GRATE** (Weir Controls 1.97 cfs @ 2.06 fps)
- **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond Pond: Treatment Pond

Inflow Area = 5.395 ac, 26.91% Impervious, Inflow Depth > 1.92" for 10-YR event
Inflow = 7.83 cfs @ 12.01 hrs, Volume= 0.861 af
Outflow = 0.83 cfs @ 14.62 hrs, Volume= 0.790 af, Atten= 89%, Lag= 156.8 min
Primary = 0.83 cfs @ 14.62 hrs, Volume= 0.790 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 173.85' @ 14.62 hrs Surf.Area= 10,197 sf Storage= 17,845 cf

Plug-Flow detention time= 247.9 min calculated for 0.789 af (92% of inflow)
Center-of-Mass det. time= 206.7 min (1,051.4 - 844.6)

Volume	Invert	Avail.Storage	Storage Description
#1	171.40'	34,006 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
171.40	4,708	0	0
172.00	5,800	3,152	3,152
173.00	8,087	6,944	10,096
174.00	10,577	9,332	19,428
175.00	13,200	11,889	31,316
175.20	13,700	2,690	34,006

Device	Routing	Invert	Outlet Devices
#1	Primary	169.00'	**8.0" Round Outlet Pipe** L= 47.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 169.00' / 168.06' S= 0.0200 '/' Cc= 0.900 n= 0.013, Flow Area= 0.35 sf
#2	Device 1	174.90'	**27.0" x 24.0" Horiz. Structure #2 Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	169.50'	**4.0" Round Connection Pipe** L= 11.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 169.50' / 169.28' S= 0.0200 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#4	Device 3	171.80'	**24.0" x 27.0" Horiz. Structure #1 Grate X 0.80** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.83 cfs @ 14.62 hrs HW=173.85' (Free Discharge)
- **1=Outlet Pipe** (Passes 0.83 cfs of 3.08 cfs potential flow)
  - **2=Structure #2 Grate** (Controls 0.00 cfs)
  - **3=Connection Pipe** (Barrel Controls 0.83 cfs @ 9.54 fps)
    - **4=Structure #1 Grate** (Passes 0.83 cfs of 24.80 cfs potential flow)

Time span=1.00-24.00 hrs, dt=0.05 hrs, 461 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment DEV: Proposed Development Runoff Area=1.957 ac 74.20% Impervious Runoff Depth>3.21"
Tc=10.0 min CN=93 Runoff=8.95 cfs 0.524 af

Subcatchment Woods: South Woods Runoff Area=3.438 ac 0.00% Impervious Runoff Depth>1.84"
Flow Length=1,000' Tc=89.3 min CN=78 Runoff=2.52 cfs 0.527 af

Subcatchment X: EXISTING Runoff Area=5.395 ac 0.00% Impervious Runoff Depth>1.77"
Flow Length=600' Slope=0.0300 '/' Tc=86.6 min CN=77 Runoff=3.88 cfs 0.794 af

Pond Ditch: DITCH Peak Elev=174.58' Storage=285 cf Inflow=2.52 cfs 0.527 af
Outflow=2.50 cfs 0.525 af

Pond Pond: Treatment Pond Peak Elev=174.32' Storage=22,943 cf Inflow=9.19 cfs 1.049 af
Outflow=0.88 cfs 0.866 af

Summary for Subcatchment DEV: Proposed Development

Runoff = 8.95 cfs @ 12.01 hrs, Volume= 0.524 af, Depth> 3.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-YR Rainfall=4.00"

	Area (ac)	CN	Description
*	1.452	98	Pavement
	0.505	80	>75% Grass cover, Good, HSG D
	1.957	93	Weighted Average
	0.505		25.80% Pervious Area
	1.452		74.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0					**Direct Entry,**

Summary for Subcatchment Woods: South Woods Redirect

Runoff = 2.52 cfs @ 13.01 hrs, Volume= 0.527 af, Depth> 1.84"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-YR Rainfall=4.00"

Area (ac)	CN	Description
2.686	79	Woods, Fair, HSG D
0.752	73	Brush, Good, HSG D
3.438	78	Weighted Average
3.438		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
86.6	600	0.0300	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.50"
2.7	400	0.0100	2.45	17.13	**Channel Flow,** Area= 7.0 sf Perim= 16.0' r= 0.44' n= 0.035 Earth, dense weeds
89.3	1,000	Total			

Summary for Subcatchment X: EXISTING

Runoff = 3.88 cfs @ 12.99 hrs, Volume= 0.794 af, Depth> 1.77"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 25-YR Rainfall=4.00"

Area (ac)	CN	Description
3.857	79	Woods, Fair, HSG D
1.538	73	Brush, Good, HSG D
5.395	77	Weighted Average
5.395		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
86.6	600	0.0300	0.12		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.50"

Summary for Pond Ditch: DITCH

Inflow Area = 3.438 ac, 0.00% Impervious, Inflow Depth > 1.84" for 25-YR event
Inflow = 2.52 cfs @ 13.01 hrs, Volume= 0.527 af
Outflow = 2.50 cfs @ 13.09 hrs, Volume= 0.525 af, Atten= 1%, Lag= 4.7 min
Primary = 2.50 cfs @ 13.09 hrs, Volume= 0.525 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 174.58' @ 13.09 hrs Surf.Area= 495 sf Storage= 285 cf

Plug-Flow detention time= 3.6 min calculated for 0.525 af (100% of inflow)
Center-of-Mass det. time= 2.0 min (898.1 - 896.1)

Volume	Invert	Avail.Storage	Storage Description
#1	173.80'	4,065 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
173.80	50	0	0
174.00	350	40	40
175.00	600	475	515
176.00	3,000	1,800	2,315
176.50	4,000	1,750	4,065

Device	Routing	Invert	Outlet Devices
#1	Primary	173.00'	**10.0" Round Culvert** L= 20.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 173.00' / 172.30' S= 0.0350 '/' Cc= 0.900 n= 0.013, Flow Area= 0.55 sf
#2	Primary	176.20'	**10.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32
#3	Device 1	174.00'	**2.0' long x 0.5' breadth INLET GRATE** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=2.50 cfs @ 13.09 hrs HW=174.58' (Free Discharge)
- **1=Culvert** (Inlet Controls 2.50 cfs @ 4.58 fps)
  - **3=INLET GRATE** (Passes 2.50 cfs of 2.70 cfs potential flow)
- **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond Pond: Treatment Pond

Inflow Area = 5.395 ac, 26.91% Impervious, Inflow Depth > 2.33" for 25-YR event
Inflow = 9.19 cfs @ 12.01 hrs, Volume= 1.049 af
Outflow = 0.88 cfs @ 14.87 hrs, Volume= 0.866 af, Atten= 90%, Lag= 171.9 min
Primary = 0.88 cfs @ 14.87 hrs, Volume= 0.866 af

Routing by Stor-Ind method, Time Span= 1.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 174.32' @ 14.87 hrs Surf.Area= 11,416 sf Storage= 22,943 cf

Plug-Flow detention time= 280.3 min calculated for 0.866 af (83% of inflow)
Center-of-Mass det. time= 207.8 min (1,049.1 - 841.3)

Volume	Invert	Avail.Storage	Storage Description
#1	171.40'	34,006 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
171.40	4,708	0	0
172.00	5,800	3,152	3,152
173.00	8,087	6,944	10,096
174.00	10,577	9,332	19,428
175.00	13,200	11,889	31,316
175.20	13,700	2,690	34,006

Device	Routing	Invert	Outlet Devices
#1	Primary	169.00'	**8.0" Round Outlet Pipe** L= 47.0' RCP, mitered to conform to fill, Ke= 0.700 Inlet / Outlet Invert= 169.00' / 168.06' S= 0.0200 '/' Cc= 0.900 n= 0.013, Flow Area= 0.35 sf
#2	Device 1	174.90'	**27.0" x 24.0" Horiz. Structure #2 Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	169.50'	**4.0" Round Connection Pipe** L= 11.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 169.50' / 169.28' S= 0.0200 '/' Cc= 0.900 n= 0.013, Flow Area= 0.09 sf
#4	Device 3	171.80'	**24.0" x 27.0" Horiz. Structure #1 Grate X 0.80** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.88 cfs @ 14.87 hrs HW=174.32' (Free Discharge)
- **1=Outlet Pipe** (Passes 0.88 cfs of 3.22 cfs potential flow)
  - **2=Structure #2 Grate** (Controls 0.00 cfs)
  - **3=Connection Pipe** (Barrel Controls 0.88 cfs @ 10.06 fps)
    - **4=Structure #1 Grate** (Passes 0.88 cfs of 27.51 cfs potential flow)

Appendix B

Air Liquide
#170359

REVISED:
1/26/2018

Site Total
Hard Surface 62,050 SF or 1.42 AC

1) WATER QUALITY, PROVIDE 0.36" TREATMENT VOLUME

62,050 SF X 0.36 IN / (12 IN / FT) = 1,862 CF

2) CALCULATE WATER QUALITY FLOW

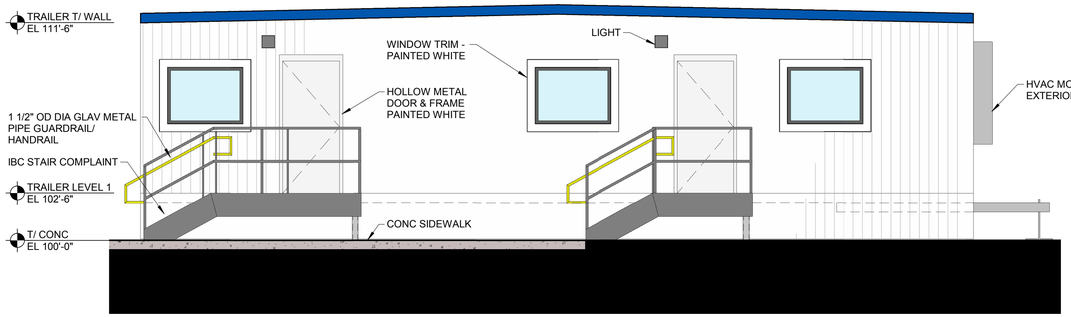
1,862 CF / 14,400 SEC = 0.13 CFS

3) POND BOTTOM = 171.4

5.0 IN + 171.4 = 171.82

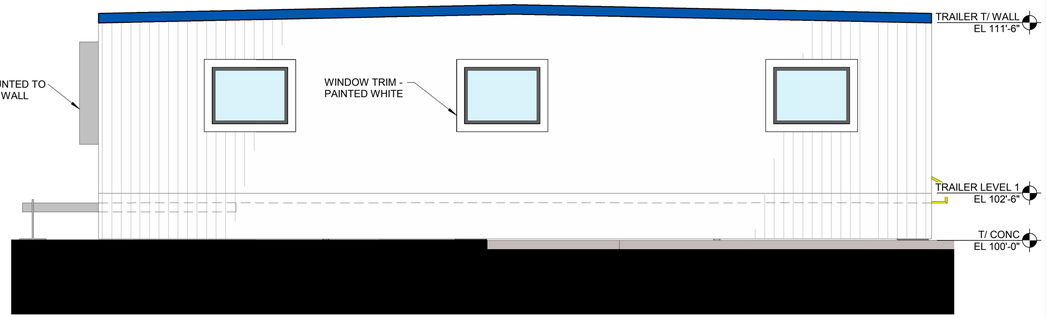
WATER QUALITY VOLUME				
		VOLUME		
CONTOUR	AREA	STAGE		CUM'TIVE
	SF	CF		CF
171.40	4,002			
171.80	5,582	1,917	100%	1,917

RUNOFF RATES			
STORM	EXISTING	PROPOSED	REDUCTION
EVENT	RATE	OCS RATE	
	(CFS)	(CFS)	
2-YR	*1.44*	**0.72**	50%
10-YR	*3.01*	**0.83**	72%
25-YR	*3.88*	**0.87**	78%



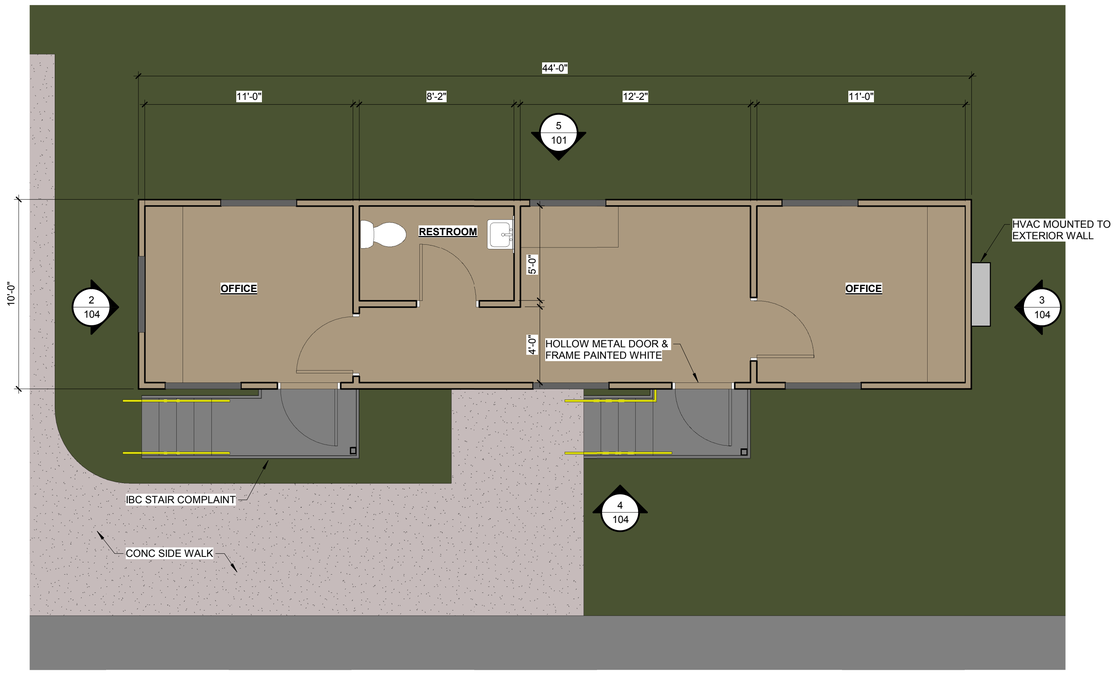
4/104 SOUTH EXTERIOR ELEVATION @ OFFICE BLDG #300

1/4" = 1'-0"



5/104 NORTH EXTERIOR ELEVATION @ OFFICE BLDG #300

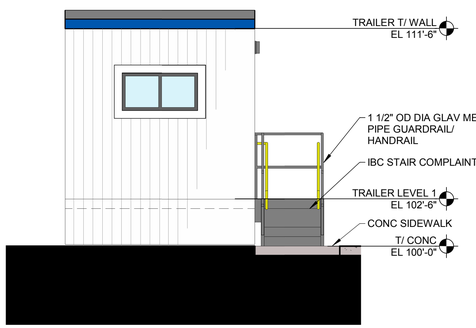
1/4" = 1'-0"



1/104 PLAN @ OFFICE BLDG #300

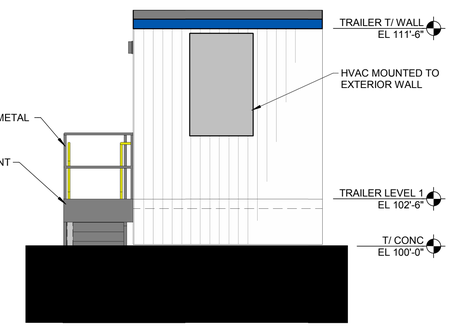
1/4" = 1'-0"

NORTH



2/104 WEST EXTERIOR ELEVATION @ OFFICE BLDG #300

1/4" = 1'-0"



3/104 EAST EXTERIOR ELEVATION @ OFFICE BLDG #300

1/4" = 1'-0"

VAA
Planners and Engineers
2300 Berkshire Lane N, Suite 200
Plymouth, MN 55441
763.559.9100
www.vaaeng.com
info@vaaeng.com

CLIENT:

JH KELLY

PROJECT:

AIR LIQUIDE
GAS DEPOT
TUALATIN, OR

NO.	DATE	ISSUE/REVISION	BY

PRELIMINARY

NOT FOR CONSTRUCTION

DATE: 12/04/17		DESIGNED: DFS
DRAWN: KYV	CHECKED: DFS	APPROVED: DFS

DRAWING TITLE:

OFFICE TRAILER BLDG #300
PLAN & EXTERIOR
ELEVATIONS

PROJECT NO: 170359	DRAWING NO: 104
SCALE: AS NOTED	

Date Plotted:12/4/2017 3:05:05 PM

ARCHITECTURAL REVIEW
CERTIFICATION OF SIGN POSTING

18"

24"

The applicant shall provide and post a sign pursuant to Tualatin Development Code (TDC) 31.064(2). Additionally, the 18" x 24" sign must contain the application number, and the block around the word "NOTICE" must remain **primary yellow** composed of the **RGB color values Red 255, Green 255, and Blue 0.** Additionally, the potential applicant must provide a flier (or flyer) box on or near the sign and fill the box with brochures reiterating the meeting info and summarizing info about the potential project, including mention of anticipated land use application(s). Staff has a Microsoft PowerPoint 2007 template of this sign design available through the Planning Division homepage at < www.tualatinoregon.gov/planning/land-use-application-sign-templates>.

NOTE: For larger projects, the Community Development Department may require the posting of additional signs in conspicuous locations.

As the applicant for the Air Liquide Depot project, I hereby certify that on this day, 1 sign(s) was/were posted on the subject property in accordance with the requirements of the Tualatin Development Code and the Community Development Department - Planning Division.

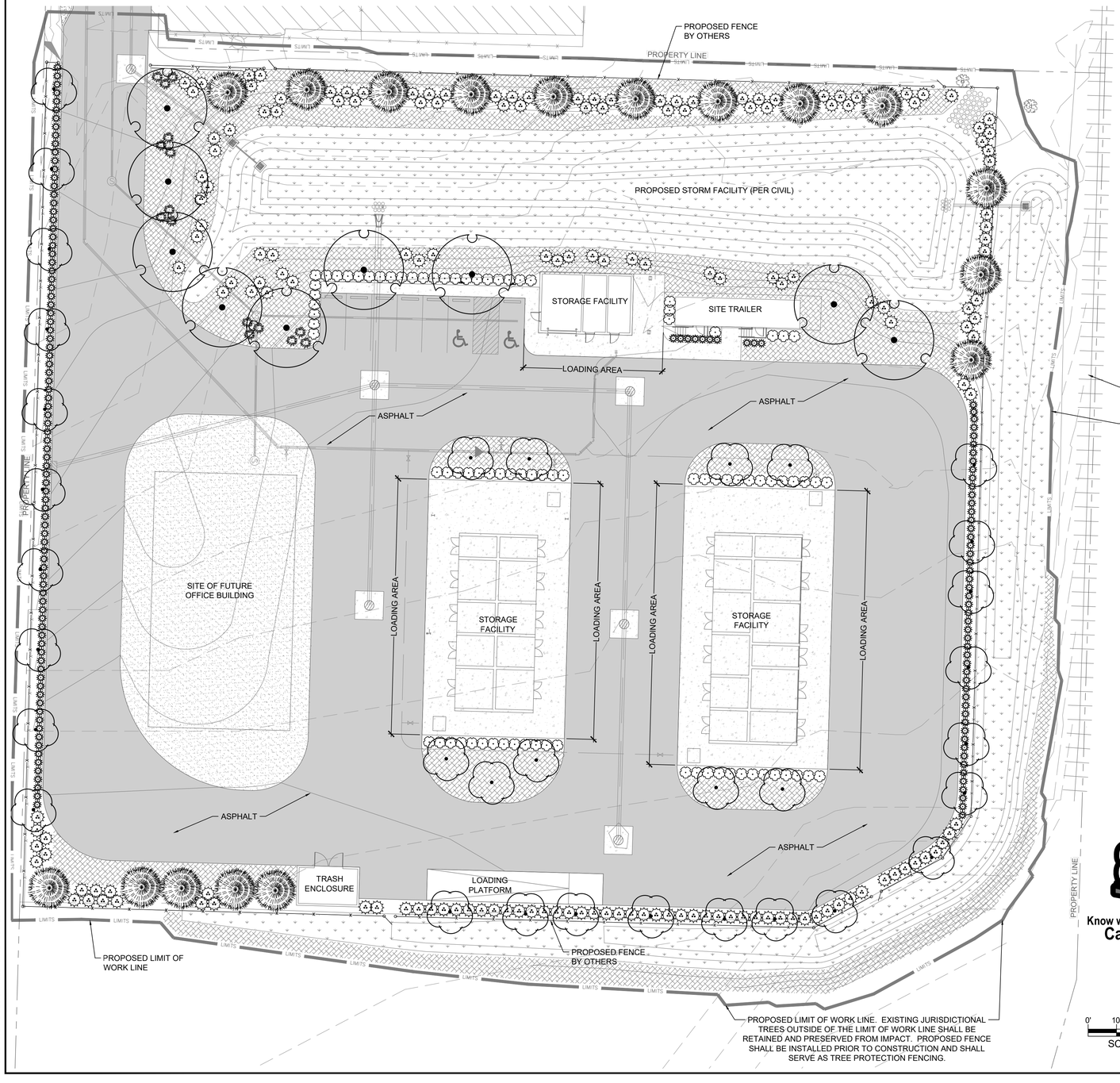
Applicant's Name: Luke Orem
(PLEASE PRINT)

Applicant's Signature: _____

Date: 10/5/2017

GENERAL LANDSCAPE NOTES

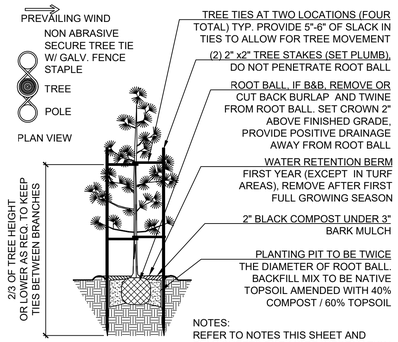
1. CONTRACTOR SHALL VERIFY PLANT QUANTITIES. IF THERE IS A DISCREPANCY BETWEEN THE QUANTITIES LISTED IN THE PLANT LEGEND AND THE QUANTITIES SHOWN ON THE PLAN, THE PLAN SHALL PREVAIL.
2. STAKE ALL PROPOSED TREE LOCATIONS FOR REVIEW AND APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO DIGGING TREE PITS. THE OWNER RESERVES THE RIGHT TO ADJUST LOCATION AND SPACING OF PLANTS.
3. PLANT SUBSTITUTIONS PROPOSED BY THE CONTRACTOR SHALL BE SIMILAR IN SIZE, SHAPE, AND FOLIAGE TYPE TO THE PLANT BEING REPLACED AND MUST BE APPROVED BY THE OWNER'S REPRESENTATIVE. STREET TREE SUBSTITUTIONS SHALL BE FROM CITY APPROVED LISTS OR SHALL BE APPROVED BY THE LOCAL JURISDICTION.
4. ALL PLANTS SHALL MEET OR EXCEED INDUSTRY STANDARDS FOR SIZE AND QUALITY. SUBSTANDARD PLANT MATERIAL WILL BE REJECTED BY THE OWNER'S REPRESENTATIVE.
5. THE LOWER BRANCHES OF TREES ADJACENT TO ROADS, PARKING AREAS, AND WALKWAYS SHALL BE PRUNED UP TO AVOID INTERFERENCE WITH PEDESTRIANS AND VEHICLES.
6. PLANTINGS WITHIN SIGHT DISTANCE AND VISION CLEARANCE TRIANGLES SHALL CONFORM TO LOCAL CODE STANDARDS.
7. REPLACE AND RESTORE DISTURBED AREAS TO THEIR ORIGINAL CONDITION OR TO THE OWNER'S SATISFACTION.
8. VERIFY BELOW GRADE CONDITIONS AND UTILITY LOCATIONS (EXISTING AND PROPOSED) PRIOR TO DIGGING.
9. COORDINATE ALL PLANTINGS WITH LOCATIONS OF UTILITY POLES, STORM WATER STRUCTURES, CLEANOUTS, ELECTRICAL TRANSFORMERS, WATER METERS, FIRE HYDRANTS, AND ANY OTHER ABOVE OR BELOW GROUND UTILITIES AND STRUCTURES. CONTRACTOR MAY FIELD ADJUST OR ELIMINATE PLANTS THAT CONFLICT WITH UTILITIES WITH THE APPROVAL OF THE OWNER'S REPRESENTATIVE. LOCAL CODE REQUIREMENTS AND BEST INDUSTRY PRACTICES SHALL GOVERN THE DISTANCE BETWEEN PLANTINGS AND VARIOUS UTILITIES.
10. THE CIVIL ENGINEER AND GENERAL CONTRACTOR SHALL COORDINATE WITH THE IRRIGATION DESIGNER/ CONTRACTOR TO PROVIDE 4" SCH. 40 PVC SLEEVES AS NECESSARY UNDER DRIVEWAYS, SIDEWALKS, AND PARKING LOTS TO SUPPLY IRRIGATION TO ISOLATED PLANTING BEDS. SLEEVES SHALL HAVE A MINIMUM 24" OF COVER.
11. REMOVE ALL CONSTRUCTION DEBRIS FROM THE SITE TO THE SATISFACTION OF THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING ANY LANDSCAPE WORK. CONSTRUCTION DEBRIS DISCOVERED BURIED IN PLANTING BEDS SHALL BE REMOVED PRIOR TO COMPLETING LANDSCAPE WORK.
12. ALL PLANTING AREAS SHALL BE PROVIDED WITH AT LEAST 8 INCHES OF NON-COMPACTED TOPSOIL OR COMPOST AMENDED AND TILLED NATIVE SOIL.
13. TWO INCHES OF BLACK COMPOST MATERIAL SHALL BE INCORPORATED INTO THE TOP LAYER OF SOIL IN SEEDED AREAS. ADD ONE SHOVEL FULL OF COMPOST PER GALLON POT SIZE TO THE PLANTING PIT FOR EACH TREE, SHRUB OR GROUNDCOVER PLANT.
14. IDENTIFY ALL PLANTING BEDS AND LAWN EDGES IN THE FIELD FOR REVIEW AND APPROVAL BY OWNER'S REPRESENTATIVE PRIOR TO PLANTING AND SEEDING OPERATIONS.
15. TREES PLANTED CLOSER THAN 5 FEET FROM CURBS AND SIDEWALKS SHALL BE INSTALLED WITH 18" DEEPROOT® ROOT BARRIERS OR AN APPROVED EQUAL, ACCORDING TO MANUFACTURERS SPECIFICATIONS.
16. THE LANDSCAPE PLANTING PLANS HAVE BEEN DESIGNED TO MEET THE REQUIREMENTS OUTLINED BY LOCAL CODES. IF A CODE OR STANDARD WAS OVERLOOKED, OMITTED OR VIOLATED ON THE PLAN, THE CODE SHALL PREVAIL OVER THE PLAN. IF THE CONTRACTOR PROPOSES ANY DEVIATIONS FROM THE PLANTING PLANS, THOSE DEVIATIONS SHALL NOT CAUSE THE PLAN TO FALL BELOW MINIMUM CODE REQUIREMENTS.



Know what's below. Call before you dig.

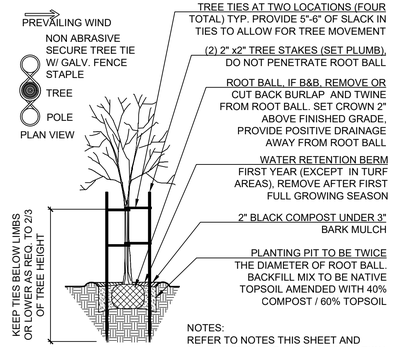
0' 10' 20' 40'

SCALE: 1" = 20'



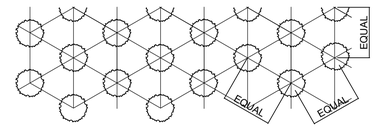
1 Evergreen Planting Detail

NO SCALE



2 Deciduous Tree Planting Details

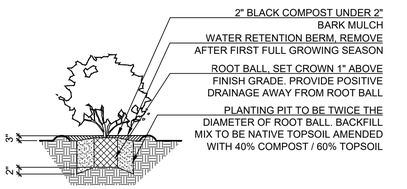
NO SCALE



NOTES:
ALL GROUND COVER SHALL BE PLANTED AT EQUAL TRIANGULAR SPACING AS SPECIFIED IN PLANTING LEGEND.
GROUND COVER TO BE LOCATED ONE HALF OF SPECIFIED SPACING DISTANCE FROM ANY HARD SURFACE, UNLESS OTHERWISE SPECIFIED.

3 Groundcover Planting Details

NO SCALE



4 Shrub Planting Details

NO SCALE

PLANT SCHEDULE

TREES	BOTANICAL NAME / COMMON NAME	CONTAINER	SIZE	SPACING	QTY
	Calocedrus decurrens / Incense Cedar	B & B	5` height	30` o.c.	17
	Carpinus betulus `Emerald Avenue` TM / European Hornbeam	B & B	1.5" cal	30` o.c.	9
	Carpinus betulus `Fastigiata` / Pyramidal European Hornbeam	B & B	1.5" cal	as shown	33

SHRUBS	BOTANICAL NAME / COMMON NAME	CONTAINER	SPREAD	SPACING	QTY
	Cornus sericea `Artic Fire` / Artic Fire Dogwood	1 gal	12"-15"	5` o.c.	166
	Spiraea x bumalda `Goldflame` / Goldflame Spirea	1 gal	12"-15"	4` o.c.	86

GRASSES	BOTANICAL NAME / COMMON NAME	CONTAINER	SPREAD	SPACING	QTY
	Calamagrostis x acutiflora `Avalanche` / Feather Reed Grass	1 gal	15"-18"	3` o.c.	148
	Pennisetum alopecuroides `Red Head` / Red Head Fountain Grass	1 gal	12"-15"	3.5` o.c.	15

GROUND COVERS	BOTANICAL NAME / COMMON NAME	CONTAINER	SPREAD	SPACING	QTY
	Fragaria chiloensis / Beach Strawberry	1 gal	10"-12"	6` o.c.	383

SOD/SEED	BOTANICAL NAME / COMMON NAME	CONTAINER	SPREAD	SPACING	QTY
	Turf Hydroseed / Drought Tolerant Fescue Blend	hydroseed			8,158 sf

STORM FACILITY	BOTANICAL NAME / COMMON NAME	CONTAINER	SPREAD	SPACING	QTY
	Plant Mix (by others) / Storm Facility Plant Mix	seed			21,659 sf

PROJECT SPECIFIC LANDSCAPE NOTES

1. THE STORM FACILITY SIZE, SHAPE, AND OTHER DETAILS WILL BE WORKED OUT IN FINAL DESIGN. THE FACILITY SHOWN ON THIS PLAN IS APPROXIMATE. IF STORM FACILITY SHRINKS, THEN BEACH STRAWBERRY OR LAWN SHALL BE PLANTED IN THE VACATED SPACE.
2. STORM FACILITY PLANTINGS WILL BE SPECIFIED BY THE CIVIL ENGINEER. IF THE CIVIL ENGINEER DOES NOT SPECIFY STORM FACILITY PLANTINGS, THE LANDSCAPE ARCHITECT RECOMMENDS THE WETLAND PRAIRIE / BIOSWALE 1 NATIVE SEED MIX BY HERITAGE SEEDLINGS, INC. SHALL BE HYDROSEEDED IN THE STORM FACILITY. THE SEED MIX IS AVAILABLE AT WWW.HERITAGESEEDLINGS.COM OR 503-585-9835.
3. IRRIGATION SHALL BE PROVIDED (DESIGN/BUILD) BY THE OWNER OR CONTRACTOR. IRRIGATION SHALL BE PROVIDED BY FULLY AUTOMATIC UNDERGROUND OR DRIP SYSTEM CAPABLE OF KEEPING ALL PLANT MATERIAL ADEQUATELY WATERED THROUGHOUT THE YEAR.

REGISTERED 653 James R. Clark GIBSON LANDSCAPE ARCHITECT 01/31/08

Clark Land Design, pllc
Land Use Planning
Landscape Architecture
Development Consulting
3501 NE 7th Avenue, Suite A214 | Vancouver, WA 98665 | 360.921.4465 | jclark@clarklanddesign.com

Air Liquide Gas Bottle Storage

10780 TUALAIN - SHERWOOD ROAD
TUALATIN, OREGON 97062

SHEET TITLE
PRELIMINARY LANDSCAPE PLAN

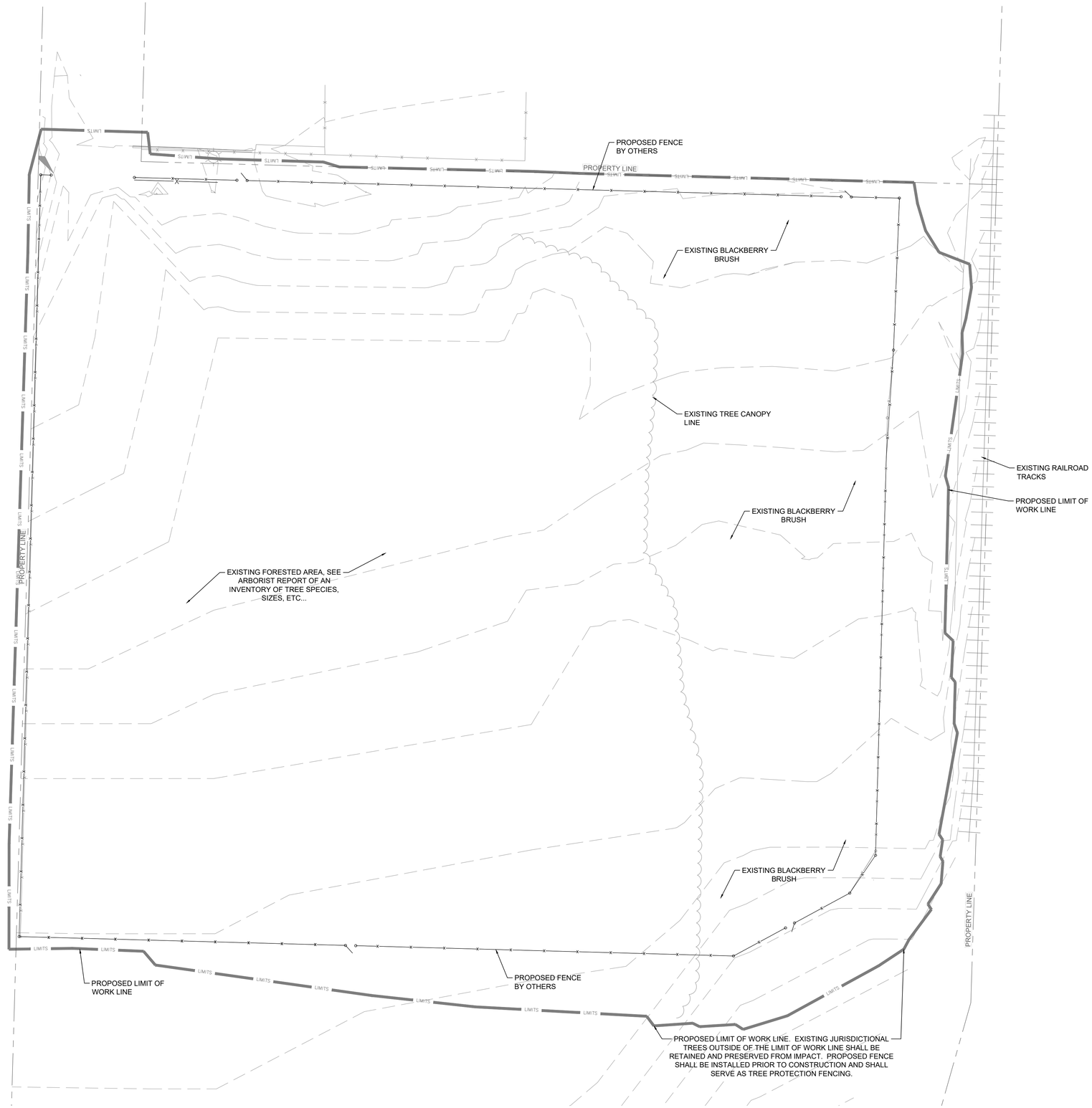
DATE	ISSUE
10/05/2017	*PRELIM*
	REVISION

DRAWN BY JAC
CHECKED BY JAC

JOB # : *1.17.043*

SCALE: *1" = 20'-0"*

SHEET NUMBER
L1.0



NOTES

1. TREES WITHIN THE AREA OF DEVELOPMENT ARE INVENTORIED IN AN ARBORIST REPORT BY TERAGAN & ASSOCIATES, INC., DATED OCTOBER 5, 2017. THIS REPORT IS INCLUDED IN THE PRELIMINARY LAND USE APPLICATION. PLEASE REFER TO THIS REPORT FOR ADDITIONAL INFORMATION AND RECOMMENDATIONS.

Know what's **below.** **Call** before you dig.

0' 10' 20' 40'

SCALE: 1" = 20'

REGISTERD
653
James R. Clark
OREGON
01/31/08
LANDSCAPE ARCHITECT

Clark Land Design, pllc
Land Use Planning
Landscape Architecture
Development Consulting
3901 NE 7th Avenue, Suite A-214 | Vancouver, WA 98665 | 360.921.4445 | jclark@clarklanddesign.com

Air Liquide Gas Bottle Storage

10780 TUALAIN - SHERWOOD ROAD
TUALATIN, OREGON 97062

SHEET TITLE
PRELIMINARY TREE PLAN

DATE	ISSUE
10/05/2017	*PRELIM*
	REVISION

DRAWN BY	JAC
CHECKED BY	JAC

JOB # : *1.17.043*

SCALE: *1" = 20'-0"*

SHEET NUMBER
L2.0

SITEWORK

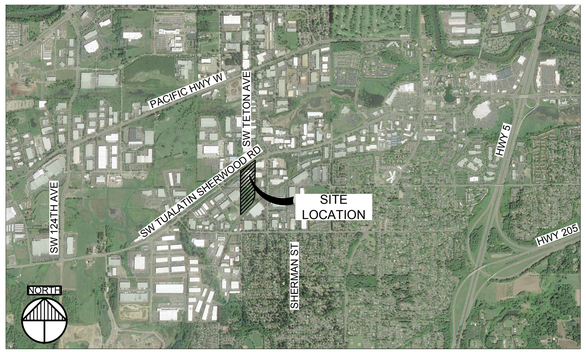
FOR THE PROPOSED

AIR LIQUIDE GAS DEPOT

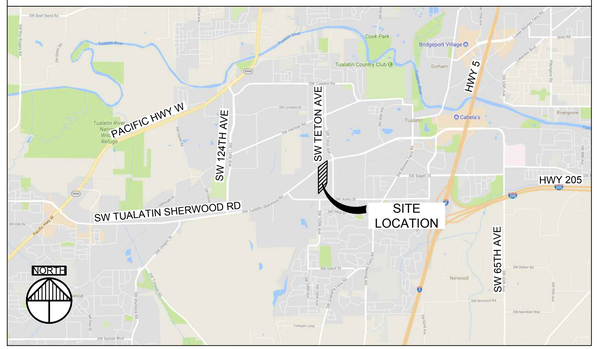
TO SERVE

AIR LIQUIDE CREATIVE OXYGEN

TUALATIN, OR



LOCATION MAP



DRAWING INDEX

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NOT FOR CONSTRUCTION

VAA
Planners and Engineers
2300 Berkshire Lane N, Suite 200
Plymouth, MN 55441
763.559.9100
www.vaaeng.com
info@vaaeng.com

CLIENT:
Air Liquide creative oxygen
CLIENT PROJECT NO:

PROJECT:
AIR LIQUIDE GAS DEPOT
TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
A	10/06/17	CITY REVIEW SUBMITTAL	CMB
B	01/26/18	CITY REVIEW SUBMITTAL	CMB

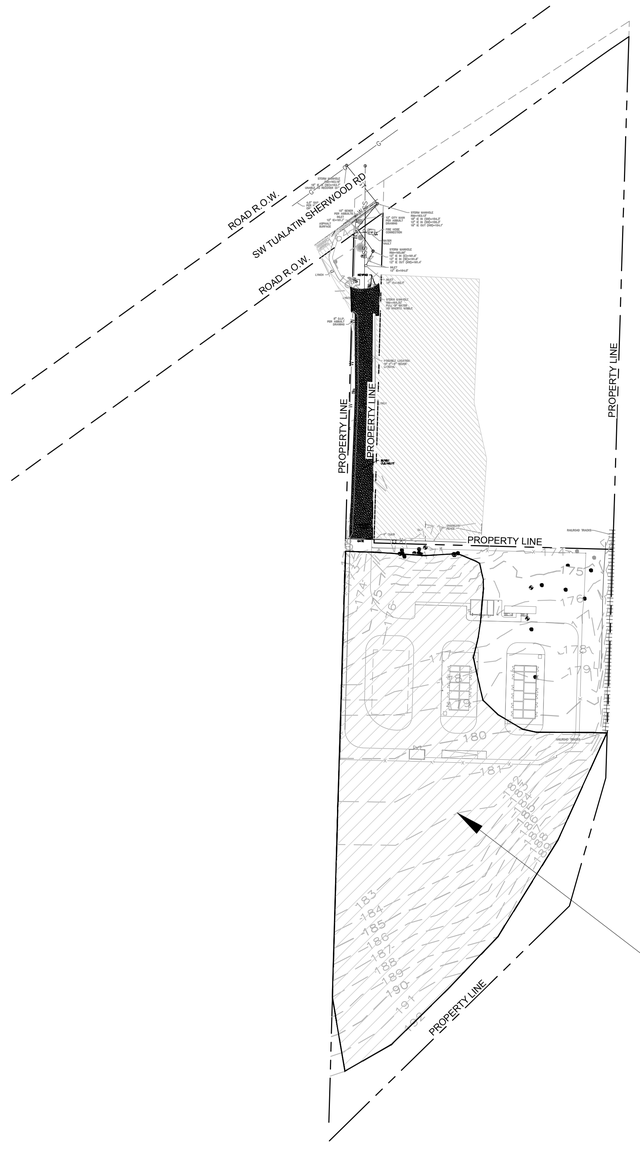
CERTIFICATION:

DATE: 10/06/17	DRAWN: CMB	
DESIGNED: NHM	CHECKED: AMB	APPROVED:

DRAWING TITLE:
TITLE SHEET AND DRAWING INDEX

PROJECT NO: 170359	DRAWING NO: C000
SCALE: AS NOTED	

Date Plotted: Thursday, February 15, 2018



EXISTING TOPOGRAPHIC DATA IN THIS AREA HAS NOT BEEN SURVEYED DUE TO THE PRESENCE OF THICK VEGETATION. APPROXIMATE TOPOGRAPHIC DATA AS SHOWN IN THIS AREA WAS OBTAINED FROM READILY AVAILABLE ONLINE SERVICES. THESE AREAS WILL NEED TO BE SURVEYED BY A LICENSED SURVEYOR PRIOR TO CONSTRUCTION LEVEL DOCUMENTS BEING PRODUCED.

NORTH

1 C100 OVERALL EXISTING CONDITIONS AND REMOVALS PLAN

1"=100'

0 100' 200' 300'

GENERAL NOTES

1. ALL EXISTING INFORMATION TAKEN FROM SURVEY BY CMT SURVEYING AND CONSULTING PROJECT NUMBER 81040514, DATED JULY 7, 2017. BACKGROUND SURVEY ON THESE DRAWINGS IS FOR REFERENCE ONLY. **NOT ALL TOPOGRAPHIC INFORMATION SHOWN HEREIN HAS BEEN SURVEYED. REFER TO SHEET C100 FOR DETAILED DESCRIPTION OF SPECIFIC AREAS THAT HAVE NOT BEEN SURVEYED. ADDITIONAL SURVEY SHALL BE COMPLETED AND DESIGNS VERIFIED PRIOR TO SUBMISSION OF CONSTRUCTION LEVEL DOCUMENTS.**
2. SUBSURFACE GEOTECHNICAL INVESTIGATION BY RAPID SOIL SOLUTIONS PROJECT NUMBER 17-6940, DATED JULY 18, 2017.
3. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING LOCATIONS OF EXISTING PUBLIC AND PRIVATE UTILITIES, AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION.
4. ALL EXISTING UTILITIES AND OTHER IMPROVEMENTS ARE TO REMAIN UNLESS NOTED OTHERWISE.
5. CONTRACTOR TO KEEP FROM DAMAGE ALL EXISTING IMPROVEMENTS, LANDSCAPING, STRUCTURES AND UTILITIES THAT ARE TO REMAIN. CONTRACTOR TO REPAIR ANY DAMAGE AT OWN EXPENSE.
6. ALL WORK TO CONFORM WITH CITY OF TUALATIN AND STATE OF OREGON STANDARDS AND REGULATIONS.
7. ALL EXCAVATIONS MUST COMPLY WITH THE REQUIREMENTS OF OSHA 29 CFR, PART 1926, SUBPART P "EXCAVATIONS AND TRENCHES". THIS DOCUMENT STATES THAT EXCAVATION SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. CATCHBASINS AND MANHOLES ARE SHOWN ON PLAN LARGER THAN ACTUAL SIZE. COORDINATE LOCATION OF MANHOLE COVER AND CASTING SO THAT IT IS PROPERLY LOCATED AT THE BACK OF CURBLINE FOR THE CURB INLETS OR CENTERED IN THE AREA AS SHOWN ON THE PLAN FOR THE AREA DRAINS AND MANHOLE COVERS.
9. FLARED END SECTIONS (FES) ARE SHOWN ON PLAN LARGER THAN ACTUAL SIZE. ALL PIPE LENGTHS INCLUDE FES. CONTRACTOR/SURVEYOR TO STAKE THE END OF FES FOR LOCATION.
10. PROVIDE TRAFFIC CONTROL AT STREETS AND SIDEWALKS PER CITY OF TUALATIN AND MUTCD REQUIREMENTS.
11. ANY WORK PERFORMED OUTSIDE THE PROPERTY BOUNDARIES MUST BE APPROVED BY OWNER AND ALL REGULATING GOVERNMENT AGENCIES AND APPROPRIATE PERMITS MUST BE OBTAINED.

REMOVAL NOTES

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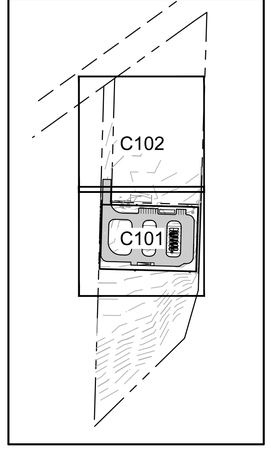
3. ALL ELECTRICAL POLE AND LIGHT REMOVAL SHALL BE COORDINATED WITH THE OWNER AND AUTHORITY HAVING JURISDICTION PRIOR TO DEMOLITION.
4. EXISTING TREES TO BE RETAINED SHALL BE FENCED AROUND THE DRIP LINE WITH CHAIN LINK OR OTHER STURDY FENCING DURING CONSTRUCTION.

PROPOSED IMPROVEMENTS ARE SHOWN FOR REFERENCE ONLY

KEY PLAN



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VAA
Planners and Engineers
2300 Berkshire Lane N, Suite 200
Plymouth, MN 55441
763.559.9100
www.vaaeng.com
info@vaaeng.com

CLIENT:

Air Liquide creative oxygen

CLIENT PROJECT NO:

PROJECT:

AIR LIQUIDE GAS DEPOT
TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
A	10/06/17	CITY REVIEW SUBMITTAL	CMB
B	01/26/18	CITY REVIEW SUBMITTAL	CMB

CERTIFICATION:

DATE:	DRAWN:	
10/06/17	CMB	
DESIGNED:	CHECKED:	APPROVED:
NHM	AMB	

DRAWING TITLE:

OVERALL EXISTING CONDITIONS AND REMOVALS PLAN

PROJECT NO:	DRAWING NO:
170359	C100
SCALE: AS NOTED	

Date Plotted: Thursday, February 15, 2018

MATCHLINE - SEE SHEET C102

EXISTING BITUMINOUS PAVEMENT TO BE REMOVED

APPROXIMATELY 320' OF EXISTING CURB AND GUTTER TO BE REMOVED

SAWCUT EXISTING BITUMINOUS PAVEMENT SEE DETAIL C-5022/C502

EXISTING CURB TO REMAIN

EXISTING LIGHT POLE TO REMAIN

APPROXIMATE LOCATION OF EXISTING BITUMINOUS PAVEMENT. LOCATIONS SHOWN HAVE NOT BEEN SURVEYED AND WERE OBTAINED FROM AERIAL PHOTOGRAPHY

EXISTING CHAIN LINK FENCE TO REMAIN

EXISTING TRACK TO REMAIN

LIMITS OF DISTURBANCE

EXISTING TREES TO REMAIN

EXISTING FENCE AND GATE TO BE REMOVED REMOVE FENCE TO NEAREST POST

APPROXIMATELY 8' OF EXISTING CURB AND GUTTER TO BE REMOVED

LIMITS OF DISTURBANCE (SHOWN OUTSIDE OF PROPERTY LIMITS FOR CLARITY. NO WORK SHALL BE PERFORMED OUTSIDE OF PROPERTY LINES.)

ALL TREES IN THIS AREA TO BE REMOVED REFER TO TREE PRESERVATION PLAN (PREPARED BY OTHERS)

AREA SURVEYED

AREA NOT SURVEYED

HA#1 & TP#1

HA#2

HA#3

PROPERTY LINE

RAILROAD TRACKS

LIMITS OF DISTURBANCE

NORTH

1 / C101 ENLARGED EXISTING CONDITIONS AND REMOVALS PLAN

1"=20'

0 20' 40' 60'

REMOVAL NOTES

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LEGEND

- EXISTING PROPERTY LINE
- EXISTING R.O.W.
- DENOTES EXISTING SURFACE DRAINAGE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- LIMITS OF DISTURBANCE
- EXISTING TRACK
- EXISTING CHAIN LINK FENCE
- EXISTING TREE
- EXISTING LIGHT POLE
- EXISTING BITUMINOUS PAVEMENT
- EXISTING CONCRETE PAVEMENT
- PROPOSED SAWCUT LINE
- HA#2 SOIL BORING LOCATION
- SURVEYED AREA BOUNDARY

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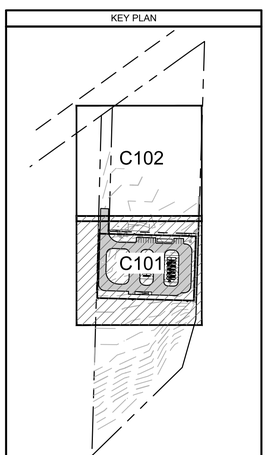

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DESIGNED:	CHECKED:	APPROVED:
NHM	AMB	

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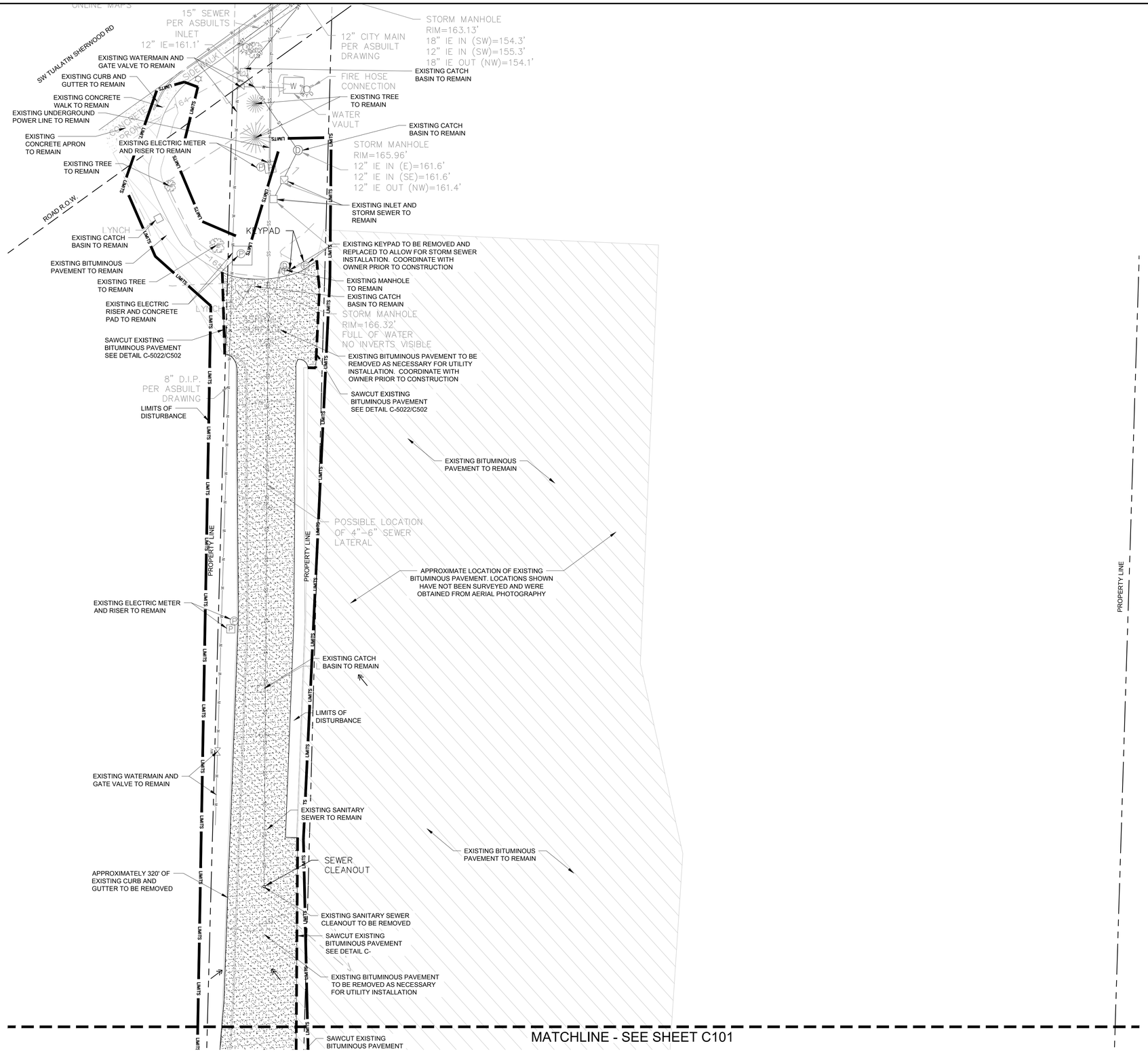
ENLARGED EXISTING CONDITIONS AND REMOVALS PLAN

PROJECT NO:	DRAWING NO:
170359	C101
SCALE: AS NOTED	

Date Plotted: Thursday, February 15, 2018



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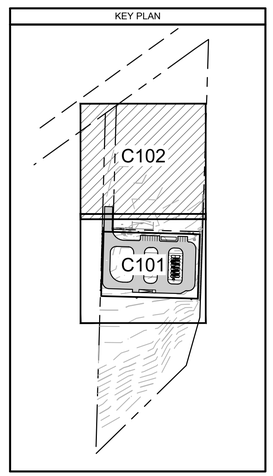
LEGEND

- EXISTING PROPERTY LINE
- EXISTING R.O.W.
- DENOTES EXISTING SURFACE DRAINAGE
- 170 EXISTING MAJOR CONTOUR
- 171 EXISTING MINOR CONTOUR
- LIMITS OF DISTURBANCE
- EXISTING TRACK
- EXISTING CHAIN LINK FENCE
- EXISTING TREE
- EXISTING LIGHT POLE
- EXISTING BITUMINOUS PAVEMENT
- EXISTING CONCRETE PAVEMENT
- PROPOSED SAWCUT LINE
- HA#2 SOIL BORING LOCATION
- SURVEYED AREA BOUNDARY

PROPOSED IMPROVEMENTS ARE SHOWN FOR REFERENCE ONLY

KEY PLAN



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A	10/06/17	ISSUED FOR PERMIT	CMB
B	01/26/18	CITY REVIEW SUBMITTAL	CMB

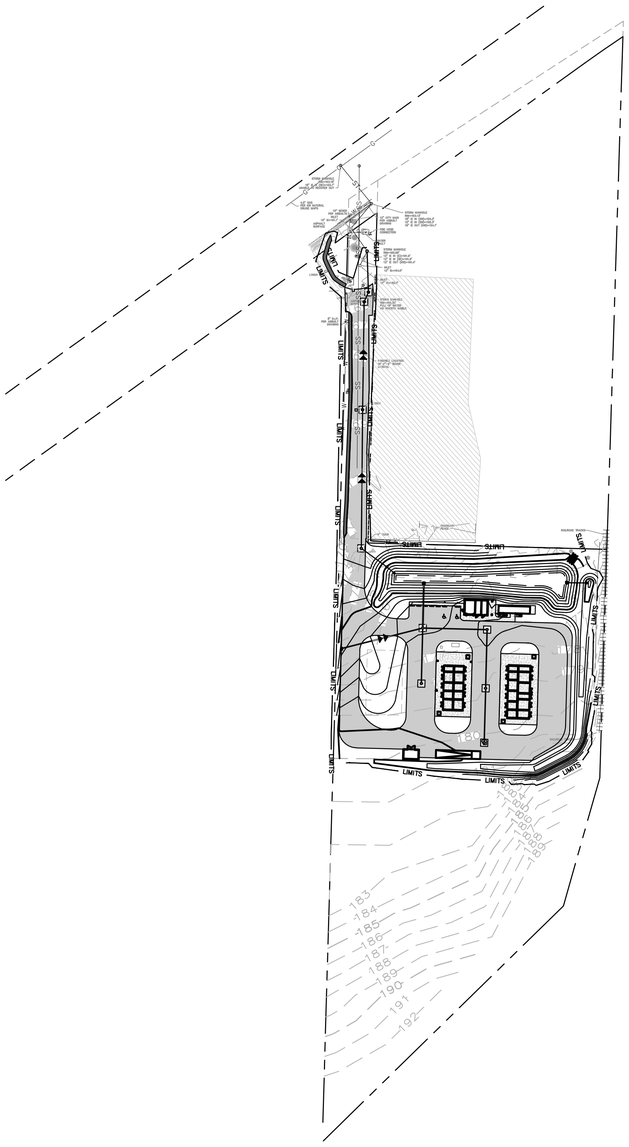
CERTIFICATION:

DATE: 10/06/17	DRAWN: CMB	
DESIGNED: NHM	CHECKED: AMB	APPROVED:

DRAWING TITLE:

ENLARGED EXISTING CONDITIONS AND REMOVALS PLAN

PROJECT NO: 170359	DRAWING NO: C102
SCALE: AS NOTED	



NORTH

1
C200
OVERALL GRADING AND DRAINAGE PLAN

1"=100'

0 100' 200' 300'

GENERAL NOTES

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2. SUBSURFACE GEOTECHNICAL INVESTIGATION BY RAPID SOIL SOLUTIONS PROJECT NUMBER 17-6940, DATED JULY 18, 2017.
3. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING LOCATIONS OF EXISTING PUBLIC AND PRIVATE UTILITIES, AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION.
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7. ALL EXCAVATIONS MUST COMPLY WITH THE REQUIREMENTS OF OSHA 29 CFR, PART 1926, SUBPART P "EXCAVATIONS AND TRENCHES". THIS DOCUMENT STATES THAT EXCAVATION SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
8. CATCHBASINS AND MANHOLES ARE SHOWN ON PLAN LARGER THAN ACTUAL SIZE. COORDINATE LOCATION OF MANHOLE COVER AND CASTING SO THAT IT IS PROPERLY LOCATED AT THE BACK OF CURBLINE FOR THE CURB INLETS OR CENTERED IN THE AREA AS SHOWN ON THE PLAN FOR THE AREA DRAINS AND MANHOLE COVERS.
9. FLARED END SECTIONS (FES) ARE SHOWN ON PLAN LARGER THAN ACTUAL SIZE. ALL PIPE LENGTHS INCLUDE FES. CONTRACTOR/SURVEYOR TO STAKE THE END OF FES FOR LOCATION.
10. PROVIDE TRAFFIC CONTROL AT STREETS AND SIDEWALKS PER CITY OF TUALATIN AND MUTCD REQUIREMENTS.
11. ANY WORK PERFORMED OUTSIDE THE PROPERTY BOUNDARIES MUST BE APPROVED BY OWNER AND ALL REGULATING GOVERNMENT AGENCIES AND APPROPRIATE PERMITS MUST BE OBTAINED.

GRADING NOTES

1. PROPOSED SPOT ELEVATIONS AND CONTOURS ARE TO TOP OF GRADE, PAVEMENT OR GUTTER LINE, UNLESS OTHERWISE SPECIFIED.
2. SEE SHEET C300 FOR EROSION AND SEDIMENT CONTROL NOTES.
3. SEE SWPPP C600 FOR ADDITIONAL DETAILED EROSION PREVENTION AND SEDIMENT CONTROL NOTES.
4. SEE SHEETS C301 & C302 FOR ADDITIONAL LOCATIONS OF EROSION AND SEDIMENT CONTROL ITEMS. INSTALL PERIMETER EROSION AND SEDIMENT CONTROL ITEMS PRIOR TO CONSTRUCTION.

CIVIL EL. 179.86 = STRUCTURAL EL. 100'-0"

KEY PLAN

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

VAA
Planners and Engineers
2300 Berkshire Lane N, Suite 200
Plymouth, MN 55441
763.559.9100
www.vaaeng.com
info@vaaeng.com

CLIENT:
Air Liquide
creative oxygen

CLIENT PROJECT NO:

PROJECT:
AIR LIQUIDE GAS DEPOT
TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
A	10/06/17	CITY REVIEW SUBMITTAL	CMB
B	01/26/18	CITY REVIEW SUBMITTAL	CMB

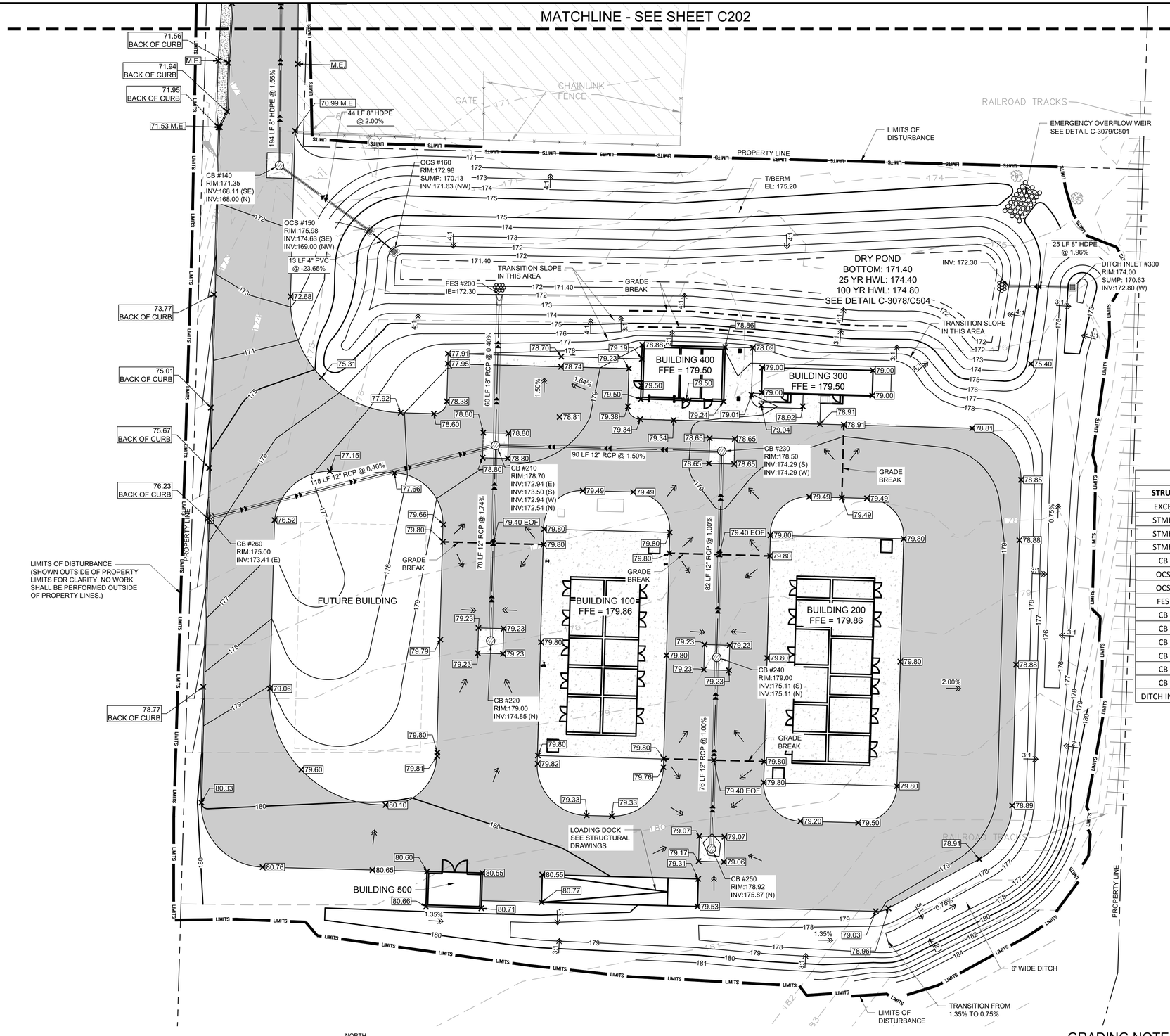
CERTIFICATION:

DATE:
10/06/17
DRAWN:
CMB
DESIGNED:
NHM
CHECKED:
AMB
APPROVED:

DRAWING TITLE:
OVERALL GRADING
AND DRAINAGE PLAN

PROJECT NO:
170359
SCALE:
AS NOTED
DRAWING NO:
C200

Date Plotted: Thursday, February 15, 2018



NORTH

1 / C201 ENLARGED GRADING AND DRAINAGE PLAN

1"=20'

0 20' 40' 60'

LEGEND

- EXISTING PROPERTY LINE
- EXISTING R.O.W.
- 180 PROPOSED CONTOUR
- 79.80 PROPOSED SPOT ELEVATION
- 2.00% 3:1 DENOTES PROPOSED SURFACE DRAINAGE
- 170 EXISTING MAJOR CONTOUR
- 171 EXISTING MINOR CONTOUR
- LIMITS LIMITS OF DISTURBANCE
- EXISTING TRACK
- EXISTING CHAIN LINK FENCE
- EXISTING TREE
- EXISTING LIGHT POLE
- EXISTING BITUMINOUS PAVEMENT
- PROPOSED STORM SEWER
- PROPOSED FES
- PROPOSED FES WITH RIPRAP
- PROPOSED CATCHBASIN
- PROPOSED MANHOLE
- PROPOSED CLEANOUT
- PROPOSED OCS / DITCH INLET
- DT PROPOSED DRAINTILE
- PROPOSED SANITARY SEWER
- PROPOSED WATERMAIN
- PROPOSED BITUMINOUS PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED GRADE BREAK

CASTING SCHEDULE

STRUCTURE	CASTING TYPE	DETAIL NUMBER	STRUCTURE I.D.
EXCB #100	N/A	N/A	N/A
STMH #110	DRAWING NO. 120 / C504	DRAWING NO. 010 / C503	48"
STMH #120	DRAWING NO. 120 / C504	DRAWING NO. 010 / C503	48"
STMH #130	DRAWING NO. 120 / C504	DRAWING NO. 010 / C503	48"
CB #140	NEENAH R-2540 - D	DRAWING NO. 050 / C503	48"
OCS #140	DRAWING NO. 400 / C504	DRAWING NO. 720 / C503	48"
OCS #160	DRAWING NO. 400 / C504	DRAWING NO. 720 / C503	48"
FES #200	N/A	N/A	N/A
CB #210	NEENAH R-2540 - D	DRAWING NO. 050 / C503	48"
CB #220	NEENAH R-2540 - D	DRAWING NO. 050 / C503	48"
CB #230	NEENAH R-2540 - D	DRAWING NO. 050 / C503	48"
CB #240	NEENAH R-2540 - D	DRAWING NO. 050 / C503	48"
CB #250	NEENAH R-2540 - D	DRAWING NO. 050 / C503	48"
CB #260	NEENAH R-3067	DRAWING NO. 330 / C503	2'x3'
DITCH INLET #300	DRAWING NO. 400 / C504	DRAWING NO. 390 / C504	24"

CIVIL EL. 179.86 = STRUCTURAL EL. 100'-0"

GRADING NOTES

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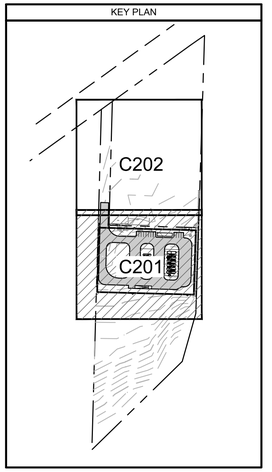
2. SEE SHEET C300 FOR EROSION AND SEDIMENT CONTROL NOTES.
3. SEE SWPPP C600 FOR ADDITIONAL DETAILED EROSION PREVENTION AND SEDIMENT CONTROL NOTES.
4. SEE SHEETS C301 & C302 FOR ADDITIONAL LOCATIONS OF EROSION AND SEDIMENT CONTROL ITEMS. INSTALL PERIMETER EROSION AND SEDIMENT CONTROL ITEMS PRIOR TO CONSTRUCTION.

KEY PLAN



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VAA
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2300 Berkshire Lane N, Suite 200
Plymouth, MN 55441
763.559.9100
www.vaaeng.com
info@vaaeng.com

CLIENT: Air Liquide creative oxygen

CLIENT PROJECT NO:

PROJECT:
AIR LIQUIDE GAS DEPOT
TUALATIN, OR

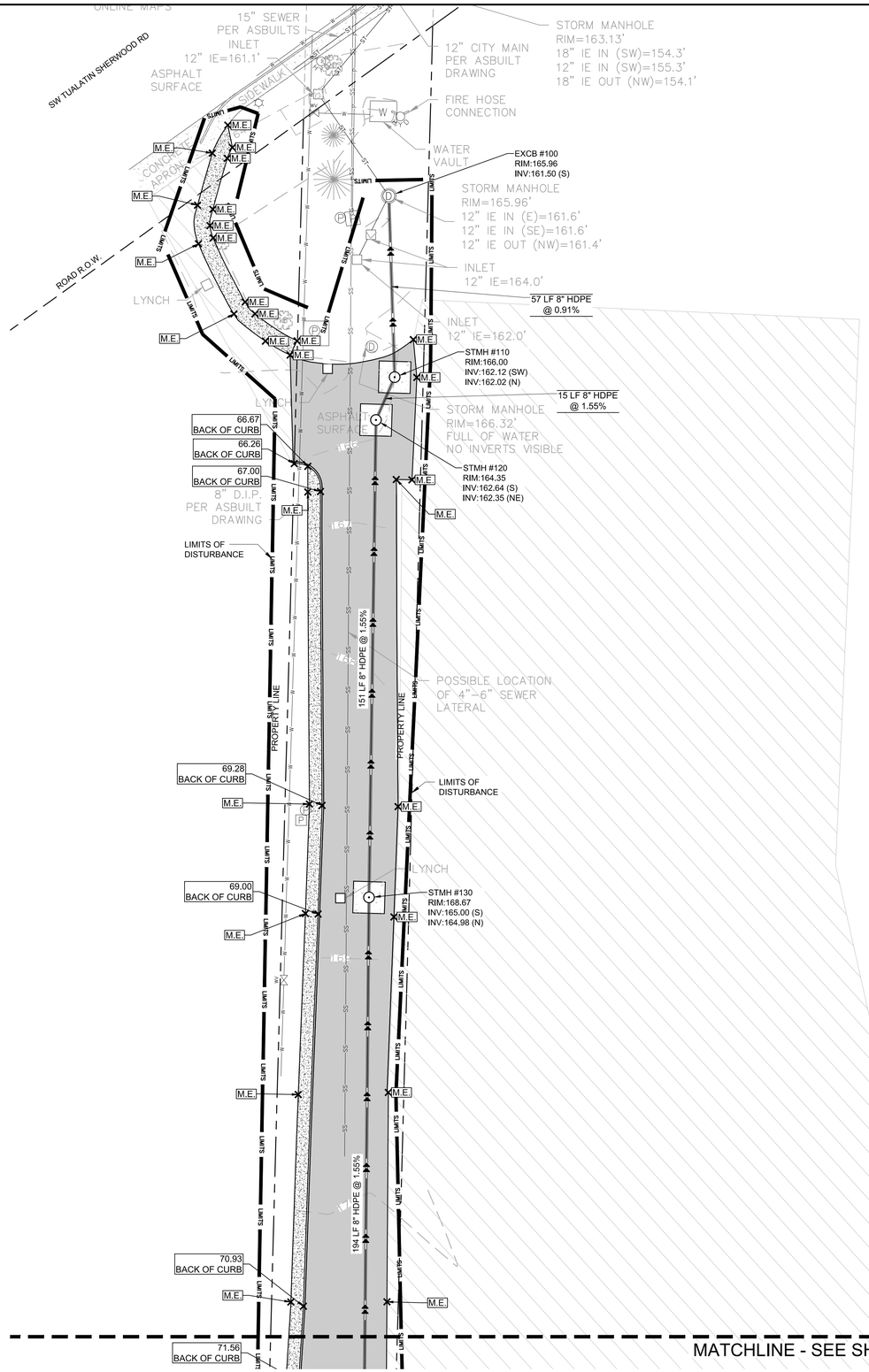
NO	DATE	ISSUE/REVISION	BY
A	10/06/17	CITY REVIEW SUBMITTAL	CMB
B	01/26/18	CITY REVIEW SUBMITTAL	CMB

CERTIFICATION:

DATE: 10/06/17	DRAWN: CMB	
DESIGNED: NHM	CHECKED: AMB	APPROVED:

DRAWING TITLE:
ENLARGED GRADING AND DRAINAGE PLAN

PROJECT NO: 170359	DRAWING NO: C201
SCALE: AS NOTED	



LEGEND

- EXISTING PROPERTY LINE
- EXISTING R.O.W.
- 180 PROPOSED CONTOUR
- 79.50 PROPOSED SPOT ELEVATION
- 2.00% 3.1 DENOTES PROPOSED SURFACE DRAINAGE
- 170 EXISTING MAJOR CONTOUR
- 171 EXISTING MINOR CONTOUR
- LIMITS OF DISTURBANCE
- EXISTING TRACK
- EXISTING CHAIN LINK FENCE
- EXISTING TREE
- EXISTING LIGHT POLE
- EXISTING BITUMINOUS PAVEMENT
- PROPOSED STORM SEWER
- PROPOSED FES
- PROPOSED FES WITH RIPRAP
- PROPOSED CATCHBASIN
- PROPOSED MANHOLE
- PROPOSED CLEANOUT
- PROPOSED OCS / DITCH INLET
- PROPOSED DRAINTILE
- PROPOSED SANITARY SEWER
- PROPOSED WATERMAIN
- PROPOSED BITUMINOUS PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED GRADE BREAK

GRADING NOTES

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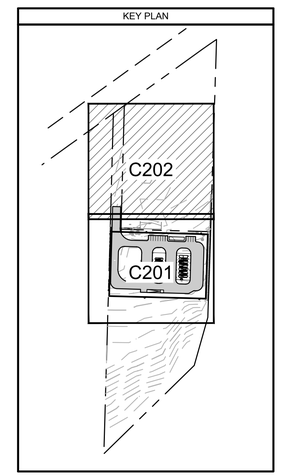
CIVIL EL. 179.86 = STRUCTURAL EL. 100'-0"

KEY PLAN



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CLIENT:

Air Liquide creative oxygen

CLIENT PROJECT NO:

PROJECT:

AIR LIQUIDE GAS DEPOT
TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
A	10/06/17	ISSUED FOR PERMIT	CMB
B	01/26/18	CITY REVIEW SUBMITTAL	CMB

CERTIFICATION:

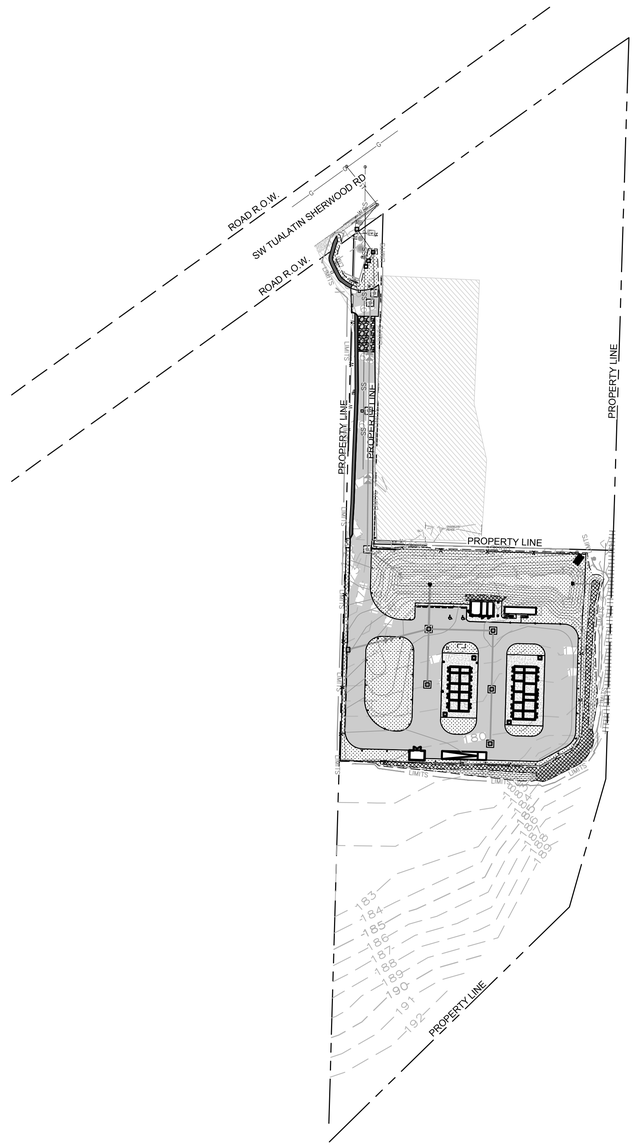
DATE:	DRAWN:	
10/06/17	CMB	
DESIGNED:	CHECKED:	APPROVED:
NHM	AMB	

DRAWING TITLE:

ENLARGED GRADING
AND DRAINAGE PLAN

PROJECT NO:	DRAWING NO:
170359	C202
SCALE: AS NOTED	

Date Plotted: Thursday, February 15, 2018



NORTH

1
C300

OVERALL EROSION AND SEDIMENT CONTROL PLAN

0 100' 200' 300'

1"=100'

GENERAL NOTES

1. ALL EXISTING INFORMATION TAKEN FROM SURVEY BY CMT SURVEYING AND CONSULTING PROJECT NUMBER 81040514, DATED JULY 7, 2017. BACKGROUND SURVEY ON THESE DRAWINGS IS FOR REFERENCE ONLY. **NOT ALL TOPOGRAPHIC INFORMATION SHOWN HEREIN HAS BEEN SURVEYED. REFER TO SHEET C100 FOR DETAILED DESCRIPTION OF SPECIFIC AREAS THAT HAVE NOT BEEN SURVEYED. ADDITIONAL SURVEY SHALL BE COMPLETED AND DESIGNS VERIFIED PRIOR TO SUBMISSION OF CONSTRUCTION LEVEL DOCUMENTS.**
2. SUBSURFACE GEOTECHNICAL INVESTIGATION BY RAPID SOIL SOLUTIONS PROJECT NUMBER 17-6940, DATED JULY 18, 2017.
3. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING LOCATIONS OF EXISTING PUBLIC AND PRIVATE UTILITIES, AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION.
4. ALL EXISTING UTILITIES AND OTHER IMPROVEMENTS ARE TO REMAIN UNLESS NOTED OTHERWISE.
5. CONTRACTOR TO KEEP FROM DAMAGE ALL EXISTING IMPROVEMENTS, LANDSCAPING, STRUCTURES AND UTILITIES THAT ARE TO REMAIN. CONTRACTOR TO REPAIR ANY DAMAGE AT OWN EXPENSE.
6. ALL WORK TO CONFORM WITH CITY OF TUALATIN AND STATE OF OREGON STANDARDS AND REGULATIONS.
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10. PROVIDE TRAFFIC CONTROL AT STREETS AND SIDEWALKS PER CITY OF TUALATIN AND MUTCD REQUIREMENTS.
11. ANY WORK PERFORMED OUTSIDE THE PROPERTY BOUNDARIES MUST BE APPROVED BY OWNER AND ALL REGULATING GOVERNMENT AGENCIES AND APPROPRIATE PERMITS MUST BE OBTAINED.

EROSION AND SEDIMENT CONTROL NOTES

1. CONTRACTOR TO RESTORE ALL AREAS OUTSIDE THE LIMITS OF PAVING. PROVIDE PERMANENT SEEDING, FERTILIZER, MULCH AND EROSION CONTROL BLANKET OF ALL DISTURBED AREAS PER ODOT EROSION CONTROL MANUAL CHAPTER 3. SEED MIX SHALL BE PER ODOT EROSION CONTROL MANUAL CHAPTER 3.1.1.3, FERTILIZER SHALL BE PHOSPHORUS FREE, MULCH SHALL BE PER ODOT EROSION CONTROL MANUAL CHAPTER 3.1.1.4, EROSION CONTROL BLANKET SHALL BE ODOT TYPE A.
2. SEE SWPPP C600 FOR ADDITIONAL DETAILED EROSION PREVENTION AND SEDIMENT CONTROL NOTES.
3. INSTALL PERIMETER AND SEDIMENT CONTROL ITEMS PRIOR TO CONSTRUCTION.

KEY PLAN

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

VAA

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info@vaaeng.com

CLIENT:

Air Liquide
creative oxygen

CLIENT PROJECT NO:

PROJECT:

AIR LIQUIDE GAS DEPOT
TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
A	10/06/17	CITY REVIEW SUBMITTAL	CMB
B	01/26/18	CITY REVIEW SUBMITTAL	CMB

CERTIFICATION:

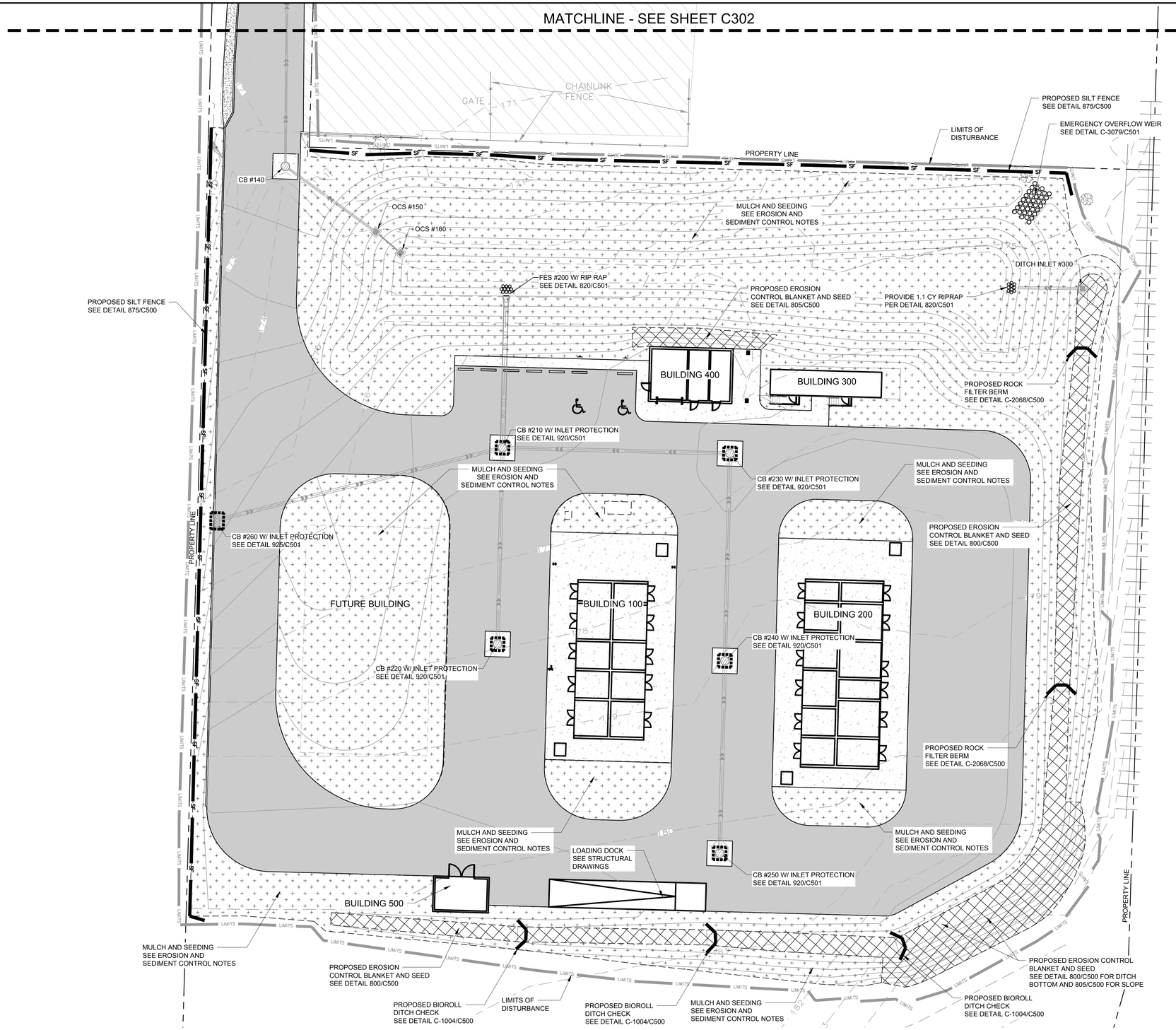
DATE:	DRAWN:	
10/06/17	CMB	
DESIGNED: NHM	CHECKED: AMB	APPROVED:

DRAWING TITLE:

OVERALL EROSION
AND SEDIMENT
CONTROL PLAN

PROJECT NO:
170359
SCALE:
AS NOTED
DRAWING NO:
C300

Date Plotted: Thursday, February 15, 2018



EROSION AND SEDIMENT CONTROL NOTES

1. CONTRACTOR TO RESTORE ALL AREAS OUTSIDE THE LIMITS OF PAVING. PROVIDE PERMANENT SEEDING, FERTILIZER, MULCH AND EROSION CONTROL BLANKET OF ALL DISTURBED AREAS PER ODOT EROSION CONTROL MANUAL CHAPTER 3. SEED MIX SHALL BE PER ODOT EROSION CONTROL MANUAL CHAPTER 3.1.1.3. FERTILIZER SHALL BE PHOSPHORUS FREE, MULCH SHALL BE PER ODOT EROSION CONTROL MANUAL CHAPTER 3.1.1.4, EROSION CONTROL BLANKET SHALL BE ODOT TYPE A.
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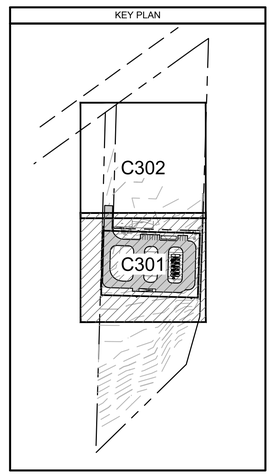
3. INSTALL PERIMETER AND SEDIMENT CONTROL ITEMS PRIOR TO CONSTRUCTION.

LEGEND

- EXISTING PROPERTY LINE
- EXISTING R.O.W.
- PROPOSED CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- LIMITS OF DISTURBANCE
- EXISTING TRACK
- EXISTING CHAIN LINK FENCE
- EXISTING TREE
- EXISTING LIGHT POLE
- EXISTING BITUMINOUS PAVEMENT
- PROPOSED STORM SEWER
- PROPOSED FES WITH INLET PROTECTION
- PROPOSED FES WITH RIPRAP
- PROPOSED CATCHBASIN WITH INLET PROTECTION
- PROPOSED MANHOLE
- PROPOSED CLEANOUT
- PROPOSED OCS / DITCH INLET
- PROPOSED DRAINTILE
- PROPOSED BITUMINOUS PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED SILT FENCE
- PROPOSED BIOROLL DITCH CHECK
- PROPOSED EROSION CONTROL BLANKET / SEED
- PROPOSED SEED AND MULCH
- PROPOSED ROCK CONSTRUCTION ENTRANCE

TOPSOIL SHALL BE REPLACED IN ALL LANDSCAPE AREAS

KEY PLAN



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Air Liquide creative oxygen
CLIENT PROJECT NO:

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AIR LIQUIDE GAS DEPOT
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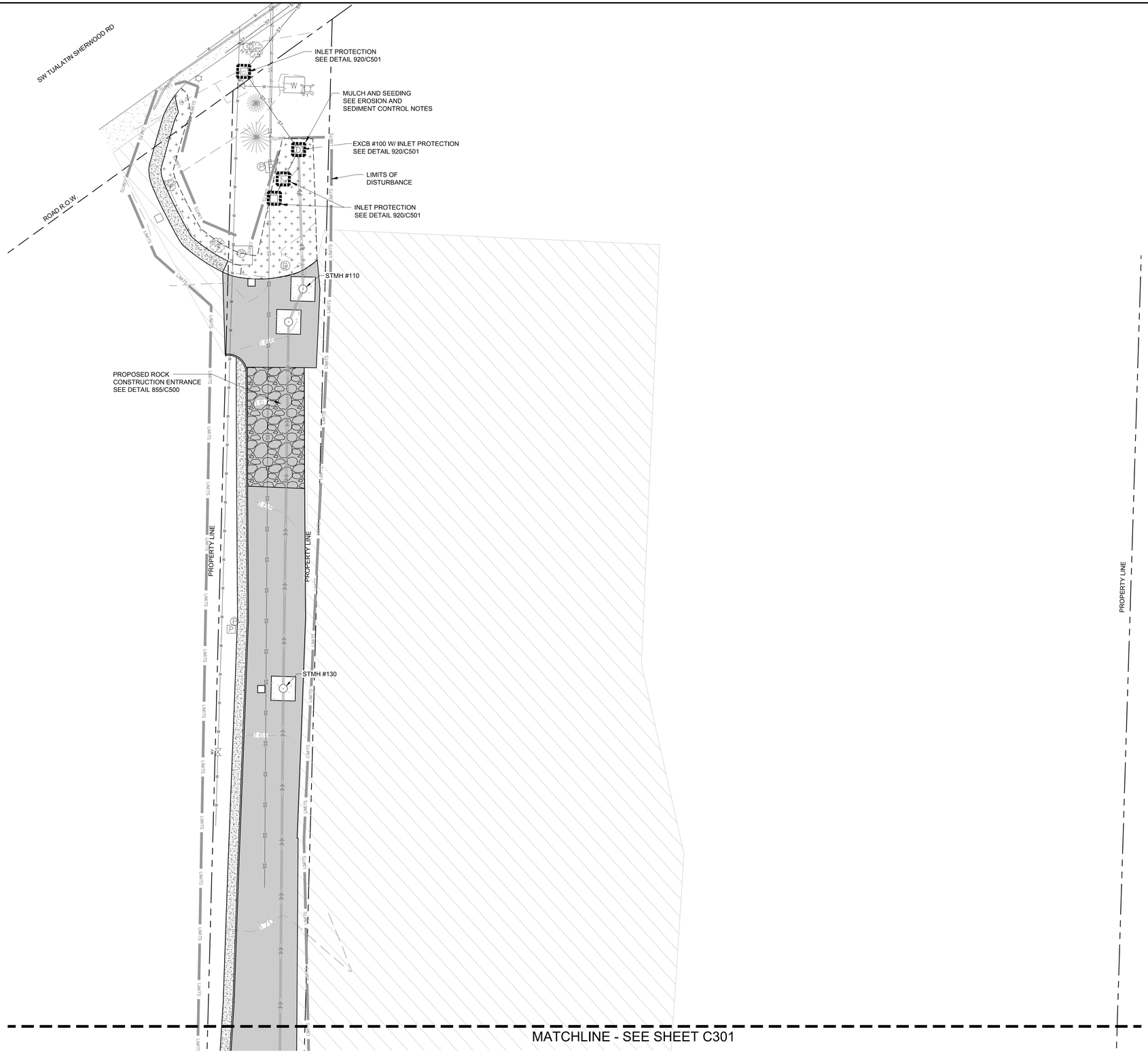
CERTIFICATION:

DATE:	DRAWN:	
10/06/17	CMB	
DESIGNED:	CHECKED:	APPROVED:
NHM	AMB	

DRAWING TITLE:
ENLARGED EROSION AND SEDIMENT CONTROL PLAN

PROJECT NO:	DRAWING NO:
170359	C301
SCALE: AS NOTED	

Date Plotted: Thursday, February 15, 2018



NORTH

1 / C301 ENLARGED EROSION AND SEDIMENT CONTROL PLAN

1"=20'

0 20' 40' 60'

EROSION AND SEDIMENT CONTROL NOTES

1. CONTRACTOR TO RESTORE ALL AREAS OUTSIDE THE LIMITS OF PAVING. PROVIDE PERMANENT SEEDING, FERTILIZER, MULCH AND EROSION CONTROL BLANKET OF ALL DISTURBED AREAS PER ODOT EROSION CONTROL MANUAL CHAPTER 3. SEED MIX SHALL BE PER ODOT EROSION CONTROL MANUAL CHAPTER 3.1.1.3, FERTILIZER SHALL BE PHOSPHORUS FREE, MULCH SHALL BE PER ODOT EROSION CONTROL MANUAL CHAPTER 3.1.1.4, EROSION CONTROL BLANKET SHALL BE ODOT TYPE A.
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3. INSTALL PERIMETER AND SEDIMENT CONTROL ITEMS PRIOR TO CONSTRUCTION.

LEGEND

- EXISTING PROPERTY LINE
- EXISTING R.O.W.
- PROPOSED CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- LIMITS OF DISTURBANCE
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- PROPOSED FES WITH INLET PROTECTION
- PROPOSED FES WITH RIPRAP
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- PROPOSED OCS / DITCH INLET
- PROPOSED DRAINTILE
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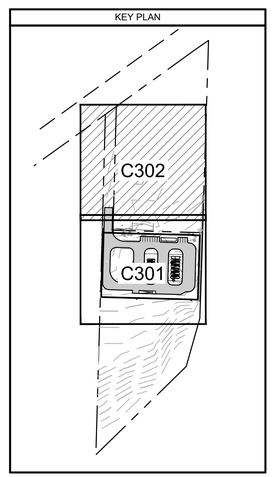
- PROPOSED CONCRETE PAVEMENT
- PROPOSED SILT FENCE
- PROPOSED BIOROLL DITCH CHECK
- PROPOSED EROSION CONTROL BLANKET / SEED
- PROPOSED SEED AND MULCH
- PROPOSED ROCK CONSTRUCTION ENTRANCE

KEY PLAN



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CLIENT:

Air Liquide creative oxygen

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PROJECT:

AIR LIQUIDE GAS DEPOT
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NO	DATE	ISSUE/REVISION	BY
A	10/06/17	ISSUED FOR PERMIT	CMB
B	01/26/18	CITY REVIEW SUBMITTAL	CMB

CERTIFICATION:

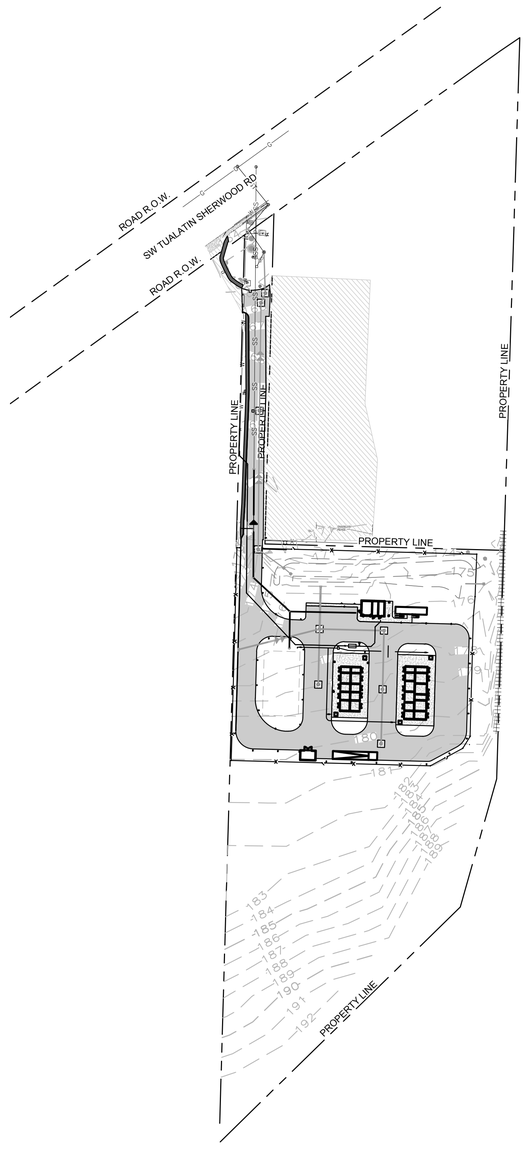
DATE: 10/06/17	DRAWN: CMB	
DESIGNED: NHM	CHECKED: AMB	APPROVED:

DRAWING TITLE:

ENLARGED EROSION
AND SEDIMENT
CONTROL PLAN

PROJECT NO: 170359	DRAWING NO: C302
SCALE: AS NOTED	

Date Plotted: Thursday, February 15, 2018



NORTH

1 C400 OVERALL UTILITY PLAN

1"=100'

0 100' 200' 300'

GENERAL NOTES

1. ALL EXISTING INFORMATION TAKEN FROM SURVEY BY CMT SURVEYING AND CONSULTING PROJECT NUMBER 81040514, DATED JULY 7, 2017. BACKGROUND SURVEY ON THESE DRAWINGS IS FOR REFERENCE ONLY. **NOT ALL TOPOGRAPHIC INFORMATION SHOWN HEREIN HAS BEEN SURVEYED. REFER TO SHEET C100 FOR DETAILED DESCRIPTION OF SPECIFIC AREAS THAT HAVE NOT BEEN SURVEYED. ADDITIONAL SURVEY SHALL BE COMPLETED AND DESIGNS VERIFIED PRIOR TO SUBMISSION OF CONSTRUCTION LEVEL DOCUMENTS.**
2. SUBSURFACE GEOTECHNICAL INVESTIGATION BY RAPID SOIL SOLUTIONS PROJECT NUMBER 17-6940, DATED JULY 18, 2017.
3. CONTRACTOR TO FIELD VERIFY ALL EXISTING CONDITIONS INCLUDING LOCATIONS OF EXISTING PUBLIC AND PRIVATE UTILITIES, AND NOTIFY ENGINEER OF ANY DISCREPANCIES PRIOR TO STARTING CONSTRUCTION.
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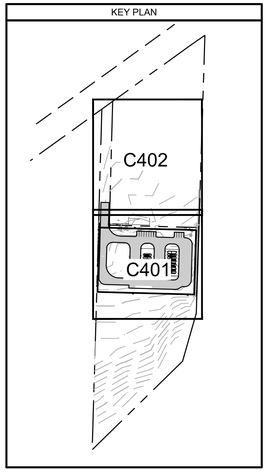
11. ANY WORK PERFORMED OUTSIDE THE PROPERTY BOUNDARIES MUST BE APPROVED BY OWNER AND ALL REGULATING GOVERNMENT AGENCIES AND APPROPRIATE PERMITS MUST BE OBTAINED.

UTILITY NOTES

1. ALL UTILITY DEMOLITION AND/OR ABANDONMENT TO BE PERFORMED IN ACCORDANCE WITH CITY OF TUALATIN AND STATE OF OREGON REGULATIONS AND STANDARDS.
2. EXISTING UTILITIES ARE SHOWN IN THEIR APPROXIMATE LOCATIONS. CONTRACTOR TO FIELD VERIFY THE LOCATION OF ALL EXISTING PUBLIC AND PRIVATE UTILITIES WHICH MAY INCLUDE BUT IS NOT LIMITED TO: ELECTRIC, TELEPHONE, GAS, CABLE TV, COMPUTER CABLE, FIBER OPTIC CABLE, SANITARY SEWER, STORM SEWER AND WATERMAIN. CONTRACTOR TO CONTACT 811 BEFORE EXCAVATING.
3. REMOVE ALL SOILS AND SEDIMENTS TRACKED OR OTHERWISE DEPOSITED ONTO PUBLIC AND PRIVATE PAVEMENT AREAS. REMOVAL SHALL BE ON A DAILY BASIS THROUGHOUT THE DURATION OF THE CONSTRUCTION. CLEAN PAVED ROADWAYS BY SHOVELING OR SWEEPING. STREET WASHING IS ALLOWED ONLY AFTER SHOVELING OR SWEEPING HAS REMOVED SEDIMENT. SEE CITY OF TUALATIN STANDARDS AND REGULATIONS
4. PROVIDE THE FOLLOWING MINIMUM COVER OVER THE TOP OF PIPE AS FOLLOWS:
   A. 3' OVER WATERMAIN
   B. 3' OVER SANITARY SEWER
   C. 1.5' OVER STORM SEWER

KEY PLAN



ISSUED FOR REVIEW
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VAA
Planners and Engineers
2300 Berkshire Lane N, Suite 200
Plymouth, MN 55441
763.559.9100
www.vaaeng.com
info@vaaeng.com

CLIENT:

Air Liquide creative oxygen

CLIENT PROJECT NO:

PROJECT:

AIR LIQUIDE GAS DEPOT
TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
A	10/06/17	CITY REVIEW SUBMITTAL	CMB
B	01/26/18	CITY REVIEW SUBMITTAL	CMB

CERTIFICATION:

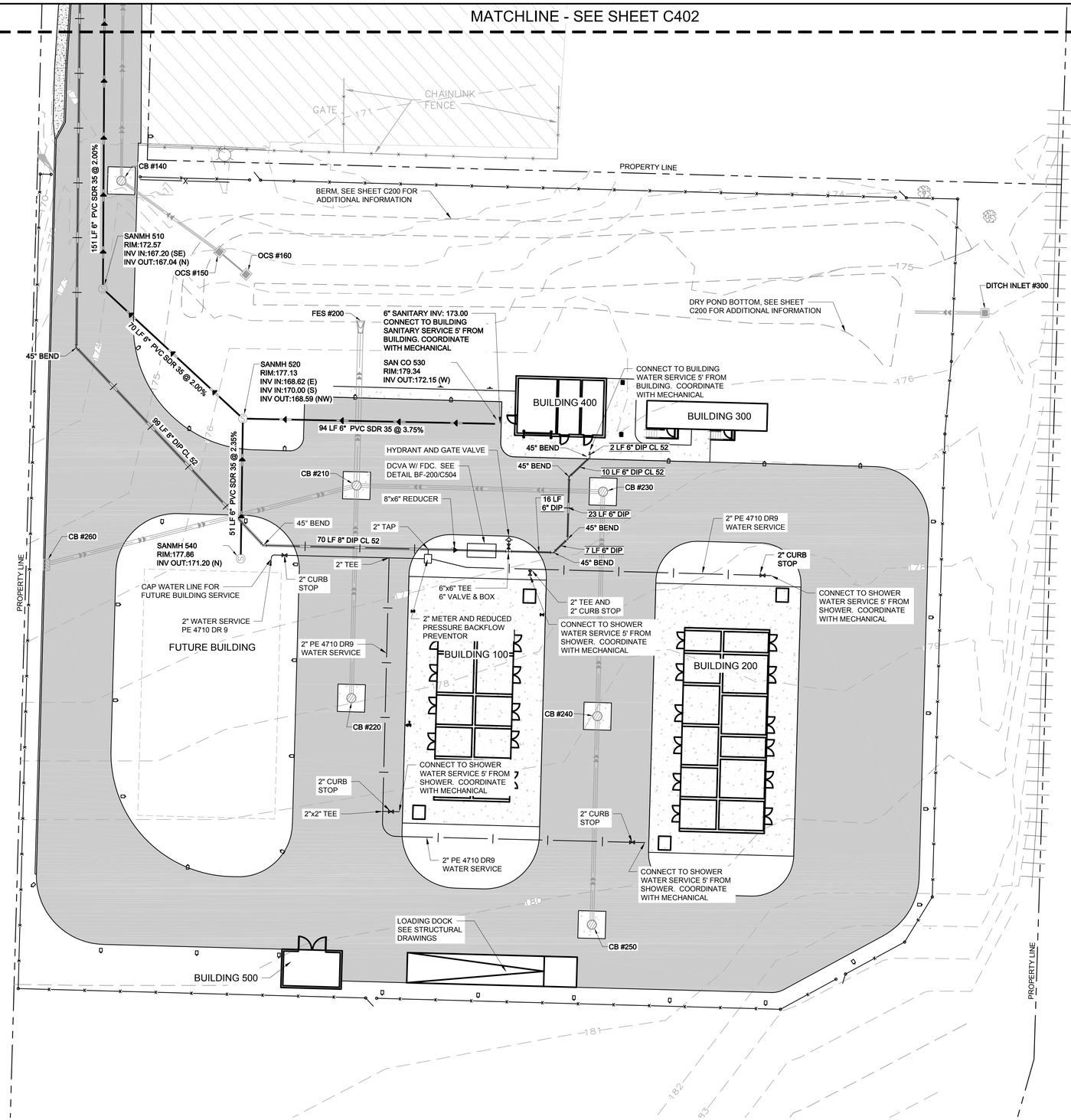
DATE: 10/06/17	DRAWN: CMB	
DESIGNED: NHM	CHECKED: AMB	APPROVED:

DRAWING TITLE:

OVERALL UTILITY PLAN

PROJECT NO: 170359	DRAWING NO: C400
SCALE: AS NOTED	

Last Plotted: Thursday, February 15, 2018



LEGEND

- EXISTING PROPERTY LINE
- EXISTING R.O.W.
- EXISTING TRACK
- EXISTING CHAIN LINK FENCE
- EXISTING TREE
- EXISTING LIGHT POLE
- EXISTING BITUMINOUS PAVEMENT
- PROPOSED STORM SEWER
- PROPOSED FES
- PROPOSED CATCHBASIN
- PROPOSED MANHOLE
- PROPOSED CLEANOUT
- PROPOSED SANITARY MANHOLE
- PROPOSED OCS / DITCH INLET
- PROPOSED DRAINTILE
- PROPOSED SANITARY SEWER
- PROPOSED WATERMAIN
- PROPOSED BITUMINOUS PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED LIGHT

GENERAL NOTES

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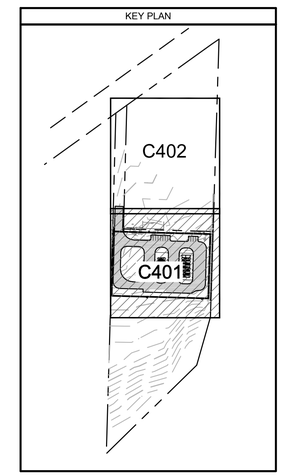

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PROJECT:
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TUALATIN, OR

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B	01/26/18	CITY REVIEW SUBMITTAL	CMB

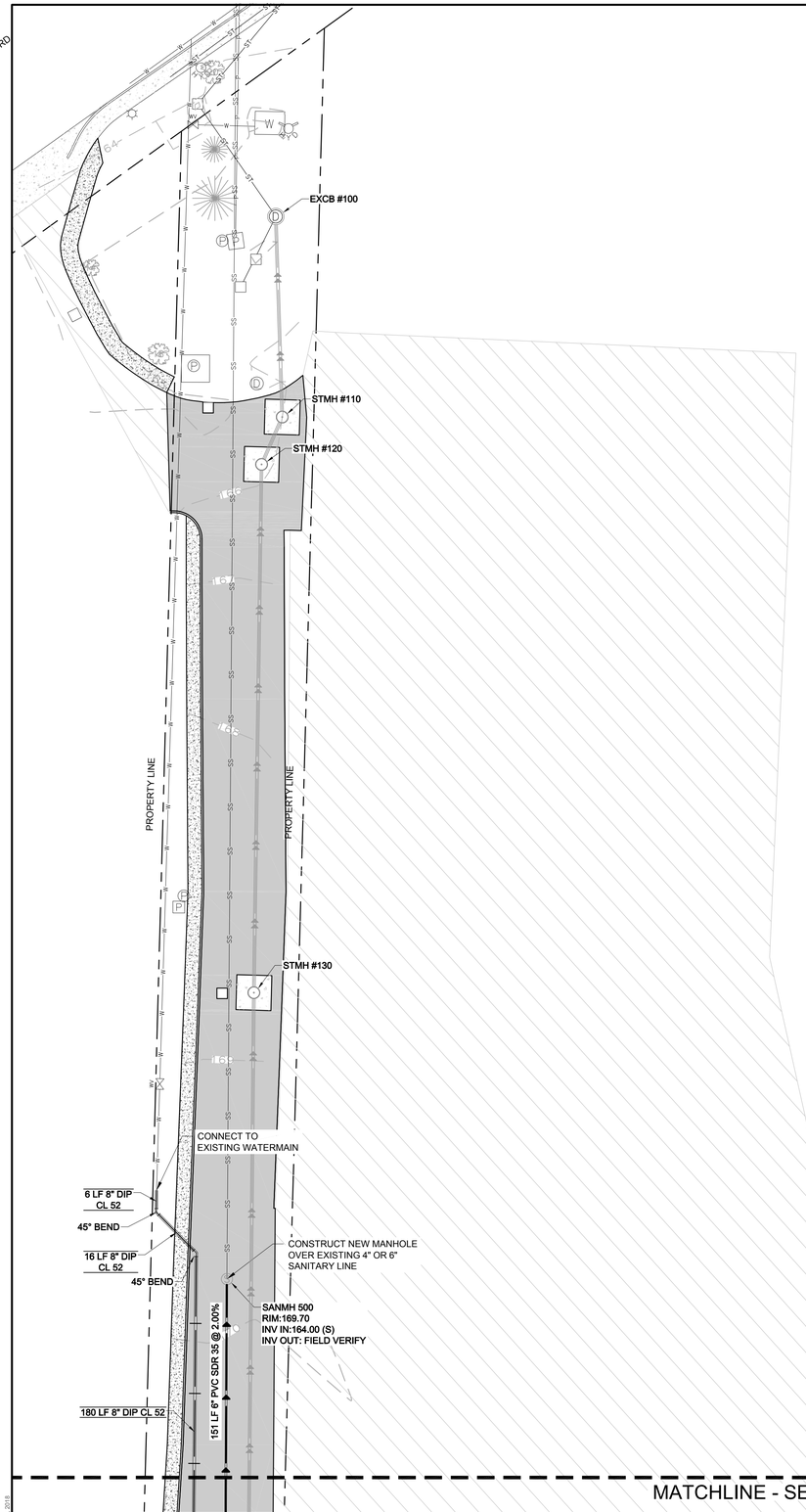
CERTIFICATION:

DATE:	DRAWN:	
10/06/17	CMB	
DESIGNED:	CHECKED:	APPROVED:
NHM	AMB	

DRAWING TITLE:
ENLARGED UTILITY PLAN

PROJECT NO:	DRAWING NO:
170359	C401
SCALE: AS NOTED	

Date Plotted: Thursday, February 01, 2018



MATCHLINE - SEE SHEET C401

NORTH

1 / C402 ENLARGED UTILITY PLAN

1"=20'

0 20' 40' 60'

LEGEND

- EXISTING PROPERTY LINE
- EXISTING R.O.W.
- EXISTING TRACK
- EXISTING CHAIN LINK FENCE
- EXISTING TREE
- EXISTING LIGHT POLE
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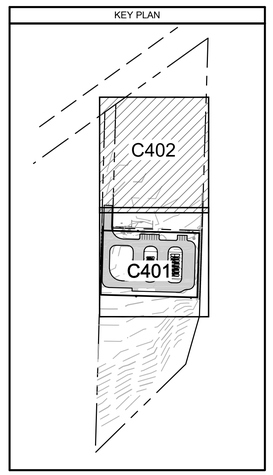
KEY PLAN



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CLIENT:

Air Liquide creative oxygen

CLIENT PROJECT NO:

PROJECT:

AIR LIQUIDE GAS DEPOT
TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
A	01/26/18	CITY REVIEW SUBMITTAL	CMB

CERTIFICATION:

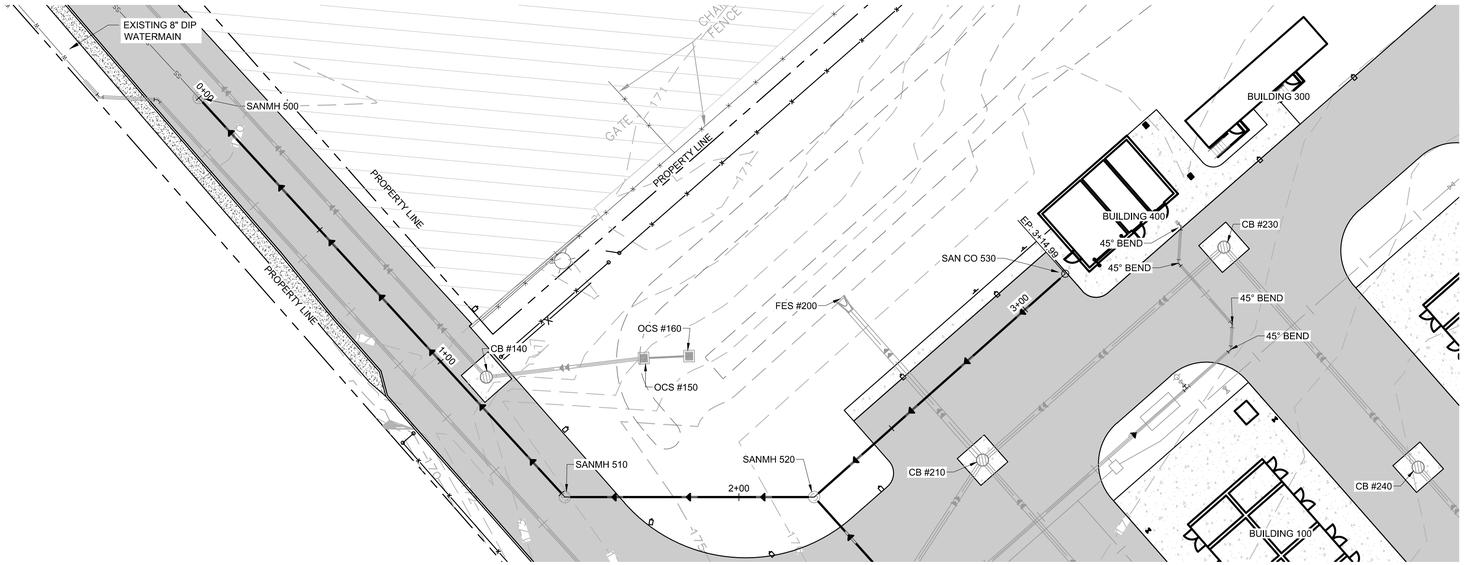
DATE:	DRAWN:	
10/06/17	CMB	
DESIGNED:	CHECKED:	APPROVED:
NHM	AMB	

DRAWING TITLE:

ENLARGED UTILITY PLAN

PROJECT NO:	DRAWING NO:
170359	C402
SCALE: AS NOTED	

Date Plotted: Thursday, February 15, 2018

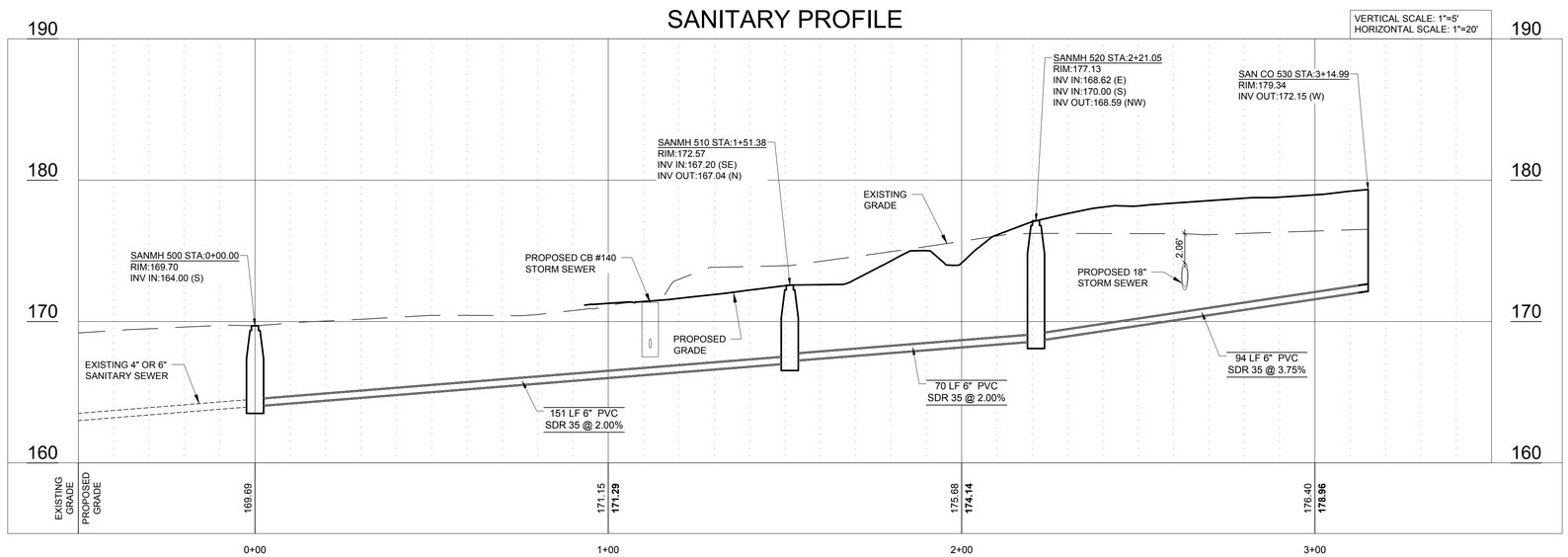


NORTH

1 C403 SANITARY PLAN AND PROFILE

1"=20'

0 20' 40' 60'



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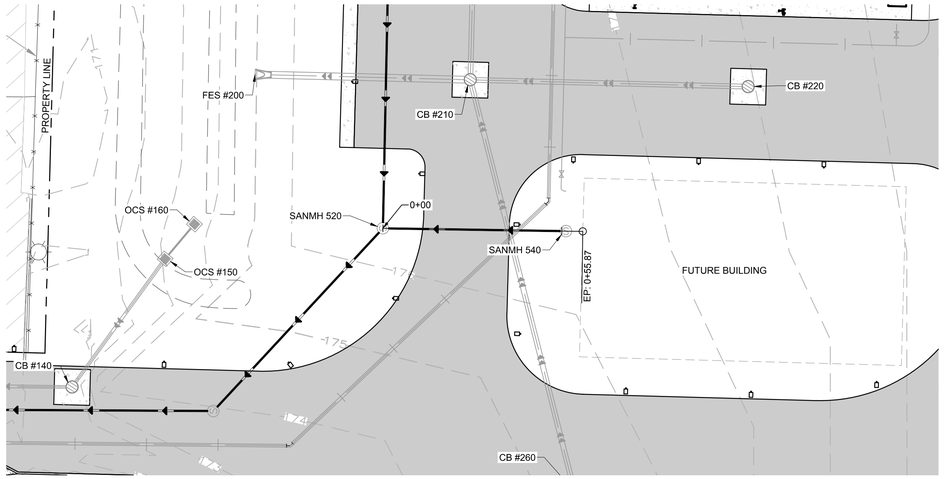
NHM	AMB	

DRAWING TITLE:

SANITARY
PLAN AND PROFILE

PROJECT NO:	DRAWING NO:
170359	C403
SCALE: AS NOTED	



NORTH

1 C404

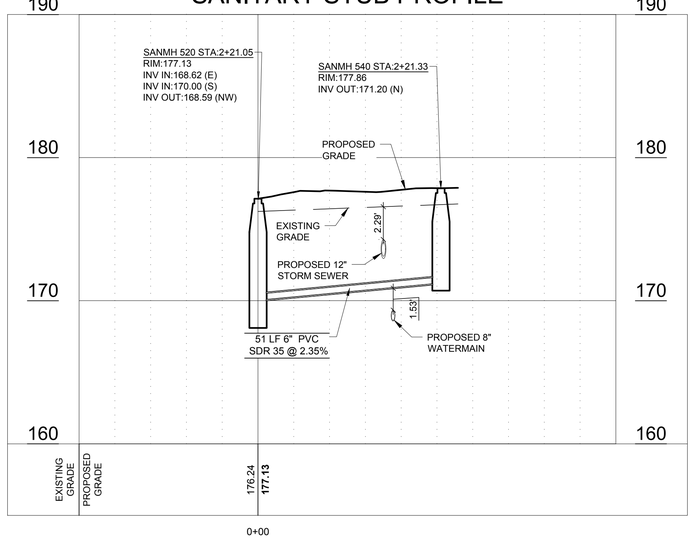
SANITARY PLAN AND PROFILE

1"=20'

0 20' 40' 60'

VERTICAL SCALE: 1"=5'
HORIZONTAL SCALE: 1"=20"

SANITARY STUB PROFILE



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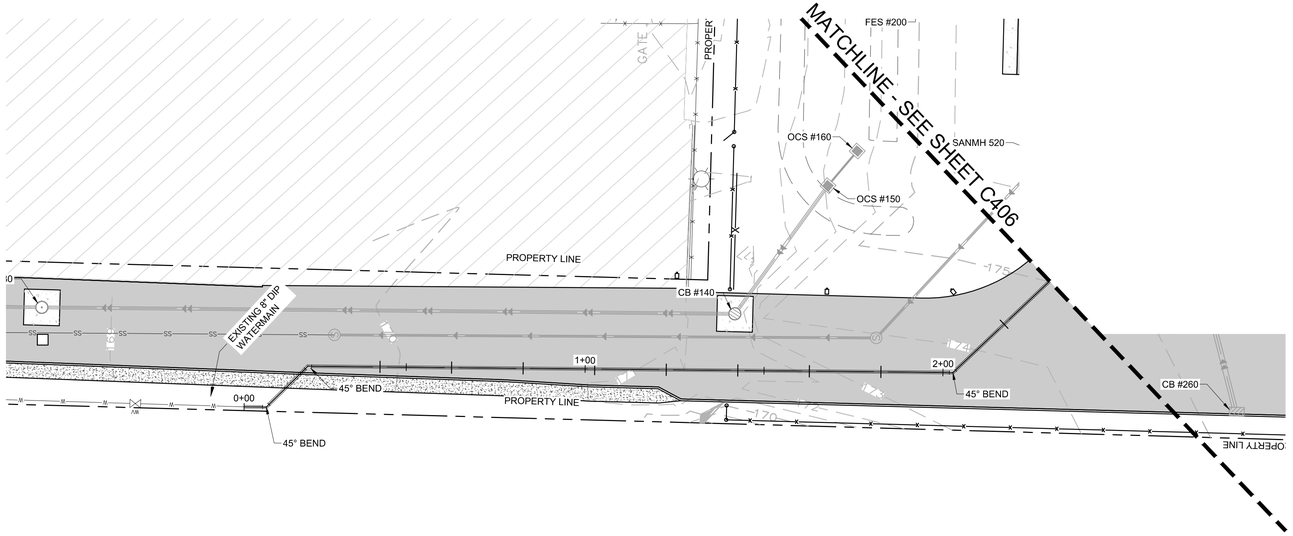
NHM	AMB	

DRAWING TITLE:

SANITARY
PLAN AND PROFILE

PROJECT NO:	DRAWING NO:
170359	C404
SCALE: AS NOTED	

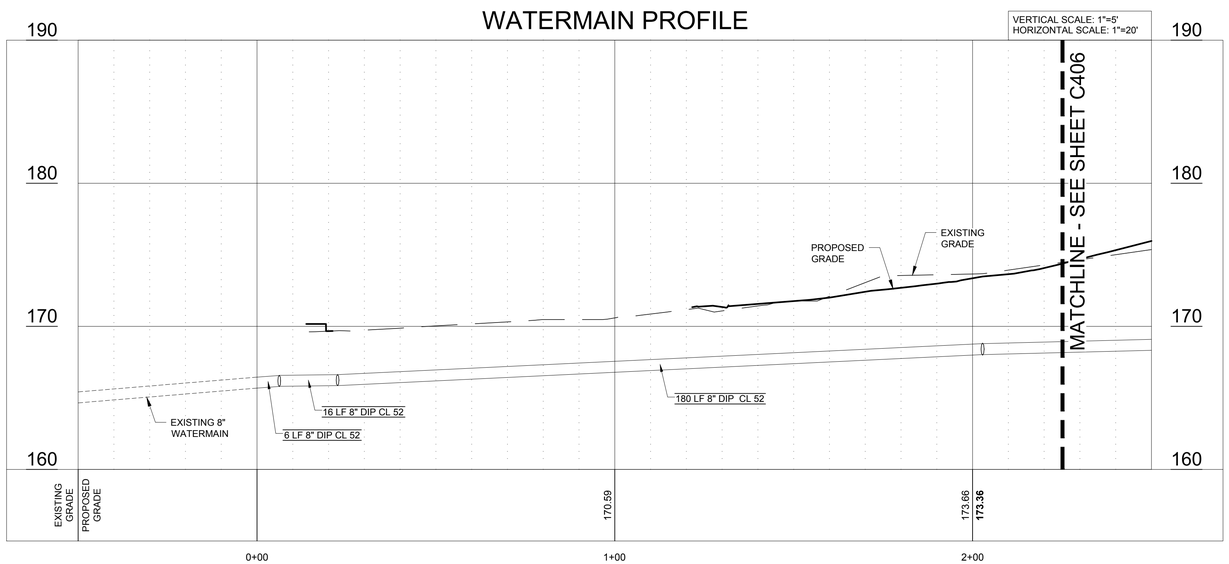


NORTH

1 / C405 WATERMAIN PLAN AND PROFILE 0+00.00 - 2+40.00

1"=20'

0 20' 40' 60'



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NO	DATE	ISSUE/REVISION	BY
A	01/26/18	CITY REVIEW SUBMITTAL	CMB

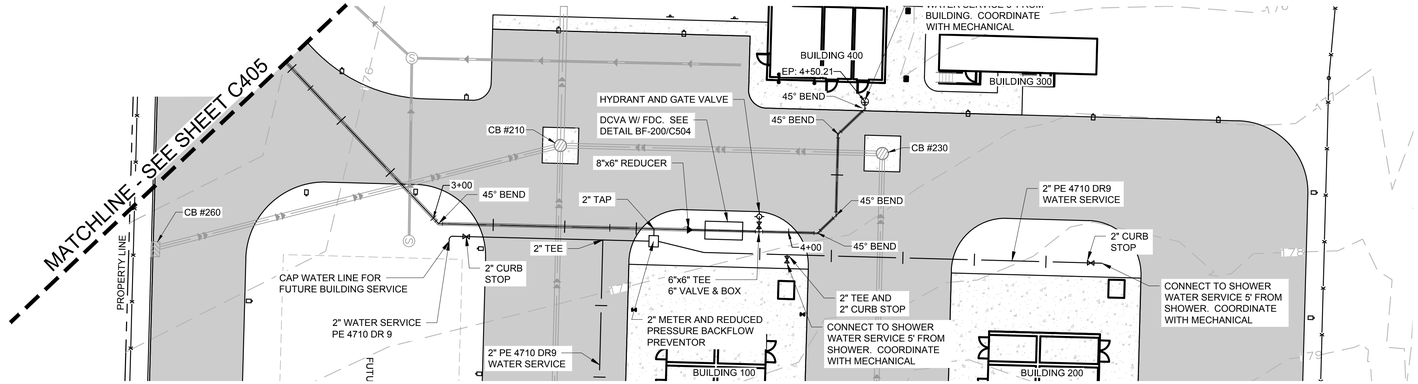
CERTIFICATION:

DATE:	DRAWN:	
10/06/17	CMB	
DESIGNED:	CHECKED:	APPROVED:
NHM	AMB	

DRAWING TITLE:

WATERMAIN PLAN
AND PROFILE
STA: 0+00.00 - 2+40.00

PROJECT NO:	DRAWING NO:
170359	C405
SCALE: AS NOTED	

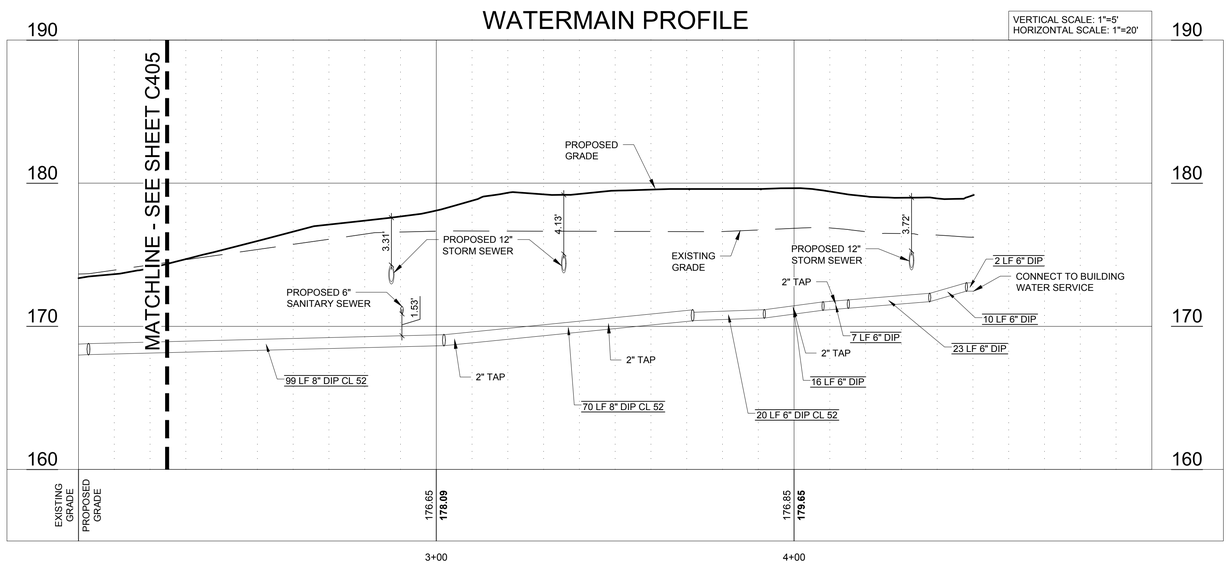


NORTH

1 / C403 WATERMAIN PLAN AND PROFILE 2+40.00 - END

1"=20'

0 20' 40' 60'



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DATE:	DRAWN:	
10/06/17	CMB	
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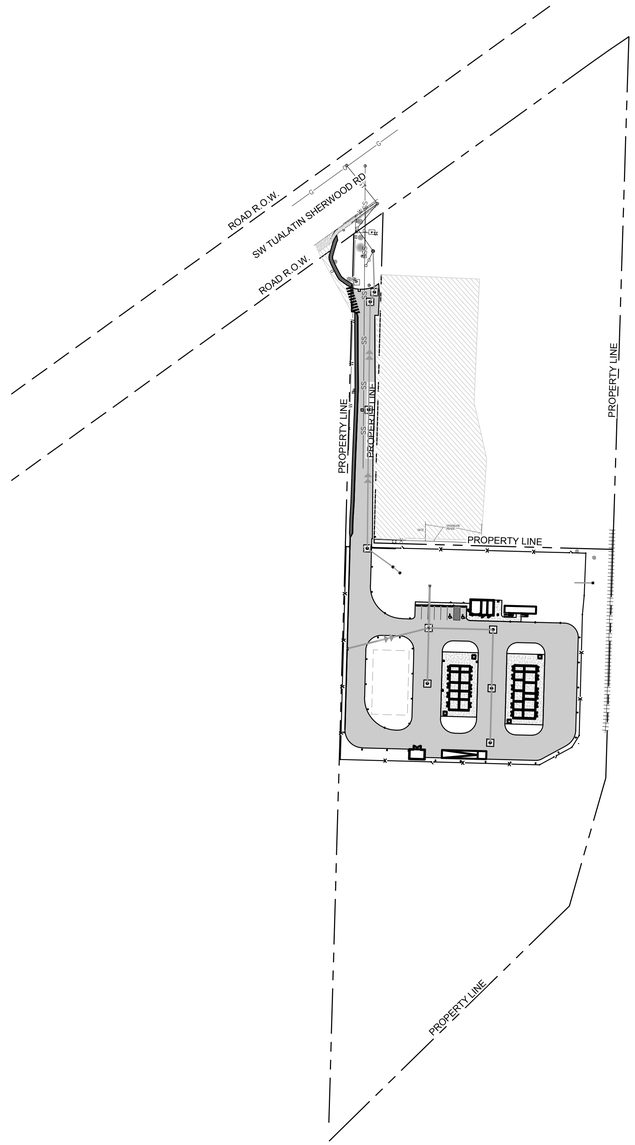
NHM	AMB	

DRAWING TITLE:

WATERMAIN PLAN
AND PROFILE
STA: 2+40.00 - END

PROJECT NO:	DRAWING NO:
170359	C406
SCALE: AS NOTED	

Date Plotted: Thursday, February 15, 2018



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PAVING NOTES

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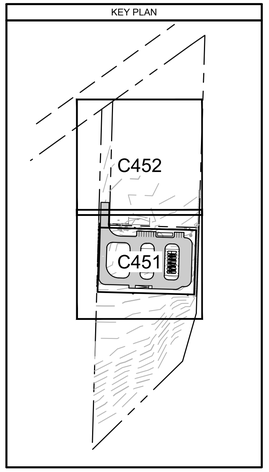
KEY PLAN



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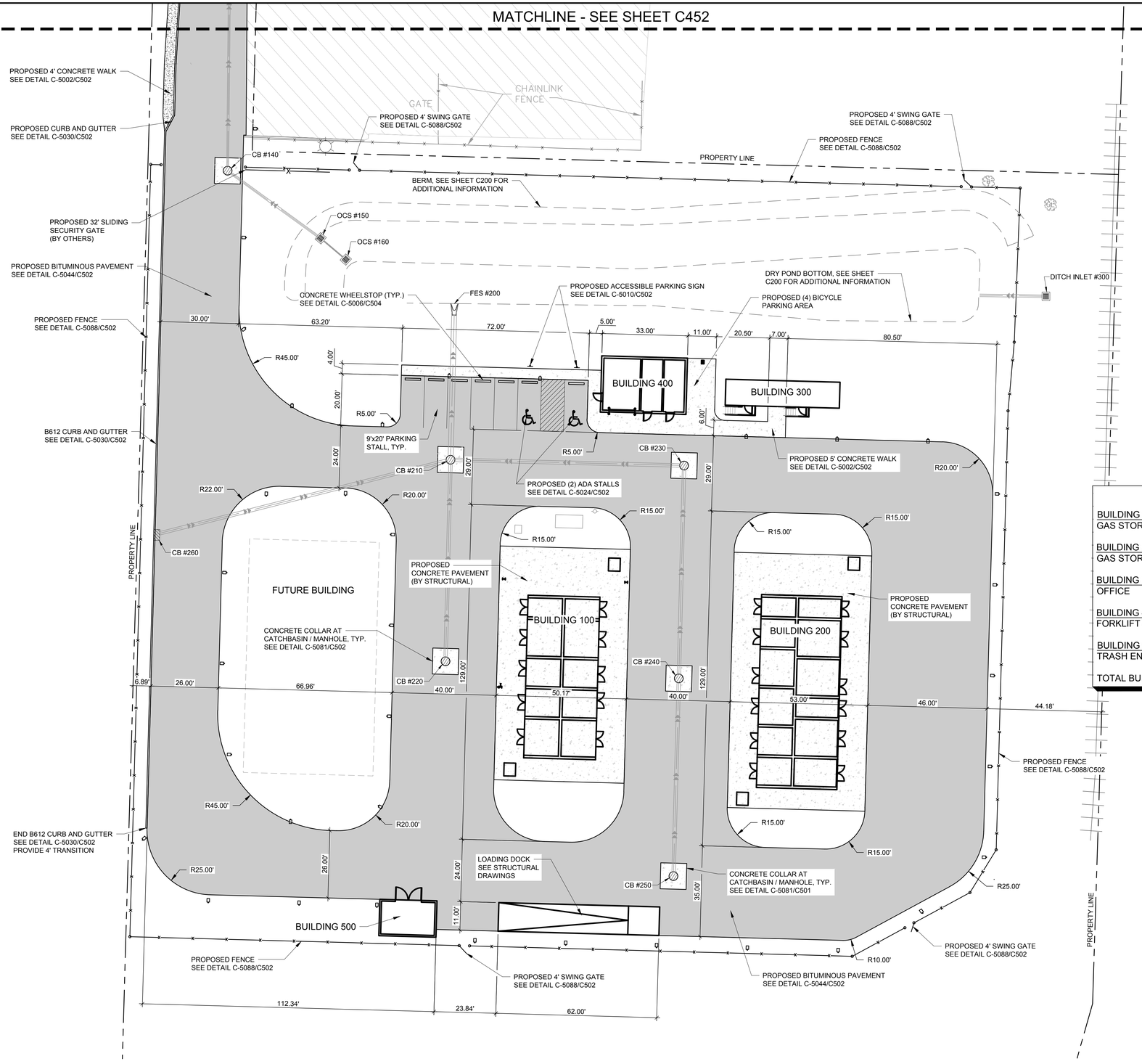
DRAWING TITLE:

OVERALL SITE
PAVING PLAN

PROJECT NO:	DRAWING NO:
170359	C450
SCALE: AS NOTED	

Date Plotted: Thursday, February 15, 2018



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LEGEND

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- EXISTING R.O.W.
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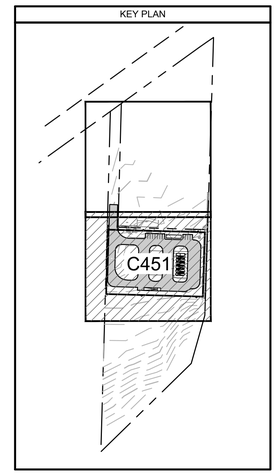
- PROPOSED LIGHT

PROPOSED BUILDINGS

BUILDING 100 GAS STORAGE BUILDING	4,500 SF (1,734 SF CMU UNDER METAL ROOF)
BUILDING 200 GAS STORAGE BUILDING	4,580 SF (2,304 SF CMU UNDER METAL ROOF)
BUILDING 300 OFFICE	675 SF
BUILDING 400 FORKLIFT / ELEC / SPRINK	687 SF
BUILDING 500 TRASH ENCLOSURE	308 SF
TOTAL BUILDING AREA:	10,750 SF

KEY PLAN



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VAA
Planners and Engineers
2300 Berkshire Lane N, Suite 200
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763.559.9100
www.vaaeng.com
info@vaaeng.com

CLIENT:

Air Liquide creative oxygen

CLIENT PROJECT NO:

PROJECT:

AIR LIQUIDE GAS DEPOT
TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
A	10/06/17	CITY REVIEW SUBMITTAL	CMB
B	01/26/18	CITY REVIEW SUBMITTAL	CMB

CERTIFICATION:

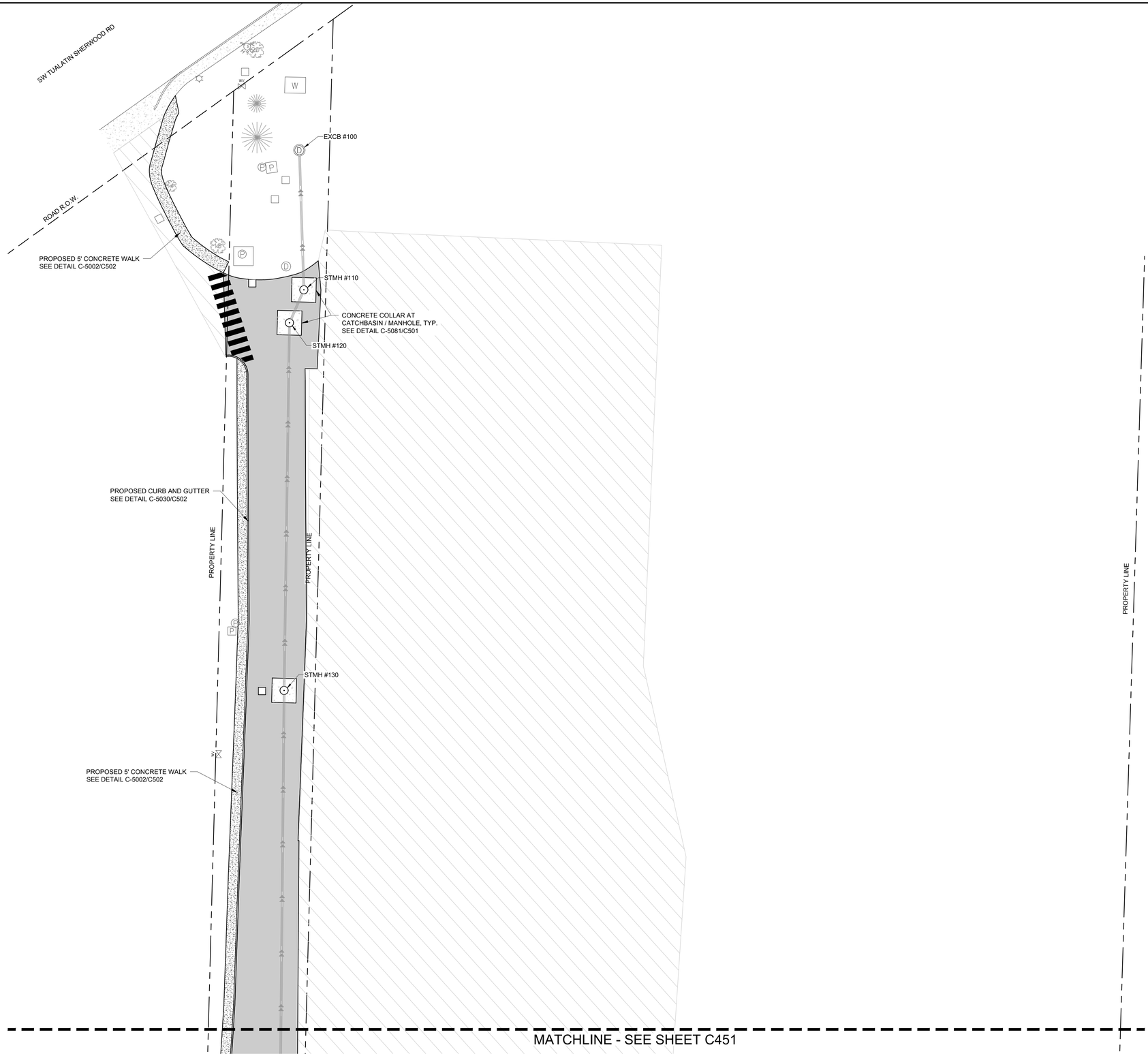
DATE:	DRAWN:	
10/06/17	CMB	
DESIGNED:	CHECKED:	APPROVED:
NHM	AMB	

DRAWING TITLE:

ENLARGED SITE
PAVING PLAN

PROJECT NO:	DRAWING NO:
170359	C451
SCALE: AS NOTED	

Date Plotted: Thursday, February 08, 2018



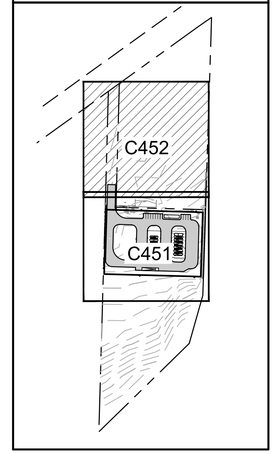
PAVING NOTES

1. ALL DIMENSIONS ARE TO FACE OF CURB OR EDGE OF PAVEMENT UNLESS NOTED OTHERWISE

LEGEND

- EXISTING PROPERTY LINE
- EXISTING R.O.W.
- EXISTING TRACK
- EXISTING CHAIN LINK FENCE
- PROPOSED FENCE
- EXISTING TREE
- EXISTING LIGHT POLE
- EXISTING BITUMINOUS PAVEMENT
- PROPOSED FES
- PROPOSED CATCHBASIN
- PROPOSED MANHOLE
- PROPOSED CLEANOUT
- PROPOSED OCS / DITCH INLET
- PROPOSED BITUMINOUS PAVEMENT
- PROPOSED CONCRETE PAVEMENT
- PROPOSED LIGHT

KEY PLAN



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Air Liquide
creative oxygen

CLIENT PROJECT NO:

PROJECT:

AIR LIQUIDE GAS DEPOT
TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
A	10/06/17	ISSUED FOR PERMIT	CMB
B	01/26/18	CITY REVIEW SUBMITTAL	CMB

CERTIFICATION:

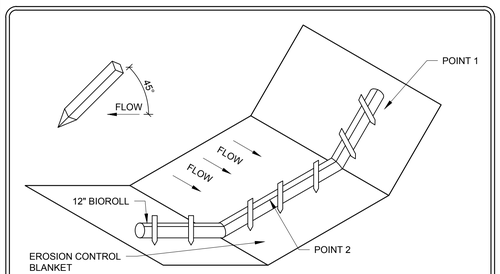
DATE: 10/06/17	DRAWN: CMB	
DESIGNED: NHM	CHECKED: AMB	APPROVED:

DRAWING TITLE:

ENLARGED SITE
PAVING PLAN

PROJECT NO: 170359	DRAWING NO: C452
SCALE: AS NOTED	

Date Plotted: Thursday, February 15, 2018



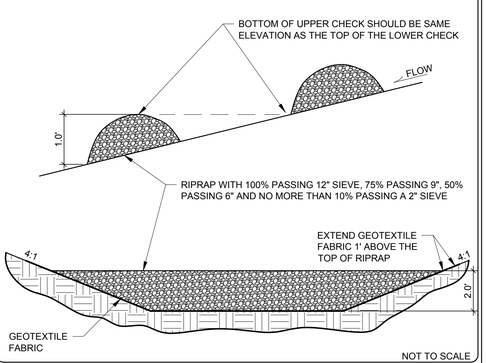
NOTE:
1. POINT 1 MUST BE A MINIMUM OF 12" HIGHER THAN POINT 2 (TOP OF BIOROLL) TO ENSURE THAT WATER FLOWS OVER THE DIKE AND NOT AROUND THE ENDS
2. STAKES SHALL BE INSTALLED PER DOT OR THE FOLLOWING AS A MINIMUM.
   A. 1/2" x 2" x 16" WOODEN STAKES
   B. STAKED @ 45° WITH TOP OF STAKE POINTING UP STREAM.
   C. MAX SPACING OF STAKES SHALL BE 1.0 FEET.

NOT TO SCALE

VAA

PLATE NO. C-1004

BIOROLL DITCH CHECK DETAIL

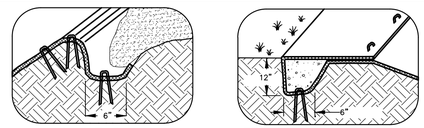


NOT TO SCALE

VAA

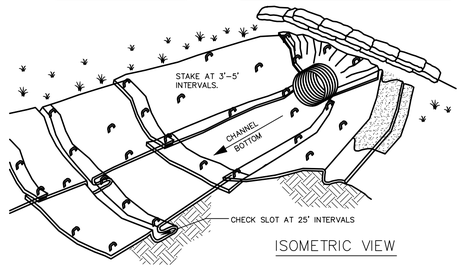
PLATE NO. C-2068

ROCK FILTER BERM

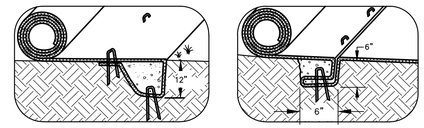


LONGITUDINAL ANCHOR TRENCH

TERMINAL SLOPE AND CHANNEL ANCHOR TRENCH



ISOMETRIC VIEW



INITIAL CHANNEL ANCHOR TRENCH

INTERMITTENT CHECK SLOT

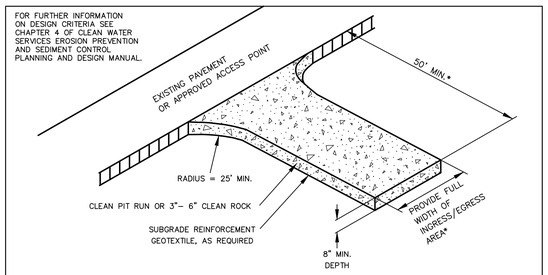
NOTES:
1. CHECK SLOTS TO BE CONSTRUCTED PER MANUFACTURERS SPECIFICATIONS.
2. STAKING OR STAPLING LAYOUT PER MANUFACTURERS SPECIFICATIONS.

MATTING CHANNEL INSTALLATION

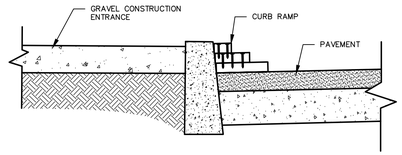
DRAWING NO. 800 **REVISED 12-16**

CleanWater Services

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.



*20' MIN. FOR SINGLE FAMILY AND DUPLEX RESIDENTIAL

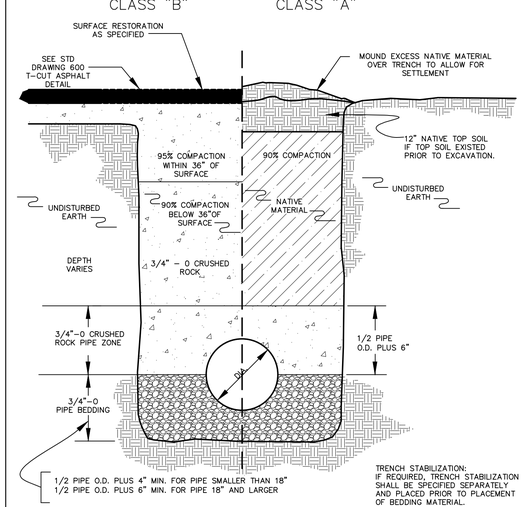


NOTES:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR AND/OR CLEAN OUT OF ANY MEASURES USED TO TRAP SEDIMENT.
2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT-OF- WAY.
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR SEDIMENT BASIN.
4. WHERE RUNOFF CONTAINING SEDIMENT LADEN WATER IS LEAVING THE SITE VIA THE CONSTRUCTION ENTRANCE, OTHER MEASURES SHALL BE IMPLEMENTED TO DIVERT RUNOFF THROUGH AN APPROVED FILTERING SYSTEM.
5. DIMENSIONS
   SINGLE FAMILY
   20' LONG BY 20' WIDE 8" DEEP OF ¾" MINUS CLEAN ROCK.
   COMMERCIAL
   50' LONG BY 20' WIDE 3-6" CLEAN ROCK, GOVERNING AUTHORITY MAY REQUIRE GEOTEXTILE FABRIC TO PREVENT SUB-SOIL PUMPING.

CONSTRUCTION ENTRANCE

DRAWING NO. 855 **REVISED 12-16**

CleanWater Services

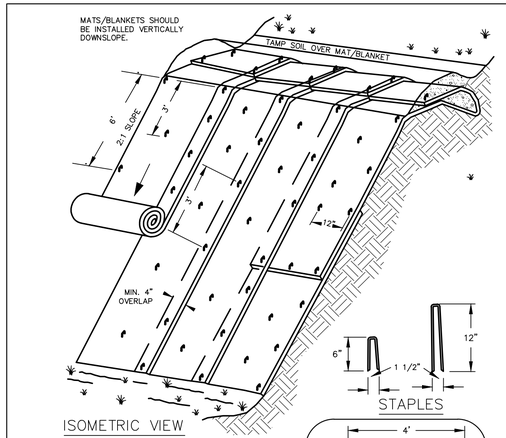


NOTE:
1. ALL COMPACTION REQUIREMENTS PER AASHTO T-99 AND ODOT/APWA SPEC 00405.
2. THE TRENCH WIDTH AT THE SURFACE OF THE GROUND SHALL BE KEPT TO A MINIMUM NECESSARY TO INSTALL THE PIPE IN A SAFE MANNER.
3. THE MINIMUM TRENCH WIDTH IN THE PIPE ZONE SHALL PROVIDE A CLEAR WORKING SPACE OF SIX INCHES OUTSIDE THE MAXIMUM OUTSIDE DIAMETER OF THE PIPE BEING INSTALLED.
4. IN ALL CASES, TRENCHES SHALL BE OF SUFFICIENT WIDTH TO ALLOW FOR SHORING, PROPER JOINING OF PIPE, AND BACKFILLING OF MATERIAL ALONG THE SIDES OF THE PIPE.

TRENCH BACKFILL DETAILS

DRAWING NO. 590 REVISED 12-16

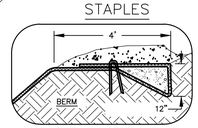
CleanWater Services



ISOMETRIC VIEW

STAPLES

TYPICAL SLOPE SOIL STABILIZATION



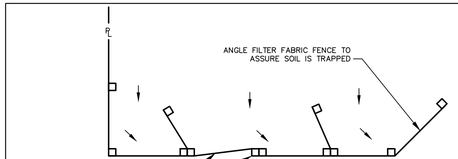
NOT TO SCALE

NOTES:
1. SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS, STICKS AND GRASS. MATS/BLANKETS SHALL HAVE GOOD SOIL CONTACT.
2. APPLY PERMANENT SEEDING BEFORE PLACING BLANKETS.
3. LAY BLANKETS LOOSELY AND STAKE OR STAPLE TO MAINTAIN DIRECT CONTACT WITH THE SOIL. DO NOT STRETCH.
4. STAKING OR STAPLING LAYOUT PER MANUFACTURERS SPECIFICATIONS.

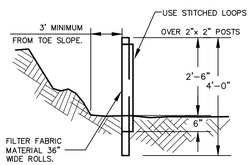
MATTING SLOPE INSTALLATION

DRAWING NO. 805 **REVISED 12-16**

CleanWater Services

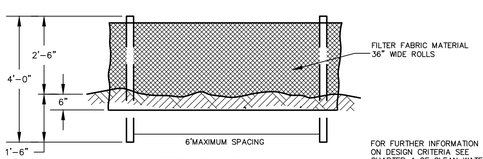


PLAN VIEW
NOT TO SCALE



PROFILE
NOT TO SCALE

NOTES:
1. BURY BOTTOM OF FILTER FABRIC 6" VERTICALLY BELOW FINISHED GRADE.
2. 2"x 2" FIR, PINE OR STEEL FENCE POSTS.
3. POSTS TO BE INSTALLED ON UPHILL SIDE OF SLOPE.
4. COMPACT BOTH SIDES OF FILTER FABRIC TRENCH.
5. PANELS MUST BE PLACED ACCORDING TO SPACING ON DETAIL NO.940



FRONT VIEW
NOT TO SCALE

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

SEDIMENT FENCE

DRAWING NO. 875 **REVISED 12-16**

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Air Liquide creative oxygen

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AIR LIQUIDE GAS DEPOT
TUALATIN, OR

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B	01/26/18	CITY REVIEW SUBMITTAL	CMB

CERTIFICATION:

DATE:	DRAWN:	
10/06/17	CMB	
DESIGNED:	CHECKED:	APPROVED:
NHM	AMB	

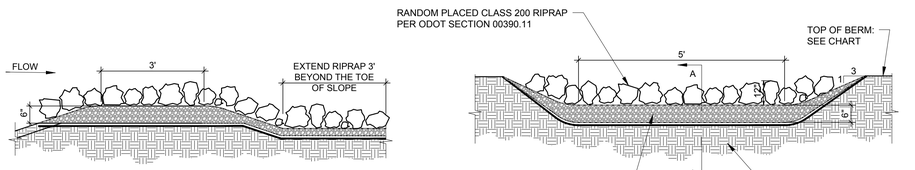
DRAWING TITLE:

CIVIL DETAILS

PROJECT NO:	DRAWING NO:
170359	C500
SCALE: AS NOTED	

Last Plotted: Thursday, February 15, 2018

	RIP-RAP OVERFLOW REFERENCE CHART			
WEIR	BOTTOM RIP-RAP ELEV.	TOP RIP-RAP ELEV.	TOP BERM ELEV.	DEPTH RIP-RAP
1	174.00	175.00	175.20	12"



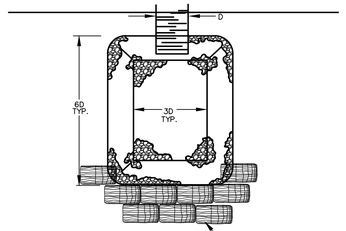
NOT TO SCALE

VAA

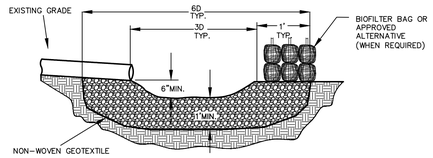
PLATE NO. C-3079

EMERGENCY OVERFLOW WEIR DETAIL

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.



PLAN VIEW
NTS



PROFILE

NOTES:

1. BIO BAGS ONLY REQUIRED WHEN DISCHARGING SEDIMENT LADEN WATER.
2. STAKING OF BAGS REQUIRED WITH EITHER METHOD USING (2) 1"x 2" WOOD STAKES OR APPROVED EQUAL PER BAG.

OUTLET PROTECTION RIP RAP

DRAWING NO. 820 **REVISED 12-16**

Clean Water Services

RIPRAP:

- ROCK FOR RIPRAP SHALL BE ANGULAR IN SHAPE.
- THICKNESS OF A SINGLE ROCK SHALL NOT BE LESS THAN ONE-THIRD ITS LENGTH.
- ROUNDED ROCK WILL NOT BE ACCEPTED UNLESS APPROVED BY THE DISTRICT.

RIPRAP INSTALLATION:

- EXCAVATE BELOW FINISH GRADE TO DEPTH & DIMENSIONS SHOWN ON APPROVED PLANS.
- INSTALL WOVEN GEOTEXTILE FABRIC.
- PLACE RIP RAP TO FINISH GRADE.

- GRADE RIPRAP SHALL BE THE CLASS AND SIZE OF ROCK ACCORDING TO THE FOLLOWING:

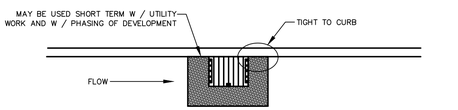
CLASS 50	CLASS 100	CLASS 200	CLASS 700	CLASS 2000	
		WEIGHT OF ROCK (LBS)			PERCENT (BY WEIGHT)
50-30	100-60	200-140	700-500	2000-1400	20
30-15	60-25	140-80	500-200	1400-700	30
15-2	25-2	80-8	200-20	700-40	40
2-0	2-0	8-0	20-0	40-0	10

RIP RAP DETAILS

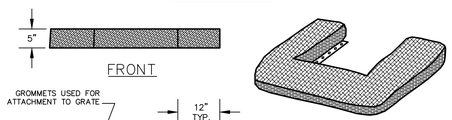
DRAWING NO. 770 REVISED 3-07

Clean Water Services

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.



CATCH BASIN



FRONT

TOP

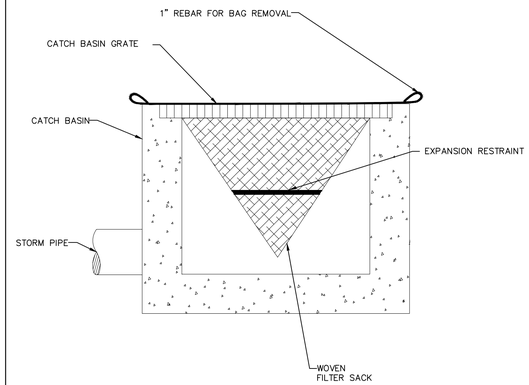
INSTALLATION NOTES:
1. INSTALL SOLID FABRIC SIDE DOWN MESH SIDE UP.
2. ATTACH TO CATCH BASIN GRATE AT A MINIMUM OF 3 LOCATIONS TIGHT TO CURB WITH 1/4" ZIP TIES.

MAINTENANCE NOTES:
1. ANY VISIBLE SIGN OF SEDIMENT ACCUMULATION TO BE CLEANED UP AT THE END OF EACH WORKDAY.
2. REPLACE U - SHAPED FILTER BAG AS NECESSARY TO PREVENT WOOD CHIPS FROM ENTERING THE STORM SYSTEM.

INLET PROTECTION TYPE 6

DRAWING NO. 925 **REVISED 12-16**

Clean Water Services



CATCH BASIN INSERT

NOTE:

1. RECESSED CURB INLET CATCH BASINS MUST BE BLOCKED WHEN USING FILTER FABRIC INLET SACKS. SIZE OF FILTER FABRIC INLET SACKS TO BE DETERMINED BY MANUFACTURER.

FOR FURTHER INFORMATION ON DESIGN CRITERIA SEE CHAPTER 4 OF CLEAN WATER SERVICES EROSION PREVENTION AND SEDIMENT CONTROL PLANNING AND DESIGN MANUAL.

INLET PROTECTION TYPE 5

DRAWING NO. 920 **REVISED 12-16**

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AIR LIQUIDE GAS DEPOT
TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
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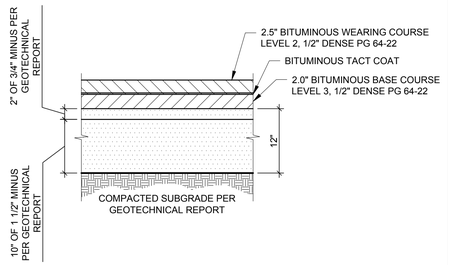
CERTIFICATION:

DATE: 10/06/17	DRAWN: CMB	
DESIGNED: NHM	CHECKED: AMB	APPROVED:

DRAWING TITLE:

CIVIL DETAILS

PROJECT NO: 170359	DRAWING NO: C501
SCALE: AS NOTED	

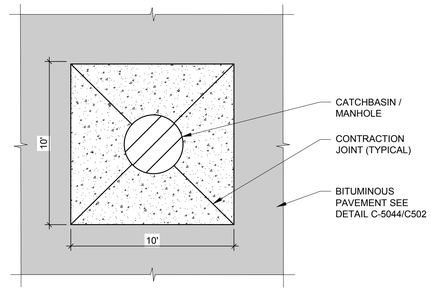


NOTE: IF PAVEMENT IS CONSTRUCTED DURING THE WET SEASON (OCTOBER - APRIL), PROVIDE GEOTEXTILE FABRIC (MIRIFI 570 OR APPROVED EQUAL)

NOT TO SCALE

PLATE NO. C-5044

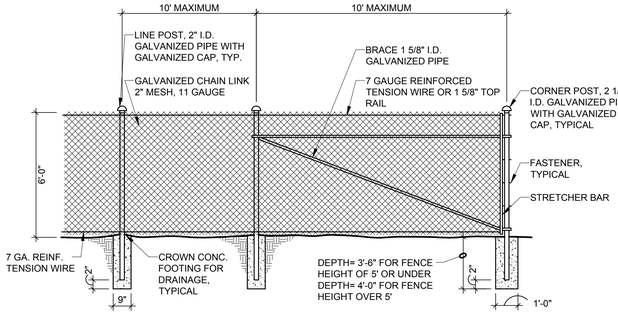
BITUMINOUS PAVEMENT DETAIL



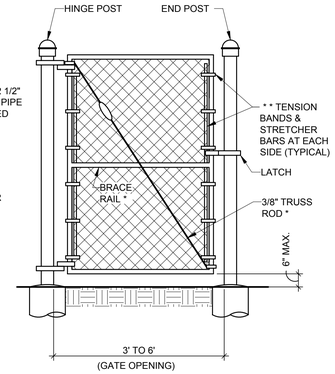
NOT TO SCALE

PLATE NO. C-5081

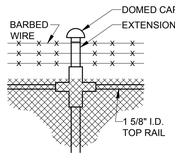
CONCRETE COLLAR AT CATCHBASIN DETAIL



FENCE



SWING GATE



DETAIL-A

NOTES:

1. DEPTH OF FOOTINGS ARE INTO NATURAL UNDISTURBED SOIL OR TESTED & APPROVED COMPACTED FILL.
2. CONCRETE FOOTINGS SHALL BE A MINIMUM 5 SACK MIX & TEST TO A MINIMUM OF 2000 P.S.I. IN 28 DAYS.
3. THE FOLLOWING ITEMS SHALL BE FURNISHED AND INSTALLED -
   A. BARBED WIRE
   B. EXTENSION ARM
   C. TOP RAIL
4. 12GA. WIRE FASTENERS SHALL BE USED.
5. DETAIL-A REFERS TO ALL ENCLOSURES TYP. U.N.O.
6. ADDITIONAL BRACING MAY BE REQUIRED. WITH RUNS OVER 200'.

GATE OPENING		FRAME PIPE NOMINAL	BRACE RAIL-PIPE NOMINAL
WIDTH [1]	HEIGHT [2]		
3' TO 8'	3' TO 6'	1.50"	1.50"

NOTES :

GATE FRAMES MAY BE CONSTRUCTED OF BENT OR WELDED STEEL TUBING INSTALLED ACCORDING TO FABRICATOR'S INSTRUCTIONS AND SUBJECT TO THE ENGINEER'S APPROVAL.

GATE OPENING WIDTH [1]	HINGE POST		CONCRETE FOOTING	
	ROUND PIPE NOMINAL	ROLL FORMED STEEL	DEPTH	DIAMETER
3' TO 6'	3.00"	3.50"x3.50"	36"	12"

* ARE NOT REQUIRED FOR GATES 3' TO 5' HEIGHT OR 5' OR LESS IN WIDTH.

* * TENSION BANDS SHALL BE SPACED 12" C. TO C.

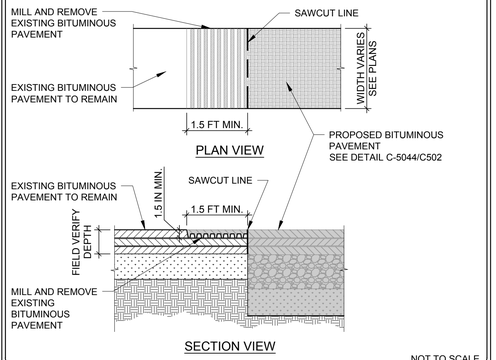
1 LEAF WIDTH FOR DOUBLE VEHICULAR GATE

2 SHALL COINCIDE WITH FENCE HEIGHT

NOT TO SCALE

PLATE NO. C-5088

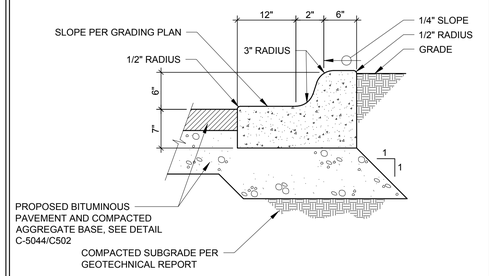
FENCE AND GATE



NOT TO SCALE

PLATE NO. C-5022

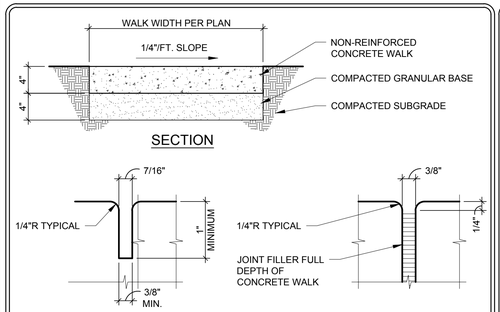
MILLED BITUMINOUS EDGE DETAIL



NOT TO SCALE

PLATE NO. C-5030

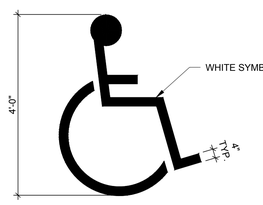
CONCRETE CURB AND GUTTER (B612) DETAIL



NOT TO SCALE

PLATE NO. C-5002

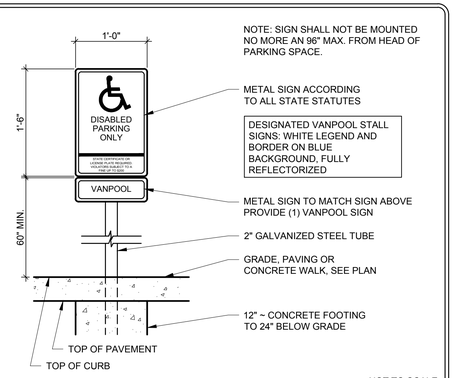
CONCRETE WALK AND JOINT DETAIL



NOT TO SCALE

PLATE NO. C-5005

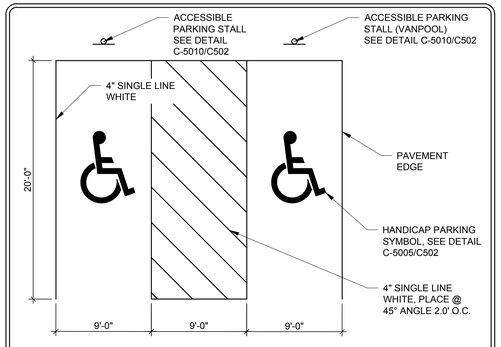
HANDICAP PARKING SYMBOL DETAIL



NOT TO SCALE

PLATE NO. C-5010

ACCESSIBLE PARKING SIGN DETAIL



NOT TO SCALE

PLATE NO. C-5024

HANDICAP PARKING STALL(S) DETAIL

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

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CLIENT: Air Liquide creative oxygen

CLIENT PROJECT NO:

PROJECT:

AIR LIQUIDE GAS DEPOT
TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
A	10/06/17	CITY REVIEW SUBMITTAL	CMB
B	01/26/18	CITY REVIEW SUBMITTAL	CMB

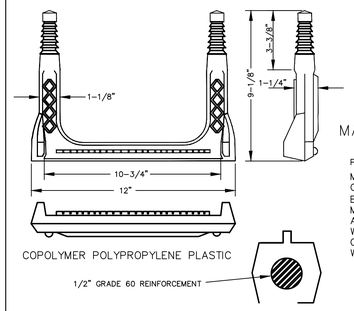
CERTIFICATION:

DATE:	DRAWN:	
10/06/17	CMB	
DESIGNED:	CHECKED:	APPROVED:
NHM	AMB	

DRAWING TITLE:

CIVIL DETAILS

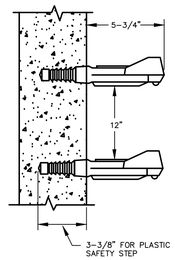
PROJECT NO:	DRAWING NO:
170359	C502
SCALE: AS NOTED	



MATERIALS:

PLASTIC:

MUST CONFORM WITH ASTM C-478. STEEL REINFORCING BAR MINIMUM 1/2" GRADE 60. MEETING REQUIREMENTS OF ASTM A-615 ENCAPSULATED WITH INJECTION MOLDED COPOLYMER POLYPROPYLENE WITH SERRATED SURFACES.

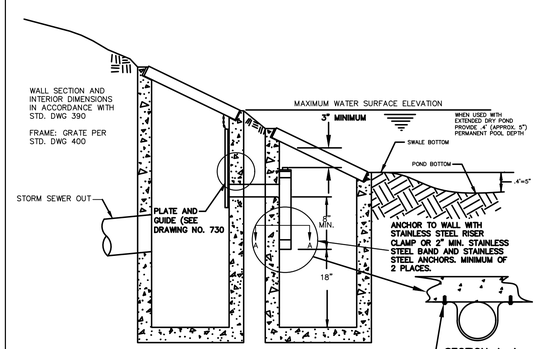


NOTES:
1. ALL STEPS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478.
2. MANHOLE STEPS MUST BE TIGHT AND FIRMLY EMBEDDED.
3. ALL STEPS WITHIN A MANHOLE SHALL BE OF THE SAME DESIGN, TYPE, AND SIZE. (MIXING OF UNMATCHED STEPS IS NOT PERMITTED).
4. STEPS ADJUSTED OR ADDED SHALL BE EPOXIED IN HOLES THAT ARE FREE OF MOISTURE AND DEBRIS. (EPOXY TO MEET ASTM C881).

MANHOLE STEP

DRAWING NO. 100 REVISED 12-16

CleanWater Services

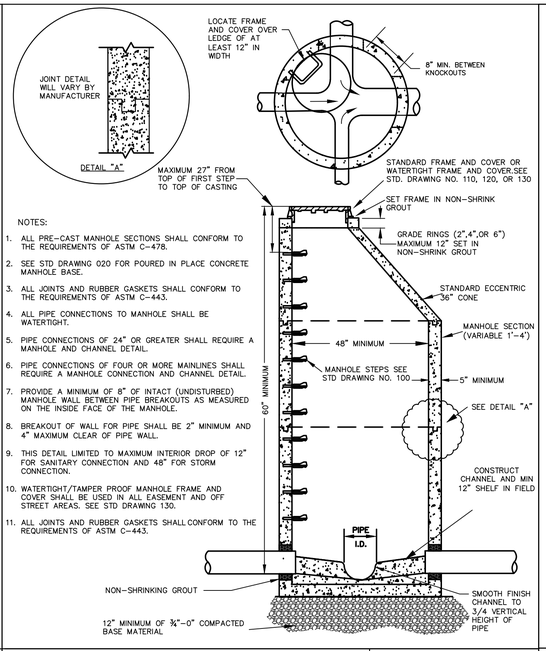


NOTES:
1. CONNECTING PIPE AND TEE SHALL BE 4", 6", OR 8" AWWA C-900 OR ASTM 3034 PVC,AND ONE SIZE LARGER THAN THE ORIFICE OPENING.
2. MAXIMUM ORIFICE OPENING SHALL BE 6" DIAMETER.
3. STRUCTURES SHALL CONFORM TO STANDARD DRAWING NO. 390 DITCH INLET.
4. FRAME AND GRATE SHALL CONFORM TO STANDARD DRAWING NO. 400, DITCH INLET FRAME AND GRATE.
5. PLATE AND GUIDE SHALL BE SECURED FLUSH AGAINST WALL OF STRUCTURE AS APPROVED.
6. MAINTENANCE ACCESS REQUIRED TO WITHIN 10' OF CENTER OF BOTH STRUCTURES.
7. FOR APPROVAL OF ALTERNATE STRUCTURES SEE SECTION 1.17.

OUTFLOW CONTROL STRUCTURE

DRAWING NO. 720 REVISED 11-06

CleanWater Services

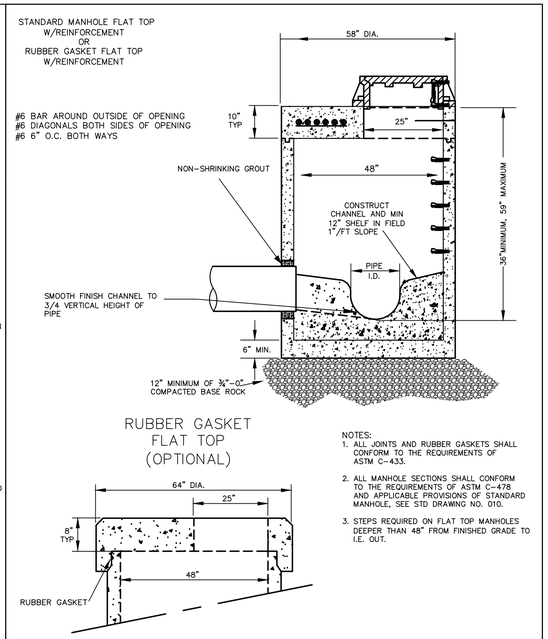


NOTES:
1. ALL PRE-CAST MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478.
2. SEE STD DRAWING 020 FOR POURED IN PLACE CONCRETE MANHOLE BASE.
3. ALL JOINTS AND RUBBER GASKETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-443.
4. ALL PIPE CONNECTIONS TO MANHOLE SHALL BE WATERTIGHT.
5. PIPE CONNECTIONS OF 24" OR GREATER SHALL REQUIRE A MANHOLE AND CHANNEL DETAIL.
6. PIPE CONNECTIONS OF FOUR OR MORE MAINLINES SHALL REQUIRE A MANHOLE CONNECTION AND CHANNEL DETAIL.
7. PROVIDE A MINIMUM OF 8" OF INTACT (UNDISTURBED) MANHOLE WALL BETWEEN PIPE BREAKOUTS AS MEASURED ON THE INSIDE FACE OF THE MANHOLE.
8. BREAKOUT OF WALL FOR PIPE SHALL BE 2" MINIMUM AND 4" MAXIMUM CLEAR OF PIPE WALL.
9. THIS DETAIL LIMITED TO MAXIMUM INTERIOR DROP OF 12" FOR SANITARY CONNECTION AND 48" FOR STORM CONNECTION.
10. WATERTIGHT/TAMPER PROOF MANHOLE FRAME AND COVER SHALL BE USED IN ALL EASEMENT AND OFF STREET AREAS. SEE STD DRAWING 130.
11. ALL JOINTS AND RUBBER GASKETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-443.

STANDARD MANHOLE

DRAWING NO. 010 REVISED 12-16

CleanWater Services



RUBBER GASKET FLAT TOP (OPTIONAL)

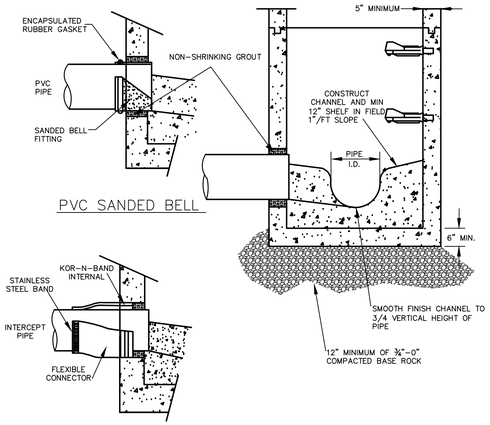
NOTES:
1. ALL JOINTS AND RUBBER GASKETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-433.
2. ALL MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478 AND APPLICABLE PROVISIONS OF STANDARD MANHOLE, SEE STD DRAWING NO. 010.
3. STEPS REQUIRED ON FLAT TOP MANHOLES DEEPER THAN 48" FROM FINISHED GRADE TO I.E. OUT.

FLAT TOP MANHOLE

DRAWING NO. 050 REVISED 12-16

CleanWater Services

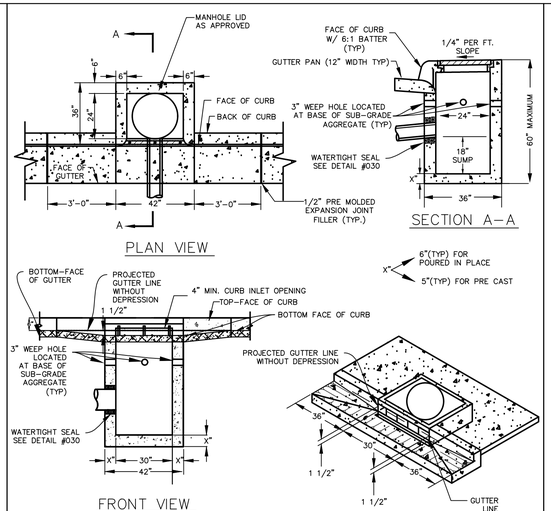
NOTES:
ALL PRE-CAST MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478 AND APPLICABLE PROVISIONS OF STANDARD DRAWING NO. 010.



MANHOLE CONNECTIONS

DRAWING NO. 030 REVISED 12-16

CleanWater Services

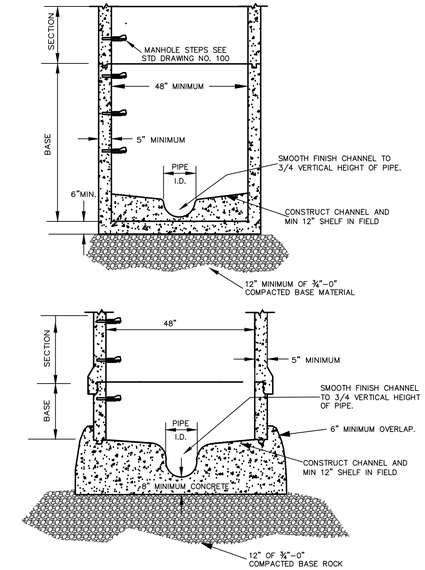


NOTES:
1. ALL POURED IN PLACE CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3000 P.S.I. AND A SLUMP OF 2" TO 4".
2. INSTALL STRUCTURE ON MINIMUM OF 8" OF ¾" TO 0" COMPACTED BASE MATERIAL.
3. NON-SUMP INLET CATCH BASINS SHALL BE CHANNELED (E.G. FLOW THROUGH CBs).

INLET CATCH BASIN (CG-30)

DRAWING NO. 330 REVISED 12-16

CleanWater Services



NOTES:
1. ALL MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478 AND APPLICABLE PROVISIONS OF STANDARD MANHOLE, DRAWING NO. 010.
2. ALL POURED IN PLACE CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3000 PSI AND A SLUMP OF 2" TO 4".

MANHOLE BASE

DRAWING NO. 020 REVISED 11-16

CleanWater Services

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

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CLIENT:

Air Liquide creative oxygen

CLIENT PROJECT NO:

PROJECT:

AIR LIQUIDE GAS DEPOT
TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
A	10/06/17	CITY REVIEW SUBMITTAL	CMB
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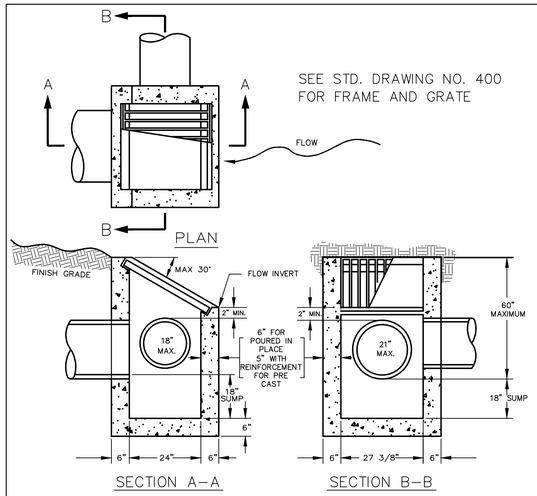
CERTIFICATION:

DATE:	DRAWN:	
10/06/17	CMB	
DESIGNED:	CHECKED:	APPROVED:
NHM	AMB	

DRAWING TITLE:

CIVIL DETAILS

PROJECT NO:	DRAWING NO:
170359	C503
SCALE: AS NOTED	



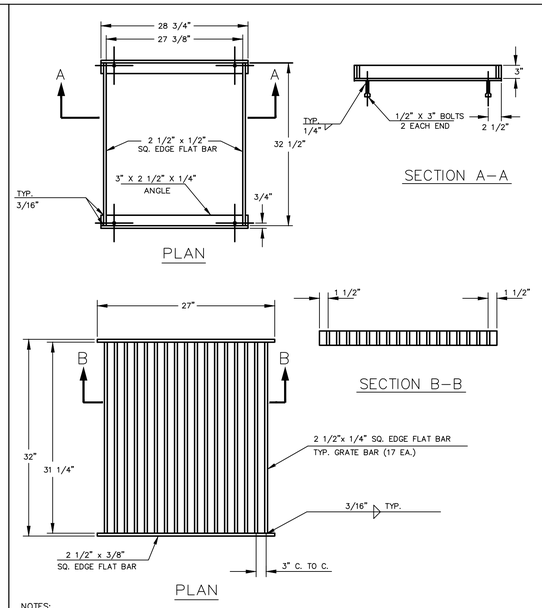
NOTES:

1. ALL PRE CAST SECTIONS SHALL CONFORM TO REQUIREMENTS OF ASTM C-478.
2. INSTALL STRUCTURE ON MINIMUM OF 8" OF 3/4" – 0" COMPACTED BASE MATERIAL.
3. PRE CAST REINFORCEMENT SHALL BE REBAR MEETING ASTM A615 GRADE 60 OR WELDED WIRE MEETING ASTM A497
4. ALL POURED IN PLACE CONCRETE SHALL HAVE A 28 DAY STRENGTH OF 3000 PSI AND SLUMP OF 2" TO 4".
5. PRE-CAST STRUCTURE'S CONFORMING TO O.D.O.T. TYPE G-2 CATCH BASIN DESIGN/WITH DITCH INLET TOP ARE AN ACCEPTABLE ALTERNATE. ALL GRATE MATERIALS SHALL MEET C.W.S. STANDARDS AS SHOWN ON DETAIL #400

DITCH INLET

DRAWING NO. 390 **REVISED 05-07**

Clean Water Services



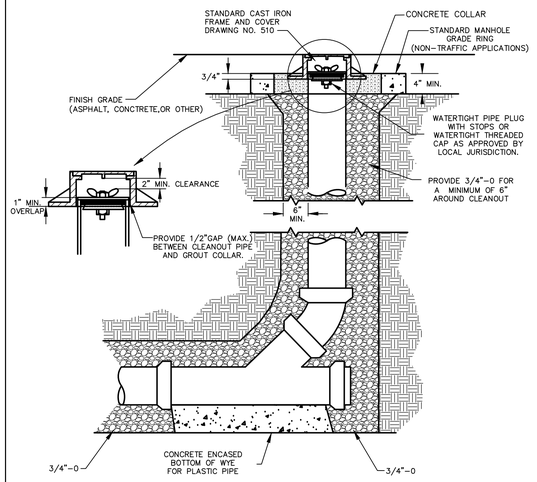
NOTES:

FRAME AND GRATE SHALL BE NEW STRUCTURAL ASTM A-36 FLAT BAR STEEL OR APPROVED EQUAL.

DITCH INLET
FRAME AND GRATE

DRAWING NO. 400 **REVISED 12-06**

Clean Water Services



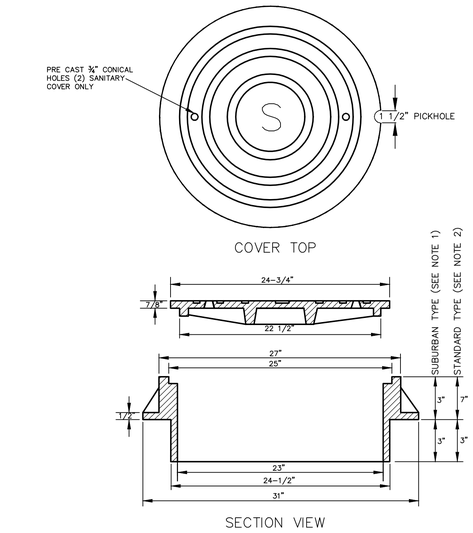
NOTE:

1. CONCRETE ENCASE ENTIRE WYE SECTION AND 45° BEND IF CONCRETE PIPE.
2. STAND PIPE TO BE SAME SIZE AS MAINLINE UP TO AND INCLUDING 8" PIPE. MAINLINE GREATER THAN 8" SHALL HAVE A 8" STANDPIPE.

STANDARD CLEANOUT

DRAWING NO. 500 REVISED 01-13

Clean Water Services



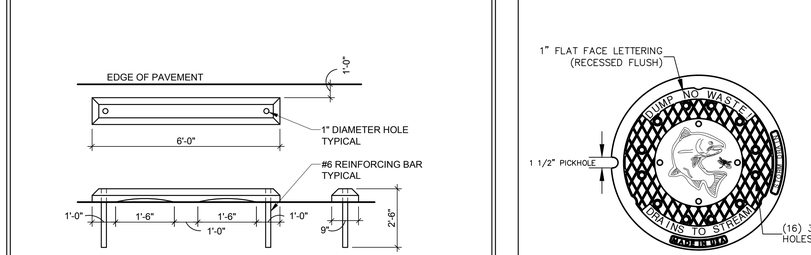
NOTES:

1. SUBURBAN TYPE FOR USE IN TRAFFIC AREAS OF LOCAL AND NEIGHBORHOOD STREETS.
2. STANDARD TYPE FOR USE IN TRAFFIC AREAS OF COLLECTOR AND ARTERIAL STREETS.
3. COVER AND FRAME SHALL BE GRAY CAST IRON ASTM A-48 CLASS 30.
4. COVER AND FRAME TO BE MACHINED TO A TRUE BEARING ALL AROUND.
5. 1 1/2" PICKHOLE IN LID FOR LIFTING HOOK.

SUBURBAN AND STANDARD
MANHOLE FRAME AND COVER
SANITARY

DRAWING NO. 110 REVISED 02-17

Clean Water Services

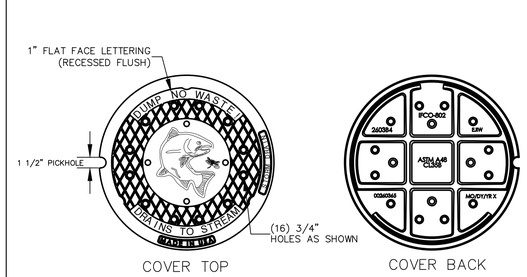


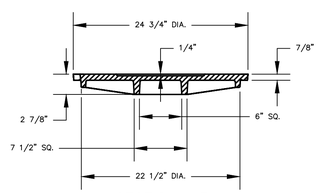
NOT TO SCALE

VAA

PLATE NO. C-5006

PRECAST CONCRETE WHEEL STOP





SEE DETAIL #110 FOR MANHOLE FRAME SPECIFICATIONS.

STORM WATER MANHOLE LID

DRAWING NO. 120 REVISED 12-06

Clean Water Services

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

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CLIENT:

Air Liquide creative oxygen

CLIENT PROJECT NO:

PROJECT:

AIR LIQUIDE GAS DEPOT
TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
A	10/06/17	CITY REVIEW SUBMITTAL	CMB
B	01/26/18	CITY REVIEW SUBMITTAL	CMB

CERTIFICATION:

DATE: 10/06/17		DRAWN: CMB
DESIGNED: NHM	CHECKED: AMB	APPROVED:

DRAWING TITLE:

CIVIL DETAILS

PROJECT NO: 170359	DRAWING NO: C504
SCALE: AS NOTED	

CONSTRUCTION ACTIVITY REQUIREMENTS

THE GENERAL STORMWATER NATIONAL POLLUTION DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT IS REQUIRED FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY. THE PERMITEE(S) AS INDICATED IN THE PERMIT, MUST IMPLEMENT THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AS DEMONSTRATED HEREIN AND WITHIN THE SWPPP NARRATIVE. THE BEST MANAGEMENT PRACTICES (BMP's) IDENTIFIED MUST BE INSTALLED IN AN APPROPRIATE AND FUNCTIONAL WAY TO PREVENT DIRT AND/OR DEBRIS FROM ENTERING THE STORM SEWER OR BEING TRANSPORTED OFF SITE IN AN UNCONTROLLED MANNER.

FOR REQUIREMENTS ASSOCIATED WITH FISH/WILDLIFE/RIVERS AND OTHER BODIES OF WATER, SEE ODFR.

EROSION PREVENTION PRACTICES

1. ALL EXPOSED SOIL MUST BE STABILIZED AS SOON AS POSSIBLE AND NO LATER THAN 14 DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE WHERE WORK HAS TEMPORARILY OR PERMANENTLY CEASED.

   THESE AREAS INCLUDE, BUT ARE NOT LIMITED TO, CONSTRUCTED STORMWATER MANAGEMENT POND, SIDE SLOPES, AND ANY EXPOSED SOIL AREAS WITH A POSITIVE SLOPE TO STORMWATER CONVEYANCE SYSTEM, SUCH AS A CURB AND GUTTER SYSTEM, STORM SEWER INLET, TEMPORARY OR PERMANENT DRAINAGE DITCH OR OTHER NATURAL OR MANMADE SYSTEMS THAT DISCHARGE TO A SURFACE WATER.

2. THE NORMAL WETTED PERIMETER OF ANY TEMPORARY OR PERMANENT DRAINAGE DITCH THAT DRAINS WATER FROM A CONSTRUCTION SITE, OR DIVERTS WATER AROUND A SITE, MUST BE STABILIZED WITHIN 200 LINEAL FEET FROM THE PROPERTY EDGE, OR FROM THE POINT OF DISCHARGE TO ANY SURFACE WATER. STABILIZATION MUST BE COMPLETED WITHIN 24 HOURS OF CONNECTING TO A SURFACE WATER.

3. PIPE OUTLETS MUST BE PROVIDED WITH TEMPORARY OR PERMANENT ENERGY DISSIPATION WITHIN 24 HOURS OF CONNECTION TO A SURFACE WATER. CONTRACTOR TO PREVENT DIRT AND/OR DEBRIS FROM ENTERING STORM SEWER OR BEING TRANSPORTED OFF-SITE IN AN UNCONTROLLED MANNER. CONTRACTOR TO VERIFY AT PROJECT CLOSE-OUT THAT STORM SEWER SYSTEM IS CLEAR OF SEDIMENT AND/OR DEBRIS AND IS FULLY FUNCTIONAL. CONTRACTOR TO FOLLOW BEST MANAGEMENT PRACTICES (BMP'S).

4. ALL DISTURBED AREAS, EXCEPT ROADWAYS, BUILDING AREAS, PARKING AREAS, ISLANDS AND SIDEWALKS, SHALL BE RESTORED WITH MINIMUM 6 INCHES TOPSOIL, SEEDED AND MULCHED AS SOON AS POSSIBLE AND NO LATER THAN 14 DAYS OF COMPLETION OF SITE GRADING.

5. IN ORDER TO MAINTAIN SHEET FLOW AND MINIMIZE HILLS AND/OR GULLIES, THERE SHALL BE NO UNBROKEN SLOPE LENGTH OF GREATER THAN 75 FEET FOR SLOPES WITH A GRADE OF 3:1 OR STEEPER.

6. EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL 3:1 SLOPES AND STEEPER, DITCH BOTTOMS AND OTHER "HARD TO HOLD" AREAS AS SHOWN.

SEDIMENT CONTROL PRACTICES

1. CONTRACTOR TO INSTALL SEDIMENT CONTROL ELEMENTS PRIOR TO START OF LAND DISTURBING ACTIVITIES, MAINTAIN IN GOOD CONDITION DURING CONSTRUCTION AND REMOVE FROM THE SITE UPON COMPLETION OF FINAL PAVING AND TURF ESTABLISHMENT. REMOVE FROM SITE UPON COMPLETION OF FINAL STABILIZATION. ALL SEDIMENT CONTROL ELEMENTS ARE TEMPORARY.

2. TEMPORARY ROCK CONSTRUCTION ENTRANCE SHALL BE LOCATED AT ALL CONSTRUCTION ACCESS LOCATIONS. SEE DETAIL 855/C500.

3. REMOVE ALL SOILS AND SEDIMENTS TRACKED OR OTHERWISE DEPOSITED ONTO PUBLIC AND PRIVATE PAVEMENT AREAS. REMOVAL SHALL BE ON A DAILY BASIS THROUGHOUT THE DURATION OF THE CONSTRUCTION. CLEAN PAVED ROADWAYS BY SHOVELING OR SWEEPING. STREET WASHING IS ALLOWED ONLY AFTER SHOVELING OR SWEEPING HAS REMOVED SEDIMENT.

4. SEDIMENT CONTROL PRACTICES MUST DETER SEDIMENT FROM ENTERING SURFACE WATERS, INCLUDING CURB AND GUTTER SYSTEMS AND STORM SEWER INLETS SEE DETAILS 920/C501 & 925/C501.

5. TEMPORARY OR PERMANENT DRAINAGE DITCHES AND SEDIMENT BASINS THAT ARE DESIGNED AS PART OF A TREATMENT SYSTEM (E.G., DITCHES WITH ROCK CHECK DAMS) REQUIRE SEDIMENT CONTROL PRACTICES ONLY AS APPROPRIATE FOR SITE CONDITIONS.

6. SEDIMENT CONTROL PRACTICES MUST BE ESTABLISHED ON ALL DOWN GRADIENT PERIMETERS BEFORE ANY UPGRADIENT LAND DISTURBING ACTIVITIES BEGIN. THESE PRACTICES SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION HAS BEEN ESTABLISHED.

SEDIMENT CONTROL PRACTICES CONTINUED

7. IF THE DOWN GRADIENT TREATMENT SYSTEM IS OVERLOADED, ADDITIONAL UPGRADIENT SEDIMENT CONTROL PRACTICES MUST BE INSTALLED TO ELIMINATE THE OVERLOADING, AND THE SWPPP MUST BE AMENDED TO IDENTIFY THESE ADDITIONAL PRACTICES.

8. THE TIMING OF THE INSTALLATION OF SEDIMENT CONTROL PRACTICES MAY BE ADJUSTED TO ACCOMMODATE SHORT-TERM ACTIVITIES SUCH AS CLEARING OR GRUBBING, OR PASSAGE OF VEHICLES. ANY SHORT-TERM ACTIVITY MUST BE COMPLETED AS QUICKLY AS POSSIBLE AND THE SEDIMENT CONTROL PRACTICES MUST BE INSTALLED IMMEDIATELY AFTER THE ACTIVITY IS COMPLETED. HOWEVER, SEDIMENT CONTROL PRACTICES MUST BE INSTALLED BEFORE THE NEXT PRECIPITATION EVENT EVEN IF THE ACTIVITY IS NOT COMPLETE.

9. CONTRACTOR TO INSTALL AND MAINTAIN INLET PROTECTION AROUND ALL EXISTING CATCHBASINS, CATCHBASIN MANHOLES, AND FLARED END SECTIONS PRIOR TO THE START OF LAND DISTURBING ACTIVITIES AND AROUND ALL NEW CATCHBASINS, CATCHBASIN MANHOLES, AND FLARED END SECTIONS AFTER THEY ARE INSTALLED, UNTIL ALL SOURCES WITH POTENTIAL FOR DISCHARGING TO THE INLET HAVE BEEN STABILIZED. SEE DETAILS 920/C501 & 925/C501.

10. TEMPORARY SOIL STOCKPILES MUST HAVE SILT FENCE OR OTHER EFFECTIVE SEDIMENT CONTROLS, AND CANNOT BE PLACED IN SURFACE WATERS, INCLUDING STORM WATER CONVEYANCES SUCH AS CURB AND GUTTER SYSTEMS, OR CONDUITS AND DITCHES.

11. STOCKPILE AREAS WHICH REMAIN INACTIVE FOR MORE THAN 14 DAYS SHALL BE SEEDED, MULCHED, AND SURROUNDED BY SILT FENCE.

12. THE PERMITEE(S) MUST INSTALL TEMPORARY SEDIMENTATION BASINS AS REQUIRED PER THE AUTHORITY HAVING JURISDICTION. IT IS RECOMMENDED THAT THE TEMPORARY BASIN BE INSTALLED IN THE LOCATION OF THE PERMANENT BASIN. CONTRACTOR TO CLEAN OUT ALL SEDIMENT AND RETURN BASIN TO DESIGN CAPACITY PRIOR TO FINAL STABILIZATION.

DEWATERING AND BASIN DRAINING

1. DEWATERING OR BASIN DRAINING (E.G. PUMPED DISCHARGES, TRENCH/DITCH CUTS FOR DRAINAGE) RELATED TO THE CONSTRUCTION ACTIVITY THAT MAY HAVE TURBID OR SEDIMENT LADEN DISCHARGE WATER MUST BE DISCHARGED TO A TEMPORARY OR PERMANENT SEDIMENTATION BASIN ON THE PROJECT SITE WHENEVER POSSIBLE. IF THE WATER CANNOT BE DISCHARGED TO A SEDIMENTATION BASIN PRIOR TO ENTERING THE SURFACE WATER, IT MUST BE TREATED WITH THE APPROPRIATE BMP's, SUCH THAT THE DISCHARGE DOES NOT ADVERSELY AFFECT THE RECEIVING WATER OR DOWNSTREAM LANDOWNERS. THE PERMITEE(S) MUST ENSURE THAT DISCHARGE POINTS ARE ADEQUATELY PROTECTED FROM EROSION AND SCOUR. THE DISCHARGE MUST BE DISPERSED OVER NATURAL ROCK RIPRAP, SAND BAGS, PLASTIC SHEETING OR OTHER ACCEPTED ENERGY DISSIPATION MEASURES. ADEQUATE SEDIMENTATION CONTROL MEASURES ARE REQUIRED FOR DISCHARGE WATER THAT CONTAINS SUSPENDED SOLIDS.

2. ALL WATER FROM DEWATERING OR BASIN DRAINING ACTIVITIES MUST BE DISCHARGED IN A MANNER THAT DOES NOT CAUSE NUISANCE CONDITIONS, EROSION IN RECEIVING CHANNELS OR ON DOWNSLOPE PROPERTIES, OR INUNDATION IN WETLANDS CAUSING SIGNIFICANT ADVERSE IMPACT TO THE WETLAND.

3. ANY DEWATERING ACTIVITY SHALL BE APPROVED BY THE ENGINEER AND THE APPROPRIATE GOVERNING AGENCIES PRIOR TO CONSTRUCTION.

INSPECTIONS AND MAINTENANCE

INSPECTIONS AND MAINTENANCE ARE CONDUCTED BY THE SUPERVISOR/CONTRACTOR AND MUST CONFORM TO THE SWPPP NARRATIVE.

IMPLEMENTATION SCHEDULE

THE IMPLEMENTATION SCHEDULE MUST CONFORM TO THE SWPPP NARRATIVE.

TEMPORARY EROSION CONTROL PLAN

INSTALL SEDIMENT PONDS AT RATE OF 1800 CF OF DEAD STORAGE PER ACRE OF DISTURBED LAND. TEMPORARY SEDIMENT BASINS SHALL BE OPERATIONAL UNTIL PERMANENT COVER IS ESTABLISHED FOR THE ENTIRE DRAINAGE AREA OF THE TEMPORARY BASIN. TEMPORARY SEDIMENT BASINS MUST BE CONSTRUCTED AND MADE OPERATIONAL CONCURRENTLY WITH THE START OF SOIL DISTURBANCE THAT IS UPGRADIENT OF THE AREA AND CONTRIBUTES RUNOFF TO THE POND.

	BEFORE CONSTRUCTION	AFTER CONSTRUCTION
TOTAL PROJECT AREA	**3.12 AC**	**3.12 AC**
DISTURBED AREA	**0 AC**	**3.12 AC**
TOTAL ESTIMATED IMPERVIOUS	**0.35 AC**	**1.46 AC**
TOTAL ESTIMATED PERVIOUS	**2.77 AC**	**1.66 AC**
RUNOFF COEFFICIENT OR CN VALUE	**77**	**84**

BMP	ESTIMATED QUANTITIES OF BMP'S	UNITS
SILT FENCE	**630**	LF
RIP RAP	**3.30**	CY
ROCK FILTER BERM	**2**	EA
BIO-ROLLS	**3**	EA
SEED	**1.08**	ACRES
MULCH	**1.08**	ACRES
CONSTRUCTION ENTRANCE	**1**	EA
EROSION CONTROL BLANKET	**690**	SY

SWPPP CONTACT INFORMATION:

OWNER:

AIR LIQUIDE

PROJECT SITE MANAGER:

TBD

CONTRACTOR:

JH KELLY
MATT OUELLETTE
mouellet@jhkelly.com
(360) 575-3198

THE SITE CONTRACTOR IS THE PARTY RESPONSIBLE TO OVERSEE THE IMPLEMENTATION OF THE SWPPP AND INSTALLATION, INSPECTION, AND MAINTENANCE OF THE EROSION PREVENTION AND SEDIMENT CONTROL BMP's BEFORE, DURING, AND AFTER CONSTRUCTION UNTIL FINAL STABILIZATION HAS BEEN ESTABLISHED AND THE "NOTICE OF TERMINATION" IS SUBMITTED. SEE THE GENERAL STORMWATER PERMIT FROM THE AUTHORITY HAVING JURISDICTION FOR REGULATIONS.

ALL INFORMATION WITHIN THE PLAN SET AND SPECIFICATIONS IS TO BE USED IN ACCORDANCE WITH THE SWPPP NARRATIVE AND THE LATEST CONSTRUCTION DOCUMENTS.

ISSUED FOR REVIEW
NOT FOR CONSTRUCTION

VAA
Planners and Engineers
2300 Berkshire Lane N, Suite 200
Plymouth, MN 55441
763.559.9100
www.vaaeng.com
info@vaaeng.com

CLIENT:

Air Liquide creative oxygen

CLIENT PROJECT NO:

PROJECT:

AIR LIQUIDE GAS DEPOT
TUALATIN, OR

NO	DATE	ISSUE/REVISION	BY
A	10/06/17	CITY REVIEW SUBMITTAL	CMB
B	01/26/18	CITY REVIEW SUBMITTAL	CMB

CERTIFICATION:

DATE:	DRAWN:	
10/06/17	CMB	
DESIGNED:	CHECKED:	APPROVED:
NHM	AMB	

DRAWING TITLE:

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

PROJECT NO:	DRAWING NO:
170359	C600
SCALE: AS NOTED	

Date Plotted: Thursday, February 15, 2018

JH Kelly, LLC
www.jhkelly.com
WA CRL #JHKELLL044KF
OR CCB #0117544

Hydrant Flow Test Report

LOCATION: NE WAGNER CT, SCAPPOOSE DATE: 1/22/2018

TEST MADE BY: _____ TIME: 10:00 am

REPRESENTATIVE OF: _____

WITNESS: J.H. KELLY / SCAPPOOSE FIRE MARSHAL

STATE PURPOSE OF TEST: HYDRANT FLOW TEST FOR SPRINKLER CALCULATIONS

IF PUMPS AFFECT TEST, INDICATE PUMPS OPERATING: N/A

FLOW HYDRANTS: A1 A2 A3 A4

Size Nozzle: 2 ½" 2 ½"

Pilot Reading: 65

TEST 1: GPM: 1500 GPM

STATICP 65 psi RESIDUAL B 38 psi

PROJECTED RESULTS: At 20 psi Residual 1976 GPM

TEST 2: GPM: 1160 GPM

STATICP 65 psi RESIDUAL B 53 psi

PROJECTED RESULTS: At 20 psi Residual 2368 GPM

REMARKS: TEST 1 FLOWED 2 DIFFUSERS SIMULTANEOUSLY AT 750gpm EACH

LOCATION MAP: Show line sizes and distance to next cross connected line. Show valves and Hydrant branch size. Indicate North. Show flowing hydrants – Label A1, A2, A3, A4. Show location of Static and Residual – Label B.

Indicate B. Hydrant: YES Sprinkler: N/A Other (Identify): N/A

NFPA 55

Standard for the

Storage, Use, and Handling of Compressed Gases and

Cryogenic Fluids in Portable and Stationary Containers,

Cylinders, and Tanks

2005 Edition

This edition of NFPA 55, *Standard for the Storage, Use, and Handling of Compressed Gases and Cryogenic Fluids in Portable and Stationary Containers, Cylinders, and Tanks*, was prepared by the Technical Committee on Industrial and Medical Gases and acted on by NFPA at its November Association Technical Meeting held November 13–17, 2004, in Miami Beach, FL. It was issued by the Standards Council on January 14, 2005, with an effective date of February 7, 2005, and supersedes all previous editions.

This edition of NFPA 55 was approved as an American National Standard on February 7, 2005.

Origin and Development of NFPA 55

NFPA 55 was developed by the Industrial and Medical Gases Committee in recognition of the need to provide information on the use of cylinder gases in one standard. The Compressed Gas Association assisted the project by submitting a draft that was used as the framework for the standard.

NFPA 55 supersedes NFPA 43C, *Code for the Storage of Gaseous Oxidizing Materials*, which was developed by the Committee on Hazardous Chemicals and transferred to the Industrial and Medical Gases Committee. The committee believed that one standard covering storage of all gas cylinders was needed and, with the new NFPA 55, the need for NFPA 43C no longer existed.

Since this standard was introduced in 1993, it has been widely used and accepted by users of different types of gases as a single source covering requirements for installation and usage of gases in portable cylinders. The 1998 edition clarified many requirements and provided additional advisory information to assist the users of the standard. Editorial changes were also incorporated for clarity.

4.9.5 No Smoking Signs. Signs prohibiting smoking shall be provided for an entire site or building, or in the following locations:

(1) In rooms or areas where hazardous materials are stored or dispensed or used in open systems in amounts requiring a permit in accordance with Section 4.1

(2) Within 25 ft (7.6 m) of outdoor storage, dispensing, or open-use areas

(3) In areas containing flammable gases

Chapter 5 Classification of Hazards

5.1 Hazardous Materials Classification.

5.1.1 Pure Gases. Hazardous materials shall be classified according to hazard categories as follows:

(1) Physical hazards, which shall include the following:

- (a) Flammable gas
- (b) Nonflammable gas
- (c) Oxidizing gas
- (d) Pyrophoric gas
- (e) Unstable reactive (detonable) gas, Class 3 or Class 4
- (f) Unstable reactive (nondetonable) gas, Class 2 or Class 3

(2) Health hazards, which shall include the following:

- (a) Corrosive gas
- (b) Cryogenic fluids
- (c) Highly toxic gas
- (d) Toxic gas
- (e) Irritant gas

3.3.28 Gallon. A standard U.S. gallon.

3.3.29 Gas.

3.3.29.1* Compressed Gas. A material, or mixture of materials, that (1) is a gas at 20°C (68°F) or less at an absolute pressure of 101.325 kPa (14.696 psia) and (2) that has a boiling point of 20°C (68°F) or less at an absolute pressure of 101.325 kPa (14.7 psia) and that is liquefied, nonliquefied, or in solution, except those gases that have no other health or physical hazard properties are not considered to be compressed gases until the pressure in the packaging exceeds an absolute pressure of 280 kPa (40.6 psia) at 20°C (68°F).

3.3.29.2 Corrosive Gas. A gas that causes visible destruction of or irreversible alterations in living tissue by chemical action at the site of contact.

3.3.29.3 Flammable Gas. A material that is a gas at 20°C (68°F) or less at an absolute pressure of 101.325 kPa (14.7 psia), that is ignitable at an absolute pressure of 101.325 kPa (14.7 psia) when in a mixture of 13 percent or less by volume with air, or that has a flammable range at an absolute pressure of 101.325 kPa (14.7 psia) with air of at least 12 percent, regardless of the lower limit.

3.3.29.4 Flammable Liquefied Gas. A liquefied compressed gas that, when under a charged pressure, is partially liquid at a temperature of 20°C (68°F) and is flammable.

3.3.29.5 Highly Toxic Gas. A chemical that has a median lethal concentration (LC_{50}) in air of 200 ppm by volume or less of gas or vapor, or 2 mg/L or less of mist, fume, or dust, when administered by continuous inhalation for 1 hour (or less if death occurs within 1 hour) to albino rats weighing between 200 g and 300 g (0.44 lb and 0.66 lb) each.

3.3.29.6 Inert Gas. A nonreactive, nonflammable, noncorrosive gas such as argon, helium, krypton, neon, nitrogen, and xenon.

3.3.29.7 Irritant Gas. A chemical that is not corrosive, but that causes a reversible inflammatory effect on living tissue by chemical action at the site of contact. A chemical is a skin irritant if, when tested on the intact skin of albino rabbits by the methods of 16 CFR 1500.41, for an exposure of 4 or more hours or by other appropriate techniques, it results in an empirical score of 5 or more. A chemical is classified as an eye irritant if so determined under the procedure listed in 16 CFR 1500.42, or other appropriate techniques.

3.3.29.8 Nonflammable Gas. A gas that does not meet the definition of a flammable gas.

3.3.29.9* Other Gas. A gas that is not a corrosive gas, flammable gas, highly toxic gas, oxidizing gas, pyrophoric gas, toxic gas, or unstable reactive gas with a hazard rating of Class 2, Class 3, or Class 4 gas.

3.3.29.10 Oxidizing Gas. A gas that can support and accelerate combustion of other materials.

3.3.29.11 Pyrophoric Gas. A gas with an autoignition temperature in air at or below 54.4°C (130°F).

3.3.29.12 Toxic Gas. A gas with a median lethal concentration (LC_{50}) in air of more than

200 ppm, but not more than 2000 ppm by volume of gas or vapor, or more than 2 mg/L, but not more than 20 mg/L of mist, fume, or dust, when administered by continuous inhalation for 1 hour (or less if death occurs within 1 hour) to albino rats weighing between 200 g and 300 g (0.44 lb and 0.66 lb) each.

3.3.29.13* **Unstable Reactive Gas.** A gas that, in the pure state or as commercially produced, will vigorously polymerize, decompose, or condense, become self-reactive, or otherwise undergo a violent chemical change under conditions of shock, pressure, or temperature.

3.3.29.13.1 Class 2 Unstable Reactive Gas. Materials that readily undergo violent chemical change at elevated temperatures and pressures.

3.3.29.13.2 Class 3 Unstable Reactive Gas. Materials that in themselves are capable of detonation or explosive decomposition or explosive reaction, but that require a strong initiating source or that must be heated under confinement before initiation.

3.3.29.13.3 Class 4 Unstable Reactive Gas. Materials that in themselves are readily capable of detonation or explosive decomposition or explosive reaction at normal temperatures and pressures.

3.3.30* **Gas Cabinet.** A fully enclosed, noncombustible enclosure used to provide an isolated environment for compressed gas cylinders in storage and use. [***5000,*** 2003]

3.3.31 Gas Manufacturer/Producer. A business that produces compressed gases or cryogenic fluids, or both, or fills portable or stationary gas containers, cylinders, or tanks.

3.3.32* **Gas Room.** A separately ventilated, fully enclosed room in which only compressed gases, cryogenic fluids, associated equipment and supplies are stored or used.

3.3.33* **Gaseous Hydrogen System.** A system in which the hydrogen is delivered, stored, and discharged in the gaseous form to a piping system. The gaseous hydrogen system terminates at the point where hydrogen at service pressure first enters the distribution piping.

3.3.34 Handling. The deliberate movement of material in containers by any means to a point of storage or use.

3.3.35* **Hazard Rating.** The numerical rating of the health, flammability, and self-reactivity, and other hazards of the material, including its reaction with water, specified in NFPA 704, *Standard System for the Identification of the Hazards of Materials for Emergency Response*.

3.3.36* **Immediately Dangerous to Life and Health (IDLH).** A concentration of airborne contaminants, normally expressed in parts per million (ppm) or milligrams per cubic meter, that represents the maximum level from which one could escape within 30 minutes without any escape-impairing symptoms or irreversible health effects.

3.3.37* **ISO Module.** An assembly of tanks or tubular cylinders permanently mounted in a frame conforming to International Organization for Standardization (ISO) requirements.

3.3.38 Limit.

Table 6.9 Explosion Control Requirements

Material	Class	Explosion Control Methods	
		Barricade Construction	Explosion Venting or Prevention Systems
Unstable reactive gas	4	Required	Not required
	3 (detonable)	Required	Not required
	3 (nondetonable)	Not required	Required

6.10* Fire Protection Systems.

Except as provided in 6.10.1, buildings or portions thereof required to comply with Protection Levels 1 through 5 shall be protected by an approved automatic fire sprinkler system complying with NFPA 13, *Standard for the Installation of Sprinkler Systems*.

6.10.1 Rooms or areas that are of noncombustible construction with wholly noncombustible contents shall not be required to be protected by an automatic fire sprinkler system.

6.10.2 Sprinkler System Design.

6.10.2.1 When sprinkler protection is provided, the area in which compressed gases or cryogenic fluids are stored or used shall be protected with a sprinkler system designed to be not less than that required by NFPA 13 for Ordinary Hazard Group 2 with a minimum design area of 278.7 m^2 (3000 ft^2).

6.10.2.2 When sprinkler protection is provided, the area in which the flammable or pyrophoric compressed gases or cryogenic fluids are stored or used shall be protected with a sprinkler system designed to be not less than that required by NFPA 13 for Extra Hazard Group 1 with a minimum design area of 232.25 m^2 (2500 ft^2).

6.11 Lighting.

Approved lighting by natural or artificial means shall be provided.

6.12 Hazard Identification Signs.

6.12.1 Location. Hazard identification signs shall be placed at all entrances to locations where compressed gases are produced, stored, used, or handled in accordance with NFPA 704, *Standard System for the Identification of the Hazards of Materials for Emergency Response*.

6.12.1.1 Ratings shall be assigned in accordance with NFPA 704.

6.12.1.2 The authority having jurisdiction shall be permitted to waive this requirement where consistent with safety.

6.12.2 Application. Signage shall be provided as specified in 6.12.2.1 and 6.12.2.2.

Walter L. Cook PE
Fire Protection Engineering Since 1991

February 15, 2018

Matt Layland,
Air Liquide – Electronics
Project Engineering Manager
c/o Airgas
4344 Main St.
Pearland TX 77581

RE: Fire Protection Sprinkler Hydraulic Requirements
Storage of Gas Cylinders Only

Dear Matt,

Based on my current understandings from Appendix K, Materials Matrix and verbal reports, the required sprinkler demand and hose allowance is as follows;

1. Attachment 1 - NFPA 55 is the primary standard for gasses stored in cylinders, in addition the OFC and NFPA 13 apply. Other NFPA standards may also influence the determination,

2. Attachment 2 – NFPA 55, definition of hazards for gasses stored in cylinders,

3. Attachment 3 – NFPA 55 definition of gasses proposed for storage in cylinders,

4. Attachment 4 – NFPA 55 6.10.2 – Sprinkler density from NFPA 13,

   - **In accordance with NFPA 55 6.10.2.12 sprinkler density is to be Extra Hazard Group 1 over 2,500 sf minimum,**
   - **From NFPA 13 Exhibit 5.5 EH G1 is 0.3 GPM 2,500 SF or 750 GPM**
   - **Hose Allowance 250 GPM (or as required by Fire Marshal)**

   - **Total Hydraulic Demand (at most remote building) = 1,000 GPM @ 20 PSI minimum**

Comparing the demand to the fire flow test indicates adequate city supply assuming all hydraulic losses to sprinklers are factored in. This determination is based on limited project information and representation by the project architect and engineer of record.

The hydraulic requirements presented above are for protection of gas cylinders only as presented in the VAA Material Matrix.

Sincerely

Walter L. Cook PE
OR License 10001 Expires 12/31/2019

13467 SW Summerwood Dr
Tigard, OR 97223

WER-I

PHONE (503) 333-3470
E-MAIL WALT.L.COOK@GMAIL.COM

OCT - 3 1995

STATE OF OREGON }
County of Washington } SS

I, Jerry R. Hanson, Director of Assessment and Taxation and Ex-Officio County Clerk for said county, do hereby certify that the within instrument of writing was received and recorded in book of records of said county.

Jerry R. Hanson, Director of Assessment and Taxation, Ex-Officio County Clerk

After Recording Return to:

Anthony J. Motschenbacher, Esq.
Preston Gates & Ellis
3200 U.S. Bancorp Tower
111 SW Fifth Avenue
Portland, Oregon 97204

Recorded By Ticor Title
Courtesy Only. Not Examined

ACCESS EASEMENT

Doc : 95071339
Rect: 151900 53.00
10/03/1995 04:21:23PM

DATE: September 26, 1995

PARTIES: The Halton Company, an Oregon corporation ("Grantor")

LAI Holdings, Inc. ("Grantee")

RECITALS

Grantor conveys to Grantee a perpetual nonexclusive roadway easement according to the terms described herein. The description of the easement is attached hereto as Attachment A. The easement is appurtenant to Grantee's property described on Attachment B ("Appurtenant Property").

The sole purpose of the easement shall be for ingress and egress to the Appurtenant Property. In conjunction with such use, Grantee may construct, reconstruct, maintain, and repair a road thereon, at the sole expense of Grantee. Such road construction, reconstruction, maintenance and repair shall not interfere with Grantor's use of or improvements upon Grantor's property.

Grantor reserves the right, but shall not be obligated, to use, construct, reconstruct, and maintain a road located upon the easement for all purposes including access to Grantor's property. Except as to the rights herein granted, Grantor shall have the full use and control of the property described on Attachment A, and may grant any rights to the property to third parties as it deems desirable

Grantor reserves the right to relocate the road or easement at any time but shall not interfere with Grantee's ingress or egress during such relocation. Such relocation shall be without reimbursement of any type to Grantee. If the road or easement is relocated, Grantor may record an instrument indicating the relocated easement which shall serve to amend this easement and eliminate any rights of Grantee in the original easement strip.

Grantee assumes all risk arising out of the use of the easement strip and Grantor shall have no liability to Grantee or any third party for any condition existing thereon. Grantee shall indemnify and defend Grantor from any loss, claim, or liability to Grantor, arising in any manner out of this grant of roadway easement or the use thereof.

1-5

OCT - 3 1995

The easement shall run with the Appurtenant Property.

This easement is granted subject to all prior easements or encumbrances of record.

IN WITNESS WHEREOF, The Halton Company has executed this instrument the date first written above.

THE HALTON COMPANY

By *Mark J. Fahey*
Mark J. Fahey
Treasurer

STATE OF OREGON)
) ss.
County of *Multnomah*)

On this *27th* day of *September*, 1995, before me, a notary public in and for the state of Oregon, personally appeared Mark J. Fahey, Treasurer of The Halton Company, known to me to be the person who executed the foregoing instrument on behalf of The Halton Company and acknowledged to me that he executed the same for the purposes therein stated.

Diane L. La Chapelle
Notary Public for Oregon
My commission expires *1-2-98*

OFFICIAL SEAL
DIANE L LA CHAPELLE
NOTARY PUBLIC OREGON
COMMISSION NO. [illegible]
MY COMMISSION EXPIRES JAN 2, 1998

OCT - 3 1995

0004256

0004256

ATTACHMENT A

A tract of land for ingress and egress purposes, located in the Northeast portion of that certain tract of land conveyed to Thomas M. Taylor, Trustee of the Thomas M. Taylor Trust, by Recorder's Document No. 94107778, Washington County Deed Records, situated in the Southeast one-quarter of Section 22, Township 2 South, Range 1 West of the Willamette Meridian, City of Tualatin, County of Washington and State of Oregon, more particularly described as follows:

Beginning at a point on the East line of said Thomas M. Taylor tract, said point bears North 00°14'51" West, 323.09 feet from a 3" aluminum disk marking the Southeast corner of said Section 22; thence South 89°45'09" West, 44.81 feet to a point on the arc of a 45 foot non-tangent radius curve to the left, a radial line bears North 88°36'00" East to said point; thence northerly and westerly along the arc of said curve 63.90 feet through a central angle of 81°21'33" (the long chord bears North 42°04'47" West, 58.66 feet) to a point on the Southeasterly right of way line of Tualatin-Sherwood Road, County Road No. 2737, 49 feet from the centerline thereof as set forth in Dedication Deed to Washington County in Recorder's Document No. 90-26764, said Deed Records; thence along said Southeasterly right of way line North 52°33'58" East, 65.68 feet to a point on the arc of a 45 foot non-tangent radius curve to the left, a radial line bears North 82°11'20" West to said point; thence southerly and easterly along the arc of said curve 63.89 feet through a central angle of 81°20'45" (the long chord bears South 32°51'43" East, 58.66 feet) to a point on the east line of said Thomas M. Taylor tract; thence along the east line thereof, South 00°14'51" East, 34.00 feet to the Point of Beginning.

Containing therein 3,453 square feet.

OCT - 3 1995

ATTACHMENT B

Part of Sections 23 and 26, Township 2 South, Range 1 West, of the Willamette Meridian, in Washington County, Oregon, described as follows:

Beginning at a point on the west line of said Section 26, which is South 0°00'53" West, 811.25 feet from the northwest corner of said Section 26, said point of beginning is also located on the northwesterly right of way line of the Oregon Electric Railway Company; thence North 0°00'53" East, 811.25 feet to the northwest corner of said Section 26; thence continuing North along the west line of said Section 23, North 0°04'41" West, 304.0 feet to a point on the center line of County Road No. 492; thence North 55°25'50" East, along the center of said Road, 455.66 feet to a point on the northerly extension of the westerly line of that tract of land conveyed to Elwyn C. Kinney, by deed recorded October 22, 1970, in Book 798, page 208, Deed Records of Washington County; thence South 0°09'47" West, along said west line and its northerly and southerly extension, 1055.75 feet to a point on the west line of that tract of land conveyed to Elwyn C. Kinney, by deed recorded February 24, 1972, in Book 855, page 523, Deed Records of Washington County; thence Southwesterly along the arc of a 383.07 foot radius curve to the right (Long Chord bears South 14°13'10" West and is 186.08 feet in length) a distance of 187.96 feet to a point on the northerly right of way line of the Oregon Electric Railway Company, said point also being the southwesterly corner of said Kinney tract; thence continuing Southwesterly along the northerly right of way line of said Oregon Electric Railway Company, along the arc of a 2890.0 foot radius curve to the left (Long Chord South 43°59'33" West, 469.36 feet) a distance of 469.88 feet to the point of beginning.

EXCEPTING THEREFROM a tract of land in the Southwest quarter of Section 23, Township 2 South, Range 1 West, of the Willamette Meridian, in Washington County, Oregon, described as follows:

Beginning at a point on the southerly right of way line of the Tualatin-Sherwood Road (County Road No. 492), which point is located North 0°04'41" West, 479.73 feet and North 55°25'50" East, 72.80 feet from the southwest corner of said Section 23; thence continuing North 55°25'50" East, 382.73 feet, to the northwest corner of that tract of land conveyed to Elwyn C. Kinney, by deed recorded October 22, 1970, in Book 798, page 208, Deed Records of Washington County; thence South 0°09'47" West, 385.82 feet, along the westerly line of said Kinney tract to a

point; thence South 89°55'19" West, 313.80 feet to a point 60.0 feet East of the west line of said Section 23; thence North 0°04'41" West, parallel to and 60.0 feet East of said west line of Section 23, a distance of 169.08 feet to the point of beginning.

FURTHER EXCEPTING THEREFROM that portion lying within the bounds of County Road No. 492 (Southwest Tualatin-Sherwood Road).

ARCHITECTURAL REVIEW
CERTIFICATION OF SIGN POSTING

18"

24"

The applicant shall provide and post a sign pursuant to Tualatin Development Code (TDC) 31.064(2). Additionally, the 18" x 24" sign must contain the application number, and the block around the word "NOTICE" must remain **primary yellow** composed of the **RGB color values Red 255, Green 255, and Blue 0.** Additionally, the potential applicant must provide a flier (or flyer) box on or near the sign and fill the box with brochures reiterating the meeting info and summarizing info about the potential project, including mention of anticipated land use application(s). Staff has a Microsoft PowerPoint 2007 template of this sign design available through the Planning Division homepage at < www.tualatinoregon.gov/planning/land-use-application-sign-templates>.

NOTE: For larger projects, the Community Development Department may require the posting of additional signs in conspicuous locations.

As the applicant for the Air Liquide Depot project, I hereby certify that on this day, 1 sign(s) was/were posted on the subject property in accordance with the requirements of the Tualatin Development Code and the Community Development Department - Planning Division.

Applicant's Name: Luke Orem
(PLEASE PRINT)

Applicant's Signature: _____

Date: 10/5/2017

City of Tualatin
www.tualatinoregon.gov

April 24, 2018

CITY ENGINEER'S REVIEW FINDING AND DECISION FOR AR17-0009, AIR LIQUIDE

Contents

I. RECOMMENDATION

Based on the findings presented, the City Engineer approves AR17-0009, Air Liquide with the following conditions:

A. PRIOR TO ISSUANCE OF EROSION CONTROL, PUBLIC WORKS, AND WATER QUALITY PERMITS:

PFR-1 Submit final sanitary sewer plans that show location of the lines, grade, materials, and other details.

PFR-2 Submit final water system plans that show location of the water lines, grade, materials, and other details including the water meter adjacent to right-of-way with valve and an approved irrigation backflow preventer adjacent to the meter.

PFR-3 Show a 10-foot wide public water line easement from the public water easement to the DCVA and surround the exterior of the vault 5 feet.

PFR-4 Obtain a City of Tualatin erosion control permit in accordance with code section TMC 3-5-060.

PFR-5 Submit plans for a 1200CN NPDES Erosion Control Permit.

PFR-6 Submit final stormwater calculations that include conveyance and detention up to the 25-year storm event and capable of equivalently treating and detaining all impervious area on the lot.

PFR-7 Submit revised plans will show the 100-year storm directed towards public right-of-way with appropriate rip-rap protection and facilities capable of equivalently treating and detaining all impervious area on the lot.

PFR-8 Submit plans that meet the requirements of TVF&R.

PFR-9 Submit plans that are sufficient to obtain a Stormwater Connection Permit Authorization Letter that complies with the submitted Service Provider Letter conditions and obtain an Amended Service Provider Letter as determined by Clean Water Services for any revisions to the proposed plans.

PFR-10 Submit plans that minimize the impact of stormwater from the development to adjacent properties.

PFR-11 Submit a plan sheet that includes all City Engineer and Planning Division conditions of approval. Include Clean Water Services' Service Provider Letter.

PFR-12 Submit PDFs of final site and permit plans.

B. PRIOR TO ISSUANCE OF A BUILDING PERMIT:

PFR-13 Obtain an Erosion Control, Public Works, and Water Quality Permit from the City of Tualatin and a Right-Of-Way Permit from Washington County.

PFR-14 Complete all the public improvements, shown on submitted plans and corrected by conditions of approval, and have them accepted by the City or provide financial assurance.

C. PRIOR TO ISSUANCE OF A CERTIFICATE OF OCCUPANCY:

PFR-15 Construct all private and public improvements shown on submitted plans and corrected by conditions of approval.

PFR-16 Record the public water line easement corrected by conditions of approval 10-feet wide from the public water easement to the DCVA and surround the exterior of the vault 5 feet.

II. APPEAL

Requests for review of this decision must be received by the Engineering Division within the 14-day appeal period ending on **May 8, 2018 at 5 PM**. Issues must have been described with adequate clarity and detail with identification of the associated Tualatin Municipal or Development Code section to afford a decision maker an opportunity to respond to the issue. A request for review must be submitted on the form provided by the City, as detailed in TDC 36.161, and signed by the appellant.

Sincerely,

Tony Doran, EIT
Engineering Associate

III. STANDARDS AND APPLICABLE CRITERIA

Tualatin Municipal Code (TMC)
Title 03: Utilities and Water Quality
Title 04: Building

Tualatin Development Code (TDC)
Chapter 73: Community Design Standards
Chapter 74: Public Improvement Requirements
Chapter 75: Access Management

IV. CONCLUSIONS

A. TMC TITLE 03: UTILITIES AND WATER QUALITY

I. TMC CHAPTER 03-02: SEWER REGULATIONS; RATES

1. TMC 3-2-020 APPLICATION, PERMIT AND INSPECTION PROCEDURE.

(1) No person shall connect to any part of the sanitary sewer system without first making an application and securing a permit from the City for such connection, nor may any person substantially increase the flow, or alter the character of sewage, without first obtaining an additional permit and paying such charges therefore as may be fixed by the City, including such charges as inspection charges, connection charges and monthly service charges.

2. TMC 3-2-030 MATERIALS 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.

(3) A public works permit must be secured from the City and other agency having jurisdiction by owners or contractors intending to excavate in a public street for the purpose of installing sewers or making sewer connections.

FINDING:
The plans show a proposed private lateral connecting to proposed private sanitary sewer manhole that is over an existing private line with gravity flow all the way to the public sanitary sewer system in SW Tualatin-Sherwood Road.

The applicant will need to submit sanitary sewer plans that show location of the lines, grade, materials, and other details prior to obtaining a public works permit. This criterion is satisfied with conditions of approval PFR-1.

II. TMC CHAPTER 03-03: WATER SERVICE

1. TMC 3-3-040 SEPARATE SERVICES REQUIRED.

(1) Except as authorized by the City Engineer, a separate service and meter to supply regular water service or fire protection service shall be required for each building, residential unit or 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.

2. 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 Construction Code.

3. TMC 3-3-120 BACKFLOW PREVENTION DEVICES AND CROSS CONNECTIONS.

(2) 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:

(4) 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.

4. 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.

FINDING:
The plans show an existing public water line extending south form SW Tualatin-Sherwood Road to a public fire hydrant on the flag pole of their lot. A proposed private water lateral connects to the public line. A fire service DCVA and domestic water meter are shown further southwest near the proposed structures.

The new meter will be installed adjacent to the right of way. A 10-foot wide public water easement will extend form the public water line down the lateral to and then surrounding the fire service DCVA by 5 feet from the exterior of the vault.

An approved domestic reduced pressure backflow preventer will be installed and an approved irrigation backflow preventer will be installed adjacent to the meter. A valve will be installed adjacent to the domestic meter and the irrigation backflow preventer system will contain a valve.

The applicant will submit water system plans that show location and other details prior to obtaining a Building Permit. A public works construction permit for the domestic and fire connections will be obtained. The applicant has not applied for a public works permit for these improvements. The applicant will need to submit water system plans that show location of the water lines, grade, materials, and other details prior to obtaining a public works permit. Public water line easements will need to be recorded prior to occupancy.

This criterion is satisfied with conditions of approval PFR-2, PFR-3, and PFR-16.

III. TMC 3-5 ADDITIONAL SURFACE WATER MANAGEMENT STANDARDS

1. TMC 3-5-010 POLICY.

It is the policy of the City to require temporary and permanent measures for all construction projects to lessen the adverse effects of construction on the environment. The contractor shall properly install, operate and maintain both temporary and permanent works as provided in this chapter or in an approved plan, to protect the environment during the term of the project. In addition, these erosion control rules apply to all properties within the City, regardless of whether that property is involved in a construction or development activity. Nothing in this chapter shall relieve any person from the obligation to comply with the regulations or permits of any federal, state, or local authority…

2. 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…

3. 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:

(a) A site specific plan outlining the protection techniques to control soil erosion and sediment transport from the site to less than one ton per acre per year as calculated using the Soil Conservation Service Universal Soil Loss Equation or other equivalent method approved by the City Engineer, or

(b) Techniques and methods contained and prescribed in the Soil Erosion Control Matrix and Methods, outlined in TMC 3-5.190 or the Erosion Control Plans - Technical Guidance Handbook, City of Portland and Unified Sewerage Agency, January, 1991.

(2) Site Plan. A site specific plan, pre-pared by an Oregon registered professional engineer, shall be required when the site meets any of the following criteria:

(a) greater than five acres;

(b) greater than one acre and has slopes greater than 20 percent;

(c) contains or is within 100 feet of a City-identified wetland or a waterway identified on FEMA floodplain maps; or

(d) greater than one acre and contains highly erodible soils.

FINDING:
The application material indicate disturbance of 2.7 acres. The applicant shall obtain a 1200CN Construction Erosion Control permit from Clean Water Services as agent for Oregon DEQ and obtain a grading and erosion control permit from the City of Tualatin prior to issuance of building permits. This criterion is satisfied with conditions of approval PFR-4 and PFR-5.

4. 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: Construction of permanent on-site stormwater quantity detention facilities designed in accordance with this title;…

5. TMC 3-5-210 REVIEW OF DOWNSTREAM SYSTEM.

For new development other than the construction of a single family house or duplex, plans shall document review by the design engineer of the downstream capacity of any existing storm drainage facilities impacted by the proposed development. That review shall extend downstream to a point where the impacts to the water surface elevation from the development will be insignificant, or to a point where the conveyance system has adequate capacity, as determined by the City Engineer. To determine the point at which the downstream impacts are insignificant or the drainage system has adequate capacity, the design engineer shall submit an analysis using the following guidelines:

(1) evaluate the downstream drainage system for at least ¼ mile;

(2) evaluate the downstream drainage system to a point at which the runoff from the development in a build out condition is less than 10 percent of the total runoff of the basin in its current development status. Developments in the basin that have been approved may be considered in place and their conditions of approval to exist if the work has started on those projects;

(3) evaluate the downstream drainage system throughout the following range of storms: 2, 5, 10, 25 year;

(4) The City Engineer may modify items 1, 2, 3 to require additional information to determine the impacts of the development or to delete the provision of unnecessary information.

6. 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:
(1) There is an identified downstream deficiency, as defined in TMC 3-5-210, and detention rather than conveyance system enlargement is determined to be the more effective solution…

FINDING:
This site is located within the Hedges Creek drainage basin which is identified as requiring detention up to the 25-year storm event. The detention system should accommodate all impervious area on the site to meet Clean Water Services new impervious area and modification standards. The applicant will submit final stormwater plans and calculations and facilities capable of equivalently treating and detaining all impervious area on the lot. This criterion is satisfied with conditions of approval PFR-6.

IV. TMC 3-5 PERMANENT ON-SITE WATER QUALITY FACILITIES

1. 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.

FINDING:
The site's proposed water quality facility is not located in wetlands or associated buffers. This criterion is met.

2. TMC 3-5-290 PURPOSE OF TITLE.

The purpose of this title is to require new development and other activities which create impervious surfaces to construct or fund on-site or off-site permanent water quality facilities to reduce the amount of phosphorous entering the storm and surface water system.

3. TMC 3-5-300 APPLICATION OF TITLE.

Title III of this Chapter shall apply to all activities which create new or additional impervious surfaces, except as provided in TMC 3-5.310.

4. TMC 3-5-310 EXCEPTIONS.

(1) Those developments with application dates prior to July 1, 1990, are exempt from the requirements of Title III.
The application date shall be defined as the date on which a complete application for development approval is accepted by the City in accordance with City regulations.

(2) Construction of one and two family (duplex) dwellings are exempt from the requirements of Title III.

(3) Sewer lines, water lines, utilities or other land development that will not directly increase the amount of storm water run-off or pollution leaving the site once construction has been completed and the site is either restored to or not altered from its approximate original condition are exempt from the requirements of Title III.

5. TMC 3-5-320 DEFINITIONS.

(1) "Stormwater Quality Control Facility" refers to any structure or drainage way that is designed, constructed and maintained to collect and filter, retain, or detain surface water run-off during and after a storm event for the purpose of water quality improvement. It may also include, but is not limited to, existing features such as constructed wetlands, water quality swales, low impact development approaches ("LIDA"), and ponds which are maintained as stormwater quality control facilities.

(2) "Low impact development approaches" or "LIDA: means stormwater facilities constructed utilizing low impact development approaches used to temporarily store, route or filter run-off for the purpose of improving water quality. Examples include; but are not limited to, Porous Pavement, Green Roofs, Infiltration Planters/Rain Gardens, Flow-Through Planters, LIDA Swales, Vegetated Filter Strips, Vegetated Swales, Extended Dry Basins, Constructed Water Quality Wetland, Conveyance and Stormwater Art, and Planting Design and Habitats.

(3) "Water Quality Swale" means a vegetated natural depression, wide shallow ditch, or constructed facility used to temporarily store, route or filter run-off for the purpose of improving water quality.

(4) "Existing Wetlands" means those areas identified and delineated as set forth in the Federal Manual for Identifying the Delineating Jurisdictional Wetlands, January, 1989, or as amended, by a qualified wetlands specialist.

(5) "Created Wetlands" means those wetlands developed in an area previously identified as a non-wetland to replace, or mitigate wetland destruction or displacement.

(6) "Constructed Wetlands" means those wetlands developed as a water quality or quantity facility, subject to change and maintenance as such. These areas must be clearly defined and/or separated from existing or created wetlands. This separation shall preclude a free and open connection to such other wetlands.

6. TMC 3-5-330 PERMIT REQUIRED.

Except as provided in TMC 3-5-310, no person shall cause any change to improved or unimproved real property that will, or is likely to, increase the rate or quantity of run-off or pollution from the site without first obtaining a permit from the City and following the conditions of the permit.

7. TMC 3-5-340 FACILITIES REQUIRED.

For new development, subject to the exemptions of TMC 3-5-310, no permit for construction, or land development, or plat or site plan shall be approved unless

the conditions of the plat, plan or permit approval require permanent stormwater quality control facilities in accordance with this Title III.

8. TMC 3-5-345 INSPECTION REPORTS.

The property owner or person in control of the property shall submit inspection reports annually to the City for the purpose of ensuring maintenance activities occur according to the operation and maintenance plan submitted for an approved permit or architectural review.

9. 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.

10. 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.

11. TMC 3-5-370 DESIGN REQUIREMENTS.

The removal efficiency in TDC Chapter 35 specifies only the design requirements and are not intended as a basis for performance evaluation or compliance determination of the stormwater quality control facility installed or constructed pursuant to this Title III.

12. TMC 3-5-330 PERMIT REQUIRED.

Except as provided in TMC 3-5-310, no person shall cause any change to improved or unimproved real property that will, or is likely to, increase the rate or quantity of run-off or pollution from the site without first obtaining a permit from the City and following the conditions of the permit.

13. TMC 3-5-340 FACILITIES REQUIRED.

For new development, subject to the exemptions of TMC 3-5-310, no permit for construction, or land development, or plat or site plan shall be approved unless

the conditions of the plat, plan or permit approval require permanent stormwater quality control facilities in accordance with this Title III.

14. TMC 3-5-390 FACILITY PERMIT APPROVAL.

A stormwater quality control facility permit shall be approved only if the following are met:

(1) The plat, site plan, or permit application includes plans and a certification prepared by an Oregon registered, professional engineer that the proposed stormwater quality control facilities have been designed in accordance with criteria expected to achieve removal efficiencies for total phosphorous required by this Title III. Clean Water Services Design and Construction Standards shall be used in preparing the plan for the water quality facility; and

(2) The plat, site plan, or permit application shall be consistent with the areas used to determine the removal required in TMC 3-5-350; and

(3) A financial assurance, or equivalent security acceptable to the City, is provided by the applicant which assures that the stormwater quality control facilities are constructed according to the plans established in the plat, site plan, or permit approval. The financial assurance may be combined with our financial assurance requirements imposed by the City; and

(4) A stormwater facility agreement identifies who will be responsible for assuring the long term compliance with the operation and maintenance plan.

FINDING:
The applicant is required to obtain a permit from the City of Tualatin to install an approved runoff flow control and treatment facility on the subject site, provide a maintenance assurance, and provide a maintenance and operation plan.

The plans show the release of the proposed detention pond north on the lot's flag pole to an existing stormwater manhole outside of SW Tualatin-Sherwood Road right-of-way. The existing stormwater system then flows northwest to release into wetlands. The 100-year storm overflow is shown to the northeast to potentially flow on to the lot to the north.

100-year storm overflows should be directed towards public-right-of-way as concentrated flow should not be directed to adjacent lots. The rip-rap should meet CWS standards based on volume and velocity.

Stormwater treatment is required for all new impervious area and existing impervious area remaining to Clean Water Services modification standards. This will require the entire amount of impervious area to be treated for this project. It is understood that some existing area will not be able to drain to a facility, therefore a proposed facility can

be sized for equivalent treatment capability. The plans and calculations will reflect treatment of all impervious area on this lot.

The revised plans will show the 100-year storm directed towards public right-of-way with appropriate rip-rap protection, final water quality facility plans capable of equivalently treating and detaining all impervious area on the lot, and conveyance calculations. This criterion is satisfied with conditions of approval PFR-6 and PFR-7.

B. CHAPTER 04-02: FIRE HYDRANT LOCATIONS AND RATES OF FLOW

I. TMC 4-2-010 HYDRANTS AND WATER SUPPLY FOR FIRE PROTECTION.

(1) Every application for a building permit and accompanying plans shall be submitted to the Building Division for review of water used for fire protection, the approximate location and size of hydrants to be connected, and the provisions for access and egress for firefighting equipment. If upon such review it is determined that the fire protection facilities are not required or that they are adequately provided for in the plans, the Fire and Life Safety Reviewer shall recommend approval to the City Building Official.

(2) If adequate provisions for such facilities are not made, the Fire and Life Safety Reviewer shall either recommend against approval of the plans or indicate to the applicant in writing where the plans are deficient or recommend approval of plans subject to conditions.

FINDING:
There is one existing public fire hydrant located at the north end of the existing driveway. One new fire hydrant will be located north of Building 100. Buildings 100 and 200 will be fully sprinklered. Buildings 300, 400 and 500 will not be sprinklered. The existing fire water service to the site is adequate for this project and will not require any public improvements.

TVF&R has submitted an attached letter dated April 4, 2018 regarding their requirements. The applicant will need to address these requirements in the final plans. This criterion is satisfied with conditions of approval PFR-8.

C. TDC CHAPTER 73: COMMUNITY DESIGN STANDARDS

I. TDC SECTION 73.270 GRADING.

(1) 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.
(2) All planting areas shall be graded to provide positive drainage.

(3) Neither soil, water, plant materials nor mulching materials shall be allowed to wash across roadways or walkways.
(4) Impervious surface drainage shall 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.

FINDING:
Grading which reduces runoff and provides surface drainage flow away from the building and sidewalks has been achieved. All landscape top soil will be restored and amended. The applicant will submit final grading plans. This criterion is satisfied with conditions of approval PFR-4 and PFR-5.

II. TDC SECTION 73.400 ACCESS.

(1) The provision and maintenance of vehicular and pedestrian ingress and egress from private property to the public streets as stipulated in this Code are continuing requirements for the use of any structure or parcel of real property in the City of Tualatin. Access management and spacing standards are provided in this section of the TDC and TDC Chapter 75. No building or other permit shall be issued until scale plans are presented that show how the ingress and egress requirement is to be fulfilled. If the owner or occupant of a lot or building changes the use to which the lot or building is put, thereby increasing ingress and egress requirements, it shall be unlawful and a violation of this code to begin or maintain such altered use until the required increase in ingress and egress is provided.

(2) Owners of two or more uses, structures, or parcels of land may agree to utilize jointly the same ingress and egress when the combined ingress and egress of both uses, structures, or parcels of land satisfies their combined requirements as designated in this code; provided that satisfactory legal evidence is presented to the City Attorney in the form of deeds, easements, leases or contracts to establish joint use. Copies of said deeds, easements, leases or contracts shall be placed on permanent file with the City Recorder.

(3) Joint and Cross Access.
(b) A system of joint use driveways and cross access easements may be required and may incorporate the following:
(i) a continuous service drive or cross access corridor extending the entire length of each block served to provide for driveway separation consistent with the access management classification system and standards.
(ii) a design speed of 10 mph and a maximum width of 24 feet to accommodate two-way travel aisles designated to accommodate automobiles, service vehicles, and loading vehicles;
(iii) stub-outs and other design features to make it visually obvious that the abutting properties may be tied in to provide cross access via a service drive;
(iv) a unified access and circulation system plan for coordinated or shared parking areas.
(c) Pursuant to this section, property owners may be required to:

(i) Record an easement with the deed allowing cross access to and from other properties served by the joint use driveways and cross access or service drive;

(ii) Record an agreement with the deed that remaining access rights along the roadway will be dedicated to the city and pre-existing driveways will be closed and eliminated after construction of the joint-use driveway;

(iii) Record a joint maintenance agreement with the deed defining maintenance responsibilities of property owners;

(4) Requirements for Development on Less than the Entire Site.
(a) To promote unified access and circulation systems, lots and parcels under the same ownership or consolidated for the purposes of development and comprised of more than one building site shall be reviewed as one unit in relation to the access standards. The number of access points permitted shall be the minimum number necessary to provide reasonable access to these properties, not the maximum available for that frontage. All necessary easements, agreements, and stipulations shall be met. This shall also apply to phased development plans. The owner and all lessees within the affected area shall comply with the access requirements.
(b) All access must be internalized using the shared circulation system of the principal commercial development or retail center. Driveways should be designed to avoid queuing across surrounding parking and driving aisles.

(5) Lots that front on more than one street may be required to locate motor vehicle accesses on the street with the lower functional classification as determined by the City Engineer.

(6) Except as provided in TDC 53.100, all ingress and egress shall connect directly with public streets.

(7) Vehicular access for residential uses shall be brought to within 50 feet of the ground floor entrances or the ground floor landing of a stairway, ramp or elevator leading to dwelling units.

(8) To afford safe pedestrian access and egress for properties within the City, a sidewalk shall be constructed along all street frontage, prior to use or occupancy of the building or structure proposed for said property. The sidewalks required by this section shall be constructed to City standards, except in the case of streets with inadequate right-of-way width or where the final street design and grade have not been established, in which case the sidewalks shall be constructed to a design and in a manner approved by the City Engineer. Sidewalks approved by the City Engineer may include temporary sidewalks and sidewalks constructed on private property; provided, however, that such sidewalks shall provide continuity with sidewalks of adjoining commercial developments existing or proposed. When a sidewalk is to adjoin a future street improvement, the sidewalk construction shall include construction of the curb and gutter section to grades and alignment established by the City Engineer.

(9) The standards set forth in this Code are minimum standards for access and egress, and may be increased through the Architectural Review process in any particular instance where the standards provided herein are deemed insufficient to protect the public health, safety, and general welfare.

(12) Minimum Access Requirements for Industrial Uses.
Ingress and egress for industrial uses shall not be less than the following:

Required Parkin	Minimum Number Required	Minimum Pavement Width	Minimum Pavement Walkways, Etc.
1-250	1	36 feet for first 50' from ROW, 24' thereafter	No curbs or walkway required

FINDINGS:
The site is served by an existing driveway accessed from SW Tualatin – Sherwood Road through an existing asphalt entrance apron serving multiple parcels. An access easement is granted to the existing site's driveway as a perpetual non-exclusive roadway easement for ingress and egress as conveyed from the Halton Company to LAI Holding, Inc. by the Access Easement recorded October 3, 1995 as indicated in Exhibit E of the Stewart Title preliminary title report dated September 28, 2017 submitted with the Architectural Review submittal. This criterion is met.

(14) Maximum Driveway Widths and Other Requirements.

(a) Unless otherwise provided in this chapter, maximum driveway widths shall not exceed 40 feet.

(b) Except for townhouse lots, no driveways shall be constructed within 5 feet of an adjacent property line, except when two adjacent property owners elect to provide joint access to their respective properties, as provided by Subsection (2).

(c) There shall 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 Engineer.

FINDINGS:
The existing shared access drive on the property to the west will remain unchanged. This criterion is met.

(15) Distance between Driveways and Intersections
Except for single-family dwellings, the minimum distance between driveways and intersections shall be as provided below. Distances listed shall be measured from the stop bar at the intersection.

(a) At the intersection of collector or arterial streets, driveways shall be located a minimum of 150 feet from the intersection.

FINDINGS:
The shared driveway on the lot to the west is located more than 150 feet from the intersection of collector or arterial streets and will remain unchanged. This criterion is met.

(16) Vision Clearance Area.

(a) Local Streets - A vision clearance area for all local street intersections, local street and driveway intersections, and local street or driveway and railroad intersections shall be that triangular area formed by the right-of-way lines along such lots and a straight line joining the right-of-way lines at points which are 10 feet from the intersection point of the right-of-way lines, as measured along such lines (see Figure 73-2 for illustration).

(b) Collector Streets - A vision clearance area for all collector/arterial street intersections, collector/arterial street and local street intersections, and collector/arterial street and railroad intersections shall be that triangular area formed by the right-of-way lines along such lots and a straight line joining the right-of-way lines at points which are 25 feet from the intersection point of the right-of-way lines, as measured along such lines. Where a driveway intersects with a collector/arterial street, the distance measured along the driveway line for the triangular area shall be 10 feet (see Figure 73-2 for illustration).

(c) Vertical Height Restriction - Except for items associated with utilities or publicly owned structures such as poles and signs and existing street trees, no vehicular parking, hedge, planting, fence, wall structure, or temporary or permanent physical obstruction shall be permitted between 30 inches and 8 feet above the established height of the curb in the clear vision area (see Figure 73-2 for illustration).

FINDINGS:
Vision clearance for both driveways comply with the required distances, per Figure 73-2. There are no vertical restrictions. This criterion is met.

D. TDC CHAPTER 74: PUBLIC IMPROVEMENT REQUIREMENTS

I. TDC 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.

FINDINGS:

The public improvements include a new sidewalk connection to SW Tualatin-Sherwood Road and water laterals to a domestic meter and fire vault. This criterion is satisfied with conditions of approval PFR-13, PFR-14, and PFR-15.

II. TDC 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.

FINDINGS:
The stormwater treatment and detention facility with associated laterals, sanitary sewer manhole and laterals, and water system past the domestic meter and fire vault are private improvements. This criterion is satisfied with conditions of approval PFR-15.

III. TDC 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.

FINDINGS:
Private and public improvements will be completed prior to a certificate of occupancy. This criterion is satisfied with conditions of approval PFR-15.

IV. TDC 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.

(1) For subdivision and partition applications, 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 shall be shown

on the final subdivision or partition plat prior to approval of the plat by the City. 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.

(6) When a proposed development is adjacent to or bisected by a street proposed in TDC Chapter 11, Transportation Plan (Figure 11-3) and no street right-of-way exists at the time the development is proposed, the entire right-of-way as shown in TDC Chapter 74, Public Improvement Requirements, Figures 74-2A through 74-2G shall be dedicated by the applicant. The dedication of right-of-way required in this subsection shall be along the route of the road as determined by the City.

FINDINGS:
Adjacent SW Tualatin-Sherwood Road exists and a traffic study was prepared and submitted to the City that supports that it doesn't require additional improvements. This criterion is satisfied.

V. TDC 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.

(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.

FINDINGS:
Utility easements for water, sanitary sewer and storm drainage facilities, telephone, television cable, gas, electrical lines and other public utilities will be granted to the City as needed. An existing easement is in place for the existing waterline serving the development area. A 10-foot wide public water easement will extend form the public water line down the lateral to and then surrounding the fire service DCVA by 5 feet from

the exterior of the vault. This criterion is satisfied with conditions of approval PFR-3 and PFR-16.

VI. TDC SECTION 74.420 STREET IMPROVEMENTS.

When an applicant proposes to develop land adjacent to an existing or proposed street, including land which has been excluded under TDC 74.220, the applicant should be responsible for the improvements to the adjacent existing or proposed street that will bring the improvement of the street into conformance with the Transportation Plan (TDC Chapter 11), TDC 74.425 (Street Design Standards), and the City' s Public Works Construction Code, subject to the following provisions:

(1) For any development proposed within the City, roadway facilities within the right-of-way described in TDC 74.210 shall be improved to standards as set out in the Public Works Construction Code.

(2) The required improvements may include the rebuilding or the reconstruction of any existing facilities located within the right-of-way adjacent to the proposed development to bring the facilities into compliance with the Public Works Construction Code.

(3) The required improvements may include the construction or rebuilding of off-site improvements which are identified to mitigate the impact of the development.

(4) Where development abuts an existing street, the improvement required shall apply only to that portion of the street right-of-way located between the property line of the parcel proposed for development and the centerline of the right-of-way, plus any additional pavement beyond the centerline deemed necessary by the City Engineer to ensure a smooth transition between a new improvement and the existing roadway (half-street improvement). Additional right-of-way and street improvements and off-site right-of-way and street improvements may be required by the City to mitigate the impact of the development. The new pavement shall connect to the existing pavement at the ends of the section being improved by tapering in accordance with the Public Works Construction Code.

(5) If additional improvements are required as part of the Access Management Plan of the City, TDC Chapter 75, the improvements shall be required in the same manner as the half-street improvement requirements.

(6) All required street improvements shall include curbs, sidewalks with appropriate buffering, storm drainage, street lights, street signs, street trees, and, where designated, bikeways and transit facilities.

(11) Existing streets which abut the pro-posed development site shall be graded, constructed, reconstructed, surfaced or repaired as necessary in accordance with the Public Works Construction Code and TDC Chapter 11, Transportation Plan, and TDC 74.425 (Street Design Standards).

(12) Sidewalks with appropriate buffering shall be constructed along both sides of each internal street and at a minimum along the development side of each external street in accordance with the Public Works Construction Code.

(13) The applicant shall comply with the requirements of the Oregon Department of Transportation (ODOT), Tri-Met, Washington County and Clackamas County when a proposed development site is adjacent to a roadway under any of their jurisdictions, in addition to the requirements of this chapter.

(14) The applicant shall construct any required street improvements adjacent to parcels excluded from development, as set forth in TDC 74.220 of this chapter.

(15) Except as provided in TDC 74.430, whenever an applicant proposes to develop land with frontage on certain arterial streets and, due to the access management provisions of TDC Chapter 75, is not allowed direct access onto the arterial, but instead must take access from another existing or future public street thereby providing an alternate to direct arterial access, the applicant shall be required to construct and place at a minimum street signage, a sidewalk, street trees and street lights along that portion of the arterial street adjacent to the applicant's property. The three certain arterial streets are S.W. Tualatin-Sherwood Road, S.W. Pacific Highway (99W) and S.W. 124th Avenue. In addition, the applicant may be required to construct and place on the arterial at the intersection of the arterial and an existing or future public non-arterial street warranted traffic control devices (in accordance with the Manual on Uniform Traffic Control Devices, latest edition), pavement markings, street tapers and turning lanes, in accordance with the Public Works Construction Code.

(16) The City Engineer may determine that, although concurrent construction and placement of the improvements in (14) and (15) of this section, either individually or collectively, are impractical at the time of development, the improvements will be necessary at some future date. In such a case, the applicant shall sign a written agreement guaranteeing future performance by the applicant and any successors in interest of the property being developed. The agreement shall be subject to the City's approval.

(17) Intersections should be improved to operate at a level of service of at least D and E for signalized and unsignalized intersections, respectively.

(18) Pursuant to requirements for off-site improvements as conditions of development approval in TDC 73.055(2)(e) and TDC 36.160(8), proposed multi-family residential, commercial, or institutional uses that are adjacent to a major transit stop will be required to comply with the City’s Mid-Block Crossing Policy.

FINDINGS:
A Trip Generation Assessment prepared for this project by Charbonneau Engineering, LLC indicates minimal impact to SW Tualatin – Sherwood Road near Teton Avenue and

recommends the City support the development without requiring a detailed traffic impact study.

Washington County submitted requirements dated March 29, 2018 of a Right-Of-Way Permit for the proposed sidewalk connection within SW Tualatin-Sherwood Road plus dedication totaling 51 feet from centerline for the cross-section classification.

This criterion is with conditions of approval PFR-13.

VII. TDC SECTION 74.425 STREET DESIGN STANDARDS.

(1) Street design standards are based on the functional and operational characteristics of streets such as travel volume, capacity, operating speed, and safety. They are necessary to ensure that the system of streets, as it develops, will be capable of safely and efficiently serving the traveling public while also accommodating the orderly development of adjacent lands.

(2) The proposed street design standards are shown in Figures 72A through 72G. The typical roadway cross sections comprise the following elements: right-of-way, number of travel lanes, bicycle and pedestrian facilities, and other amenities such as landscape strips. These figures are intended for planning purposes for new road construction, as well as for those locations where it is physically and economically feasible to improve existing streets

(3) In accordance with the Tualatin Basin Program for fish and wildlife habitat it is the intent of Figures 74-2A through 74-2G to allow for modifications to the standards when deemed appropriate by the City Engineer to address fish and wildlife habitat.

(4) All streets shall be designed and constructed according to the preferred standard. The City Engineer may reduce the requirements of the preferred standard based on specific site conditions, but in no event will the requirement be less than the minimum standard. The City Engineer shall take into consideration the following factors when deciding whether the site conditions warrant a reduction of the preferred standard:

- **(a) Arterials:**
  - **(i) Whether adequate right-of-way exists**
  - **(ii) Impacts to properties adjacent to right-of-way**
  - **(iii) Current and future vehicle traffic at the location**
  - **(iv) Amount of heavy vehicles (buses and trucks).**
- **(b) Collectors:**
  - **(i) Whether adequate right-of-way exists**
  - **(ii) Impacts to properties adjacent to right-of-way**
  - **(iii) Amount of heavy vehicles (buses and trucks)**
  - **(iv) Proximity to property zoned manufacturing or industrial.**
- **(c) Local Streets:**

(i) Local streets proposed within areas which have environmental constraints and/or sensitive areas and will not have direct residential access may utilize the minimum design standard. When the minimum design standard is allowed, the City Engineer may determine that no parking signs are required on one or both sides of the street.

FINDINGS:
No changes or improvements are proposed along SW Tualatin – Sherwood Road. The traffic study determined that no improvements were necessary to meet agency standards. This criterion is met.

VIII. TDC 74.440 STREETS, TRAFFIC STUDY REQUIRED

(1) The City Engineer 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 Engineer determines that such a study is necessary in connection with a proposed development project in order to:
  (a) Assure that the existing or proposed transportation facilities in the vicinity of the proposed development are capable of accommodating the amount of traffic that is expected to be generated by the proposed development, and/or
  (b) Assure that the internal traffic circulation of the proposed development will not result in conflicts between on-site parking movements and/or on-site loading movements and/or on-site traffic movements, or impact traffic on the adjacent streets.
(2) The required traffic study shall be completed prior to the approval of the development application.
(3) The traffic study shall include, at a minimum:
  (a) an analysis of the existing situation, including the level of service on adjacent and impacted facilities.
  (b) an analysis of any existing safety deficiencies.
  (c) proposed trip generation and distribution for the proposed development.
  (d) projected levels of service on adjacent and impacted facilities.
  (e) recommendation of necessary improvements to ensure an acceptable level of service for roadways and a level of service of at least D and E for signalized and unsignalized intersections respectively, after the future traffic impacts are considered.
  (f) The City Engineer will determine which facilities are impacted and need to be included in the study.
  (g) The study shall be conducted by a registered engineer.
(4) The applicant shall implement all or a portion of the improvements called for in the traffic study as determined by the City Engineer.

FINDINGS:
A Trip Generation Assessment prepared for this project by Charbonneau Engineering, LLC indicates minimal impact to SW Tualatin – Sherwood Road near Teton Avenue and recommends the City support the development without requiring a detailed traffic impact study. This criterion is met.

IX. TDC SECTION 74.610 WATER SERVICE.

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

(2) If there are undeveloped properties adjacent to the subject site, public water lines shall be extended by the applicant to the common boundary line of these properties. The lines shall be sized to provide service to future development, in accordance with the City's Water System Master Plan, TDC Chapter 12.

(3) As set forth is TDC Chapter 12, Water Service, the City has three water service levels. All development applicants shall be required to connect the proposed development site to the service level in which the development site is located. If the development site is located on a boundary line between two service levels the applicant shall be required to connect to the service level with the higher reservoir elevation. The applicant may also be required to install or provide pressure reducing valves to supply appropriate water pressure to the properties in the proposed development site.

FINDINGS:
An existing 8" public water line extends approximately 320 lineal feet onto the property within a public easement. The line runs north-south along the west property line, paralleling the existing flagpole drive. A new 8" water line will connect to this existing stub and continue south to serve the site. No building is served by domestic water; a stub for a future building is provided. External showers located north of Buildings 100 and 200 are connected to domestic water.

The plans show an existing public water line extending south form SW Tualatin-Sherwood Road to a public fire hydrant on the flag pole of their lot. A proposed private water lateral connects to the public line. A fire service DCVA and domestic water meter are shown further southwest near the proposed structures.

The new meter will be installed adjacent to the right of way. A 10-foot wide public water easement will extend form the public water line down the lateral to and then surrounding the fire service DCVA by 5 feet from the exterior of the vault.

An approved domestic reduced pressure backflow preventer will be installed and an approved irrigation backflow preventer will be installed adjacent to the meter. A valve will be installed adjacent to the domestic meter and the irrigation backflow preventer system will contain a valve.

The applicant will submit water system plans that show location and other details prior to obtaining a Building Permit. A public works construction permit for the domestic and fire connections will be obtained. The applicant has not applied for a public works permit for these improvements. The applicant will need to submit water system plans that show location of the water lines, grade, materials, and other details prior to obtaining a public works permit. Public water line easements will need to be recorded prior to occupancy.

This criterion is satisfied with conditions of approval PFR-2, PFR-3, PFR-13, PFR-15, and PFR-16.

X. TDC SECTION 74.620 SANITARY SEWER SERVICE.

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

(2) If there are undeveloped properties adjacent to the proposed development site which can be served by the gravity sewer system on the proposed development site, the applicant shall extend public sanitary sewer lines to the common boundary line with these properties. The lines shall be sized to convey flows to include all future development from all up stream areas that can be expected to drain through the lines on the site, in accordance with the City's Sanitary Sewer System Master Plan, TDC Chapter 13.

FINDINGS:
An existing 6" sanitary line extends approximately 340 lineal feet onto the property. The line runs north-south down the centerline of the existing flagpole drive. A new sanitary manhole will be installed within the drive and a 6" line will continue south to serve the site. Building 400 will connect to this waste line; Buildings 100, 200, 300 and 500 do not require sanitary connections. A manhole is provided for connection to a future building. The system will be gravity type. This criterion is satisfied with conditions of approval PFR-1, PFR-13, and PFR-15.

XI. TDC SECTION 74.630 STORM DRAINAGE SYSTEM.

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

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

(3) If there are undeveloped properties adjacent to the proposed development site which can be served by the storm drainage system on the proposed development site, the applicant shall extend storm drainage lines to the common boundary line with these properties. The lines shall be sized to convey expected flows to include all future development from all up stream areas that will drain through the lines on the site, in accordance with the Tualatin Drainage Plan in TDC Chapter 14.

FINDINGS:

This site is located within the Hedges Creek drainage basin which is identified as requiring detention up to the 25-year storm event.

The applicant is required to obtain a permit from the City of Tualatin to install an approved runoff flow control and treatment facility on the subject site, provide a maintenance assurance, and provide a maintenance and operation plan.

The plans show the release of the proposed detention pond north on the lot's flag pole to an existing stormwater manhole outside of SW Tualatin-Sherwood Road right-of-way. The existing stormwater system then flows northwest to release into wetlands. The 100-year storm overflow is shown to the northeast to potentially flow on to the lot to the north.

100-year storm overflows should be directed towards public-right-of-way as concentrated flow should not be directed to adjacent lots. The rip-rap should meet CWS standards based on volume and velocity.

Stormwater treatment is required for all new impervious area and existing impervious area remaining to Clean Water Services modification standards. This will require the entire amount of impervious area to be treated for this project. It is understood that some existing area will not be able to drain to a facility, therefore a proposed facility can be sized for equivalent treatment capability. The plans and calculations will reflect treatment of all impervious area on this lot.

The revised plans will show the 100-year storm directed towards public right-of-way with appropriate rip-rap protection, final water quality facility plans capable of equivalently treating and detaining all impervious area on the lot, and conveyance calculations. No undeveloped sites exist adjacent to the development site that public stormwater service would need to be extended to serve. This criterion is satisfied with conditions of approval PFR-6, PFR-7, PFR-13, and PFR-15.

XII. TDC SECTION 74.640 GRADING.

(1) Development sites shall 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 shall 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 Engineer may require the applicant to remove all excess material from the development site.

FINDINGS:
The proposed grading plan minimizes the impact of stormwater runoff to adjacent properties and allows adjacent properties to drain as they did before the development.

100-year storm overflows should be directed towards public-right-of-way as concentrated flow should not be directed to adjacent lots. The rip-rap should meet CWS standards based on volume and velocity. The revised plans will show the 100-year storm directed towards public right-of-way with appropriate rip-rap protection, final water quality facility plans, and conveyance calculations.

This criterion is satisfied with conditions of approval PFR-4, PFR-5, PFR-10, PFR-13, and PFR-15.

XIII. TDC SECTION 74.650 WATER QUALITY, STORM WATER DETENTION AND EROSION CONTROL.

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

(3) For on-site private and regional non-residential public facilities, the applicant shall 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 shall submit an erosion control plan prior to issuance of a Public Works Permit. No construction or disturbing of the site shall occur until the erosion control plan is approved by the City and the required measures are in place and approved by the City.

FINDINGS:
An erosion control plan will be submitted prior to approval of a Public Works Permit. Stormwater and water quality for each building and associated impervious surface will be accommodated on-site. A CWS Service Provider Letter (SPL) is included with the Architectural Review Application.

The applicant will obtain a 1200CN Construction Erosion Control permit from Clean Water Services as agent for Oregon DEQ and obtain a grading and erosion control permit from the City of Tualatin prior to issuance of building permits.

The applicant has submitted a Service Provider Letter from Clean Water Services indicating that Sensitive Areas do not exist on-site. A CWS Memorandum was received dated April 6, 2018 for development on this site. The applicant will need to submit plans that are sufficient to obtain a Stormwater Connection Permit Authorization Letter that complies with the submitted Service Provider Letter conditions, for review and approval. This criterion is satisfied with conditions of approval PFR-9.

XIV. 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 shall 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 shall 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 shall, at their own expense, provide an underground system. The applicant shall be responsible for obtaining any off-site deeds and/or easements necessary to provide utility service to this site; the deeds and/or easements shall be submitted to the City Engineer for acceptance by the City prior to issuance of the Public Works Permit.

FINDINGS:
All proposed utilities will be placed underground in accordance with this requirement. Surface-mounted transformers will be placed internal to the development, screened from adjacent right-of-way. This criterion is satisfied.

E. TDC CHAPTER 75: ACCESS MANAGEMENT

I. TDC SECTION 75.010 PURPOSE.

The purpose of this chapter is to promote the development of safe, convenient and economic transportation systems and to preserve the safety and capacity of the street system by limiting conflicts resulting from uncontrolled driveway access, street intersections, and turning movements while providing for appropriate access for all properties.

Section 75.060 Existing Driveways and Street Intersections.
(1) Existing driveways with access onto arterials on the date this chapter was originally adopted shall be allowed to remain. If additional development occurs on properties with existing driveways with access onto arterials then this chapter applies and the entire site shall be made to conform with the requirements of this chapter.

FINDINGS:
No restriction of existing driveway is anticipated as a part of this application. The existing driveway to SW Tualatin-Sherwood Road conforms to the requirements of this chapter and will remain. This criterion is satisfied.

II. SECTION 75.120 EXISTING STREETS.

The following list describes in detail the freeways and arterials as defined in TDC 75.030 with respect to access. Recommendations are made for future changes in

accesses and location of future accesses. These recommendations are examples of possible solutions and shall not be construed as limiting the City' s authority to change or impose different conditions if additional studies result in different recommendations from those listed below.
(4) TUALATIN-SHERWOOD ROAD
(d) Teton Avenue to Avery Street/112th Avenue:
On the south side of Tualatin-Sherwood Road there will be no new driveways or streets.

FINDINGS:
No new access from SW Tualatin – Sherwood Road is proposed. This criterion is satisfied.

III. SECTION 75.130 JOINT ACCESSES REQUIRED.

When the City Engineer determines that joint accesses are required by properties undergoing development or redevelopment, an overall access plan shall be prescribed by the City Engineer and all properties shall adhere to this. Interim accesses may be allowed in accordance with TDC 75.090 of this chapter to provide for the eventual implementation of the overall access plan.

FINDINGS:
Three lots share an existing accesses to SW Tualatin-Sherwood Road via private access easements. This section is met.

M E M O R A N D U M

Date: April 6, 2018

To: Matt Straite, Contract Planner, City of Tualatin

From: Jackie Sue Humphreys, Clean Water Services (CWS)

Subject: Air Liquide Gas Depot, AR17-0009, 2S126B000105

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 prior to plat approval and recordation. Application for CWS Permit Authorization must be in accordance with the requirements of the Design and Construction Standards, Resolution and Order No. 17-5, (or current R&O in effect at time of Engineering plan submittal), 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. If site area and any offsite improvements required for this development exceed one-acre of disturbance, project will require a 1200-CN Erosion Control Permit..

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 17-5, Section 4.05. Access shall be provided for maintenance of facility per R&O 17-5, Section 4.02.4.

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. 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.

Tualatin Valley Fire & Rescue

April 4, 2018

Matt Straite
City of Tualatin
18880 SW Martinazzi Ave.
Tualatin, OR 97062

Re: AR17-0009, 10500 SW Tualatin-Sherwood Rd.,Tualatin, OR 97062
Air Liquide Gas Depot

Tax Lot I.D: 2S1 26BO 00105

Dear Matt,

Thank you for the opportunity to review the proposed site plan surrounding the above named development project. Tualatin Valley Fire & Rescue endorses this proposal predicated on the following criteria and conditions of approval:

FIRE APPARATUS ACCESS:

1. **FIRE APPARATUS ACCESS ROAD DISTANCE FROM BUILDINGS AND FACILITIES:** Access roads shall be within 150 feet of all portions of the exterior wall of the first story of the building as measured by an approved route around the exterior of the building or facility. An approved turnaround is required if the remaining distance to an approved intersecting roadway, as measured along the fire apparatus access road, is greater than 150 feet. (OFC 503.1.1))

2. **DEAD END ROADS AND TURNAROUNDS:** Dead end fire apparatus access roads in excess of 150 feet in length shall be provided with an approved turnaround. Diagrams of approved turnarounds are shown below: (OFC 503.2.5 & D103.1)

3. **ADDITIONAL ACCESS ROADS – COMMERCIAL/INDUSTRIAL HEIGHT:** Buildings exceeding 30 feet in height or three stories in height shall have at least two separate means of fire apparatus access. (D104.1)

4. **ADDITIONAL ACCESS ROADS – COMMERCIAL/INDUSTRIAL SQUARE FOOTAGE:** Buildings or facilities having a gross building area of more than 62,000 square feet shall have at least two approved separate means of fire apparatus access. Exception: Projects having a gross building area of up to 124,000 square feet that have a single approved fire apparatus access road when all buildings are equipped throughout with approved automatic sprinkler systems. (OFC D104.2)

5. **AERIAL FIRE APPARATUS ROADS:** Buildings with a vertical distance between the grade plane and the highest roof surface that exceeds 30 feet in height shall be provided with a fire apparatus access road constructed for use by aerial apparatus with an unobstructed driving surface width of not less than 26 feet. For the purposes of this section, the highest roof surface shall be determined by measurement to the eave of a pitched roof, the intersection of the roof to the exterior wall, or the top of the parapet walls, whichever is greater. Any portion of the building may be used for this measurement, provided that it is accessible to firefighters and is capable of supporting ground ladder placement. (OFC D105.1, D105.2)

6. **AERIAL APPARATUS OPERATIONS:** At least one of the required aerial access routes shall be located within a minimum of 15 feet and a maximum of 30 feet from the building, and shall be positioned parallel to one entire side of the building. The side of the building on which the aerial access road is positioned shall be approved by the fire code official. Overhead utility and power lines shall not be located over the aerial access road or between the aerial access road and the building. (D105.3, D105.4)

7. **MULTIPLE ACCESS ROADS SEPARATION:** Where two access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the area to be served (as identified by the Fire Code Official), measured in a straight line between accesses. (OFC D104.3) Exception: Buildings equipped throughout with an approved automatic fire sprinkler system (the approval of this alternate method of construction shall be accomplished in accordance with the provisions of ORS 455.610(5).

8. **FIRE APPARATUS ACCESS ROAD WIDTH AND VERTICAL CLEARANCE:** Fire apparatus access roads shall have an unobstructed driving surface width of not less than 20 feet (26 feet adjacent to fire hydrants (OFC D103.1)) and an unobstructed vertical clearance of not less than 13 feet 6 inches. The fire district will approve access roads of 12 feet for up to three dwelling units and accessory buildings. (OFC 503.2.1 & D103.1)

9. **NO PARKING SIGNS:** Where fire apparatus roadways are not of sufficient width to accommodate parked vehicles and 20 feet of unobstructed driving surface, "No Parking" signs shall be installed on one or both sides of the roadway and in turnarounds as needed. Signs shall read "NO PARKING - FIRE LANE" and shall be installed with a clear space above grade level of 7 feet. Signs shall be 12 inches wide by 18 inches high and shall have red letters on a white reflective background. (OFC D103.6)

10. **NO PARKING:** Parking on emergency access roads shall be as follows (OFC D103.6.1-2):
    1. 20-26 feet road width – no parking on either side of roadway
    2. 26-32 feet road width – parking is allowed on one side
    3. Greater than 32 feet road width – parking is not restricted

11. **PAINTED CURBS:** Where required, fire apparatus access roadway curbs shall be painted red (or as approved) and marked "NO PARKING FIRE LANE" at 25 foot intervals. Lettering shall have a stroke of not less than one inch wide by six inches high. Lettering shall be white on red background (or as approved). (OFC 503.3)

12. **FIRE APPARATUS ACCESS ROADS WITH FIRE HYDRANTS:** Where a fire hydrant is located on a fire apparatus access road, the minimum road width shall be 26 feet and shall extend 20 feet before and after the point of the hydrant. (OFC D103.1)

13. **SURFACE AND LOAD CAPACITIES:** Fire apparatus access roads shall be of an all-weather surface that is easily distinguishable from the surrounding area and is capable of supporting not less than 12,500 pounds point load (wheel load) and 75,000 pounds live load (gross vehicle weight). Documentation from a registered engineer that the final construction is in accordance with approved plans or the requirements of the Fire Code may be requested. (OFC 503.2.3)

14. **TURNING RADIUS:** The inside turning radius and outside turning radius shall not be less than 28 feet and 48 feet respectively, measured from the same center point. (OFC 503.2.4 & D103.3)

15. **ACCESS ROAD GRADE:** Fire apparatus access roadway grades shall not exceed 12%. When fire sprinklers* are installed, a maximum grade of 15% will be allowed.

0-12%	Allowed
13-15%	Special consideration with submission of written Alternate Methods and Materials request. Ex: Automatic fire sprinkler (13-D) system* in lieu of grade.

≥16%	Special consideration on a case by case basis with submission of written Alternate Methods and Materials request Ex: Automatic fire sprinkler (13-D) system* plus additional engineering controls in lieu of grade.**

*The approval of fire sprinklers as an alternate shall be accomplished in accordance with the provisions of ORS 455.610(5) and OAR 918-480-0100 and installed per section 903.3.1.1, 903.3.1.2, or 903.3.1.3 of the Oregon Fire Code (OFC 503.2.7 & D103.2)
** See Forest Dwelling Access section for exceptions.

16. **ANGLE OF APPROACH/GRADE FOR TURNAROUNDS:** Turnarounds shall be as flat as possible and have a maximum of 5% grade with the exception of crowning for water run-off. (OFC 503.2.7 & D103.2)

17. **ANGLE OF APPROACH/GRADE FOR INTERSECTIONS:** Intersections shall be level (maximum 5%) with the exception of crowning for water run-off. (OFC 503.2.7 & D103.2)

18. **AERIAL APPARATUS OPERATING GRADES:** Portions of aerial apparatus roads that will be used for aerial operations shall be as flat as possible. Front to rear and side to side maximum slope shall not exceed 10%.

19. **GATES:** Gates securing fire apparatus roads shall comply with all of the following (OFC D103.5, and 503.6):
    1. Minimum unobstructed width shall be not less than 20 feet (or the required roadway surface width).
    2. Gates serving three or less single-family dwellings shall be a minimum of 12 feet in width.
    3. Gates shall be set back at minimum of 30 feet from the intersecting roadway or as approved.
    4. Electric gates shall be equipped with a means for operation by fire department personnel
    5. Electric automatic gates shall comply with ASTM F 2200 and UL 325.

20. **ACCESS DURING CONSTRUCTION:** Approved fire apparatus access roadways shall be installed and operational prior to any combustible construction or storage of combustible materials on the site. Temporary address signage shall also be provided during construction. (OFC 3309 and 3310.1)

21. **TRAFFIC CALMING DEVICES:** Shall be prohibited on fire access routes unless approved by the Fire Code Official. (OFC 503.4.1).

FIREFIGHTING WATER SUPPLIES:

22. **MUNICIPAL FIREFIGHTING WATER SUPPLY EXCEPTIONS:** The requirements for firefighting water supplies may be modified as approved by the fire code official where any of the following apply: (OFC 507.5.1 Exceptions)
    1. Buildings are equipped throughout with an approved automatic fire sprinkler system (the approval of this alternate method of construction shall be accomplished in accordance with the provisions of ORS 455.610(5)).
    2. There are not more than three Group R-3 or Group U occupancies.

23. **COMMERCIAL BUILDINGS – REQUIRED FIRE FLOW:** The minimum fire flow and flow duration for buildings other than one- and two-family dwellings shall be determined in accordance with residual pressure (OFC Table B105.2). The required fire flow for a building shall not exceed the available GPM in the water delivery system at 20 psi.
    Note: OFC B106, Limiting Fire-Flow is also enforced, except for the following:
    - In areas where the water system is already developed, the maximum needed fire flow shall be either 3,000 GPM or the available flow in the system at 20 psi, whichever is greater.
    - In new developed areas, the maximum needed fire flow shall be 3,000 GPM at 20 psi.
    - Tualatin Valley Fire & Rescue does not adopt Occupancy Hazards Modifiers in section B105.4-B105.4.1

24. **FIRE FLOW WATER AVAILABILITY:** Applicants shall provide documentation of a fire hydrant flow test or flow test modeling of water availability from the local water purveyor if the project includes a new structure or increase in the floor area of an existing structure. Tests shall be conducted from a fire hydrant within 400 feet for commercial projects, or 600 feet for residential development. Flow tests will be accepted if they were performed within 5 years as long as no adverse modifications have been made to the supply system. Water availability information may not be required to be submitted for every project. (OFC Appendix B)

25. **WATER SUPPLY DURING CONSTRUCTION:** Approved firefighting water supplies shall be installed and operational prior to any combustible construction or storage of combustible materials on the site. (OFC 3312.1)

FIRE HYDRANTS:

26. **FIRE HYDRANTS – COMMERCIAL BUILDINGS:** Where a portion of the building is more than 400 feet from a hydrant on a fire apparatus access road, as measured in an approved route around the exterior of the building, on-site fire hydrants and mains shall be provided. (OFC 507.5.1)
    - This distance may be increased to 600 feet for buildings equipped throughout with an approved automatic sprinkler system.
    - The number and distribution of fire hydrants required for commercial structure(s) is based on Table C105.1, following any fire-flow reductions allowed by section B105.3.1. Additional fire hydrants may be required due to spacing and/or section 507.5 of the Oregon Fire Code.

27. **FIRE HYDRANT NUMBER AND DISTRIBUTION:** The minimum number and distribution of fire hydrants available to a building shall not be less than that listed in Table C 105.1. (OFC Appendix C)

28. **FIRE HYDRANT(S) PLACEMENT:** (OFC C104)
    - Existing hydrants in the area may be used to meet the required number of hydrants as approved. Hydrants that are up to 600 feet away from the nearest point of a subject building that is protected with fire sprinklers may contribute to the required number of hydrants. (OFC 507.5.1)
    - Hydrants that are separated from the subject building by railroad tracks shall not contribute to the required number of hydrants unless approved by the fire code official.
    - Hydrants that are separated from the subject building by divided highways or freeways shall not contribute to the required number of hydrants. Heavily traveled collector streets may be considered when approved by the fire code official.
    - Hydrants that are accessible only by a bridge shall be acceptable to contribute to the required number of hydrants only if approved by the fire code official.

29. **PRIVATE FIRE HYDRANT IDENTIFICATION:** Private fire hydrants shall be painted red in color. Exception: Private fire hydrants within the City of Tualatin shall be yellow in color. (OFC 507)

30. **FIRE HYDRANT DISTANCE FROM AN ACCESS ROAD:** Fire hydrants shall be located not more than 15 feet from an approved fire apparatus access roadway unless approved by the fire code official. (OFC C102.1)

31. **REFLECTIVE HYDRANT MARKERS:** Fire hydrant locations shall be identified by the installation of blue reflective markers. They shall be located adjacent and to the side of the center line of the access roadway that the fire hydrant is located on. In the case that there is no center line, then assume a center line and place the reflectors accordingly. (OFC 507)

32. **PHYSICAL PROTECTION:** Where fire hydrants are subject to impact by a motor vehicle, guard posts, bollards or other approved means of protection shall be provided. (OFC 507.5.6 & OFC 312)

33. **CLEAR SPACE AROUND FIRE HYDRANTS:** A 3 foot clear space shall be provided around the circumference of fire hydrants. (OFC 507.5.5)

34. **FIRE DEPARTMENT CONNECTION (FDC) LOCATIONS:** FDCs shall be located within 100 feet of a fire hydrant (or as approved). Hydrants and FDC's shall be located on the same side of the fire apparatus access roadway or drive aisle, fully visible, and recognizable from the street or nearest point of the fire department vehicle access or as otherwise approved. (OFC 912.2.1 & NFPA 13)

- Fire department connections (FDCs) shall normally be located remotely and outside of the fall-line of the building when required. FDCs may be mounted on the building they serve, when approved.
- FDCs shall be plumbed on the system side of the check valve when sprinklers are served by underground lines also serving private fire hydrants.

BUILDING ACCESS AND FIRE SERVICE FEATURES

35. **EMERGENCY RESPONDER RADIO COVERAGE:** In new buildings where the design reduces the level of radio coverage for public safety communications systems below minimum performance levels, a distributed antenna system, signal booster, or other method approved by TVF&R and Washington County Consolidated Communications Agency shall be provided. (OSSC 915.1; OFC 510.1)
    a. Emergency responder radio system testing and/or system installation is required for this building. Please contact me (using my contact info below) for further information including an alternate means of compliance that is available. If the alternate method is preferred, it must be requested from TVF&R prior to issuance of building permit.

36. **KNOX BOX:** A Knox Box for building access may be required for structures and gates. See Appendix C for further information and detail on required installations. Order via www.tvfr.com or contact TVF&R for assistance and instructions regarding installation and placement. (OFC 506.1)

37. **UTILITY IDENTIFICATION:** Rooms containing controls to fire suppression and detection equipment shall be identified as "Fire Control Room." Signage shall have letters with a minimum of 4 inches high with a minimum stroke width of 1/2 inch, and be plainly legible, and contrast with its background. (OFC 509.1)

38. **PREMISES IDENTIFICATION:** New and existing buildings shall have approved address numbers; building numbers or approved building identification placed in a position that is plainly legible and visible from the street or road fronting the property, including monument signs. These numbers shall contrast with their background. Numbers shall be a minimum of 4 inches high with a minimum stroke width of 1/2 inch. (OFC 505.1)

If you have questions or need further clarification, please feel free to contact me at (503) 649-8577.

Sincerely,

Ty Darby

Ty Darby
Deputy Fire Marshal

Cc: file

WASHINGTON COUNTY, OREGON
Department of Land Use and Transportation, Operations & Maintenance Division
1400 SW Walnut Street, MS 51, Hillsboro, Oregon 97123-5625
(503) 846-7623 · FAX: (503) 846-7620

March 29, 2018

Matt Straite
City of Tualatin
18880 SW Martinazzi Avenue
Tualatin, OR 97062-7092

RE: Air Liquide Gas Depot
City File Number: **AR17-0009**
County File Number: CP18-004
Tax Map and Lot Number: **2S1 26B000105**
Location: **10500 SW Tualatin-Sherwood Road**

Washington County Department of Land Use and Transportation has reviewed this development application for a gas company. The subject site has access to SW Tualatin-Sherwood Road, a County-maintained Arterial (5 lanes).

1. ***The County reviewed the submitted Trip Generation analysis (Charbonneau Engineering – July 27, 2017) for the proposed development and concurs with the findings of the analysis.***

2. ***The applicant is utilizing an existing shared access driveway located on SW Tualatin-Sherwood Road. The apron shall be repaired/replaced if found to be damaged.***

3. ***The applicant proposes to connect a 5-foot concrete pathway to the existing public sidewalk. The applicant shall replace damaged sidewalk panels within the right-of-way.***

4. The statewide Transportation Planning Rule requires provision for adequate transportation facilities in order for development to occur. Accordingly, the County has classified roads and road segments within the County system based upon their function. The current Transportation System Plan (regularly updated) contains adequate right-of-way, road width and lane provision standards based upon each roadway's classification.

Subject right of way is considered deficient if half-width of the existing right of way does not meet that determined necessary within the County's current transportation plan.

SW Tualatin-Sherwood Road is designated a 5-Lane Arterial and an "Enhanced Major Street Bikeway" on the current County Transportation System Plan (TSP). Per the TSP, the right-of-way requirement for this segment of road is 102 feet, 51 feet from centerline. The applicant shall dedicate additional right-of-way along the site's frontage to meet the minimum 51 feet from the centerline of SW Tualatin-Sherwood.

REQUIRED CONDITIONS OF APPROVAL

Refer to the following link to access Washington County Road Design and Construction Standards:

http://www.co.washington.or.us/LUT/Divisions/Engineering/ConsultantResources/road-design-standards.cfm

I. PRIOR TO ISSUANCE OF A BUILDING PERMIT BY THE CITY OF TUALATIN:

A. The following shall be recorded with Washington County Survey Division (John Kidd - 503.846.7932):

1. Dedication of additional right-of-way to meet 51 feet from the centerline of SW Tualatin-Sherwood Road.

B. Submit to **Washington County** Operations Division for work proposed within the public right-of-way (503-846-7623):

1. Completed "Right-of-Way Permit" application form and fees.

2. A copy of the City's Land Use Approval with Conditions and County Letter, signed and dated.

3. Three (3) sets of 11X17 plans, site plan and traffic control plan (if required) for the following work proposed within the public right-of-way of SW Tualatin-Sherwood Road:

   a. 5 foot concrete walk connection to existing public sidewalk to County standards. Note: portion within ROW shall meet County and ADA standards.

Thank you for the opportunity to comment. If you have any questions, please contact me at 503-846-7639.

Naomi Vogel - Associate Planner

Cc: Transportation File