# 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: AR17-0008** (Community Development Dept.: Planning Division)

| PROPOSAL | |
|---|---|
| | To construct a new one-story approximately 43,660-square-foot light industrial building "shell" in the eastern portion of the Leveton Business Park which is located along the east side of SW 124th Avenue between Tualatin Road and Leveton Drive. |

| PROPERTY | | | | | | |
|---|---|---|---|---|---|---|
| ☐ n/a | **Name of Application** | MITTLEMAN PROPERTIES AT LEVETON BUSINESS PARK PROPOSED BUILDING | | | | |
| | **Street Address** | 12200 SW Tualatin Road | | | | |
| | **Tax Map and Lot No(s).** | 2S1 22B 001100 | | | | |
| | **Planning District** | MP | **Overlays** ☐ | **NRPO** ☐ | **Flood Plain** ☐ | |
| | **Previous Applications** | AR-93-11; AR-93-37; AR-95-03; AR-98-15; AR-06-13; IMP-08-01 | **Additional Applications:** N/A | | **CIO** INDUSTRIAL | |

| DATES | | | | CONTACT | |
|---|---|---|---|---|---|
| **Receipt of application** | 10/9/17 | **Deemed Complete** | 12/20/17 | | **Name:** Erin Engman |
| **Notice of application submittal** | | | 12/22/17 | | **Title:** ASSOCIATE PLANNER |
| **Project Status / Development Review meeting** | | | 07/24/17 | | **E-mail:** EENGMAN @tualatin.gov |
| **Comments due for staff report** | | | 01/05/18 | | **Phone:** 503-691-3024 |
| **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*

# Mittleman Properties
# At Leveton Business Park
# Proposed Building

## Narrative
## Architectural Review Application

**Prepared for:**
City of Tualatin
18880 SW Martinazzi Avenue
Tualatin, Oregon 97062

**Prepared by:**
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**October 2017**
**116190**

# Mittleman Properties at Leveton Business Park

## Summary

## PROJECT DESCRIPTION

This project proposes new construction of a single story, 43,660 SF industrial use building. The project includes associated parking, utilities and landscape.

## PROJECT BACKGROUND

The proposed building is located in a portion of the Mittleman Properties Master Plan. The tax lot consists of 17.43 acres of the 32.18 acre Master Plan. The Site, located between the SW Leveton Drive and SW Tualatin Road on the east side of SW 124th Avenue. The Master Plan currently includes there buildings.

## SITE DESCRIPTION

The property is located at 12100 SW Tualatin Road, east of SW 124th Avenue, south of SW Tualatin Road, in the City of Tualatin Oregon. More specifically, the property is TL#1100 on map 2S1 22. The property is zoned MP (Manufacturing Park) and is currently vacant.

## APPLICABLE STANDARDS

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

**Tualatin Development Code:**

**CHAPTER 34 - Special Regulations**

**Tree Preservation:**

34.230 Tree Removal Criteria

**CHAPTER 62 - Manufacturing Park Planning District Uses:**

62.020 Permitted Uses

**Lot Sizes, Setback Requirements, Structure Height:**

62.050 Lot Size

62.060 Setback Requirements

62.080 Structure Height

**CHAPTER 72 - Natural Resource Protection Overlay District**

**CHAPTER 73 - Community Design Standards**

**Site Planning:**

73.160 Site Planning Standards

**Structure Design:**

73.220 Safety and Security

**Mixed Solid Waste and Source Separated Recyclables Storage Areas:**

73.226 Objectives
73.227 Waste Storage Areas - Standards
**Landscaping:**
73.240 - Landscape General Provisions
73.250 Tree Preservation
73.260 Tree and Planting Specifications
73.280 Irrigation System Required
73.290 Re-vegetation in un-landscaped areas
73.310 Landscape Standards
73.340 Off-street Parking Lot and Loading Area Landscaping
73.360 Off Street Parking Lot Islands
73.410 Street Tree Plan
**Grading, Flood Plain, Wetlands, Natural Resources Protection:**
73.270 Grading
**Off-Street Parking and Loading:**
73.370 Off-Street Parking and Loading
73.380 Off-Street Parking Lots
73.390 Off-Street Loading Facilities
**Access:**
73.400 Access

**CHAPTER 74 - Public Improvements Required:**
Section 74.440 Streets, Traffic Study Required
Section 74.630 Storm Drainage System
Section 74.640 Grading
Section 74.650 Water Quality, Storm Water Detention and
Erosion Control

**CHAPTER 75 - Access Management"**
Section 75.060 Existing Driveways and Street Intersections
Section 75.080 Alternate Access
Section 75.120 Existing Streets
Section 75.140 Collector Streets

**Tualatin Municipal Code:**
**Title 03: Utilities and Water Quality**
**Title 04: Building**

## CODE CITATION and ANALYSIS

### Tualatin Development Code

CHAPTER 34 - Special Regulations

34.200 Tree Removal on Private Property without Architectural Review, Subdivision or Partition Approval, or Tree Removal Permit Prohibited.
**Tree Preservation:**
Section 34.230 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, and

(i) The disease threatens the structural integrity of the tree; or

(ii) The disease permanently and severely diminishes the esthetic value of the tree; or

(iii) The continued retention of the tree could result in other trees being infected with a disease that threatens either their structural integrity or esthetic value.

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

(i) The tree is in danger of falling;

(ii) Substantial portions of the tree are in danger of falling.

(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.

(2) If none of the conditions in TDC 34.240(1) are met, the Community Development Director shall evaluate the condition of each tree based on the following criteria. A tree given a rating of one on a factor will not be required to be retained.

**RESPONSE: - Please refer to the Landscape Plan included in this submittal package.**

## CHAPTER 62 – Manufacturing Park Planning District

**Uses:**

Section 62.020 Permitted Uses.

**RESPONSE: The current anticipated use is a mixture of Office/Warehouse/Manufacturing. Specific users have not been identified at this point however, potential users will be made aware to of the permitted uses within the MP zone.**

**Lot Sizes, Setback Requirements, Structure Height:**

Section 62.050 Lot Size.

Except for lots for public utility facilities, natural gas pumping stations and wireless communication facilities which shall be established through the Subdivision, Partition or Lot Line Adjustment process, the following requirements shall apply, except as otherwise provided in TDC Chapter 37.

(1) The minimum lot area north of SW Leveton Drive is 40 acres, except the mini-mum lot area may be reduced to 15 acres pursuant to an approved Industrial Master Plan as provided in TDC Chapter 37, and south of SW Leveton Drive is five acres, except for conditional uses north and south of SW Leveton Drive where the City Council shall set the minimum lot size and dimensions to accommodate the proposed use, or as provided in TDC 62.050(6) or (7).

(2) The average lot width shall be 250 feet.

(3) The minimum lot width at the street shall be 250 feet.

(4) 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).

(5) The minimum lot width at the street shall be 50 feet on a cul-de-sac bulb.

(6) Lots or remnant areas created by the location of public streets may be less than 40 acres if necessary to create a logical, safe network of streets in the District.
(7) No minimum lot size, width or frontage requirement shall apply to wetland conservation lots.
**RESPONSE: (1) The lot size is 17.48 acres = to 761,429 SF. The Master Plan area is 32.18 acres = 1,401,761 SF.**
**(2) Average Lot Width - The lot is 443'-4"at a line at and parallel to the north side of the proposed building from the east property line to SW 124th Street.**
**The lot is 248'-2" at a line at and parallel to the south side of the proposed building from the east property line to SW 124th Street.**
**The lot is 426'-4" wide at a line at and parallel to the east side of the building from SW Tualatin Road to the east property line.**
**The lot is 728'-3" wide at a line at and parallel to the west side of the building from SW Tualatin Road to the east property line.**
**(3) Minimum Lot Width - The Lot is 248'-2" wide at the narrowest point on the south side from the east property line to SW 124th Street.**
**(4) The Lot has street frontage along SW 124th Avenue approximately 1,046', SW Tualatin Road approximately 2,409' and SW Leveton Road approximately 1,031'.**
**(5) Not applicable**
**(6) Not applicable**
**(7) Not applicable**
Section 62.060 Setback Requirements.
(1) The setbacks set forth in an Industrial Master Plan approved in accordance with TDC Chapter 37 apply. Where setbacks are not specified in an Industrial Master Plan, TDC 62.060(2) - (5) apply.
**RESPONSE: The setbacks comply with those specified in the Master Plan.**

(2) Yards Adjacent to Streets or Alleys.
(a) Except as otherwise provided in TDC Chapter 37, the minimum building setback for parcels south of SW Leveton Drive is 60 feet. The minimum building setback for parcels north of SW Leveton Drive is 100 feet. **RESPONSE: The proposed building is set back from SW Leveton Drive the required distance**
(b) Except as otherwise provided in TDC Chapter 37, the minimum setback to any parking or circulation area is 50 feet. **RESPONSE: Parking is set back the required distance from SW Leveton Drive, SW Tualatin Road and SW 124th Street,**

(3) Side and Rear Yards Not Adjacent to Streets or Alleys.

(a) Except as otherwise provided in TDC Chapter 37, the minimum setback for parcels south of SW Leveton Drive is 0 to 50 feet, as determined through the Architectural Review process. The minimum setback for parcels north of SW Leveton Drive is 50 feet.

(b) Except as otherwise provided in TDC Chapter 37, all parking and circulation areas shall be set back a minimum of 5 to 25 feet from the property line, as determined through the Architectural Review process. However, no setback is required from lot lines lying within ingress and egress areas shared by two or more abutting properties in accordance with TDC 73.400(2).

(c) No spur rail track shall be permitted within 200 feet of an adjacent residential district.

(d) No setbacks are required at points where side or rear property lines abut a railroad right-of-way or track**. RESPONSE: Building is setback the required distance from SW Leveton Drive. All proposed parking is setback from SW Leveton Road, SW Tualatin Road and SW 124th Street the required distance.**

**There are no proposed rail spurs.**

(4) No fence shall be constructed within 10 feet of a public right-of-way.
**RESPONSE: There is no fencing proposed.**

(5) 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.
**RESPONSE: No wireless communications facilities are proposed.**

Section 62.080 Structure Height.
(1) Except as provided in TDC 61.080(2) - (4), no structure shall exceed a height of 70 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.
**RESPONSE: The proposed building will not exceed 30-feet in height.**
(2) Height Adjacent to a Residential District.
**RESPONSE: This property is NOT adjacent to a residential district or use.**

CHAPTER 73 - Community Design Standards

**Site Planning:**
73.160 Site Planning 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.
(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 grass Crete, 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;

(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 grass Crete, but not gravel or woody material, and be ADA compliant, if applicable.

(g) Accessways shall be constructed, owned and maintained by the property owner.

**RESPONSE: As Proposed, the building has (4) main entrances on the west side. Pedestrian/bicycle access ways are provided from the existing building walkways to the north and to existing parking to the south.**
**Sidewalks are concrete, 7 feet in width at entry, ADA accessible and 5 feet in width at the Fire Riser Room. Route connects to adjacent sidewalk system to the building to the north and to the public ways. Sidewalks are on private property and will be maintained by the property owner.**
**Curb ramps are provided wherever ADA parking is located.**

**Structure Design:**

73.220 Safety and Security

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

Purpose. 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.

**RESPONSE: The Project has been designed to reflect the development established by the existing buildings within the development area.**
**The Building presents storefronts to the street, with associated parking and truck loading to the rear.**
**Along the North South and West elevations the building is articulated to add visual interest and emphasize the business entrance locations through variation of roof line and use of brick.**
**The project is to be constructed of concrete tilt-up panels with brick veneer, steel and glass canopies and aluminum storefront systems.**
**The colors and materials will be consistent with the adjacent projects.**

73.226 Objectives

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.
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.
**RESPONSE: This project proposes a trash enclosure at the rear/east side of the building.**

73.227 Waste Storage Areas - Standards
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.
**RESPONSE: This project proposes the use of the Franchised Hauler Review method to determine the standards needed for the trash/recycling area.**
**Using the minimum standards method, the area of the trash/recyclables storage area is a minimum of 238 S.F.**
**10 S.F. + 4 S.F./1000 Office + 6 S.F./1000 S.F. Mnfr./Warehouse = 10 +70 +158 = 238 S.F. Proposed project is providing an area of 460 S.F.**

(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:
**RESPONSE: A letter of approval from Republic Services is included in this**

**application package.**

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

(a) Location Standards

**RESPONSE: The single proposed trash/recycling enclosure is located outside the building at the center of the rear exterior wall adjacent to the building.**
**The enclosure will accommodate both recycling and solid waste.**
**It is easily accessible from the doors to the rear of the building, will be well-lighted by the proposed parking lot and does not interrupt proposed pedestrian or vehicular access ways.**
**The location is not visible from any public right-of-way.**

(b) Design Standards

R**ESPONSE: The proposed enclosure is 460 SF in size, paved with concrete wall panels and metal gate. All storage containers will be clearly signed to acceptable materials, meet Fire Code and have water proof lids. The enclosure has two 10-foot gates on the east side, facing the loading zone area at the rear of the building. A separate pedestrian access is provided on the north side of the enclosure with a sidewalk connection from the parking lot area. Please refer to Detail 3/A1.3.**

(c) Access Standards

**RESPONSE: The trash enclosure will be accessible during all hours. As evidenced by the attached letter from Republic Services, the storage area has been designed to be easily accessible, horizontal and vertical clearance requirements have been met. The collection vehicle will not need to back into a public right-of-way to access the trash/recycling containers.**

**Landscaping:**

73.240 - Landscape General Provisions

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.

**RESPONSE: A minimum of 20% landscape area is required. 23% landscape area is provided.**

(9) Yards adjacent to public streets 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.

**RESPONSE: No yards are adjacent to public streets.**

(10) Yards not adjacent to public streets 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.

**RESPONSE: Refer to Landscape Plans for planting information. Landscape shall be maintained as approved by 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.
**RESPONSE: All landscape areas have been designed and will be installed and maintained to achieve living plant coverage within three years. Planting area soils will be amended to promote maximum health and growth of the plant materials.**

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.
**RESPONSE: Refer to Landscaping Plan for responses to this section.**

73.260 Tree and Planting Specifications
Section 73.260 Tree and Plant Specifications. :
Refer to Landscaping Plan for responses to this section.
(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.

**RESPONSE: All proposed deciduous trees are specified as B&B and are 2-inch or above DBH.**

(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.

**RESPONSE: There are no new coniferous trees proposed in the project.**

(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.

**RESPONSE: All proposed shrubs are specified as 1-gallon or larger in size.**

(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.

**RESPONSE: The proposed ground covers are specified in 4-inch pots and neither are English Ivy.**

(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.

**RESPONSE: Seeding for the lawn area are specified to comply with all provider's instructions and recommendations for lawn seeding.**

(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.

**RESPONSE: All proposed landscape materials will be chosen, installed and maintained per current industry standards.**

(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.

**RESPONSE: Branching, size, and structure of the proposed plant materials have been specified as desired and in conformance with this code section. Maintenance of**

**the plant materials will also comply with this code section requirements regarding access and visibility.**

73.280 Irrigation System Required
Section 73.280 Irrigation System Required.
Except for townhouse lots, landscaped areas shall be irrigated with an automatic underground or drip irrigation system.
**RESPONSE: This project proposes a Design Build automatic, underground irrigation system.**

73.290 Re-vegetation in un-landscaped areas
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.
**RESPONSE: An Erosion Control Plan, compliant with this code section, will be part of the Building Permit application package.**

73.310 Landscape Standards
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.
**RESPONSE: Varying depths of landscape areas are provided on all sides of the building except the east (rear) side of the building where the loading docks are located. Pedestrian walkways are provided to the NW and SW corners of the building and along the west building front where the four primary entrances are located.**

73.340 Off-street Parking Lot and Loading Area Landscaping

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.

**RESPONSE: Landscape clear vision triangles have been considered at all parking aisle access points.**

(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 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.

**RESPONSE: This project proposes a minimum landscape area around all parking, loading and vehicular maneuvering areas of 5-feet or more in width. These areas have been landscaped as required by this code section. Please refer to the Landscape Plan included in this submittal package.**

73.360 Off Street Parking Lot Islands

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.

**RESPONSE: The project proposes 130 parking stalls, which results in a requirement of 3300 SF of landscape island landscape area. (25 SF x 130 stalls =3250 SF). As proposed, the project proposes a total of approximately 8000 SF of landscape within the parking lot area.**

(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).

**RESPONSE: As proposed, the landscape islands within the parking lot area are a minimum of 8-feet in width.**

(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.

**RESPONSE: Refer to Landscape Drawings for this section.**

(4) Landscape islands shall be utilized at aisle ends to protect parked vehicles from moving vehicles and emphasize vehicular circulation patterns. Landscape islandlocation requirements shall not apply to parking structures and under-ground parking.

**RESPONSE: Landscape islands are provided at the ends of each row of parking spaces, as required.**

(5) Required plant material in landscape islands shall achieve 90 percent coverage within three years. Native shrubs and trees are encouraged.

**RERSPONSE: The plant materials specified with in the landscape islands have been spaced and sized to achieve 90% coverage within three years.**

(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.

**RESPONSE: Existing driveway access off of SW Tualatin Road are defined on both sides with existing landscape.**

(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.

**RESPONSE: Refer to Landscape Drawings for this section.**

73.410 Street Tree Plan

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.

**RESPONSE:**

**Grading, Flood Plain, Wetlands, Natural Resources Protection:**
73.270 Grading
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: 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.**

**Off-Street Parking and Loading:**
73.370 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.

(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.

(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.

**RESPONSE: Vehicular parking is proposed on-site, reflective of the anticipated use ratio and compliant with the General Provisions of this code section.**

(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 grass Crete, 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 grass Crete, 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.

(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.

**RESPONSE: Twelve covered bicycle parking spaces are provided at four of the primary building entrances. Please see Detail 11/A1.2 Signage identifying the bicycle parking has been mounted to the building wall adjacent to the racks. Please see Detail 10/A1.2.**

(x) Required vanpool and carpool parking shall meet the 9-foot parking stall standards in Figure 73-1 and be identified with appropriate signage.

**RESPONSE: The project proposes 130 parking spaces. At 1/25 spaces, the project will provide 6 Vanpool/ Carpool spaces dispersed through the parking area. These spaces are 9-feet in width and identified with signage.**

(2) Off-Street Parking Provisions.

(a) The following are the minimum and maximum requirements for off- street motor vehicle parking in the City,

| USE | MINIMUM MOTOR VEHICLE PARKING REQUIREMENT | MAXIMUM MOTOR VEHICLE PARKING REQUIREMENT | BICYCLE PARKING REQUIREMENT | PERCENTAGE OF BICYCLE PARKING TO BE COVERED |
|---|---|---|---|---|
| **Industrial** | | | | |
| **(i) Manufacturing g** | **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<br>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 establishmen t t** | **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** |

**RESPONSE: The project anticipates a mix of Office (25%), Manufacturing (40%) and Warehouse (35%). Based on this use mix, the project requires a minimum of 96 parking spaces. Because Manufacturing has no specific maximum, this mixed use has no specific maximum. A total of 130 spaces are proposed.**

**Based on the above mix ration, twelve covered bicycle spaces are required.**

(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 |

73.380 Off-Street Parking Lots
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. **RESPONSE: All proposed standard parking lot spaces are 9-feet by 18.5 feet with 2'-6" bumper overhang.**

(2) 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.

**RESPONSE: As proposed, the parking lot has a maximum of 8 continuous parking spaces.**

(3) 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 grass Crete, 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. 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.

**RESPONSE: The parking lot is paved. Parking lot landscape has been provided as required and discussed above.**

(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.

**RESPONSE: A Lighting Plan with associated fixture cut-sheets has been prepared and submitted with the application package.**

(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.

**RESPONSE: The parking lot has been configured to eliminate the need for any backing into or maneuvering within a public right-of-way.**

(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.

**RESPONSE: No service specific use driveways are proposed. Service vehicles will use the driveways off of SW Tualatin Road, which comply with this code section.**

(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.

**RESPONSE: The proposed parking spaces and adjacent landscape areas have been sized and designed to accommodate bumper overhang.**

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

**RESPONSE: Six ADA accessible parking spaces which comply with all 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.

**RESPONSE: The four drive aisles that access the parking lot are two-way and 30-feet in width.**

73.390 Off-Street Loading Facilities

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 |

**RESPONSE: The proposed building is 43,660 SF in size, which requires two loading spaces. However, the project proposes a total of eight loading docks across the east side/rear of the building.**

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

(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.

**RESPONSE: The proposed loading docks are a minimum of 13 feet 6 inches X 60 feet, with unobstructed height in excess of 14-feet. Furthermore, the loading dock area is located behind the building, not abutting a right-of-way. 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.**

**RESPONSE: The proposed loading dock area is screened from SW Tualatin Road by existing buildings. Additional screening is provided by the perimeter and parking lot landscape.**

(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.

**RESPONSE: The required parking for this project has been provided on site.**

**Access:**

73.400 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.

**RESPONSE: As proposed, this building complies with the access/egress code**

**standards.**
(5) Lots that front on more than one street may be required to located motor vehicle accesses on the street with the lower functional classification as determined by City Engineer.
**RESPONSE: This site shares accesses to SW Tualatin Road, a major collector, and SW Leveton Drive, a minor arterial that already serve three existing buildings.**
(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]
**RESPONSE: The access and egress to this site is via SW Tualatin Road to the north and to SW Leveton Drive to the south.**
(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.
RE**SPONSE: Project development area of the site has no frontage on public right-of-way. The existing built-out portion of the frontage along SW Tualatin Road and SW 124th complies with the Code Standard.**
(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 |

**RESPONSE: The project site is accessed from SW Tualatin Road by an existing driveway meeting these criteria.**

(14) Maximum Driveway Widths and Other Requirements.
**RESPONSE: The existing access drives are 36-feet in width.**
(15) Distance between Driveways and Intersections
**RESPONSE: All driveways are located more than 150 feet from the intersection of collector or arterial streets.**

(16) Vision Clearance Area.
(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).

**RESPONSE: Vision clearance for both driveways comply with the required distances, per Figure 73-2. There are no vertical restrictions.**

CHAPTER 74 – Public Improvement Requirements

Section 74.210 Minimum Street Right-of-Way Widths.

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

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

(3) For development applications that will impact existing streets not adjacent to the applicant's property, and to construct necessary street improvements to mitigate those impacts would require additional right-of-way, the applicant shall be responsible for obtaining the necessary right-of-way from the property owner. A right-of-way dedication deed form shall be obtained from the City Engineer and upon completion returned to the City Engineer for acceptance by the City. On subdivision and partition plats the right-of-way dedication shall be accepted by the City prior to acceptance of the final plat by the City. On other development applications the right-of-way dedication shall be accepted by the City prior to issuance of building permits. The City may elect to exercise eminent domain and condemn necessary off-site right-of-way at the applicant's request and expense. The City Council shall determine when condemnation proceedings are to be used.

**RESPONSE: Adjacent streets are existing and a traffic study was prepared and submitted to the City that supports that they are of adequate width not requiring additional improvements.**

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.

(8) For development applications other than subdivisions and partitions, all street improvements required by this section shall be completed and accepted by the City prior to the issuance of a Certificate of Occupancy.

(9) In addition to land adjacent to an existing or proposed street, the requirements of this section shall apply to land separated from such a street only by a railroad right-of-way.

(10) Streets within, or partially within, a proposed development site shall be graded for the entire right-of-way width and constructed and surfaced in accordance with the Public Works Construction Code.

(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.

**RESPONSE: Adjacent streets are existing and a traffic study was prepared and submitted to the City that supports that they are of adequate width not requiring additional improvements.**

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. [Ord. 1354-13 §35, 02/25/13]

**RESPONSE: Adjacent streets are existing and a traffic study was prepared and submitted to the City that supports that they are of adequate width not requiring additional improvements.**

Section 74.430 Streets, Modifications of Requirements in Cases of Unusual Conditions.

(1) When, in the opinion of the City Engineer, the construction of street improvements in accordance with TDC 74.420 would result in the creation of a hazard, or would be impractical, or would be detrimental to the City, the City Engineer may modify the scope of the required improvement to eliminate such hazardous, impractical, or detrimental results. Examples of conditions requiring modifications to improvement requirements include but are not limited to horizontal alignment, vertical alignment, significant stands of trees, fish and wildlife habitat areas, the amount of traffic generated by the proposed development, timing of the development or other conditions creating hazards for pedestrian, bicycle or motor vehicle traffic. The City Engineer may determine that, although an improvement may be impractical at the time of development, it will be necessary at some future date. In such cases, a written agreement guaranteeing future performance by the applicant in installing the required improvements must be signed by the applicant and approved by the City.

(2) When the City Engineer determines that modification of the street improvement requirements in TDC 74.420 is warranted pursuant to subsection (1) of this section, the City Engineer shall prepare written findings of modification. The City Engineer shall forward a copy of said findings and description of modification to the applicant, or his authorized agent, as part of the Utility Facilities Review for the proposed development, as provided by TDC 31.072. The decision of the City Engineer may be appealed to the City Council in accordance with TDC 31.076 and 31.077.

(3) To accommodate bicyclists on streets prior to those streets being upgraded to the full standards, an interim standard may be implemented by the City. These interim standards include reduction in motor vehicle lane width to 10 feet [the minimum specified in AASHTO's A Policy on Geo-metric Design of Highways and Streets (1990)], a reduction of bike lane width to 4-feet (as measured from the longitudinal gutter joint to the centerline of the bike lane stripe), and a paint-striped separation 2 to 4 feet wide in lieu of a center turn lane. Where available roadway width does not provide for these minimums, the roadway can be signed for shared use by bicycle and motor vehicle travel. When width constraints

occur at an intersection, bike lanes should terminate 50 feet from the intersection with appropriate signing.

**RESPONSE: Adjacent streets are existing and a traffic study was prepared and submitted to the City that supports that they area adequate width not requiring additional improvements.**

Section 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.

**RESPONSE: A traffic study was prepared and submitted to the City.**

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

**RESPONSE: A traffic study was prepared and submitted to the City.**

(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.

**RESPONSE: The traffic study evaluated existing conditions and determined that City and ODOT standards are currently met.**

(b) an analysis of any existing safety deficiencies.

**RESPONSE: The traffic study evaluated five years of historical crash data at the study area intersection and did not find any crash patterns that indicated safety concerns.**

(c) proposed trip generation and distribution for the proposed development.

**RESPONSE: The traffic study was based assumptions presented in a scoping letter that was approved by the City and ODOT.**

(d) projected levels of service on adjacent and impacted facilities.

**RESPONSE: The traffic study determined that the future conditions with the proposed development will not exceed City or ODOT standards.**

(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.

**RESPONSE: No mitigation was necessary to meet City or ODOT standards.**

(f) The City Engineer will determine which facilities are impacted and need to be included in the study.

**RESPONSE: A scoping letter outlining the study area was submitted to the City and ODOT and the analysis included all intersections required by the agencies.**

(g) The study shall be conducted by a registered engineer.

**RESPONSE: The study was prepared 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.

**RESPONSE: The traffic study determined that no improvements were necessary to meet agency standards.**

Section 74.630 Storm Drainage System.

(1) Storm drainage line 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.

**RESPONSE: Storm drainage connection to the existing public storm system serving the property is shown on the utility plans. Storm drainage construction plans and calculations have been submitted and are acceptable.**

(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: Submitted drainage analysis includes downstream analysis conforming to current Clean Water Services Resolution and Order 17-05 and showing that adequate capacity exists to serve the site. The analysis conforms to 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 the 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. [Ord. 895-93, 5/24/1993; Ord. 933-94, Sec. 61, 11/28/94; Ord. 895-93, Sec. 2, 10/23/95]

**RESPONSE: No undeveloped sites exist adjacent to the development site. This section does not apply.**

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.

**RESPONSE: Site grading is such that no site runoff is directed to adjacent sites. There is no evidence that adjacent sites drain toward the development site.**

(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 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. [Ord. 895-93,

5/24/1993]
**RESPONSE: Site grading is such that no site runoff is directed to adjacent sites. There is no evidence that adjacent sites drain toward the development site, therefore there is no impact to drainage on adjacent sites. The proposed building does not have a crawl space.**

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:

(1) On subdivision and partition development applications, prior to approval of the final plat, 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 satisfied and obtain a Stormwater Connection Permit from Clean Water Services; or
**RESPONSE: This development does not propose either a subdivision or partition so this section does not apply.**

(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 submit a design and calculations indicating that the requirements of the Surface Water Management Ordinance will be satisfied and obtain a Stormwater Connection Permit from Clean Water Services; or
**RESPONSE: Plans show provision for on site detention using a pond with outflow limited by a series of orifi installed within a control manhole. Sizing is detailed in the submitted drainage analysis. The site's proposed detention and water quality facility is designed in conformance with Clean Water Services Resolution and Order 17-05.**

(3)For on-site private and regional non-residential public facilities, the applicant shall submit a storm water 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. [Ord. 895-93, 5/24/1993; Ord. 952-95, Sec. 3, 10/23/95; Ord. 1070-01, 4/9/01; Ord. 1327-11 Sec. 1; 6/27/11]
**RESPONSE: The drainage analysis includes an operation and maintenance plan. A storm water facility agreement will be executed prior to issuance of construction permits. 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.**

## CHAPTER 75 – Access Management

### 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.

**RESPONSE: The driveways conform to the requirements of this chapter.**

Section 75.080 Alternate Access.

Except as provided in 75.090 all properties which abut two roadways shall have access on the lowest classification road-way, preferable on a local street.

**RESPONSE: This site shares accesses to SW Tualatin Road, a major collector, and SW Leveton Drive, a minor arterial, that already serve three existing buildings. The access to SW Leveton Drive may remain per TDC 75.120 (15)(b).**

Section 75.120 Existing Streets.

(15) Leveton Drive.

(b) 118th Avenue to 124th Avenue: The existing driveways will be allowed to remain. No new driveways will be permitted.

**RESPONSE: No new driveways are proposed.**

Section 75.140 Collector Streets.

(a) Major Collectors. Direct access from newly constructed single family homes, duplexes or triplexes shall not be permitted.

**RESPONSE: The site accesses on SW Tualatin Road do not serve residential uses. Spacing is greater than 100 feet which is consistent with Access Management Policy 7 of Chapter 11: Transportation.**

## Tualatin Municipal Code

TMC Title 03: Utilities and Water Quality

1. TMC 3-2-020 Application, Permit and inspection procedure.
2. TMC 3-2-030 Materials and Manner of Construction.
3. TMC 3-2-160 Construction Standards

**RESPONSE: The sanitary sewer for the building will be provided via a new connection to an existing public sanitary sewer manhole located west of the building. The applicant will provide final engineering drawings of this connection.**

4. TMC 3-3-040 Separate Services Required.

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

**RESPONSE: Domestic and irrigation water services for the building will be provided via a new connection to an existing public water main at SW Tualatin Road. New meter will be installed adjacent to the right of way.**

**Fire service for the new site hydrants and building will be provided via a new service pipe with a new tap at SW Tualatin Road. An approved backflow preventer will be installed inside the building fire riser room.**

**The applicant will submit water system plans that show location and other details prior to obtaining a Building Permit.**

5.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.
**RESPONSE: A public works construction permit for the domestic and fire connections will be obtained.**

6. TMC 3-3-120 Backflow Prevention Devices and Cross Connections.
The owner of property to which City water is furnished for human consumption shall install in accordance with City standards an appropriate backflow prevention device on the premises where any of the following circumstances exist:
Except as otherwise provided in this subsection, all irrigation systems shall be installed with a double check valve assembly. Irrigation system backflow prevention device assemblies installed before the effective date of this ordinance, which were approved at the time they were installed but are not on the current list of approved device assemblies maintained by the Oregon State Health Division, shall be permitted to remain in service provided they are properly maintained, are commensurate with the degree of hazard, are tested at least annually, and perform satisfactorily. When devices of this type are moved, or require more than minimum maintenance, they shall be replaced by device assemblies which are on the Health Division list of approved device assemblies.
**RESPONSE: Domestic and irrigation water services for the building will be provided via a new connection to an existing public water main at SW Tualatin Road. New meter will be installed adjacent to the right of way.**
**An approved domestic backflow preventer will be installed adjacent to the meter and an approved irrigation backflow preventer will be installed adjacent to the meter.**

7. TMC 3-3-130 Control Valves.
The customer shall install a suitable valve, as close to the meter location as practical, the operation of which will control the entire water supply from the service. The operation by the customer of the curb stop in the meter box is prohibited.
**RESPONSE: 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.**

8. TMC 3-5-010 Policy.
9. TMC 3-5-050 Erosion Control Permits
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 fee.

**RESPONSE: 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.**

10. TMC 3-5-060 Permit Process
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.

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.
**RESPONSE: : 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.**

11. 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.
**RESPONSE: Plans show provision for on site detention using a pond with outflow limited by a series of orifi installed within a control manhole. Sizing is detailed in the submitted drainage analysis, which conforms to current Clean Water Services Resolution and Order 17-05.**

12. 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, and 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.
**RESPONSE: Submitted drainage analysis includes downstream analysis conforming to current Clean Water Services Resolution and Order 17-05.**

13. 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.

**RESPONSE: The submitted drainage analysis has been reviewed by staff and the proposed detention system has been found to be acceptable.**

14. TMC 3-5-280 Placement of Water Quality Facilities.
Title III specifies that certain properties shall install water quality facilities for the purpose of removing phosphorous. No such water quality facilities shall be constructed within the defined area of existing or created wetlands unless a mitigation action, approved by the City, is constructed to replace the area used for the water quality facility. **RESPONSE**:
**The site's proposed water quality facility is not located in wetlands or associated buffers.**
15. 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.
**RESPONSE: The site's proposed water quality facility is designed in conformance with Clean Water Services Resolution and Order 17-05.**

16. 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.
**RESPONSE: The site's proposed water quality facility is designed in conformance to Clean Water Services Resolution and Order 17-05.**

17. TMC 3-5-310 Exceptions.
**RESPONSE: No exceptions are requested.**

18. TMC 3-5-320 Definitions.
19. 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.
**RESPONSE: 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.**

20. 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.
**RESPONSE: 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.**

21. 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.
**RESPONSE: The submitted drainage analysis includes a maintenance and operation section outlining the maintenance requirements in conformance with Clean Water Services Resolution and Order 17-05.**

22. TMC 3-5-350 Phosphorous Removal Standard.
The stormwater quality control facilities shall be designed to remove 65 percent of the phosphorous from the runoff from 100 percent of the newly constructed impervious surfaces. Impervious surfaces shall include pavement, buildings, public and private roadways, and all other surfaces with similar runoff characteristics.
**RESPONSE: The site's proposed water quality facility is designed to meet this standard in conformance to Clean Water Services Resolution and Order 17-05.**

23. TMC 3-5-360 Design Storm.
The stormwater quality control facilities shall be designed to meet the removal efficiency of TMC 3-5-350 for a mean summertime storm event totaling 0.36 inches of precipitation falling in four hours with an average return period of 96 hours.
**RESPONSE: The site's proposed water quality facility is designed to meet this standard in conformance to Clean Water Services Resolution and Order 17-05.**

24. 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.
**RESPOPNSE: The site's proposed water quality facility is designed to meet this standard in conformance to Clean Water Services Resolution and Order 17-05.**

25. 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.
**RESPONSE: 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.**

26. 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.
**RESPONSE: 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.**

27. 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.
**RESPONSE: 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.**

TMC Title 04: Buildings

TMC 4-1-010 Standards Applicable to Building.

(1)The City adopts the following specialty codes, rules, and standards;

(a) The Oregon Structural Specialty Code, 2014 edition;

(b) The Oregon Mechanical Specialty Code, 2014 edition;

(c) The Oregon Plumbing Specialty Code, 2014 edition;

(i) The Oregon Energy Efficiency Specialty Code, 2014 edition;

(j) The Oregon Fire Code, 2014 edition.

(2) The provisions in subsection (1) apply to all building and related activities conducted within the City and are in addition to all other applicable provisions of the Tualatin Municipal Code and the Tualatin Development Code.

**RESPONSE: This building has been design per all applicable codes as outlined above.**

TMC 4-1-030 Grading

A person seeking a grading permit must submit a soil report with the permit application. The soils report submitted must be signed and sealed by an Oregon-certified soils engineer and comply with Appendix J of the Oregon Structural Specialty Code, 2014 edition. No grading activities may occur unless and until a person receives a grading permit and complies with this section.

**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.**

**A geotechnical report was part of the AR submittal package and it will be part of the building permit submittal.**

TMC 4-1-040 Local Interpretation.

**RESPONSE: No alternate materials or methods of construction are proposed.**

TMC 4-2-010 Hydrants and Water Supply for Fire Protection

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.

If adequate provisions for such facilities are not made, the Fire and Life Safety Reviewer

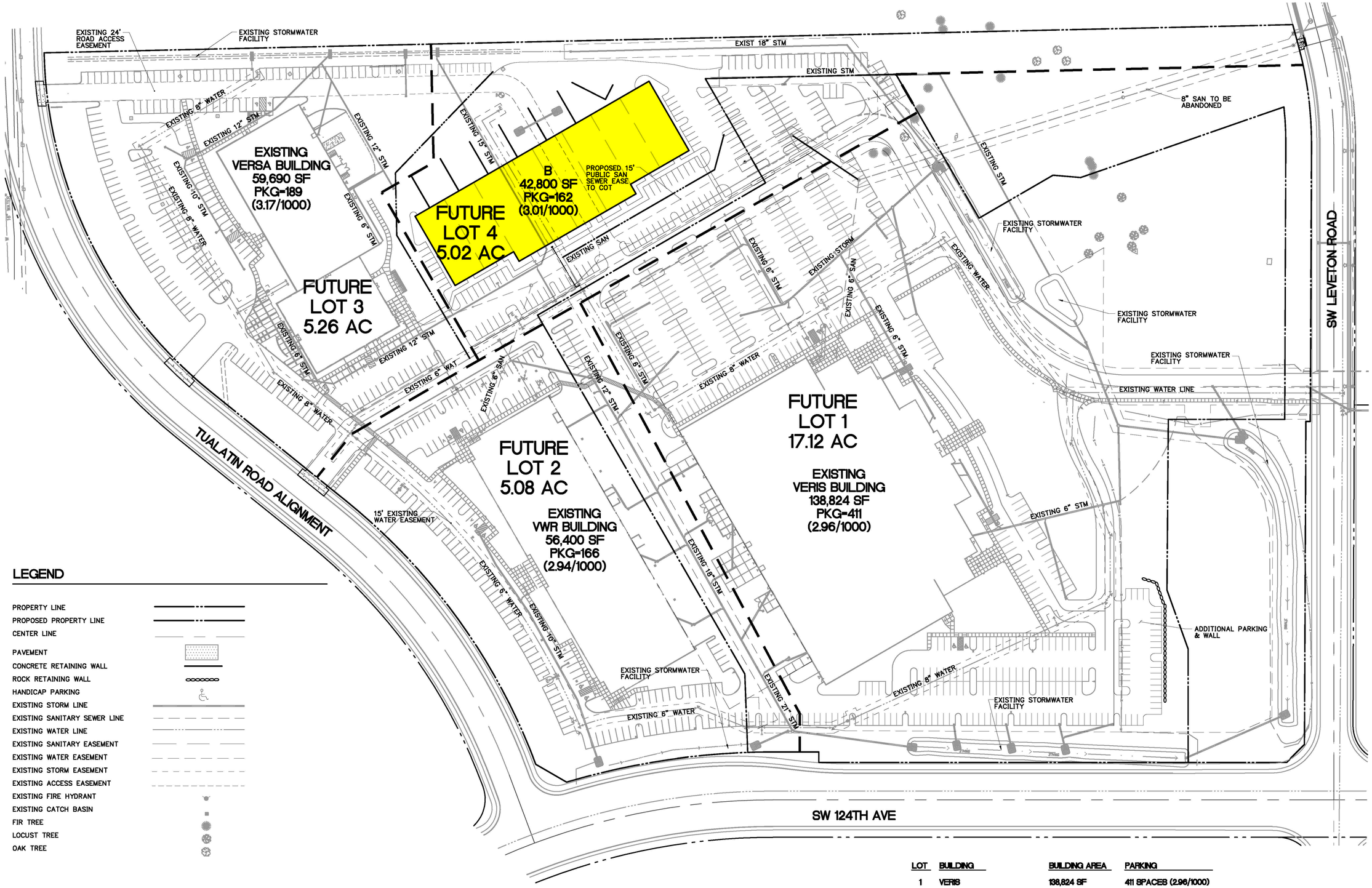
shall either recommend against approval of the plans or indicate to the applicant in writing where the plans are deficient or recommend approval of plans subject to conditions.
**RESPONSE: The submitted site utility plans shows private on site hydrants and existing public hydrants in the vicinity of the building. The submitted fire flow calculations conform to the requirements of Tualatin Valley Fire and Rescue. The submitted site plan and accompanying letter from TVF&R show compliance to their requirements for apparatus maneuvering.**

TMC 4-4-020 Permit Required.
**RESPONSE: All required permits will be obtained prior to construction on the site.**

TMC 4-4-100 Issuance of Permit; Conditions.
**RESPONSE: All conditions of approval will be met as required.**

**ATTACHMENTS:**
Land Use application
City Fact Sheet
Republic Services letter of approval
Clean Water Services application
TVFR Fire Flow Test Report
Neighborhood meeting letters/mailing list/site buffer map/mailing affidavit
Hydraulic modeling fee sheet
Scoping meeting request

(2) 24 x 36 Plan sets, with colored elevations
(2) 11 x 17 Plan sets, with colored elevations




## LEGEND

- PROPERTY LINE
- PROPOSED PROPERTY LINE
- CENTER LINE
- PAVEMENT
- CONCRETE RETAINING WALL
- ROCK RETAINING WALL
- HANDICAP PARKING
- EXISTING STORM LINE
- EXISTING SANITARY SEWER LINE
- EXISTING WATER LINE
- EXISTING SANITARY EASEMENT
- EXISTING WATER EASEMENT
- EXISTING STORM EASEMENT
- EXISTING ACCESS EASEMENT
- EXISTING FIRE HYDRANT
- EXISTING CATCH BASIN
- FIR TREE
- LOCUST TREE
- OAK TREE

1 C2.0 SITE PLAN

60 0 30 60 120 240

( IN FEET )
1 inch = 60 ft.

| LOT | BUILDING | BUILDING AREA | PARKING |
|---|---|---|---|
| 1 | VERIS | 138,824 SF | 411 SPACES (2.96/1000) |
| 2 | VWR | 56,400 SF | 166 SPACES (2.94/1000) |
| 3 | VERSA | 59,690 SF | 189 SPACES (3.17/1000) |
| 4 | PROPOSED BLDG B FLEX/LIGHT INDUSTRIAL | 42,800 SF | 129 SPACES (3.01/1000) |
| | TOTAL | 297,714 SF | 895 SPACES (3.00/1000) |

CIO Contact Information

Riverpark CIO
Ted Saedi
atasaedi@hotmail.com

East Tualatin CIO
Charlie Benson, President
charlie5915@hotmail.com

Midwest Tualatin CIO
Angela DeMeo, President
tualatinmidwestcio@gmail.com

Martinazzi Woods CIO

Carmen Madrid, President
carmentmadrid@gmail.com

Ibach CIO
Rachel Martin, President

shamusluv@yahoo.com

Byrom CIO (CIO 6)
Willie Fisher, President
willie.fisher@gmail.com

Commercial CIO
Cathy Holland, President
tualatincommercialcio@gmail.com

Tualatin Valley Fire & Rescue

**Fire Marshal's Division Offices**

North - 14480 SW Jenkins Rd., Beaverton, OR 97005, (503) 356-4700
South - 7401 SW Wash Ct., Tualatin, OR 97062, (503) 612-7010

# Fire Flow and Hydrant Worksheet

**This worksheet is required to be submitted to and approved by the Authority Having Jurisdiction (AHJ) before any permits for new building construction, building expansion or fire hydrants will be issued by any building department within the TVF&R District**

## Preparer Information

**Preparer Name:** Karl Koroch, PE

**Phone:** 503 443 3900 **Fax:** 503 443 3700

**Architect / Engineer of Record:** TM Rippey Consulting Engineers

**Phone:** As above **Fax:**

## General Building Information

**Project Name:** Mittleman Properties Building

**Project Address:** 124th and Tualatin Road

**City:** Tualatin **County:** Washington **Zip:**

**Construction Type(s):** Type IIB and IIIB

**Total Bldg Area:** 43,600 **sqft**

**Total Fire Area:** 43,600 **sqft**

**Bldg Fire Flow:** 4510 **Gallons Per Minute (Light Hazard)**

**Describe Fire Area:** (if more than one fire area, include an 8 1/2 x 11 or 11 x 17 drawing indicating the various fire areas)

Fire area is commercial warehouse with supporting office. Building will be fully sprinklered.

**Type of Occupancy or Use of Building:** B/F1/S1

## A. Occupancy Hazard

**A1 Determine percent of each occupancy hazard in the fire area.**

| Occupancy Hazard Class | Fire Area | | Total Fire Area | | Percent of Fire Area |
|---|---|---|---|---|---|
| Light Hazard | 0 SF | / | 1 SF | x 100 = | 0 % |
| Ordinary Hazard Grp 1 | 0 SF | / | 1 SF | x 100 = | 0 % |
| Ordinary Hazard Grp 2 | 43600 SF | / | 43,600 SF | x 100 = | 100 % |
| Extra Hazard Grp 1 | 0 SF | / | 1 SF | x 100 = | 0 % |
| Extra Hazard Grp 2 | 0 SF | / | 1 SF | x 100 = | 0 % |

**Total Must equal 100%** **100 %**

**A2 Calculate Fire Flow**

| Occupancy Hazard Class | Factor | | Fire Area | | Fire Flow | | Bldg Fire Flow |
|---|---|---|---|---|---|---|---|
| Light Hazard | 1.0 | x | 0 % | x | 4510 GPM | = | 0 GPM |
| Ordinary Hazard Grp 1 | 1.2 | x | 0 % | x | 4510 GPM | = | 0 GPM |
| Ordinary Hazard Grp 2 | 1.3 | x | 100 % | x | 4510 GPM | = | 5863 GPM |
| Extra Hazard Grp 1 | 1.4 | x | 0 % | x | 4510 GPM | = | 0 GPM |
| Extra Hazard Grp 2 | 1.5 | x | 0 % | x | 4510 GPM | = | 0 GPM |

**A3 Required Fire Flow** **5863 GPM**

## B. Minimum Number of Fire Hydrants Required

Required Fire Flow **5863** = **6** No. of Hydrants Required

## C. Reduction of Fire Flow - Reductions are based on the following:

**C1** - Reduced by 25% for all Group R Occupancies without fire sprinklers (multiply by .75)
**C2** - Reduced by 25% for a NFPA 72 Fire Alarm System (multiply by .75)
**C3** - Reduced by 75% for NFPA 13 Automatic Sprinklers (multiply by .25)

## D. Required Fire Flow

**D1** - Group R occupancy **No** x 1 = **5863** GPM (Max. 3000 - Min. 1500 gpm)

**D2** - Fire Flow **5863** GPM x 0.25 = **1500** GPM (Max. 3000 - Min. 1500 gpm)

## E. Available Fire Flow to the Building

**Test Results:** **1,500** **GPM**

From City of Tualatin flow testing

**To:** Darby, Ty M. <Ty.Darby@tvfr.com>
**Subject:** RE: Mittleman Leveton Site AR 17 008

Ty,

Thanks for chatting with me today.

To recap, we've got an existing site with two existing buildings and we're adding a third building. There's also an adjacent parcel with a building on it. All owned by the same company. The existing fire line connects both at Tualatin Road and at Leveton and passes through the site and both parcels. There's a number of hydrants throughout the site and it appears backflow preventers are inside the existing buildings, not at the rights of way.

I have attached fire calculations, the building's 43,600 sf and will be fully spinklered. The calculations indicate we need six hydrants and with the proposed new plus existing, we have five but it feels like we've got a pretty good spread with several choices for apparatus approach.

We are currently trying to obtain completeness from the City of Tualatin for our Architectural Review process and Tony Doran needs confirmation from you that the proposal is acceptable (or I need to know what changes you need to get that confirmation).

As discussed, we'll get Patriot out to flow one of the existing hydrants west of the proposed building and I'll have them flow a hydrant nearby on Tualatin road as well. Once I have the flow information, I'll update the fire calculations.

I hope you feel better!

Karl
503 443 3900

---

**From:** Karl Koroch
**Sent:** Thursday, November 30, 2017 8:02 AM
**To:** Darby, Ty M.
**Subject:** Mittleman Leveton Site AR 17 008

Ty,

I'd like to chat with you about the AR plans for a new commercial building on the existing multi building campus at 124 and Leveton Drive in Tualatin. I have attached the current site layout but Tony needs me to reconfigure the sourcing of the fire from what's shown to a new tap and vault at Tualatin Drive, which we are prepared to do. I need "approval" from TVF&R to satisfy Tony's review for the AR findings.

I have attached the fire calculations but I don't have a current flow test—I'm trying to arrange that but also want to discuss which hydrant(s) to flow.

Can you give me a ring when you have time?

Thanks
Karl Koroch, PE
TM Rippey Consulting Engineers

## Karl Koroch

**From:** Tony Doran <TDORAN@tualatin.gov>
**Sent:** Thursday, December 07, 2017 9:36 AM
**To:** Karl Koroch
**Subject:** RE: Mittleman Leveton Site AR 17 008

Yes. Let the next completeness review commence!

Tony Doran, Engineering Associate
Engineering Division, Operations
City of Tualatin
18880 SW Martinazzi Ave.
Tualatin, OR 97062
(503) 691-3035 | tdoran@tualatin.gov
www.tualatinoregon.gov

---

**From:** Karl Koroch [mailto:KKoroch@tmrippey.com]
**Sent:** Thursday, December 07, 2017 9:02 AM
**To:** Darby, Ty M. <Ty.Darby@tvfr.com>
**Cc:** Tony Doran <TDORAN@tualatin.gov>
**Subject:** RE: Mittleman Leveton Site AR 17 008

Thanks Ty.

Tony, is this what you need?

Karl

---

**From:** Darby, Ty M. [mailto:Ty.Darby@tvfr.com]
**Sent:** Thursday, December 07, 2017 8:48 AM
**To:** Karl Koroch
**Cc:** 'Tony Doran'
**Subject:** RE: Mittleman Leveton Site AR 17 008

Hi Karl,

The proposed fire hydrant layout and fire flow results are acceptable to the Fire District.

Thank you,

Ty

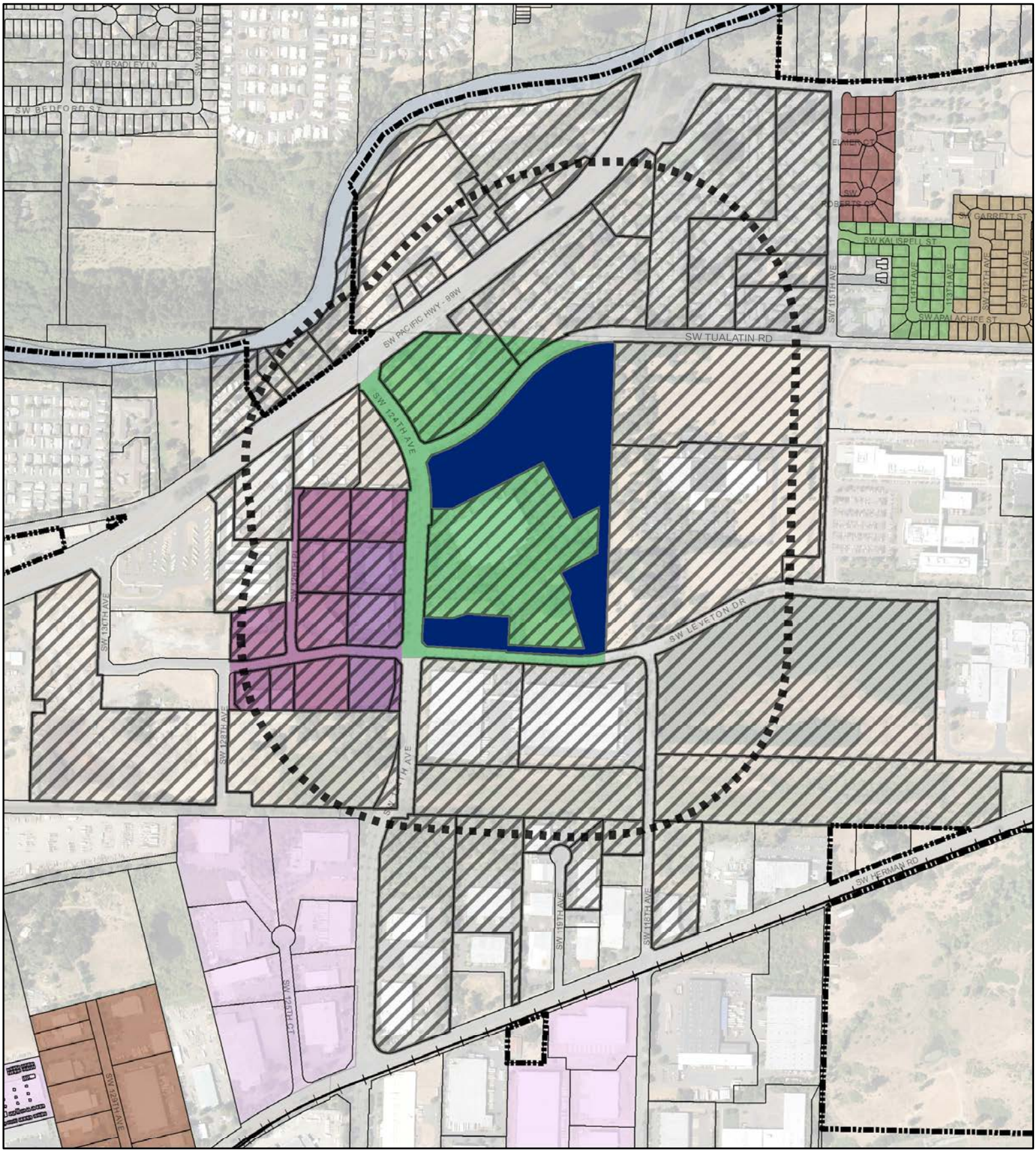
**Ty Darby | Deputy Fire Marshal**
Tualatin Valley Fire & Rescue
Direct: 503-259-1409
www.tvfr.com

---

**From:** Karl Koroch [mailto:KKoroch@tmrippey.com]
**Sent:** Friday, December 01, 2017 12:12 PM

# Mailing List - TLID 2S122B001100

TUALGIS




1000' Buffer

Selected Taxlots

N
W E
S

| TLID | OWNER1 | OWNER2 |
|---|---|---|
| 2S115C001600 | CR RIVERCREST MEADOWS | COMMUNITIES LLC |
| 2S115C001700 | CR RIVERCREST MEADOWS | COMMUNITIES LLC |
| 2S115C001800 | ROAMER'S REST R V PARK LLC | |
| 2S115C002000 | DUE NORTH PROPERTIES LLC | |
| 2S115C002001 | EXPRESSIONS FUTONS & FURNITURE I | |
| 2S115C002190 | LANKARANI REZA & | PAKSERESHT FARAH |
| 2S115C002192 | LANKARANI REZA & | PAKSERESHT FARAH |
| 2S115C002200 | PACIFIC OUTDOOR ADVERTISING | |
| 2S115C002202 | TUALATIN CITY OF | |
| 2S115C002203 | CASEY SEAN P | |
| 2S115C002300 | MWIC TUALATIN LLC | BY MOUTAIN WEST INVESTMENT CORP |
| 2S115C002802 | APOSTOLIC LUTHERAN CHURCH | OF PORTLAND |
| 2S115C002803 | TUALATIN WOODS LLC | |
| 2S115CC00100 | WOODRIDGE LIMITED PARTNERSHIP | THREE CENTERPOINTE DR #130 |
| 2S115CC00200 | WOODRIDGE LIMITED PARTNERSHIP | THREE CENTERPOINTE DR #130 |
| 2S116D001400 | OSBORNE ROBERT | |
| 2S121A000101 | KENNEDY JONATHAN | |
| 2S121A000102 | WATSON J DOUGLAS | MARILYN J |
| 2S121A000200 | KENNEDY JONATHAN & CARMEN | |
| 2S121A000300 | NICHOLS DOROTHY D TRUST | BY RHONDA BARBOUR TR |
| 2S121A002100 | GRIMM'S FUEL CO | |
| 2S121A002102 | TUALATIN CITY OF | |
| 2S121A002300 | SPEIGHT LARRY G/MARGARET I TRS | c/o VOSS ANDREW J & ERICA B |
| 2S121A002400 | MCCULLOCH GRANT H & SHIRLEY A | REVOCABLE LIVING TRUST |
| 2S121A002600 | TUALATIN STORAGE LLC | |
| 2S121A003200 | SKYPORT PROPERTIES OF OREGON LLC | |
| 2S121A003300 | HENDERSON PROPERTIES LLC | |
| 2S121A003400 | TWO IN THE KEY LLC | |
| 2S121A003500 | TUALATIN CITY OF | |
| 2S121A003600 | PAZODA HOLDINGS LLC | |
| 2S121A003700 | HAN ZIYE & | XU YU |
| 2S121A003800 | 18420 SW PLACE LLC | BY DAVID RONNENBERG |
| 2S121A003900 | LPKF DISTRIBUTION INC | |
| 2S121A004000 | DANA PROPERTIES LLC | |
| 2S121A004200 | GRAY ALFA LLC | |
| 2S121A004400 | JC VENTURES LLC | |
| 2S121A004500 | JC VENTURES LLC | |
| 2S1220000300 | PHIGHT LLC | ONE BOWERMAN DR |
| 2S1220000500 | WASHINGTON COUNTY | FACILITES MGMT |
| 2S122B000800 | WASHINGTON COUNTY | FACILITES MGMT |
| 2S122B000900 | DISTRIBUTION PLUS INC | BY EUROBEST FOOD INDUSTRIES INC |
| 2S122B001000 | IDM-OREGON LLC | |
| 2S122B001100 | MITTLEMAN PROPERTIES | BY GVA KIDDER MATHEWS |
| 2S122B001200 | MITTLEMAN PROPERTIES | BY GVA KIDDER MATHEWS |
| 2S122BA00100 | JAE OREGON INC | ACCOUNTING DEPT |
| 2S122BA00200 | JAE OREGON INC | ACCOUNTING DEPT |
| 2S122BB00100 | QUEST GROUP TRUST VIII | BY UNION BANK OF CALIFORNIA |
| 2S122BB00200 | BLAKESLEE PROPERTIES LLC | |
| 2S122C000300 | MAJNARICH FAMILY LTD PTNSHP | |
| 2S122C000604 | CLOWN NOSE PROPERTIES LLC | |
| 2S122C000801 | SILVEY LLC | |
| 2S122C001900 | WETLANDS CONSERVANCY INC THE | |
| 2S122C002800 | H2A INVESTMENTS LLC | |
| 2S122C002900 | H2B INVESTMENTS LLC | |

| OWNER3 | OWNERADDR | OWNERCITY | OWNERSTATE | OWNERZIP |
|---|---|---|---|---|
| BY COLRICH | 444 WEST BEECH ST #300 | SAN DIEGO | CA | 92101-2942 |
| BY COLRICH | 444 WEST BEECH ST #300 | SAN DIEGO | CA | 92101-2942 |
| | 19542 SW ALDERWOOD CT | ALOHA | OR | 97003 |
| | 17725 SW PACIFIC HWY | TUALATIN | OR | 97062-6955 |
| | 17705 SW PACIFIC HWY | TUALATIN | OR | 97062-6955 |
| | 3944 CROISAN MT DR S | SALEM | OR | 97302-3644 |
| | 3944 CROISAN MT DR S | SALEM | OR | 97302-3644 |
| | 715 NE EVERETT ST | PORTLAND | OR | 97232-2724 |
| | 18880 SW MARTINAZZI AVE | TUALATIN | OR | 97062-7092 |
| | 456 N STATE ST | LAKE OSWEGO | OR | 97034-3113 |
| | 201 FERRY ST SE #400 | SALEM | OR | 97301-3775 |
| | PO BOX 23312 | TIGARD | OR | 97281-3312 |
| | 4632 SW VERMONT ST | PORTLAND | OR | 97219-1054 |
| | | LAKE OSWEGO | OR | 97035 |
| | | LAKE OSWEGO | OR | 97035 |
| | PO BOX 687 | NEWBERG | OR | 97132-0687 |
| | 13685 SW NAHCOTTA DR | TIGARD | OR | 97223-5776 |
| | 18081 SW PACIFIC HWY | TUALATIN | OR | 97062-6969 |
| | 13685 SW NAHCOTTA DR | TIGARD | OR | 97223-5776 |
| | 7410 SW OLESON RD #424 | PORTLAND | OR | 97223-7475 |
| | 18850 SW CIPOLE RD | TUALATIN | OR | 97062-6935 |
| | 18880 SW MARTINAZZI AVE | TUALATIN | OR | 97062-7092 |
| | 18230 SW PACIFIC HWY | TUALATIN | OR | 97062-6964 |
| | 12905 SW WATKINS | TIGARD | OR | 97223-3896 |
| | 14855 SE 82ND DR | CLACKAMAS | OR | 97015-7624 |
| | PO BOX 2775 | TUALATIN | OR | 97062-2775 |
| | 12451 SW LEVETON DR | TUALATIN | OR | 97062-6066 |
| | PO BOX 1299 | TUALATIN | OR | 97062-1299 |
| | 18880 SW MARTINAZZI AVE | TUALATIN | OR | 97062-7092 |
| | 18348 SW 126TH PL | TUALATIN | OR | 97062-6078 |
| | 10755 SW NAEVE ST | TIGARD | OR | 97224-3542 |
| | 11292 WESTERN AVE | STANTON | CA | 90680-2912 |
| | 12555 SW LEVETON DR | TUALATIN | OR | 97062-6073 |
| | PO BOX 5837 | ALOHA | OR | 97006-0837 |
| | 18525 SW 126TH PL | TUALATIN | OR | 97062-6074 |
| | 19435 SW 129TH AVE | TUALATIN | OR | 97062-7070 |
| | 19435 SW 129TH AVE | TUALATIN | OR | 97062-7070 |
| | | BEAVERTON | OR | 97005 |
| | 169 N FIRST AVE #42 | HILLSBORO | OR | 97124-3001 |
| | 169 N FIRST AVE #42 | HILLSBORO | OR | 97124-3001 |
| | 12360 SW LEVETON DR | TUALATIN | OR | 97062-6001 |
| SUITE #F | 4200 SE COLUMBIA WAY | VANCOUVER | WA | 98661-5572 |
| ONE SW COLUMBIA ST #950 | | PORTLAND | OR | 97258 |
| ONE SW COLUMBIA ST #950 | | PORTLAND | OR | 97258 |
| | 11555 SW LEVETON | TUALATIN | OR | 97062-6000 |
| | 11555 SW LEVETON | TUALATIN | OR | 97062-6000 |
| | 1 SW COLUMBIA ST STE 1100 | PORTLAND | OR | 97258-2012 |
| | PO BOX 1450 | SHERWOOD | OR | 97140-1450 |
| | 8338 SW 11TH AVE | PORTLAND | OR | 97219-4370 |
| | PO BOX 23456 | PORTLAND | OR | 97281-3456 |
| | P O BOX 205 | TUALATIN | OR | 97062-0205 |
| | 4640 SW MACADAM AVE #50 | PORTLAND | OR | 97239-4283 |
| | 14240 NW HARVEST LN | PORTLAND | OR | 97229-3671 |
| | 14240 NW HARVEST LN | PORTLAND | OR | 97229-3671 |

MILDREN DESIGN GROUP, P.C.
ARCHITECTURE ▪ SPACE PLANNING
7650 S.W. Beveland, Suite 120
Tigard, Oregon 97223
Voice: 503-244-0552 Fax 503-244-0417

# MEMO

To: City of Tualatin Date: October 6, 2017

Attention: **Charles Benson**

Copy to:

Project Name: **Mittleman Properties at Leveton Business Park** Project Number: 116190

Subject: Neighborhood Meeting Notes

There was a Neighborhood Meeting held on Tuesday, September 12th, at 6:00 PM at the Juanita Pohl Center in the Large Classroom at 8513 SW Tualatin Rd, Tualatin Oregon. There was a mailing that was provided to property owners per a list provided by the City of Tualatin. The meeting held was to discuss a proposed project located at 12100 SW Leveton Avenue, Tualatin Oregon on the east side of 124th just south of SW Tualatin Road and just north of SW Leveton Drive. The proposal is for a new 43,660 SF concrete tilt up building and the associated parking and landscaping.

The purpose of this meeting was to provide a means for the applicant and surrounding property owners to meet and discuss this proposal and identify any issues regarding this proposal. There were no attendees at the meeting.

Signed: Curt Trolan

P:\116190 Mittleman Properties at Leveton Business Park\wp\memo.Neighborhood Meeting Notes.wpd

MILDREN DESIGN GROUP, P.C.
Architecture • Space Planning

August 24, 2017

RE: Mittleman Properties at Leveton Business Park

Dear Property Owner:

You are cordially invited to attend a meeting on Tuesday, September 12th, at 6:00 PM and at the Juanita Pohl Center in the Large Classroom at 8513 SW Tualatin Rd, Tualatin Oregon. This meeting shall be held to discuss a proposed project located at 12100 SW Leveton Avenue, Tualatin Oregon on the east side of 124th just south of SW Tualatin Road and just north of SW Leveton Drive. The proposal is for a new 43,660 SF concrete tilt up building and the associated parking and landscaping.

The purpose of this meeting is to provide a means for the applicant and surrounding property owners to meet and discuss this proposal and identify any issues regarding this proposal.

Regards,

Curt Trolan
Mildren Design Group
503-244-0552
curt@mdgpc.com

7650 SW Beveland Street, Suite 120
Tigard, Oregon 97223
503 244 0552 Fax 503 244 0417

MILDREN DESIGN GROUP, P.C.
Architecture • Space Planning

September 26, 2017

RE: Mittleman Properties at Leveton Business Park

Dear City of Tualatin Community Development Director, City Engineer and Tualatin Citizen Involvement Organization:

There was a Neighborhood Meeting held on Tuesday, September 12th, at 6:00 PM at the Juanita Pohl Center in the Large Classroom at 8513 SW Tualatin Rd, Tualatin Oregon. There was a mailing that was provided to property owners per a list provided by the City of Tualatin. The meeting held was to discuss a proposed project located at 12100 SW Leveton Avenue, Tualatin Oregon on the east side of 124th just south of SW Tualatin Road and just north of SW Leveton Drive. The proposal is for a new 43,660 SF concrete tilt up building and the associated parking and landscaping.

The purpose of this meeting was to provide a means for the applicant and surrounding property owners to meet and discuss this proposal and identify any issues regarding this proposal. There were no attendees at the meeting. We are providing the materials which were available for review at that meeting.

For any additional information please feel free to call or email and any questions or additional information can be provided.

Regards,

Curt Trolan
Mildren Design Group
503-244-0552
curt@mdgpc.com

7650 SW Beveland Street, Suite 120
Tigard, Oregon 97223
503 244 0552 Fax 503 244 0417

**Received: Monday, July 17, 2017 9:01 AM**
**From: Lynette Sanford <LSanford@tualatin.gov>**
**To: Charles Benson <cbenson@tualatin.gov>, Tony Doran <TDORAN@tualatin.gov>, Chris Ragland <cragland@tualatin.gov>, Melinda Anderson <manderson@tualatin.gov>, 'TVFR' <ty.darby@tvfr.com>, Paul Hennon <phennon@tualatin.gov>, Sou Souvanny <ssouvanny@tualatin.gov>, Rich Mueller <rmueller@tualatin.gov>, "gene@mdgpc.com" <gene@mdgpc.com>, Curt Trolan <curt@mdgpc.com>**
**Subject: Pre-App Meeting - Mittleman Properties at Leveton Business Park**
**Date: Mon, 17 Jul 2017 16:01:47 +0000**

**Attachment: 20170717091740513.pdf**

When: Monday, July 24, 2017 3:00 PM-4:00 PM (UTC-08:00) Pacific Time (US & Canada).
Where: Develop Service Conference Room

Note: The GMT offset above does not reflect daylight saving time adjustments.

*~*~*~*~*~*~*~*~*~*~*

# City of Tualatin

COMMUNITY DEVELOPMENT PLANNING DIVISION

# Pre-Application Meeting Request



The purpose of the Scoping and Pre-Application meetings is to offer early assistance in the land use and permitting process. This includes thoughtful feedback on preliminary design direction and visioning, outlining expectations, and to assist the applicant in attaining a complete application at first submittal.

## PROJECT DESCRIPTION

Project name/title: Mittleman Properties at Leveton Business Park

What is the primary purpose of this pre-application meeting (What would you like to accomplish)? (Attach additional sheets if needed.)

Review proposed use. See attachment for questions.

## PROPERTY INFORMATION

Property address/location(s): 19555 SW Leveton

Tax map and tax lot no.(s): W444584

Zoning: MP - Manufacturing Park

## PROPERTY OWNER/HOLDER INFORMATION

Name(s): Mittleman Properties
c/o: Kidder Mathews, Attention: Steven Klein

Address: One Columbia, Suite 950 Phone: 503-221-9900

City/state: Portland, Oregon Zip: 97258

## APPLICANT INFORMATION

Name: Mildren Design Group, P.C.

Address: 7650 SW Beveland Street, Suite 120 Phone: 503-244-0552

City/state: Tigard, Oregon Zip: 97223

Contact person: Gene Mildren

Phone: _____ Email: gene@mdgpc.com

### Pre-application Conference Information

All of the information identified on this form is required and must be submitted to the Planning Division with this application. Conferences are scheduled subject to availability and a minimum of two weeks after receiving this application and all materials. Pre-application conferences are one (1) hour long and are typically held on Mondays between the hours of 3-4 p.m. or Wednesdays between 2-4 p.m.

**If more than four (4) people are expected to attend the pre-application conference in your group, please inform the City in advance so that alternate room arrangements can be made to accommodate the group.**

### REQUIRED SUBMITTAL ELEMENTS

*(Note: Requests will not be accepted without the required submittal elements)*

☐ A complete application form and accompanying fee.

**1 hard copy and an electronic set of the following:**

☐ Preliminary site and building plans, drawn to scale, showing existing and proposed features. (Plans do not need to be professionaly prepared; just accurate and reliable.)

☐ A detailed narrative description of the proposal that clearly identifies the location, existing and proposed uses, and any proposed construction.

☐ A list of all questions or issues the applicant would like the City to address.

### FOR STAFF USE ONLY

Case No.: Pre 17-0014

Related Case No.(s): SC17-0003

Application fee: $220.00 ✓ pd

Application accepted:

By: _____ Date: 7-13-17

Date of pre-app: _____

Time of pre-app: _____

Planner assigned to pre-app: Charles

**What type of development are you proposing? (Check all that apply)**

[X] Industrial [ ] Commercial [ ] Residential [ ] Institutional [ ] Mixed-use

**Please provide a brief description of your project: (Attach additional sheets if needed.) Please include description of existing uses and structures in addition to what is proposed.**

Proposed speculative building shell. Currently the site is undeveloped.

**Are you familiar with the development process in Washington or Clackamas County or Tualatin?**

[X] Yes [ ] No

**If yes, please identify an example project:**

Franklin Business Park on SW 112th Avenue, Lakeside Lumber and Arlington Development on Tualatin Sherwood Road

**Are you familiar with the sections of the Tualatin Development Code (TDC) that pertain to your proposed development?**

[X] Yes [ ] No

**Is the property under enforcement action? If yes, please attached a notice of the violation.**

None to our knowledge.

**Please provide the names of City, TVF&R, CWS, and County staff with whom you have already discussed this proposal:**

Charles Benson III Planner, Tony Doran Engineering, Chris Ragland Building Official from Scoping Meeting

# Scoping Meeting Request

MILDREN DESIGN GROUP, P.C.
Architecture • Space Planning

To: City of Tualatin
Community Development Planning Division
Project #116190.00

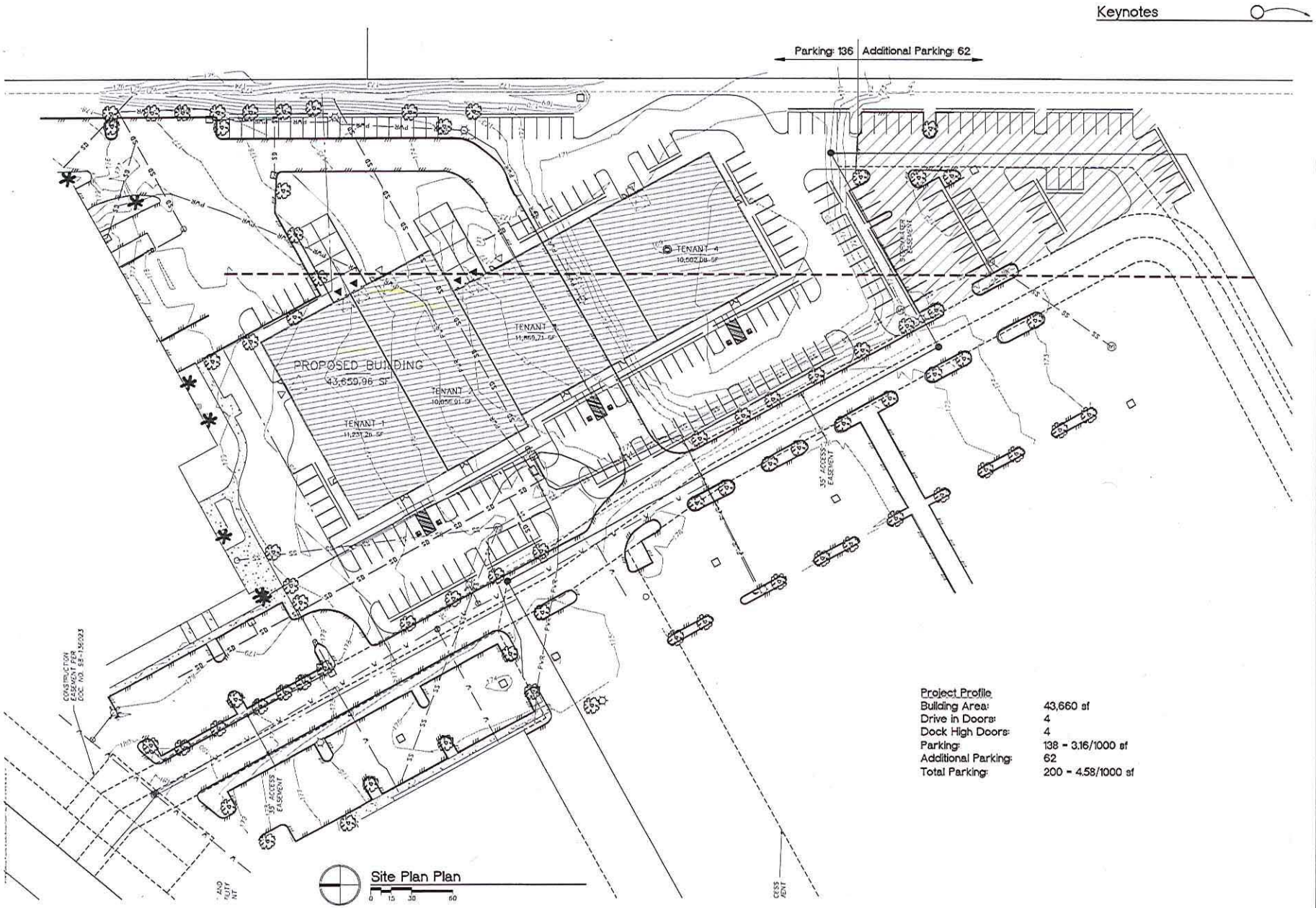
Date: July 12, 2017

Project Description (Continued):

1. How is the parking ratio determined provided the odd property line and proximity of the parking for the new building on an adjacent property?
2. How much latitude is there with the existing drive way or private road that runs adjacent to and in front of the new building?
3. Is there an architectural overlay district for the parcel?
4. Are there requirements for brick, reveals or other architectural features?
5. How is the landscape percentage to be addressed for this building? There is a large undeveloped portion, will that go towards landscaping?
6. Are any improvements to either of the two frontage roads required?
7. Are any storm/water/sanitary public extensions required?
8. Does the City have copies of storm drainage analysis prepared for the existing developments adjacent to this site and/or for the public infrastructure?
9. What records of the downstream storm systems can the City provide, what are the known deficiencies downstream?
10. Other than meeting current CWS requirements (per CWS R & O 07-20) will be required for storm runoff discharge flow control and/or storm treatment?
11. What is the process needed for CWS? How much is determined by the City and what is determined by CWS?
12. Is public sanitary sewer available to the site, are record drawings available, are there any capacity deficiencies?
13. Is public water available to the site for both domestic and fire protection use? Are record drawings available? What are available pressures and flows?
14. Where would new water meters and fire lines need to be connected? Is there a connection point close to the building or will it need to be in the ROW?
15. Is a transportation analysis required and if so, what is the scope of the analysis?
16. Are there any known environmentally sensitive areas on or abutting the site?



7650 SW Beveland Street, Suite 120
Tigard, Oregon 97223
503 244 0552 Fax 503 244 0417




**Project Profile**

| | |
|---|---|
| Building Area: | 43,660 sf |
| Drive in Doors: | 4 |
| Dock High Doors: | 4 |
| Parking: | 138 - 3.16/1000 sf |
| Additional Parking: | 62 |
| Total Parking: | 200 - 4.58/1000 sf |

Pre-Application Meeting - July 2017


MILDREN DESIGN GROUP, PC
ARCHITECTURE + SPACE PLANNING
7450 S.W. Breyman, Suite 120
Tigard, Oregon 97223-8602
(503) 244-0552


Client
Mittleman Properties

Project
Mittleman Properties at Leveton Business Park

Tualatin, Oregon

Sheet Title
Site Plan

Revisions



Date 13 July 2017
Drawn by CLT
Checked by
Job Number 116190
Sheet A1.1

# City of Tualatin

www.tualatinoregon.gov

## APPLICATION FOR ARCHITECTURAL REVIEW

| Direct Communication to: | | | |
|---|---|---|---|
| Name: Curt Trolan | | Title: Project Manager | |
| Company Name: Mildren Design Group, P.C. | | | |
| Current address: 7650 SW Beveland Street, Suite 120 | | | |
| City: Tigard | State: Oregon | | ZIP Code: 97223 |
| Phone: 503- 244-0417 | Fax: | Email: curt@mdgpc.com | |

| Applicant | | | |
|---|---|---|---|
| Name: Curt Trolan | | Company Name: Mildren Design Group, P.C. | |
| Address: 7650 SW Beveland Street, Suite 120 | | | |
| City: Tigard | State: Oregon | | ZIP Code: 97223 |
| Phone: 503- 244-0417 | Fax: | Email: curt@mdgpc.com | |
| Applicant's Signature: | | Date: | |

| Property Owner | | | |
|---|---|---|---|
| Name: Mittleman Properties | | | |
| Address: 1585 Coast Walk | | | |
| City: La Jolla | State: California | | ZIP Code: 92037 |
| Phone: | Fax: | Email: hhaimshon@gmail.com | |
| Property Owner's Signature: | | Date 9/27/2017 | |
| (Note: Letter of authorization is required if not signed by owner) | | | |

| Architect | | | |
|---|---|---|---|
| Name: Mildren Desgn Group, PC | | | |
| Address: 7650 SW Beveland Street, Suite 120 | | | |
| City: Tigard | State: Oregon | | ZIP Code: 97223 |
| Phone: 503- 244-0417 | Fax: | Email: curt@mdgpc.com | |

| Landscape Architect | | | |
|---|---|---|---|
| Name: AAI Engineering | | | |
| Address: 4875 SW Griffith Drive, Suite 200 | | | |
| City: Beaverton | State: Oregon | | ZIP Code: 97005 |
| Phone: 503- 620-3030 | Fax: | Email: yoshiy@aaieng.com | |

| Engineer | | | |
|---|---|---|---|
| Name: TM Rippey Consulting Engineers | | | |
| Address: 7650 SW Beveland Street, Suite 100 | | | |
| City: Tigard | State: Oregon | | ZIP Code: 97223 |
| Phone: 503- 443-3900 | Fax: | Email: kkoroch@tmrippey.com | |

| Project | | | |
|---|---|---|---|
| Project Title: Mittleman Properties at Leveton Business Park | | | |
| Address: 12100 SW Tualatin Road | | | |
| City: Tualatin | State: Oregon | | ZIP Code: 97062 |
| Brief Project Description: Multi-tenant concrete tilt up building with associated parking and landscaping. | | | |
| Proposed Use: Warehouse, industrial, office | | | |

REPUBLIC SERVICES

10295 SW Ridder Road, Wilsonville, OR 97070
O: 503.570.0626 F: 503.982.9307 republicservices.com

September 27, 2017

Curt Trolan
Mildren Design Group P.C.
7650 SW Beveland St.
Suite 120
Tigard, OR 97223

Re: Mittleman Properties 116190

Dear Curt;

Thank you, for sending us the final site plans for this proposed building in Tualatin.

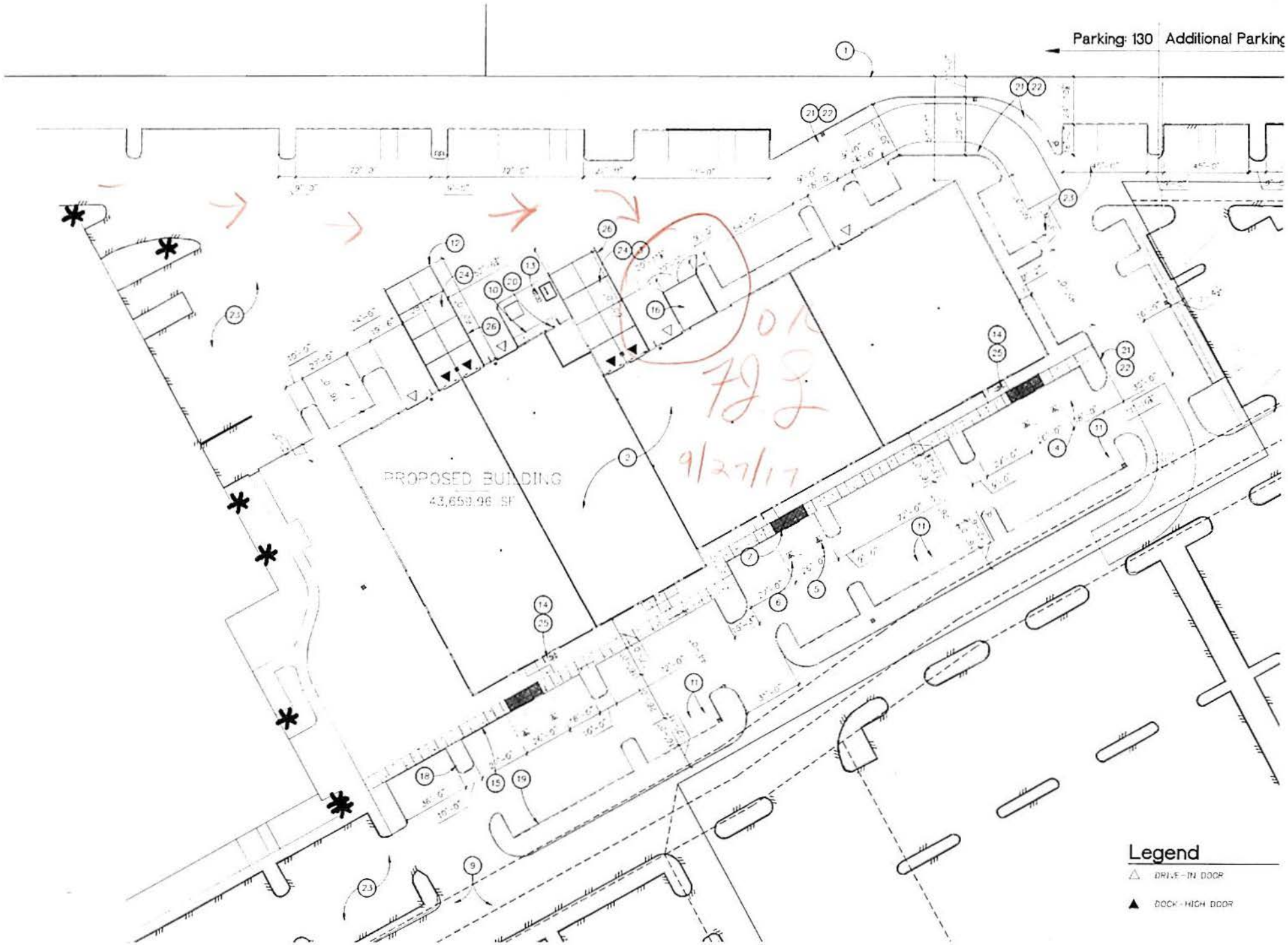
My Company: Republic Services of Clackamas & Washington Counties has the franchise agreement to service this area with the City of Tualatin. We will provide complete commercial waste removal and recycling services as needed on a weekly basis for this location.

The location of the enclosure looks very accessible for my trucks. It looks like we will be able to enter and exit in a very safe manner. Thank you for increasing the front gate openings, and the size of the enclosure to 20 feet. My containers will fit fine within.

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

Sincerely,

Frank J. Lonergan
Operations Manager
Republic Services Inc.


Parking: 130 Additional Parking
PROPOSED BUILDING
43,659.96 SF
Legend
DRIVE-IN DOOR
DOCK-HIGH DOOR

MACKENZIE.

DESIGN DRIVEN I CLIENT FOCUSED


Expires 12-31-2017

# TRANSPORTATION IMPACT STUDY

**To**
City of Tualatin

**For**
Mittleman Properties at
Leveton Business Park

**Dated**
November 27, 2017

**Project Number**
2170617.00

MACKENZIE
Since 1960

RiverEast Center | 1515 SE Water Ave, Suite 100, Portland, OR 97214
PO Box 14310, Portland, OR 97293 | T 503.224.9560 | www.mcknze.com

## TABLE OF CONTENTS

## LIST OF TABLES



## LIST OF FIGURES (SEE APPENDIX A)

## EXECUTIVE SUMMARY

This Transportation Impact Study (TIS) has been prepared in support of the proposed Mittleman Properties Leveton Industrial Building in Tualatin, Oregon. Figure 1 in Appendix A presents a vicinity map indicating the project location.

### Project Description

- The proposed development is a 43,660-square-foot SF industrial building.
- The property is located within the 32.18-acre Mittleman Properties Industrial Master Plan which currently includes three (3) existing buildings east of SW 124th avenue, north of SW Leveton Drive, and south of SW Tualatin Road.
- Access to the site is currently provided via three (3) existing driveways on SW Tualatin Road and one (1) driveway on SW Leveton Drive.

### Existing Conditions

- The site has direct access on a Minor Arterial street, SW Leveton Drive, and a Major Collector Street, SW Tualatin Road.
- The study area has nearly complete bicycle and pedestrian networks.
- The study area is served by TriMet bus lines 93 and 94 with bus stops on OR 99W, and the Tualatin Shuttle with a bus stop on SW Leveton Drive.
- Turning movement counts were collected Tuesday, November 7, 2017, during the AM and PM peak periods.
- Existing traffic volumes on OR 99W were seasonally adjusted based on a commuter trend per ODOT's *Analysis Procedures Manual.*
- Five years of historical crash data did not show significant patterns or unexpected behaviors in the study area intersection and all intersections have crash rates below ODOT's 90th percentile crash rates by type of intersection.
- All study area intersections currently operate within City and ODOT mobility standards.
- Traffic simulations indicate that two intersections have queues that currently exceed available storage: OR 99W at SW 124th Avenue and SW 124th Avenue at SW Tualatin Road; however, field observations of highway operations indicate that the simulations appear to overestimate queuing during the AM peak hour.

### Pre-Development Conditions

- A linear 2% annual growth rate was applied to the 2017 seasonally adjusted traffic volumes to estimate 2019 background traffic.
- Traffic volumes for the Leveton Industrial Building and Ruth T. LLC developments were included in the analysis to account for in-process traffic.
- The City of Tualatin Capital Improvement Plan 2018-2027 (CIP) did not include any planned transportation improvements in the study area.
- All study area intersections are expected to operate within City and ODOT mobility standards under pre-development conditions.

- Pre-development queues will generally increase by no more than one (1) to two (2) vehicles but traffic simulations indicate the north/eastbound queue on OR 99W could increase by almost 500 feet primarily due to background traffic growth.

## Site Development

- Trip generation for the 43,660 SF building was estimated using the "General Light Industrial" (LUC 110) land use in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition.*
- Site trip generation is estimated at 24 AM peak hour, 21 PM peak hour and 223 daily trips.

## Site Access and Circulation

- The proposed development will have access to three (3) existing full-movement driveways located on SW Tualatin Road and one (1) existing full-movement driveway on SW Leveton Drive that are shared with three (3) existing buildings in the 32.18-acre Industrial Master Plan site.
- The existing driveways for the site meet the driveway width and spacing standards as well as access management standards.
- Parking will be provided on three (3) sides of the building (east, west, and south), and truck loading will be provided on the east side of the building.
- All four (4) site driveways meet the stopping sight distance requirement and most meet the recommended intersection sight distance requirement; curvature of SW Tualatin Road affects the available sight distance at the Center driveway looking to the east and the East driveway looking to the west but both driveways have sightlines exceeding the stopping requirement.

## Post-Development Conditions

- All study area intersections are expected to operate within City and ODOT mobility standards under post-development conditions.
- Although the site will add some traffic to the OR 99W at SW 124th Avenue and SW 124th Avenue at SW Tualatin Road intersections, queues under 2019 post-development conditions are not anticipated to lengthen over pre-development conditions; thus, no impact is anticipated.

## Mitigation and Recommendations

- The proposed industrial development will not exceed City or ODOT operational standards in the study area under the 2019 post-development conditions; therefore, no improvements are required or recommended with the project based on operations, or queueing.
- The crash history did not show any significant patterns or unexpected behaviors at either the study area intersections or the existing site driveways; therefore, no safety improvements are necessary.
- None of the unsignalized intersections in the study area meet the criteria for a traffic signal.
- Although the West site access does warrant consideration of a right-turn lane, the safety and operational benefits of a right-turn lane are expected to be minimal; the construction would impact existing landscaping, drainage facilities, and street lighting, and unnecessarily increase impervious surface.

# I. INTRODUCTION

This Transportation Impact Study (TIS) has been prepared in support of the proposed Mittleman Properties at Leveton Business Park in Tualatin, Oregon. Figure 1 in Appendix A presents a vicinity map indicating the project location.

## Project Description

The proposed development is a 43,660-square-foot SF industrial building within the 32.18-acre Industrial Master Plan (IMP), Mittleman Properties at Leveton Business Park, which is located east of SW 124th avenue, north of SW Leveton Drive, and south of SW Tualatin Road. The site itself is part of a 17.48-acre parcel (tax lot #1100 on map 2S1 22B) with an address of 12100 SW Tualatin Road. Zoning is Manufacturing Park (MP). Access will be shared with three existing buildings via three full-movement driveways on SW Tualatin Road and one (1) full-movement driveway on SW Leveton Drive.

## Scope of Analysis

This TIS has been prepared in accordance with the *City of Tualatin Traffic Study Requirements,* Tualatin Development Code (TDC), Section 74.440, and ODOT's *Analysis Procedures Manual* (APM). This study includes a summary of existing traffic conditions, crash review, proposed trip generation, and an analysis of intersection operations, sight distance, queuing, and signal and turn-lane warrants.

A TIS scoping letter dated November 3, 2017, was submitted to City and ODOT staff, and approved in a November 8, 2017, email, with revisions. The scoping letter and corresponding communications are provided in Appendix B.

### *Study Area*

The City's *Traffic Study Requirements* document requires all intersections with a 1/4-mile radius of the project site be included as part of the study area. The following intersections are located within the 1/4-mile radius and were included in the study area:

- OR 99W (Pacific Highway W)/SW 124th Avenue
- SW 124th Avenue/SW Tualatin Road
- SW Tualatin Road/West Site Access
- SW Tualatin Road/Center Site Access
- SW Tualatin Road/East Site Access
- SW 124th Avenue/SW Leveton Drive
- SW Leveton Drive/Site Access
- SW Leveton Drive/SW 118th Avenue

Washington County requires analysis for all intersections where project trips will exceed 10% of the existing average daily traffic (ADT). No Washington County intersections were found to meet this threshold.

The OR 99W/SW 124th Avenue intersection is maintained and operated by ODOT. All intersections in the study area are located within the City of Tualatin.

### *Analysis Scenarios*

Within the study area, the TIS addresses AM and PM peak hour conditions for the following analysis scenarios:

- 2017 Existing (Seasonally Adjusted)
- 2019 Pre-Development without proposed building
- 2019 Post-Development with proposed building

## II. EXISTING CONDITIONS

The existing conditions analysis is based on a current year 2017 inventory of transportation facilities and traffic data.

### Site Conditions

The project site is in Tualatin, Oregon within the Portland metropolitan area. The site is part of a 17.48-acre parcel zoned Manufacturing Park (MP) and is part of the 32.18-acre Mittleman Properties Industrial Master Plan. The parcel is identified as tax lot #1100 on map 2S1 22B with a street address of 12100 SW Tualatin Road.

Access to the site is provided via three (3) existing full-movement driveways on SW Tualatin Road and one (1) existing driveway on SW Leveton Drive. All driveways are currently shared with the tax lot's two (2) existing buildings and a third building located on the adjacent tax lot (#1200).

### Vehicular Transportation Facilities

Figure 3 presents existing lane configurations and traffic control devices for the eight (8) study area intersections. Table 1 below summarizes roadway characteristics within the study area.

**TABLE 1 – ROADWAY CHARACTERISTICS**

| Roadway | Functional Classification | Posted Speed | Travel Lanes | Bike Lanes | On-Street Parking | Sidewalks |
|---|---|---|---|---|---|---|
| OR 99W (Pacific Highway W) | Major Arterial/ (Urban Principal Arterial) | 45/55 mph | 4 | Yes | None | Sporadic |
| SW 124th Avenue | Major Arterial | 45 mph | 4/5 | Yes | None | Yes |
| SW Tualatin Road | Major Collector | 35 mph | 3 | Yes | None | Yes |
| SW Leveton Drive | Minor Arterial | 35/40 mph | 2 | Yes | None | Yes |

### Pedestrian and Bicycle Facilities

The study area has nearly complete bicycle and pedestrian networks. Clearly marked bike lanes are provided on all study area roadways. Sidewalks are also provided on all study area roadways except on OR 99W where segments of sidewalks have been constructed with recent development but the network is incomplete.

### Transit Facilities

The study area is served by TriMet bus lines 93 and 94 and the Tualatin Shuttle.

TriMet bus lines 93 and 94 have stops on OR 99W east and west of SW 124th Avenue approximately 0.35 miles from the proposed building. TriMet bus line 93 service is provided weekdays, Saturdays, and Sundays between the Tigard Transit Center and Sherwood. Headways during peak hours are about 30

minutes every day. TriMet bus line 94 service is provided weekdays between Portland city center and Sherwood. Headways during peak hours are about 45 minutes on weekdays.

The Blue Line of the Tualatin Shuttle serves SW 124th Avenue and SW Leveton Drive with a stop on SW Leveton Drive just south of the site access, approximately 1,000 feet from the proposed building. The Blue Line travels to and from the Westside Express Service (WES) station between about 5:30 AM and 7:00 PM on weekdays.

Transit maps and bus schedules are provided in Appendix C.

## Existing Traffic Counts

Turning movement counts were collected Tuesday, November 7, 2017, during the AM and PM peak periods. Figure 4 presents the existing AM and PM peak hour traffic volumes. Raw traffic count summaries are provided in Appendix D.

### *Seasonal Adjustment*

OR 99W is a state facility which requires a seasonal adjustment as specified in the APM. There is no seasonal adjustment data available for this location are there is no nearby Automatic Traffic Recorder (ATR). Therefore, a seasonal adjustment of 1.07 derived from data presented in ODOT's 2016 Seasonal Trend Table for the "Commuter" trend was applied to 2017 existing through traffic volumes on OR 99W. The seasonal adjustment calculation is provided in Appendix E.

Figure 5 presents the seasonally-adjusted AM and PM peak hour traffic volumes.

## Crash Analysis

Historical crash data reported for the study area intersections were evaluated to identify patterns that might indicate a safety concern. Crash data for the 5-year period of 2011 through 2015 were obtained from ODOT's online crash data system and used to review crash patterns and estimate intersection crash rates.

The crash evaluation is summarized in Table 2. The raw crash data are provided in Appendix F.

| TABLE 2 – INTERSECTION CRASH RATES | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Intersection (ODOT Traffic Control Type) | Year | | | | | Total Crashes | ADT | Crash Rate | 90th Percentile Rate |
| | 2011 | 2012 | 2013 | 2014 | 2015 | | | | |
| OR 99W/ SW 124th Avenue (3SG) | 5 | 7 | 3 | 5 | 3 | 23 | 45,500 | 0.28 | 0.509 |
| SW 124th Avenue/ SW Tualatin Road (3SG) | 6 | 1 | 0 | 0 | 3 | 10 | 23,100 | 0.24 | 0.509 |
| SW Tualatin Road/ West Site Access (4ST) | 0 | 0 | 0 | 0 | 0 | 0 | 11,500 | 0.00 | 0.408 |
| SW Tualatin Road/ Center Site Access (4ST) | 0 | 0 | 0 | 0 | 0 | 0 | 11,000 | 0.00 | 0.408 |
| SW Tualatin Road/ East Site Access (4ST) | 0 | 1 | 0 | 0 | 0 | 1 | 11,300 | 0.05 | 0.408 |
| SW 124th Avenue/ SW Leveton Drive (4SG) | 1 | 0 | 0 | 0 | 1 | 2 | 14,300 | 0.08 | 0.860 |
| SW Leveton Drive/ Site Access (4ST) | 0 | 0 | 0 | 0 | 0 | 0 | 6,100 | 0.00 | 0.408 |
| SW Leveton Drive/ 118th Avenue (4ST) | 0 | 0 | 0 | 0 | 2 | 2 | 6,100 | 0.18 | 0.408 |

### *Crash Data Summary*

Thirty-five (35) crashes were reported at the study area intersections in the 5-year analysis period. None resulted in a fatality or severe injury (Type A) and none involved pedestrians or bicycles.

Analysis of crash types shows:

- Most crashes occurred at the OR 99W/SW 124th Avenue intersection. Twenty (20) of the crashes at this location were reported as rear-end collisions with 11 in the north/eastbound direction on OR 99W and nine (9) in the south/westbound direction. This pattern is consistent with signalized intersection control.
- Of the 10 crashes at the SW 124th Avenue/SW Tualatin Road intersection, four (4) were reported as turning movement collisions and four (4) were reported as fixed-object collisions. All the fixed-object collisions involved vehicles making a southbound left turn with speed as factor in the collision; two (2) of the drivers had suspended licenses.

- Only two (2) crashes were reported at the SW 124th Avenue/SW Leveton Road intersection: one (1) rear-end involving southbound vehicles and one (1) turning movement collision between a southbound left-turning vehicle and a northbound vehicle.
- Two (2) crashes were reported at the SW Leveton Drive/SW 118th Avenue intersection: one (1) was a rear-end collision involving two (2) eastbound vehicles, and one (1) was a fixed-object collision involving one (1) northbound left-turning vehicle.
- No crashes in the 5-year period involved any site traffic. However, there was one (1) crash reported in 2012 involving a westbound right-turning vehicle opposite the East Site Access on SW Tualatin Road.

### *Intersection Crash Rates*

Intersection crash rates were calculated as a measure of the number of crashes occurring per one million entering vehicles (MEV) per year. The intersection crash rate is calculated by dividing the average number of crashes per year by the MEV per year. An average daily traffic (ADT) volume was estimated by dividing the PM peak hour volume at each intersection by a peak-to-daily factor, or k-factor of 0.09, derived from ODOT's 2015 ADT volume on OR 99W just west of SW 124th Avenue and PM peak hour count at the same location.

All intersections have crash rates below ODOT's 90th percentile crash rates by type of intersection.

## III. PRE-DEVELOPMENT CONDITIONS

The pre-development conditions reflect build-out year conditions without the proposed development. This scenario includes seasonally adjusted traffic from the 2017 existing condition, background traffic growth to year 2019, and in-process traffic from other approved developments. The pre-development traffic without the project trips will indicate if traffic issues are present before the addition of the proposed development.

### Background Traffic Growth

Background traffic was applied to existing (seasonally adjusted) traffic volumes to forecast future traffic demand. A linear 2% annual growth rate was applied to 2017 seasonally adjusted traffic volumes to estimate 2019 background traffic. Background growth was applied to all movements at all intersections, except for driveways. Figure 6 presents the background growth from 2017 to 2019 for the AM and PM peak hours.

### In-Process Traffic

In-process traffic volumes account for developments that have been approved or that are under construction at the time of a traffic study. These traffic volumes account for traffic that will be added to the external roadway network before buildout of the proposed development.

Traffic volumes for the Leveton Industrial building and Ruth T. LLC developments were included in the analysis to account for in-process traffic. Figure 7 presents the in-process traffic volumes for the AM and PM peak hours. The supporting documentation for in-process developments is provided in Appendix G.

### Pre-Development Traffic

The 2019 pre-development analysis scenario is a combination of 2017 seasonally adjusted traffic, background growth of 2% for two (2) years, and in-process traffic. Figure 8 presents the 2019 pre-development traffic volumes for the AM and PM peak hours.

### Planned Transportation Improvements

The City of Tualatin Capital Improvement Plan 2018-2027 (CIP) was reviewed for any planned transportation improvements. No planned transportation improvements were found in the area. Therefore, no future improvements were assumed in the pre-development scenario of this analysis.

## IV. SITE DEVELOPMENT

The trip-making characteristics of the proposed development are described below.

### Trip Generation

The proposed 43,660 SF industrial use building will offer about 17,460 SF of manufacturing space, 15,280 SF of warehousing space, and 10,920 SF of office space. Trip generation estimates were developed with the use of the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition.* The City requires the reasonable worst case for trip generation be analyzed. Therefore, data for ITE's "General Light Industrial" (LUC 110) land use was utilized to estimate trips for the proposed development. Table 3 presents the trip generation estimates for the proposed industrial use development.

**TABLE 3 – TRIP GENERATION**

| ITE Code | ITE Land Use | Size | Trip Type | AM Peak Hour | | | PM Peak Hour | | | Daily |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | In | Out | Total | In | Out | Total | |
| 110 | General Light Industrial | 43.66 KSF | Total | 21 | 3 | 24 | 3 | 18 | 21 | 223 |

### Trip Distribution and Assignment

Trip distribution for the proposed development was assumed to be similar as that presented in the Leveton Industrial Building traffic study dated June 2, 2017, prepared by Lancaster Engineering. The site for this project is on SW Leveton Drive, diagonally across SW 124th Avenue from the Mittleman Properties at Leveton Business Park. The trip distribution was adjusted slightly to account for better access to SW Tualatin Road. The following trip distribution was assumed in the analysis:

- 20% to/from the west on OR 99W (Pacific Highway W)
- 25% to/from the east on OR 99W (Pacific Highway W)
- 20% to/from the east on SW Tualatin Road
- 10% to/from the east on SW Leveton Drive
- 25% to/from the south on SW 124th Avenue

Figure 9 presents the trip distribution and site-generated traffic assignment for the AM and PM peak hours.

### Post-Development Traffic

Post-development traffic volumes are the sum of the project trips and the pre-development traffic volumes. Figure 10 presents the 2019 post-development traffic volumes for the AM and PM peak hours.

## V. SITE ACCESS AND CIRCULATION

The on-site evaluation of traffic access and circulation and a review of sight distance at the existing site driveways are presented below.

### Site Access

The proposed development will have access to three (3) existing full-movement driveways located on SW Tualatin Road and one (1) existing driveway on SW Leveton Drive. Currently, these driveways are shared with the existing two (2) buildings on the subject tax lot and the adjacent building on tax lot #1200.

#### *Access Standards*

The TDC includes several sections related to access standards. Section 73.400 of the Community Design Standards (Chapter 73) presents access standards relative to driveway widths and spacing on the site. Chapter 75 provides standards for access management. Table 4 summarizes the existing driveway width and spacing measurements.

**TABLE 4 – ACCESS SUMMARY**

| Access | Functional Classification | Driveway Width (feet) | On-Site Access Measurement/Standard Edge-to-Edge (feet) | | Access Management Measurement/Standard Centerline-to-Centerline (feet) | |
|---|---|---|---|---|---|---|
| | | | To West | To East | To West | To East |
| SW Tualatin Road | | | | | | |
| West | Major Collector | 32 | 530/150 | 185/40 | 570/100 | 220/100 |
| Center | | 32 | 185/40 | 410/40 | 220/100 | 460/100 |
| East | | 24 | 410/40 | 45/5 | 460/100 | 1,250/100 |
| SW Leveton Drive | | | | | | |
| Site | Minor Arterial | 36 | 490/150 | 475/5 | 570/Existing | 730/Existing |

Per TDC 73.400 (12), minimum pavement width for industrial driveways is 36 feet for first 50 feet of ROW and 24 feet thereafter with a maximum driveway width of 40 feet per TDC 73.400 (13)(a). The existing driveways for the site meet these standards.

On-site access or driveway spacing is also specified in TDC 73.400. Driveways must be located at least 150 feet from the intersection of collector or arterial streets per TDC 73.400 (15)(a). Additionally, driveways must be at least 5 feet from an adjacent property line per TDC 73.400 (14)(b) with a minimum distance of 40 feet between on-site driveways per TDC 73.400 (14)(c). The existing driveways meet these standards.

The City's access management standards are listed in the Transportation System Plan (TSP) and codified in TDC Chapter 75 – Access Management. For SW Leveton Drive, TDC 75.120 (15)(b) allows existing driveways to remain but does not permit any new driveways between SW 118th Avenue and SW 124th Avenue. For SW Tualatin Road, TDC 75.140 and TSP Access Management Policy 7 specify minimum 100-foot spacing on collector roadways. The existing driveways meet these standards.

## On-Site Circulation

The site is accessible from both SW Tualatin Road and SW Leveton Drive. The site trip distribution assumes most site traffic will use the west access on SW Tualatin Road or the access on SW Leveton Drive. Some traffic traveling to/from the east will also use the east access on SW Tualatin Road. No trips are anticipated at the center access on SW Tualatin Road because it requires drivers to travel through the parking lot around the existing building at the northeast corner of the site.

Parking will be provided on three (3) sides of the building (east, west, and south), and truck loading will be provided on the east side of the building. The truck loading area will provide four (4) drive-in dock doors and four (4) high-dock loading doors. Up to 130 parking spaces will be provided on-site.

## Sight Distance Evaluation

Intersection sight distance was evaluated at the existing site driveway locations. The American Association of State Highway and Transportation Officials' (AASHTO) *A Policy on Geometric Design of Highways and Streets, 2011 Edition,* provides recommendations for intersection sight distance (ISD) based on roadway design speed. At minimum, stopping sight distance (SSD) must be provided.

A base time gap of 7.5 seconds was assumed for passenger vehicles completing a left turn from stop. An additional 0.5 seconds was added to the calculation for the additional traffic lane to be crossed on SW Tualatin Road. SW Tualatin Road and SW Leveton Drive are relatively flat. Therefore, no grade adjustments were made.

The design speed on SW Tualatin Road and SW Leveton Drive was assumed to be 5 mph over the posted speed as a conservative measure. The recommendations for ISD have been noted for left turns from stop on a stop-controlled minor approach (driveway). The sight distance evaluation for the site driveways is presented in Table 5.

**TABLE 5 – SIGHT DISTANCE EVALUATION**

| Access/ Intersection | Design Speed (mph) | Design Vehicle | Recommended Intersection Sight Distance (feet) | Required Stopping Sight Distance (feet) | Available Sight Distance (feet) | |
|---|---|---|---|---|---|---|
| | | | | | To West | To East |
| SW Tualatin Road/ West Site Access | 40 | Passenger | 470 | 305 | 535 | 470 |
| SW Tualatin Road/ Center Site Access | 40 | Passenger | 470 | 305 | 500 | 395 |
| SW Tualatin Road/ East Site Access | 40 | Passenger | 470 | 305 | 340 | 520 |
| SW Leveton Drive/ Site Access | 40 | Passenger | 445 | 305 | 500 | 480 |

As presented in Table 5, all four (4) site driveways meet the SSD requirement and most meet the recommended ISD in both directions as well. The curvature of SW Tualatin Road affects the available sight distance at the Center driveway looking to the east and the East driveway looking to the west but both driveways have sightlines exceeding the requirement.

## VI. OPERATIONAL ANALYSIS

Two aspects of operational analysis were evaluated for the study area intersections: 1) intersection operation analysis, which evaluates how well an intersection processes traffic demand, and 2) queuing analysis, which compares intersection queues with available storage for different travel lanes.

### Intersection Operation Analysis

Intersection operations are generally measured by three (3) mobility standards: volume-to-capacity (v/c) ratio, level-of-service (LOS), and delay (measured in seconds). Signalized and all-way stop-controlled (AWSC) are measured by one (1) overall v/c ratio, LOS, and delay. Two-way stop-controlled (TWSC) intersections are typically measured by a single v/c ratio, LOS, and delay representative of the worst stopped movement.

#### *Performance Measures*

All study area intersections are located within City of Tualatin jurisdiction but OR 99W is under ODOT's jurisdiction.

*City of Tualatin*

The TDC, Section 74.440(3)(e) requires the following mobility standards for intersections within City jurisdiction:

- LOS D or better for signalized intersections
- LOS E or better for unsignalized intersections

*ODOT*

The *Oregon Highway Plan* (OHP) designates OR 99W as a Principal Arterial Route at SW 124th Avenue. Table 7 of the OHP establishes a v/c target of 0.99 for the OR 99W/SW 124th Avenue intersection.

#### *Methodology*

The intersection capacity analyses were conducted in accordance with ODOT's APM and using ODOT Synchro templates. A saturated flow rate of 1900 vehicles per hour per lane (vphpl) was assumed for the Portland metro area. Intersection operations were analyzed with the use of Synchro 9 software, which utilizes the Transportation Research Board's Highway Capacity Manual (HCM) 2000 and 2010 methodologies. All signalized study area intersections were reported using HCM 2000 outputs and all unsignalized study area intersections were reported using HCM 2010. Signal timing information was obtained from ODOT staff and the Washington County Traffic Engineering Plans website. Signal timing information is provided in Appendix H.

#### *Findings*

Table 6 summarizes the critical movements (either overall intersection for signalized or worst movement for unsignalized) for the AM and PM peak hours with Synchro output sheets provided in Appendix I. The operations show that all intersections in the study area meet City and ODOT operational standards for all time periods and all conditions.

| TABLE 6 – PEAK HOUR INTERSECTION OPERATIONS | | | | | | |
|---|---|---|---|---|---|---|
| Intersection (Control) | Operations Standard | Peak Hour | Intersection/ Approach/ Movement | Analysis Results (v/c-LOD-Delay in seconds) | | |
| | | | | 2017 Existing | 2019 Pre-Development | 2019 Post-Development |
| OR 99W/ SW 124th Avenue (Signalized) | v/c ≤ 0.99 | AM | Intersection | 0.94-D-45 | 0.98-D-54 | 0.98-D-55 |
| | | PM | Intersection | 0.70-C-22 | 0.73-C-23 | 0.73-C-23 |
| SW 124th Avenue/ SW Tualatin Road (Signalized) | LOS D | AM | Intersection | 0.80-A-9 | 0.83-A-9 | 0.84-A-10 |
| | | PM | Intersection | 0.74-B-15 | 0.77-B-16 | 0.77-B-16 |
| SW Tualatin Road/ West Site Access (TWSC) | LOS E | AM | NB | 0.02-C-18 | 0.02-C-18 | 0.03-C-19 |
| | | PM | NB | 0.08-B-14 | 0.08-B-14 | 0.10-B-15 |
| SW Tualatin Road/ Center Site Access (TWSC) | LOS E | AM | NB | 0.00-C-17 | 0.00-C-17 | 0.00-C-17 |
| | | PM | NB | 0.01-B-13 | 0.01-B-13 | 0.01-B-13 |
| SW Tualatin Road/ East Site Access (TWSC) | LOS E | AM | SB | 0.10-C-15 | 0.11-C-16 | 0.11-C-16 |
| | | PM | SB | 0.08-B-14 | 0.08-B-14 | 0.08-B-14 |
| SW 124th Avenue/ SW Leveton Drive (Signalized) | LOS D | AM | Intersection | 0.50-B-12 | 0.52-B-12 | 0.52-B-12 |
| | | PM | Intersection | 0.31-B-14 | 0.34-B-15 | 0.34-B-15 |
| SW Leveton Drive/ Site Access (TWSC) | LOS E | AM | NB | 0.00-B-11 | 0.00-B-11 | 0.00-B-12 |
| | | PM | NB | 0.02-B-13 | 0.02-B-14 | 0.02-B-14 |
| SW Leveton Drive/ SW 118th Avenue (AWSC) | LOS E | AM | EB | 0.01-B-11 | 0.02-B-11 | 0.02-B-11 |
| | | PM | WB | 0.19-B-11 | 0.20-B-11 | 0.20-B-11 |

## Intersection Queuing Analysis

An intersection queuing analysis was conducted for the study area intersections during the AM and PM peak hours to evaluate any potential queue spillbacks. The 95th percentile queues were estimated using SimTraffic software. Queue demand results were rounded to the nearest 25 feet to represent average vehicle lengths.

### *Methodology for Measuring Storage*

Available queue storage lengths were estimated using Google Earth Pro software and rounded to the nearest 5 feet. Two (2) values may be shown for turn lanes: the first represents the striped storage; the second (or only value in some locations) is the effective storage, or the length physically available regardless of striping, such as a center turn lane upstream of a striped left-turn lane at an intersection. Although through travel lanes have no storage limits defined by striping, two (2) values may be reported

for storage: the first is the distance to an upstream driveway; the second (or only value in some locations) is the distance to an upstream intersection.

***Findings***

The AM and PM peak hour 95th percentile queues are presented in Table 7. Bold text indicates the calculated queue exceeds the storage for the travel lane. SimTraffic output sheets are provided in Appendix J.

**TABLE 7 – 95TH PERCENTILE QUEUING ANALYSIS**

| Intersection (Control) | Approach/ Movement | Striped/Effective Storage (Fee) | AM/PM Peak Hour Queue (feet) | | |
|---|---|---|---|---|---|
| | | | 2017 Existing | 2019 Pre-Development | 2019 Post-Development |
| OR 99W/ SW 124th Avenue (Signalized) | NEBT | 510/+1,000 | **2,100**/350 | **2,575**/400 | **2,550**/375 |
| | NEBR | 225/310 | **550**/125 | **525**/175 | **525**/175 |
| | SWBL | 545/745 | **1,050**/475 | **1,100**/575 | **1,100**/675 |
| | SWBT | 625/+1,000 | NA/300 | NA/325 | NA/350 |
| | NBL | 315/465 | 100/275 | 100/300 | 100/275 |
| | NBR | 295/350 | 100/200 | 125/200 | 125/200 |
| SW 124th Avenue/ SW Tualatin Road (Signalized) | WBL | 310/350 | 50/75 | 50/75 | 50/100 |
| | WBR | 285/500 | 75/300 | 75/325 | 75/350 |
| | NBT | 995 | 175/275 | 200/300 | 175/325 |
| | NBR | 145/230 | 75/50 | 50/75 | 50/100 |
| | SBL | 190/290 | **350/300** | **325/325** | **325/325** |
| | SBT | 450 | 325/75 | 275/125 | 250/100 |
| SW Tualatin Road/ West Site Access (TWSC) | EBL | 120 | 25/25 | 25/<25 | 25/25 |
| | WBL | 185 | 25/<25 | 25/25 | 25/25 |
| | NB | 70 | 25/50 | 25/50 | 25/50 |
| | SB | 50 | 25/**75** | 25/50 | 25/**75** |
| SW Tualatin Road/ Center Site Access (TWSC) | EBL | 185 | 25/25 | <25/25 | <25/25 |
| | WBL | 440 | <25/<25 | <25/<25 | <25/<25 |
| | NB | 70 | <25/25 | <25/25 | <25/25 |
| | SB | 185 | 50/50 | 50/50 | 50/50 |
| SW Tualatin Road/ East Site Access (TWSC) | EBL | 440 | 25/25 | 25/25 | <25/25 |
| | WBL | 175/+1,000 | <25/<25 | <25/<25 | 25/<25 |
| | NB | 85 | <25/25 | <25/25 | <25/25 |
| | SB | 140 | 50/50 | 50/50 | 50/50 |

| TABLE 7 – 95TH PERCENTILE QUEUING ANALYSIS | | | | | |
|---|---|---|---|---|---|
| Intersection (Control) | Approach/ Movement | Striped/Effective Storage (Fee) | AM/PM Peak Hour Queue (feet) | | |
| | | | 2017 Existing | 2019 Pre-Development | 2019 Post-Development |
| SW 124th Avenue/ SW Leveton Drive (Signalized) | EBL | 100/130 | 50/50 | 75/50 | 75/50 |
| | EBT+R | 270/580 | 75/50 | 100/75 | 100/75 |
| | WBL | 145/185 | 25/50 | 25/50 | 25/75 |
| | WBT+R | 490/+1,000 | 50/150 | 75/125 | 75/150 |
| | NBL | 155/230 | 50/25 | 50/25 | 50/25 |
| | NBT+R | +1,000 | 150/150 | 125/125 | 125/175 |
| | SBL | 165/245 | 125/100 | 150/100 | 150/100 |
| | SBT+R | 995 | 125/125 | 125/125 | 125/150 |
| SW Leveton Drive/ Site Access (TWSC) | EB | 490 | <25/<25 | <25/<25 | 25/<25 |
| | NB | 70 | 25/25 | 25/25 | 25/25 |
| | SB | 315 | 25/50 | 25/50 | 25/50 |
| SW Leveton Drive/ SW 118th Avenue (AWSC) | EB | 240/+1,000 | 75/75 | 100/75 | 100/75 |
| | WB | +1,000 | 75/100 | 75/100 | 75/100 |
| | NB | 525/+1,000 | 50/50 | 50/50 | 75/50 |
| | SB | 650 | 25/50 | 25/50 | 25/50 |

Two intersections have queues that are expected to exceed available storage: OR 99W at SW 124th Avenue and SW 124th Avenue at SW Tualatin Road under all analysis scenarios. Although the site will add some traffic to these intersections, queues under 2019 post-development conditions are not anticipated to lengthen over pre-development conditions; thus, no measurable impact is anticipated.

It should be noted that while the traffic simulations show significant queuing at OR 99W at SW 124th Avenue during the AM peak hour, field observations of traffic conditions did not find highway queues to the extent indicated. One (1) factor that may contribute to this variance is the seasonally-adjustment to volumes required by the APM. The seasonal factors are based on comparison of daily volume data, which likely overestimates demand during the morning commute, when seasonal variation is much less significant than at other times of day. As part of a traffic study prepared for a development in the City of Sherwood[1], a comparison of three (3) years (2012-2014) of hourly traffic data at the Automatic Traffic Recorder (ATR) located on OR 99W at the north end of Newberg showed that AM peak hour volumes in the peak month of August were 96.5% of the November morning peak volumes. Although this ATR is about nine (9) miles south of this study area, the volume trends are likely similar.

[1] Transportation Impact Analysis for Cedar Creek Plaza (Deacon Development and Rembold Properties): https://www.sherwoodoregon.gov/sites/default/files/fileattachments/planning/project/12591/part_2_sp_16-10_cup_16-06_cedar_creek_plaza_revised_narrative_02.10.17.pdf

## VII. WARRANTS

Traffic signal and turn-lane warrants were reviewed using 2019 post-development volumes for the AM and PM peak hours. The analysis summary for signal, left- and right-turn lane warrants is presented below.

### Traffic Signal

The *Manual on Uniform Traffic Control Devices* (MUTCD), 2009 Edition, provides guidance and standards on the study of traffic conditions to determine the need for traffic signalization at unsignalized intersections. A screening level comparison of peak hour traffic volumes with the lowest MUTCD volume threshold (75 vehicles per hour for the minor street approach) was initially performed to determine if a more detailed analysis should be performed. None of the unsignalized intersections have minor street volumes which exceed this threshold during peak hours; therefore, no traffic signals are warranted in the study area.

### Turn Lanes

Turn lane criteria were reviewed for the existing driveways on SW Tualatin Road and the existing driveway on SW Leveton Drive using the Texas Transportation Institute's (TTI) left-turn lane and right-turn lane criteria for an unsignalized intersection. Appendix K includes the turning lane evaluation.

#### *SW Tualatin Road*

The existing driveways on SW Tualatin Road already have left-turn lanes into the site; therefore, only a right-turn lane evaluation was conducted. The West site access volumes would meet the criteria for considering a right-turn lane while the other site accesses are well below the thresholds. However, a right-turn lane is not recommended at this location for several reasons. This site access has no history of any crashes during the 5-year analysis period from 2011 through 2015. Existing delays at this site driveway that are minimal and are expected to remain so under post-development conditions. Right-turning traffic can also help moderate the speed of traffic on a roadway. Overall, the benefits of a right-turn lane are expected to be minimal at this location while the construction would impact existing landscaping, drainage, and street lighting as well as increasing the impervious surface by adding more pavement. Additionally, a right-turn lane is inconsistent with the rest of the SW Tualatin Road corridor, which has a center lane for left turns but no separate right-turn lanes.

#### *SW Leveton Drive*

SW Leveton Drive is a two-lane roadway with no existing turn lanes into the site. The volumes at this intersection are well below the thresholds for either left-turn or right-turn lanes.

## VIII. RECOMMENDATIONS AND MITIGATION

The proposed industrial development will not exceed City or ODOT operational standards in the study area under the 2019 post-development conditions. Although some queuing issues are present during the AM peak hour at the intersection of OR 99W at SW 124th Avenue, the traffic added by the proposed development is not anticipated to lengthen these queues. Therefore, no improvements are required or recommended with the project based on operations, or queueing.

The crash history did not show any significant patterns or unexpected behaviors at either the study area intersections or the existing site driveways; therefore, no safety improvements are necessary.

Warrants for traffic signals and turn lanes were evaluated and no changes to the existing network are recommended. None of the unsignalized intersections in the study area meet the criteria for a traffic signal. Although the West site access does warrant consideration of a right-turn lane, the safety and operational benefits of a right-turn lane are expected to be minimal while the construction would impact existing landscaping, drainage, and street lighting and unnecessarily increase impervious surface.

## IX. APPENDIX

Appendix A. Figures

Appendix B. Scoping Material

Appendix C. Transit Information

Appendix D. Traffic Count Summaries

Appendix E. Seasonal Adjustment Data

Appendix F. Crash Data

Appendix G. In-Process Data

Appendix H. Signal Information

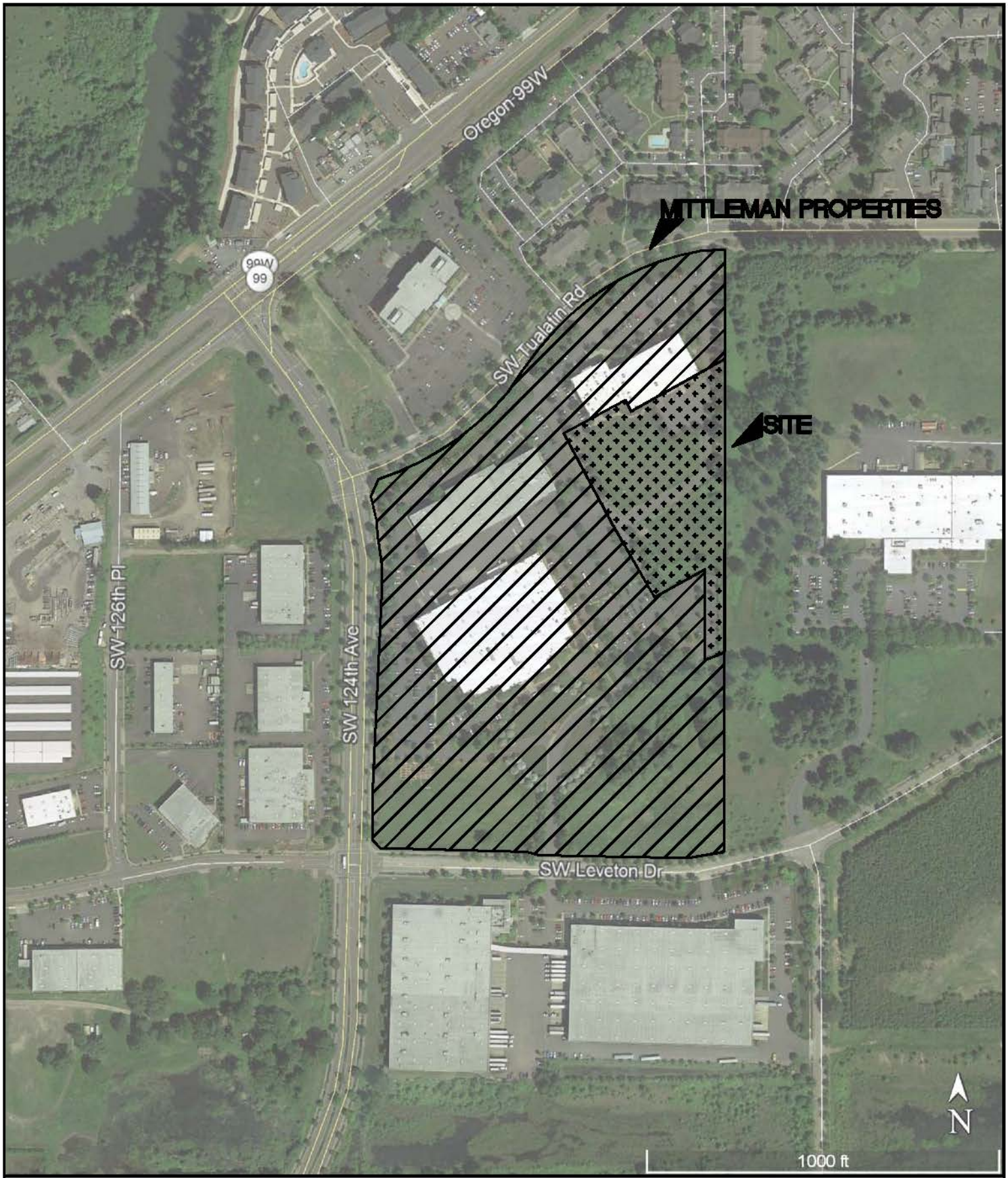
Appendix I. Operations Calculations

Appendix J. Queuing Analysis

Appendix K. Turning Lane Evaluation

APPENDIX A

**FIGURES**

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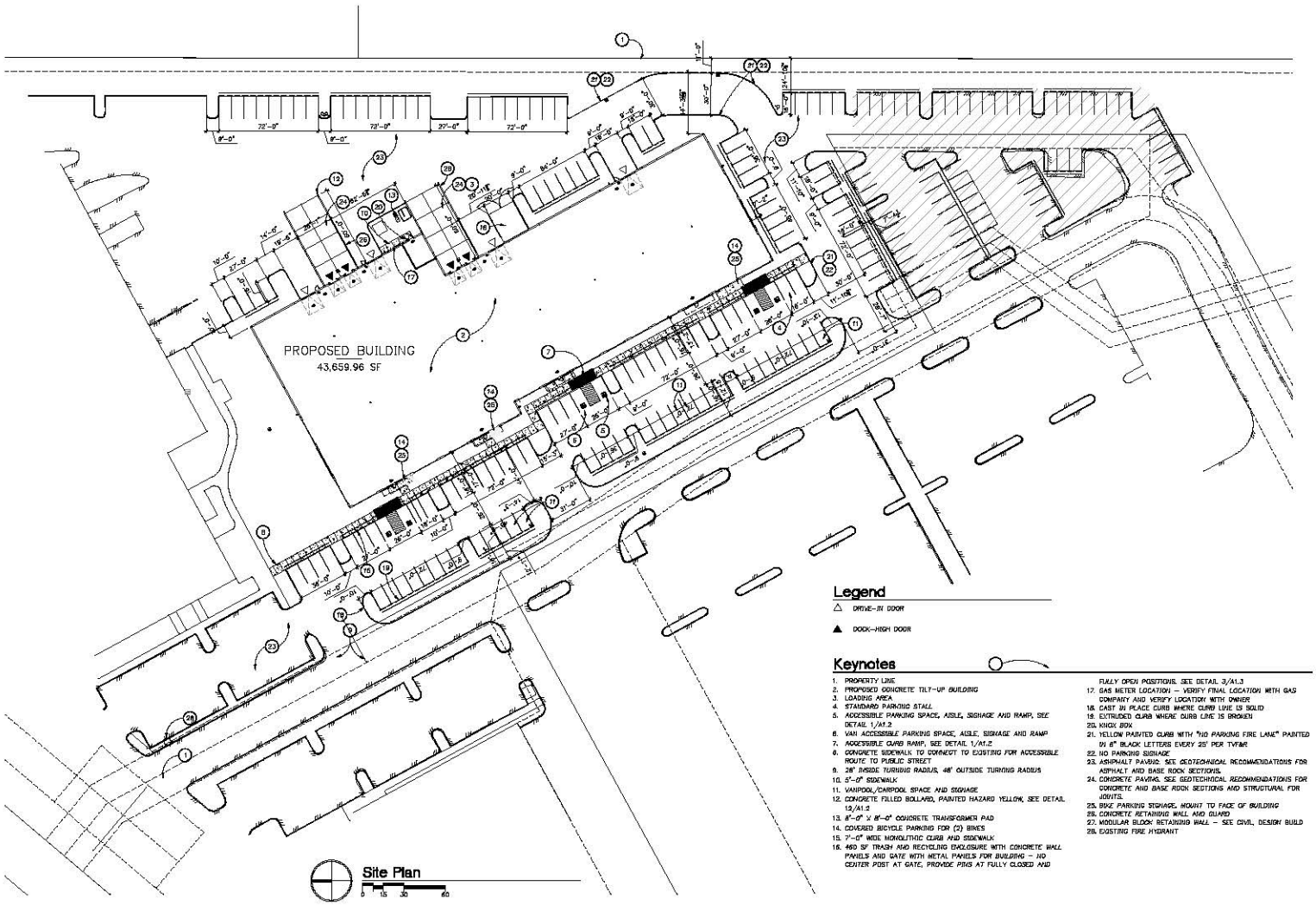
# VICINITY MAP

MITTLEMAN – LEVETON BUSINESS PARK
TUALATIN, OREGON

FIGURE
1




## Legend

△ DRIVE-IN DOOR

▲ DOCK-HIGH DOOR

## Keynotes

1. PROPERTY LINE
2. PROPOSED CONCRETE TILT-UP BUILDING
3. LOADING AREA
4. STANDARD PARKING STALL
5. ACCESSIBLE PARKING SPACE, AISLE, SIGNAGE AND RAMP, SEE DETAIL 1/A1.2
6. VAN ACCESSIBLE PARKING SPACE, AISLE, SIGNAGE AND RAMP
7. ACCESSIBLE CURB RAMP, SEE DETAIL 1/A1.2
8. CONCRETE SIDEWALK TO CONNECT TO EXISTING FOR ACCESSIBLE ROUTE TO PUBLIC STREET
9. 28' INSIDE TURNING RADIUS, 48' OUTSIDE TURNING RADIUS
10. 5'-0" SIDEWALK
11. VANPOOL/CARPOOL SPACE AND SIGNAGE
12. CONCRETE FILLED BOLLARD, PAINTED HAZARD YELLOW, SEE DETAIL 13/A1.2
13. 8'-0" W 8'-0" CONCRETE TRANSFORMER PAD
14. COVERED BICYCLE PARKING FOR (2) BIKES
15. 7'-0" WIDE MONOLITHIC CURB AND SIDEWALK
16. 460 SF TRASH AND RECYCLING ENCLOSURE WITH CONCRETE WALL PANELS AND GATE WITH METAL PANELS FOR BUILDING – NO CENTER POST AT GATE, PROVIDE PINS AT FULLY CLOSED AND FULLY OPEN POSITIONS. SEE DETAIL 3/A1.3
17. GAS METER LOCATION – VERIFY FINAL LOCATION WITH GAS COMPANY AND VERIFY LOCATION WITH OWNER
18. CAST IN PLACE CURB WHERE CURB LINE IS SOLID
19. EXTRUDED CURB WHERE CURB LINE IS BROKEN
20. KNOX BOX
21. YELLOW PAINTED CURB WITH "NO PARKING FIRE LANE" PAINTED IN 6" BLACK LETTERS EVERY 25' PER TVF&R
22. NO PARKING SIGNAGE
23. ASPHALT PAVING. SEE GEOTECHNICAL RECOMMENDATIONS FOR ASPHALT AND BASE ROCK SECTIONS.
24. CONCRETE PAVING. SEE GEOTECHNICAL RECOMMENDATIONS FOR CONCRETE AND BASE ROCK SECTIONS AND STRUCTURAL FOR JOINTS.
25. BIKE PARKING SIGNAGE, MOUNT TO FACE OF BUILDING
26. CONCRETE RETAINING WALL AND GUARD
27. MODULAR BLOCK RETAINING WALL – SEE CIVIL, DESIGN BUILD
28. EXISTING FIRE HYDRANT

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A1.1

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REGISTERED ARCHITECT STATE OF OREGON

Client:
Mittleman Properties

Project:
Mittleman Properties at Leveton Business Park

Tualatin, Oregon

Sheet Title:
Site Plan

Revisions



Date: 28 September 2017
Drawn by: CLT
Checked by:
Job Number: 116180
Sheet

FIGURE 2

# SITE PLAN

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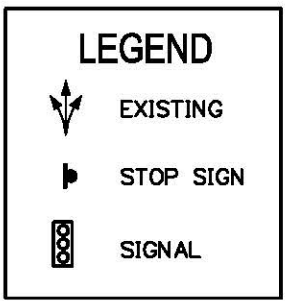


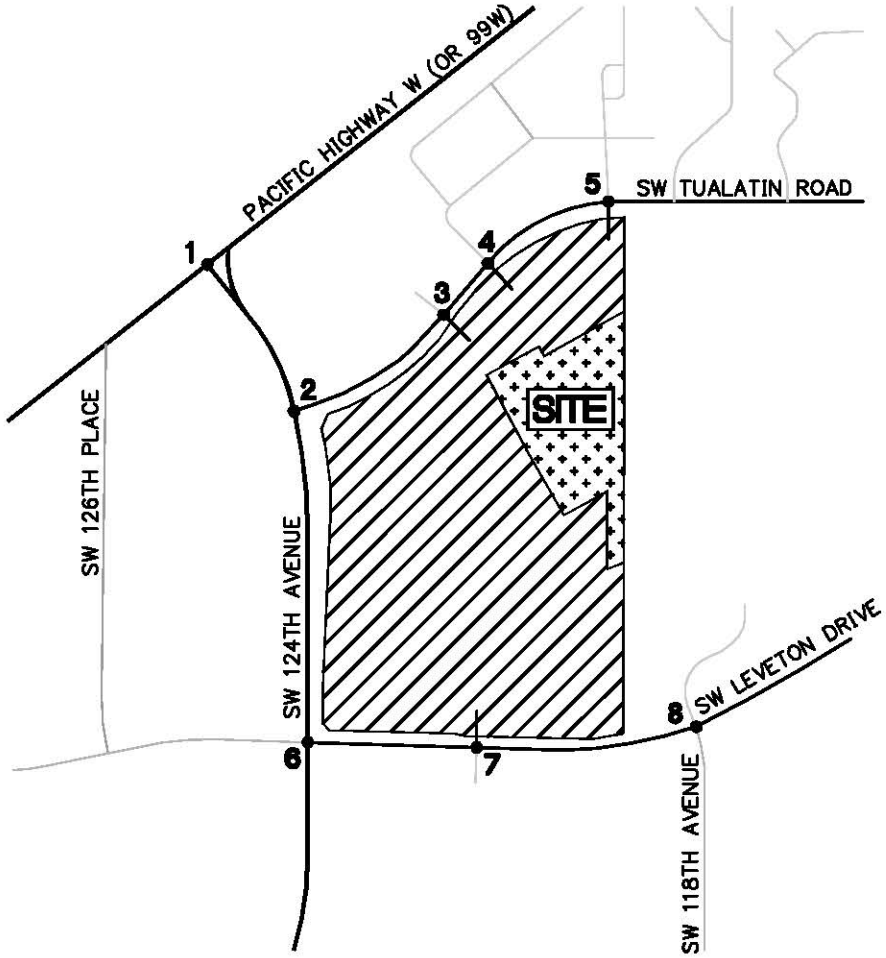


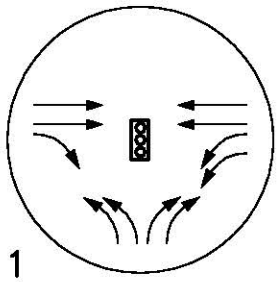
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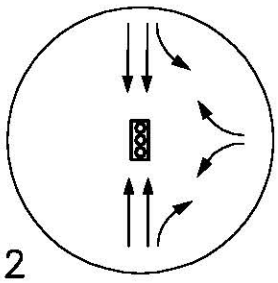
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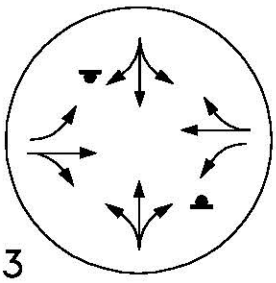
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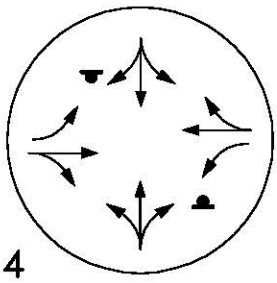
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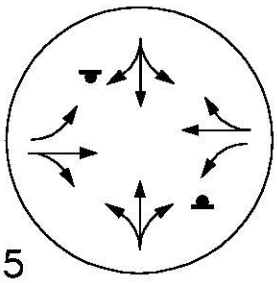
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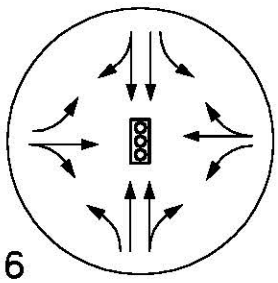
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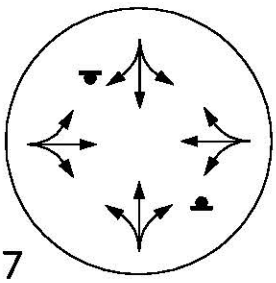
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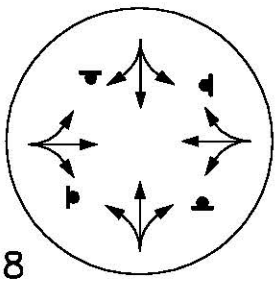
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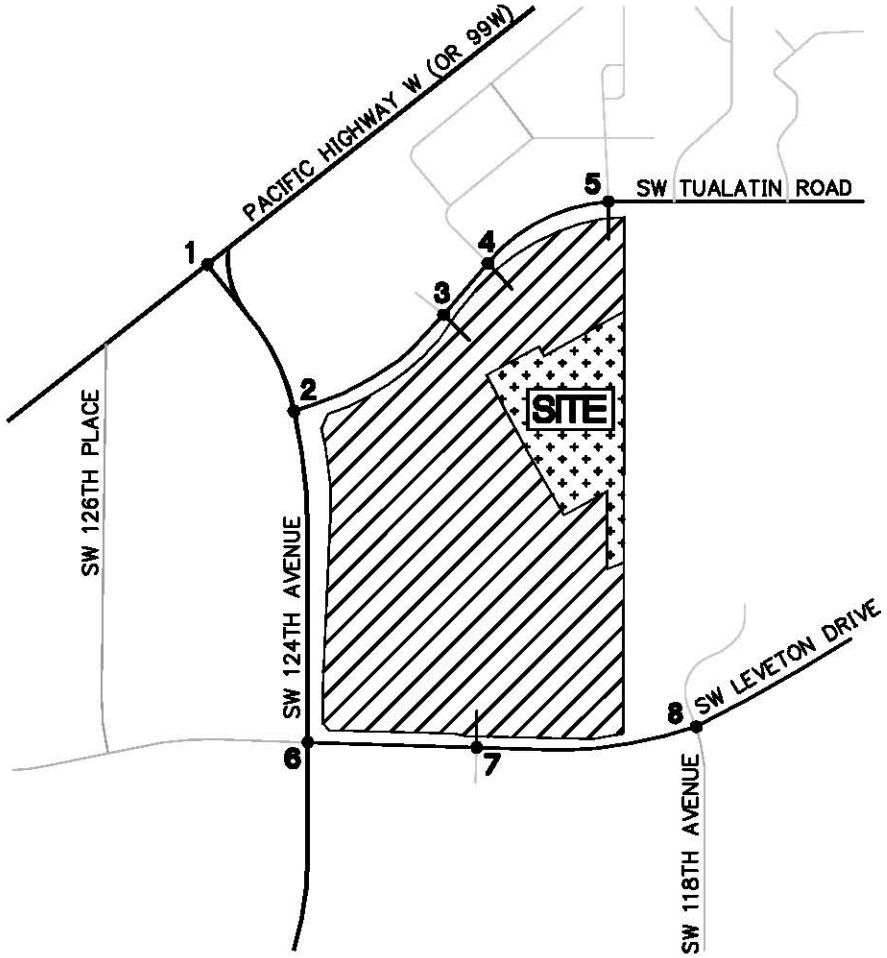
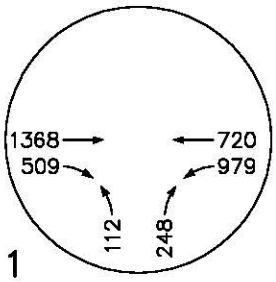
# EXISTING TRAFFIC CONTROL DEVICES + LANE CONFIGURATIONS

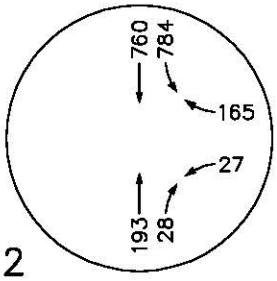
MITTLEMAN - LEVETON BUSINESS PARK
TUALATIN, OREGON

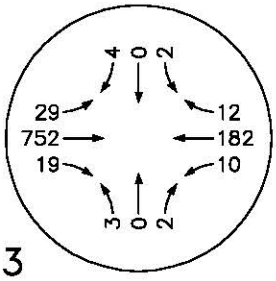
FIGURE 3

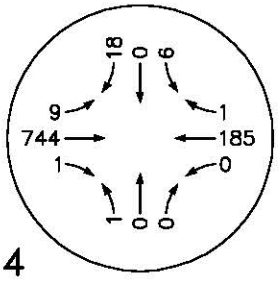
NOT TO SCALE

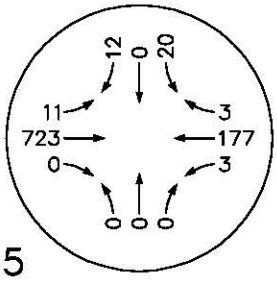


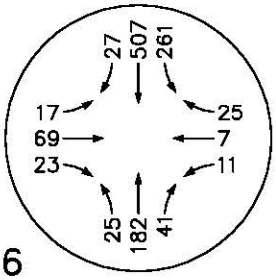



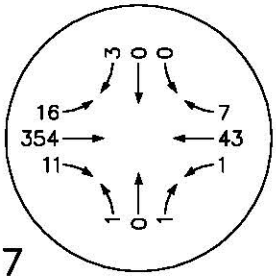



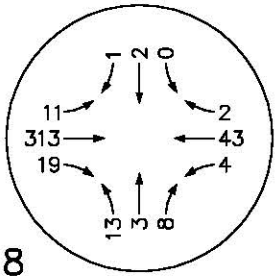





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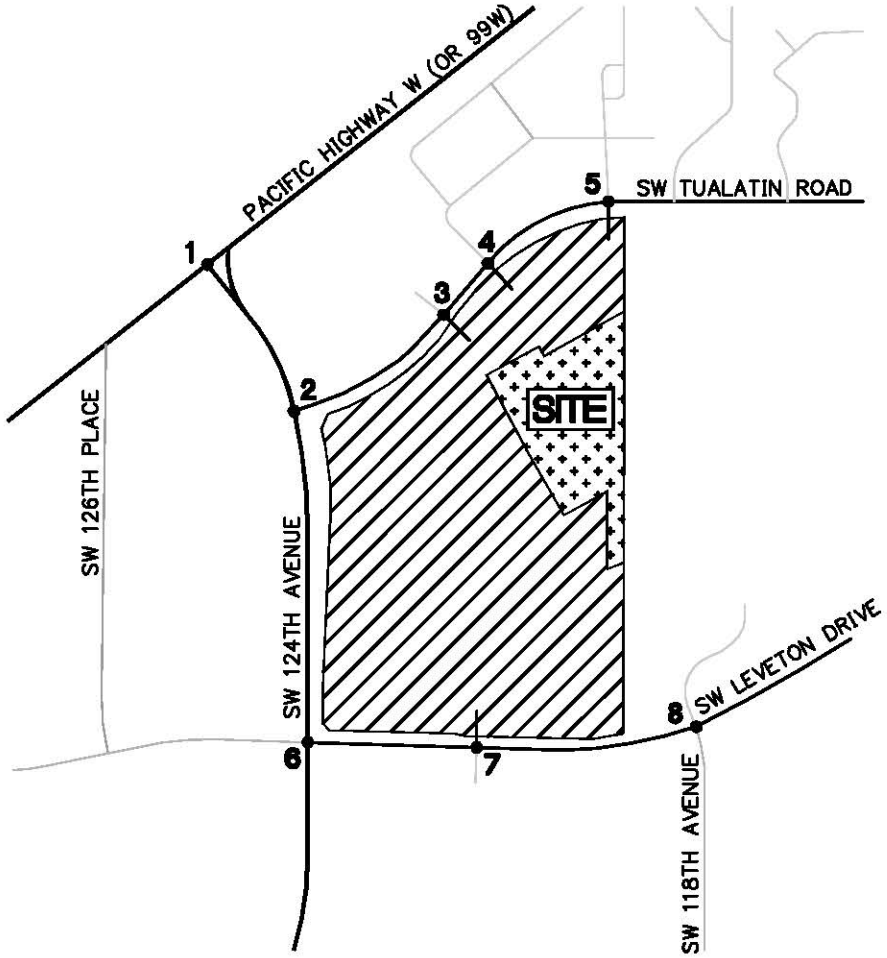
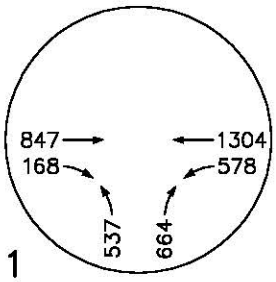
# 2017 EXISTING TRAFFIC - AM PEAK HOUR

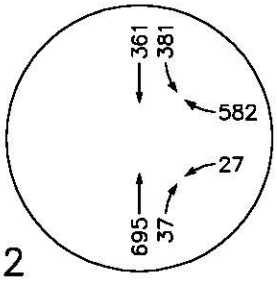
MITTLEMAN - LEVETON BUSINESS PARK
TUALATIN, OREGON

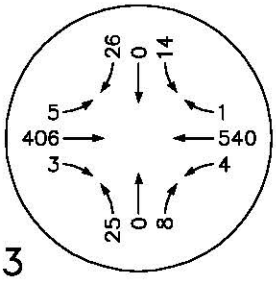
FIGURE
4A

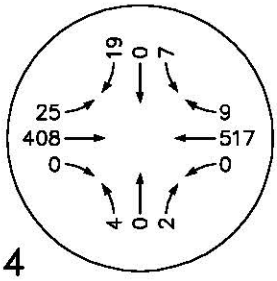
NOT TO SCALE

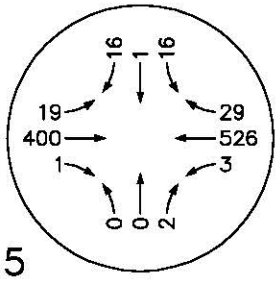


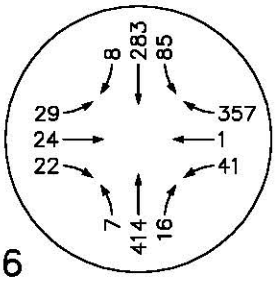



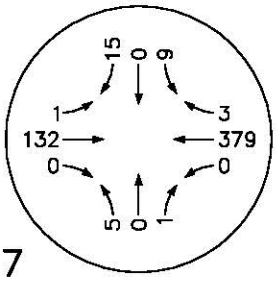



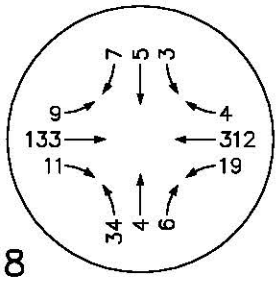





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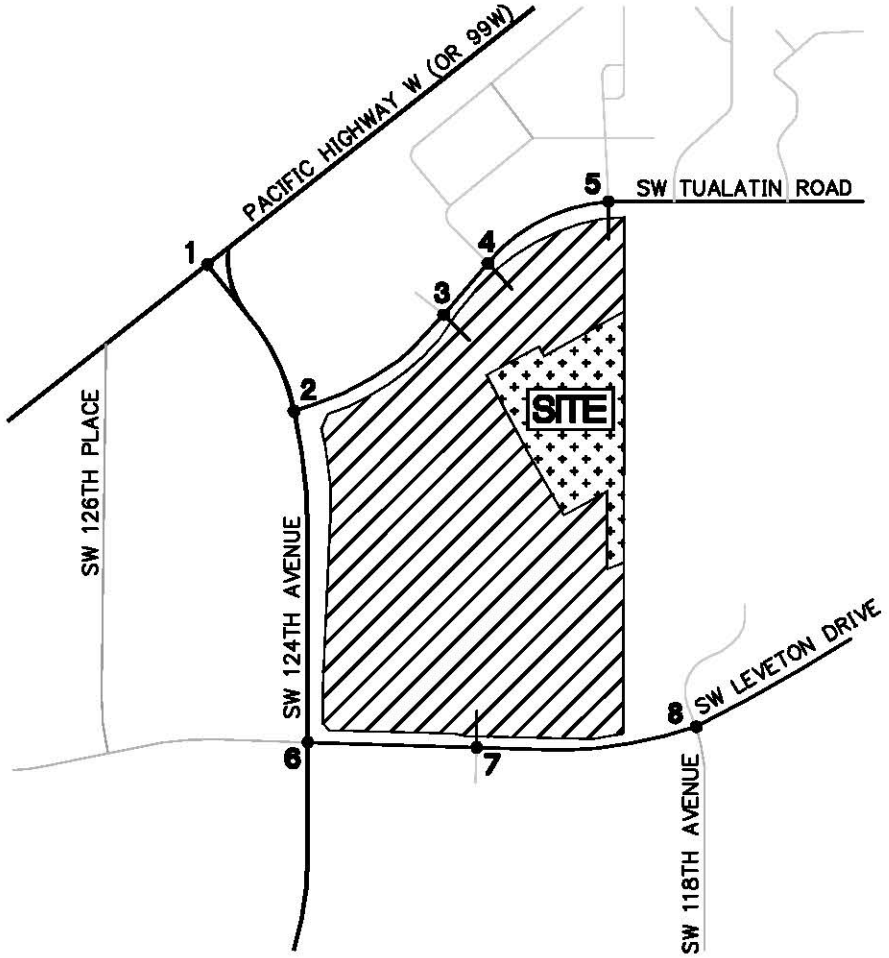
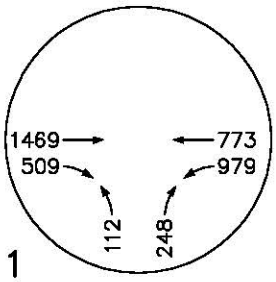
# 2017 EXISTING TRAFFIC - PM PEAK HOUR

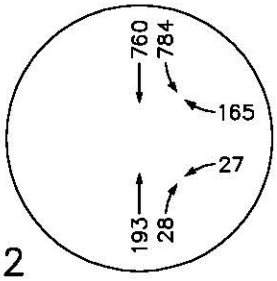
MITTLEMAN - LEVETON BUSINESS PARK
TUALATIN, OREGON

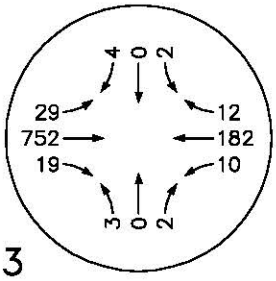
FIGURE
4B

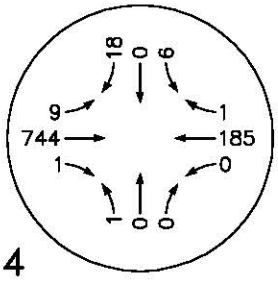
NOT TO SCALE

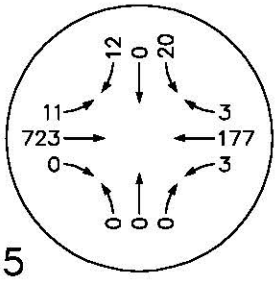


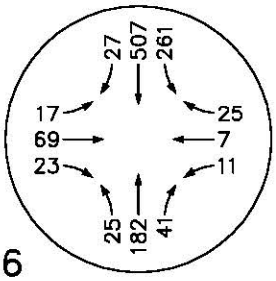



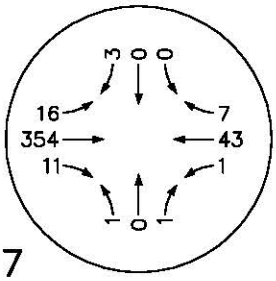



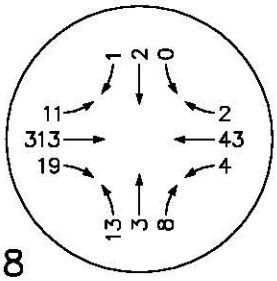





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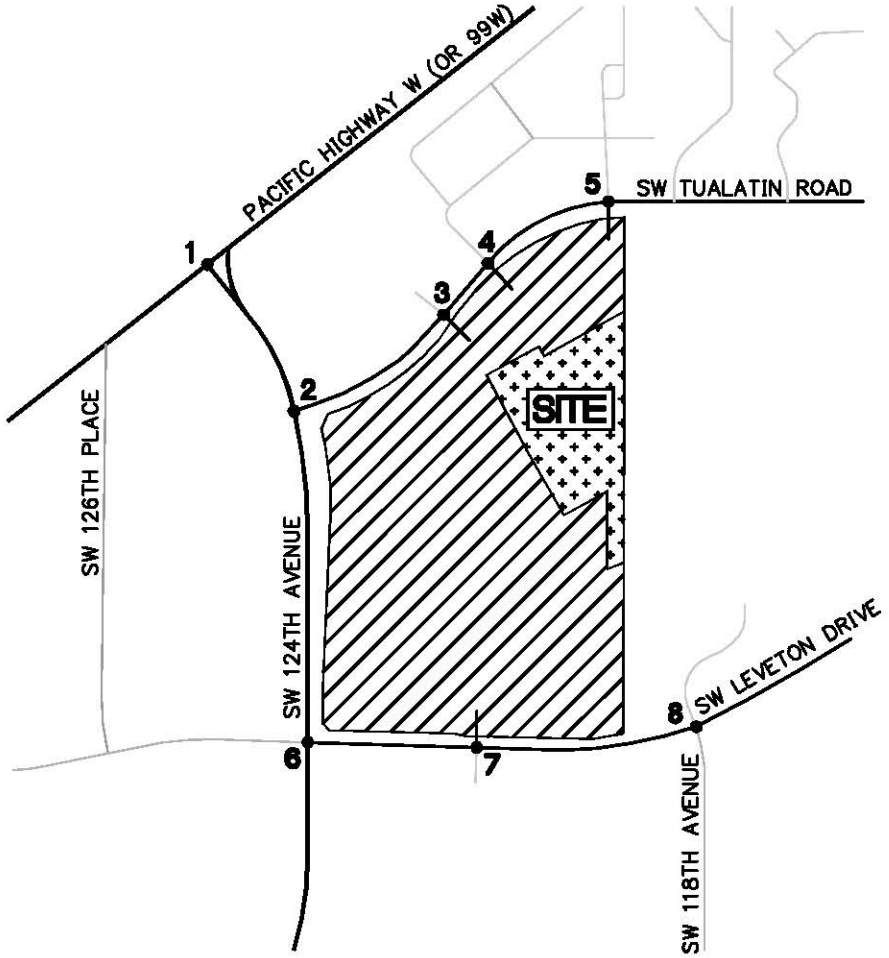
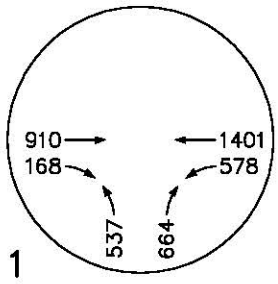
# 2017 SEASONALLY ADJUSTED TRAFFIC VOLUMES - AM PEAK HOUR

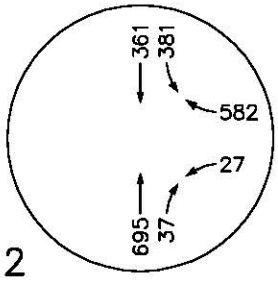
MITTLEMAN - LEVETON BUSINESS PARK
TUALATIN, OREGON

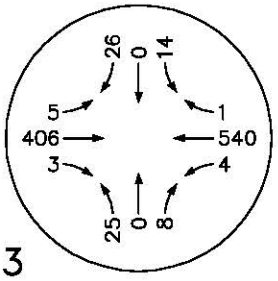
FIGURE
5A

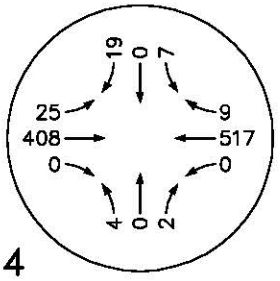
NOT TO SCALE

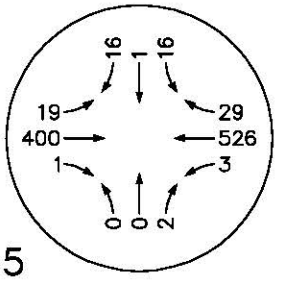


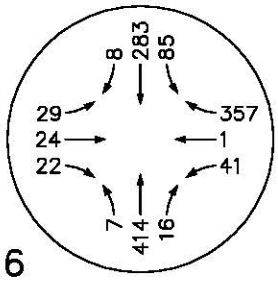



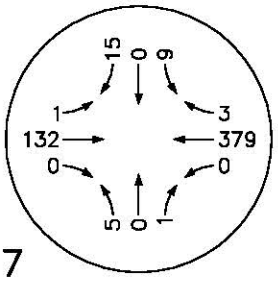



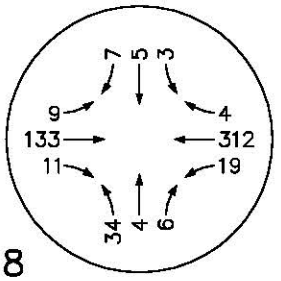





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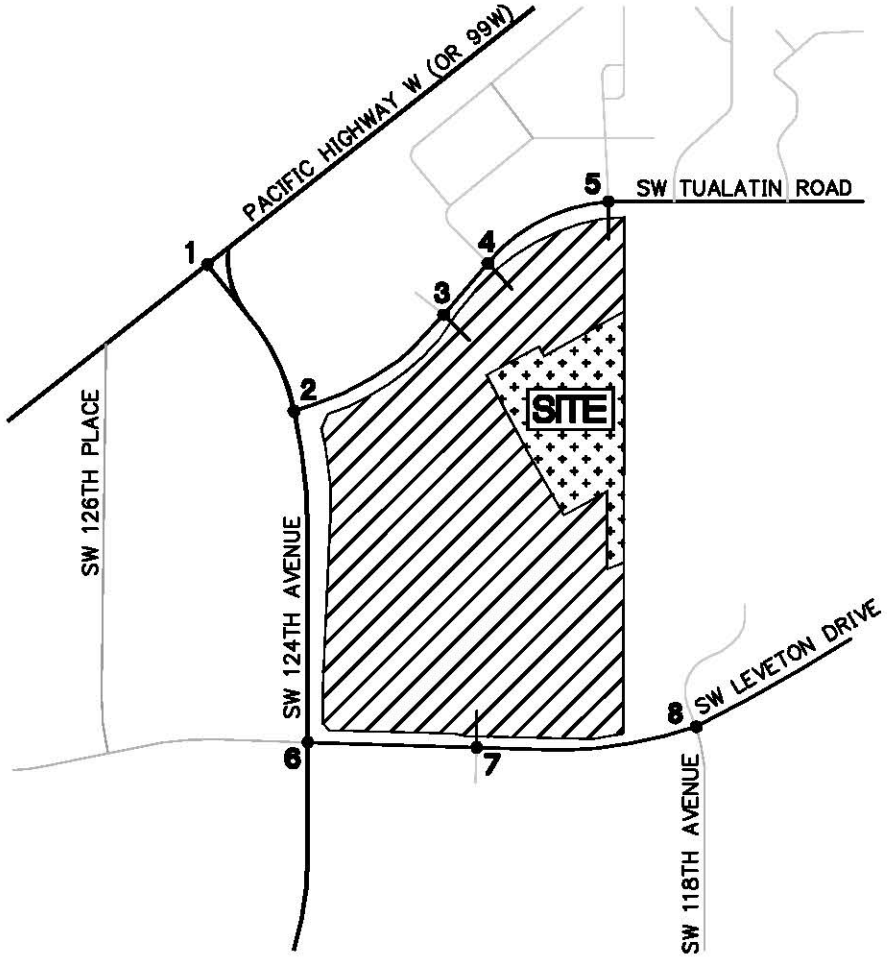
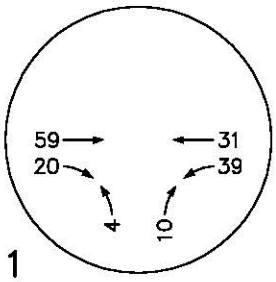
# 2017 SEASONALLY ADJUSTED TRAFFIC VOLUMES - PM PEAK HOUR

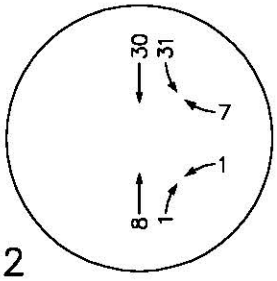
MITTLEMAN - LEVETON BUSINESS PARK
TUALATIN, OREGON

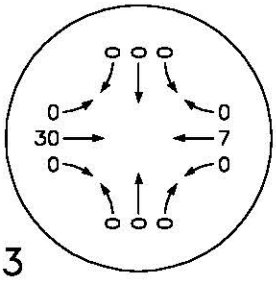
FIGURE
5B

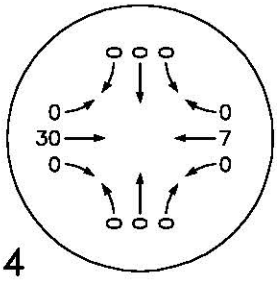
NOT TO SCALE

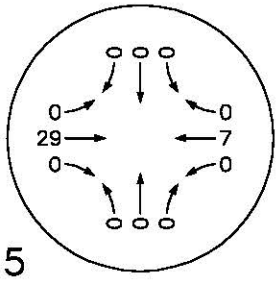


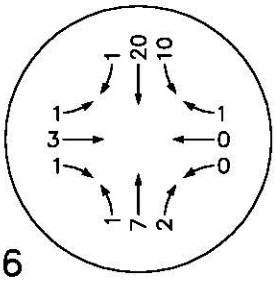



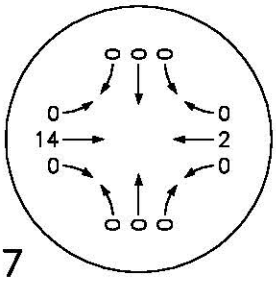



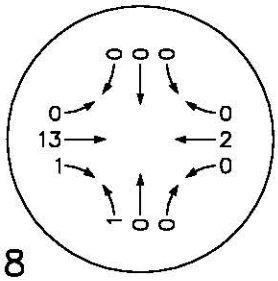





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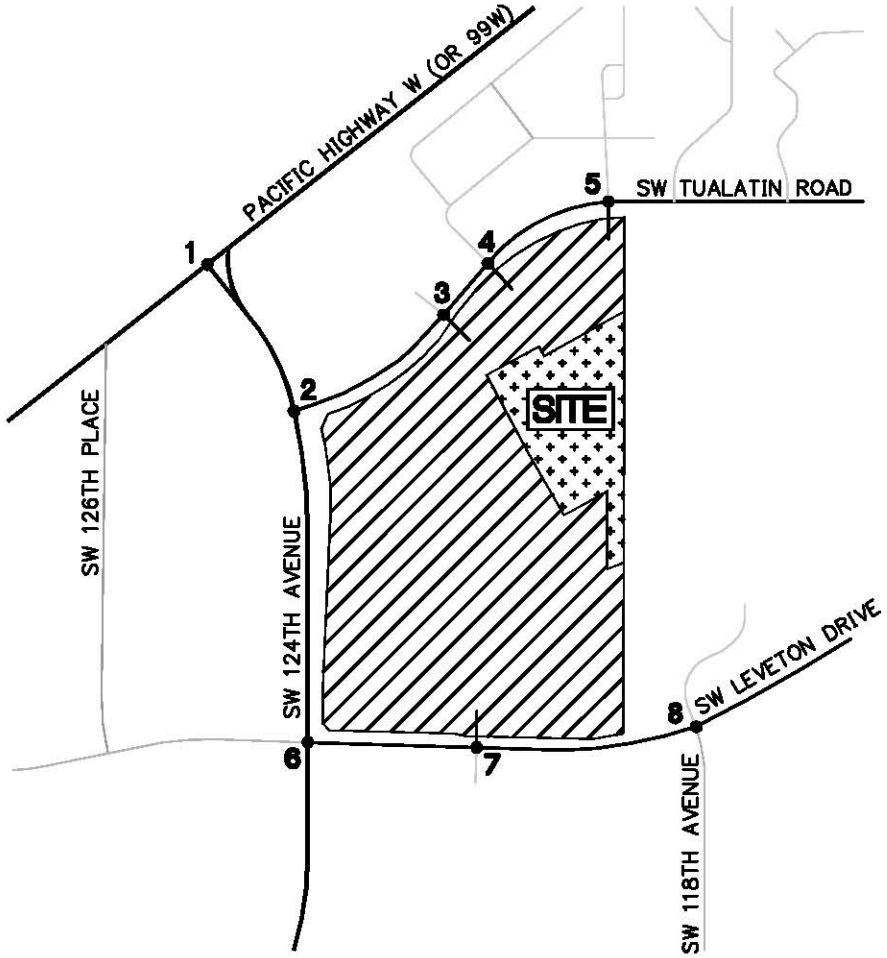
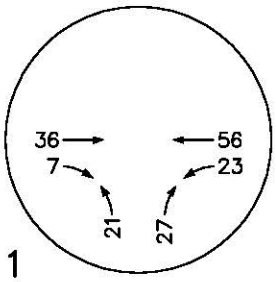
# BACKGROUND GROWTH, 2 YEARS AT 2% PER YEAR - AM PEAK HOUR

MITTLEMAN - LEVETON BUSINESS PARK
TUALATIN, OREGON

FIGURE
6A

NOT TO SCALE



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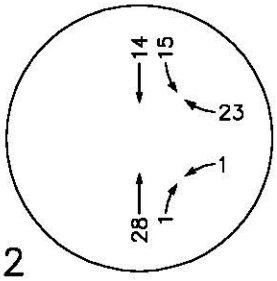

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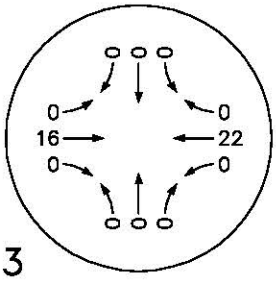

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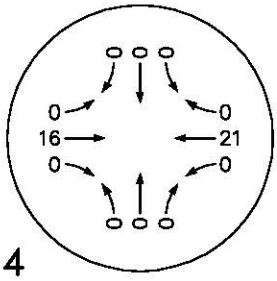

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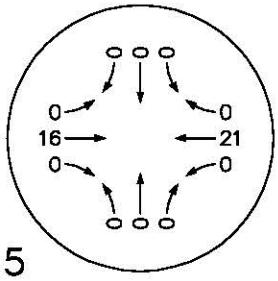

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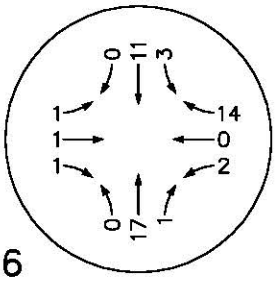

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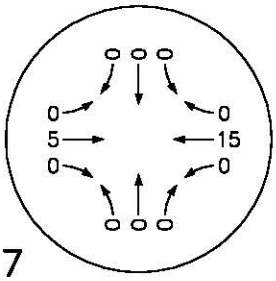

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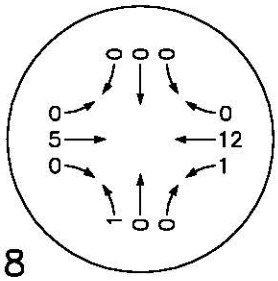

8


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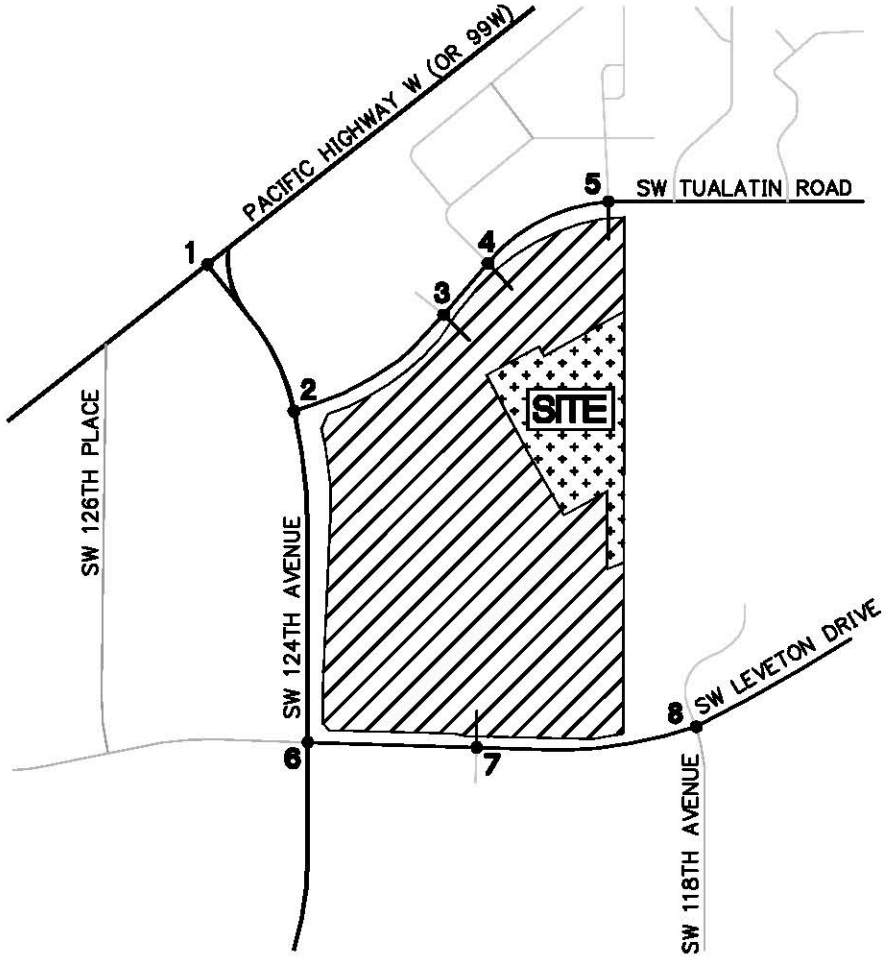
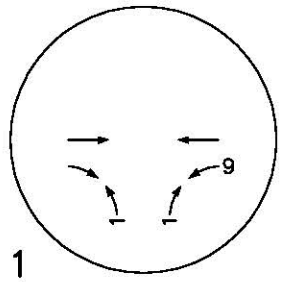
# BACKGROUND GROWTH, 2 YEARS AT 2% PER YEAR - AM PEAK HOUR

MITTLEMAN - LEVETON BUSINESS PARK
TUALATIN, OREGON

FIGURE
6B

NOT TO SCALE



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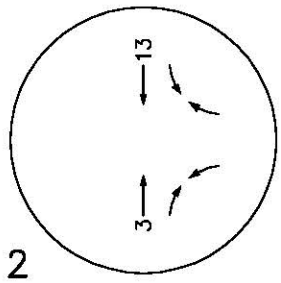

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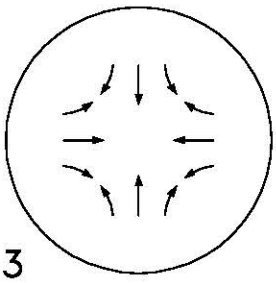
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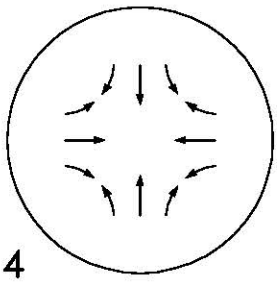
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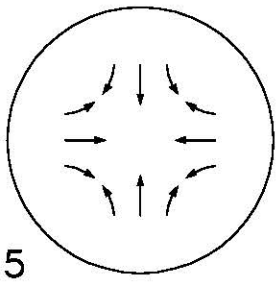
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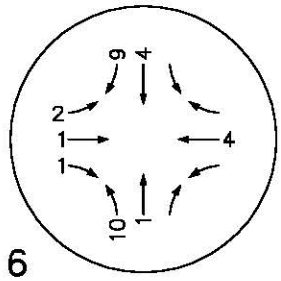

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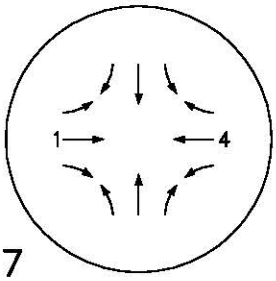

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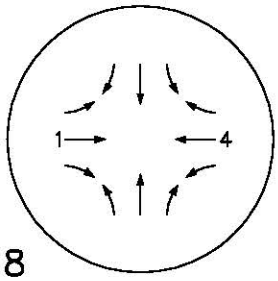

8


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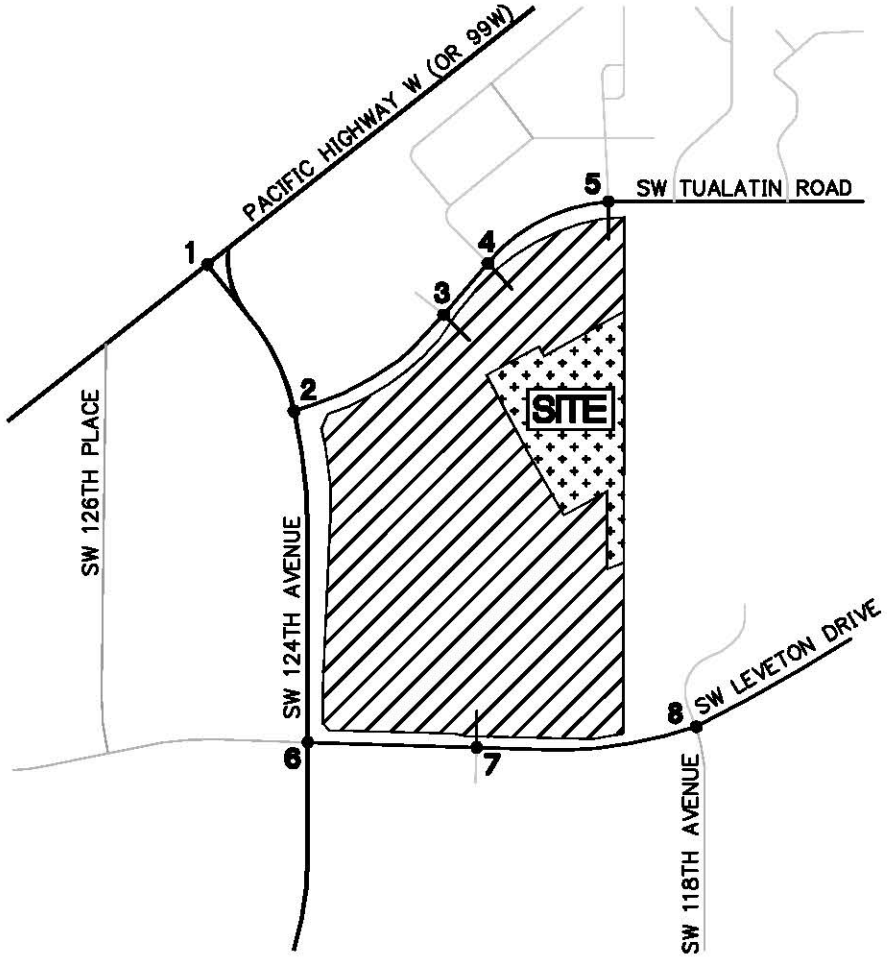
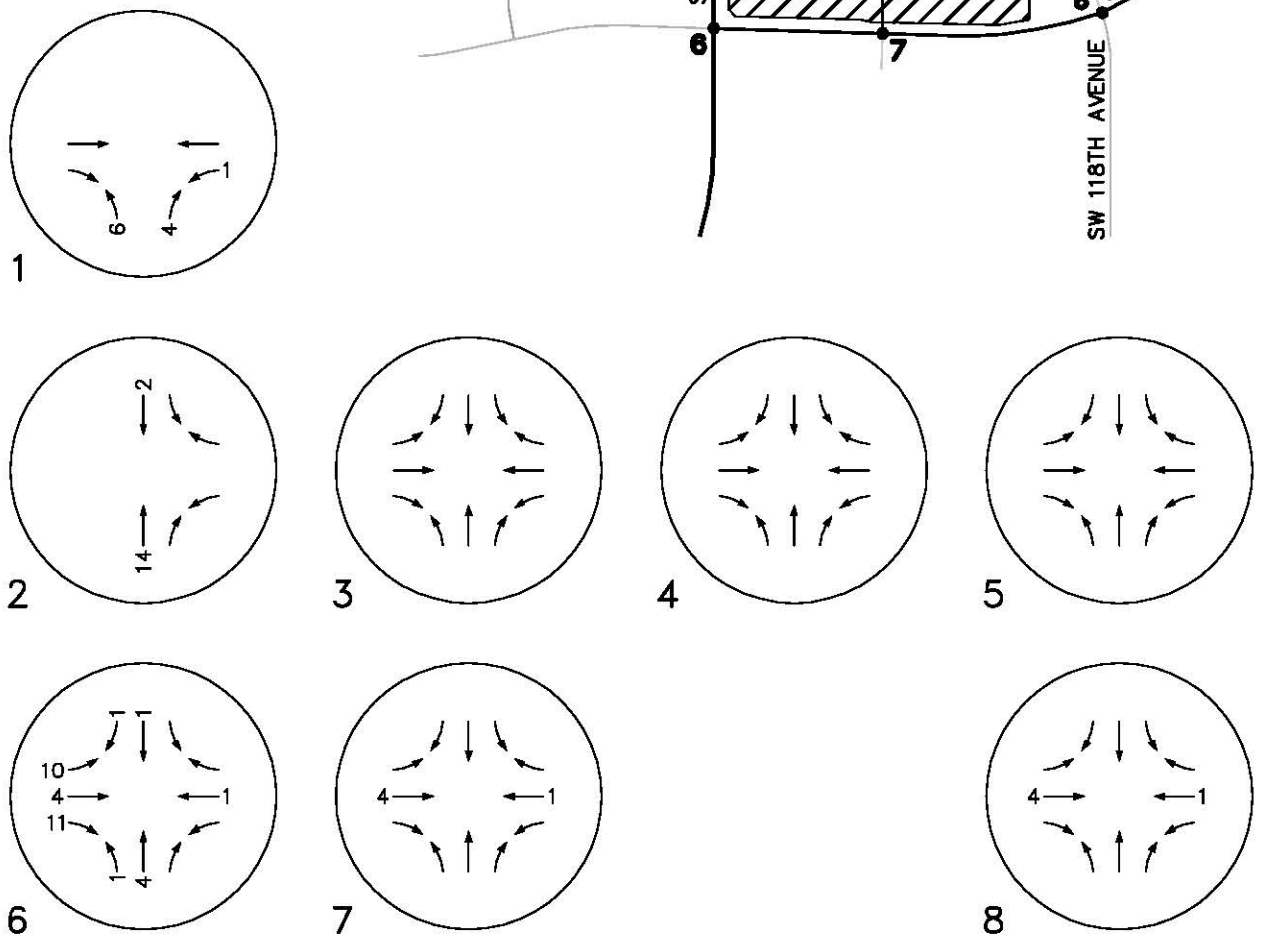
# IN-PROCESS TRAFFIC - AM PEAK HOUR

MITTLEMAN - LEVETON BUSINESS PARK
TUALATIN, OREGON

FIGURE
7A

NOT TO SCALE

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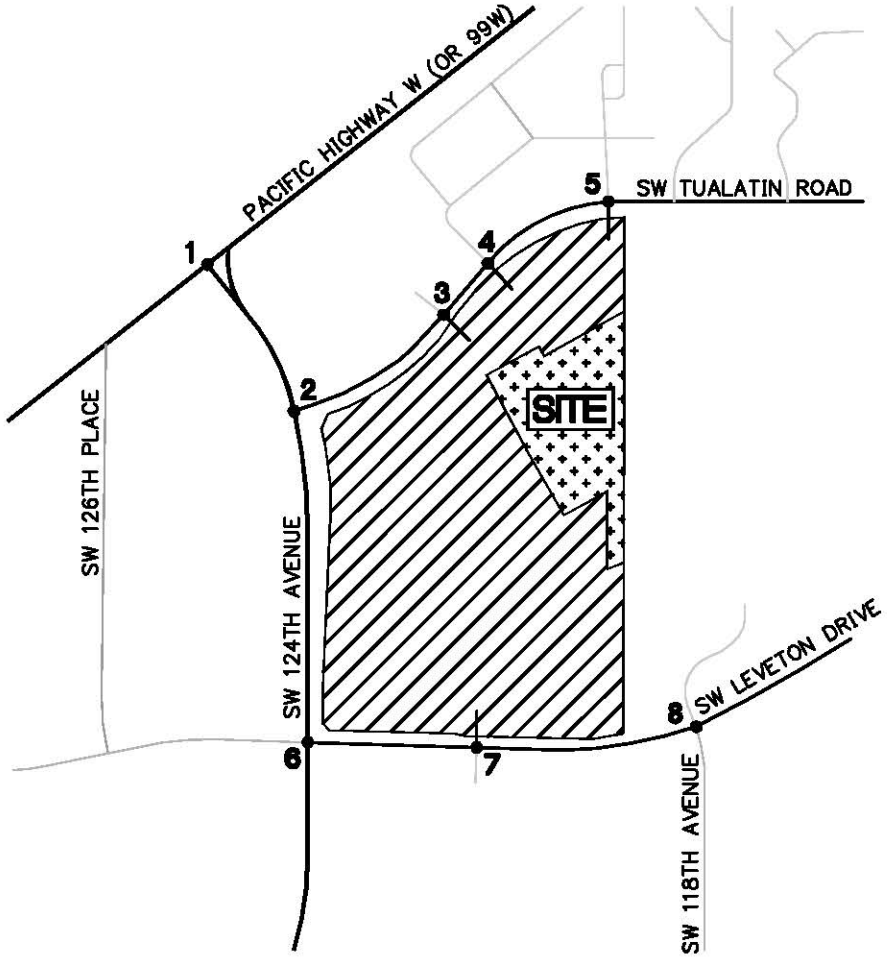
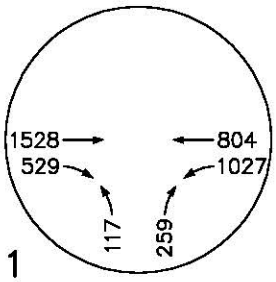
# IN-PROCESS TRAFFIC - PM PEAK HOUR

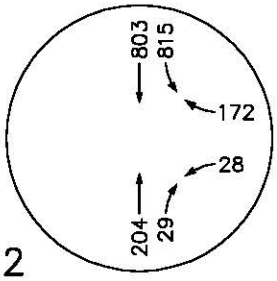
MITTLEMAN - LEVETON BUSINESS PARK
TUALATIN, OREGON

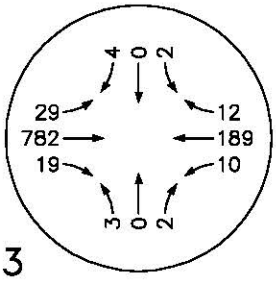
FIGURE
7B

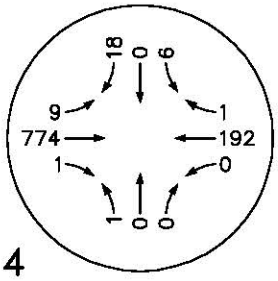
NOT TO SCALE

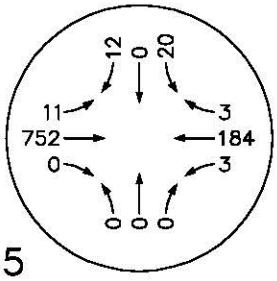


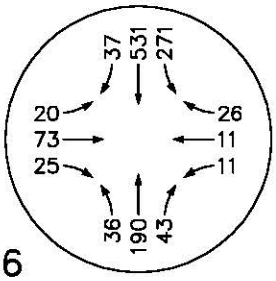



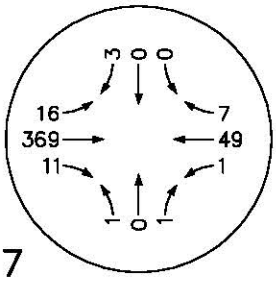



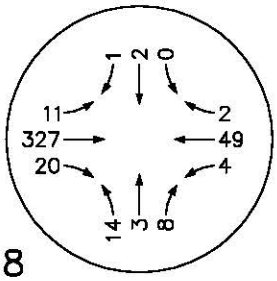





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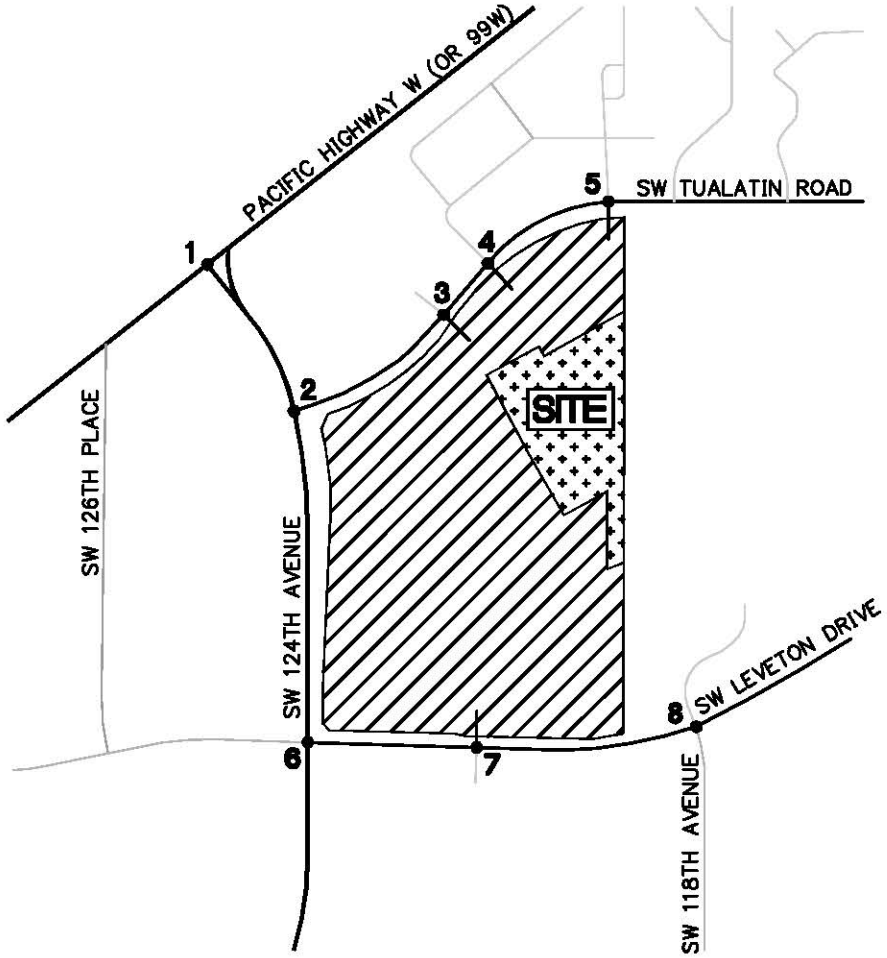
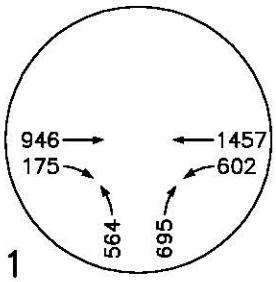
# 2019 PRE-DEVELOPMENT TRAFFIC VOLUMES - AM PEAK HOUR

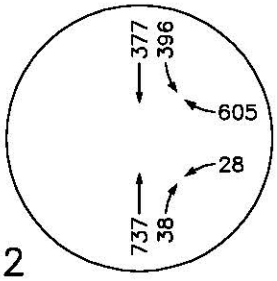
MITTLEMAN - LEVETON BUSINESS PARK
TUALATIN, OREGON

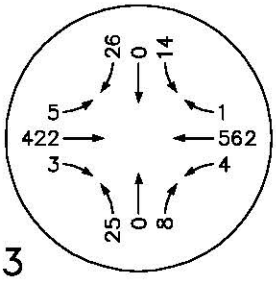
FIGURE
8A

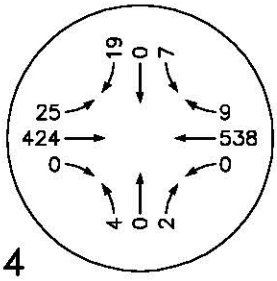
NOT TO SCALE

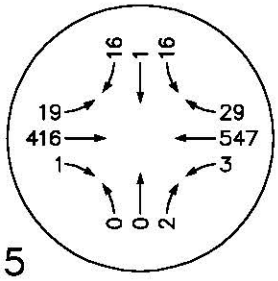


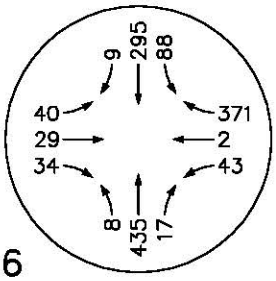



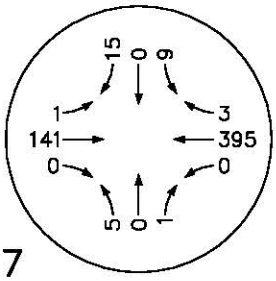



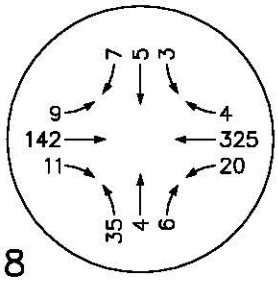





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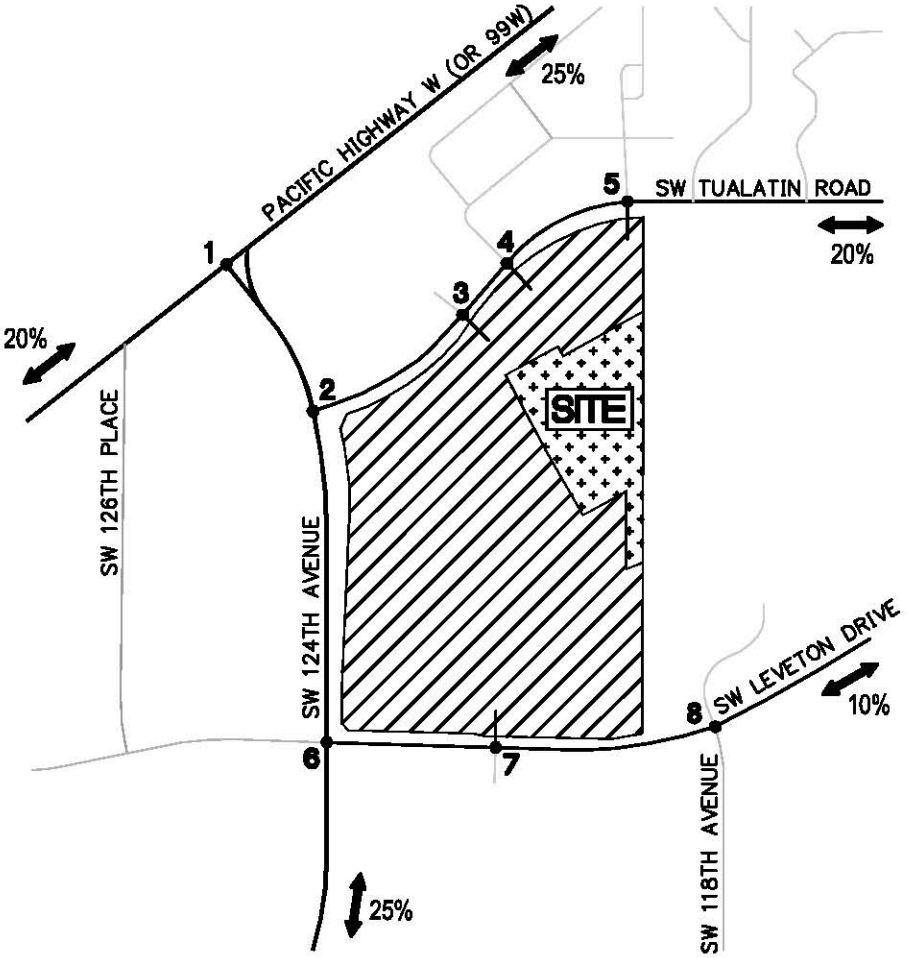
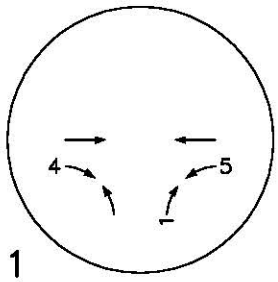
# 2019 PRE-DEVELOPMENT TRAFFIC VOLUMES - PM PEAK HOUR

MITTLEMAN - LEVETON BUSINESS PARK
TUALATIN, OREGON

FIGURE
8B

NOT TO SCALE

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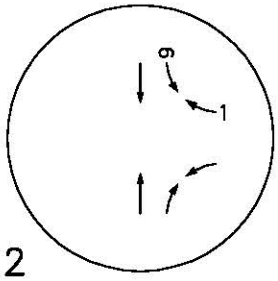


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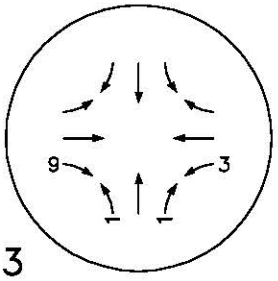


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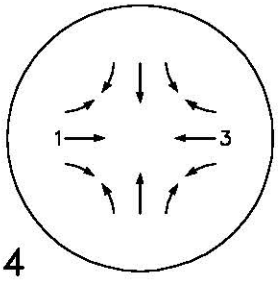


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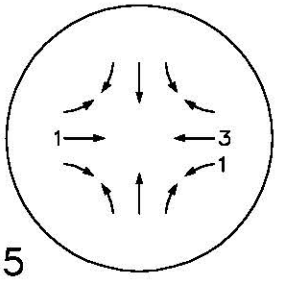


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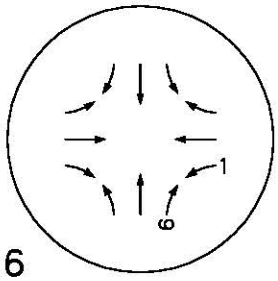


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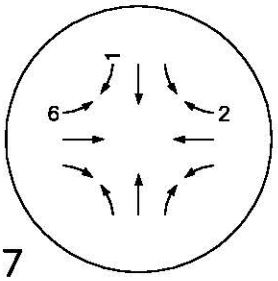
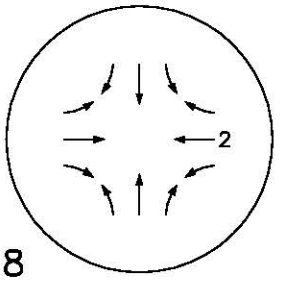



7

AM PEAK HOUR

Enter – 21
Exit – 3
Total – 24




8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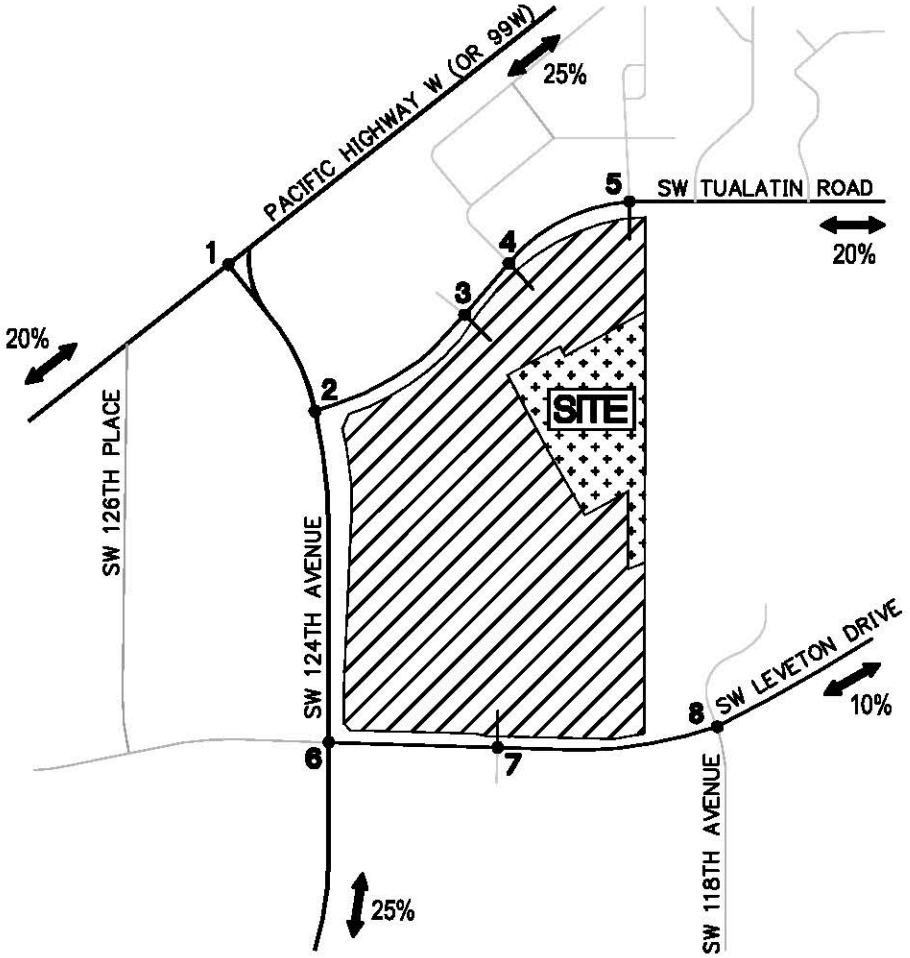
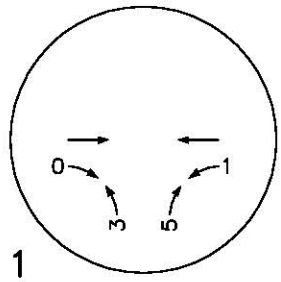
# TRIP DISTRIBUTION + TRAFFIC ASSIGNMENT - AM PEAK HOUR

MITTLEMAN - LEVETON BUSINESS PARK
TUALATIN, OREGON

FIGURE
9A

NOT TO SCALE



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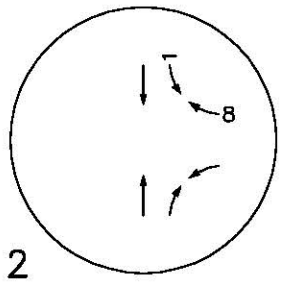

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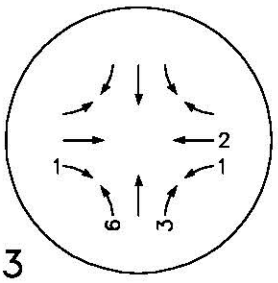

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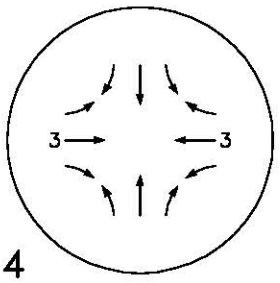

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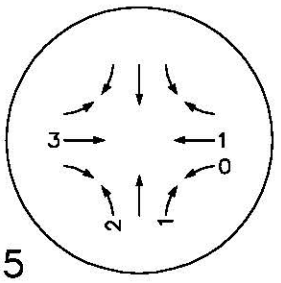

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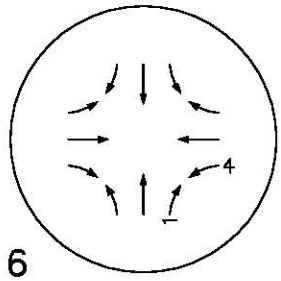

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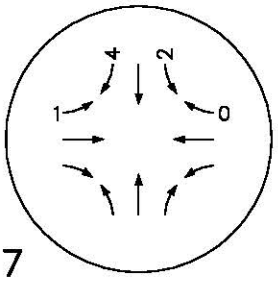
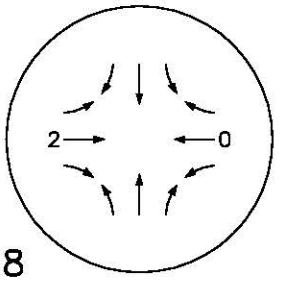


7

PM PEAK HOUR

Enter – 3
Exit – 18
Total – 21



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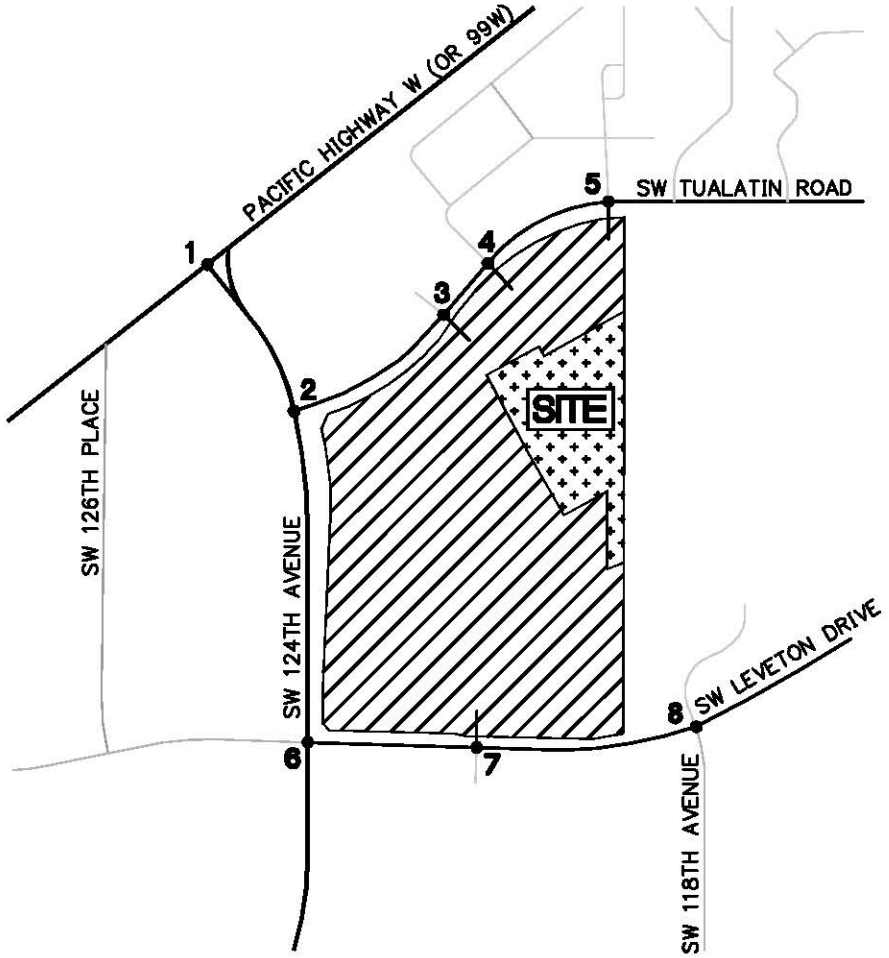
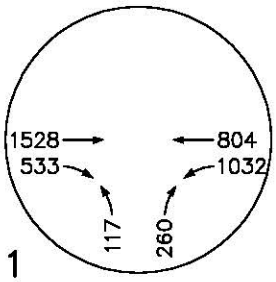
# TRIP DISTRIBUTION + TRAFFIC ASSIGNMENT - PM PEAK HOUR

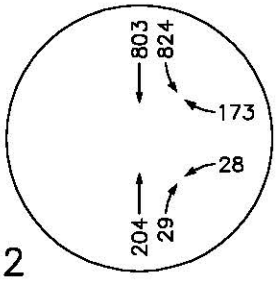
MITTLEMAN - LEVETON BUSINESS PARK
TUALATIN, OREGON

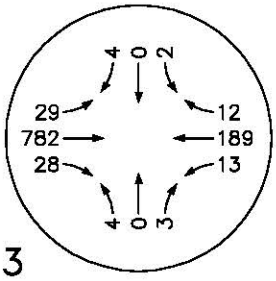
FIGURE
9B

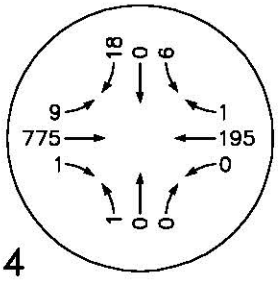
NOT TO SCALE

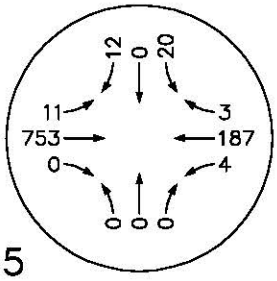


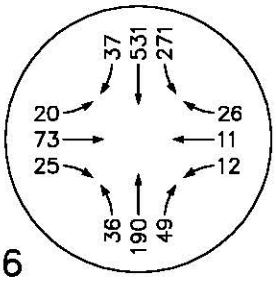



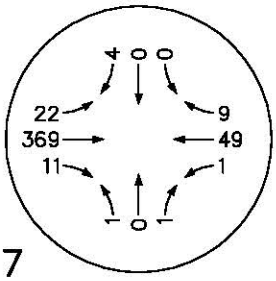



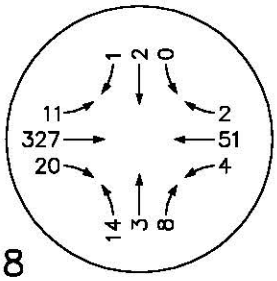





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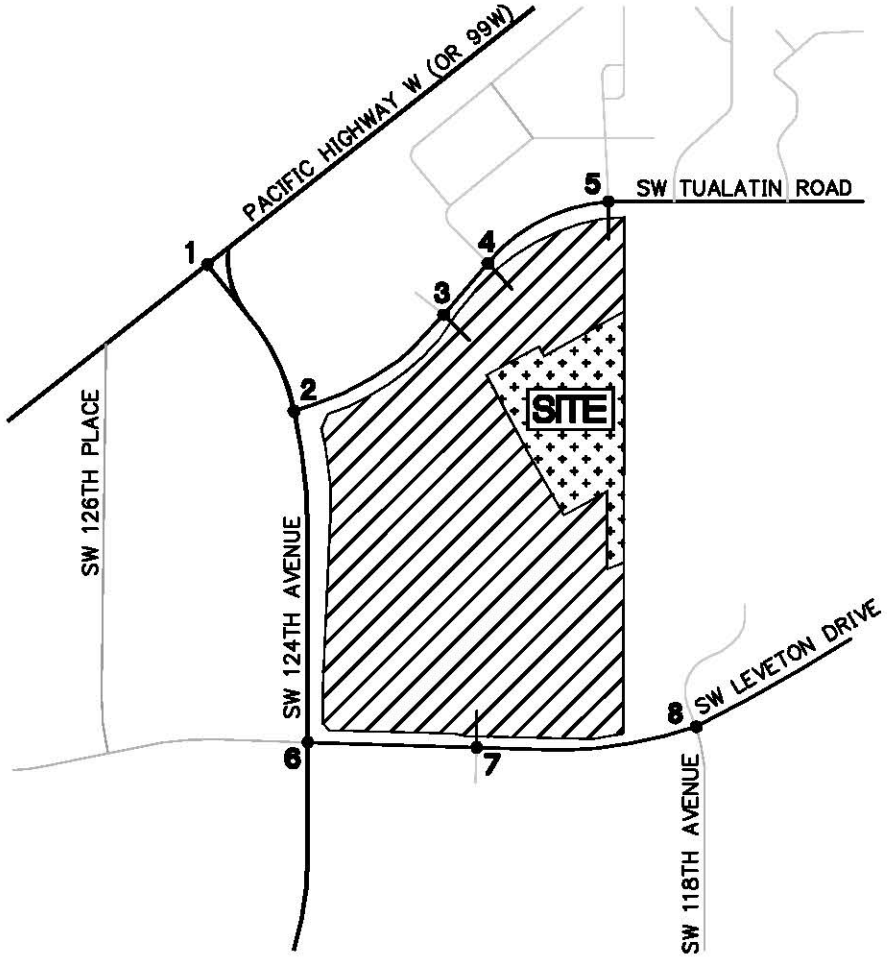
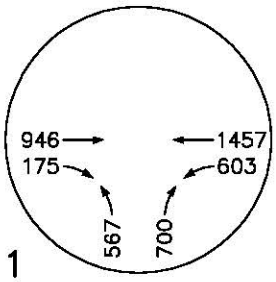
# 2019 POST-DEVELOPMENT TRAFFIC VOLUMES - AM PEAK HOUR

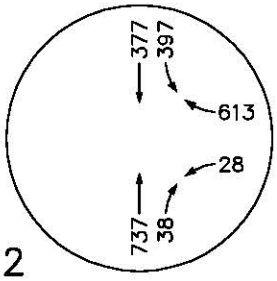
MITTLEMAN - LEVETON BUSINESS PARK
TUALATIN, OREGON

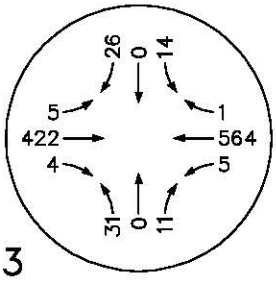
FIGURE
10A

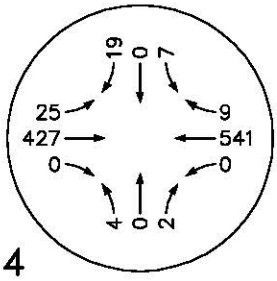
NOT TO SCALE

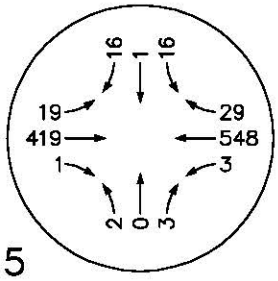


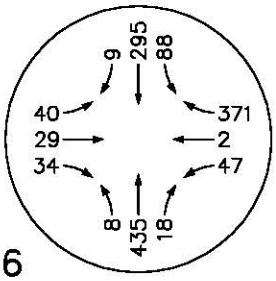



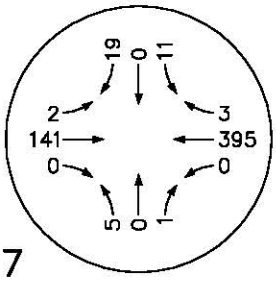



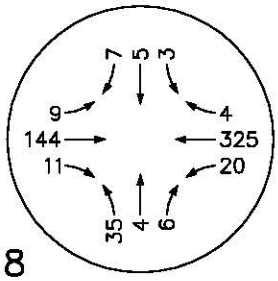





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DATE: 11.20.2017
DRAWN BY: JTJ
CHECKED BY: JED
JOB NO: 2170617.00

# 2019 POST-DEVELOPMENT TRAFFIC VOLUMES - PM PEAK HOUR

MITTLEMAN - LEVETON BUSINESS PARK
TUALATIN, OREGON

FIGURE
10B

APPENDIX B.

# SCOPING MATERIAL

MACKENZIE.

DESIGN DRIVEN | CLIENT FOCUSED

November 3, 2017

City of Tualatin
Attention: Tony Doran
18880 SW Martinazzi Avenue
Tualatin, OR 97062

Re: **Mittleman Properties at Leveton Business Park**
*Traffic Scoping Letter*
Project Number 2170617.00

Dear Mr. Doran:

Mackenzie has prepared this traffic scoping letter in advance of preparing the required Transportation Impact Analysis (TIA) for a proposed industrial building that will be part of the Mittleman Properties at Leveton Business Park in Tualatin, Oregon.

## SITE CONDITIONS

### Existing

The property is located within the 32.18-acre Mittleman Properties Industrial Master Plan, zoned as MP (Manufacturing Park), which currently includes three existing buildings east of SW 124th Avenue, north of SW Leveton Drive, and south of SW Tualatin Road. The site itself is part of a 17.48-acre parcel (tax lot #1100 on map 2S1 22B) with an address of 12100 SW Tualatin Road.

Access to the site is provided on SW Tualatin Road via three existing driveways and on SW Leveton Drive via one existing driveway. All driveways are currently shared with the tax lot's two existing buildings and a third building located on the adjacent tax lot (#1200).

### Proposed

A 43,660-square foot (SF) industrial use building is proposed southeast of two existing buildings fronting SW Tualatin Road. Access to the proposed building will be provided via the existing driveways on SW Tualatin Road and SW Leveton Drive. The buildout year for the development will be 2019. A site plan is attached for reference.

## TRIP GENERATION

Trip generation estimates were developed with the use of the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition.* The City requires that the reasonable worst case for trip generation be analyzed. Therefore, data for ITE's "General Light Industrial" (LUC 110) land use was utilized to estimate trips for the proposed development. Table 1 presents the trip generation estimates for the proposed manufacturing development.

| TABLE 1 – PROPOSED TRIP GENERATION | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| ITE Code | Land Use | Size | Trip Type | AM Peak Hour | | | PM Peak Hour | | | Daily |
| | | | | *In* | *Out* | *Total* | *In* | *Out* | *Total* | |
| 110 | General Light Industrial | 43.66 KSF | Total | 21 | 3 | 24 | 3 | 18 | 21 | 223 |

## TRIP DISTRIBUTION

Site trip distribution was assumed to be as presented in the Leveton Industrial Building traffic study dated June 2, 2017, prepared by Lancaster Engineering. The site for this project is on SW Leveton Drive cater-corner to the Mittleman Properties at Leveton Business Park. The trip distribution was adjusted slightly to account for better access to SW Tualatin Road. The following trip distribution is proposed:

- 20% to/from the west on OR 99W (Pacific Highway)
- 25% to/from the east on OR 99W (Pacific Highway)
- 20% to/from the east on SW Tualatin Road
- 10% to/from the east on SW Leveton Drive
- 25% to/from the south on SW 124th Avenue

## STUDY AREA

The City's *Traffic Study Requirements* document requires that all intersections with a ¼-mile radius of the project site be included as part of the study area. The following intersections are located within the ¼-mile radius:

- Pacific Highway W (OR-99W)/SW 124th Avenue
- SW 124th Avenue/SW Tualatin Road
- SW 124th Avenue/SW Leveton Drive
- SW 118$^{th}$ Avenue/SW Leveton Drive
- SW Tualatin Road/West Site Access
- SW Tualatin Road/Center Site Access
- SW Tualatin Road/East Site Access
- SW Leveton Drive/Site Access

However, site volumes through some of these intersections are expected to be very low and we propose to exclude two intersections for the following reasons:

- SW Leveton Drive/SW 118th Avenue – With only 10% of the traffic expected to use SW Leveton Drive to access the site, volumes through this intersection are estimated at two vehicles in both the AM and PM peak hours.
- SW Tualatin Road/Center Site Access – This driveway is unlikely to carry any entering/exiting site traffic because it does not provide any direct access to the parking for the new building.

Excluding these two intersections, the proposed study area would address six of the eight intersections within ¼ mile of the site.

No Washington County intersections are proposed because projected trips are not expected to meet the threshold of 10% impact of the roadway's average daily traffic (ADT).

## TRANSPORTATION IMPACT ANALYSIS

Based on the City's traffic study requirements, as well as the required scope for the Leveton Industrial Building, the TIA will review AM and PM peak hour conditions at the study area intersections for the following scenarios:

- 2017 Existing
- 2019 Pre-Development without Leveton Building B
- 2019 Post-Development with Leveton Building B

The TIA will include the following analysis components:

- Intersection capacity analyses will be conducted at the study area intersections using the *Highway Capacity Manual* (HCM) 2000 and 2010 methodologies. Capacity results for unsignalized intersections will be reported using the HCM 2010 methodology and capacity results for signalized intersections will be reported using the HCM 2000 methodology.
- Crash data will be compiled and evaluated for safety concerns.
- Intersection sight distance evaluations will be based on AASHTO methodology for the existing site access points.
- Intersection queuing, turn-lane warrants, and signal warrants will also be evaluated where appropriate.

For the existing traffic condition, a seasonal adjustment factor of 1.07 based on ODOT's 2016 commuter trend and a November 7, 2017 count date will be applied to existing through volumes on OR 99W.

For the pre-development condition, a 2% annual growth rate will be applied to existing traffic volumes to reflect 2019 background traffic, consistent with the Leveton Industrial Building traffic study. Traffic volumes for the Leveton Industrial Building, Stein Oil, and Ruth T. LLC developments will be added to 2019 background traffic volumes to reflect 2019 pre-development traffic.

The Synchro model used to evaluate intersection operations will follow ODOT parameters. A saturated flow rate of 1900 vehicles per hour per lane (vphpl) will be used to reflect conditions within the Portland Urban Growth Boundary (UGB) area.

## DATA REQUEST

We will obtain traffic signal plans for all signalized study area intersections located in Washington County from the "Washington County Traffic Engineering Plans Online". We request that ODOT provide signal timing, phase rotation, and detector setting plans for the OR-99W/SW 124th Avenue intersection.

## SUMMARY

In summary, please confirm the following assumptions for the TIA:

- Trip generation and distribution assumptions described in this letter
- Six study area intersections proposed in this letter
- Analysis scenarios and analysis periods described in this letter
- Annual growth rate of 2%
- ODOT seasonal adjustment of 1.07
- Use of a 1900 vphpl saturated flow rate for capacity analysis and ODOT analysis parameters

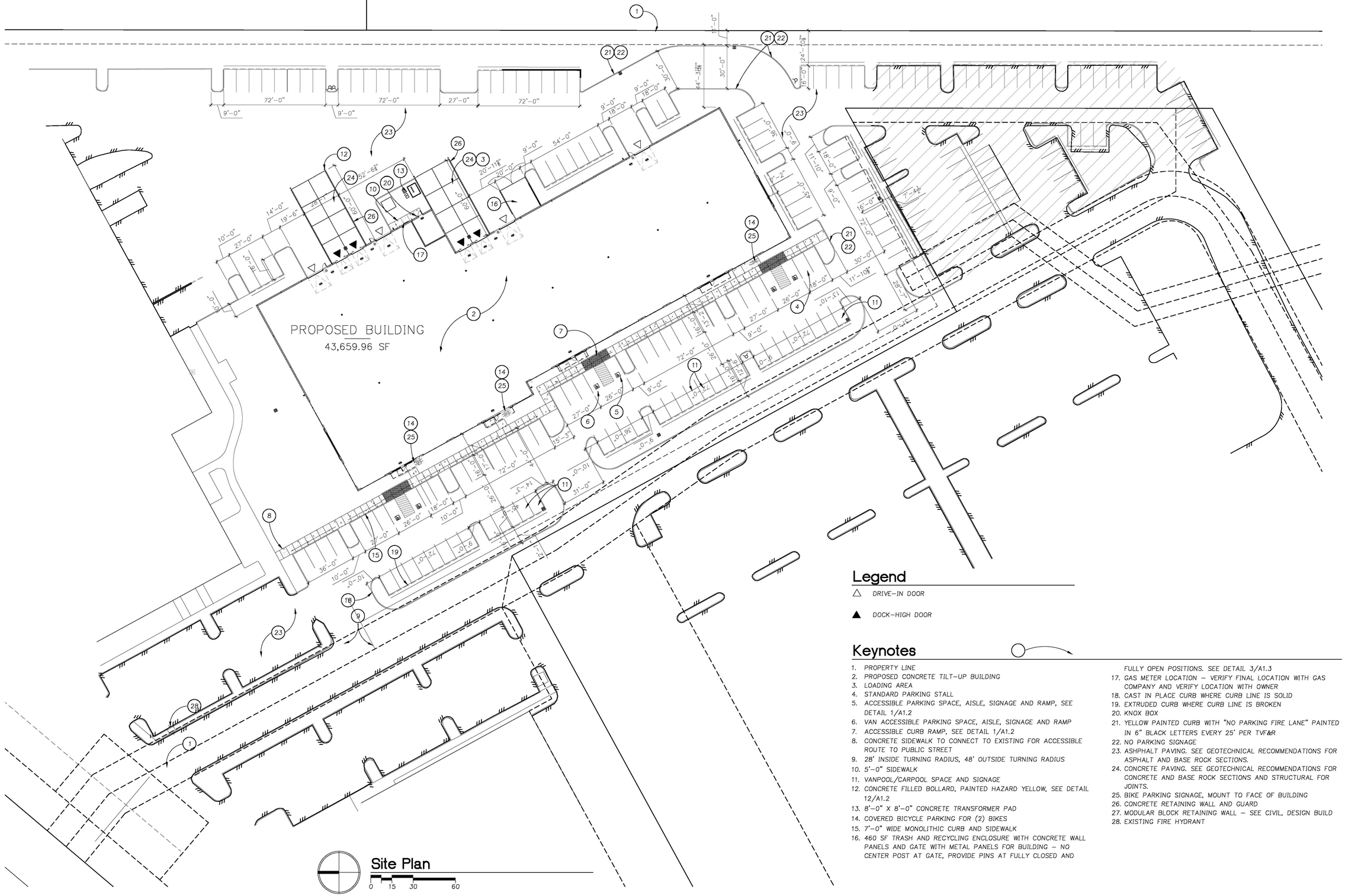
Please contact me if you have any questions or comments regarding the information presented in this letter.

Sincerely,

Jennifer Danziger, PE
Transportation Engineer

Enclosure(s): Site Plan

c: Avi Tayar – ODOT
Dirk Otis – Stratus Real Estate Developers
Janet Jones – Mackenzie




## Legend

△ DRIVE-IN DOOR

▲ DOCK-HIGH DOOR

## Keynotes

1. PROPERTY LINE
2. PROPOSED CONCRETE TILT-UP BUILDING
3. LOADING AREA
4. STANDARD PARKING STALL
5. ACCESSIBLE PARKING SPACE, AISLE, SIGNAGE AND RAMP, SEE DETAIL 1/A1.2
6. VAN ACCESSIBLE PARKING SPACE, AISLE, SIGNAGE AND RAMP
7. ACCESSIBLE CURB RAMP, SEE DETAIL 1/A1.2
8. CONCRETE SIDEWALK TO CONNECT TO EXISTING FOR ACCESSIBLE ROUTE TO PUBLIC STREET
9. 28' INSIDE TURNING RADIUS, 48' OUTSIDE TURNING RADIUS
10. 5'-0" SIDEWALK
11. VANPOOL/CARPOOL SPACE AND SIGNAGE
12. CONCRETE FILLED BOLLARD, PAINTED HAZARD YELLOW, SEE DETAIL 12/A1.2
13. 8'-0" X 8'-0" CONCRETE TRANSFORMER PAD
14. COVERED BICYCLE PARKING FOR (2) BIKES
15. 7'-0" WIDE MONOLITHIC CURB AND SIDEWALK
16. 460 SF TRASH AND RECYCLING ENCLOSURE WITH CONCRETE WALL PANELS AND GATE WITH METAL PANELS FOR BUILDING - NO CENTER POST AT GATE, PROVIDE PINS AT FULLY CLOSED AND FULLY OPEN POSITIONS. SEE DETAIL 3/A1.3
17. GAS METER LOCATION - VERIFY FINAL LOCATION WITH GAS COMPANY AND VERIFY LOCATION WITH OWNER
18. CAST IN PLACE CURB WHERE CURB LINE IS SOLID
19. EXTRUDED CURB WHERE CURB LINE IS BROKEN
20. KNOX BOX
21. YELLOW PAINTED CURB WITH "NO PARKING FIRE LANE" PAINTED IN 6" BLACK LETTERS EVERY 25' PER TVF&R
22. NO PARKING SIGNAGE
23. ASHPHALT PAVING. SEE GEOTECHNICAL RECOMMENDATIONS FOR ASPHALT AND BASE ROCK SECTIONS.
24. CONCRETE PAVING. SEE GEOTECHNICAL RECOMMENDATIONS FOR CONCRETE AND BASE ROCK SECTIONS AND STRUCTURAL FOR JOINTS.
25. BIKE PARKING SIGNAGE, MOUNT TO FACE OF BUILDING
26. CONCRETE RETAINING WALL AND GUARD
27. MODULAR BLOCK RETAINING WALL - SEE CIVIL, DESIGN BUILD
28. EXISTING FIRE HYDRANT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REGISTERED ARCHITECT
3056
WILLIAM L. CALHOUN
OREGON
STATE OF OREGON

Client:
Mittleman Properties

Project:
Mittleman Properties at Leveton Business Park

Tualatin, Oregon

Sheet Title:
Site Plan

Revisions:



Date: 29 September 2017

Drawn by: CLT

Checked by:

Job Number: 116190

Sheet: A1.1

Architectural Review Submittal - September 2017

## Jennifer E. Danziger

**From:** Tony Doran <TDORAN@tualatin.gov>
**Sent:** Thursday, November 09, 2017 8:06 AM
**To:** Jennifer E. Danziger
**Subject:** RE: Mittleman Properties - Traffic Study scoping letter

Jennifer,

Avi just confirmed ODOT finds it acceptable. When you have it ready please combine it with other remaining incompleteness items to Charles who is the Planner lead on this AR. However, I'll never deny an earlier pdf to share with staff.

Tony Doran, Engineering Associate
Engineering Division, Operations
City of Tualatin
18880 SW Martinazzi Ave.
Tualatin, OR 97062
(503) 691-3035 | tdoran@tualatin.gov
www.tualatinoregon.gov

---

**From:** Tony Doran
**Sent:** Wednesday, November 08, 2017 1:12 PM
**To:** 'Jennifer E. Danziger' <JDanziger@mcknze.com>
**Subject:** RE: Mittleman Properties - Traffic Study scoping letter

Jennifer,

Based on our current policy in general your proposal looks fine, but you will need to include all your listed intersections. The center site access to Tualatin and 118th & Leveton need to be included due to:

1) We don't currently have a minimum % to where there's a cutoff for evaluation.
2) Part of their objective is to clarify in the response existing conditions to result with their impacts. Even if you will not be adding trips within their evaluation, that response defends why no requirements for improvements are needed.
3) The Tualatin accesses exist with the west two opposing residential apartments, which met past Transportation System Plans (TSP). Our current TSP prefers Tualatin to be residential focused. Clarifying commercial affect opposing the apartments and on Tualatin road is best for public interests.

There is no need to include projects that haven't submitted for Architectural Review. Stein Oil only obtained a Conditional Use Permit without any specific development made certain. Any traffic impacts would be a guestimate based on the size of lot. We typically have only made TIAs account for those who have submitted and they did account for them. The remaining projects you identified are within AR and you correctly indicate accounting for them.

Avi from ODOT hasn't responded at this time.

Tony Doran, Engineering Associate
Engineering Division, Operations
City of Tualatin

18880 SW Martinazzi Ave.
Tualatin, OR 97062
(503) 691-3035 | tdoran@tualatin.gov
www.tualatinoregon.gov

---

**From:** Jennifer E. Danziger [mailto:JDanziger@mcknze.com]
**Sent:** Monday, November 06, 2017 10:13 AM
**To:** Tony Doran <TDORAN@tualatin.gov>
**Subject:** Mittleman Properties - Traffic Study scoping letter

Tony,

I'm sending over the scoping letter for the Mittleman site we discussed last week. I'm hoping you can confirm study area today because we are struggling to find count dates in No-School November and tomorrow is one of the few days that works. Please call if you have questions.

Regards, Jennifer

**Jennifer Danziger, PE**
Transportation Engineer | Project Manager

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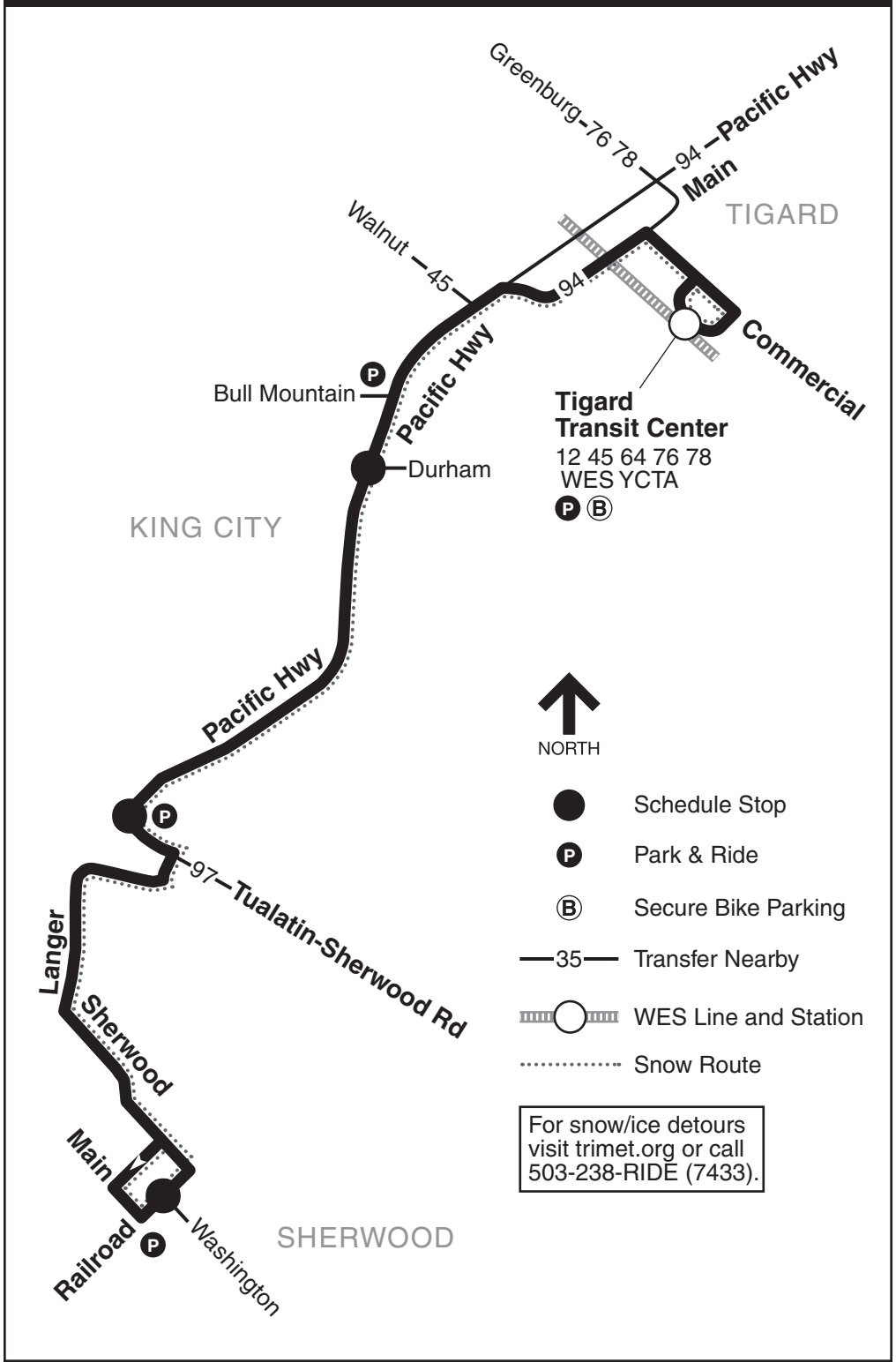
**P** 503.224.9560 **W** mcknze.com **C** vcard

RiverEast Center
1515 SE Water Ave, Suite 100
Portland OR 97214

APPENDIX C.

# TRANSIT INFORMATION

# 93-Tigard/Sherwood



TRIMET

# 93-Tigard/Sherwood

**Weekday** **To Sherwood**

| Tigard Transit Center Stop ID 8211 | SW Pacific Hwy & Durham Stop ID 8644 | SW Tualatin-Sherwood Rd & Pacific Hwy Stop ID 9186 | SW Railroad & Washington Stop ID 3670 |
|---|---|---|---|
| 6:12 | 6:20 | 6:28 | 6:35 |
| 6:42 | 6:50 | 6:58 | 7:06 |
| 7:12 | 7:21 | 7:30 | 7:38 |
| 7:42 | 7:52 | 8:01 | 8:10 |
| 8:27 | 8:37 | 8:46 | 8:55 |
| 9:11 | 9:22 | 9:31 | 9:40 |
| 9:56 | 10:07 | 10:16 | 10:25 |
| 10:41 | 10:52 | 11:01 | 11:10 |
| 11:25 | 11:37 | 11:46 | 11:55 |
| **12:10** | **12:22** | **12:31** | **12:40** |
| **12:55** | **1:07** | **1:16** | **1:25** |
| **1:40** | **1:52** | **2:01** | **2:10** |
| **2:25** | **2:38** | **2:47** | **2:56** |
| **3:15** | **3:28** | **3:37** | **3:46** |
| **4:02** | **4:15** | **4:24** | **4:33** |
| **4:45** | **4:59** | **5:09** | **5:17** |
| **5:31** | **5:45** | **5:54** | **6:02** |
| **6:19** | **6:31** | **6:39** | **6:47** |
| **6:45** | **6:57** | **7:05** | **7:13** |
| **7:14** | **7:25** | **7:33** | **7:41** |
| **7:40** | **7:51** | **7:59** | **8:07** |
| **8:10** | **8:20** | **8:27** | **8:35** |
| **8:40** | **8:50** | **8:57** | **9:05** |
| **9:21** | **9:30** | **9:36** | **9:43** |
| **10:07** | **10:15** | **10:21** | **10:28** |
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| **11:38** | **11:45** | **11:51** | **11:58** |
| 12:18 | 12:25 | — | — |
| 1:04 | 1:11 | — | — |

**Times in darker print are p.m.**

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TRIMET

# 93-Tigard/Sherwood

**Weekday** **To Tigard Transit Center**

| SW Railroad & Washington Stop ID 3670 | SW Tualatin-Sherwood Rd & Pacific Hwy Stop ID 9639 | SW Pacific Hwy & Durham Stop ID 8792 | Tigard Transit Center |
|---|---|---|---|
| 4:29 | 4:35 | 4:43 | 4:52 |
| 4:55 | 5:01 | 5:09 | 5:18 |
| — | — | 5:29 | 5:38 |
| 5:31 | 5:37 | 5:46 | 5:55 |
| 6:07 | 6:14 | 6:22 | 6:32 |
| 6:35 | 6:42 | 6:51 | 7:02 |
| 7:06 | 7:13 | 7:22 | 7:34 |
| 7:38 | 7:45 | 7:54 | 8:06 |
| 8:31 | 8:38 | 8:47 | 8:59 |
| 9:16 | 9:23 | 9:32 | 9:43 |
| 10:01 | 10:08 | 10:17 | 10:28 |
| 10:46 | 10:53 | 11:02 | 11:13 |
| 11:31 | 11:38 | 11:48 | 11:59 |
| **12:16** | **12:23** | **12:33** | **12:45** |
| **1:01** | **1:08** | **1:18** | **1:30** |
| **1:46** | **1:53** | **2:03** | **2:15** |
| **2:31** | **2:39** | **2:49** | **3:01** |
| **3:15** | **3:23** | **3:33** | **3:45** |
| **3:34** | **3:42** | **3:52** | **4:04** |
| **3:52** | **4:00** | **4:10** | **4:22** |
| **4:10** | **4:18** | **4:28** | **4:40** |
| **4:27** | **4:35** | **4:45** | **4:57** |
| **4:44** | **4:52** | **5:02** | **5:14** |
| **4:57** | **5:05** | **5:15** | **5:27** |
| **5:37** | **5:45** | **5:55** | **6:07** |
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| **6:46** | **6:53** | **7:02** | **7:12** |
| **7:08** | **7:15** | **7:24** | **7:34** |
| **7:30** | **7:37** | **7:46** | **7:56** |
| **7:54** | **8:01** | **8:10** | **8:19** |
| **8:17** | **8:24** | **8:33** | **8:42** |
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| **9:58** | **10:05** | **10:12** | **10:20** |
| **10:50** | **10:56** | **11:03** | **11:10** |
| **11:30** | **11:36** | **11:43** | **11:50** |

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TRIMET

# 93-Tigard/Sherwood

**Saturday** **To Sherwood**

| Tigard Transit Center Stop ID 8211 | SW Pacific Hwy & Durham Stop ID 8644 | SW Tualatin-Sherwood Rd & Pacific Hwy Stop ID 9186 | SW Railroad & Washington Stop ID 3670 |
|---|---|---|---|
| 6:03 | 6:11 | 6:19 | 6:26 |
| 6:46 | 6:54 | 7:02 | 7:10 |
| 7:28 | 7:36 | 7:44 | 7:52 |
| 8:10 | 8:19 | 8:27 | 8:35 |
| 8:53 | 9:02 | 9:10 | 9:19 |
| 9:49 | 9:59 | 10:07 | 10:16 |
| 10:19 | 10:30 | 10:38 | 10:47 |
| 10:49 | 11:00 | 11:08 | 11:17 |
| 11:19 | 11:30 | 11:38 | 11:47 |
| 11:49 | **12:00** | **12:08** | **12:17** |
| **12:19** | **12:30** | **12:38** | **12:47** |
| **12:49** | **1:00** | **1:08** | **1:17** |
| **1:19** | **1:30** | **1:38** | **1:47** |
| **1:49** | **2:00** | **2:08** | **2:17** |
| **2:19** | **2:30** | **2:38** | **2:47** |
| **2:48** | **2:59** | **3:07** | **3:16** |
| **3:19** | **3:30** | **3:38** | **3:47** |
| **3:49** | **4:00** | **4:08** | **4:17** |
| **4:19** | **4:30** | **4:38** | **4:47** |
| **4:49** | **5:00** | **5:08** | **5:17** |
| **5:19** | **5:30** | **5:38** | **5:47** |
| **5:49** | **6:00** | **6:08** | **6:17** |
| **6:19** | **6:30** | **6:38** | **6:47** |
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| **7:19** | **7:30** | **7:38** | **7:47** |
| **7:52** | **8:03** | **8:10** | **8:18** |
| **8:34** | **8:44** | **8:51** | **8:59** |
| **9:21** | **9:30** | **9:36** | **9:43** |
| **10:07** | **10:15** | **10:21** | **10:28** |
| **10:53** | **11:01** | **11:07** | **11:14** |
| **11:38** | **11:45** | **11:51** | **11:58** |
| 12:17 | 12:24 | — | — |
| 1:03 | 1:10 | — | — |

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TRIMET

# 93-Tigard/Sherwood

**Saturday** — **To Tigard Transit Center**

| SW Railroad & Washington Stop ID 3670 | SW Tualatin-Sherwood Rd & Pacific Hwy Stop ID 9639 | SW Pacific Hwy & Durham Stop ID 8792 | Tigard Transit Center |
|---|---|---|---|
| 4:31 | 4:37 | 4:45 | 4:52 |
| 5:11 | 5:17 | 5:25 | 5:32 |
| 5:51 | 5:57 | 6:05 | 6:12 |
| 6:23 | 6:30 | 6:39 | 6:46 |
| 7:05 | 7:12 | 7:21 | 7:28 |
| 7:46 | 7:53 | 8:02 | 8:10 |
| 8:29 | 8:36 | 8:45 | 8:53 |
| 9:02 | 9:09 | 9:19 | 9:27 |
| 9:32 | 9:39 | 9:49 | 9:57 |
| 10:01 | 10:08 | 10:18 | 10:27 |
| 10:31 | 10:38 | 10:48 | 10:57 |
| 11:01 | 11:08 | 11:18 | 11:27 |
| 11:31 | 11:38 | 11:48 | 11:57 |
| **12:00** | **12:07** | **12:17** | **12:27** |
| **12:30** | **12:37** | **12:47** | **12:57** |
| **1:00** | **1:07** | **1:17** | **1:27** |
| **1:30** | **1:37** | **1:47** | **1:57** |
| **1:59** | **2:06** | **2:16** | **2:27** |
| **2:29** | **2:36** | **2:46** | **2:57** |
| **2:59** | **3:06** | **3:16** | **3:27** |
| **3:29** | **3:36** | **3:46** | **3:57** |
| **3:59** | **4:06** | **4:16** | **4:27** |
| **4:29** | **4:36** | **4:46** | **4:57** |
| **4:59** | **5:06** | **5:16** | **5:27** |
| **5:29** | **5:36** | **5:46** | **5:57** |
| **6:00** | **6:07** | **6:17** | **6:27** |
| **6:47** | **6:54** | **7:03** | **7:12** |
| **7:32** | **7:39** | **7:48** | **7:57** |
| **8:18** | **8:25** | **8:34** | **8:42** |
| **9:09** | **9:16** | **9:24** | **9:32** |
| **9:58** | **10:05** | **10:12** | **10:20** |
| **10:47** | **10:53** | **11:00** | **11:07** |
| **11:27** | **11:33** | **11:40** | **11:47** |

**Times in darker print are p.m.**

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TRIMET

# 93-Tigard/Sherwood

**Sunday** **To Sherwood**

| Tigard Transit Center Stop ID 8211 | SW Pacific Hwy & Durham Stop ID 8644 | SW Tualatin-Sherwood Rd & Pacific Hwy Stop ID 9186 | SW Railroad & Washington Stop ID 3670 |
|---|---|---|---|
| 6:03 | 6:11 | 6:19 | 6:26 |
| 6:46 | 6:54 | 7:02 | 7:10 |
| 7:28 | 7:36 | 7:44 | 7:52 |
| 8:10 | 8:19 | 8:27 | 8:35 |
| 8:53 | 9:02 | 9:10 | 9:19 |
| 9:49 | 9:59 | 10:07 | 10:16 |
| 10:19 | 10:30 | 10:38 | 10:47 |
| 10:49 | 11:00 | 11:08 | 11:17 |
| 11:19 | 11:30 | 11:38 | 11:47 |
| 11:49 | **12:00** | **12:08** | **12:17** |
| **12:19** | **12:30** | **12:38** | **12:47** |
| **12:49** | **1:00** | **1:08** | **1:17** |
| **1:19** | **1:30** | **1:38** | **1:47** |
| **1:49** | **2:00** | **2:08** | **2:17** |
| **2:19** | **2:30** | **2:38** | **2:47** |
| **2:48** | **2:59** | **3:07** | **3:16** |
| **3:19** | **3:30** | **3:38** | **3:47** |
| **3:49** | **4:00** | **4:08** | **4:17** |
| **4:19** | **4:30** | **4:38** | **4:47** |
| **4:49** | **5:00** | **5:08** | **5:17** |
| **5:19** | **5:30** | **5:38** | **5:47** |
| **5:49** | **6:00** | **6:08** | **6:17** |
| **6:19** | **6:30** | **6:38** | **6:47** |
| **6:49** | **7:00** | **7:08** | **7:17** |
| **7:19** | **7:30** | **7:38** | **7:47** |
| **7:52** | **8:03** | **8:10** | **8:18** |
| **8:34** | **8:44** | **8:51** | **8:59** |
| **9:21** | **9:30** | **9:36** | **9:43** |
| **10:07** | **10:15** | **10:21** | **10:28** |
| **10:53** | **11:01** | **11:07** | **11:14** |
| **11:38** | **11:45** | **11:51** | **11:58** |
| 12:17 | 12:24 | — | — |
| 1:03 | 1:10 | — | — |

**Times in darker print are p.m.**

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TRIMET

# 93-Tigard/Sherwood

**Sunday** — **To Tigard Transit Center**

| SW Railroad & Washington Stop ID 3670 | SW Tualatin-Sherwood Rd & Pacific Hwy Stop ID 9639 | SW Pacific Hwy & Durham Stop ID 8792 | Tigard Transit Center |
|---|---|---|---|
| 4:31 | 4:37 | 4:45 | 4:52 |
| 5:11 | 5:17 | 5:25 | 5:32 |
| 5:51 | 5:57 | 6:05 | 6:12 |
| 6:23 | 6:30 | 6:39 | 6:46 |
| 7:05 | 7:12 | 7:21 | 7:28 |
| 7:46 | 7:53 | 8:02 | 8:10 |
| 8:29 | 8:36 | 8:45 | 8:53 |
| 9:02 | 9:09 | 9:19 | 9:27 |
| 9:32 | 9:39 | 9:49 | 9:57 |
| 10:01 | 10:08 | 10:18 | 10:27 |
| 10:31 | 10:38 | 10:48 | 10:57 |
| 11:01 | 11:08 | 11:18 | 11:27 |
| 11:31 | 11:38 | 11:48 | 11:57 |
| **12:00** | **12:07** | **12:17** | **12:27** |
| **12:30** | **12:37** | **12:47** | **12:57** |
| **1:00** | **1:07** | **1:17** | **1:27** |
| **1:30** | **1:37** | **1:47** | **1:57** |
| **1:59** | **2:06** | **2:16** | **2:27** |
| **2:29** | **2:36** | **2:46** | **2:57** |
| **2:59** | **3:06** | **3:16** | **3:27** |
| **3:29** | **3:36** | **3:46** | **3:57** |
| **3:59** | **4:06** | **4:16** | **4:27** |
| **4:29** | **4:36** | **4:46** | **4:57** |
| **4:59** | **5:06** | **5:16** | **5:27** |
| **5:29** | **5:36** | **5:46** | **5:57** |
| **6:00** | **6:07** | **6:17** | **6:27** |
| **6:47** | **6:54** | **7:03** | **7:12** |
| **7:32** | **7:39** | **7:48** | **7:57** |
| **8:18** | **8:25** | **8:34** | **8:42** |
| **9:09** | **9:16** | **9:24** | **9:32** |
| **9:58** | **10:05** | **10:12** | **10:20** |
| **10:47** | **10:53** | **11:00** | **11:07** |
| **11:27** | **11:33** | **11:40** | **11:47** |

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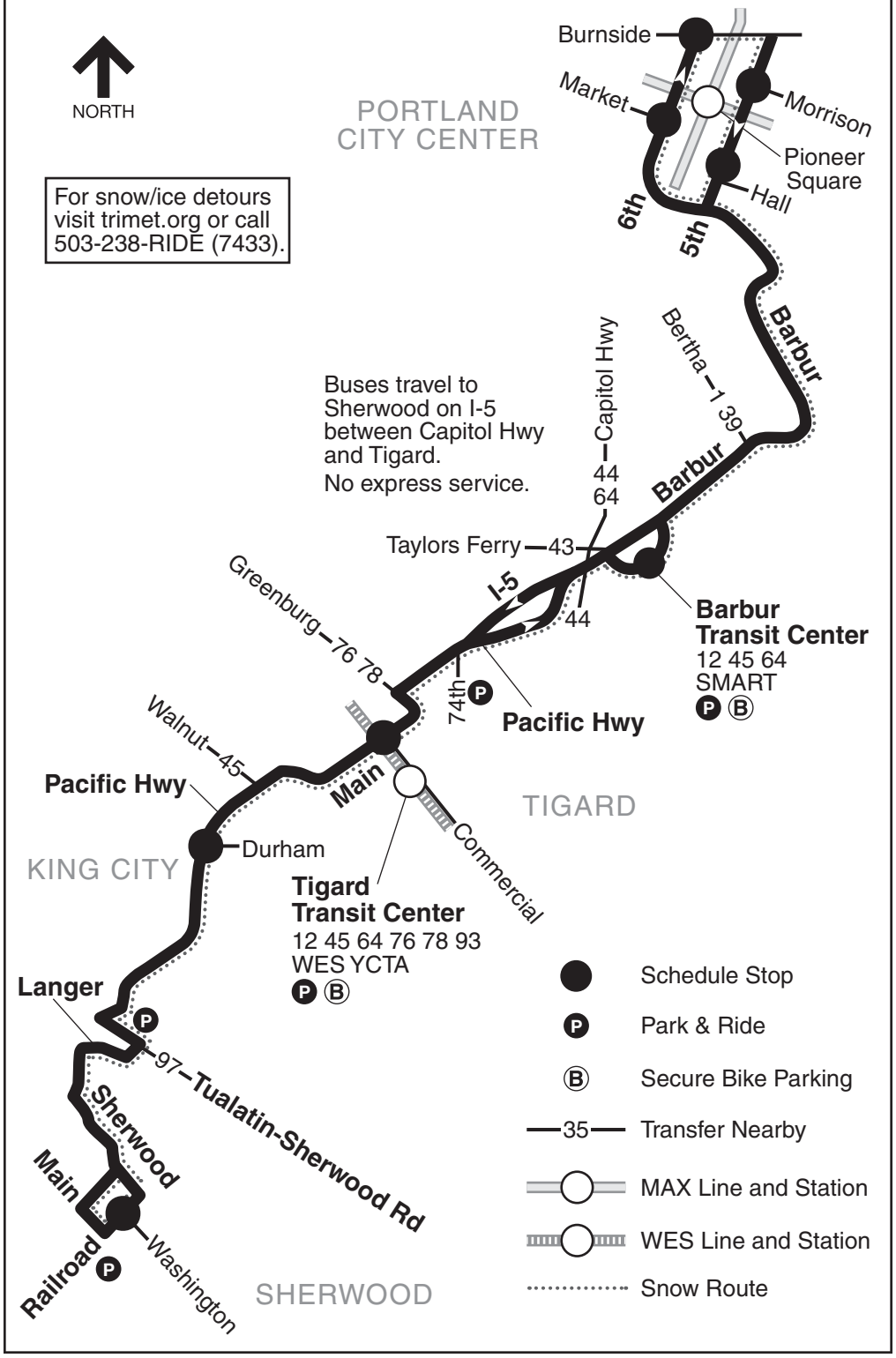
# 94-Pacific Hwy/Sherwood



TRIMET

# 94-Pacific Hwy/Sherwood

**Weekday** **To Sherwood**

| SW 5th & Morrison Stop ID 7625 | Barbur Transit Center Stop ID 8213 | SW Main & Commercial Stop ID 3656 | SW Pacific Hwy & Durham Stop ID 8644 | SW Railroad & Washington Stop ID 3670 |
|---|---|---|---|---|
| 7:32 | 7:51 | 8:02 | 8:13 | 8:31 |
| 8:16 | 8:35 | 8:46 | 8:58 | 9:16 |
| 9:01 | 9:20 | 9:31 | 9:43 | 10:01 |
| 9:46 | 10:05 | 10:16 | 10:28 | 10:46 |
| 10:30 | 10:49 | 11:00 | 11:13 | 11:31 |
| 11:15 | 11:34 | 11:45 | 11:58 | **12:16** |
| **12:00** | **12:19** | **12:30** | **12:43** | **1:01** |
| **12:45** | **1:04** | **1:15** | **1:28** | **1:46** |
| **1:30** | **1:49** | **2:00** | **2:13** | **2:31** |
| **2:13** | **2:32** | **2:43** | **2:57** | **3:15** |
| **2:32** | **2:51** | **3:02** | **3:16** | **3:34** |
| **2:49** | **3:09** | **3:20** | **3:34** | **3:52** |
| **3:06** | **3:26** | **3:38** | **3:52** | **4:10** |
| **3:23** | **3:43** | **3:55** | **4:09** | **4:27** |
| **3:40** | **4:00** | **4:13** | **4:27** | **4:44** |
| **3:53** | **4:13** | **4:26** | **4:40** | **4:57** |
| **4:06** | **4:26** | **4:39** | **4:54** | **5:11** |
| **4:14** | **4:34** | **4:47** | **5:02** | **5:20** |
| **4:22** | **4:43** | **4:56** | **5:11** | **5:29** |
| **4:30** | **4:51** | **5:04** | **5:19** | **5:37** |
| **4:38** | **4:59** | **5:12** | **5:27** | **5:45** |
| **4:45** | **5:06** | **5:19** | **5:34** | **5:51** |
| **4:53** | **5:14** | **5:27** | **5:42** | **5:59** |
| **4:59** | **5:20** | **5:33** | **5:48** | **6:05** |
| **5:05** | **5:26** | **5:39** | **5:54** | **6:11** |
| **5:11** | **5:33** | **5:46** | **6:01** | **6:17** |
| **5:17** | **5:39** | **5:52** | **6:06** | **6:22** |
| **5:23** | **5:45** | **5:58** | **6:12** | **6:28** |
| **5:38** | **5:59** | **6:12** | **6:26** | **6:42** |
| **5:54** | **6:14** | **6:26** | **6:40** | **6:56** |
| **6:09** | **6:28** | **6:40** | **6:53** | **7:09** |
| **6:24** | **6:43** | **6:54** | **7:07** | **7:23** |
| **6:54** | **7:13** | **7:24** | **7:36** | **7:52** |
| **7:34** | **7:53** | **8:04** | **8:16** | **8:31** |

**Note:** Line 94 buses to Sherwood serve: stops on SW 5th at Pine, Morrison, Madison, Market, Hall, and Broadway then travel express to Barbur & Bertha; then stop at: Barbur Blvd Transit Center; Pacific Hwy at 74th, SW Main in Tigard, then all stops to Sherwood.

**Times in darker print are p.m.**

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TRIMET

# 94-Pacific Hwy/Sherwood

**Weekday** **To Portland City Center**

| SW Railroad & Washington Stop ID 3670 | SW Pacific Hwy & Durham Stop ID 8792 | SW Main & Commercial Stop ID 13636 | Barbur Transit Center Stop ID 212 | SW 6th & Yamhill Stop ID 7807 | SW 6th & W Burnside Stop ID 7751 |
|---|---|---|---|---|---|
| 5:43 | 5:57 | 6:06 | 6:17 | 6:32 | 6:36 |
| 5:54 | 6:08 | 6:18 | 6:29 | 6:44 | 6:48 |
| 6:03 | 6:18 | 6:28 | 6:39 | 6:54 | 6:58 |
| 6:10 | 6:25 | 6:35 | 6:47 | 7:02 | 7:05 |
| 6:18 | 6:33 | 6:43 | 6:55 | 7:10 | 7:14 |
| 6:24 | 6:39 | 6:49 | 7:02 | 7:19 | 7:23 |
| 6:29 | 6:45 | 6:56 | 7:09 | 7:26 | 7:30 |
| 6:36 | 6:52 | 7:03 | 7:16 | 7:33 | 7:37 |
| — | — | — | 7:21 | 7:38 | 7:42 |
| 6:44 | 7:00 | 7:12 | 7:25 | 7:42 | 7:46 |
| — | — | — | 7:30 | 7:48 | 7:51 |
| 6:53 | 7:09 | 7:21 | 7:34 | 7:52 | 7:56 |
| 7:00 | 7:16 | 7:28 | 7:41 | 8:00 | 8:04 |
| 7:08 | 7:24 | 7:36 | 7:49 | 8:08 | 8:12 |
| 7:17 | 7:33 | 7:45 | 7:58 | 8:18 | 8:22 |
| — | — | — | 8:10 | 8:30 | 8:33 |
| 7:39 | 7:55 | 8:07 | 8:20 | 8:40 | 8:44 |
| — | — | — | 8:27 | 8:47 | 8:51 |
| — | 8:09 | 8:21 | 8:34 | 8:53 | 8:57 |
| 8:10 | 8:26 | 8:38 | 8:51 | 9:09 | 9:12 |
| 8:55 | 9:11 | 9:22 | 9:35 | 9:51 | 9:54 |
| 9:40 | 9:56 | 10:07 | 10:20 | 10:36 | 10:39 |
| 10:25 | 10:41 | 10:52 | 11:05 | 11:21 | 11:24 |
| 11:10 | 11:27 | 11:38 | 11:51 | **12:07** | **12:10** |
| 11:55 | **12:12** | **12:24** | **12:37** | **12:53** | **12:56** |
| **12:40** | **12:57** | **1:09** | **1:22** | **1:38** | **1:41** |
| **1:25** | **1:42** | **1:54** | **2:07** | **2:23** | **2:26** |
| **2:10** | **2:27** | **2:39** | **2:53** | **3:09** | **3:12** |
| **2:56** | **3:14** | **3:26** | **3:40** | **3:58** | **4:01** |
| **3:46** | **4:04** | **4:16** | **4:30** | **4:50** | **4:53** |
| **4:33** | **4:51** | **5:03** | **5:17** | **5:36** | **5:39** |
| **5:17** | **5:35** | **5:47** | **6:01** | **6:17** | **6:20** |
| **6:02** | **6:20** | **6:31** | **6:44** | **6:59** | **7:02** |

**Note:** Buses to Portland City Center serve: all stops from Sherwood to Main & Commercial in Tigard, then Main & Scoffins, 99W & Main, 99W & 74th, Barbur Blvd & Capitol Hwy, Barbur Blvd Transit Center, Barbur & Bertha, then travel express with no stops to SW Broadway & 5th, SW 6th at Market, Jefferson, Yamhill, Oak, and Burnside.

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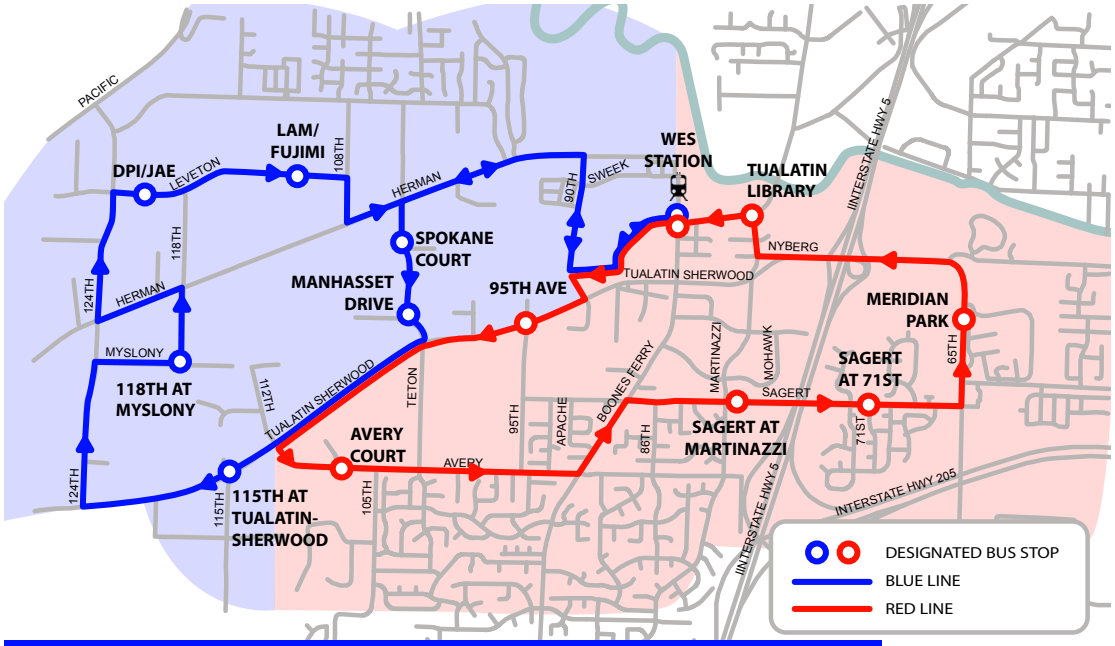



## BLUE LINE SCHEDULE

| Southbound WES Arrival Time | Depart WES Station | Spokane Court | Manhasset Drive | 115th at Tualatin-Sherwood | 118th at Myslony | DPI/JAE | LAM/Fujimi | Arrive WES Station | Northbound WES Departs |
|---|---|---|---|---|---|---|---|---|---|
| --- | 5:32 | 5:37 | 5:38 | 5:42 | 5:45 | 5:49 | 5:50 | 5:55 | |
| 6:15 | 6:16 | 6:21 | 6:22 | 6:26 | 6:29 | 6:33 | 6:34 | 6:42 | |
| 6:45 | 6:46 | 6:51 | 6:52 | 6:56 | 6:59 | 7:03 | 7:04 | 7:12 | |
| 7:15 | 7:16 | 7:21 | 7:22 | 7:26 | 7:29 | 7:33 | 7:34 | 7:42 | |
| 7:45 | 7:46 | 7:51 | 7:52 | 7:56 | 7:59 | 8:03 | 8:04 | 8:12 | |
| 8:15 | 8:27 | 8:32 | 8:33 | 8:37 | 8:40 | 8:44 | 8:45 | 8:53 | |
| 8:45 | 8:57 | 9:02 | 9:03 | 9:07 | 9:10 | 9:14 | 9:15 | 9:23 | |
| 9:15 | 9:27 | 9:32 | 9:33 | 9:37 | 9:40 | 9:44 | 9:45 | 9:53 | |
| | | | | | | | | | |
| | **2:58** | **3:03** | **3:04** | **3:08** | **3:11** | **3:15** | **3:16** | **3:24** | **3:38** |
| | **3:28** | **3:33** | **3:34** | **3:38** | **3:41** | **3:45** | **3:46** | **3:54** | **4:08** |
| | **3:58** | **4:03** | **4:04** | **4:08** | **4:11** | **4:15** | **4:16** | **4:24** | **4:38** |
| | **4:28** | **4:33** | **4:34** | **4:38** | **4:41** | **4:45** | **4:46** | **4:54** | **5:08** |
| | **4:58** | **5:03** | **5:04** | **5:08** | **5:11** | **5:15** | **5:16** | **5:24** | **5:38** |
| | **5:39** | **5:44** | **5:45** | **5:49** | **5:52** | **5:56** | **5:57** | **6:05** | **6:08** |
| | **6:09** | **6:14** | **6:15** | **6:19** | **6:22** | **6:26** | **6:27** | **6:35** | **6:38** |
| | **6:39** | **6:44** | **6:45** | **6:49** | **6:52** | **6:56** | **6:57** | **7:05** | **7:08** |

**$No Fare Required** PM times in **BOLD**

# TUALATIN SHUTTLE

The Tualatin Shuttle is a free 'deviated, fixed-route' service linking WES MAX Station to employment destinations in the Tualatin area. While specifically designed for transit-dependent employees, job-seekers, and low-income individuals, the service is open to the public.

### FLAG STOPS

If you are along the route, and not near a designated stop, you can "flag" or simply wave to signal the bus driver to stop. Be sure to stand on the correct side of the road. Passengers may request on-route stops when boarding as well. Street and traffic conditions may make it unsafe for a driver to perform a flag stop where requested.

### OFF-ROUTE STOPS / DEVIATIONS

We will deviate up to 1/2 mile off route to pick you up or drop you off for one leg of your trip (see shaded area on map). Off-route stop requests should be scheduled with our dispatcher at least one day in advance. Only one scheduled deviation (pick-up or drop-off) is allowed per loop, however, multiple passengers may use the same deviation.

To schedule a deviation, please call 503-226-0700 between 7:30am and 5:00pm Monday through Friday.

### BIKE RACKS AND ACCESSIBILITY

All buses are accessible and equipped with bike racks and lifts.

### SEVERE WEATHER

On days with severe weather such as ice or snow, Tualatin Shuttle schedules may follow snow routes. Or all service may be suspended until weather improves. If conditions warrant a closure or change in operations, information will be available on our website: www.rideconnection.org. You can also call 503-226-0700.

### HOLIDAY CLOSURES

Service will not be available on: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Christmas Day. If a listed holiday occurs on a Saturday, the observed holiday will be the Friday before. If the holiday occurs on a Sunday, the holiday will be observed on Monday.

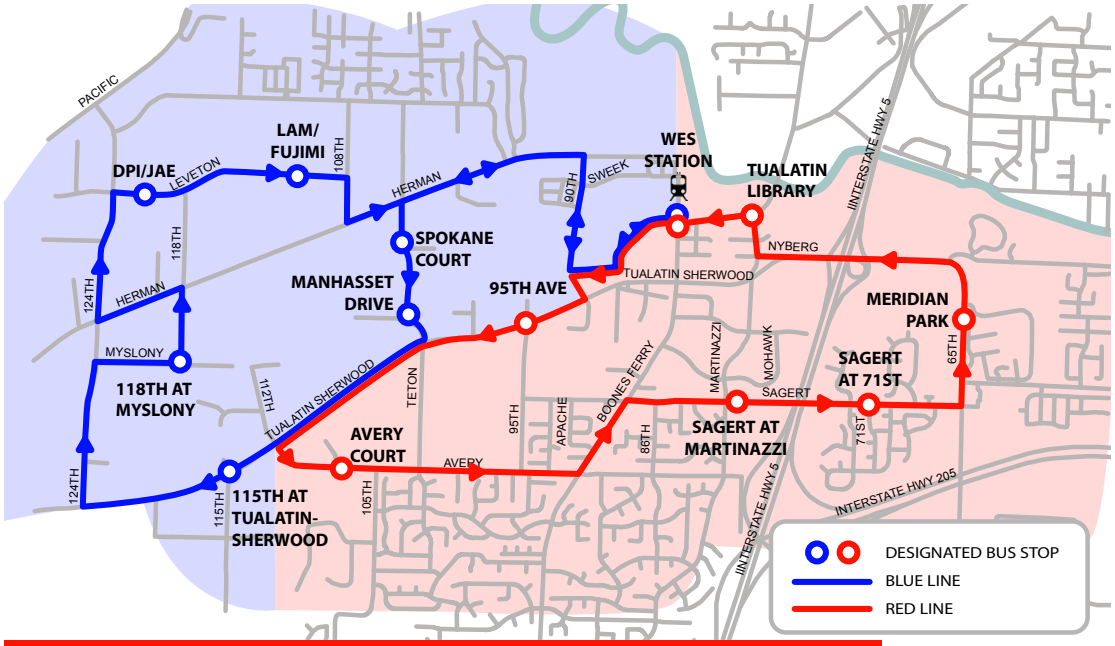
### CUSTOMER COMMENTS

Your input is appreciated! Feel free to contact us: 503-226-0700 or info@rideconnection.org

**WE RESPECT CIVIL RIGHTS.** For a copy of our policy, please call 503-528-1721

To request this brochure in an alternate format, please call 503-528-1721

# TUALATIN SHUTTLE




## RED LINE SCHEDULE

| Southbound WES Arrival Time | Leave WES Station | 95th Ave | Avery Court | Sagert at Martinazzi | Sagert St. at 71st Ave. | Meridian Park | Tualatin Library | Arrive WES Station | Northbound WES Departs |
|---|---|---|---|---|---|---|---|---|---|
| --- | 5:02 | 5:05 | 5:10 | 5:16 | 5:17 | 5:19 | 5:24 | 5:28 | |
| --- | 5:32 | 5:35 | 5:40 | 5:46 | 5:47 | 5:49 | 5:54 | 5:58 | |
| 6:15 | 6:16 | 6:19 | 6:24 | 6:30 | 6:31 | 6:33 | 6:38 | 6:42 | |
| 6:45 | 6:46 | 6:49 | 6:54 | 7:00 | 7:01 | 7:03 | 7:08 | 7:12 | |
| 7:15 | 7:16 | 7:19 | 7:24 | 7:30 | 7:31 | 7:33 | 7:38 | 7:42 | |
| 7:45 | 7:46 | 7:49 | 7:54 | 8:00 | 8:01 | 8:03 | 8:08 | 8:12 | |
| 8:15 | 8:27 | 8:30 | 8:35 | 8:41 | 8:42 | 8:44 | 8:49 | 8:53 | |
| 8:45 | 8:57 | 9:00 | 9:05 | 9:11 | 9:12 | 9:14 | 9:19 | 9:23 | |
| | | | | | | | | | |
| | **2:58** | **3:01** | **3:06** | **3:12** | **3:13** | **3:15** | **3:20** | **3:24** | **3:38** |
| | **3:28** | **3:31** | **3:36** | **3:42** | **3:43** | **3:45** | **3:50** | **3:54** | **4:08** |
| | **3:58** | **4:01** | **4:06** | **4:12** | **4:13** | **4:15** | **4:20** | **4:24** | **4:38** |
| | **4:28** | **4:31** | **4:36** | **4:42** | **4:43** | **4:45** | **4:50** | **4:54** | **5:08** |
| | **4:58** | **5:01** | **5:06** | **5:12** | **5:13** | **5:15** | **5:20** | **5:24** | **5:38** |
| | **5:39** | **5:42** | **5:47** | **5:53** | **5:54** | **5:56** | **6:00** | **6:05** | **6:08** |
| | **6:09** | **6:12** | **6:17** | **6:23** | **6:24** | **6:26** | **6:30** | **6:35** | **6:38** |
| | **6:39** | **6:42** | **6:47** | **6:53** | **6:54** | **6:56** | **7:00** | **7:05** | **7:08** |

**$No Fare Required**

PM times in **BOLD**

We do our best to stay on schedule, however, times may be changed by up to 5 minutes past the scheduled stop time to adjust for traffic conditions.


**THE TUALATIN SHUTTLE**

*Is operated by:*


Ride CONNECTION

9955 NE Glisan St.
Portland, OR 97220
rideconnection.org
503.226.0700 | TTY : 711

APPENDIX D.

# TRAFFIC COUNT SUMMARIES

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

**LOCATION:** SW 124th Ave -- SW Pacific Hwy

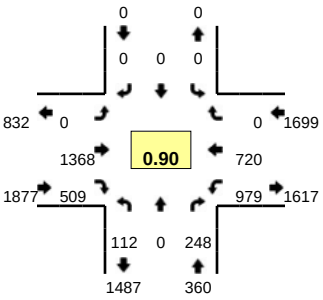
**CITY/STATE:** Tualatin, OR

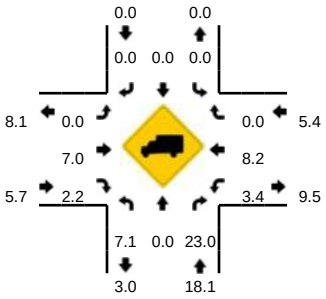
**QC JOB #:** 14553201

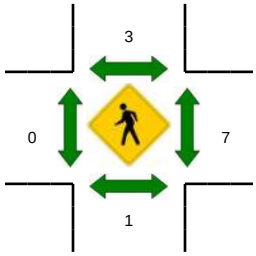
**DATE:** Tue, Nov 07 2017

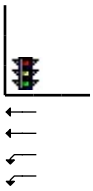
**Peak-Hour: 7:00 AM -- 8:00 AM**

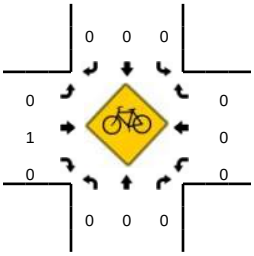
**Peak 15-Min: 7:35 AM -- 7:50 AM**

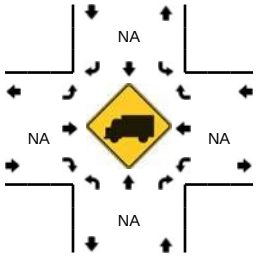


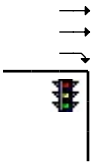



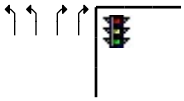



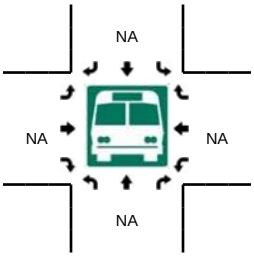










| 5-Min Count Period Beginning At | SW 124th Ave (Northbound) | | | | SW 124th Ave (Southbound) | | | | SW Pacific Hwy (Eastbound) | | | | SW Pacific Hwy (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 6 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 128 | 25 | 0 | 78 | 64 | 0 | 0 | 324 | |
| 7:05 AM | 15 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 148 | 37 | 0 | 51 | 56 | 0 | 0 | 321 | |
| 7:10 AM | 9 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 113 | 29 | 0 | 68 | 67 | 0 | 0 | 303 | |
| 7:15 AM | 9 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 128 | 45 | 0 | 78 | 53 | 0 | 0 | 337 | |
| 7:20 AM | 8 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 112 | 46 | 0 | 72 | 40 | 0 | 0 | 304 | |
| 7:25 AM | 7 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 123 | 35 | 0 | 46 | 61 | 0 | 0 | 286 | |
| 7:30 AM | 3 | 0 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 101 | 49 | 0 | 79 | 76 | 0 | 0 | 320 | |
| 7:35 AM | 16 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 143 | 44 | 0 | 119 | 84 | 0 | 0 | 429 | |
| 7:40 AM | 12 | 0 | 28 | 0 | 0 | 0 | 0 | 0 | 0 | 86 | 58 | 0 | 95 | 57 | 0 | 0 | 336 | |
| 7:45 AM | 7 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 96 | 57 | 0 | 86 | 63 | 0 | 0 | 329 | |
| 7:50 AM | 8 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 81 | 50 | 0 | 117 | 44 | 0 | 0 | 324 | |
| 7:55 AM | 12 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 109 | 34 | 0 | 89 | 55 | 0 | 1 | 323 | 3936 |
| 8:00 AM | 8 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 109 | 43 | 0 | 73 | 52 | 0 | 0 | 304 | 3916 |
| 8:05 AM | 5 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 107 | 43 | 0 | 68 | 56 | 0 | 0 | 292 | 3887 |
| 8:10 AM | 5 | 0 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 92 | 52 | 0 | 50 | 34 | 0 | 0 | 247 | 3831 |
| 8:15 AM | 12 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 76 | 35 | 0 | 52 | 60 | 0 | 0 | 261 | 3755 |
| 8:20 AM | 14 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 103 | 28 | 0 | 74 | 53 | 0 | 0 | 298 | 3749 |
| 8:25 AM | 11 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 103 | 22 | 0 | 36 | 47 | 0 | 1 | 243 | 3706 |
| 8:30 AM | 6 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 83 | 26 | 0 | 36 | 50 | 0 | 0 | 211 | 3597 |
| 8:35 AM | 7 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 73 | 18 | 0 | 58 | 57 | 0 | 0 | 240 | 3408 |
| 8:40 AM | 12 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 89 | 32 | 0 | 50 | 59 | 0 | 0 | 259 | 3331 |
| 8:45 AM | 14 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 87 | 30 | 0 | 43 | 59 | 0 | 0 | 250 | 3252 |
| 8:50 AM | 6 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 103 | 25 | 0 | 37 | 38 | 0 | 0 | 222 | 3150 |
| 8:55 AM | 6 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 53 | 17 | 0 | 46 | 59 | 0 | 0 | 208 | 3035 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 140 | 0 | 284 | 0 | 0 | 0 | 0 | 0 | 0 | 1300 | 636 | 0 | 1200 | 816 | 0 | 0 | 4376 |
| Heavy Trucks | 8 | 0 | 56 | | 0 | 0 | 0 | | 0 | 120 | 8 | | 24 | 44 | 0 | | 260 |
| Pedestrians | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 1 | 0 | | 0 | 0 | 0 | | 1 |
| Railroad | | | | | | | | | | | | | | | | | |
| Stopped Buses | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/16/2017 1:52 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

**LOCATION:** SW 124th Ave -- SW Tualatin Rd

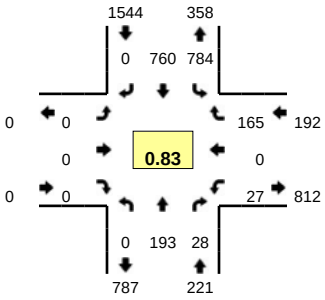
**CITY/STATE:** Tualatin, OR

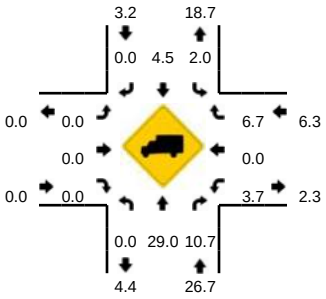
**QC JOB #:** 14553203

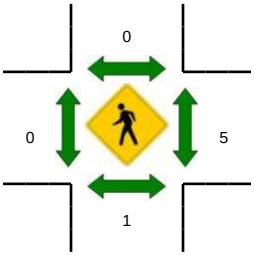
**DATE:** Tue, Nov 07 2017

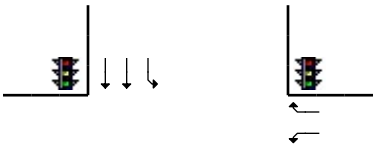
**Peak-Hour: 7:15 AM -- 8:15 AM**

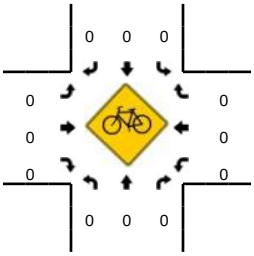
**Peak 15-Min: 7:40 AM -- 7:55 AM**

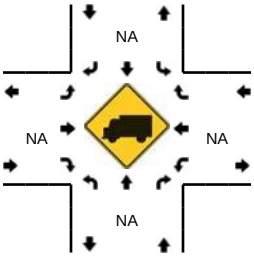


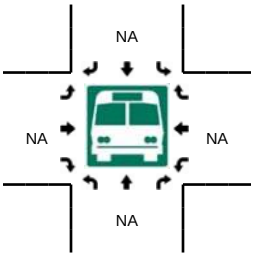






| 5-Min Count Period Beginning At | SW 124th Ave (Northbound) | | | | SW 124th Ave (Southbound) | | | | SW Tualatin Rd (Eastbound) | | | | SW Tualatin Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 0 | 15 | 1 | 0 | 29 | 57 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 15 | 0 | 119 | |
| 7:05 AM | 0 | 14 | 0 | 0 | 51 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 19 | 0 | 136 | |
| 7:10 AM | 0 | 14 | 1 | 0 | 45 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 12 | 0 | 124 | |
| 7:15 AM | 0 | 20 | 1 | 0 | 65 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 13 | 0 | 146 | |
| 7:20 AM | 0 | 21 | 0 | 0 | 75 | 63 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 13 | 0 | 173 | |
| 7:25 AM | 0 | 14 | 0 | 0 | 44 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 10 | 0 | 110 | |
| 7:30 AM | 0 | 11 | 3 | 0 | 63 | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 15 | 0 | 152 | |
| 7:35 AM | 0 | 19 | 4 | 0 | 72 | 81 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 14 | 0 | 194 | |
| 7:40 AM | 0 | 16 | 2 | 0 | 70 | 95 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 22 | 0 | 209 | |
| 7:45 AM | 0 | 17 | 5 | 0 | 64 | 74 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 16 | 0 | 177 | |
| 7:50 AM | 0 | 15 | 5 | 0 | 84 | 85 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 0 | 205 | |
| 7:55 AM | 0 | 19 | 3 | 0 | 71 | 65 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 10 | 0 | 172 | 1917 |
| 8:00 AM | 0 | 18 | 4 | 0 | 48 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 14 | 0 | 143 | 1941 |
| 8:05 AM | 0 | 10 | 0 | 0 | 63 | 53 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 8 | 0 | 135 | 1940 |
| 8:10 AM | 0 | 13 | 1 | 0 | 65 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 15 | 0 | 141 | 1957 |
| 8:15 AM | 0 | 20 | 3 | 0 | 47 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 13 | 0 | 123 | 1934 |
| 8:20 AM | 0 | 21 | 1 | 0 | 57 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 18 | 0 | 156 | 1917 |
| 8:25 AM | 0 | 17 | 1 | 0 | 40 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 94 | 1901 |
| 8:30 AM | 0 | 14 | 4 | 0 | 33 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 7 | 0 | 95 | 1844 |
| 8:35 AM | 0 | 18 | 1 | 0 | 36 | 33 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 15 | 0 | 104 | 1754 |
| 8:40 AM | 0 | 13 | 0 | 0 | 47 | 32 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 12 | 0 | 110 | 1655 |
| 8:45 AM | 0 | 15 | 0 | 0 | 33 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 15 | 0 | 119 | 1597 |
| 8:50 AM | 0 | 6 | 0 | 0 | 27 | 29 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 16 | 0 | 81 | 1473 |
| 8:55 AM | 0 | 23 | 2 | 0 | 35 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 10 | 0 | 100 | 1401 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 0 | 192 | 48 | 0 | 872 | 1016 | 0 | 0 | 0 | 0 | 0 | 0 | 24 | 0 | 212 | 0 | 2364 |
| Heavy Trucks | 0 | 64 | 0 | | 8 | 28 | 0 | | 0 | 0 | 0 | | 0 | 0 | 12 | | 112 |
| Pedestrians | | 0 | | | | 0 | | | | 0 | | | | 4 | | | 4 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Railroad | | | | | | | | | | | | | | | | | |
| Stopped Buses | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/16/2017 1:52 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

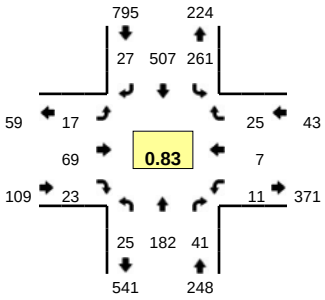
Type of peak hour being reported: Intersection Peak

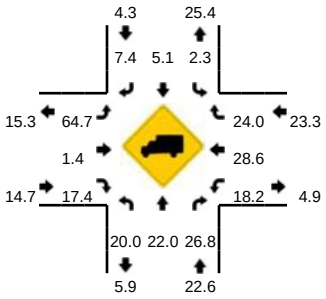
Method for determining peak hour: Total Entering Volume

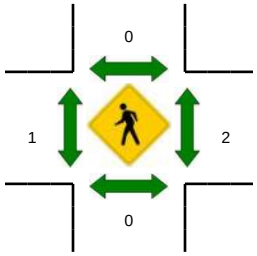
**LOCATION:** SW 124th Ave -- SW Leveton Dr
**CITY/STATE:** Tualatin, OR

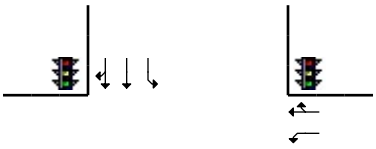
**QC JOB #:** 14553205
**DATE:** Tue, Nov 07 2017

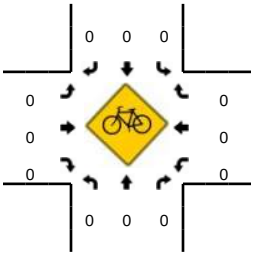
**Peak-Hour: 7:15 AM -- 8:15 AM**
**Peak 15-Min: 7:35 AM -- 7:50 AM**

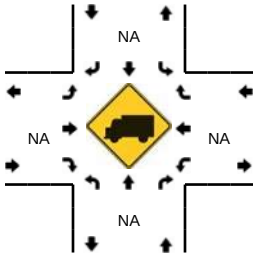


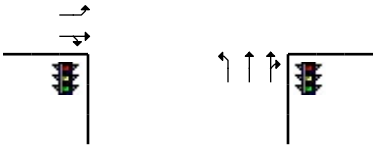



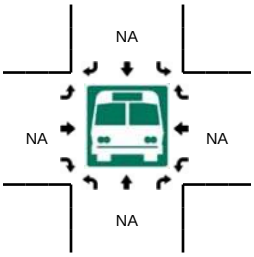








| 5-Min Count Period Beginning At | SW 124th Ave (Northbound) | | | | SW 124th Ave (Southbound) | | | | SW Leveton Dr (Eastbound) | | | | SW Leveton Dr (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 0 | 7 | 3 | 0 | 14 | 39 | 1 | 1 | 5 | 8 | 1 | 0 | 2 | 0 | 2 | 0 | 83 | |
| 7:05 AM | 2 | 13 | 1 | 0 | 13 | 36 | 2 | 0 | 4 | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 74 | |
| 7:10 AM | 1 | 8 | 2 | 0 | 11 | 34 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 3 | 1 | 0 | 66 | |
| 7:15 AM | 1 | 13 | 3 | 0 | 18 | 36 | 2 | 0 | 3 | 1 | 1 | 0 | 0 | 0 | 6 | 0 | 84 | |
| 7:20 AM | 0 | 18 | 3 | 0 | 10 | 46 | 1 | 0 | 3 | 4 | 1 | 0 | 0 | 0 | 1 | 0 | 87 | |
| 7:25 AM | 5 | 11 | 0 | 0 | 12 | 39 | 1 | 0 | 1 | 8 | 3 | 0 | 1 | 0 | 2 | 0 | 83 | |
| 7:30 AM | 1 | 10 | 3 | 0 | 16 | 33 | 5 | 0 | 4 | 9 | 3 | 0 | 2 | 2 | 4 | 0 | 92 | |
| 7:35 AM | 3 | 19 | 0 | 0 | 24 | 52 | 2 | 0 | 0 | 5 | 3 | 0 | 3 | 1 | 4 | 0 | 116 | |
| 7:40 AM | 2 | 14 | 4 | 0 | 33 | 68 | 2 | 0 | 2 | 4 | 1 | 0 | 0 | 1 | 0 | 0 | 131 | |
| 7:45 AM | 1 | 20 | 2 | 0 | 30 | 48 | 1 | 0 | 1 | 9 | 1 | 0 | 0 | 0 | 0 | 0 | 113 | |
| 7:50 AM | 1 | 15 | 5 | 0 | 26 | 40 | 2 | 0 | 1 | 8 | 6 | 0 | 0 | 0 | 2 | 0 | 106 | |
| 7:55 AM | 4 | 22 | 5 | 0 | 19 | 47 | 3 | 0 | 0 | 4 | 1 | 0 | 1 | 0 | 1 | 0 | 107 | 1142 |
| 8:00 AM | 2 | 18 | 4 | 0 | 36 | 40 | 2 | 0 | 0 | 10 | 1 | 0 | 0 | 0 | 1 | 0 | 114 | 1173 |
| 8:05 AM | 2 | 9 | 6 | 0 | 18 | 31 | 2 | 0 | 0 | 4 | 1 | 0 | 1 | 1 | 1 | 0 | 76 | 1175 |
| 8:10 AM | 3 | 13 | 6 | 0 | 19 | 27 | 4 | 0 | 2 | 3 | 1 | 0 | 3 | 2 | 3 | 0 | 86 | 1195 |
| 8:15 AM | 2 | 11 | 4 | 0 | 17 | 19 | 4 | 0 | 1 | 5 | 3 | 0 | 2 | 1 | 5 | 0 | 74 | 1185 |
| 8:20 AM | 2 | 18 | 3 | 0 | 17 | 29 | 3 | 0 | 2 | 7 | 0 | 0 | 3 | 0 | 1 | 0 | 85 | 1183 |
| 8:25 AM | 3 | 14 | 1 | 0 | 12 | 15 | 1 | 0 | 1 | 2 | 3 | 0 | 0 | 0 | 1 | 0 | 53 | 1153 |
| 8:30 AM | 1 | 16 | 1 | 0 | 16 | 19 | 1 | 0 | 2 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 59 | 1120 |
| 8:35 AM | 1 | 14 | 1 | 0 | 12 | 18 | 1 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 2 | 0 | 52 | 1056 |
| 8:40 AM | 0 | 13 | 2 | 0 | 16 | 19 | 5 | 0 | 0 | 4 | 0 | 0 | 0 | 1 | 1 | 0 | 61 | 986 |
| 8:45 AM | 0 | 10 | 0 | 1 | 18 | 25 | 8 | 0 | 0 | 3 | 0 | 1 | 2 | 0 | 1 | 0 | 69 | 942 |
| 8:50 AM | 1 | 7 | 2 | 0 | 15 | 19 | 4 | 0 | 0 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 52 | 888 |
| 8:55 AM | 2 | 22 | 1 | 0 | 12 | 16 | 3 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 61 | 842 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 24 | 212 | 24 | 0 | 348 | 672 | 20 | 0 | 12 | 72 | 20 | 0 | 12 | 8 | 16 | 0 | 1440 |
| Heavy Trucks | 8 | 40 | 8 | | 8 | 16 | 0 | | 0 | 0 | 4 | | 4 | 0 | 4 | | 92 |
| Pedestrians | | 0 | | | | 0 | | | | 4 | | | | 4 | | | 8 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Railroad | | | | | | | | | | | | | | | | | |
| Stopped Buses | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/16/2017 1:52 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

**LOCATION:** SW 118th Ave -- SW Leveton Dr

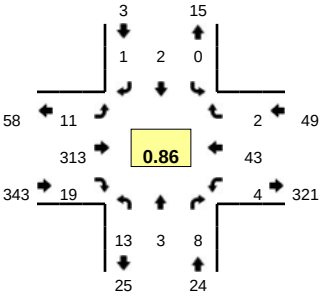
**CITY/STATE:** Tualatin, OR

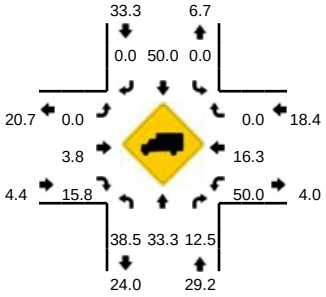
**QC JOB #:** 14553207

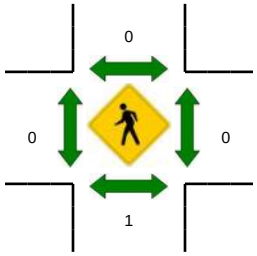
**DATE:** Tue, Nov 07 2017

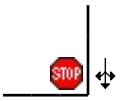
**Peak-Hour: 7:25 AM -- 8:25 AM**

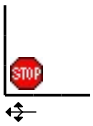
**Peak 15-Min: 8:00 AM -- 8:15 AM**

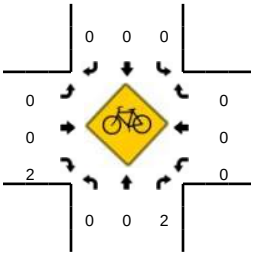


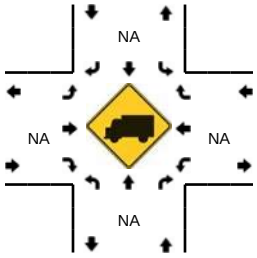



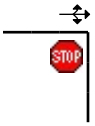



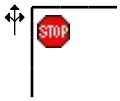



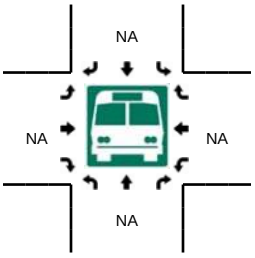




| 5-Min Count Period Beginning At | SW 118th Ave (Northbound) | | | | SW 118th Ave (Southbound) | | | | SW Leveton Dr (Eastbound) | | | | SW Leveton Dr (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 3 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 19 | 2 | 0 | 2 | 3 | 1 | 0 | 35 | |
| 7:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 11 | 0 | 0 | 0 | 1 | 0 | 0 | 14 | |
| 7:10 AM | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 10 | 0 | 0 | 0 | 6 | 0 | 0 | 20 | |
| 7:15 AM | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 17 | 4 | 0 | 0 | 2 | 0 | 0 | 27 | |
| 7:20 AM | 3 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 4 | 10 | 2 | 0 | 0 | 1 | 0 | 0 | 22 | |
| 7:25 AM | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 14 | 4 | 0 | 0 | 4 | 0 | 0 | 26 | |
| 7:30 AM | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 2 | 0 | 0 | 6 | 0 | 0 | 33 | |
| 7:35 AM | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 20 | 1 | 0 | 0 | 4 | 0 | 0 | 28 | |
| 7:40 AM | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 1 | 0 | 1 | 2 | 0 | 0 | 39 | |
| 7:45 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 2 | 1 | 0 | 1 | 0 | 0 | 40 | |
| 7:50 AM | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 32 | 2 | 0 | 0 | 3 | 0 | 0 | 41 | |
| 7:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 1 | 0 | 1 | 3 | 0 | 0 | 27 | 352 |
| 8:00 AM | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 5 | 37 | 0 | 0 | 0 | 1 | 0 | 0 | 47 | 364 |
| 8:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 26 | 3 | 0 | 0 | 3 | 1 | 0 | 35 | 385 |
| 8:10 AM | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 1 | 0 | 0 | 8 | 0 | 0 | 40 | 405 |
| 8:15 AM | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 21 | 1 | 0 | 0 | 3 | 1 | 0 | 30 | 408 |
| 8:20 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 23 | 1 | 0 | 2 | 5 | 0 | 0 | 33 | 419 |
| 8:25 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 12 | 3 | 0 | 1 | 3 | 0 | 0 | 21 | 414 |
| 8:30 AM | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 16 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 400 |
| 8:35 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 4 | 0 | 0 | 18 | 390 |
| 8:40 AM | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 2 | 0 | 0 | 24 | 375 |
| 8:45 AM | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 2 | 0 | 0 | 1 | 1 | 0 | 26 | 361 |
| 8:50 AM | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 17 | 1 | 0 | 0 | 1 | 0 | 0 | 23 | 343 |
| 8:55 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 12 | 0 | 0 | 0 | 3 | 0 | 0 | 18 | 334 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 12 | 4 | 12 | 0 | 0 | 0 | 4 | 0 | 24 | 364 | 16 | 0 | 0 | 48 | 4 | 0 | 488 |
| Heavy Trucks | 4 | 0 | 0 | | 0 | 0 | 0 | | 0 | 16 | 4 | | 0 | 12 | 0 | | 36 |
| Pedestrians | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Railroad | | | | | | | | | | | | | | | | | |
| Stopped Buses | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/16/2017 1:52 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

**LOCATION:** West Site Access -- SW Tualatin Rd

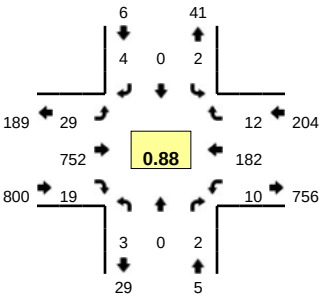
**CITY/STATE:** Tualatin, OR

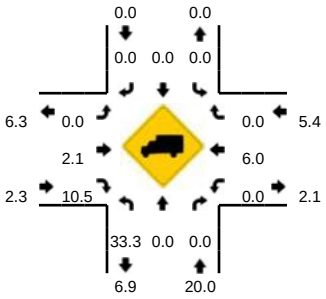
**QC JOB #:** 14553211

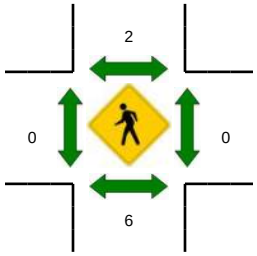
**DATE:** Tue, Nov 07 2017

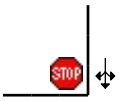
**Peak-Hour: 7:15 AM -- 8:15 AM**

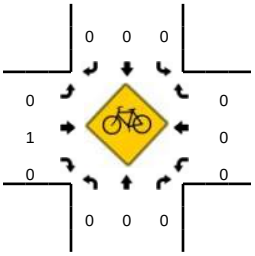
**Peak 15-Min: 7:40 AM -- 7:55 AM**

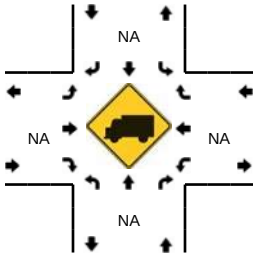


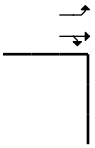



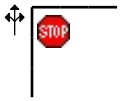



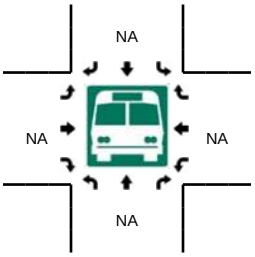






| 5-Min Count Period Beginning At | West Site Access (Northbound) | | | | West Site Access (Southbound) | | | | SW Tualatin Rd (Eastbound) | | | | SW Tualatin Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 30 | 1 | 1 | 1 | 17 | 1 | 0 | 53 | |
| 7:05 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 49 | 1 | 0 | 0 | 20 | 1 | 0 | 74 | |
| 7:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 2 | 0 | 1 | 12 | 0 | 0 | 57 | |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 66 | 0 | 0 | 0 | 16 | 2 | 0 | 87 | |
| 7:20 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 68 | 1 | 0 | 0 | 12 | 1 | 0 | 84 | |
| 7:25 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 43 | 2 | 0 | 0 | 13 | 1 | 0 | 61 | |
| 7:30 AM | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 59 | 2 | 0 | 2 | 17 | 0 | 0 | 83 | |
| 7:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 71 | 1 | 0 | 0 | 14 | 0 | 0 | 89 | |
| 7:40 AM | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 72 | 2 | 0 | 2 | 25 | 1 | 0 | 105 | |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 62 | 1 | 0 | 0 | 15 | 2 | 0 | 83 | |
| 7:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 77 | 1 | 0 | 0 | 18 | 1 | 0 | 101 | |
| 7:55 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 5 | 69 | 3 | 0 | 1 | 14 | 1 | 0 | 94 | 971 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 50 | 5 | 0 | 1 | 15 | 1 | 0 | 74 | 992 |
| 8:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 55 | 0 | 0 | 2 | 10 | 2 | 0 | 73 | 991 |
| 8:10 AM | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 60 | 1 | 0 | 2 | 13 | 0 | 0 | 81 | 1015 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 49 | 3 | 0 | 3 | 19 | 0 | 0 | 75 | 1003 |
| 8:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 51 | 4 | 0 | 0 | 19 | 0 | 0 | 77 | 996 |
| 8:25 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 33 | 3 | 0 | 2 | 18 | 0 | 0 | 59 | 994 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 31 | 0 | 0 | 2 | 10 | 0 | 0 | 45 | 956 |
| 8:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 33 | 1 | 0 | 0 | 15 | 0 | 0 | 51 | 918 |
| 8:40 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 51 | 2 | 0 | 1 | 19 | 0 | 0 | 75 | 888 |
| 8:45 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 2 | 0 | 0 | 22 | 0 | 0 | 53 | 858 |
| 8:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 2 | 0 | 0 | 18 | 0 | 0 | 48 | 805 |
| 8:55 AM | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 35 | 2 | 0 | 2 | 11 | 1 | 0 | 54 | 765 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 4 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 28 | 844 | 16 | 0 | 8 | 232 | 16 | 0 | 1156 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 8 | 4 | | 0 | 12 | 0 | | 24 |
| Pedestrians | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Railroad | | | | | | | | | | | | | | | | | |
| Stopped Buses | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/16/2017 1:52 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

**LOCATION:** Center Site Access -- SW Tualatin Rd

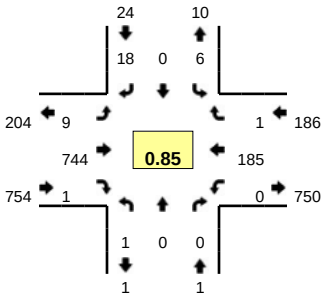
**CITY/STATE:** Tualatin, OR

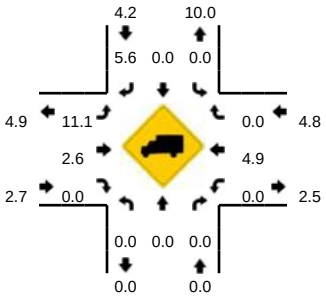
**QC JOB #:** 14553213

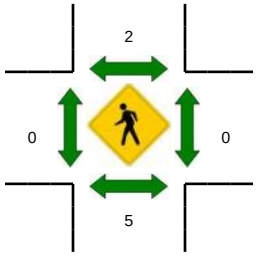
**DATE:** Tue, Nov 07 2017

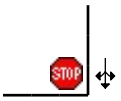
**Peak-Hour: 7:15 AM -- 8:15 AM**

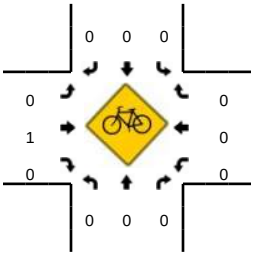
**Peak 15-Min: 7:40 AM -- 7:55 AM**

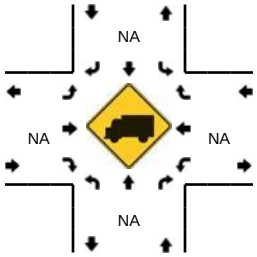


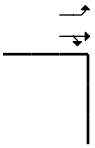



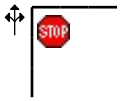



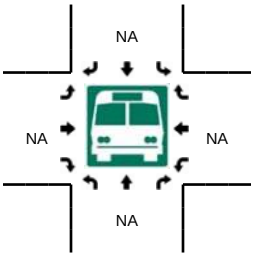






| 5-Min Count Period Beginning At | Center Site Access (Northbound) | | | | Center Site Access (Southbound) | | | | SW Tualatin Rd (Eastbound) | | | | SW Tualatin Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 32 | 0 | 0 | 0 | 16 | 0 | 0 | 51 | |
| 7:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48 | 1 | 0 | 1 | 19 | 0 | 0 | 69 | |
| 7:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 1 | 0 | 0 | 14 | 0 | 0 | 58 | |
| 7:15 AM | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 64 | 0 | 0 | 0 | 17 | 0 | 0 | 85 | |
| 7:20 AM | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 3 | 65 | 0 | 0 | 0 | 9 | 0 | 0 | 81 | |
| 7:25 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 45 | 0 | 0 | 0 | 13 | 0 | 0 | 59 | |
| 7:30 AM | 1 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 60 | 1 | 0 | 0 | 16 | 0 | 0 | 81 | |
| 7:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 62 | 0 | 0 | 0 | 11 | 0 | 0 | 77 | |
| 7:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 77 | 0 | 0 | 0 | 26 | 0 | 0 | 104 | |
| 7:45 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 63 | 0 | 0 | 0 | 18 | 0 | 0 | 83 | |
| 7:50 AM | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 1 | 74 | 0 | 0 | 0 | 17 | 0 | 0 | 96 | |
| 7:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 69 | 0 | 0 | 0 | 16 | 0 | 0 | 86 | 930 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 52 | 0 | 0 | 0 | 14 | 1 | 0 | 70 | 949 |
| 8:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 0 | 0 | 0 | 14 | 0 | 0 | 69 | 949 |
| 8:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 58 | 0 | 0 | 0 | 14 | 0 | 0 | 74 | 965 |
| 8:15 AM | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 48 | 0 | 0 | 0 | 22 | 0 | 0 | 74 | 954 |
| 8:20 AM | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 50 | 0 | 0 | 0 | 19 | 0 | 0 | 72 | 945 |
| 8:25 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 19 | 0 | 0 | 54 | 940 |
| 8:30 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 31 | 1 | 0 | 0 | 11 | 0 | 0 | 44 | 903 |
| 8:35 AM | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 33 | 0 | 0 | 0 | 14 | 0 | 0 | 50 | 876 |
| 8:40 AM | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 1 | 50 | 0 | 0 | 0 | 18 | 1 | 0 | 74 | 846 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 27 | 1 | 0 | 0 | 19 | 1 | 0 | 51 | 814 |
| 8:50 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 27 | 0 | 0 | 0 | 19 | 0 | 0 | 48 | 766 |
| 8:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 0 | 15 | 0 | 0 | 52 | 732 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 0 | 0 | 0 | 0 | 12 | 0 | 12 | 0 | 8 | 856 | 0 | 0 | 0 | 244 | 0 | 0 | 1132 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 16 | 0 | | 0 | 12 | 0 | | 28 |
| Pedestrians | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Railroad | | | | | | | | | | | | | | | | | |
| Stopped Buses | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/16/2017 1:52 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

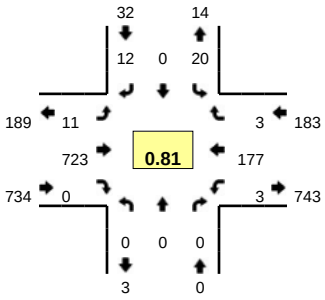
**LOCATION:** East Site Access -- SW Tualatin Rd

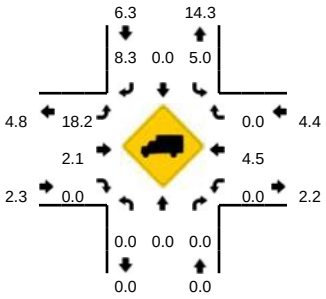
**QC JOB #:** 14553215

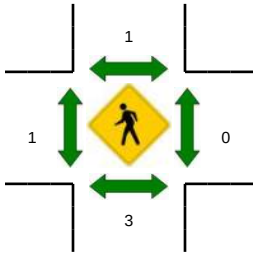
**CITY/STATE:** Tualatin, OR

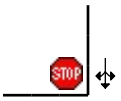
**DATE:** Tue, Nov 07 2017

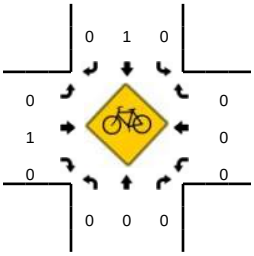
**Peak-Hour: 7:15 AM -- 8:15 AM**
**Peak 15-Min: 7:40 AM -- 7:55 AM**

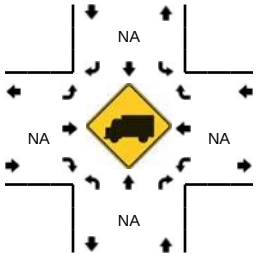


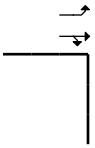



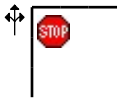



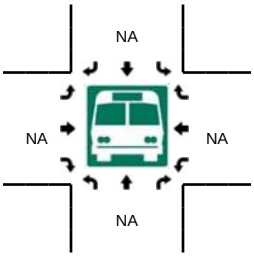






| 5-Min Count Period Beginning At | East Site Access (Northbound) | | | | East Site Access (Southbound) | | | | SW Tualatin Rd (Eastbound) | | | | SW Tualatin Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 16 | 0 | 0 | 56 | |
| 7:05 AM | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 44 | 3 | 0 | 0 | 19 | 0 | 0 | 69 | |
| 7:10 AM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 42 | 0 | 0 | 1 | 14 | 1 | 0 | 60 | |
| 7:15 AM | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 1 | 66 | 0 | 0 | 1 | 15 | 1 | 0 | 88 | |
| 7:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 61 | 0 | 0 | 0 | 9 | 0 | 0 | 70 | |
| 7:25 AM | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 2 | 44 | 0 | 0 | 0 | 13 | 0 | 0 | 63 | |
| 7:30 AM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 59 | 0 | 0 | 0 | 16 | 0 | 0 | 77 | |
| 7:35 AM | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 2 | 42 | 0 | 0 | 0 | 11 | 0 | 0 | 58 | |
| 7:40 AM | 0 | 0 | 0 | 0 | 3 | 0 | 2 | 0 | 0 | 95 | 0 | 0 | 1 | 25 | 1 | 0 | 127 | |
| 7:45 AM | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 3 | 57 | 0 | 0 | 0 | 15 | 0 | 0 | 79 | |
| 7:50 AM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 68 | 0 | 0 | 0 | 17 | 0 | 0 | 88 | |
| 7:55 AM | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 69 | 0 | 0 | 1 | 16 | 1 | 0 | 90 | 925 |
| 8:00 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 55 | 0 | 0 | 0 | 14 | 0 | 0 | 70 | 939 |
| 8:05 AM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 56 | 0 | 0 | 0 | 13 | 0 | 0 | 72 | 942 |
| 8:10 AM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 51 | 0 | 0 | 0 | 13 | 0 | 0 | 67 | 949 |
| 8:15 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 55 | 0 | 0 | 0 | 22 | 1 | 0 | 79 | 940 |
| 8:20 AM | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 49 | 0 | 0 | 0 | 18 | 1 | 0 | 71 | 941 |
| 8:25 AM | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 1 | 34 | 0 | 0 | 0 | 19 | 0 | 0 | 57 | 935 |
| 8:30 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 31 | 0 | 0 | 0 | 10 | 3 | 0 | 46 | 904 |
| 8:35 AM | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 1 | 34 | 0 | 0 | 0 | 12 | 1 | 0 | 52 | 898 |
| 8:40 AM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 51 | 0 | 0 | 1 | 19 | 0 | 0 | 73 | 844 |
| 8:45 AM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 28 | 0 | 0 | 0 | 21 | 2 | 0 | 53 | 818 |
| 8:50 AM | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 1 | 25 | 0 | 0 | 1 | 16 | 1 | 0 | 47 | 777 |
| 8:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 0 | 0 | 0 | 16 | 1 | 0 | 49 | 736 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 0 | 0 | 0 | 0 | 28 | 0 | 16 | 0 | 16 | 880 | 0 | 0 | 4 | 228 | 4 | 0 | 1176 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 4 | | 0 | 12 | 0 | | 0 | 8 | 0 | | 24 |
| Pedestrians | | 0 | | | | 4 | | | | 0 | | | | 0 | | | 4 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Railroad | | | | | | | | | | | | | | | | | |
| Stopped Buses | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/16/2017 1:52 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

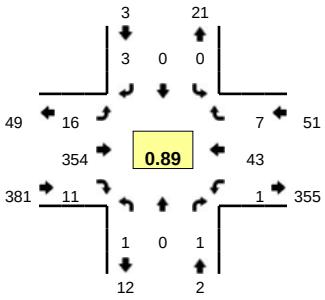
**LOCATION:** Site Access -- SW Leveton Dr

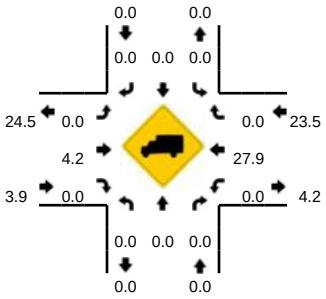
**CITY/STATE:** Tualatin, OR

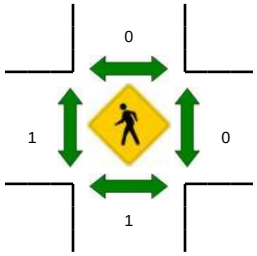
**QC JOB #:** 14553209

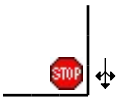
**DATE:** Tue, Nov 07 2017

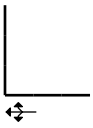
**Peak-Hour: 7:25 AM -- 8:25 AM**
**Peak 15-Min: 8:00 AM -- 8:15 AM**

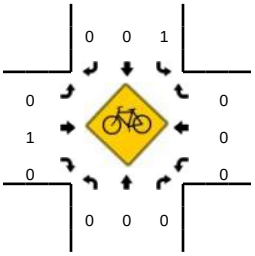


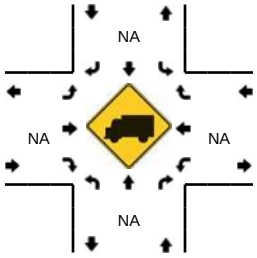



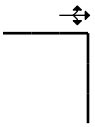



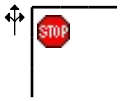



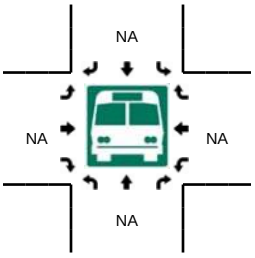








| 5-Min Count Period Beginning At | Site Access (Northbound) | | | | Site Access (Southbound) | | | | SW Leveton Dr (Eastbound) | | | | SW Leveton Dr (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 7:00 AM | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 23 | 1 | 0 | 1 | 2 | 1 | 0 | 32 | |
| 7:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | |
| 7:10 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 12 | 1 | 0 | 0 | 5 | 2 | 0 | 21 | |
| 7:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 22 | 1 | 0 | 0 | 4 | 1 | 0 | 32 | |
| 7:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 16 | 0 | 0 | 0 | 1 | 2 | 0 | 20 | |
| 7:25 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 3 | 1 | 0 | 25 | |
| 7:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 25 | 1 | 0 | 0 | 7 | 1 | 0 | 37 | |
| 7:35 AM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 26 | 2 | 1 | 0 | 6 | 2 | 0 | 39 | |
| 7:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 34 | 3 | 0 | 0 | 1 | 0 | 0 | 40 | |
| 7:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 38 | 0 | 0 | 0 | 1 | 0 | 0 | 41 | |
| 7:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 32 | 3 | 1 | 0 | 1 | 1 | 0 | 39 | |
| 7:55 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 26 | 1 | 0 | 0 | 2 | 1 | 0 | 30 | 371 |
| 8:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 49 | 0 | 0 | 0 | 1 | 0 | 0 | 52 | 391 |
| 8:05 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 28 | 0 | 0 | 1 | 3 | 0 | 0 | 34 | 410 |
| 8:10 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 26 | 1 | 0 | 0 | 8 | 0 | 0 | 37 | 426 |
| 8:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 25 | 0 | 0 | 0 | 7 | 0 | 0 | 33 | 427 |
| 8:20 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 24 | 0 | 0 | 0 | 3 | 1 | 0 | 30 | 437 |
| 8:25 AM | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 1 | 1 | 0 | 19 | 431 |
| 8:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 0 | 1 | 0 | 17 | 411 |
| 8:35 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 14 | 0 | 0 | 1 | 2 | 1 | 0 | 20 | 392 |
| 8:40 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 20 | 0 | 0 | 1 | 3 | 0 | 0 | 26 | 378 |
| 8:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 1 | 3 | 0 | 0 | 23 | 360 |
| 8:50 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 0 | 0 | 0 | 1 | 1 | 0 | 24 | 345 |
| 8:55 AM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 2 | 0 | 0 | 18 | 333 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 0 | 0 | 4 | 0 | 0 | 0 | 4 | 0 | 16 | 412 | 4 | 0 | 4 | 48 | 0 | 0 | 492 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 20 | 0 | | 0 | 12 | 0 | | 32 |
| Pedestrians | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Railroad | | | | | | | | | | | | | | | | | |
| Stopped Buses | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/16/2017 1:52 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

**LOCATION:** SW 124th Ave -- SW Pacific Hwy

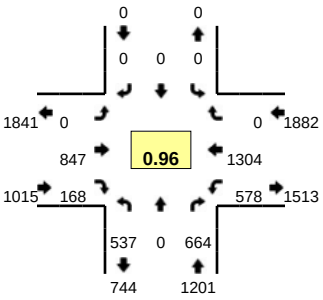
**CITY/STATE:** Tualatin, OR

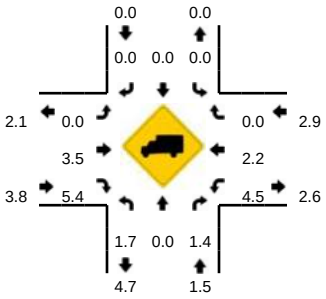
**QC JOB #:** 14553202

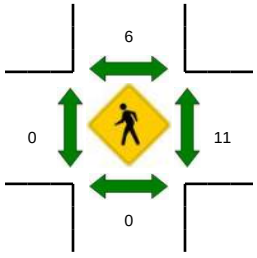
**DATE:** Tue, Nov 07 2017

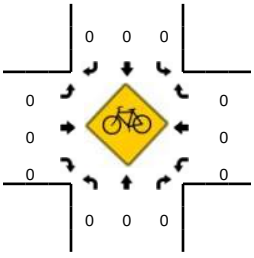
**Peak-Hour: 4:15 PM -- 5:15 PM**

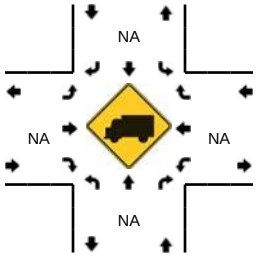
**Peak 15-Min: 5:00 PM -- 5:15 PM**

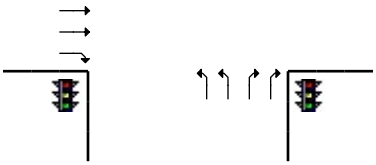


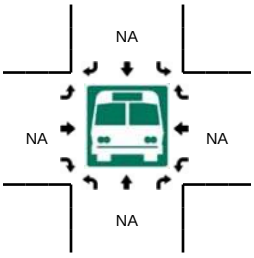






| 5-Min Count Period Beginning At | SW 124th Ave (Northbound) | | | | SW 124th Ave (Southbound) | | | | SW Pacific Hwy (Eastbound) | | | | SW Pacific Hwy (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:00 PM | 44 | 0 | 83 | 0 | 0 | 0 | 0 | 0 | 0 | 58 | 15 | 0 | 54 | 121 | 0 | 0 | 375 | |
| 4:05 PM | 48 | 0 | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 17 | 0 | 43 | 136 | 0 | 1 | 360 | |
| 4:10 PM | 52 | 0 | 66 | 0 | 0 | 0 | 0 | 0 | 0 | 57 | 16 | 0 | 23 | 84 | 0 | 0 | 298 | |
| 4:15 PM | 34 | 0 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 69 | 8 | 0 | 51 | 133 | 0 | 0 | 331 | |
| 4:20 PM | 50 | 0 | 55 | 0 | 0 | 0 | 0 | 0 | 0 | 62 | 11 | 0 | 42 | 117 | 0 | 0 | 337 | |
| 4:25 PM | 43 | 0 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 99 | 14 | 0 | 51 | 101 | 0 | 0 | 353 | |
| 4:30 PM | 49 | 0 | 51 | 0 | 0 | 0 | 0 | 0 | 0 | 58 | 18 | 0 | 46 | 86 | 0 | 0 | 308 | |
| 4:35 PM | 28 | 0 | 45 | 0 | 0 | 0 | 0 | 0 | 0 | 77 | 15 | 0 | 50 | 100 | 0 | 0 | 315 | |
| 4:40 PM | 56 | 0 | 88 | 0 | 0 | 0 | 0 | 0 | 0 | 75 | 18 | 0 | 36 | 95 | 0 | 0 | 368 | |
| 4:45 PM | 31 | 0 | 56 | 0 | 0 | 0 | 0 | 0 | 0 | 72 | 17 | 0 | 65 | 126 | 0 | 0 | 367 | |
| 4:50 PM | 48 | 0 | 58 | 0 | 0 | 0 | 0 | 0 | 0 | 55 | 14 | 0 | 17 | 101 | 0 | 0 | 293 | |
| 4:55 PM | 30 | 0 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 75 | 17 | 0 | 61 | 138 | 0 | 0 | 358 | 4063 |
| 5:00 PM | 45 | 0 | 57 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | 12 | 0 | 64 | 110 | 0 | 2 | 354 | 4042 |
| 5:05 PM | 68 | 0 | 74 | 0 | 0 | 0 | 0 | 0 | 0 | 67 | 9 | 0 | 34 | 84 | 0 | 0 | 336 | 4018 |
| 5:10 PM | 55 | 0 | 62 | 0 | 0 | 0 | 0 | 0 | 0 | 74 | 15 | 0 | 59 | 113 | 0 | 0 | 378 | 4098 |
| 5:15 PM | 38 | 0 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 74 | 11 | 0 | 41 | 64 | 0 | 0 | 288 | 4055 |
| 5:20 PM | 46 | 0 | 60 | 0 | 0 | 0 | 0 | 0 | 0 | 48 | 13 | 0 | 48 | 86 | 0 | 0 | 301 | 4019 |
| 5:25 PM | 63 | 0 | 47 | 0 | 0 | 0 | 0 | 0 | 0 | 66 | 14 | 0 | 30 | 91 | 0 | 0 | 311 | 3977 |
| 5:30 PM | 34 | 0 | 65 | 0 | 0 | 0 | 0 | 0 | 0 | 64 | 7 | 0 | 44 | 101 | 0 | 0 | 315 | 3984 |
| 5:35 PM | 49 | 0 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 16 | 0 | 33 | 70 | 0 | 0 | 261 | 3930 |
| 5:40 PM | 59 | 0 | 50 | 0 | 0 | 0 | 0 | 0 | 0 | 72 | 7 | 0 | 37 | 106 | 0 | 0 | 331 | 3893 |
| 5:45 PM | 44 | 0 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 70 | 17 | 0 | 33 | 93 | 0 | 0 | 301 | 3827 |
| 5:50 PM | 51 | 0 | 43 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 12 | 0 | 41 | 77 | 0 | 0 | 266 | 3800 |
| 5:55 PM | 20 | 0 | 35 | 0 | 0 | 0 | 0 | 0 | 0 | 77 | 16 | 0 | 28 | 72 | 0 | 0 | 248 | 3690 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 672 | 0 | 772 | 0 | 0 | 0 | 0 | 0 | 0 | 820 | 144 | 0 | 628 | 1228 | 0 | 8 | 4272 |
| Heavy Trucks | 8 | 0 | 4 | | 0 | 0 | 0 | | 0 | 28 | 12 | | 16 | 32 | 0 | | 100 |
| Pedestrians | | 0 | | | | 12 | | | | 0 | | | | 16 | | | 28 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Railroad | | | | | | | | | | | | | | | | | |
| Stopped Buses | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/16/2017 1:52 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

**LOCATION:** SW 124th Ave -- SW Tualatin Rd

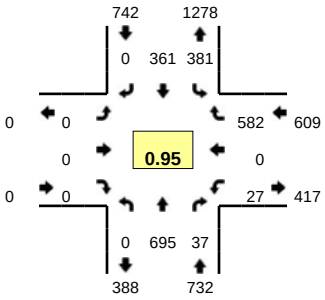
**CITY/STATE:** Tualatin, OR

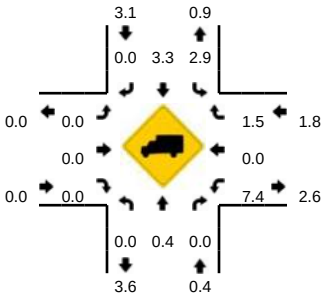
**QC JOB #:** 14553204

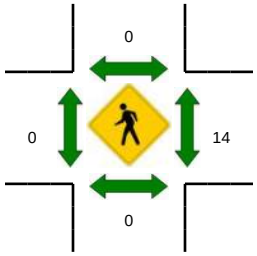
**DATE:** Tue, Nov 07 2017

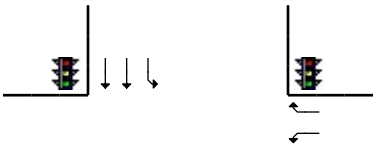
**Peak-Hour: 4:30 PM -- 5:30 PM**

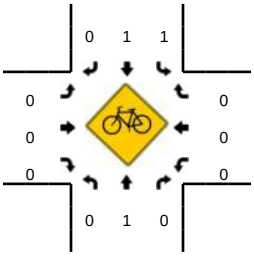
**Peak 15-Min: 5:00 PM -- 5:15 PM**

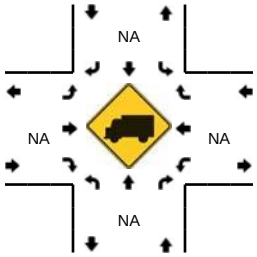


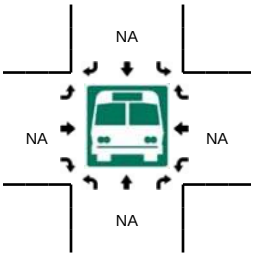






| 5-Min Count Period Beginning At | SW 124th Ave (Northbound) | | | | SW 124th Ave (Southbound) | | | | SW Tualatin Rd (Eastbound) | | | | SW Tualatin Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:00 PM | 0 | 70 | 4 | 0 | 31 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 38 | 0 | 170 | |
| 4:05 PM | 0 | 55 | 4 | 0 | 40 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 54 | 0 | 184 | |
| 4:10 PM | 0 | 67 | 4 | 0 | 26 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 40 | 0 | 151 | |
| 4:15 PM | 0 | 47 | 5 | 0 | 30 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 51 | 0 | 166 | |
| 4:20 PM | 0 | 48 | 7 | 0 | 27 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 47 | 0 | 144 | |
| 4:25 PM | 0 | 54 | 1 | 0 | 38 | 38 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 164 | |
| 4:30 PM | 0 | 53 | 1 | 0 | 34 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 49 | 0 | 170 | |
| 4:35 PM | 0 | 48 | 1 | 0 | 30 | 36 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 60 | 0 | 178 | |
| 4:40 PM | 0 | 78 | 0 | 0 | 29 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 36 | 0 | 168 | |
| 4:45 PM | 0 | 46 | 3 | 0 | 34 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 50 | 0 | 179 | |
| 4:50 PM | 0 | 55 | 5 | 0 | 26 | 27 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 48 | 0 | 163 | |
| 4:55 PM | 0 | 43 | 2 | 0 | 31 | 49 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 44 | 0 | 174 | 2011 |
| 5:00 PM | 0 | 60 | 1 | 0 | 38 | 34 | 0 | 1 | 0 | 0 | 0 | 0 | 3 | 0 | 46 | 0 | 183 | 2024 |
| 5:05 PM | 0 | 76 | 8 | 0 | 32 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 48 | 0 | 172 | 2012 |
| 5:10 PM | 0 | 68 | 1 | 0 | 30 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 53 | 0 | 194 | 2055 |
| 5:15 PM | 0 | 64 | 5 | 0 | 25 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 0 | 163 | 2052 |
| 5:20 PM | 0 | 47 | 2 | 0 | 38 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 56 | 0 | 166 | 2074 |
| 5:25 PM | 0 | 57 | 8 | 0 | 33 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 49 | 0 | 173 | 2083 |
| 5:30 PM | 0 | 60 | 7 | 0 | 20 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 38 | 0 | 142 | 2055 |
| 5:35 PM | 0 | 73 | 3 | 0 | 30 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 36 | 0 | 163 | 2040 |
| 5:40 PM | 0 | 70 | 4 | 0 | 31 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 42 | 0 | 162 | 2034 |
| 5:45 PM | 0 | 48 | 0 | 0 | 40 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 51 | 0 | 157 | 2012 |
| 5:50 PM | 0 | 39 | 4 | 0 | 30 | 22 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 47 | 0 | 143 | 1992 |
| 5:55 PM | 0 | 27 | 3 | 0 | 38 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 114 | 1932 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 0 | 816 | 40 | 0 | 400 | 316 | 0 | 4 | 0 | 0 | 0 | 0 | 32 | 0 | 588 | 0 | 2196 |
| Heavy Trucks | 0 | 0 | 0 | | 20 | 8 | 0 | | 0 | 0 | 0 | | 0 | 0 | 16 | | 44 |
| Pedestrians | | 0 | | | | 0 | | | | 0 | | | | 16 | | | 16 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Railroad | | | | | | | | | | | | | | | | | |
| Stopped Buses | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/16/2017 1:52 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

**LOCATION:** SW 124th Ave -- SW Leveton Dr

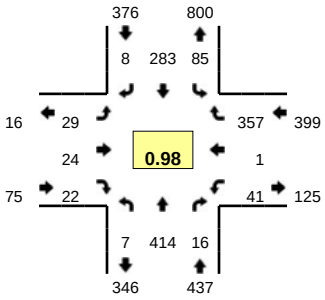
**CITY/STATE:** Tualatin, OR

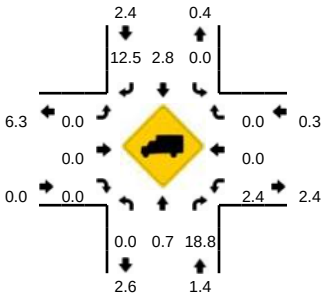
**QC JOB #:** 14553206

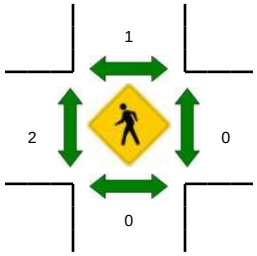
**DATE:** Tue, Nov 07 2017

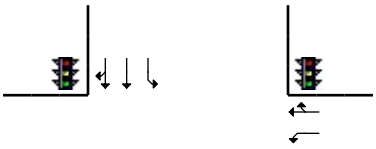
**Peak-Hour: 4:40 PM -- 5:40 PM**

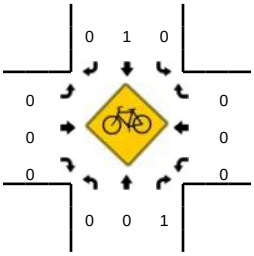
**Peak 15-Min: 4:40 PM -- 4:55 PM**

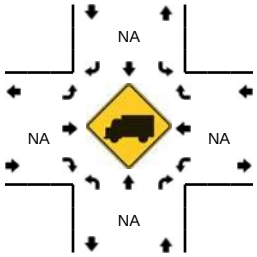


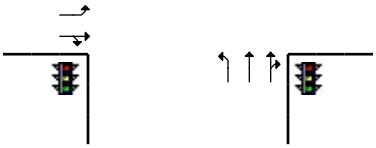



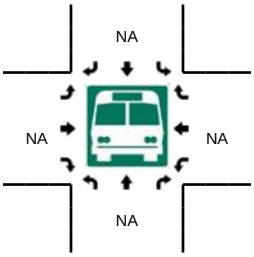








| 5-Min Count Period Beginning At | SW 124th Ave (Northbound) | | | | SW 124th Ave (Southbound) | | | | SW Leveton Dr (Eastbound) | | | | SW Leveton Dr (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:00 PM | 0 | 34 | 2 | 0 | 3 | 19 | 3 | 0 | 8 | 1 | 3 | 0 | 3 | 0 | 26 | 0 | 102 | |
| 4:05 PM | 1 | 49 | 2 | 0 | 6 | 25 | 0 | 0 | 2 | 2 | 2 | 0 | 2 | 0 | 15 | 0 | 106 | |
| 4:10 PM | 8 | 41 | 1 | 0 | 2 | 12 | 1 | 0 | 4 | 1 | 1 | 0 | 4 | 1 | 19 | 0 | 95 | |
| 4:15 PM | 1 | 22 | 2 | 0 | 5 | 27 | 1 | 0 | 3 | 0 | 0 | 0 | 1 | 0 | 17 | 0 | 79 | |
| 4:20 PM | 1 | 35 | 2 | 0 | 5 | 6 | 0 | 0 | 7 | 3 | 2 | 0 | 3 | 1 | 16 | 0 | 81 | |
| 4:25 PM | 3 | 32 | 3 | 0 | 12 | 24 | 3 | 0 | 0 | 2 | 2 | 0 | 1 | 1 | 17 | 0 | 100 | |
| 4:30 PM | 2 | 28 | 1 | 0 | 10 | 23 | 2 | 0 | 3 | 1 | 7 | 0 | 2 | 2 | 16 | 0 | 97 | |
| 4:35 PM | 1 | 39 | 1 | 0 | 9 | 22 | 1 | 0 | 2 | 5 | 3 | 0 | 1 | 0 | 21 | 0 | 105 | |
| 4:40 PM | 0 | 39 | 1 | 0 | 13 | 15 | 1 | 0 | 2 | 4 | 1 | 0 | 2 | 0 | 34 | 0 | 112 | |
| 4:45 PM | 0 | 27 | 5 | 0 | 10 | 31 | 1 | 0 | 5 | 6 | 4 | 0 | 4 | 0 | 19 | 0 | 112 | |
| 4:50 PM | 3 | 36 | 1 | 0 | 12 | 26 | 0 | 0 | 0 | 1 | 0 | 0 | 2 | 0 | 25 | 0 | 106 | |
| 4:55 PM | 0 | 32 | 0 | 0 | 15 | 33 | 1 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 14 | 0 | 99 | 1194 |
| 5:00 PM | 1 | 35 | 2 | 0 | 13 | 27 | 0 | 0 | 4 | 2 | 3 | 0 | 3 | 0 | 29 | 0 | 119 | 1211 |
| 5:05 PM | 0 | 39 | 0 | 0 | 2 | 6 | 1 | 0 | 7 | 3 | 2 | 0 | 6 | 0 | 33 | 0 | 99 | 1204 |
| 5:10 PM | 0 | 40 | 0 | 0 | 3 | 27 | 0 | 0 | 1 | 1 | 4 | 0 | 2 | 0 | 30 | 0 | 108 | 1217 |
| 5:15 PM | 1 | 38 | 1 | 0 | 3 | 31 | 1 | 0 | 2 | 2 | 2 | 0 | 3 | 1 | 30 | 0 | 115 | 1253 |
| 5:20 PM | 1 | 22 | 0 | 0 | 6 | 21 | 0 | 0 | 1 | 0 | 2 | 0 | 4 | 0 | 31 | 0 | 88 | 1260 |
| 5:25 PM | 0 | 22 | 2 | 0 | 3 | 18 | 2 | 0 | 2 | 0 | 2 | 0 | 5 | 0 | 31 | 0 | 87 | 1247 |
| 5:30 PM | 1 | 23 | 1 | 0 | 2 | 21 | 1 | 0 | 3 | 1 | 0 | 0 | 2 | 0 | 37 | 0 | 92 | 1242 |
| 5:35 PM | 0 | 61 | 3 | 0 | 3 | 27 | 0 | 0 | 2 | 1 | 2 | 0 | 7 | 0 | 44 | 0 | 150 | 1287 |
| 5:40 PM | 0 | 36 | 1 | 0 | 2 | 14 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 35 | 0 | 90 | 1265 |
| 5:45 PM | 0 | 22 | 0 | 0 | 2 | 19 | 2 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 28 | 0 | 80 | 1233 |
| 5:50 PM | 1 | 16 | 2 | 0 | 2 | 15 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 23 | 0 | 61 | 1188 |
| 5:55 PM | 0 | 13 | 1 | 0 | 2 | 17 | 1 | 0 | 0 | 3 | 0 | 0 | 1 | 0 | 12 | 0 | 50 | 1139 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 12 | 408 | 28 | 0 | 140 | 288 | 8 | 0 | 28 | 44 | 20 | 0 | 32 | 0 | 312 | 0 | 1320 |
| Heavy Trucks | 0 | 0 | 8 | | 0 | 8 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 16 |
| Pedestrians | | 0 | | | | 0 | | | | 8 | | | | 0 | | | 8 |
| Bicycles | 0 | 0 | 1 | | 0 | 1 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 2 |
| Railroad | | | | | | | | | | | | | | | | | |
| Stopped Buses | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/16/2017 1:52 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

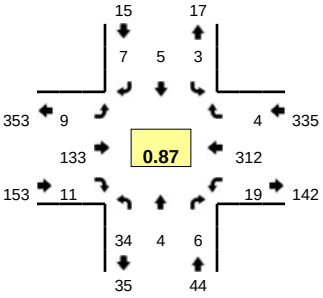
**LOCATION:** SW 118th Ave -- SW Leveton Dr

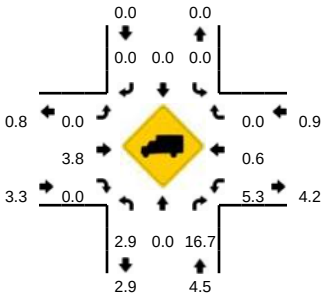
**QC JOB #:** 14553208

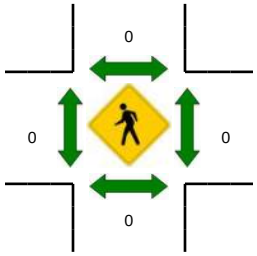
**CITY/STATE:** Tualatin, OR

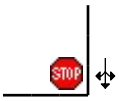
**DATE:** Tue, Nov 07 2017

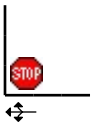
**Peak-Hour: 4:40 PM -- 5:40 PM**
**Peak 15-Min: 5:25 PM -- 5:40 PM**

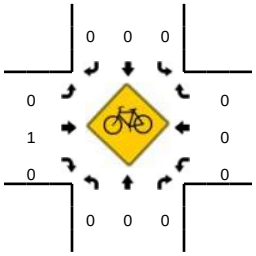


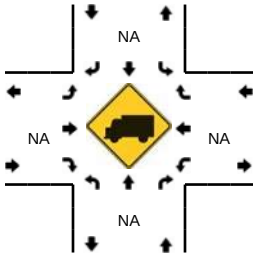



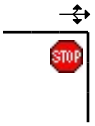



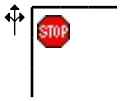



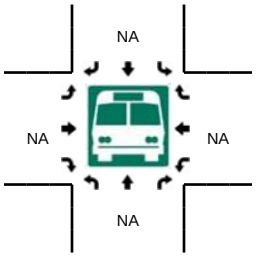




| 5-Min Count Period Beginning At | SW 118th Ave (Northbound) | | | | SW 118th Ave (Southbound) | | | | SW Leveton Dr (Eastbound) | | | | SW Leveton Dr (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:00 PM | 4 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 6 | 3 | 0 | 1 | 10 | 0 | 0 | 27 | |
| 4:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 8 | 3 | 0 | 2 | 13 | 0 | 0 | 30 | |
| 4:10 PM | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 2 | 0 | 1 | 15 | 0 | 0 | 27 | |
| 4:15 PM | 4 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 5 | 2 | 0 | 1 | 14 | 0 | 0 | 27 | |
| 4:20 PM | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 14 | 0 | 0 | 0 | 16 | 0 | 0 | 34 | |
| 4:25 PM | 2 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 12 | 2 | 0 | 1 | 12 | 0 | 0 | 33 | |
| 4:30 PM | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 11 | 0 | 0 | 1 | 15 | 0 | 0 | 31 | |
| 4:35 PM | 1 | 0 | 1 | 0 | 0 | 0 | 5 | 0 | 1 | 14 | 1 | 0 | 1 | 14 | 1 | 0 | 39 | |
| 4:40 PM | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 20 | 1 | 0 | 2 | 23 | 0 | 0 | 50 | |
| 4:45 PM | 3 | 1 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 21 | 1 | 0 | 1 | 15 | 1 | 0 | 46 | |
| 4:50 PM | 1 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 1 | 16 | 1 | 0 | 0 | 18 | 0 | 0 | 40 | |
| 4:55 PM | 2 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 16 | 0 | 0 | 1 | 11 | 0 | 0 | 32 | 416 |
| 5:00 PM | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 19 | 1 | 0 | 2 | 31 | 0 | 0 | 57 | 446 |
| 5:05 PM | 5 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 22 | 0 | 0 | 39 | 455 |
| 5:10 PM | 4 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 3 | 20 | 0 | 0 | 33 | 461 |
| 5:15 PM | 3 | 0 | 2 | 0 | 1 | 0 | 2 | 0 | 1 | 6 | 0 | 0 | 2 | 24 | 0 | 0 | 41 | 475 |
| 5:20 PM | 2 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 4 | 3 | 1 | 0 | 2 | 36 | 2 | 0 | 52 | 493 |
| 5:25 PM | 3 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 8 | 1 | 0 | 1 | 38 | 0 | 0 | 52 | 512 |
| 5:30 PM | 1 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | 1 | 0 | 2 | 32 | 1 | 0 | 45 | 526 |
| 5:35 PM | 4 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 5 | 4 | 0 | 3 | 42 | 0 | 0 | 60 | 547 |
| 5:40 PM | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 1 | 0 | 3 | 30 | 0 | 0 | 40 | 537 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 1 | 0 | 1 | 34 | 1 | 0 | 40 | 531 |
| 5:50 PM | 2 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 6 | 0 | 0 | 3 | 21 | 0 | 0 | 34 | 525 |
| 5:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 0 | 2 | 15 | 1 | 0 | 22 | 515 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 32 | 4 | 8 | 0 | 0 | 4 | 4 | 0 | 8 | 68 | 24 | 0 | 24 | 448 | 4 | 0 | 628 |
| Heavy Trucks | 0 | 0 | 4 | | 0 | 0 | 0 | | 0 | 4 | 0 | | 0 | 0 | 0 | | 8 |
| Pedestrians | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Railroad | | | | | | | | | | | | | | | | | |
| Stopped Buses | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/16/2017 1:52 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

**LOCATION:** West Site Access -- SW Tualatin Rd

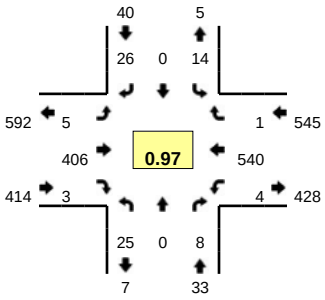
**QC JOB #:** 14553212

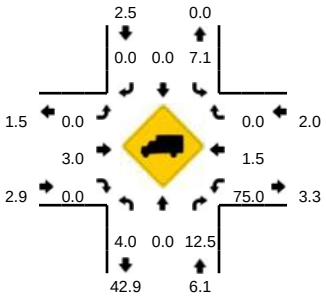
**CITY/STATE:** Tualatin, OR

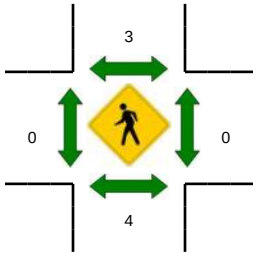
**DATE:** Tue, Nov 07 2017

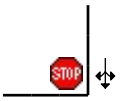
**Peak-Hour: 4:30 PM -- 5:30 PM**

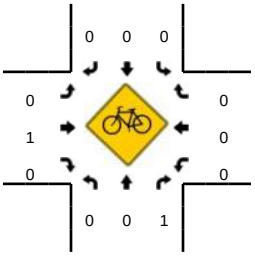
**Peak 15-Min: 4:55 PM -- 5:10 PM**

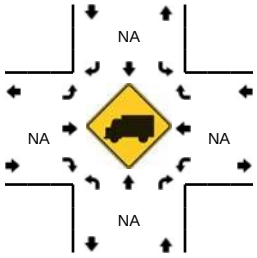


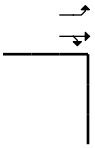



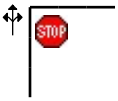



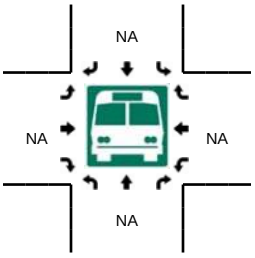






| 5-Min Count Period Beginning At | West Site Access (Northbound) | | | | West Site Access (Southbound) | | | | SW Tualatin Rd (Eastbound) | | | | SW Tualatin Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:00 PM | 4 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 36 | 1 | 0 | 0 | 41 | 0 | 0 | 84 | |
| 4:05 PM | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 36 | 0 | 0 | 1 | 45 | 1 | 0 | 88 | |
| 4:10 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 0 | 0 | 46 | 0 | 0 | 76 | |
| 4:15 PM | 0 | 0 | 2 | 0 | 1 | 0 | 3 | 0 | 2 | 39 | 0 | 0 | 0 | 52 | 0 | 0 | 99 | |
| 4:20 PM | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 33 | 0 | 0 | 0 | 43 | 0 | 0 | 79 | |
| 4:25 PM | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 38 | 0 | 0 | 0 | 33 | 0 | 0 | 72 | |
| 4:30 PM | 2 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 0 | 40 | 0 | 0 | 0 | 43 | 0 | 0 | 90 | |
| 4:35 PM | 1 | 0 | 1 | 0 | 2 | 0 | 4 | 0 | 0 | 29 | 0 | 0 | 0 | 58 | 0 | 0 | 95 | |
| 4:40 PM | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 29 | 0 | 0 | 1 | 40 | 0 | 0 | 74 | |
| 4:45 PM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 37 | 1 | 0 | 1 | 46 | 0 | 0 | 87 | |
| 4:50 PM | 3 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 1 | 0 | 0 | 52 | 0 | 0 | 89 | |
| 4:55 PM | 1 | 0 | 2 | 0 | 1 | 0 | 1 | 0 | 0 | 30 | 0 | 0 | 0 | 45 | 0 | 0 | 80 | 1013 |
| 5:00 PM | 3 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 1 | 32 | 0 | 0 | 1 | 38 | 0 | 0 | 83 | 1012 |
| 5:05 PM | 2 | 0 | 0 | 0 | 1 | 0 | 8 | 0 | 1 | 43 | 0 | 1 | 0 | 48 | 0 | 0 | 104 | 1028 |
| 5:10 PM | 5 | 0 | 1 | 0 | 2 | 0 | 2 | 0 | 0 | 32 | 0 | 0 | 0 | 36 | 0 | 0 | 78 | 1030 |
| 5:15 PM | 2 | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 1 | 28 | 1 | 0 | 1 | 43 | 0 | 0 | 81 | 1012 |
| 5:20 PM | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 37 | 0 | 0 | 0 | 46 | 1 | 0 | 89 | 1022 |
| 5:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 0 | 45 | 0 | 0 | 82 | 1032 |
| 5:30 PM | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 0 | 0 | 39 | 1 | 0 | 70 | 1012 |
| 5:35 PM | 2 | 0 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 33 | 1 | 0 | 0 | 40 | 0 | 0 | 79 | 996 |
| 5:40 PM | 2 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 35 | 0 | 0 | 0 | 33 | 0 | 0 | 73 | 995 |
| 5:45 PM | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 33 | 0 | 0 | 0 | 47 | 0 | 0 | 84 | 992 |
| 5:50 PM | 2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 39 | 0 | 0 | 0 | 46 | 0 | 0 | 88 | 991 |
| 5:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 1 | 0 | 0 | 33 | 0 | 0 | 77 | 988 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 24 | 0 | 8 | 0 | 24 | 0 | 52 | 0 | 8 | 420 | 0 | 4 | 4 | 524 | 0 | 0 | 1068 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 12 | 0 | | 4 | 4 | 0 | | 20 |
| Pedestrians | | 0 | | | | 4 | | | | 0 | | | | 0 | | | 4 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Railroad | | | | | | | | | | | | | | | | | |
| Stopped Buses | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/16/2017 1:52 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

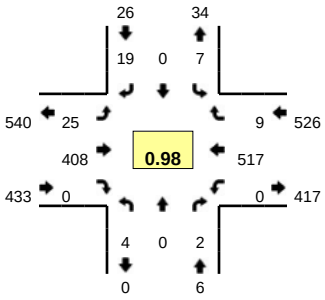
Method for determining peak hour: Total Entering Volume

**LOCATION:** Center Site Access -- SW Tualatin Rd

**QC JOB #:** 14553214

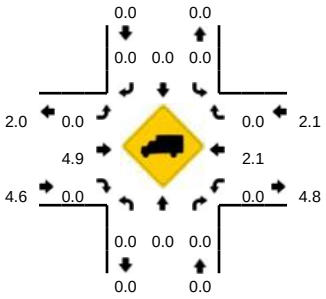
**CITY/STATE:** Tualatin, OR

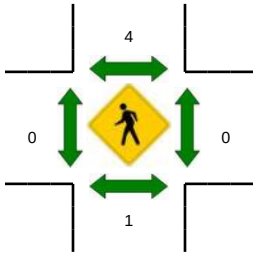
**DATE:** Tue, Nov 07 2017

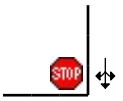


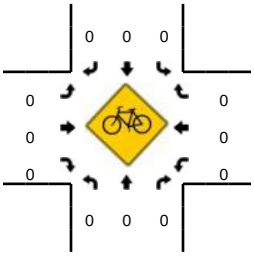

**Peak-Hour: 4:10 PM -- 5:10 PM**

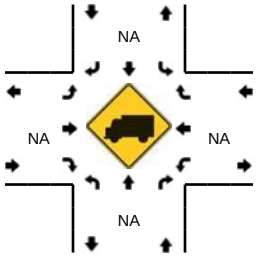
**Peak 15-Min: 4:45 PM -- 5:00 PM**

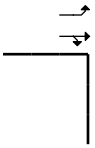


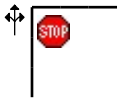



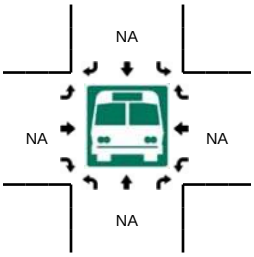






| 5-Min Count Period Beginning At | Center Site Access (Northbound) | | | | Center Site Access (Southbound) | | | | SW Tualatin Rd (Eastbound) | | | | SW Tualatin Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 35 | 0 | 0 | 0 | 39 | 0 | 0 | 76 | |
| 4:05 PM | 2 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 37 | 0 | 0 | 0 | 41 | 1 | 0 | 84 | |
| 4:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 26 | 0 | 0 | 0 | 47 | 0 | 0 | 75 | |
| 4:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 42 | 0 | 0 | 0 | 46 | 1 | 0 | 97 | |
| 4:20 PM | 2 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 31 | 0 | 0 | 0 | 39 | 0 | 0 | 74 | |
| 4:25 PM | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 4 | 34 | 0 | 0 | 0 | 32 | 0 | 0 | 73 | |
| 4:30 PM | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 3 | 40 | 0 | 0 | 0 | 38 | 0 | 0 | 85 | |
| 4:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 32 | 0 | 0 | 0 | 53 | 2 | 0 | 88 | |
| 4:40 PM | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 29 | 0 | 0 | 0 | 40 | 1 | 0 | 75 | |
| 4:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 38 | 0 | 0 | 0 | 45 | 1 | 0 | 85 | |
| 4:50 PM | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 2 | 30 | 0 | 0 | 0 | 49 | 2 | 0 | 87 | |
| 4:55 PM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 32 | 0 | 0 | 0 | 44 | 1 | 0 | 81 | 980 |
| 5:00 PM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 33 | 0 | 0 | 0 | 40 | 1 | 0 | 79 | 983 |
| 5:05 PM | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 0 | 2 | 41 | 0 | 0 | 0 | 44 | 0 | 0 | 92 | 991 |
| 5:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 35 | 0 | 0 | 0 | 34 | 0 | 0 | 70 | 986 |
| 5:15 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 3 | 26 | 0 | 0 | 0 | 45 | 1 | 0 | 76 | 965 |
| 5:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 4 | 33 | 0 | 0 | 0 | 48 | 0 | 0 | 87 | 978 |
| 5:25 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 38 | 0 | 0 | 0 | 41 | 2 | 0 | 83 | 988 |
| 5:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 25 | 0 | 0 | 0 | 38 | 0 | 0 | 68 | 971 |
| 5:35 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 35 | 0 | 0 | 0 | 42 | 4 | 0 | 81 | 964 |
| 5:40 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 35 | 0 | 0 | 0 | 31 | 1 | 0 | 68 | 957 |
| 5:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 34 | 0 | 0 | 0 | 48 | 1 | 0 | 83 | 955 |
| 5:50 PM | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 0 | 2 | 38 | 0 | 0 | 0 | 38 | 1 | 0 | 84 | 952 |
| 5:55 PM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 3 | 40 | 0 | 0 | 0 | 31 | 0 | 0 | 76 | 947 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 0 | 0 | 0 | 0 | 12 | 0 | 16 | 0 | 16 | 400 | 0 | 0 | 0 | 552 | 16 | 0 | 1012 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 4 | 0 | | 0 | 8 | 0 | | 12 |
| Pedestrians | | 0 | | | | 12 | | | | 0 | | | | 0 | | | 12 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Railroad | | | | | | | | | | | | | | | | | |
| Stopped Buses | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/16/2017 1:52 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

**LOCATION:** East Site Access -- SW Tualatin Rd

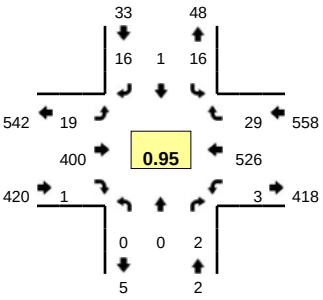
**CITY/STATE:** Tualatin, OR

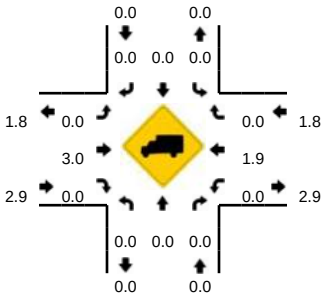
**QC JOB #:** 14553216

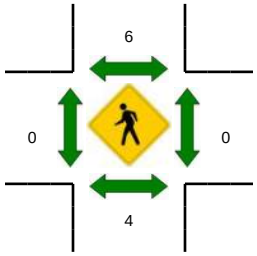
**DATE:** Tue, Nov 07 2017

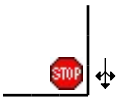
**Peak-Hour: 4:30 PM -- 5:30 PM**

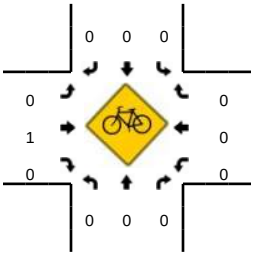
**Peak 15-Min: 4:30 PM -- 4:45 PM**

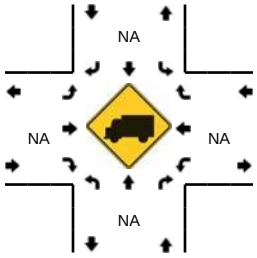


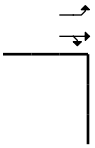



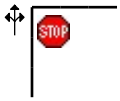



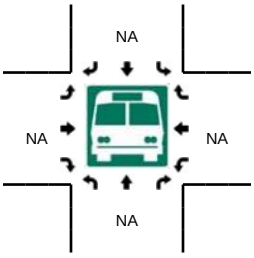






| 5-Min Count Period Beginning At | East Site Access (Northbound) | | | | East Site Access (Southbound) | | | | SW Tualatin Rd (Eastbound) | | | | SW Tualatin Rd (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:00 PM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 2 | 34 | 0 | 0 | 1 | 42 | 1 | 0 | 82 | |
| 4:05 PM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 3 | 29 | 0 | 0 | 1 | 43 | 1 | 0 | 79 | |
| 4:10 PM | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 3 | 28 | 0 | 0 | 0 | 46 | 3 | 0 | 83 | |
| 4:15 PM | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 3 | 36 | 0 | 0 | 0 | 45 | 3 | 0 | 90 | |
| 4:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 31 | 0 | 0 | 0 | 39 | 2 | 0 | 75 | |
| 4:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 3 | 26 | 0 | 0 | 0 | 28 | 3 | 0 | 64 | |
| 4:30 PM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 42 | 0 | 0 | 0 | 42 | 5 | 0 | 92 | |
| 4:35 PM | 0 | 0 | 1 | 0 | 2 | 1 | 1 | 0 | 0 | 32 | 0 | 0 | 0 | 56 | 4 | 0 | 97 | |
| 4:40 PM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 30 | 0 | 0 | 0 | 42 | 2 | 0 | 77 | |
| 4:45 PM | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 1 | 34 | 1 | 0 | 1 | 43 | 2 | 0 | 88 | |
| 4:50 PM | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 3 | 30 | 0 | 0 | 0 | 48 | 0 | 0 | 83 | |
| 4:55 PM | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 2 | 28 | 0 | 0 | 1 | 46 | 3 | 0 | 83 | 993 |
| 5:00 PM | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 0 | 0 | 35 | 0 | 0 | 0 | 39 | 1 | 0 | 79 | 990 |
| 5:05 PM | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 43 | 0 | 0 | 1 | 41 | 3 | 0 | 94 | 1005 |
| 5:10 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 4 | 31 | 0 | 0 | 0 | 34 | 1 | 0 | 71 | 993 |
| 5:15 PM | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 26 | 0 | 0 | 0 | 47 | 2 | 0 | 78 | 981 |
| 5:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 31 | 0 | 0 | 0 | 47 | 2 | 0 | 82 | 988 |
| 5:25 PM | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 0 | 1 | 38 | 0 | 0 | 0 | 41 | 4 | 0 | 89 | 1013 |
| 5:30 PM | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 21 | 0 | 0 | 0 | 38 | 2 | 0 | 64 | 985 |
| 5:35 PM | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 0 | 0 | 0 | 45 | 1 | 0 | 85 | 973 |
| 5:40 PM | 0 | 0 | 0 | 0 | 3 | 0 | 1 | 0 | 0 | 37 | 0 | 0 | 0 | 32 | 1 | 0 | 74 | 970 |
| 5:45 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 30 | 0 | 0 | 0 | 49 | 1 | 0 | 82 | 964 |
| 5:50 PM | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 0 | 2 | 39 | 0 | 0 | 0 | 39 | 3 | 0 | 86 | 967 |
| 5:55 PM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 39 | 0 | 0 | 0 | 31 | 4 | 0 | 77 | 961 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 0 | 0 | 4 | 0 | 20 | 4 | 8 | 0 | 8 | 416 | 0 | 0 | 0 | 560 | 44 | 0 | 1064 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 12 | 0 | | 0 | 16 | 0 | | 28 |
| Pedestrians | | 4 | | | | 0 | | | | 0 | | | | 0 | | | 4 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Railroad | | | | | | | | | | | | | | | | | |
| Stopped Buses | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/16/2017 1:52 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

Type of peak hour being reported: Intersection Peak

Method for determining peak hour: Total Entering Volume

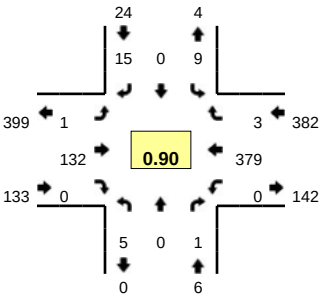
**LOCATION:** Site Access -- SW Leveton Dr

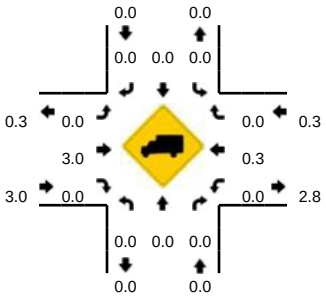
**CITY/STATE:** Tualatin, OR

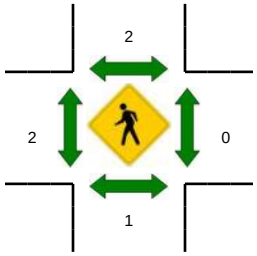
**QC JOB #:** 14553210

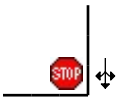
**DATE:** Tue, Nov 07 2017

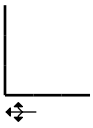
**Peak-Hour: 4:40 PM -- 5:40 PM**
**Peak 15-Min: 5:25 PM -- 5:40 PM**

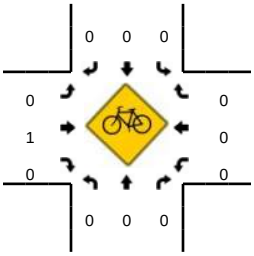


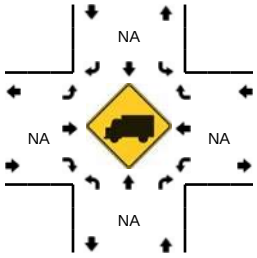



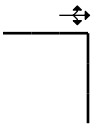



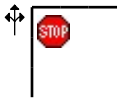



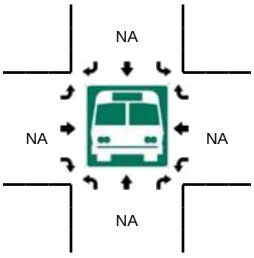








| 5-Min Count Period Beginning At | Site Access (Northbound) | | | | Site Access (Southbound) | | | | SW Leveton Dr (Eastbound) | | | | SW Leveton Dr (Westbound) | | | | Total | Hourly Totals |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | | |
| 4:00 PM | 6 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 5 | 1 | 0 | 0 | 22 | 1 | 0 | 38 | |
| 4:05 PM | 0 | 0 | 1 | 0 | 2 | 0 | 2 | 0 | 1 | 9 | 1 | 0 | 1 | 16 | 0 | 0 | 33 | |
| 4:10 PM | 2 | 0 | 2 | 0 | 2 | 9 | 3 | 0 | 0 | 4 | 0 | 0 | 0 | 11 | 1 | 0 | 34 | |
| 4:15 PM | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 5 | 1 | 0 | 0 | 19 | 1 | 0 | 28 | |
| 4:20 PM | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 11 | 1 | 0 | 0 | 18 | 0 | 0 | 33 | |
| 4:25 PM | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 17 | 0 | 0 | 0 | 14 | 0 | 0 | 36 | |
| 4:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 11 | 1 | 0 | 0 | 18 | 0 | 0 | 32 | |
| 4:35 PM | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 16 | 0 | 0 | 0 | 20 | 1 | 0 | 40 | |
| 4:40 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 17 | 0 | 0 | 0 | 33 | 1 | 0 | 53 | |
| 4:45 PM | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 19 | 0 | 0 | 0 | 19 | 0 | 0 | 40 | |
| 4:50 PM | 1 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 17 | 0 | 0 | 0 | 25 | 0 | 0 | 47 | |
| 4:55 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 17 | 0 | 0 | 0 | 12 | 1 | 0 | 31 | 445 |
| 5:00 PM | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 18 | 0 | 0 | 0 | 31 | 0 | 0 | 52 | 459 |
| 5:05 PM | 3 | 0 | 0 | 0 | 1 | 0 | 5 | 0 | 0 | 7 | 0 | 0 | 0 | 32 | 0 | 0 | 48 | 474 |
| 5:10 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 4 | 0 | 0 | 0 | 28 | 0 | 0 | 33 | 473 |
| 5:15 PM | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 8 | 0 | 0 | 0 | 32 | 0 | 0 | 43 | 488 |
| 5:20 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 38 | 1 | 0 | 47 | 502 |
| 5:25 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 43 | 0 | 0 | 48 | 514 |
| 5:30 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 38 | 0 | 0 | 44 | 526 |
| 5:35 PM | 0 | 0 | 1 | 0 | 2 | 0 | 1 | 0 | 0 | 7 | 0 | 0 | 0 | 48 | 0 | 0 | 59 | 545 |
| 5:40 PM | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 32 | 1 | 0 | 39 | 531 |
| 5:45 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 35 | 1 | 0 | 39 | 530 |
| 5:50 PM | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 25 | 0 | 0 | 31 | 514 |
| 5:55 PM | 0 | 0 | 1 | 0 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 0 | 14 | 0 | 0 | 20 | 503 |

| Peak 15-Min Flowrates | Northbound | | | | Southbound | | | | Eastbound | | | | Westbound | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | Left | Thru | Right | U | |
| All Vehicles | 0 | 0 | 4 | 0 | 12 | 0 | 4 | 0 | 0 | 68 | 0 | 0 | 0 | 516 | 0 | 0 | 604 |
| Heavy Trucks | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 4 | 0 | | 0 | 0 | 0 | | 4 |
| Pedestrians | | 0 | | | | 0 | | | | 0 | | | | 0 | | | 0 |
| Bicycles | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 |
| Railroad | | | | | | | | | | | | | | | | | |
| Stopped Buses | | | | | | | | | | | | | | | | | |

*Comments:*

Report generated on 11/16/2017 1:52 PM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net) 1-877-580-2212

APPENDIX E.

# SEASONAL ADJUSTMENT DATA

**SEASONAL TREND TABLE (Updated: 9/30/16 )**

| TREND | 1-Jan | 15-Jan | 1-Feb | 15-Feb | 1-Mar | 15-Mar | 1-Apr | 15-Apr | 1-May | 15-May | 1-Jun | 15-Jun | 1-Jul | 15-Jul | 1-Aug | 15-Aug | 1-Sep | 15-Sep | 1-Oct | 15-Oct | 1-Nov | 15-Nov | 1-Dec | 15-Dec | Seasonal Trend Peak Period Factor | 7-Nov |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| INTERSTATE URBANIZED | 1.0328 | 1.0423 | 1.0157 | 0.9891 | 0.9780 | 0.9670 | 0.9582 | 0.9493 | 0.9530 | 0.9567 | 0.9385 | 0.9202 | 0.9228 | 0.9275 | 0.9229 | 0.9182 | 0.9363 | 0.9544 | 0.9568 | 0.9592 | 0.9776 | 0.9959 | 1.0131 | 1.0303 | 0.9182 | |
| INTERSTATE NONURBANIZED | 1.2437 | 1.3089 | 1.2543 | 1.1997 | 1.1341 | 1.0685 | 1.0594 | 1.0503 | 1.0243 | 0.9984 | 0.9494 | 0.9005 | 0.8748 | 0.8449 | 0.8450 | 0.8452 | 0.8928 | 0.9405 | 0.9815 | 1.0224 | 1.0445 | 1.0666 | 1.1193 | 1.1721 | 0.8449 | |
| COMMUTER | 1.0475 | 1.0553 | 1.0272 | 0.9991 | 0.9913 | 0.9836 | 0.9655 | 0.9474 | 0.9442 | 0.9411 | 0.9497 | 0.9583 | 0.9410 | 0.9243 | 0.9206 | 0.9168 | 0.9289 | 0.9409 | 0.9431 | 0.9452 | 0.9734 | 1.0017 | 1.0249 | 1.0481 | 0.9168 | 0.9847 |
| COASTAL DESTINATION | 1.2011 | 1.2105 | 1.1669 | 1.1234 | 1.0959 | 1.0684 | 1.0679 | 1.0673 | 1.0450 | 1.0227 | 0.9832 | 0.9438 | 0.8923 | 0.8293 | 0.8289 | 0.8284 | 0.8792 | 0.9300 | 0.9866 | 1.0432 | 1.1000 | 1.1567 | 1.1795 | 1.2023 | 0.8284 | |
| COASTAL DESTINATION ROUTE | 1.4581 | 1.4945 | 1.4132 | 1.3319 | 1.2689 | 1.2060 | 1.1989 | 1.1918 | 1.1318 | 1.0718 | 1.0090 | 0.9462 | 0.8627 | 0.7570 | 0.7580 | 0.7589 | 0.8357 | 0.9125 | 1.0223 | 1.1321 | 1.2122 | 1.2922 | 1.3556 | 1.4189 | 0.7570 | |
| AGRICULTURE | 1.2501 | 1.2671 | 1.2126 | 1.1581 | 1.1239 | 1.0896 | 1.0515 | 1.0134 | 0.9750 | 0.9367 | 0.9081 | 0.8794 | 0.8633 | 0.8439 | 0.8440 | 0.8441 | 0.8457 | 0.8473 | 0.8799 | 0.9125 | 0.9820 | 1.0515 | 1.1491 | 1.2467 | 0.8439 | |
| RECREATIONAL SUMMER | 1.7175 | 1.7853 | 1.7144 | 1.6434 | 1.5416 | 1.4398 | 1.3847 | 1.3297 | 1.1730 | 1.0163 | 0.9355 | 0.8546 | 0.7960 | 0.7248 | 0.7363 | 0.7478 | 0.8050 | 0.8623 | 0.9661 | 1.0699 | 1.2299 | 1.3898 | 1.5122 | 1.6346 | 0.7248 | |
| RECREATIONAL SUMMER WINTER | 1.1876 | 1.2510 | 1.2671 | 1.2831 | 1.3092 | 1.3353 | 1.4523 | 1.5692 | 1.5280 | 1.4868 | 1.2809 | 1.0750 | 0.9651 | 0.8183 | 0.8556 | 0.8930 | 1.0372 | 1.1814 | 1.4146 | 1.6262 | 1.6922 | 1.7365 | 1.4069 | 1.0773 | 0.8183 | |
| RECREATIONAL WINTER | 0.9829 | 0.9405 | 0.9610 | 0.9814 | 1.0088 | 1.0363 | 1.2717 | 1.5070 | 1.8899 | 2.2729 | 1.9598 | 1.6468 | 1.4478 | 1.1378 | 1.1680 | 1.1981 | 1.3341 | 1.4702 | 1.7772 | 2.0843 | 2.4169 | 2.7495 | 1.8778 | 1.0060 | 0.9405 | |
| SUMMER | 1.2064 | 1.2361 | 1.1933 | 1.1505 | 1.1163 | 1.0821 | 1.0551 | 1.0280 | 0.9946 | 0.9611 | 0.9252 | 0.8893 | 0.8654 | 0.8356 | 0.8394 | 0.8431 | 0.8787 | 0.9142 | 0.9489 | 0.9836 | 1.0386 | 1.0936 | 1.1381 | 1.1826 | 0.8356 | |
| SUMMER < 2500 | 1.2956 | 1.3295 | 1.2823 | 1.2352 | 1.1775 | 1.1198 | 1.0711 | 1.0223 | 0.9728 | 0.9232 | 0.8909 | 0.8586 | 0.8394 | 0.8161 | 0.8251 | 0.8341 | 0.8478 | 0.8616 | 0.9004 | 0.9392 | 1.0145 | 1.0898 | 1.1787 | 1.2675 | 0.8161 | |

***Seasonal Trend Table factors are based on previous year ATR data. The table is updated yearly.**
***Grey shading indicates months were seasonal factor is greater than 30%**

| Seasonal Factor | 1.07 |
|---|---|

APPENDIX F.

**CRASH DATA**

091: PACIFIC HIGHWAY WEST

**Highway 091 ALL ROAD TYPES, MP 12.60 to 12.72 01/01/2011 to 12/31/2015, Both Add and Non-Add mileage**

Total crash records: 24

| SER# / INVEST | S P E D | A U G | R S C L | W O R K | DATE / DAY / TIME | COUNTY / CITY / URBAN AREA | RD# FC / COMPNT / MLG TYP / MILEPNT | CONN# / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS (#LANES) | INT-REL / TRAF- / CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | SPCL USE / TRLR QTY / OWNER | V# | TYPE | MOVE / FROM / TO | P# | TYPE | SVRTY | A G E | S E X | LICNS RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05510 | N | N | N | | 09/22/2015 | WASHINGTON | 1 14 | | STRGHT | | N | N | CLR | S-1STOP | 0 | 01 | NONE | STRGHT | | | | | | | | | | 013 | 29 |
| NONE | | | | | TU | TUALATIN | MN 0 | SW PACIFIC HY 99W | NE | (DIVMD) | UNKNOWN | N | DRY | REAR | | | PRVTE | NE-SW | | | | | | | | | 000 | | 00 |
| | | | | | 5P | PORTLAND UA | 12.63 | SW 124TH AVE | 04 | (04) | | N | DAY | PDO | | | PSNGR CAR | | 01 | DRVR | NONE | 34 | F | OR-Y<br>OR<25 | | 026 | 000 | | 29 |
| | | | | | | | | | | | | | | | | 02 | NONE | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | NE-SW | | | | | | | | | 011 | 013 | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 45 | M | OR-Y<br>OR<25 | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | 03 | NONE | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | NE-SW | | | | | | | | | 022 | | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 26 | F | OR-Y<br>OR<25 | | 000 | 000 | | 00 |
| 00703 | N | N | N | | 02/07/2015 | WASHINGTON | 1 14 | | STRGHT | | N | N | RAIN | S-1STOP | 0 | 01 | NONE | STRGHT | | | | | | | | | | | 29 |
| NO RPT | | | | | SA | TUALATIN | MN 0 | SW PACIFIC HY 99W | UN | (DIVMD) | UNKNOWN | N | WET | REAR | | | PRVTE | NE-SW | | | | | | | | | 000 | | 00 |
| | | | | | 10P | PORTLAND UA | 12.64 | SW 124TH AVE | 03 | (04) | | N | DLIT | INJ | | | PSNGR CAR | | 01 | DRVR | NONE | 34 | M | OR-Y<br>OR<25 | | 026 | 000 | | 29 |
| | | | | | | | | | | | | | | | | 02 | NONE | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | NE-SW | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJB | 20 | F | OR-Y<br>N-RES | | 000 | 000 | | 00 |
| 03136 | N | N | N | | 06/18/2012 | WASHINGTON | 1 14 | | STRGHT | | Y | N | CLR | S-1STOP | 0 | 01 | NONE | STRGHT | | | | | | | | | | 013 | 32 |
| CITY | | | | | MO | | MN 0 | | UN | (DIVMD) | L-TURN REF | N | DRY | REAR | | | PRVTE | N -S | | | | | | | | | 000 | | 00 |
| | | | | | 7A | PORTLAND UA | 12.64 | | 05 | (06) | | N | DAY | INJ | | | PSNGR CAR | | 01 | DRVR | INJB | 37 | F | OR-Y<br>OR<25 | | 052,026 | 000 | | 32 |
| | | | | | | | | | | | | | | | | 02 | NONE | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | N -S | | | | | | | | | 011 | 013 | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJB | 48 | M | OR-Y<br>OR<25 | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | 03 | NONE | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | N -S | | | | | | | | | 022 | 013 | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 42 | F | OR-Y<br>OR<25 | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | 04 | NONE | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PUBLC | N -S | | | | | | | | | 022 | | 00 |
| | | | | | | | | | | | | | | | | | TRUCK | | 01 | DRVR | NONE | 28 | M | OR-Y<br>OR<25 | | 000 | 000 | | 00 |
| 07496 | N | N | N | | 09/22/2015 | WASHINGTON | 1 14 | | STRGHT | | N | N | UNK | S-1STOP | 0 | 01 | NONE | STRGHT | | | | | | | | | | 013 | 29 |
| NO RPT | | | | | TU | TUALATIN | MN 0 | SW PACIFIC HY 99W | NE | (DIVMD) | UNKNOWN | N | UNK | REAR | | | PRVTE | NE-SW | | | | | | | | | 000 | | 00 |
| | | | | | 5P | PORTLAND UA | 12.64 | SW 124TH AVE | 04 | (06) | | N | DAY | INJ | | | PSNGR CAR | | 01 | DRVR | NONE | 00 | M | UNK<br>UNK | | 026 | 000 | | 29 |
| | | | | | | | | | | | | | | | | 02 | NONE | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | NE-SW | | | | | | | | | 011 | 013 | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 00 | F | UNK<br>UNK | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | 03 | NONE | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | NE-SW | | | | | | | | | 022 | | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 27 | F | OR-Y<br>OR<25 | | 000 | 000 | | 00 |
| 06103 | N | N | N | | 11/05/2012 | WASHINGTON | 1 14 | | INTER | 3-LEG | N | N | RAIN | S-1STOP | 0 | 01 | NONE | STRGHT | | | | | | | | | | | 07 |

*Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.*

091: PACIFIC HIGHWAY WEST

**Highway 091 ALL ROAD TYPES, MP 12.60 to 12.72 01/01/2011 to 12/31/2015, Both Add and Non-Add mileage**

Total crash records: 24

| SER# / INVEST | SPEED | ALCOHOL | DRUGS | SCHL BUS | WORK ZONE | DATE / DAY / TIME | COUNTY / CITY / URBAN AREA | RD# FC / COMPNT / MLG TYP / MILEPNT | CONN# / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS (#LANES) | INT-REL / TRAF-CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER / TYPE | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | AGE | SEX | LICNS RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| NONE | | | | | | MO | | MN 0 | | UN | | TRF SIGNAL | N | WET | REAR | | UNKN | NE-SW | | | | | | | | | 000 | | 00 |
| | | | | | | 8A | PORTLAND UA | 12.66 | | 06 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 00 | F | OR-Y OR<25 | | 026 | 000 | | 07 |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | NE-SW | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 50 | M | OR-Y OR<25 | | 000 | 000 | | 00 |
| 92231 | N | N | N | | | 05/02/2013 | WASHINGTON | 1 14 | | INTER | 3-LEG | N | N | CLR | S-STRGHT | 01 | NONE 0 | STRGHT | | | | | | | | | | | 07 |
| NO RPT | | | | | | TH | | MN 0 | | UN | | TRF SIGNAL | N | DRY | REAR | | PRVTE | NE-SW | | | | | | | | | 000 | | 00 |
| | | | | | | 4P | PORTLAND UA | 12.66 | | 06 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 24 | F | OR-Y OR<25 | | 043,042 | 000 | | 07 |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | NE-SW | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 58 | M | OR-Y OR<25 | | 000 | 000 | | 00 |
| 06901 | N | N | N | | | 12/05/2012 | WASHINGTON | 1 14 | | INTER | 3-LEG | N | N | UNK | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | 07 |
| NONE | | | | | | WE | | MN 0 | | NE | | TRF SIGNAL | N | WET | REAR | | PRVTE | NE-SW | | | | | | | | | 000 | | 00 |
| | | | | | | 5P | PORTLAND UA | 12.66 | | 06 | 0 | | N | DLIT | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 54 | F | OR-Y OR<25 | | 026 | 000 | | 07 |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | NE-SW | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 53 | F | OR-Y OR<25 | | 000 | 000 | | 00 |
| 04138 | N | N | N | N | N | 08/06/2011 | WASHINGTON | 1 14 | | INTER | 3-LEG | N | N | CLR | ANGL-OTH | 01 | NONE 0 | STRGHT | | | | | | | | | | 010 | 04 |
| CITY | | | | | | SA | | MN 0 | | CN | | TRF SIGNAL | N | DRY | TURN | | PRVTE | N -S | | | | | | | | | 000 | | 00 |
| | | | | | | 1P | PORTLAND UA | 12.66 | | 03 | 1 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 51 | F | OR-Y OR>25 | | 020 | 000 | | 04 |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | E -S | | | | | | | | | 000 | 010 | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 31 | M | OR-Y OR<25 | | 000 | 000 | | 00 |
| 04897 | N | N | N | N | N | 09/04/2013 | WASHINGTON | 1 14 | | STRGHT | | N | N | CLD | S-STRGHT | 01 | NONE 0 | STRGHT | | | | | | | | | | 010 | 13 |
| CITY | | | | | | WE | | MN 0 | | UN | (DIVMD) | UNKNOWN | N | DRY | REAR | | PRVTE | N -S | | | | | | | | | 000 | | 00 |
| | | | | | | 3P | PORTLAND UA | 12.67 | | 03 | (04) | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 20 | M | SUSP OR<25 | | 045 | 000 | | 13 |
| | | | | | | | | | | | | | | | | 02 | NONE 1 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | N -S | | | | | | | | | 000 | 010 | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 45 | M | OR-Y OR<25 | | 000 | 000 | | 00 |
| 04244 | N | N | N | N | N | 08/16/2012 | WASHINGTON | 2 14 | | STRGHT | | N | Y | CLR | FIX OBJ | 01 | NONE 0 | STRGHT | | | | | | | | | | 062 | 10 |
| CITY | | | | | | TH | TUALATIN | MN 0 | SW PACIFIC HY 99W | NE | (DIVMD) | ONE-WAY | N | DRY | FIX | | PRVTE | SW-NE | | | | | | | | | 000 | 062 | 00 |
| | | | | | | 9P | PORTLAND UA | 12.60 | SW 124TH AVE | 06 | (04) | | N | DLIT | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 38 | M | OR-Y OR<25 | | 080,081 | 088 | | 10 |
| | | | | | | | | | | | | | | | | 01 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | SW-NE | | | | | | | | | 000 | 062 | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 02 | PSNG | INJC | 30 | F | | | 000 | 000 | | 00 |
| 02767 | N | N | N | N | N | 05/29/2012 | WASHINGTON | 2 14 | | INTER | CROSS | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | 07 |
| CITY | | | | | | TU | TUALATIN | MN 0 | SW PACIFIC HY 99W | NE | | TRF SIGNAL | N | DRY | REAR | | PRVTE | SW-NE | | | | | | | | | 000 | | 00 |

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091: PACIFIC HIGHWAY WEST

**Highway 091 ALL ROAD TYPES, MP 12.60 to 12.72 01/01/2011 to 12/31/2015, Both Add and Non-Add mileage**

Total crash records: 24

| SER# / INVEST | SPEED | ALCHL | DRUGS | SCHL | WORK | DATE / DAY / TIME | COUNTY / CITY / URBAN AREA | RD# FC / COMPNT / MLG TYP / MILEPNT | CONN# / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS (#LANES) | INT-REL / TRAF-CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER / TYPE | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | AGE | SEX | LICNS RES | PED LOC | ERROR | ACT EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 1P | PORTLAND UA | 12.66 | SW 124TH AVE | 05 | 1 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 56 | F | OR-Y | | 043,026 | 000 | 07 |
| | | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | SW-NE | | | | | | | | | 011 | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 65 | M | OR-Y | | 000 | 000 | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | SW-NE | | | | | | | | | 011 | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 02 | PSNG | INJC | 61 | F | | | 000 | 000 | 00 |
| 07063 | N | N | N | N | N | 11/22/2014 | WASHINGTON | 2 14 | | INTER | 3-LEG | N | N | CLD | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 07 |
| CITY | | | | | | SA | TUALATIN | MN 0 | SW PACIFIC HY 99W | NE | | TRF SIGNAL | N | WET | REAR | | PRVTE | NE-SW | | | | | | | | | 000 | 00 |
| | | | | | | 4P | PORTLAND UA | 12.66 | SW 124TH AVE | 06 | 1 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 84 | M | OR-Y | | 043,026 | 000 | 07 |
| | | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | NE-SW | | | | | | | | | 011 | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 54 | F | OR-Y | | 000 | 000 | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| 04829 | N | N | N | | | 09/06/2011 | WASHINGTON | 2 14 | | INTER | 3-LEG | N | N | CLR | S-1STOP | 01 | UNKN 0 | STRGHT | | | | | | | | | | 07 |
| NONE | | | | | | TU | TUALATIN | MN 0 | SW PACIFIC HY 99W | SW | | TRF SIGNAL | N | DRY | REAR | | UNKN | SW-NE | | | | | | | | | 000 | 00 |
| | | | | | | 9P | PORTLAND UA | 12.66 | SW 124TH AVE | 06 | 1 | | N | DARK | PDO | | UNKNOWN | | 01 | DRVR | NONE | 00 | F | OR-Y | | 026 | 000 | 07 |
| | | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | RENTL | SW-NE | | | | | | | | | 011 | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 68 | M | OR-Y | | 000 | 000 | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | | OR>25 | | | | |
| 00041 | N | N | N | | | 01/03/2013 | WASHINGTON | 2 14 | | INTER | CROSS | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 07 |
| NONE | | | | | | TH | TUALATIN | MN 0 | SW PACIFIC HY 99W | SW | | TRF SIGNAL | N | DRY | REAR | | PRVTE | SW-NE | | | | | | | | | 000 | 00 |
| | | | | | | 12P | PORTLAND UA | 12.66 | SW 124TH AVE | 06 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 27 | F | OR-Y | | 026 | 000 | 07 |
| | | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | SW-NE | | | | | | | | | 011 | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 52 | M | OR-Y | | 000 | 000 | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | SW-NE | | | | | | | | | 011 | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 02 | PSNG | INJC | 65 | F | | | 000 | 000 | 00 |
| 02734 | N | N | N | N | N | 05/14/2014 | WASHINGTON | 2 14 | | INTER | 3-LEG | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 32,16,29 |
| CITY | | | | | | WE | TUALATIN | MN 0 | SW PACIFIC HY 99W | SW | | TRF SIGNAL | N | DRY | REAR | | PRVTE | SW-NE | | | | | | | | | 000 | 00 |
| | | | | | | 5P | PORTLAND UA | 12.66 | SW 124TH AVE | 06 | 1 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 21 | M | OR-Y | | 052,026 | 025 | 32,16,29 |
| | | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | SW-NE | | | | | | | | | 011 | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 47 | M | OR-Y | | 000 | 000 | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| 00035 | N | N | N | N | N | 01/04/2012 | WASHINGTON | 2 14 | | INTER | CROSS | N | N | CLR | ANGL-OTH | 01 | NONE 0 | STRGHT | | | | | | | | | | 02 |
| CITY | | | | | | WE | TUALATIN | MN 0 | SW PACIFIC HY 99W | CN | | TRF SIGNAL | N | DRY | TURN | | PRVTE | SW-NE | | | | | | | | | 000 | 00 |
| | | | | | | 8A | PORTLAND UA | 12.66 | SW 124TH AVE | 02 | 1 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 24 | F | OR-Y | | 000 | 000 | 00 |

091: PACIFIC HIGHWAY WEST

**Highway 091 ALL ROAD TYPES, MP 12.60 to 12.72 01/01/2011 to 12/31/2015, Both Add and Non-Add mileage**

Total crash records: 24

| SER# / INVEST | S P E D | R S W A U C O | DATE / DAY / TIME | COUNTY / CITY / URBAN AREA | RD# FC / COMPNT / MLG TYP / MILEPNT | CONN# / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS (#LANES) | INT-REL / TRAF- / CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | SPCL USE / TRLR QTY / OWNER | MOVE / FROM / TO | PRTC / TYPE | INJ / SVRTY | A G E | S E X | LICNS / RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | 02 NONE 0 | TURN-L | | | | | | | | | | |
| | | | | | | | | | | | | | PRVTE | SE-SW | | | | | | | | 016 | | 00 |
| | | | | | | | | | | | | | PSNGR CAR | | 01 DRVR | NONE | 16 | M | OR-Y | | 028 | 000 | | 02 |
| | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 06352 | N N N N N | | 11/12/2011 | WASHINGTON | 2 14 | | INTER | CROSS | N | N | CLD | S-1STOP | 01 NONE 0 | STRGHT | | | | | | | | | | 07 |
| CITY | | SA | | TUALATIN | MN 0 | SW PACIFIC HY 99W | CN | | TRF SIGNAL | N | DRY | REAR | PRVTE | SW-NE | | | | | | | | 000 | | 00 |
| | | 11A | | PORTLAND UA | 12.66 | SW 124TH AVE | 03 | 2 | | N | DAY | PDO | PSNGR CAR | | 01 DRVR | NONE | 40 | M | OR-Y | | 026 | 000 | | 07 |
| | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | 02 NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | PRVTE | SW-NE | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | PSNGR CAR | | 01 DRVR | NONE | 41 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | OR>25 | | | | | |
| 04773 | N N N N N | | 09/10/2012 | WASHINGTON | 2 14 | | INTER | CROSS | N | N | CLR | O-1 L-TURN | 01 NONE 0 | STRGHT | | | | | | | | | | 04 |
| CITY | | MO | | TUALATIN | MN 0 | SW PACIFIC HY 99W | CN | | TRF SIGNAL | N | DRY | TURN | PRVTE | SW-NE | | | | | | | | 000 | | 00 |
| | | 10P | | PORTLAND UA | 12.66 | SW 124TH AVE | 04 | 0 | | N | DLIT | INJ | PSNGR CAR | | 01 DRVR | INJC | 18 | M | OR-Y | | 020 | 000 | | 04 |
| | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | 02 NONE 0 | TURN-L | | | | | | | | | | |
| | | | | | | | | | | | | | PRVTE | NE-SE | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | PSNGR CAR | | 01 DRVR | NONE | 25 | M | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | 03 NONE 0 | TURN-L | | | | | | | | | | |
| | | | | | | | | | | | | | PRVTE | NE-SE | | | | | | | | 022 | | 00 |
| | | | | | | | | | | | | | PSNGR CAR | | 01 DRVR | NONE | 40 | M | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 00673 | N N N N N | | 02/06/2015 | WASHINGTON | 2 14 | | STRGHT | | N | N | RAIN | S-1STOP | 01 NONE 0 | STRGHT | | | | | | | | | | 29 |
| CITY | | FR | | TUALATIN | MN 0 | SW PACIFIC HY 99W | SW | (DIVMD) | TRF SIGNAL | N | WET | REAR | PRVTE | SW-NE | | | | | | | | 000 | | 00 |
| | | 8A | | PORTLAND UA | 12.67 | SW 124TH AVE | 03 | | | N | DAY | INJ | PSNGR CAR | | 01 DRVR | NONE | 19 | M | OR-Y | | 026 | 000 | | 29 |
| | | | | | | | | (04) | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | 02 NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | PRVTE | SW-NE | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | PSNGR CAR | | 01 DRVR | INJC | 23 | M | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 02846 | N N N N N | | 06/02/2011 | WASHINGTON | 2 14 | | STRGHT | | Y | N | RAIN | S-1STOP | 01 NONE 0 | STRGHT | | | | | | | 002 | | | 27,10 |
| CITY | | TH | | TUALATIN | MN 0 | SW PACIFIC HY 99W | SW | (DIVMD) | ONE-WAY | N | WET | REAR | PRVTE | SW-NE | | | | | | | | 000 | | 00 |
| | | 7A | | PORTLAND UA | 12.68 | SW 124TH AVE | 03 | | | N | DAY | PDO | PSNGR CAR | | 01 DRVR | NONE | 31 | F | SUSP | 016,014,026 | | 038 | | 27 |
| | | | | | | | | (04) | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | 01 NONE 0 | STRGHT | | | | | | | | | | |
| | | | | | | | | | | | | | PRVTE | SW-NE | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | PSNGR CAR | | 02 PSNG | NO<5 | 02 | F | | 000 | | 000 | 002 | 00 |
| | | | | | | | | | | | | | 02 NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | PRVTE | SW-NE | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | PSNGR CAR | | 01 DRVR | NONE | 43 | M | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 04719 | N N N | | 09/07/2012 | WASHINGTON | 2 14 | | STRGHT | | Y | N | CLR | S-1STOP | 01 NONE 0 | STRGHT | | | | | | | | | | 07 |
| NONE | | FR | | TUALATIN | MN 0 | SW PACIFIC HY 99W | SW | (DIVMD) | ONE-WAY | N | DRY | REAR | PRVTE | SW-NE | | | | | | | | 000 | | 00 |
| | | 7A | | PORTLAND UA | 12.68 | SW 124TH AVE | 04 | | | N | DAY | PDO | PSNGR CAR | | 01 DRVR | NONE | 33 | M | OR-Y | | 026 | 000 | | 07 |
| | | | | | | | | (04) | | | | | | | | | | | OR<25 | | | | | |

091: PACIFIC HIGHWAY WEST

**Highway 091 ALL ROAD TYPES, MP 12.60 to 12.72 01/01/2011 to 12/31/2015, Both Add and Non-Add mileage**

Total crash records: 24

| SER# / INVEST | SPEED | ALC | DRUGS | SCHL | WORK | DAY | DATE / TIME | COUNTY / CITY / URBAN AREA | RD# FC / COMPNT / MLG TYP / MILEPNT | CONN# / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS (#LANES) | INT-REL / TRAF-CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | AGE | SEX | LICNS RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | PRVTE | SW-NE | | | | | | | | | 011 | 00 |
| | | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 25 | F | OTH-Y | | 000 | 000 | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| 07867 | N | N | N | | | | 12/19/2015 | WASHINGTON | 2 14 | | STRGHT | | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 29 |
| NONE | | | | | | | SA | TUALATIN | MN 0 | SW PACIFIC HY 99W | SW | (DIVMD) | UNKNOWN | N | DRY | REAR | | PRVTE | SW-NE | | | | | | | | | 000 | 00 |
| | | | | | | | 1P | PORTLAND UA | 12.69 | SW 124TH AVE | 03 | | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 00 | F | UNK | | 026 | 000 | 29 |
| | | | | | | | | | | | | (04) | | | | | | | | | | | | | UNK | | | | |
| | | | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | PRVTE | SW-NE | | | | | | | | | 011 | 00 |
| | | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 22 | M | OR-Y | | 000 | 000 | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| 03816 | N | N | N | | | | 07/07/2015 | WASHINGTON | 2 14 | | STRGHT | | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 29 |
| NONE | | | | | | | TU | TUALATIN | MN 0 | SW PACIFIC HY 99W | SW | (DIVMD) | UNKNOWN | N | DRY | REAR | | PRVTE | SW-NE | | | | | | | | | 000 | 00 |
| | | | | | | | 8A | PORTLAND UA | 12.70 | SW 124TH AVE | 03 | | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 00 | M | OTH-Y | | 026 | 000 | 29 |
| | | | | | | | | | | | | (04) | | | | | | | | | | | | | UNK | | | | |
| | | | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | PRVTE | SW-NE | | | | | | | | | 011 | 00 |
| | | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 35 | F | OR-Y | | 000 | 000 | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| 05771 | N | N | N | N | N | | 10/17/2011 | WASHINGTON | 2 14 | | STRGHT | | N | N | FOG | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 07 |
| CITY | | | | | | | MO | TUALATIN | MN 0 | SW PACIFIC HY 99W | SW | (DIVMD) | ONE-WAY | N | DRY | REAR | | PRVTE | SW-NE | | | | | | | | | 000 | 00 |
| | | | | | | | 6A | PORTLAND UA | 12.72 | SW 124TH AVE | 03 | | | N | DLIT | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 43 | M | OR-Y | 043,026 | 000 | 07 |
| | | | | | | | | | | | | (04) | | | | | | | | | | | | | OR<25 | | | | |
| | | | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | PRVTE | SW-NE | | | | | | | | | 011 | 00 |
| | | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 61 | M | OR-Y | 000 | 000 | 000 | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |

OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING



CITY OF TUALATIN, WASHINGTON COUNTY

**124TH AVE at TUALATIN RD, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 10

| SER# / INVEST | SPEED | ALCOHOL | DRUGS | SCHL BUS | WORK ZONE | DATE / DAY / TIME | CLASS / DIST / FROM | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS (#LANES) | INT-REL / TRAF-CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER / TYPE | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | AGE | SEX | LICNS RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00365 | Y | N | N | | | 01/08/2011 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | Y | UNK | FIX OBJ | 01 | NONE 0 | TURN-L | | | | | | | | | | 062,124 | 01 |
| NONE | | | | | | SA | 0 | SW 124TH AVE | E | | TRF SIGNAL | N | ICE | FIX | | PRVTE | N -E | | | | | | | | | 088 | 062,124 | 00 |
| | | | | | | 6A | | | 05 | 0 | | N | DLIT | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 38 | M | OR-Y OR<25 | | 047,080,081 | 017 | | 01 |
| 03194 | Y | N | N | N | N | 06/18/2011 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | Y | CLD | FIX OBJ | 01 | NONE 0 | TURN-L | | | | | | | | | | 050,062 | 32,01 |
| CITY | | | | | | SA | 0 | SW 124TH AVE | E | | TRF SIGNAL | N | WET | FIX | | PRVTE | N -E | | | | | | | | | 000 | 050,062 | 00 |
| | | | | | | 2P | | | 05 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 19 | M | OR-Y OR<25 | | 083,047,081 | 017 | | 32,01 |
| 04706 | N | N | N | N | N | 09/01/2011 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | 07 |
| COUNTY | | | | | | TH | 0 | SW 124TH AVE | E | | TRF SIGNAL | N | DRY | REAR | | PRVTE | E -W | | | | | | | | | 000 | | 00 |
| | | | | | | 5P | | | 06 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 36 | F | OTH-Y N-RES | | 026 | 000 | | 07 |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 69 | F | OR-Y OR<25 | | 000 | 000 | | 00 |
| 05973 | Y | N | N | N | N | 10/31/2012 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | Y | RAIN | FIX OBJ | 01 | NONE 0 | TURN-L | | | | | | | | | | 044,062,040 | 08,01 |
| CITY | | | | | | WE | 0 | SW 124TH AVE | E | | TRF SIGNAL | N | WET | FIX | | PRVTE | N -E | | | | | | | | | 000 | 044,062,040 | 00 |
| | | | | | | 3P | | | 05 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 25 | M | SUSP OR<25 | | 002,047,081 | 088 | | 08,01 |
| 01534 | Y | N | N | N | N | 03/23/2015 | 16 | SW TUALATIN RD | INTER | 3-LEG | N | Y | CLD | FIX OBJ | 01 | NONE 0 | TURN-L | | | | | | | | | | 079 | 01,08 |
| CITY | | | | | | MO | 0 | SW 124TH AVE | E | | TRF SIGNAL | N | DRY | FIX | | PRVTE | N -E | | | | | | | | | 000 | 079 | 00 |
| | | | | | | 12P | | | 06 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 39 | F | SUSP OR<25 | | 047,001,081 | 000 | | 01,08 |
| 00739 | N | N | N | N | N | 02/09/2011 | 16 | SW TUALATIN RD | INTER | 3-LEG | N | N | CLR | O-1 L-TURN | 01 | NONE 0 | TURN-L | | | | | | | | | | | 02 |
| CITY | | | | | | WE | 0 | SW 124TH AVE | CN | | TRF SIGNAL | N | DRY | TURN | | PRVTE | N -E | | | | | | | | | 000 | | 00 |
| | | | | | | 4P | | | 04 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 52 | F | OR-Y OR<25 | | 004,028 | 000 | | 02 |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | S -N | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 63 | M | OR-Y OR<25 | | 000 | 000 | | 00 |
| 01155 | N | N | N | N | N | 02/28/2011 | 16 | SW TUALATIN RD | INTER | 3-LEG | N | N | RAIN | O-1 L-TURN | 01 | NONE 0 | STRGHT | | | | | | | | | | | 02 |
| CITY | | | | | | MO | 0 | SW 124TH AVE | CN | | TRF SIGNAL | N | WET | TURN | | PRVTE | S -N | | | | | | | | | 000 | | 00 |
| | | | | | | 3P | | | 04 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 34 | M | OR-Y OR<25 | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | N -E | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 46 | M | OR-Y OR<25 | | 004,028 | 000 | | 02 |
| 06247 | N | N | N | N | N | 11/09/2011 | 16 | SW TUALATIN RD | INTER | 3-LEG | N | N | CLD | O-1 L-TURN | 01 | NONE 0 | TURN-L | | | | | | | | | | | 02 |
| CITY | | | | | | WE | 0 | SW 124TH AVE | CN | | TRF SIGNAL | N | DRY | TURN | | PRVTE | N -E | | | | | | | | | 000 | | 00 |
| | | | | | | 7A | | | 04 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 41 | F | OR-Y OR<25 | | 004,028 | 000 | | 02 |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | S -N | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJB | 57 | M | OR-Y OR<25 | | 000 | 000 | | 00 |
| 00366 | N | N | N | N | N | 01/21/2015 | 16 | SW TUALATIN RD | INTER | 3-LEG | N | N | CLR | O-1 L-TURN | 01 | NONE 0 | STRGHT | | | | | | | | | | | 02 |
| CITY | | | | | | WE | 0 | SW 124TH AVE | CN | | TRF SIGNAL | N | DRY | TURN | | PRVTE | S -N | | | | | | | | | 001 | | 00 |

CITY OF TUALATIN, WASHINGTON COUNTY

**124TH AVE at TUALATIN RD, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 10

| SER# / INVEST | S P E D | A L C | R U G S | S C H L | W O R K | DATE / DAY / TIME | CLASS / DIST / FROM | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS / (#LANES) | INT-REL / TRAF- / CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER / TYPE | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | A G E | S E X | LICNS / RES / LOC | PED ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 6P | | | 04 | 0 | | N | DLIT | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 37 | M | OR-Y<br>OR<25 | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | 02 | NONE 0<br>PRVTE | TURN-L<br>N -E | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 37 | M | OR-Y<br>OR<25 | 004,028 | 000 | | 02 |
| | | | | | | | | | | | | | | | 02 | NONE 0<br>PRVTE | TURN-L<br>N -E | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 02 | PSNG | NO<5 | 01 | M | | 000 | 000 | | 00 |
| 02705 | N | N | N | | | 05/18/2015 | 16 | SW TUALATIN RD | INTER | 3-LEG | N | N | CLR | ANGL-OTH | 01 | NONE 0 | STRGHT | | | | | | | | | | 02 |
| NO RPT | | | | | | MO | 0 | SW 124TH AVE | CN | | TRF SIGNAL | N | DRY | TURN | | PRVTE | S -N | | | | | | | | 000 | | 00 |
| | | | | | | 3P | | | 02 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 17 | F | OR-Y<br>OR<25 | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | 02 | NONE 0<br>PRVTE | TURN-R<br>E -N | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 67 | F | OR-Y<br>OR<25 | 028 | 000 | | 02 |

OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING



CITY OF TUALATIN, WASHINGTON COUNTY

**124TH AVE at LEVETON DR, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 2

| SER# / INVEST | SPEED | ALCHL | DRUGS | SCHL | WORK | DAY / TIME | CLASS / DIST | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS (#LANES) | INT-REL / TRAF-CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER / TYPE | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | AGE | SEX | LICNS / RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 00094 | N | N | N | | | 01/07/2011 | 16 | LEVETON DR | INTER | CROSS | N | N | RAIN | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | 27 |
| NONE | | | | | | FR | 0 | 124TH AVE | N | | TRF SIGNAL | N | WET | REAR | | PRVTE | N -S | | | | | | | | | 000 | | 00 |
| | | | | | | 10A | | | 06 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 52 | M | OR-Y | | 016,026 | 038 | | 27 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | UNKN 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | N -S | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 54 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 06999 | N | N | N | N | N | 11/19/2015 | 16 | SW LEVETON DR | INTER | CROSS | N | N | RAIN | O-1 L-TURN | 01 | NONE 0 | STRGHT | | | | | | | | | | | 02 |
| CITY | | | | | | TH | 0 | 124TH AVE | CN | | TRF SIGNAL | N | WET | TURN | | PRVTE | S -N | | | | | | | | | 000 | | 00 |
| | | | | | | 7A | | | 04 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 45 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | N -E | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 58 | M | OR-Y | | 004,028 | 000 | | 02 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |

OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING



CITY OF TUALATIN, WASHINGTON COUNTY

**118TH AVE at LEVETON DR, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 2

| SER# / INVEST | S P E D | A L C | D R U G S | S W C H L | O R K | DATE / DAY / TIME | CLASS / DIST / FROM | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS / (#LANES) | INT-REL / TRAF- / CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER / TYPE | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | A G E | S E X | LICNS RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01382 | Y | N | N | N | N | 03/14/2015 | 17 | SW LEVETON DR | INTER | 3-LEG | N | Y | RAIN | FIX OBJ | 01 | NONE 0 | TURN-L | | | | | | | | | | 040,062 | 01 |
| CITY | | | | | | SA | 0 | SW 118TH AVE | W | | STOP SIGN | N | WET | FIX | | PRVTE | S -W | | | | | | | | | 015 | 040,062 | 00 |
| | | | | | | 4P | | | 05 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 19 | M | OR-Y OR<25 | | 047,080,081 | 000 | | 01 |
| 06642 | N | N | N | | | 11/03/2015 | 17 | SW LEVETON DR | INTER | 3-LEG | N | N | RAIN | S-STRGHT | 01 | NONE 0 | STRGHT | | | | | | | | | | | 07 |
| NONE | | | | | | TU | 0 | SW 118TH AVE | W | | STOP SIGN | N | WET | REAR | | PRVTE | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | 6A | | | 06 | 0 | | N | DARK | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 26 | M | OR-Y OR<25 | | 042 | 000 | | 07 |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 00 | M | OR-Y OR<25 | | 000 | 000 | | 00 |

CITY OF TUALATIN, WASHINGTON COUNTY

**TUALATIN RD and Intersectional Crashes at TUALATIN RD, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 99

| SER# / INVEST | SPEED | ALCHL | DRUGS | SCHL BUS | WORK ZONE | HIT/RUN | DATE / DAY / TIME | CLASS / DIST / FROM | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS / (#LANES) | INT-REL / TRAF- / CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | AGE | SEX | LICNS RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03448 | N | N | N | N | N | | 07/01/2011 | 17 | SW BOONES FERRY RD | INTER | 3-LEG | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | 07 |
| CITY | | | | | | | FR | 0 | SW TUALATIN RD | N | | TRF SIGNAL | N | DRY | REAR | | PRVTE | N -S | | | | | | | | | 000 | | 00 |
| | | | | | | | 7P | | | 06 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 44 | M | OR-Y OR<25 | | 026 | 000 | | 07 |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | N -S | | | | | | | | | 012 | | 00 |
| | | | | | | | | | | | | | | | | | MTRCYCLE | | 01 | DRVR | INJC | 51 | M | OR-Y OR<25 | | 000 | 000 | | 00 |
| 04686 | N | N | N | | | | 08/27/2012 | 16 | SW BOONES FERRY RD | INTER | 3-LEG | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | 07 |
| NONE | | | | | | | MO | 0 | SW TUALATIN RD | N | | TRF SIGNAL | N | DRY | REAR | | UNKN | N -S | | | | | | | | | 000 | | 00 |
| | | | | | | | 8A | | | 06 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 00 | F | UNK UNK | | 026 | 000 | | 07 |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | N -S | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 38 | M | OR-Y OR<25 | | 000 | 000 | | 00 |
| 82473 | N | N | N | | | | 06/27/2014 | 16 | SW BOONES FERRY RD | INTER | 3-LEG | N | N | RAIN | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | 29 |
| NO RPT | | | | | | | FR | 0 | SW TUALATIN RD | N | | TRF SIGNAL | N | WET | REAR | | PRVTE | N -S | | | | | | | | | 000 | | 00 |
| | | | | | | | 10P | | | 06 | 0 | | N | DLIT | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 22 | M | OR-Y OR>25 | | 026 | 000 | | 29 |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | N -S | | | | | | | | | 012 | | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 00 | Unk | UNK UNK | | 000 | 000 | | 00 |
| 02164 | N | N | N | N | N | | 04/28/2011 | 16 | SW BOONES FERRY RD | INTER | 3-LEG | N | N | CLD | PED | 01 | NONE 0 | TURN-L | | | | | | | | | | | 02 |
| CITY | | | | | | | TH | 0 | SW TUALATIN RD | E | | TRF SIGNAL | N | DRY | PED | | RENTL | N -E | | | | | | | | | 000 | | 00 |
| | | | | | | | 11A | | | 05 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 23 | F | OR-Y OR<25 | | 029 | 000 | | 02 |
| | | | | | | | | | | | | | | | | | | - | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | STRGHT | 01 | PED | INJC | 57 | F | | I XWLK | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | N S | | | | | | | | | | | |
| 06007 | N | N | N | N | N | | 10/29/2011 | 16 | SW BOONES FERRY RD | INTER | 3-LEG | N | N | CLD | PED | 01 | NONE 0 | TURN-L | | | | | | | | | | | 02 |
| CITY | | | | | | | SA | 0 | SW TUALATIN RD | E | | TRF SIGNAL | N | DRY | PED | | PRVTE | N -E | | | | | | | | | 000 | | 00 |
| | | | | | | | 6P | | | 05 | 0 | | N | DLIT | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 38 | M | OR-Y OR>25 | | 029 | 000 | | 02 |
| | | | | | | | | | | | | | | | | | | - | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | STRGHT | 01 | PED | INJB | 13 | F | | I XWLK | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | S N | | | | | | | | | | | |
| 00997 | N | N | N | | | | 02/25/2012 | 16 | SW BOONES FERRY RD | INTER | 3-LEG | N | N | RAIN | O-1STOP | 01 | NONE 0 | BACK | | | | | | | | | | | 10 |
| NONE | | | | | | | SA | 0 | SW TUALATIN RD | E | | TRF SIGNAL | N | WET | BACK | | PRVTE | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | | 9P | | | 06 | 0 | | N | DLIT | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 64 | F | OR-Y OR>25 | | 011,026 | 000 | | 10 |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 63 | F | OR-Y OR<25 | | 000 | 000 | | 00 |
| 05468 | N | N | N | N | N | | 10/23/2012 | 16 | SW BOONES FERRY RD | INTER | 3-LEG | N | N | CLD | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | 27 |
| CITY | | | | | | | TU | 0 | SW TUALATIN RD | E | | L-GRN-SIG | N | DRY | REAR | | PRVTE | E -W | | | | | | | | | 000 | | 00 |

CITY OF TUALATIN, WASHINGTON COUNTY

**TUALATIN RD and Intersectional Crashes at TUALATIN RD, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 99

| SER# / INVEST | S P E D | A L C | R U S | S C L | W O R K | DATE / DAY / TIME | CLASS / DIST / FROM | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS (#LANES) | INT-REL / TRAF- / CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | A G E | S E X | LICNS RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 4P | | | 06 | 0 | | N | DAY | INJ | | TRUCK | | 01 | DRVR | NONE | 62 | M | OR-Y OR>25 | | 016,026 | 038 | | 27 |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | | 012 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 42 | F | OR-Y OR<25 | | 000 | 000 | | 00 |
| 01420 CITY | N | N | N | N | N | 01/25/2015 SU 4P | 16 0 | SW BOONES FERRY RD SW TUALATIN RD | INTER E 06 | 3-LEG 0 | N TRF SIGNAL | N N N | CLR DRY DAY | S-STRGHT SS-O PDO | 01 | NONE 0 PRVTE PSNGR CAR | STRGHT E -W | 01 | DRVR | NONE | 41 | F | OR-Y OR<25 | | 045 | 000 | | 13 00 13 |
| | | | | | | | | | | | | | | | 02 | NONE 0 PRVTE PSNGR CAR | STRGHT E -W | 01 | DRVR | NONE | 47 | F | OR-Y OR<25 | | 000 | 000 | | 00 00 00 |
| 01877 CITY | N | N | N | N | N | 04/10/2015 FR 7A | 16 0 | SW BOONES FERRY RD SW TUALATIN RD | INTER CN 04 | 3-LEG 0 | N TRF SIGNAL | N N N | CLR DRY DAY | O-1 L-TURN TURN INJ | 01 | NONE 0 PRVTE PSNGR CAR | STRGHT S -N | 01 | DRVR | INJC | 52 | M | OR-Y OR<25 | | 000 | 000 | | 02 00 00 |
| | | | | | | | | | | | | | | | 02 | NONE 0 PRVTE PSNGR CAR | TURN-L N -E | 01 | DRVR | NONE | 33 | M | OR-Y OR>25 | | 028,004 | 000 | | 00 00 02 |
| 01536 NONE | N | N | N | | | 03/23/2015 MO 4P | 16 0 | SW BOONES FERRY RD SW TUALATIN RD | INTER CN 02 | 3-LEG 0 | N TRF SIGNAL | N N N | RAIN WET DAY | S-STRGHT REAR PDO | 01 | NONE 0 PRVTE PSNGR CAR | TURN-R E -N | 01 | DRVR | NONE | 64 | M | OR-Y OR<25 | | 042 | 000 | | 29 00 29 |
| | | | | | | | | | | | | | | | 02 | NONE 0 PRVTE PSNGR CAR | TURN-R E -N | 01 | DRVR | NONE | 00 | M | OR-Y OR<25 | | 000 | 006 | | 00 00 |
| 07920 NONE | N | N | N | | | 12/21/2015 MO 8A | 16 0 | SW BOONES FERRY RD SW TUALATIN RD | INTER CN 02 | 3-LEG 0 | N TRF SIGNAL | N N N | RAIN WET DAY | ANGL-OTH TURN PDO | 01 | NONE 0 PRVTE PSNGR CAR | TURN-L E -S | 01 | DRVR | NONE | 00 | M | UNK UNK | | 097 | 000 | | 04 00 00 |
| | | | | | | | | | | | | | | | 02 | NONE 0 PRVTE PSNGR CAR | STRGHT S -N | 01 | DRVR | NONE | 55 | F | OR-Y OR<25 | | 097 | 000 | | 00 00 00 |
| 01334 CITY | N | N | N | N | N | 03/06/2014 TH 3P | 17 0 | SW CHEYENNE WAY SW TUALATIN RD | INTER E 06 | 3-LEG 0 | N STOP SIGN | N N N | CLD DRY DAY | S-1STOP REAR INJ | 01 | NONE 0 PRVTE PSNGR CAR | STRGHT E -W | 01 | DRVR | NONE | 33 | M | OR-Y OR<25 | | 043,026 | 000 | 013 | 07 00 07 |
| | | | | | | | | | | | | | | | 02 | NONE 0 PRVTE PSNGR CAR | STOP E -W | 01 | DRVR | INJC | 42 | M | OR-Y OR<25 | | 000 | 011 000 | 013 | 00 00 |
| | | | | | | | | | | | | | | | 03 | NONE 0 PRVTE PSNGR CAR | STOP E -W | 01 | DRVR | INJC | 28 | M | OR-Y OR<25 | | 000 | 011 000 | | 00 00 |
| 07472 | N | N | N | N | N | 12/28/2012 | 17 | SW CHEYENNE WAY | INTER | 3-LEG | N | N | CLD | ANGL-OTH | 01 | NONE 0 | STRGHT | | | | | | | | | | 001 | | 02 |

*Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.*

CITY OF TUALATIN, WASHINGTON COUNTY

**TUALATIN RD and Intersectional Crashes at TUALATIN RD, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 99

| SER# / INVEST | S P E D | A L C | R U G S | S C H L | W O R K | DATE / DAY / TIME | CLASS / DIST / FROM | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS / (#LANES) | INT-REL / TRAF- / CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | A G E | S E X | LICNS RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| CITY | | | | | | FR | 0 | SW TUALATIN RD | CN | | STOP SIGN | N | DRY | TURN | | PRVTE | E -W | | | | | | | | | 000 | | 00 |
| | | | | | | 3P | | | 01 | 0 | | N | DAY | INJ | | MTRCYCLE | | 01 | DRVR | INJC | 41 | M | OR-Y | | 000 | 000 | 001 | 02 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | N -E | | | | | | | | | 015 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJB | 21 | F | OR-Y | | 028 | 000 | | 02 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 04083 | N | N | N | N | N | 07/18/2014 | 17 | SW TUALATIN RD | STRGHT | | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | 07 |
| CITY | | | | | | FR | 219 | SW CHEYENNE WAY | E | (NONE) | UNKNOWN | N | DRY | REAR | | PRVTE | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | 7A | | | 07 | | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 23 | M | OR-Y | | 026 | 026 | | 07 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 45 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 81469 | N | N | N | N | N | 04/23/2015 | 17 | SW CHIPPEWA TRAIL | INTER | 3-LEG | N | N | CLR | ANGL-OTH | 01 | NONE 0 | STRGHT | | | | | | | | | | | 02 |
| CITY | | | | | | TH | 0 | SW TUALATIN RD | CN | | STOP SIGN | N | DRY | TURN | | PRVTE | E -W | | | | | | | | | 000 | | 00 |
| | | | | | | 2P | | | 01 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 45 | M | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | N -E | | | | | | | | | 015 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 41 | F | OR-Y | | 028 | 000 | | 02 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 06173 | N | N | N | | | 10/25/2013 | 17 | SW CHEROKEE ST | INTER | 3-LEG | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | 07 |
| NONE | | | | | | FR | 0 | SW TUALATIN RD | N | | STOP SIGN | N | DRY | REAR | | PRVTE | N -S | | | | | | | | | 000 | | 00 |
| | | | | | | 8A | | | 06 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 31 | M | OR-Y | | 026 | 000 | | 07 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | N -S | | | | | | | | | 012 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 43 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 03871 | Y | N | N | N | N | 07/10/2014 | 17 | SW CHEROKEE ST | INTER | 3-LEG | N | N | CLR | O-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 093 | 27,01 |
| CITY | | | | | | TH | 0 | SW TUALATIN RD | S | | STOP SIGN | N | DRY | HEAD | | PRVTE | N -S | | | | | | | | | 000 | | 00 |
| | | | | | | 4A | | | 06 | 0 | | N | DLIT | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 17 | F | OR-Y | | 016,047,080 | 038 | 093 | 27,01 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | S -N | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 32 | M | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 07804 | N | N | N | | | 12/17/2015 | 17 | SW CHEROKEE ST | INTER | 3-LEG | N | N | RAIN | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | 29 |
| NONE | | | | | | TH | 0 | SW TUALATIN RD | S | | STOP SIGN | N | WET | REAR | | PRVTE | S -N | | | | | | | | | 000 | | 00 |
| | | | | | | 4P | | | 06 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 52 | M | OR-Y | | 026 | 000 | | 29 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | S -N | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 32 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 06063 | N | N | N | | | 10/15/2014 | 17 | SW TUALATIN RD | STRGHT | | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | 29 |
| NONE | | | | | | WE | 75 | SW CHEROKEE ST | S | (NONE) | WW W/ GATE | N | DRY | REAR | | PRVTE | S -N | | | | | | | | | 000 | | 00 |
| | | | | | | 11A | | | 08 | | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 19 | M | OR-Y | | 026 | 000 | | 29 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | | |

CITY OF TUALATIN, WASHINGTON COUNTY

**TUALATIN RD and Intersectional Crashes at TUALATIN RD, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 99

| SER# / INVEST | S P E D | A L C | U G S | C H L | S R K | W O R | DATE / DAY / TIME | CLASS / DIST / FROM | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS / (#LANES) | INT-REL / TRAF- / CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE TRLR QTY / OWNER / TYPE | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | A G E | S E X | LICNS RES / LOC | PED ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | S -N | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 58 | F | OR-Y OR<25 | 000 | 000 | | 00 |
| 01242 | N | N | N | N | N | | 03/08/2015 | 17 | SW TUALATIN RD | STRGHT | | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 17,29 |
| CITY | | | | | | | SU | 115 | SW CHEROKEE ST | S | (NONE) | WW W/ GATE | N | DRY | REAR | | PRVTE | S -N | | | | | | | | 000 | | 00 |
| | | | | | | | 4P | | | 08 | | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 59 | F | OR-Y OR<25 | 026 | 028 | | 17,29 |
| | | | | | | | | | | | (02) | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | S -N | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 31 | M | OR-Y OR<25 | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | S -N | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 02 | PSNG | INJA | 27 | F | | 000 | 000 | | 00 |
| 03152 | N | N | N | | | | 06/06/2014 | 17 | SW TUALATIN RD | STRGHT | | Y | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 07 |
| NONE | | | | | | | FR | 345 | SW CHEROKEE ST | S | (NONE) | UNKNOWN | N | DRY | REAR | | PRVTE | S -N | | | | | | | | 000 | | 00 |
| | | | | | | | 6P | | | 08 | | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 52 | M | OR-Y OR<25 | 026 | 000 | | 07 |
| | | | | | | | | | | | (02) | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | S -N | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 34 | F | OR-Y OR<25 | 000 | 000 | | 00 |
| 06150 | Y | N | N | N | N | | 10/26/2013 | 17 | SW CHINOOK ST | INTER | 3-LEG | N | N | RAIN | ANGL-OTH | 01 | NONE 0 | TURN-R | | | | | | | | | | 01,05 |
| CITY | | | | | | | SA 0 | | SW TUALATIN RD | S | | STOP SIGN | N | WET | TURN | | PRVTE | W -S | | | | | | | | 000 | | 00 |
| | | | | | | | 8A | | | 06 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 20 | F | OR-Y OR>25 | 047,080 | 000 | | 01,05 |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | S -W | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 55 | F | OR-Y OR<25 | 000 | 000 | | 00 |
| 08238 | Y | N | N | N | N | | 10/30/2015 | 17 | SW CHINOOK ST | INTER | 3-LEG | N | Y | CLR | FIX OBJ | 01 | NONE 0 | STRGHT | | | | | | | | | 040,053 | 01 |
| CITY | | | | | | | FR 0 | | SW TUALATIN RD | S | | UNKNOWN | N | DRY | FIX | | PRVTE | N -S | | | | | | | | 000 | 040,053 | 00 |
| | | | | | | | 8P | | | 06 | 0 | | N | DLIT | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 26 | F | OR-Y OR<25 | 047,039,081 | 000 | | 01 |
| | | | | | | | | | | | | | | | | 01 | NONE 0 | STRGHT | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | N -S | | | | | | | | 000 | 040,053 | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 02 | PSNG | NO<5 | 03 | F | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | 01 | NONE 0 | STRGHT | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | N -S | | | | | | | | 000 | 040,053 | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 03 | PSNG | NO<5 | 03 | F | | 000 | 000 | | 00 |
| 00514 | N | N | N | N | N | | 01/28/2011 | 17 | SW CHINOOK ST | INTER | 3-LEG | N | N | CLR | O-STRGHT | 01 | NONE 0 | STRGHT | | | | | | | | | 015 | 05 |
| CITY | | | | | | | FR 0 | | SW TUALATIN RD | CN | | STOP SIGN | N | DRY | SS-M | | PRVTE | N -S | | | | | | | | 000 | | 00 |
| | | | | | | | 12P | | | 04 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 34 | M | OR-Y OR<25 | 080 | 000 | | 05 |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | STRGHT | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | S -N | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 55 | M | OR-Y | 000 | 000 | | 00 |

CITY OF TUALATIN, WASHINGTON COUNTY

**TUALATIN RD and Intersectional Crashes at TUALATIN RD, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 99

| SER# / INVEST | SPEED | ALCHL | DRUGS | SCHL | WORK | DATE / DAY / TIME | CLASS / DIST FROM | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS / (#LANES) | INT-REL / TRAF- / CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | AGE | SEX | LICNS RES / LOC | PED ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03085 | N | N | N | | | 06/13/2011 | 17 | SW CHINOOK ST | INTER | 3-LEG | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | 013 | 07 |
| NONE | | | | | | MO | 0 | SW TUALATIN RD | CN | | STOP SIGN | N | DRY | REAR | | PRVTE | N -S | | | | | | | | 000 | | 00 |
| | | | | | | 12P | | | 03 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 26 | F | OR-Y | 026 | 000 | | 07 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | N -S | | | | | | | | 011 | 013 | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 42 | F | OR-Y | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| | | | | | | | | | | | | | | | 03 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | N -S | | | | | | | | 022 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 57 | F | OR-Y | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| 06730 | N | N | N | | | 11/20/2013 | 17 | SW CHINOOK ST | INTER | 3-LEG | N | N | CLR | O-STRGHT | 01 | NONE 0 | STRGHT | | | | | | | | | | 10 |
| NONE | | | | | | WE | 0 | SW TUALATIN RD | CN | | STOP SIGN | N | DRY | SS-M | | PRVTE | N -S | | | | | | | | 000 | | 00 |
| | | | | | | 2P | | | 02 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 81 | F | OR-Y | 080 | 000 | | 10 |
| | | | | | | | | | | | | | | | | | | | | | | | OR>25 | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STRGHT | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | S -N | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 00 | M | UNK | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | UNK | | | | |
| 01011 | N | N | N | | | 02/19/2014 | 17 | SW CHINOOK ST | INTER | 3-LEG | N | N | CLD | O-1 L-TURN | 01 | NONE 0 | TURN-L | | | | | | | | | 128 | 02 |
| CITY | | | | | | WE | 0 | SW TUALATIN RD | CN | | STOP SIGN | N | DRY | TURN | | PRVTE | N -E | | | | | | | | 000 | | 00 |
| | | | | | | 10A | | | 02 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 82 | F | OR-Y | 004,028 | 000 | | 02 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STRGHT | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | S -N | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 70 | M | OR-Y | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| 07711 | N | N | N | | | 11/14/2012 | 17 | SW TUALATIN RD | STRGHT | | Y | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 07 |
| NONE | | | | | | WE | 130 | SW CHINOOK ST | N | (NONE) | UNKNOWN | N | UNK | REAR | | PRVTE | N -S | | | | | | | | 000 | | 00 |
| | | | | | | 7A | | | 08 | | | N | DAWN | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 30 | F | OR-Y | 026 | 000 | | 07 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | UNKN | N -S | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 00 | F | UNK | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| 02873 | N | N | N | | | 05/21/2014 | 17 | SW TUALATIN RD | STRGHT | | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 07 |
| NONE | | | | | | WE | 99 | SW CHINOOK ST | W | (NONE) | UNKNOWN | N | DRY | REAR | | PRVTE | W -E | | | | | | | | 000 | | 00 |
| | | | | | | 10A | | | 08 | | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 31 | F | OR-Y | 026 | 000 | | 07 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 63 | F | OR-Y | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| 00228 | N | N | N | N | N | 01/14/2013 | 17 | SW HERMAN RD | INTER | 3-LEG | N | N | CLD | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 07 |
| CITY | | | | | | MO | 0 | SW TUALATIN RD | SW | | TRF SIGNAL | N | DRY | REAR | | PRVTE | SW-NE | | | | | | | | 000 | | 00 |
| | | | | | | 2P | | | 06 | 1 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 61 | F | OR-Y | 043,026 | 000 | | 07 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | SW-NE | | | | | | | | 011 | | 00 |

CITY OF TUALATIN, WASHINGTON COUNTY

**TUALATIN RD and Intersectional Crashes at TUALATIN RD, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 99

| SER# / INVEST | SPEED | ALCOHOL | DRUGS | SCHL BUS | WORK ZONE | DAY / TIME | CLASS / DIST / FROM / SECOND STREET | CITY STREET / FIRST STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS / (#LANES) | INT-REL / TRAF-CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | AGE | SEX | LICNS RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 38 | M | OR-Y<br>OR<25 | | 000 | 000 | | 00 |
| 00491 | N | N | N | N | N | 01/28/2014 | 17 | SW HERMAN RD | INTER | 3-LEG | N | N | RAIN | S-STRGHT | 01 | NONE 0 | STRGHT | | | | | | | | | | | | 27,07 |
| CITY | | | | | | TU | 0 | SW TUALATIN RD | SW | | TRF SIGNAL | N | WET | REAR | | PRVTE | SW-NE | | | | | | | | | 000 | | 00 |
| | | | | | | 4P | | | 06 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJB | 17 | M | OR-Y<br>OR<25 | | 016,042 | 038 | | 27,07 |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | SW-NE | | | | | | | | | 006 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 30 | F | OR-Y<br>OR<25 | | 000 | 000 | | 00 |
| 06891 | N | N | N | | | 11/16/2015 | 17 | SW HERMAN RD | INTER | 3-LEG | N | N | RAIN | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | | 29 |
| NONE | | | | | | MO | 0 | SW TUALATIN RD | SW | | TRF SIGNAL | N | WET | REAR | | PRVTE | SW-NE | | | | | | | | | 000 | | 00 |
| | | | | | | 4P | | | 06 | 0 | | N | DUSK | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 51 | F | OR-Y<br>OR<25 | | 026 | 000 | | 29 |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | SW-NE | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 23 | M | OR-Y<br>OR<25 | | 000 | 000 | | 00 |
| 00847 | N | N | N | N | N | 02/14/2011 | 17 | SW HERMAN RD | INTER | 3-LEG | N | N | RAIN | ANGL-OTH | 01 | NONE 0 | STRGHT | | | | | | | | | | | | 04 |
| CITY | | | | | | MO | 0 | SW TUALATIN RD | CN | | TRF SIGNAL | N | WET | TURN | | PRVTE | N -S | | | | | | | | | 000 | | 00 |
| | | | | | | 6A | | | 01 | 1 | | N | DLIT | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 61 | F | OR-Y<br>OR>25 | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | S -W | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 26 | F | OR-Y<br>OR<25 | | 020 | 000 | | 04 |
| 05912 | N | N | N | N | N | 10/29/2012 | 17 | SW HERMAN RD | INTER | 3-LEG | N | N | CLD | BIKE | | | | | | | | | | | | | 110 | | 04,18 |
| CITY | | | | | | MO | 0 | SW TUALATIN RD | CN | | TRF SIGNAL | N | DRY | TURN | | | - | | | | | | | | | | | | |
| | | | | | | 6P | | | 01 | 1 | | N | DUSK | INJ | | | TURN-R<br>N W | 01 | BIKE | INJC | 12 | M | I INRD | | 020 | 088 | 110 | | 04,18 |
| | | | | | | | | | | | | | | | 01 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 40 | M | OR-Y<br>OR<25 | | 000 | 000 | | 00 |
| 05963 | N | N | N | N | N | 10/11/2014 | 17 | SW HERMAN RD | INTER | 3-LEG | N | N | CLR | ANGL-OTH | 01 | NONE 0 | STRGHT | | | | | | | | | | | | 04 |
| CITY | | | | | | SA | 0 | SW TUALATIN RD | CN | | TRF SIGNAL | N | DRY | TURN | | PRVTE | E -W | | | | | | | | | 000 | | 00 |
| | | | | | | 3P | | | 02 | 1 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 59 | M | OR-Y<br>OR<25 | | 020 | 000 | | 04 |
| | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | N -E | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 44 | F | OR-Y<br>OR<25 | | 000 | 000 | | 00 |
| 82083 | N | N | N | | | 06/13/2011 | 17 | SW TUALATIN RD | STRGHT | | Y | N | UNK | S-1STOP | 01 | UNKN 0 | STRGHT | | | | | | | | | | | 013 | 07 |
| NONE | | | | | | MO | 75 | SW HERMAN RD | N | (NONE) | UNKNOWN | N | UNK | REAR | | UNKN | N -S | | | | | | | | | 000 | | 00 |
| | | | | | | 11A | | | 08 | | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 00 | F | OR-Y<br>UNK | | 026 | 000 | | 07 |
| | | | | | | | | | | (02) | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | N -S | | | | | | | | | 011 | 013 | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 42 | F | OR-Y<br>OR<25 | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | 03 | UNKN 0 | STOP | | | | | | | | | | | |

CITY OF TUALATIN, WASHINGTON COUNTY

**TUALATIN RD and Intersectional Crashes at TUALATIN RD, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 99

| SER# / INVEST | S P E D | A L C | R U G S | S C H L | W O R K | DATE / DAY / TIME | CLASS / DIST / FROM | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS / (#LANES) | INT-REL / TRAF- / CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | A G E | S E X | LICNS RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | PRVTE | N -S | | | | | | | | 022 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 57 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 01714 | N | N | N | N | N | 04/04/2012 | 17 | SW JURGENS AVE | INTER | 3-LEG | N | N | RAIN | ANGL-OTH | 01 | NONE 0 | STRGHT | | | | | | | | | | | 02 |
| CITY | | | | | | WE | 0 | SW TUALATIN RD | CN | | STOP SIGN | N | WET | TURN | | PRVTE | E -W | | | | | | | | 000 | | 00 |
| | | | | | | 8A | | | 01 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 28 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | N -E | | | | | | | | 015 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 18 | F | OR-Y | | 028 | 000 | | 02 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 03886 | N | N | N | | | 07/10/2015 | 17 | SW JURGENS AVE | INTER | 3-LEG | N | N | CLR | ANGL-OTH | 01 | NONE 0 | TURN-L | | | | | | | | | | | 02 |
| NO RPT | | | | | | FR | 0 | SW TUALATIN RD | CN | | STOP SIGN | N | DRY | TURN | | UNKN | N -E | | | | | | | | 015 | | 00 |
| | | | | | | 11A | | | 03 | 0 | | N | DAY | INJ | | UNKNOWN | | 01 | DRVR | NONE | 00 | Unk | UNK | | 028 | 000 | | 02 |
| | | | | | | | | | | | | | | | | | | | | | | | UNK | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -N | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | MTRCYCLE | | 01 | DRVR | INJB | 30 | M | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 05391 | N | N | N | | | 09/17/2015 | 17 | SW TUALATIN RD | STRGHT | | N | N | CLR | S-STRGHT | 01 | NONE 0 | STRGHT | | | | | | | | | | 013 | 29 |
| NO RPT | | | | | | TH | 30 | SW JURGENS AVE | W | (NONE) | UNKNOWN | N | DRY | REAR | | PRVTE | W -E | | | | | | | | 000 | | 00 |
| | | | | | | 5P | | | 06 | | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 52 | F | OR-Y | | 042 | 000 | | 29 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | 006 | 013 | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 58 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 03 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | 022 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 24 | M | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 02105 | Y | Y | N | N | N | 04/25/2011 | 17 | SW TUALATIN RD | CURVE | | Y | Y | CLD | FIX OBJ | 01 | NONE 0 | STRGHT | | | | | | | | | | 040,088,072 | 01 |
| CITY | | | | | | MO | 20 | SW SIOUX CT | E | (NONE) | UNKNOWN | N | DRY | FIX | | PRVTE | S -N | | | | | | | | 000 | 040,088,072 | 00 |
| | | | | | | 4P | | | 06 | | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJB | 50 | F | OR-Y | | 047,080,081 | 088 | | 01 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | | |
| 07423 | Y | N | N | N | N | 12/06/2015 | 17 | SW TUALATIN RD | CURVE | | N | Y | RAIN | FIX OBJ | 01 | NONE 0 | STRGHT | | | | | | | | | | 053 | 01 |
| CITY | | | | | | SU | 75 | SW SIOUX CT | E | (NONE) | UNKNOWN | N | WET | FIX | | PRVTE | W -E | | | | | | | | 000 | 053 | 00 |
| | | | | | | 5A | | | 08 | | | N | DLIT | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 26 | M | OR-Y | | 047,080,081 | 000 | | 01 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | | |
| 00517 | N | N | N | | | 01/28/2011 | 14 | SW SWEEK DR | INTER | CROSS | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | 07 |
| NONE | | | | | | FR | 0 | SW TUALATIN RD | NE | | TRF SIGNAL | N | DRY | REAR | | PRVTE | E -W | | | | | | | | 000 | | 00 |
| | | | | | | 7P | | | 09 | 1 | | N | DARK | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 49 | M | OR-Y | | 026 | 000 | | 07 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 64 | M | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 02 | PSNG | INJB | 42 | F | | | 000 | 000 | | 00 |

CITY OF TUALATIN, WASHINGTON COUNTY

**TUALATIN RD and Intersectional Crashes at TUALATIN RD, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 99

| SER# / INVEST | SPEED | ALCHL | DRUGS | SCHL | WORK | DAY / TIME | CLASS / DIST / FROM | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS / (#LANES) | INT-REL / TRAF- / CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | AGE | SEX | LICNS RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 03894 | N | N | N | N | N | 07/20/2013 | 17 | SW SWEEK DR | INTER | 3-LEG | N | Y | CLR | FIX OBJ | 01 | NONE 0 | STRGHT | | | | | | | | | | 055 | 10 |
| CITY | | | | | | SA | 0 | SW TUALATIN RD | E | | TRF SIGNAL | N | DRY | FIX | | PRVTE | E -W | | | | | | | | | 000 | 055 | 00 |
| | | | | | | 6A | | | 06 | 1 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJB | 62 | M | OR-Y | | 080 | 000 | | 10 |
| | | | | | | | | | | | | | | | | | | | | | | | OR>25 | | | | | |
| 02033 | N | N | N | | | 04/09/2014 | 17 | SW SWEEK DR | INTER | 3-LEG | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | 29 |
| NONE | | | | | | WE | 0 | SW TUALATIN RD | W | | TRF SIGNAL | N | DRY | REAR | | PRVTE | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | 8A | | | 06 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 26 | F | OR-Y | | 026 | 026 | | 29 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 23 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 07363 | N | N | N | N | N | 12/27/2011 | 17 | SW SWEEK DR | INTER | 3-LEG | N | N | RAIN | O-1 L-TURN | 01 | NONE 0 | TURN-L | | | | | | | | | | | 02 |
| CITY | | | | | | TU | 0 | SW TUALATIN RD | CN | | TRF SIGNAL | N | WET | TURN | | RENTL | E -S | | | | | | | | | 019 | | 00 |
| | | | | | | 6P | | | 03 | 1 | | N | DLIT | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 19 | M | OR-Y | | 004,028 | 000 | | 02 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 46 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 05767 | N | N | N | N | N | 09/26/2014 | 17 | SW TUALATIN RD | STRGHT | | Y | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | 07 |
| CITY | | | | | | FR | 100 | SW SWEEK DR | E | (NONE) | UNKNOWN | N | DRY | REAR | | PRVTE | E -W | | | | | | | | | 000 | | 00 |
| | | | | | | 3P | | | 08 | | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 23 | M | OR-Y | | 043,026 | 000 | | 07 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 40 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 02742 | N | N | N | | | 05/15/2014 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | 29 |
| NONE | | | | | | TH | 0 | SW TETON AVE | S | | STOP SIGN | N | DRY | REAR | | PRVTE | S -N | | | | | | | | | 000 | | 00 |
| | | | | | | 4P | | | 06 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 20 | F | OTH-Y | | 026 | 000 | | 29 |
| | | | | | | | | | | | | | | | | | | | | | | | UNK | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | S -N | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 37 | M | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | S -N | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 02 | PSNG | INJC | 04 | F | | | 000 | 000 | | 00 |
| 05671 | N | N | N | N | N | 10/05/2013 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | N | CLR | ANGL-OTH | 01 | NONE 0 | STRGHT | | | | | | | | | | | 02 |
| CITY | | | | | | SA | 0 | SW TETON AVE | CN | | STOP SIGN | N | DRY | TURN | | PRVTE | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | 12P | | | 04 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 48 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | S -W | | | | | | | | | 015 | | 00 |
| | | | | | | | | | | | | | | | | TRUCK | | 01 | DRVR | NONE | 53 | M | OR-Y | | 028 | 000 | | 02 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 06731 | N | N | N | N | N | 11/20/2013 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | N | CLR | ANGL-OTH | 01 | NONE 0 | TURN-L | | | | | | | | | | | 02 |
| CITY | | | | | | WE | 0 | SW TETON AVE | CN | | STOP SIGN | N | DRY | TURN | | PRVTE | S -W | | | | | | | | | 015 | | 00 |

CITY OF TUALATIN, WASHINGTON COUNTY

**TUALATIN RD and Intersectional Crashes at TUALATIN RD, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 99

| SER# / INVEST | S P E D | A L C | R U G S | S C H L | W O R K | DATE / DAY / TIME | CLASS / DIST / FROM | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS (#LANES) | INT-REL / TRAF- / CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | A G E | S E X | LICNS RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 8A | | | 04 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 26 | F | OR-Y | | 028 | 000 | | 02 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 59 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 01423 | N | N | N | N | N | 03/17/2015 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | N | RAIN | ANGL-OTH | 01 | NONE 0 | STRGHT | | | | | | | | | | | 03 |
| CITY | | | | | | TU | 0 | SW TETON AVE | CN | | STOP SIGN | N | WET | TURN | | PRVTE | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | 3P | | | 04 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 17 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | S -W | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 64 | F | OR-Y | | 021 | 000 | | 03 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 07632 | N | N | N | N | N | 12/12/2015 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | N | RAIN | ANGL-OTH | 01 | NONE 0 | STRGHT | | | | | | | | | | | 02 |
| CITY | | | | | | SA | 0 | SW TETON AVE | CN | | UNKNOWN | N | WET | TURN | | PRVTE | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | 4P | | | 04 | 0 | | N | DUSK | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 23 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | S -W | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 61 | F | OTH-Y | | 028 | 000 | | 02 |
| | | | | | | | | | | | | | | | | | | | | | | | N-RES | | | | | |
| 03054 | N | N | N | | | 06/04/2015 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | N | CLR | ANGL-OTH | 01 | NONE 0 | STRGHT | | | | | | | | | | | 02 |
| NONE | | | | | | TH | 0 | SW TETON AVE | CN | | STOP SIGN | N | DRY | TURN | | PRVTE | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | 7A | | | 04 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 52 | M | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | S -W | | | | | | | | | 015 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 49 | M | OR-Y | | 028 | 000 | | 02 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 01723 | N | N | N | N | N | 04/02/2011 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | Y | CLD | FIX OBJ | 01 | NONE 0 | STRGHT | | | | | | | | | | 050,058 | 21,11 |
| CITY | | | | | | SA | 0 | SW 86TH AVE | E | | STOP SIGN | N | DRY | FIX | | PRVTE | E -W | | | | | | | | | 088 | 050,058 | 21,11 |
| | | | | | | 12A | | | 06 | 0 | | N | DLIT | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 44 | M | OR-Y | | 080,081 | 017 | | 12 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 03157 | N | N | N | N | N | 06/06/2014 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 013,004 | 07 |
| CITY | | | | | | FR | 0 | SW 86TH AVE | W | | STOP SIGN | N | DRY | REAR | | PRVTE | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | 5P | | | 06 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 42 | F | OR-Y | | 026 | 000 | | 07 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | | 011 | 013 | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 64 | M | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 03 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | | 011 | 004 | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 62 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 05169 | N | N | N | N | N | 09/28/2012 | 17 | SW TUALATIN RD | ALLEY | | N | N | CLR | S-1TURN | 01 | NONE 0 | STRGHT | | | | | | | | | | | 07 |
| CITY | | | | | | FR | 100 | SW 86TH AVE | E | (DIVMD) | NONE | N | DRY | TURN | | PRVTE | E -W | | | | | | | | | 000 | | 00 |
| | | | | | | 3P | | | 08 | | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 27 | M | OR-Y | | 042 | 000 | | 07 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-R | | | | | | | | | | | |

*Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.*

CITY OF TUALATIN, WASHINGTON COUNTY

**TUALATIN RD and Intersectional Crashes at TUALATIN RD, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 99

| SER# / INVEST | S P E D | A L C | R U G S | S C H L | W O R K | DATE / DAY / TIME | CLASS / DIST / FROM | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS / (#LANES) | INT-REL / TRAF- / CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | A G E | S E X | LICNS RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | PRVTE | E -N | | | | | | | | | | 019 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 49 | M | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 00647 | N | N | N | | | 02/04/2012 | 17 | SW TUALATIN RD | STRGHT | | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | 013 | 07 |
| NONE | | | | | | SA | 40 | SW 86TH AVE | E | (NONE) | UNKNOWN | N | DRY | REAR | | UNKN | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | 5P | | | 05 | | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 00 | M | OR-Y | | 026 | 000 | | 07 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | UNK | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | | 011 | 013 | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 43 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 03 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | | 022 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 49 | M | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 04893 | N | N | N | | | 09/09/2011 | 17 | SW TUALATIN RD | STRGHT | | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | 015 | 07 |
| NONE | | | | | | FR | 282 | SW 86TH AVE | E | (NONE) | UNKNOWN | N | DRY | REAR | | PRVTE | E -W | | | | | | | | | 000 | | 00 |
| | | | | | | 1P | | | 08 | | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 43 | M | OR-Y | | 026 | 000 | | 07 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PUBLC | E -W | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | SCHL BUS | | 01 | DRVR | NONE | 69 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 03958 | N | N | N | | | 07/14/2015 | 17 | SW TUALATIN RD | STRGHT | | N | N | CLR | S-STRGHT | 01 | NONE 0 | STRGHT | | | | | | | | | | | | 29 |
| NONE | | | | | | TU | 305 | SW 86TH AVE | E | (NONE) | UNKNOWN | N | DRY | REAR | | PRVTE | E -W | | | | | | | | | 000 | | 00 |
| | | | | | | 11A | | | 08 | | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 26 | F | OR-Y | | 042 | 000 | | 29 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | | 006 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 00 | M | UNK | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 05094 | N | N | N | N | N | 09/12/2013 | 16 | SW TUALATIN RD | CURVE | | N | Y | CLR | FIX OBJ | 01 | NONE 0 | STRGHT | | | | | | | | | | 040,052 | 16 |
| CITY | | | | | | TH | 238 | SW 86TH AVE | E | (NONE) | WW W/ GATE | N | DRY | FIX | | PRVTE | E -W | | | | | | | | | 000 | 040,052 | 00 |
| | | | | | | 8A | | | 08 | | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 25 | M | OR-Y | | 080,081 | 025 | | 16 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR>25 | | | | | |
| 05793 | Y | Y | N | N | N | 10/25/2012 | 17 | SW TUALATIN RD | CURVE | | N | Y | RAIN | FIX OBJ | 01 | NONE 0 | STRGHT | | | | | | | | | | 015,052,124 | 01 |
| CITY | | | | | | TH | 280 | SW 86TH AVE | E | (NONE) | UNKNOWN | N | WET | FIX | | PRVTE | E -W | | | | | | | | | 000 | 052,124 | 00 |
| | | | | | | 1A | | | 08 | | | N | DLIT | INJ | | PSNGR CAR | | 01 | DRVR | INJB | 33 | M | SUSP | | 047,080,081 | 017 | | 01 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR>25 | | | | | |
| 07625 | Y | N | N | N | N | 12/17/2014 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | N | RAIN | ANGL-STP | 01 | NONE 0 | TURN-R | | | | | | | | | | | 01,08 |
| CITY | | | | | | WE | 0 | SW 90TH AVE | S | | TRF SIGNAL | N | WET | TURN | | PRVTE | W -S | | | | | | | | | 000 | | 00 |
| | | | | | | 3P | | | 06 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 26 | M | NONE | | 047,001,026 | 000 | | 01,08 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 01 | NONE 0 | TURN-R | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -S | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 02 | PSNG | INJC | 17 | F | | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | S -N | | | | | | | | | 012 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 45 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |

CITY OF TUALATIN, WASHINGTON COUNTY

**TUALATIN RD and Intersectional Crashes at TUALATIN RD, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 99

| SER# / INVEST | SPEED | ALCHL | DRUGS | SCHL BUS | WORK ZONE | DAY OF WEEK / DAY / TIME | CLASS / DIST FROM | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS / (#LANES) | INT-REL / TRAF-CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER / TYPE | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | AGE | SEX | LICNS RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 02522 | | Y | N | N | N | 05/04/2014 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | Y | RAIN | PED | 01 | NONE 0 | TURN-L | | | | | | | | | | | 040 | 01,08 |
| CITY | | | | | | SU | 0 | SW 90TH AVE | W | | TRF SIGNAL | N | WET | PED | | PRVTE | S -W | | | | | | | | | 000 | 040 | 00 |
| | | | | | | 5P | | | 05 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 20 | M | OR-Y OR<25 | | 047,001,081 | 017 | | 01,08 |
| | | | | | | | | | | | | | | | | | - | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | STRGHT | 01 | PED | INJC | 47 | M | | SIDEWK | 000 | 047 | | 00 |
| | | | | | | | | | | | | | | | | | W E | | | | | | | | | | | |
| 02745 | | N | N | N | N | 05/15/2014 | 17 | SW TUALATIN RD | STRGHT | | Y | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 013 | 27,32 |
| CITY | | | | | | TH | 100 | SW 90TH AVE | E | (NONE) | UNKNOWN | N | DRY | REAR | | PRVTE | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | 8A | | | 07 | | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 24 | M | OR-Y OR<25 | | 016,052,026 | 038 | | 27,32 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | | 011 | 013 | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 18 | F | OR-Y OR<25 | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | 03 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 55 | M | OTH-Y N-RES | | 000 | 000 | | 00 |
| 01564 | | N | N | N | N | 03/24/2015 | 17 | SW TUALATIN RD | STRGHT | | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | | 07 |
| CITY | | | | | | TU | 100 | SW 90TH AVE | E | (NONE) | UNKNOWN | N | DRY | REAR | | PRVTE | E -W | | | | | | | | | 000 | | 00 |
| | | | | | | 2P | | | 08 | | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 23 | F | OR-Y OR<25 | | 043 | 000 | | 07 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 60 | M | OR-Y OR<25 | | 000 | 000 | | 00 |
| 07620 | | N | N | N | N | 12/02/2014 | 17 | SW TUALATIN RD | STRGHT | | Y | N | CLD | S-STRGHT | 01 | NONE 0 | STRGHT | | | | | | | | | | | | 07 |
| CITY | | | | | | TU | 150 | SW 90TH AVE | E | (NONE) | NONE | N | DRY | REAR | | PRVTE | E -W | | | | | | | | | 000 | | 00 |
| | | | | | | 12P | | | 08 | | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 33 | M | OTH-Y N-RES | | 043,042 | 000 | | 07 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | | 006 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 58 | F | OR-Y OR<25 | | 000 | 000 | | 00 |
| 02473 | | N | N | N | N | 05/14/2013 | 17 | SW TUALATIN RD | STRGHT | | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 013 | | 27,07 |
| CITY | | | | | | TU | 518 | SW 90TH AVE | E | (NONE) | UNKNOWN | N | DRY | REAR | | PRVTE | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | 10A | | | 07 | | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 22 | M | OR-Y OR<25 | | 016,043,026 | 038 | | 27,07 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | | 011 | 013 | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 61 | F | OR-Y OR<25 | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | | 011 | 013 | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 02 | PSNG | INJC | 61 | M | | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | 03 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 37 | M | OR-Y | | 000 | 000 | | 00 |

CITY OF TUALATIN, WASHINGTON COUNTY

**TUALATIN RD and Intersectional Crashes at TUALATIN RD, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 99

| SER# / INVEST | SPEED | ALC | DRUGS | SCHL | WORK | DAY OF WEEK / TIME | CLASS / DIST | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS (#LANES) | INT-REL / TRAF-CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER / TYPE | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | AGE | SEX | LICNS RES / LOC | PED ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| 02537 | N | N | N | N | N | 05/16/2012 | 17 | SW TUALATIN RD | STRGHT | | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 07 |
| CITY | | | | | | WE | 100 | SW 90TH AVE | W | (NONE) | UNKNOWN | N | DRY | REAR | | PRVTE | W -E | | | | | | | | | 000 | 00 |
| | | | | | | 4P | | | 08 | | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 58 | M | OR-Y | 026 | 000 | | 07 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 29 | M | OR-Y | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| 01414 | N | N | N | | | 03/19/2013 | 17 | SW TUALATIN RD | STRGHT | | Y | N | RAIN | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 07 |
| CITY | | | | | | TU | 100 | SW 90TH AVE | W | (NONE) | UNKNOWN | N | WET | REAR | | PRVTE | S -N | | | | | | | | | 000 | 00 |
| | | | | | | 5P | | | 08 | | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 30 | F | OR-Y | 026 | 000 | | 07 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | S -N | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 37 | M | OR-Y | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| 07684 | N | N | N | | | 12/14/2015 | 17 | SW TUALATIN RD | STRGHT | | Y | N | CLD | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 07 |
| NONE | | | | | | MO | 200 | SW 90TH AVE | W | (NONE) | UNKNOWN | N | WET | REAR | | PRVTE | W -E | | | | | | | | | 000 | 00 |
| | | | | | | 11A | | | 08 | | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 56 | M | OR-Y | 043,026 | 000 | | 07 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 64 | M | OR-Y | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| 02747 | N | N | N | N | N | 05/15/2014 | 17 | SW TUALATIN RD | STRGHT | | Y | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 27,07 |
| CITY | | | | | | TH | 400 | SW 90TH AVE | W | (NONE) | UNKNOWN | N | DRY | REAR | | PRVTE | W -E | | | | | | | | | 000 | 00 |
| | | | | | | 3P | | | 08 | | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 21 | M | OR-Y | 016,043,026 | 038 | | 27,07 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 43 | M | OR-Y | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR>25 | | | | |
| 00399 | N | N | N | N | N | 01/24/2014 | 17 | SW TUALATIN RD | STRGHT | | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | 002,013 | 27,07 |
| CITY | | | | | | FR | 430 | SW 90TH AVE | W | (NONE) | BUS STPSGN | N | DRY | REAR | | PRVTE | E -W | | | | | | | | 000 | | 00 |
| | | | | | | 7A | | | 07 | | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 24 | F | OR-Y | 016,043,026 | 038 | 002 | 27,07 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | 011 | 013 | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 26 | M | OR-Y | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | 011 | 013 | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 02 | PSNG | INJA | 25 | F | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | 03 | NONE 0 | STOP | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 31 | F | OR-Y | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | |
| 02490 | N | N | N | N | N | 05/15/2013 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | N | CLD | ANGL-OTH | 01 | NONE 0 | TURN-L | | | | | | | | | 083 | 02 |
| CITY | | | | | | WE | 0 | SW 108TH AVE | CN | | STOP SIGN | N | WET | TURN | | PRVTE | S -W | | | | | | | | 015 | | 00 |

CITY OF TUALATIN, WASHINGTON COUNTY

**TUALATIN RD and Intersectional Crashes at TUALATIN RD, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 99

| SER# / INVEST | S P E D | A L C | U G S | C H L | W O R K | DATE / DAY / TIME | CLASS / DIST / FROM | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS / (#LANES) | INT-REL / TRAF- / CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | A G E | S E X | LICNS RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 3P | | | 02 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 56 | M | OR-Y OR<25 | | 028 | 000 | 083 | 02 |
| | | | | | | | | | | | | | | | 02 | NONE 0<br>PRVTE | STRGHT<br>E -W | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJA | 47 | F | OR-Y OR<25 | | 000 | 000 | | 00 |
| 02911 | N | N | N | N | N | 05/23/2014 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | N | CLD | ANGL-OTH | 01 | NONE 0 | STRGHT | | | | | | | | | | | 02 |
| CITY | | | | | | FR | 0 | SW 108TH AVE | CN | | STOP SIGN | N | DRY | TURN | | PRVTE | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | 3P | | | 04 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 30 | F | OR-Y OR<25 | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | 01 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 02 | PSNG | NO<5 | 04 | F | | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | 01 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 03 | PSNG | INJC | 07 | F | | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | S -W | | | | | | | | | 015 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 27 | M | OR-Y OR<25 | | 028 | 000 | | 02 |
| 01117 | N | N | N | N | N | 03/02/2015 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | N | CLR | S-STRGHT | 01 | NONE 0 | STRGHT | | | | | | | | | | | 07 |
| CITY | | | | | | MO | 0 | SW 108TH AVE | CN | | UNKNOWN | N | DRY | REAR | | PRVTE | E -W | | | | | | | | | 000 | | 00 |
| | | | | | | 4P | | | 02 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 30 | F | OR-Y OR<25 | | 043 | 000 | | 07 |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | | 006 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 42 | F | OR-Y OR<25 | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | | 006 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 02 | PSNG | INJC | 08 | M | | | 000 | 000 | | 00 |
| 04546 | N | N | N | N | N | 08/08/2014 | 17 | SW TUALATIN RD | STRGHT | | N | Y | CLR | FIX OBJ | 01 | NONE 0 | STRGHT | | | | | | | | | | 062 | | 32,16 |
| CITY | | | | | | FR | 134 | SW 108TH AVE | E | (NONE) | UNKNOWN | N | DRY | FIX | | PRVTE | E -W | | | | | | | | | 000 | 062 | | 00 |
| | | | | | | 5P | | | 08 | (02) | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 18 | M | OR-Y OR<25 | | 052,081 | 025 | | 32,16 |
| 03316 | N | N | N | N | N | 06/22/2013 | 17 | SW TUALATIN RD | STRGHT | | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 004 | | 07 |
| CITY | | | | | | SA | 60 | SW 108TH AVE | W | (NONE) | NONE | N | DRY | REAR | | PRVTE | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | 2P | | | 08 | (02) | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 18 | M | OR-Y OR<25 | | 043,026 | 000 | | 07 |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | | 011 | 004 | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 43 | F | OR-Y OR<25 | | 000 | 000 | | 00 |
| 03657 | N | N | N | N | N | 07/16/2012 | 17 | SW TUALATIN RD | STRGHT | | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 004 | | 07 |
| CITY | | | | | | MO | 65 | SW 108TH AVE | W | (RSDMD) | WARNING | N | DRY | REAR | | PRVTE | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | 3P | | | 08 | (02) | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 23 | F | OR-Y OR<25 | | 043,026 | 000 | | 07 |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |

CITY OF TUALATIN, WASHINGTON COUNTY

**TUALATIN RD and Intersectional Crashes at TUALATIN RD, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 99

| SER# / INVEST | S P E D | A L C | R U G S | S C H L | W O R K | DATE / DAY / TIME | CLASS / DIST / FROM | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS / (#LANES) | INT-REL / TRAF- / CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | A G E | S E X | LICNS RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | | 011 | 004 | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 53 | M | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 02074 | N | N | N | | | 04/22/2011 | 17 | SW TUALATIN RD | STRGHT | | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | 07 |
| NO RPT | | | | | | FR | 100 | SW 109TH AVE | W | (NONE) | UNKNOWN | N | DRY | REAR | | PRVTE | E -W | | | | | | | | | 000 | | 00 |
| | | | | | | 3P | | | 07 | | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 23 | M | OR-Y | | 026 | 000 | | 07 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 52 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 01289 | N | N | N | N | N | 03/05/2014 | 17 | SW TUALATIN RD | STRGHT | | N | N | RAIN | S-STRGHT | 01 | NONE 0 | STRGHT | | | | | | | | | | | 07 |
| CITY | | | | | | WE | 348 | SW 112TH AVE | E | (NONE) | UNKNOWN | N | WET | REAR | | PRVTE | E -W | | | | | | | | | 000 | | 00 |
| | | | | | | 11A | | | 08 | | | Y | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 29 | F | OR-Y | | 042 | 000 | | 07 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | | 006 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 57 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR>25 | | | | | |
| 04481 | N | N | N | | | 08/07/2015 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | N | CLR | O-1 L-TURN | 01 | NONE 0 | STRGHT | | | | | | | | | | | 02 |
| CITY | | | | | | FR | 0 | SW 115TH AVE | CN | | UNKNOWN | N | DRY | TURN | | PRVTE | E -W | | | | | | | | | 000 | | 00 |
| | | | | | | 5P | | | 02 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 42 | M | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -N | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJB | 43 | F | OR-Y | | 004,028 | 000 | | 02 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -N | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 02 | PSNG | INJB | 15 | M | | | 000 | 000 | | 00 |
| 05558 | N | N | N | N | N | 10/09/2011 | 17 | SW TUALATIN RD | ALLEY | | N | N | CLD | ANGL-OTH | 01 | NONE 0 | STRGHT | | | | | | | | | | | 02 |
| CITY | | | | | | SU | 100 | SW 115TH AVE | W | (NONE) | NONE | N | DRY | TURN | | PRVTE | E -W | | | | | | | | | 000 | | 00 |
| | | | | | | 4P | | | 07 | | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 25 | M | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | N -E | | | | | | | | | 018 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 33 | F | OR-Y | | 028 | 000 | | 02 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | N -E | | | | | | | | | 018 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 02 | PSNG | INJC | 25 | F | | | 000 | 000 | | 00 |
| 01495 | N | N | N | N | N | 03/06/2014 | 17 | SW TUALATIN RD | ALLEY | | N | N | RAIN | BIKE | 01 | NONE 0 | TURN-L | | | | | | | | | | | 02 |
| CITY | | | | | | TH | 620 | SW 115TH AVE | W | (NONE) | UNKNOWN | N | WET | TURN | | PRVTE | N -E | | | | | | | | | 018 | | 00 |
| | | | | | | 6A | | | 07 | | | N | DAWN | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 27 | M | OR-Y | | 027 | 000 | | 02 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | | | - | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | STRGHT | 01 | BIKE | NONE | 34 | M | | BKPATH | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | E W | | | | | | | | | | | |

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CITY OF TUALATIN, WASHINGTON COUNTY

**TUALATIN RD and Intersectional Crashes at TUALATIN RD, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 99

| SER# / INVEST | S P E D | A L C | R U G S | S W C H | O R K | DATE / DAY / TIME | CLASS / DIST / FROM | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS (#LANES) | INT-REL / TRAF-CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | A G E | S E X | LICNS RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 05100 | N | N | N | N | N | 09/12/2013 | 17 | SW TUALATIN RD | STRGHT | | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 004 | 07 |
| CITY | | | | | | TH | 398 | SW 115TH AVE | W | (NONE) | UNKNOWN | N | DRY | REAR | | PRVTE | E -W | | | | | | | | | 000 | | 00 |
| | | | | | | 1P | | | 07 | | | Y | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 63 | F | OR-Y | | 043,026 | 000 | | 07 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | | 011 | 004 | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 28 | M | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | | 011 | 004 | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 02 | PSNG | INJC | 23 | F | | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | | 011 | 004 | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 03 | PSNG | NO<5 | 01 | M | | | 000 | 000 | | 00 |
| 05586 | N | N | N | N | N | 09/25/2015 | 18 | SW TUALATIN RD | STRGHT | | N | Y | CLR | FIX OBJ | 01 | NONE 0 | STRGHT | | | | | | | | | | 053 | 16 |
| CITY | | | | | | FR | 500 | SW 115TH AVE | W | (NONE) | UNKNOWN | N | DRY | FIX | | PRVTE | E -W | | | | | | | | | 000 | 053 | 00 |
| | | | | | | 3A | | | 07 | | | N | DLIT | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 20 | M | OR-Y | | 080,081 | 025 | | 16 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | | |
| 00365 | Y | N | N | | | 01/08/2011 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | Y | UNK | FIX OBJ | 01 | NONE 0 | TURN-L | | | | | | | | | | 062,124 | 01 |
| NONE | | | | | | SA | 0 | SW 124TH AVE | E | | TRF SIGNAL | N | ICE | FIX | | PRVTE | N -E | | | | | | | | | 088 | 062,124 | 00 |
| | | | | | | 6A | | | 05 | 0 | | N | DLIT | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 38 | M | OR-Y | | 047,080,081 | 017 | | 01 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 03194 | Y | N | N | N | N | 06/18/2011 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | Y | CLD | FIX OBJ | 01 | NONE 0 | TURN-L | | | | | | | | | | 050,062 | 32,01 |
| CITY | | | | | | SA | 0 | SW 124TH AVE | E | | TRF SIGNAL | N | WET | FIX | | PRVTE | N -E | | | | | | | | | 000 | 050,062 | 00 |
| | | | | | | 2P | | | 05 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 19 | M | OR-Y | | 083,047,081 | 017 | | 32,01 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 04706 | N | N | N | N | N | 09/01/2011 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | 07 |
| COUNTY | | | | | | TH | 0 | SW 124TH AVE | E | | TRF SIGNAL | N | DRY | REAR | | PRVTE | E -W | | | | | | | | | 000 | | 00 |
| | | | | | | 5P | | | 06 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 36 | F | OTH-Y | | 026 | 000 | | 07 |
| | | | | | | | | | | | | | | | | | | | | | | | N-RES | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 69 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 05973 | Y | N | N | N | N | 10/31/2012 | 17 | SW TUALATIN RD | INTER | 3-LEG | N | Y | RAIN | FIX OBJ | 01 | NONE 0 | TURN-L | | | | | | | | | | 044,062,040 | 08,01 |
| CITY | | | | | | WE | 0 | SW 124TH AVE | E | | TRF SIGNAL | N | WET | FIX | | PRVTE | N -E | | | | | | | | | 000 | 044,062,040 | 00 |
| | | | | | | 3P | | | 05 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 25 | M | SUSP | | 002,047,081 | 088 | | 08,01 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 01534 | Y | N | N | N | N | 03/23/2015 | 16 | SW TUALATIN RD | INTER | 3-LEG | N | Y | CLD | FIX OBJ | 01 | NONE 0 | TURN-L | | | | | | | | | | 079 | 01,08 |
| CITY | | | | | | MO | 0 | SW 124TH AVE | E | | TRF SIGNAL | N | DRY | FIX | | PRVTE | N -E | | | | | | | | | 000 | 079 | 00 |
| | | | | | | 12P | | | 06 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 39 | F | SUSP | | 047,001,081 | 000 | | 01,08 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 00739 | N | N | N | N | N | 02/09/2011 | 16 | SW TUALATIN RD | INTER | 3-LEG | N | N | CLR | O-1 L-TURN | 01 | NONE 0 | TURN-L | | | | | | | | | | | 02 |
| CITY | | | | | | WE | 0 | SW 124TH AVE | CN | | TRF SIGNAL | N | DRY | TURN | | PRVTE | N -E | | | | | | | | | 000 | | 00 |
| | | | | | | 4P | | | 04 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 52 | F | OR-Y | | 004,028 | 000 | | 02 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | S -N | | | | | | | | | 000 | | 00 |

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CITY OF TUALATIN, WASHINGTON COUNTY

**TUALATIN RD and Intersectional Crashes at TUALATIN RD, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 99

| SER# / INVEST | SPE | ALC | DRS | SWG | CHR | OLK | DATE / DAY / TIME | CLASS / DIST / FROM | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS / (#LANES) | INT-REL / TRAF- / CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | AGE | SEX | LICNS RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 63 | M | OR-Y OR<25 | | 000 | 000 | | 00 |
| 01155 | N | N | N | N | N | | 02/28/2011 | 16 | SW TUALATIN RD | INTER | 3-LEG | N | N | RAIN | O-1 L-TURN | 01 | NONE 0 | STRGHT | | | | | | | | | | | 02 |
| CITY | | | | | | | MO | 0 | SW 124TH AVE | CN | | TRF SIGNAL | N | WET | TURN | | PRVTE | S -N | | | | | | | | | 000 | | 00 |
| | | | | | | | 3P | | | 04 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 34 | M | OR-Y OR<25 | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | N -E | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 46 | M | OR-Y OR<25 | | 004,028 | 000 | | 02 |
| 06247 | N | N | N | N | N | | 11/09/2011 | 16 | SW TUALATIN RD | INTER | 3-LEG | N | N | CLD | O-1 L-TURN | 01 | NONE 0 | TURN-L | | | | | | | | | | | 02 |
| CITY | | | | | | | WE | 0 | SW 124TH AVE | CN | | TRF SIGNAL | N | DRY | TURN | | PRVTE | N -E | | | | | | | | | 000 | | 00 |
| | | | | | | | 7A | | | 04 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 41 | F | OR-Y OR<25 | | 004,028 | 000 | | 02 |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | S -N | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJB | 57 | M | OR-Y OR<25 | | 000 | 000 | | 00 |
| 00366 | N | N | N | N | N | | 01/21/2015 | 16 | SW TUALATIN RD | INTER | 3-LEG | N | N | CLR | O-1 L-TURN | 01 | NONE 0 | STRGHT | | | | | | | | | | | 02 |
| CITY | | | | | | | WE | 0 | SW 124TH AVE | CN | | TRF SIGNAL | N | DRY | TURN | | PRVTE | S -N | | | | | | | | | 001 | | 00 |
| | | | | | | | 6P | | | 04 | 0 | | N | DLIT | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 37 | M | OR-Y OR<25 | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | N -E | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 37 | M | OR-Y OR<25 | | 004,028 | 000 | | 02 |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-L | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | N -E | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 02 | PSNG | NO<5 | 01 | M | | | 000 | 000 | | 00 |
| 02705 | N | N | N | | | | 05/18/2015 | 16 | SW TUALATIN RD | INTER | 3-LEG | N | N | CLR | ANGL-OTH | 01 | NONE 0 | STRGHT | | | | | | | | | | | 02 |
| NO RPT | | | | | | | MO | 0 | SW 124TH AVE | CN | | TRF SIGNAL | N | DRY | TURN | | PRVTE | S -N | | | | | | | | | 000 | | 00 |
| | | | | | | | 3P | | | 02 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 17 | F | OR-Y OR<25 | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-R | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | E -N | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 67 | F | OR-Y OR<25 | | 028 | 000 | | 02 |
| 01138 | N | N | N | N | N | | 03/05/2012 | 17 | SW TUALATIN RD | ALLEY | | N | N | CLD | S-1TURN | 01 | NONE 0 | STRGHT | | | | | | | | | | | 32,07 |
| CITY | | | | | | | MO | 1225 | SW 124TH AVE | E | (NONE) | UNKNOWN | N | DRY | TURN | | PRVTE | E -W | | | | | | | | | 000 | | 00 |
| | | | | | | | 5P | | | 08 | | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 44 | F | OR-Y OR<25 | | 052,042 | 000 | | 32,07 |
| | | | | | | | | | | | (02) | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | 02 | NONE 0 | TURN-R | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | PRVTE | E -N | | | | | | | | | 019 | | 00 |
| | | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 22 | F | OR-Y OR<25 | | 000 | 000 | | 00 |
| 05768 | N | N | N | N | N | | 10/23/2012 | 17 | SW TUALATIN RD | STRGHT | | N | N | RAIN | ANIMAL | 01 | NONE 0 | STRGHT | | | | | | | | | | 035,110 | 12 |
| CITY | | | | | | | TU | 675 | SW 124TH AVE | E | (NONE) | NONE | N | WET | OTH | | PRVTE | E -W | | | | | | | | | 000 | 035,110 | 00 |
| | | | | | | | 6P | | | 08 | | | N | DLIT | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 23 | F | OR-Y OR<25 | | 000 | 088 | | 12 |
| | | | | | | | | | | | (02) | | | | | | | | | | | | | | | | | | | |

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CITY OF TUALATIN, WASHINGTON COUNTY

**TUALATIN RD and Intersectional Crashes at TUALATIN RD, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 99

| SER# / INVEST | S P E D | A L C | U G S | C H L | O R K | DATE / DAY / TIME | CLASS / DIST / FROM | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS (#LANES) | INT-REL / TRAF- / CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER / TYPE | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | A G E | S E X | LICNS RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 07455 | N | N | N | | | 12/30/2011 | 17 | SW TUALATIN RD | CURVE | | N | N | CLR | O-1STOP | 01 | NONE 1 | BACK | | | | | | | | | | | 10 |
| NONE | | | | | | FR | 200 | SW 124TH AVE | E | (NONE) | UNKNOWN | N | DRY | BACK | | PRVTE | E -W | | | | | | | | | 000 | | 00 |
| | | | | | | 12P | | | 07 | | | N | DAY | PDO | | SEMI TOW | | 01 | DRVR | NONE | 00 | M | OTH-Y | | 011 | 000 | | 10 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | N-RES | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 79 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |
| 00152 | Y | N | N | | | 01/08/2011 | 17 | SW TUALATIN RD | CURVE | | N | Y | UNK | FIX OBJ | 01 | NONE 0 | STRGHT | | | | | | | | | | 040,124 | 01 |
| NONE | | | | | | SA | 528 | SW 124TH AVE | E | (NONE) | UNKNOWN | N | ICE | FIX | | PRVTE | E -W | | | | | | | | | 000 | 040,124 | 00 |
| | | | | | | 8A | | | 08 | | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 46 | F | OR-Y | | 047,080,081 | 017 | | 01 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | | |
| 05345 | N | N | N | | | 09/15/2014 | 17 | SW TUALATIN RD | STRGHT | | N | N | CLR | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | 004 | 07 |
| NO RPT | | | | | | MO | 243 | SW 100TH CT | W | (NONE) | UNKNOWN | N | DRY | REAR | | PRVTE | E -W | | | | | | | | | 000 | | 00 |
| | | | | | | 7A | | | 07 | | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | NONE | 24 | M | OR-Y | | 026 | 000 | | 07 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | OR<25 | | | | | |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | | 011 | 004 | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | INJC | 31 | F | OR-Y | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | | | | | | | | | OR<25 | | | | | |

OREGON.. DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANAYLYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING



CITY OF TUALATIN, WASHINGTON COUNTY

**LEVETON DR and Intersectional Crashes at LEVETON DR, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 9

| SER# / INVEST | S P E D | A L C | R U G S | S C H L | W O R K | DATE / DAY / TIME | CLASS / DIST / FROM | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS (#LANES) | INT-REL / TRAF- / CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE TRLR QTY / OWNER / TYPE | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | A G E | S E X | LICNS RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01382 | Y | N | N | N | N | 03/14/2015 | 17 | SW LEVETON DR | INTER | 3-LEG | N | Y | RAIN | FIX OBJ | 01 | NONE 0 | TURN-L | | | | | | | | | | 040,062 | 01 |
| CITY | | | | | | SA | 0 | SW 118TH AVE | W | | STOP SIGN | N | WET | FIX | | PRVTE | S -W | | | | | | | | | 015 | 040,062 | 00 |
| | | | | | | 4P | | | 05 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 19 | M | OR-Y OR<25 | | 047,080,081 | 000 | | 01 |
| 06642 | N | N | N | | | 11/03/2015 | 17 | SW LEVETON DR | INTER | 3-LEG | N | N | RAIN | S-STRGHT | 01 | NONE 0 | STRGHT | | | | | | | | | | | 07 |
| NONE | | | | | | TU | 0 | SW 118TH AVE | W | | STOP SIGN | N | WET | REAR | | PRVTE | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | 6A | | | 06 | 0 | | N | DARK | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 26 | M | OR-Y OR<25 | | 042 | 000 | | 07 |
| | | | | | | | | | | | | | | | 02 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | W -E | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 00 | M | OR-Y OR<25 | | 000 | 000 | | 00 |
| 04220 | N | N | N | N | N | 07/25/2014 | 17 | SW LEVETON DR | ALLEY | | N | N | CLR | BIKE | 01 | NONE 0 | TURN-L | | | | | | | | | | | 02 |
| CITY | | | | | | FR | 1067 | SW 118TH AVE | E | (NONE) | STOP SIGN | N | DRY | TURN | | PRVTE | W -N | | | | | | | | | 019 | | 00 |
| | | | | | | 7A | | | 08 | | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJB | 43 | M | OR-Y OR<25 | | 027 | 000 | | 02 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | - STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | E W | 01 | BIKE | INJB | 36 | M | | BKPATH | 000 | 000 | | 00 |
| 03234 | Y | N | N | N | N | 06/18/2013 | 17 | SW LEVETON DR | CURVE | | N | Y | CLD | FIX OBJ | 01 | NONE 0 | STRGHT | | | | | | | | | | 040,062 | 32,30,05 |
| CITY | | | | | | TU | 618 | SW 118TH AVE | E | (NONE) | NONE | N | DRY | FIX | | PRVTE | W -E | | | | | | | | | 000 | 040,062 | 00 |
| | | | | | | 8P | | | 08 | | | N | DUSK | INJ | | PSNGR CAR | | 01 | DRVR | INJB | 24 | M | OR-Y OR>25 | | 052,050,081 | 017 | | 32,30,05 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | | | | | | |
| 00674 | Y | N | N | N | N | 02/07/2011 | 17 | SW LEVETON DR | CURVE | | N | Y | RAIN | FIX OBJ | 01 | NONE 0 | STRGHT | | | | | | | | | | 062,040,124 | 32,30 |
| CITY | | | | | | MO | 805 | SW 118TH AVE | E | (NONE) | UNKNOWN | N | WET | FIX | | PRVTE | E -W | | | | | | | | | 000 | 062,040,124 | 00 |
| | | | | | | 5P | | | 07 | | | N | DLIT | INJ | | PSNGR CAR | | 01 | DRVR | INJB | 16 | M | OR-Y OR<25 | | 052,050,081 | 017 | | 32,30 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | 01 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | | 000 | 062,040,124 | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 02 | PSNG | INJB | 16 | F | | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | 01 | NONE 0 | STRGHT | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | E -W | | | | | | | | | 000 | 062,040,124 | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 03 | PSNG | INJB | 15 | F | | | 000 | 000 | | 00 |
| 01479 | Y | N | N | N | N | 03/22/2012 | 17 | SW LEVETON DR | CURVE | | N | Y | SNOW | FIX OBJ | 01 | NONE 0 | STRGHT | | | | | | | | | | 059,054 | 01 |
| CITY | | | | | | TH | 255 | SW 118TH AVE | W | (NONE) | UNKNOWN | N | SNO | FIX | | PRVTE | W -E | | | | | | | | | 088 | 059,054,124 | 00 |
| | | | | | | 11P | | | 08 | | | N | DLIT | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 25 | M | OR-Y OR<25 | | 047,080,081 | 017 | | 01 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | | | | | | |
| 00094 | N | N | N | | | 01/07/2011 | 16 | LEVETON DR | INTER | CROSS | N | N | RAIN | S-1STOP | 01 | NONE 0 | STRGHT | | | | | | | | | | | 27 |
| NONE | | | | | | FR | 0 | 124TH AVE | N | | TRF SIGNAL | N | WET | REAR | | PRVTE | N -S | | | | | | | | | 000 | | 00 |
| | | | | | | 10A | | | 06 | 0 | | N | DAY | PDO | | PSNGR CAR | | 01 | DRVR | NONE | 52 | M | OR-Y OR<25 | | 016,026 | 038 | | 27 |
| | | | | | | | | | | | | | | | 02 | UNKN 0 | STOP | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | PRVTE | N -S | | | | | | | | | 011 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 54 | F | OR-Y OR<25 | | 000 | 000 | | 00 |
| 06999 | N | N | N | N | N | 11/19/2015 | 16 | SW LEVETON DR | INTER | CROSS | N | N | RAIN | O-1 L-TURN | 01 | NONE 0 | STRGHT | | | | | | | | | | | 02 |
| CITY | | | | | | TH | 0 | 124TH AVE | CN | | TRF SIGNAL | N | WET | TURN | | PRVTE | S -N | | | | | | | | | 000 | | 00 |

*Disclaimer: The information contained in this report is compiled from individual driver and police crash reports submitted to the Oregon Department of Transportation as required in ORS 811.720. The Crash Analysis and Reporting Unit is committed to providing the highest quality crash data to customers. However, because submittal of crash report forms is the responsibility of the individual driver, the Crash Analysis and Reporting Unit can not guarantee that all qualifying crashes are represented nor can assurances be made that all details pertaining to a single crash are accurate. Note: Legislative changes to DMV's vehicle crash reporting requirement, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.*

CITY OF TUALATIN, WASHINGTON COUNTY

**LEVETON DR and Intersectional Crashes at LEVETON DR, City of Tualatin, Washington County, 01/01/2011 to 12/31/2015**

Total crash records: 9

| SER# / INVEST | S P E D | A L C | R U G S | S C H L | W O R K | DATE / DAY / TIME | CLASS / DIST / FROM | CITY STREET / FIRST STREET / SECOND STREET | RD CHAR / DIRECT / LOCTN | INT-TYPE (MEDIAN) / LEGS / (#LANES) | INT-REL / TRAF- / CONTL | OFFRD / RNDBT / DRVWY | WTHR / SURF / LIGHT | CRASH / COLL / SVRTY | V# | SPCL USE / TRLR QTY / OWNER / TYPE | MOVE / FROM / TO | P# | PRTC TYPE | INJ SVRTY | A G E | S E X | LICNS / RES | PED LOC | ERROR | ACT | EVENT | CAUSE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 7A | | | 04 | 0 | | N | DAY | INJ | | PSNGR CAR | | 01 | DRVR | INJC | 45 | F | OR-Y<br>OR<25 | | 000 | 000 | | 00 |
| | | | | | | | | | | | | | | | 02 | NONE 0<br>PRVTE | TURN-L<br>N -E | | | | | | | | | 000 | | 00 |
| | | | | | | | | | | | | | | | | PSNGR CAR | | 01 | DRVR | NONE | 58 | M | OR-Y<br>OR<25 | | 004,028 | 000 | | 02 |
| 06169 | Y | N | N | N | N | 10/20/2015 | 17 | SW LEVETON DR | STRGHT | | N | Y | CLD | FIX OBJ | 01 | NONE 0 | STRGHT | | | | | | | | | | 040,062 | 01 |
| CITY | | | | | | TU | 150 | 124TH AVE | E | (NONE) | UNKNOWN | N | DRY | FIX | | PRVTE | E -W | | | | | | | | 000 | 040,062 | 00 |
| | | | | | | 3P | | | 08 | | | N | DAY | INJ | | SEMI TOW | | 01 | DRVR | INJC | 28 | M | OR-Y<br>OR<25 | | 047,080,081 | 000 | | 01 |
| | | | | | | | | | | (02) | | | | | | | | | | | | | | | | | | |

APPENDIX G.

# IN-PROCESS DATA

# Leveton Industrial Building

## Transportation Impact Study

## Tualatin, Oregon

**Date:**
June 2, 2017

**Prepared for:**
Dana Properties, LLC.

**Prepared by:**
Daniel Stumpf, EI
Michael Ard, PE

6/2/17
REGISTERED PROFESSIONAL ENGINEER
54983PE
OREGON
JULY 10, 2002
MICHAEL T. ARD
EXPIRES 12/31/17

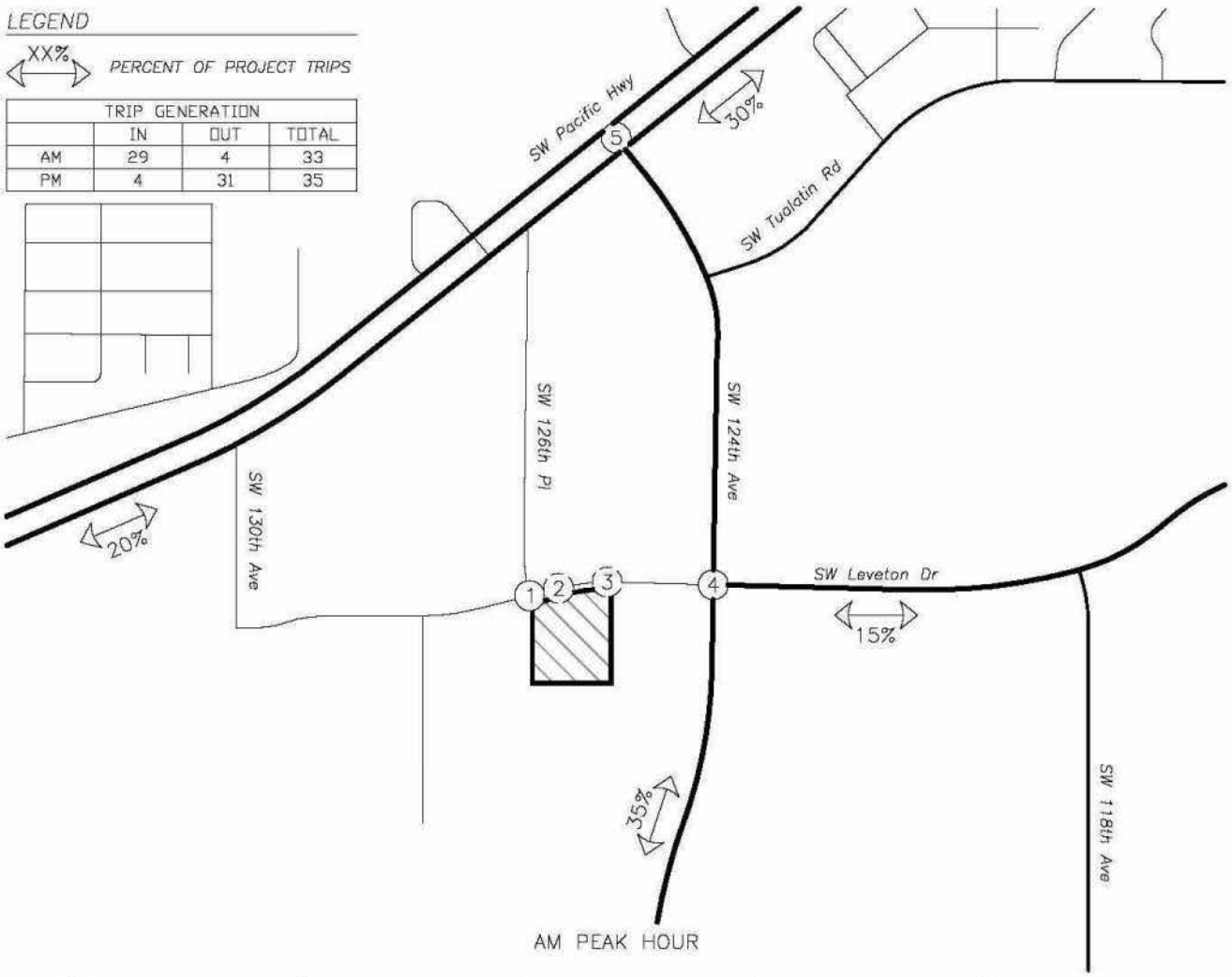
LANCASTER
ENGINEERING

321 SW 4th Ave., Suite 400 | Portland, OR 97204 | 503.248.0313 | lancasterengineering.com

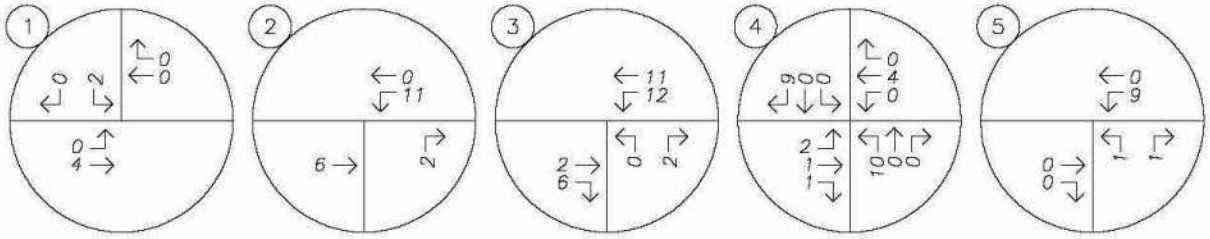
LEGEND

XX% PERCENT OF PROJECT TRIPS

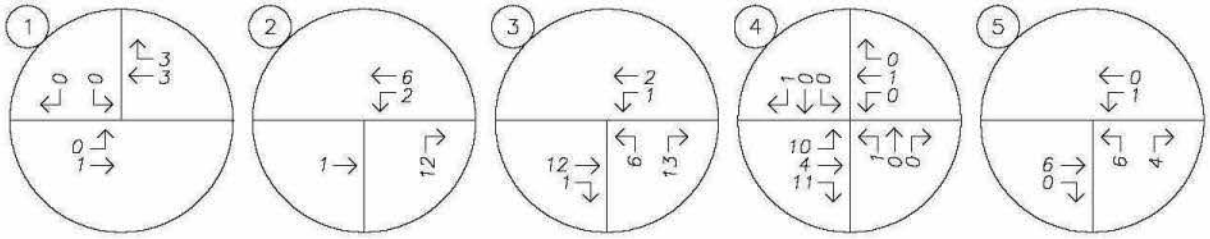
| TRIP GENERATION | | | |
|---|---|---|---|
| | IN | OUT | TOTAL |
| AM | 29 | 4 | 33 |
| PM | 4 | 31 | 35 |




AM PEAK HOUR




PM PEAK HOUR




## SITE TRIP ASSIGNMENT
## Proposed Development Plan – Site Trips
## AM & PM Peak Hours

no scale

FIGURE 4

# SW Herman Road Development

Transportation Impact Study

Tualatin, Oregon

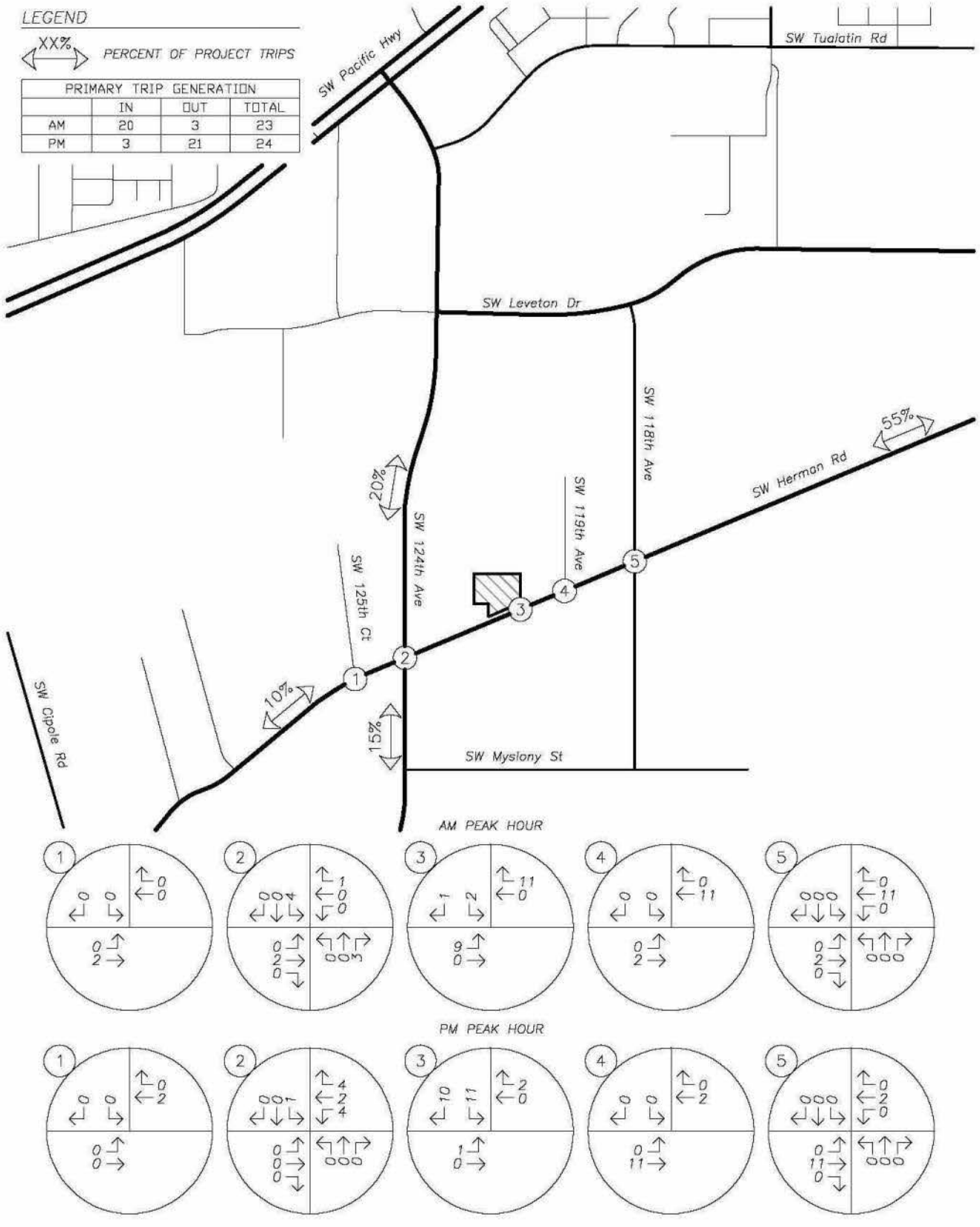

**DATE:**
October 7, 2015

**PREPARED FOR:**
Don Silvey
Silco Commercial Construction, Inc.

**PREPARED BY:**
**Daniel Stumpf, EI**
**Michael Ard, PE**

LANCASTER
ENGINEERING

321 SW 4th Ave., Suite 400 | Portland, OR 97204 | 503.248.0313 | lancasterengineering.com




SITE TRIP DISTRIBUTION & ASSIGNMENT
Proposed Development Plan – Site Trips
AM & PM Peak Hours

no scale

FIGURE 3

APPENDIX H.

# SIGNAL INFORMATION

14329

ENGLISH

# SIGNAL MODIFICATION PLAN
# PACIFIC HWY WEST AT SW 124TH AVE
# OR 99W, M.P. 12.66

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION PLANNING/TRAFFIC ENGINEERING

SCALE 0 10 20 40 FEET

9+79

PACIFIC HIGHWAY WEST
(OR 99W)

NOTE: ALL EXISTING WIRING WILL BE REMOVED AND REPLACED AS SHOWN.

POLE NO. 4
STA. 10+05, 18'RT

EX. POLE NO. 3

EX. POLE NO. 2

POLE NO. 5
STA. 9+20, 24'RT

9+00

POLE NO. 8
STA. 8+72, 23'RT

POLE NO. 9
STA. 8+59, 12'RT

EX. POLE NO. 1

POLE NO. 1
STA. 8+41, 98'LT

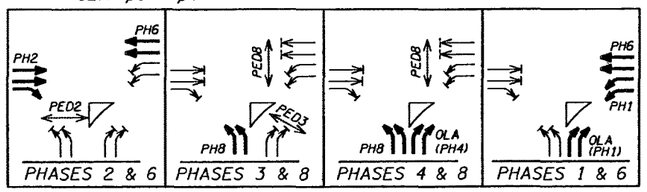
SW 124TH AVE.

POLE NO. 7
STA. 8+31, 59'RT

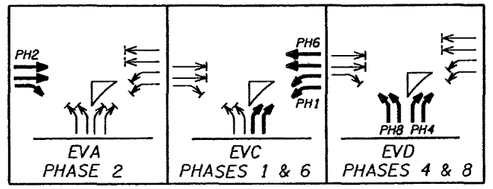
POLE NO. 6
STA. 8+55, 93'RT

## NORMAL PHASE ROTATION

OLA= Ø1 + Ø4 (STATE SUPPLIED W4IKS SOFTWARE)




## FIRE PREEMPTION OPERATION




Thomas Sahlin
Traffic Engineering Operation Section Approval

ODOT TEOS DWG NO. 14329

REGISTERED PROFESSIONAL ENGINEER
19283PE
OREGON
JULY 17, 1997
CHARLES W RADOSTA
EXPIRES 12/31/06
8/2/06

**TUALATIN DEVELOPMENT COMMISSION**

SW 124TH AVE TURN LANE AT 99W
CITY OF TUALATIN
WASHINGTON COUNTY
Reviewed By - C. Radosta
Designed By - M. Stansell
Drafted By - M. Stansell

SIGNAL MODIFICATION PLAN

SHEET NO. S-2

H:\proj file\16562\dgn\16562ts-l.dgn 8/2/2006 8:15:02 AM

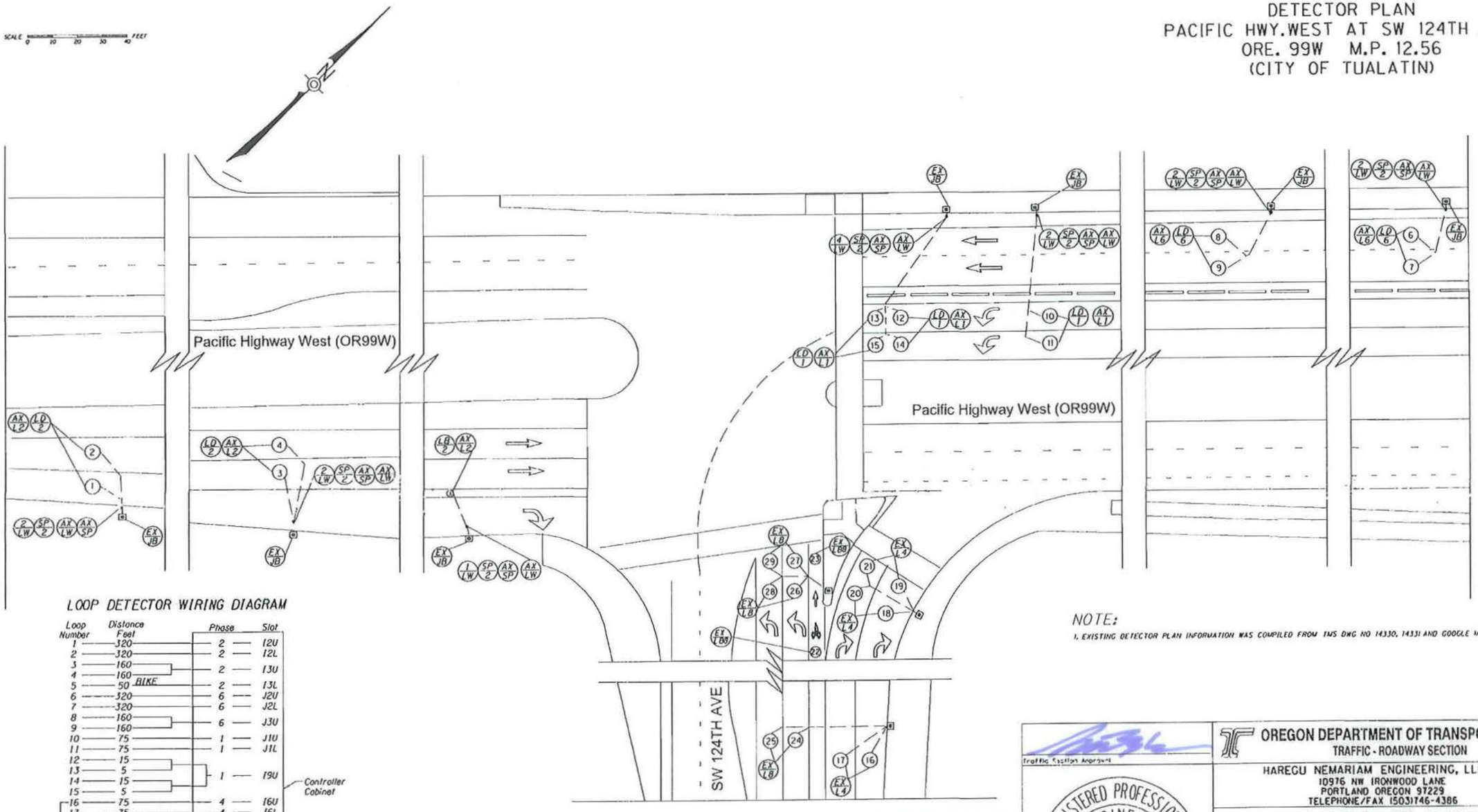
VIEW 1

TS&L PLANS

16698

# DETECTOR PLAN
PACIFIC HWY.WEST AT SW 124TH AVE.
ORE. 99W M.P. 12.56
(CITY OF TUALATIN)

SCALE 0 10 20 30 40 FEET




## LOOP DETECTOR WIRING DIAGRAM

| Loop Number | Distance Feet | | Phase | Slot | |
|---|---|---|---|---|---|
| 1 | 320 | | 2 | 12U | |
| 2 | 320 | | 2 | 12L | |
| 3 | 160 | | 2 | 13U | |
| 4 | 160 | BIKE | | | |
| 5 | 50 | | 2 | 13L | |
| 6 | 320 | | 6 | J2U | |
| 7 | 320 | | 6 | J2L | |
| 8 | 160 | | 6 | J3U | |
| 9 | 160 | | | | |
| 10 | 75 | | 1 | J1U | |
| 11 | 75 | | 1 | J1L | |
| 12 | 15 | | | | |
| 13 | 5 | | 1 | 19U | Controller Cabinet |
| 14 | 15 | | | | |
| 15 | 5 | | | | |
| 16 | 75 | | 4 | 16U | |
| 17 | 75 | | 4 | 16L | |
| 18 | 15 | | 4 | 17U | |
| 19 | 5 | | | | |
| 20 | 15 | | 4 | 17L | |
| 21 | 5 | | | | |
| 22 | 50 | BIKE | 8 | J7L | No-Work |
| 23 | 5 | | | | |
| 24 | 75 | | 8 | J6U | |
| 25 | 75 | | 8 | J6L | |
| 26 | 15 | | 8 | J8U | |
| 27 | 5 | | | | |
| 28 | 15 | | 8 | J7U | |
| 29 | 5 | | | | |

"UTILITIES NOT SHOWN"
Contractor to contact utility companies for field locations.

NOTE:
See T.R.S. Dwg. 16697 for Legend

NOTE:
Field Verify Measurements Before Construction

NOTE:
1. EXISTING DETECTOR PLAN INFORMATION WAS COMPILED FROM TMS DWG NO 14330, 14331 AND GOOGLE MAP.

Traffic Section Approved

REGISTERED PROFESSIONAL ENGINEER
67133
Haregu Nemariam
OREGON
May 10, 2005
HAREGU NEMARIAM
Expires Dec. 31, 2012

OREGON DEPARTMENT OF TRANSPORTATION
TRAFFIC - ROADWAY SECTION


HAREGU NEMARIAM ENGINEERING, LLC.
10976 NW IRONWOOD LANE
PORTLAND OREGON 97229
TELEPHONE/FAX (503)746-4386


OR99W: TUALATIN RIVER BR-SUNSET BLVD. SEC.
PACIFIC HIGHWAY WEST
WASHINGTON COUNTY

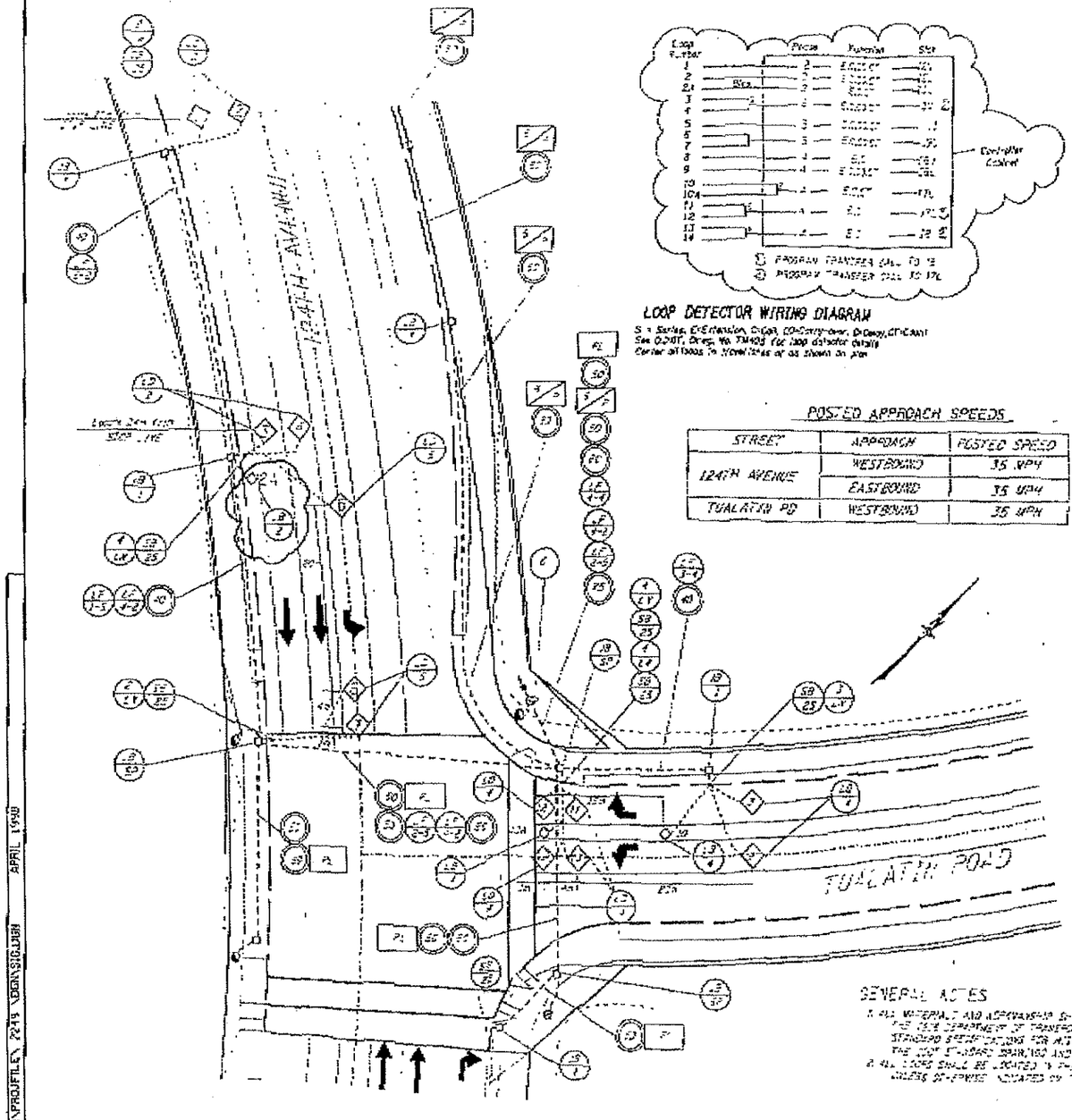
DESIGNED BY: TN
REVIEWED BY: HN
DRAWN BY: TN
FC: 91 MP: 12.56

DETECTOR PLAN

TSSD No. _____ T.R.S. DWG. NO. 16698

C:\user\Haregu\Contract 29885 Projects\TA2 Loop Replacement\SW 124th_St_08-08-2012

# 124TH AT TUALATIN RD
# DETECTOR & INTERCONNECT PLAN







LOOP DETECTOR WIRING DIAGRAM

S = Series, E=Extension, D=Det, CO=Carry-over, D-Delay, CT=Count
See D-2107, Dwg. No. TM-909 for loop detector details
Center all loops in travel lanes or as shown on plan

## POSTED APPROACH SPEEDS

| STREET | APPROACH | POSTED SPEED |
|---|---|---|
| 124TH AVENUE | WESTBOUND | 35 MPH |
| | EASTBOUND | 35 MPH |
| TUALATIN RD | WESTBOUND | 35 MPH |

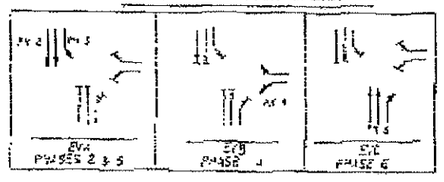
## LEGEND

- C — CONTROLLER (See Signal Plan)
- JB — Junction box (See Signal Plan)
- Installed #40 on 1 #8S on 4 3/0 on 1inch diameter Schedule 80 conduit Junction box
- Install 4sec (6ft.) in ground vehicle detector loop
- Install 4sec (6'x6') in ground bicycle detector loop
- Install (4) 2sec 1inch conduit Feeder cables
- Install (1) pair of loop wires
- Install (1) 4in. electrical conduit
- Electrical conduit (See Signal Plan)
- Install (1) twisted pair interconnect cable
- Install only pull box if no obstruction

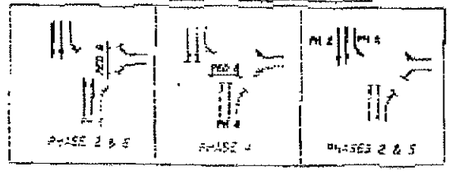
## ABBREVIATIONS

| | |
|---|---|
| Y = TYPE SHOWN | G = AWG SIZE SHOWN |
| PH = PHASE SHOWN | S = SIZE SHOWN |
| # = NUMBER OF CABLES SHOWN | R = STANDARD RISER/ER |
| E = ELEVATOR RISER/ER | CR = CABINET SHOWN |
| H = HORNS SHOWN | L = LENGTH SHOWN |
| A = NUMBER SHOWN | PW = PEDS WARNED |

## FIRE PREEMPTION OPERATION




## NORMAL PHASE ROTATION




SCALE 0 20 40

## GENERAL NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IDENTICAL TO THE OREGON DEPARTMENT OF TRANSPORTATION (ODOT) STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND THE ODOT STANDARD DRAWINGS AND SPECIAL PROVISIONS.
2. ALL LOOPS SHALL BE LOCATED IN THE CENTER OF THE LANE UNLESS OTHERWISE INDICATED ON THE DETECTOR PLAN.

REVISED AS CONSTRUCTED
28-June-1999 CONTRACT 12044
8/18/99 Add Bike Loop

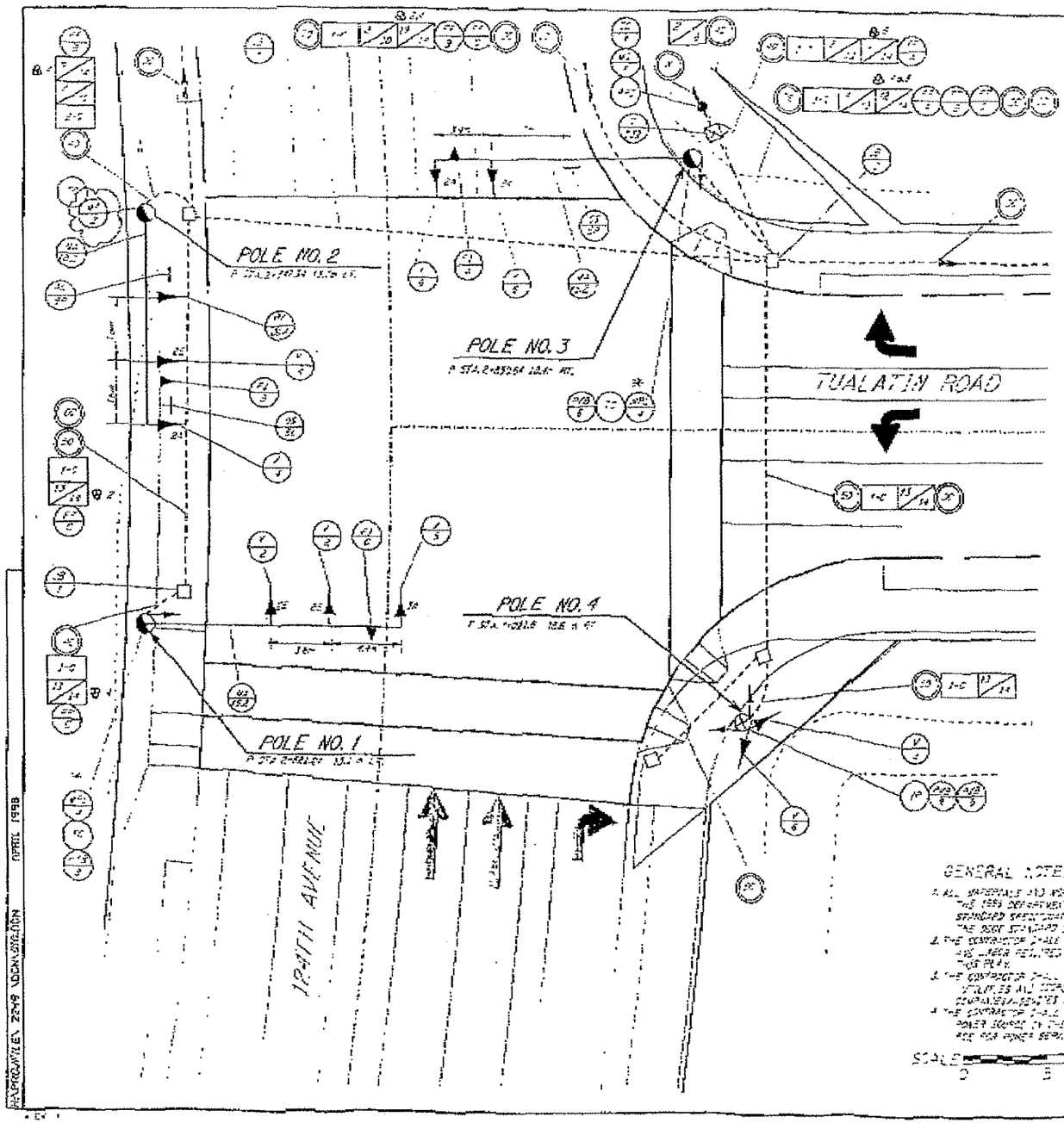
TUALATIN

"TRAFFIC SIGNAL INSTALLATION"
124TH AVENUE & "TUALATIN RD/SHERWOOD"
PACIFIC HIGHWAY WEST
WASHINGTON COUNTY

| FEDERAL HIGHWAY ADMINISTRATION | | PROJECT NUMBER | SHEET NO. |
|---|---|---|---|
| REGION 10 | OREGON DIVISION | | TS 5 |

H:\PROJFILE\ 2215 \DGN\SIGJOB# APRIL 1998

01/25/00 15:37 P.003/005




LEGEND

- Install mast arm assembly in pedestal with 2 signal sections, 1 pedestrian section, 1 vehicle signal head section and 1 pedestrian signal head section
- Install type 17 standard traffic signal mast arm pole
- Install 5 wire traffic signal mast arm
- Install pedestrian pole assembly with 1 section
- Install controller/cabinet on concrete foundation on concrete pad
- Install service pole
- Install pedestrian (PH) vehicle signal with LED's
  8" x 203mm R, 305mm Y, 305mm G
  3 x 305mm R, 305mm Y, 305mm G
- Install pedestrian (PH) pedestrian signal with LED retrofit kit
- Install pedestrian (PH) pedestrian signal with LED retrofit kit, push button and instruction decal
- Install junction station
- Install service 60A/240, 120 volt for signal system
- Install 125 watt meter base
- Install 440 wet x 265 wide x 305 mm high dimension precast concrete junction box
- Install 560 wet x 305 mm x 305 mm high dimension precast concrete junction box
- Install (4) No. 8 type THWN (Signal system common)
- Install (4) No. 12 type THWN wires
- Include 3 spare wires for phase (PH)
- Install (5) wire electrical conduit
- Detector conduit (See Detector Plan)
- Interconnect conduit (See Detector Plan)
- Install standard (GALVA) pre-cast base for detector loop
- Install conduit and wire as required by power company
- Install interior illuminated 250 mm x 900 mm right arrow "ONLY" sign
- Install interior illuminated 250 mm x 900 mm right arrow "ONLY" sign
- Illuminated signal pedestal with transformer base

SEE LIGHTING PLAN FOR ANY ILLUMINATION INSTALLATION DETAILS

ABBREVIATIONS

| | |
|---|---|
| * = TYPE SHOWN | S = ANC SIZE SHOWN |
| PH = PHASE SHOWN | S = SIZE SHOWN |
| # = HEIGHT OR GAUGE SHOWN | R = REQUIRED PLUMBIZED |
| E = ELEVATION PLUMBIZED | CH = CHANGE SHOWN |
| M = METAL SHOWN | # = LENGTH SHOWN |
| W = WIDTH SHOWN | PH = PULL WRAPPED |

GENERAL NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL BE CONFORM TO THE 1996 DEPARTMENT OF TRANSPORTATION HIGHWAY STANDARD SPECIFICATION FOR HIGHWAY CONSTRUCTION AND THE SIGNAL STANDARD DRAWINGS AND SPECIAL PROVISIONS.
2. THE CONTRACTOR SHALL SUBMIT ALL EQUIPMENT MATERIALS AND LABOR REQUIRED FOR THE FINAL INSPECTION WITHIN SIX (30) DAYS.
3. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF MAINTENANCE UNLESS ALL WORK IS COMPLETE IN ACCORDANCE WITH THE PLANS, SPECIFICATIONS AND CONTRACT.
4. THE CONTRACTOR SHALL CONTACT PGE TO INSTALL THE POWER SERVICE IN THE FIELD AND COORDINATE A METER WITH PGE FOR POWER SERVICE "ENERGIZE".

SCALE 0 5 10 20 METERS

124TH AT TUALATIN RD
SIGNAL PLAN

KEEP

K KITTELSON & ASSOCIATES, INC.
610 SW ALDER SUITE 700
PORTLAND, OREGON 97205
(503) 228-4252

SIDE STREET LOCATING ZONE IN POLE

POLE ENTRANCE CHART

| POLE NUMBER | 1 | 2 | 3 | 4 |
|---|---|---|---|---|
| LUMINAIRE ARM | 90 | — | — | — |
| MAST ARM | 3 | 3 | 7 | — |
| PEDESTRIAN SIGNAL PLAN SHEET | 7 | — | 3 | 33 |
| PEDESTRIAN PSF DETAIL | 38 | — | 35 | N.S. |
| TERMINAL CABINET | 2 | 1 | 3 | — |

REVISED AS CONSTRUCTED
28-June-1999 CONTRACT 12044

TRAFFIC SIGNAL INSTALLATION
124th AT 124TH AVENUE & TUALATIN RD RESIGNAL
PACIFIC HIGHWAY WEST
WASHINGTON COUNTY

| FEDERAL HIGHWAY ADMINISTRATION | | PROJECT NUMBER | SHEET NO. |
|---|---|---|---|
| REGION 10 | OREGON DIVISION | | TS 4 |

APPROVED [illegible] 2549 [illegible] APRIL 1998

01/25/00 15:36 P.002/005

**W4IKS Table 1 Page 0**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(0+KEY)**

| FUNCTIONS | KEY | 12345678 |
|---|---|---|
| Veh Recall | 0 | _2___6__ |
| Ped Recall | 1 | ________ |
| Red Lock | 2 | ________ |
| Yellow Lock | 3 | ________ |
| Permit | 4 | _2_456_8 |
| Ped Phases | 5 | _____6_8 |
| Lead Phases | 6 | _2_45__8 |
| Double Entry | 7 | ________ |
| Sequential Timing | 8 | ________ |
| Startup Green | 9 | _2___6__ |
| Overlap A | A | ___45___ |
| Overlap B | B | ________ |
| Overlap C | C | ____56__ |
| Overlap D | D | ________ |
| Exclusive | E | ________ |
| Simultaneous Gap | F | ________ |

**(PHASE+KEY)**

| FUNCTIONS | KEY | PH1 | PH2 | PH3 | PH4 | PH5 | PH6 | PH7 | PH8 |
|---|---|---|---|---|---|---|---|---|---|
| Max I | 0 | 0 | 50 | 0 | 15 | 45 | 50 | 0 | 30 |
| Max II | 1 | 0 | 50 | 0 | 15 | 45 | 50 | 0 | 30 |
| Walk | 2 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 |
| Flash DW | 3 | 0 | 0 | 0 | 0 | 0 | 18 | 0 | 23 |
| Max Initial | 4 | 0 | 10 | 0 | 0 | 10 | 10 | 0 | 0 |
| Min Green | 5 | 0 | 10 | 0 | 5 | 10 | 10 | 0 | 0 |
| TBR | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TTR | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Observe Gap | 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Passage | 9 | 0.0 | 3.0 | 0.0 | 3.0 | 3.0 | 3.9 | 0.0 | 0.0 |
| Min Gap | A | 0.0 | 3.0 | 0.0 | 0.0 | 3.0 | 3.0 | 0.0 | 0.0 |
| Added Actuation | B | 0.0 | 1.0 | 0.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 |
| Yellow | C | 0.0 | 4.0 | 0.0 | 4.0 | 4.0 | 4.0 | 0.0 | 0.0 |
| Red Clear | D | 0.0 | 1.0 | 0.0 | 1.0 | 1.0 | 1.0 | 0.0 | 0.0 |
| Red Revert | E | 0.0 | 5.0 | 0.0 | 5.0 | 5.0 | 5.0 | 0.0 | 0.0 |
| Walk II | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**W4IKS Table 1 Page 1**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(D+C+0+KEY)**

| FUNCTIONS | KEY | 12345678 |
|---|---|---|
| Veh Recall | 0 | ________ |
| Ped Recall | 1 | ________ |
| Red Lock | 2 | ________ |
| Yellow Lock | 3 | ________ |
| Permit | 4 | ________ |
| Ped Phases | 5 | ________ |
| Lead Phases | 6 | ________ |
| Double Entry | 7 | ________ |
| Sequential Timing | 8 | ________ |
| Startup Green | 9 | ________ |
| Overlap A | A | ________ |
| Overlap B | B | ________ |
| Overlap C | C | ________ |
| Overlap D | D | ________ |
| Exclusive | E | ________ |
| Simultaneous Gap | F | ________ |

**(D+C+PHASE+KEY)**

| FUNCTIONS | KEY | PH1 | PH2 | PH3 | PH4 | PH5 | PH6 | PH7 | PH8 |
|---|---|---|---|---|---|---|---|---|---|
| Max I | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max II | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Walk | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Flash DW | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max Initial | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Min Green | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TBR | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TTR | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Observe Gap | 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Passage | 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Min Gap | A | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Added Actuation | B | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Yellow | C | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Red Clear | D | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Red Revert | E | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Walk II | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**W4IKS Table 1 Page 2**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(D+D+0+KEY)**

| FUNCTIONS | KEY | 12345678 |
|---|---|---|
| Veh Recall | 0 | ________ |
| Ped Recall | 1 | ________ |
| Red Lock | 2 | ________ |
| Yellow Lock | 3 | ________ |
| Permit | 4 | ________ |
| Ped Phases | 5 | ________ |
| Lead Phases | 6 | ________ |
| Double Entry | 7 | ________ |
| Sequential Timing | 8 | ________ |
| Startup Green | 9 | ________ |
| Overlap A | A | ________ |
| Overlap B | B | ________ |
| Overlap C | C | ________ |
| Overlap D | D | ________ |
| Exclusive | E | ________ |
| Simultaneous Gap | F | ________ |

**(D+D+PHASE+KEY)**

| FUNCTIONS | KEY | PH1 | PH2 | PH3 | PH4 | PH5 | PH6 | PH7 | PH8 |
|---|---|---|---|---|---|---|---|---|---|
| Max I | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max II | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Walk | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Flash DW | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max Initial | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Min Green | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TBR | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TTR | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Observe Gap | 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Passage | 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Min Gap | A | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Added Actuation | B | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Yellow | C | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Red Clear | D | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Red Revert | E | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Walk II | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**W4IKS Table 2 Page 0**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(9+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Short Power Down | 0 | 0 |
| Long Power Down | 1 | 0 |
| EVA Delay Type | 2 | 1 |
| EVB Delay Type | 3 | 1 |
| EVC Delay Type | 4 | 1 |
| EVD Delay Type | 5 | 0 |
| RR Delay Type | 6 | 0 |
| Ped Inhibit | 7 | 0 |
| OLA Green | 8 | 0.0 |
| OLA Yellow | 9 | 4.0 |
| OLB Green | A | 0.0 |
| OLB Yellow | B | 0.0 |
| OLC Green | C | 0.0 |
| OLC Yellow | D | 0.0 |
| OLD Green | E | 0.0 |
| OLD Yellow | F | 0.0 |

**(C+F+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Page ID | 0 | 0 |
| Future | 1 | 0 |
| Future | 2 | 0 |
| Future | 3 | 0 |
| OLA Red | 4 | 0.0 |
| OLB Red | 5 | 0.0 |
| OLC Red | 6 | 0.0 |
| OLD Red | 7 | 0.0 |
| Overlap E | 8 | _____ |
| Overlap F | 9 | _____ |
| Red Rest | A | _____ |
| Max Recall | B | _____ |
| Flash Green | C | _____ |
| Flash Walk | D | _____ |
| Advance Walk | E | _____ |
| Restrictive Phase | F | _____ |

**W4IKS Table 2 Page 1**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(D+C+9+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Short Power Down | 0 | 0 |
| Long Power Down | 1 | 0 |
| EVA Delay Type | 2 | 0 |
| EVB Delay Type | 3 | 0 |
| EVC Delay Type | 4 | 0 |
| EVD Delay Type | 5 | 0 |
| RR Delay Type | 6 | 0 |
| Ped Inhibit | 7 | 0 |
| OLA Green | 8 | 0.0 |
| OLA Yellow | 9 | 0.0 |
| OLB Green | A | 0.0 |
| OLB Yellow | B | 0.0 |
| OLC Green | C | 0.0 |
| OLC Yellow | D | 0.0 |
| OLD Green | E | 0.0 |
| OLD Yellow | F | 0.0 |

**(D+C+B+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Page ID | 0 | 1 |
| Future | 1 | 0 |
| Future | 2 | 0 |
| Future | 3 | 0 |
| OLA Red | 4 | 0.0 |
| OLB Red | 5 | 0.0 |
| OLC Red | 6 | 0.0 |
| OLD Red | 7 | 0.0 |
| Overlap E | 8 | _____ |
| Overlap F | 9 | _____ |
| Red Rest | A | _____ |
| Max Recall | B | _____ |
| Flash Green | C | _____ |
| Flash Walk | D | _____ |
| Advance Walk | E | _____ |
| Restrictive Phase | F | _____ |

**W4IKS Table 2 Page 2**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(D+D+9+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Short Power Down | 0 | 0 |
| Long Power Down | 1 | 0 |
| EVA Delay Type | 2 | 0 |
| EVB Delay Type | 3 | 0 |
| EVC Delay Type | 4 | 0 |
| EVD Delay Type | 5 | 0 |
| RR Delay Type | 6 | 0 |
| Ped Inhibit | 7 | 0 |
| OLA Green | 8 | 0.0 |
| OLA Yellow | 9 | 0.0 |
| OLB Green | A | 0.0 |
| OLB Yellow | B | 0.0 |
| OLC Green | C | 0.0 |
| OLC Yellow | D | 0.0 |
| OLD Green | E | 0.0 |
| OLD Yellow | F | 0.0 |

**(D+D+B+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Page ID | 0 | 2 |
| Future | 1 | 0 |
| Future | 2 | 0 |
| Future | 3 | 0 |
| OLA Red | 4 | 0.0 |
| OLB Red | 5 | 0.0 |
| OLC Red | 6 | 0.0 |
| OLD Red | 7 | 0.0 |
| Overlap E | 8 | _____ |
| Overlap F | 9 | _____ |
| Red Rest | A | _____ |
| Max Recall | B | _____ |
| Flash Green | C | _____ |
| Flash Walk | D | _____ |
| Advance Walk | E | _____ |
| Restrictive Phase | F | _____ |

**W4IKS Table 3**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(C+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Year | 0 | 13 |
| Month | 1 | 2 |
| Day of Month | 2 | 5 |
| Day of Week | 3 | 4 |
| Hour | 4 | 12 |
| Minute | 5 | 32 |
| Second | 6 | 39 |
| Reserved | 7 | 6 |
| Trigs On In Flash | 8 | 0 |
| Startup Yellow | 9 | _____ |
| EVA Phases | A | _2__5___ |
| EVB Phases | B | ___4____ |
| EVC Phases | C | _____6__ |
| EVD Phases | D | _____ |
| Handicap Ped | E | _____ |

**(E+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| EVA Delay | 0 | 0 |
| EVA Min | 1 | 1 |
| EVB Delay | 2 | 0 |
| EVB Min | 3 | 1 |
| EVC Delay | 4 | 0 |
| EVC Min | 5 | 1 |
| EVD Delay | 6 | 0 |
| EVD Min | 7 | 1 |
| OL Red Revert | 8 | 5.0 |
| RR Delay | 9 | 0 |
| RR Clear | A | 0 |
| RR Clear Phases | B | _____ |
| RR Permit | C | _____ |
| RR OL Permit | D | _____ |
| NEMA Hold Phases | E | _____ |

**W4IKS Table 4 Part 1**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(D+COL+KEY)**

| DETECTOR TYPE | | DELAY | | | CARRYOVER | | |
|---|---|---|---|---|---|---|---|
| COLUMN NUM | 2 | | 3 | | 4 | | 5 | |
| FUNCTIONSKEY | PH | TIME | PH | TIME | PH | TIME | PH | TIME |
| ------ (1)0 | 1 | 0.0 | 5 | 0.0 | 1 | 0.0 | 5 | 0.0 |
| Upper (9)1 | 1 | 0.0 | 5 | 0.0 | 1 | 0.0 | 5 | 0.0 |
| Upper (2)2 | 2 | 0.0 | 6 | 0.0 | 2 | 0.0 | 6 | 0.0 |
| Lower (2)3 | 2 | 0.0 | 6 | 0.0 | 2 | 0.0 | 6 | 0.0 |
| Upper (3)4 | 2 | 0.0 | 6 | 0.0 | 2 | 0.0 | 6 | 0.0 |
| Lower (3)5 | | 0.0 | | 0.0 | 2 | 0.0 | 6 | 0.0 |
| ------ (4)6 | 2 | 0.0 | 6 | 0.0 | 2* | 0.0 | 6* | 0.0 |
| ------ (5)7 | 3 | 0.0 | 7 | 0.0 | 3 | 0.0 | 7 | 0.0 |
| Lower (9)8 | 3 | 0.0 | 7 | 0.0 | 3 | 0.0 | 7 | 0.0 |
| Upper (6)9 | 4 | 5.0 | 8 | 0.0 | 4 | 0.0 | 8 | 0.0 |
| Lower (6)A | 4 | 0.0 | 8 | 0.0 | 4 | 0.0 | 8 | 0.0 |
| Upper (7)B | 4 | 0.0 | 8 | 0.0 | 4 | 0.0 | 8 | 0.0 |
| Lower (7)C | | 0.0 | | 0.0 | 4 | 0.0 | 8 | 0.0 |
| ------ (8)D | 4 | 0.0 | 8 | 0.0 | 4* | 0.0 | 8* | 0.0 |
| CABINET FILE | | I | | J | | I | | J |

Note:  () = Slot Number  * = Set Type 3 Detector

**W4IKS Table 4 Part 2**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(D+9+4+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Detector Fail On | 0 | 0 |
| Detector Fail Off | 1 | 0 |
| Fail Det Backup | 2 | 0 |
| Max II In Delay | 3 | 0 |
| Max II In Carryover | 4 | 0 |
| Plan 9 In Delay | 5 | 0 |
| Plan 9 In Carryover | 6 | 0 |
| Plan 18 In Delay | 7 | 0 |
| Plan 18 In Carryover | 8 | 0 |
| TT Page 1 Delay | 9 | 0 |
| TT Page 1 Carryover | A | 0 |
| TT Page 2 Delay | B | 0 |
| TT Page 2 Carryover | C | 0 |
| NOVRAM | D | 0 |
| Computran | E | 0 |
| Release | F | 0 |

**(D+9+5+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| DF 01 Min | 0 | 0 |
| DF 02 Min | 1 | 0 |
| DF 03 Min | 2 | 0 |
| DF 04 Min | 3 | 0 |
| DF 05 Min | 4 | 0 |
| DF 06 Min | 5 | 0 |
| DF 07 Min | 6 | 0 |
| DF 08 Min | 7 | 0 |
| DF 01 Max | 8 | 0 |
| DF 02 Max | 9 | 0 |
| DF 03 Max | A | 0 |
| DF 04 Max | B | 0 |
| DF 05 Max | C | 0 |
| DF 06 Max | D | 0 |
| DF 07 Max | E | 0 |
| DF 08 Max | F | 0 |

**W4IKS Table 5 Sheet 1**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(A+CODE)**

| EVENT | 1234567 | HR | MIN | FUNC | CODE | EVENT | 1234567 | HR | MIN | FUNC | CODE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | _____ | 0 | 0 | 0 | 80-83 | 17 | _____ | 0 | 0 | 0 | C0-C3 |
| 2 | _____ | 0 | 0 | 0 | 84-87 | 18 | _____ | 0 | 0 | 0 | C4-C7 |
| 3 | _____ | 0 | 0 | 0 | 88-8B | 19 | _____ | 0 | 0 | 0 | C8-CB |
| 4 | _____ | 0 | 0 | 0 | 8C-8F | 20 | _____ | 0 | 0 | 0 | CC-CF |
| 5 | _____ | 0 | 0 | 0 | 90-93 | 21 | _____ | 0 | 0 | 0 | D0-D3 |
| 6 | _____ | 0 | 0 | 0 | 94-97 | 22 | _____ | 0 | 0 | 0 | D4-D7 |
| 7 | _____ | 0 | 0 | 0 | 98-9B | 23 | _____ | 0 | 0 | 0 | D8-DB |
| 8 | _____ | 0 | 0 | 0 | 9C-9F | 24 | _____ | 0 | 0 | 0 | DC-DF |
| 9 | _____ | 0 | 0 | 0 | A0-A3 | 25 | _____ | 0 | 0 | 0 | E0-E3 |
| 10 | _____ | 0 | 0 | 0 | A4-A7 | 26 | _____ | 0 | 0 | 0 | E4-E7 |
| 11 | _____ | 0 | 0 | 0 | A8-AB | 27 | _____ | 0 | 0 | 0 | E8-EB |
| 12 | _____ | 0 | 0 | 0 | AC-AF | 28 | _____ | 0 | 0 | 0 | EC-EF |
| 13 | _____ | 0 | 0 | 0 | B0-B3 | 29 | _____ | 0 | 0 | 0 | F0-F3 |
| 14 | _____ | 0 | 0 | 0 | B4-B7 | 30 | _____ | 0 | 0 | 0 | F4-F7 |
| 15 | _____ | 0 | 0 | 0 | B8-BB | 31 | _____ | 0 | 0 | 0 | F8-FB |
| 16 | ___4___ | 12 | 0 | 132 | BC-BF | 32 | _____ | 0 | 0 | 0 | FC-FF |

**W4IKS Table 5 Sheet 2**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(D+8+CODE)**

| EVENT | 1234567 | HR | MIN | FUNC | CODE | EVENT | 1234567 | HR | MIN | FUNC | CODE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 | _____ | 0 | 0 | 0 | 80-83 | 49 | _____ | 0 | 0 | 0 | C0-C3 |
| 34 | _____ | 0 | 0 | 0 | 84-87 | 50 | _____ | 0 | 0 | 0 | C4-C7 |
| 35 | _____ | 0 | 0 | 0 | 88-8B | 51 | _____ | 0 | 0 | 0 | C8-CB |
| 36 | _____ | 0 | 0 | 0 | 8C-8F | 52 | _____ | 0 | 0 | 0 | CC-CF |
| 37 | _____ | 0 | 0 | 0 | 90-93 | 53 | _____ | 0 | 0 | 0 | D0-D3 |
| 38 | _____ | 0 | 0 | 0 | 94-97 | 54 | _____ | 0 | 0 | 0 | D4-D7 |
| 39 | _____ | 0 | 0 | 0 | 98-9B | 55 | _____ | 0 | 0 | 0 | D8-DB |
| 40 | _____ | 0 | 0 | 0 | 9C-9F | 56 | _____ | 0 | 0 | 0 | DC-DF |
| 41 | _____ | 0 | 0 | 0 | A0-A3 | 57 | _____ | 0 | 0 | 0 | E0-E3 |
| 42 | _____ | 0 | 0 | 0 | A4-A7 | 58 | _____ | 0 | 0 | 0 | E4-E7 |
| 43 | _____ | 0 | 0 | 0 | A8-AB | 59 | _____ | 0 | 0 | 0 | E8-EB |
| 44 | _____ | 0 | 0 | 0 | AC-AF | 60 | _____ | 0 | 0 | 0 | EC-EF |
| 45 | _____ | 0 | 0 | 0 | B0-B3 | 61 | _____ | 0 | 0 | 0 | F0-F3 |
| 46 | _____ | 0 | 0 | 0 | B4-B7 | 62 | _____ | 0 | 0 | 0 | F4-F7 |
| 47 | _____ | 0 | 0 | 0 | B8-BB | 63 | _____ | 0 | 0 | 0 | F8-FB |
| 48 | _____ | 0 | 0 | 0 | BC-BF | 64 | _____ | 0 | 0 | 0 | FC-FF |

**W4IKS Table 6**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(B+0+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Present Plan | 0 | 0 |
| TOD/DOW Plan | 1 | 0 |
| Hardwire Plan | 2 | 0 |
| Modem Plan | 3 | 0 |
| Mode (0-4) | 4 | 0 |
| Master (0-OFF) | 5 | 0 |
| Master Clock | 6 | 0 |
| Local Clock | 7 | 0 |
| Dwell Clock | 8 | 0 |
| Future | 9 | 0 |
| Future | A | 0 |
| Future | B | 0 |
| Future | C | _____ |
| NEMA CNA Phases | D | _____ |
| Adv Warning Phases | E | _____ |
| MRI Phases | F | _____ |

**(D+KEY1+KEY2)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Floating Ped | 2E | 0 |
| ID Number | 2F | 138 |
| No Coord Ped Recall | 3E | 0 |
| Rest In Walk | 3F | 0 |
| Adv Warning EOG | 4E | 0 |
| Adv Warning SOG | 4F | 0 |
| RR Red Clear | 5E | 0 |
| RR Clear Color | 5F | 0 |
| Bus Delay | 6D | 0.0 |
| Bus Free T1 | 6E | 0 |
| Bus Free T3 | 6F | 0 |
| EV Min Aft Clear | 7E | 0 |
| EV Indicators | 7F | 0 |
| NEMA Inputs | 66 | 0.0 |

**W4IKS Table 7 Sheet 1**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(B+PLAN+KEY)**

| FUNCTION | KEY | Plan 1 | Plan 2 | Plan 3 | Plan 4 | Plan 5 | Plan 6 | Plan 7 | Plan 8 | Plan 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| Cycle Length | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 01 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 02 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 03 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 04 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 05 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 06 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 07 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 08 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offset | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Perm Length | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max Dwell | B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lead Phases | C | | | | | | | | | |
| Coord Phases | D | | | | | | | | | |
| Perm 2 Phases | E | | | | | | | | | |
| Min Recall | F | | | | | | | | | |

**W4IKS Table 7 Sheet 2**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(B+D+KEY1+KEY2)**

| | KEY1 | 7 | 8 | 9 | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|---|---|---|
| FUNCTION | KEY2 | Plan 10 | Plan 11 | Plan 12 | Plan 13 | Plan 14 | Plan 15 | Plan 16 | Plan 17 | Plan 18 |
| Cycle Length | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 01 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 02 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 03 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 04 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 05 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 06 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 07 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 08 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offset | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Perm Length | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max Dwell | B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lead Phases | C | | | | | | | | | |
| Coord Phases | D | | | | | | | | | |
| Perm 2 Phases | E | | | | | | | | | |
| Min Recall | F | | | | | | | | | |

**W4IKS Table 8**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(B+A+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Bus P1 T1 | 0 | 0 |
| Bus P1 T2 | 1 | 0 |
| Bus P1 T3 | 2 | 0 |
| Bus P2 T1 | 3 | 0 |
| Bus P2 T2 | 4 | 0 |
| Bus P2 T3 | 5 | 0 |
| Bus P3 T1 | 6 | 0 |
| Bus P3 T2 | 7 | 0 |
| Bus P3 T3 | 8 | 0 |
| Perm 2 P1 | 9 | 0 |
| Perm 2 P2 | A | 0 |
| Perm 2 P3 | B | 0 |
| Flash Yellow | C | |
| Flash Circuit | D | |
| TOD/DOW Max | E | |
| OLB Switchpack | F | |

**(B+B+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Bus P4 T1 | 0 | 0 |
| Bus P4 T2 | 1 | 0 |
| Bus P4 T3 | 2 | 0 |
| Bus P5 T1 | 3 | 0 |
| Bus P5 T2 | 4 | 0 |
| Bus P5 T3 | 5 | 0 |
| Bus P6 T1 | 6 | 0 |
| Bus P6 T2 | 7 | 0 |
| Bus P6 T3 | 8 | 0 |
| Perm 2 P4 | 9 | 0 |
| Perm 2 P5 | A | 0 |
| Perm 2 P6 | B | 0 |
| OL Flash Yellow | C | |
| OL Flash Clear | D | |
| TOD/DOW Ped | E | |
| OLC Switchpack | F | |

**(B+C+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Bus P7 T1 | 0 | 0 |
| Bus P7 T2 | 1 | 0 |
| Bus P7 T3 | 2 | 0 |
| Bus P8 T1 | 3 | 0 |
| Bus P8 T2 | 4 | 0 |
| Bus P8 T3 | 5 | 0 |
| Bus P9 T1 | 6 | 0 |
| Bus P9 T2 | 7 | 0 |
| Bus P9 T3 | 8 | 0 |
| Perm 2 P7 | 9 | 0 |
| Perm 2 P8 | A | 0 |
| Perm 2 P9 | B | 0 |
| Coord Max | C | |
| TOD Red Rest | D | |
| OLA Switchpack | E | 3 |
| OLD Switchpack | F | |

**W4IKS Table 9 Page 0**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(A+4+KEY)**

| C1 PIN | KEY | CODE |
|---|---|---|
| 39 | 0 | 0 |
| 40 | 1 | 0 |
| 41 | 2 | 0 |
| 42 | 3 | 0 |
| 43 | 4 | 0 |
| 44 | 5 | 0 |
| 45 | 6 | 0 |
| 46 | 7 | 0 |
| 47 | 8 | 0 |
| 48 | 9 | 0 |
| 49 | A | 0 |
| 50 | B | 0 |
| 51 | C | 0 |
| 52 | D | 0 |
| 53 | E | 0 |
| 54 | F | 0 |

**(A+5+KEY)**

| C1 PIN | KEY | CODE |
|---|---|---|
| 55 | 0 | 0 |
| 56 | 1 | 0 |
| 57 | 2 | 0 |
| 58 | 3 | 0 |
| 59 | 4 | 0 |
| 60 | 5 | 0 |
| 61 | 6 | 0 |
| 62 | 7 | 0 |
|  | 8 | 0 |
|  | 9 | 0 |
|  | A | 0 |
|  | B | 0 |
| 63 | C | 0 |
| 64 | D | 0 |
| 65 | E | 0 |
| 66 | F | 0 |

**(A+6+KEY)**

| C1 PIN | KEY | CODE |
|---|---|---|
| 67 | 0 | 0 |
| 68 | 1 | 0 |
| 69 | 2 | 0 |
| 70 | 3 | 0 |
| 71 | 4 | 0 |
| 72 | 5 | 0 |
| 73 | 6 | 0 |
| 74 | 7 | 0 |
| 75 | 8 | 0 |
| 76 | 9 | 0 |
| 77 | A | 0 |
| 78 | B | 0 |
| 79 | C | 0 |
| 80 | D | 0 |
| 81 | E | 0 |
| 82 | F | 0 |

**W4IKS Table 9 Page 1**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(D+A+4+KEY)**

| C1 PIN | KEY | CODE |
|---|---|---|
| 39 | 0 | 0 |
| 40 | 1 | 0 |
| 41 | 2 | 0 |
| 42 | 3 | 0 |
| 43 | 4 | 0 |
| 44 | 5 | 0 |
| 45 | 6 | 0 |
| 46 | 7 | 0 |
| 47 | 8 | 0 |
| 48 | 9 | 0 |
| 49 | A | 0 |
| 50 | B | 0 |
| 51 | C | 0 |
| 52 | D | 0 |
| 53 | E | 0 |
| 54 | F | 0 |

**(D+A+5+KEY)**

| C1 PIN | KEY | CODE |
|---|---|---|
| 55 | 0 | 0 |
| 56 | 1 | 0 |
| 57 | 2 | 0 |
| 58 | 3 | 0 |
| 59 | 4 | 0 |
| 60 | 5 | 0 |
| 61 | 6 | 0 |
| 62 | 7 | 0 |
|  | 8 | 0 |
|  | 9 | 0 |
|  | A | 0 |
|  | B | 0 |
| 63 | C | 0 |
| 64 | D | 0 |
| 65 | E | 0 |
| 66 | F | 0 |

**(D+A+6+KEY)**

| C1 PIN | KEY | CODE |
|---|---|---|
| 67 | 0 | 0 |
| 68 | 1 | 0 |
| 69 | 2 | 0 |
| 70 | 3 | 0 |
| 71 | 4 | 0 |
| 72 | 5 | 0 |
| 73 | 6 | 0 |
| 74 | 7 | 0 |
| 75 | 8 | 0 |
| 76 | 9 | 0 |
| 77 | A | 0 |
| 78 | B | 0 |
| 79 | C | 0 |
| 80 | D | 0 |
| 81 | E | 0 |
| 82 | F | 0 |

**W4IKS Table 9 Page 2**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(D+A+B+KEY)**

| C1 PIN | KEY | CODE |
|---|---|---|
| 39 | 0 | 0 |
| 40 | 1 | 0 |
| 41 | 2 | 0 |
| 42 | 3 | 0 |
| 43 | 4 | 0 |
| 44 | 5 | 0 |
| 45 | 6 | 0 |
| 46 | 7 | 0 |
| 47 | 8 | 0 |
| 48 | 9 | 0 |
| 49 | A | 0 |
| 50 | B | 0 |
| 51 | C | 0 |
| 52 | D | 0 |
| 53 | E | 0 |
| 54 | F | 0 |

**(D+A+C+KEY)**

| C1 PIN | KEY | CODE |
|---|---|---|
| 55 | 0 | 0 |
| 56 | 1 | 0 |
| 57 | 2 | 0 |
| 58 | 3 | 0 |
| 59 | 4 | 0 |
| 60 | 5 | 0 |
| 61 | 6 | 0 |
| 62 | 7 | 0 |
|  | 8 | 0 |
|  | 9 | 0 |
|  | A | 0 |
|  | B | 0 |
| 63 | C | 0 |
| 64 | D | 0 |
| 65 | E | 0 |
| 66 | F | 0 |

**(D+A+D+KEY)**

| C1 PIN | KEY | CODE |
|---|---|---|
| 67 | 0 | 0 |
| 68 | 1 | 0 |
| 69 | 2 | 0 |
| 70 | 3 | 0 |
| 71 | 4 | 0 |
| 72 | 5 | 0 |
| 73 | 6 | 0 |
| 74 | 7 | 0 |
| 75 | 8 | 0 |
| 76 | 9 | 0 |
| 77 | A | 0 |
| 78 | B | 0 |
| 79 | C | 0 |
| 80 | D | 0 |
| 81 | E | 0 |
| 82 | F | 0 |

**W4IKS Table 10 Page 0**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

| (A+0+KEY) | | | (A+1+KEY) | | | (A+2+KEY) | | | (A+3+KEY) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **FUNCTION** | **KEY** | **CODE** | **FUNCTION** | **KEY** | **CODE** | **FUNCTION** | **KEY** | **CODE** | **FUNCTION** | **KEY** | **CODE** |
| 04 D/W | 0 | 0 | 08 D/W | 0 | 0 | 02 Ped Y | 0 | 0 | 01 D/W | 0 | 0 |
| 04 Walk | 1 | 0 | 08 Walk | 1 | 0 | 06 Ped Y | 1 | 99 | 01 Walk | 1 | 0 |
| 04 Red | 2 | 0 | 08 Red | 2 | 0 | 04 Ped Y | 2 | 0 | OLB Red | 2 | 0 |
| 04 Yellow | 3 | 0 | 08 Yellow | 3 | 0 | 08 Ped Y | 3 | 0 | OLB Yellow | 3 | 0 |
| 04 Green | 4 | 0 | 08 Green | 4 | 0 | 03 Ped Y | 4 | 0 | OLB Green | 4 | 0 |
| 03 Red | 5 | 0 | 07 Red | 5 | 0 | 01 Ped Y | 5 | 0 | OLA Red | 5 | 0 |
| 03 Yellow | 6 | 0 | 07 Yellow | 6 | 0 | Flash | 6 | 0 | OLA Yellow | 6 | 0 |
| 03 Green | 7 | 0 | 07 Green | 7 | 0 | Watchdog | 7 | 0 | OLA Green | 7 | 0 |
| 02 D/W | 8 | 0 | 06 D/W | 8 | 0 | 03 D/W | 8 | 0 | | 8 | 0 |
| 02 Walk | 9 | 0 | 06 Walk | 9 | 0 | 03 Walk | 9 | 0 | SD | 9 | 0 |
| 02 Red | A | 0 | 06 Red | A | 0 | OLD Red | A | 0 | LTT | A | 0 |
| 02 Yellow | B | 0 | 06 Yellow | B | 0 | OLD Yellow | B | 0 | | | |
| 02 Green | C | 0 | 06 Green | C | 0 | OLD Green | C | 0 | High Byte IDC | | 0 |
| 01 Red | D | 0 | 05 Red | D | 99 | OLC Red | D | 0 | | | |
| 01 Yellow | E | 0 | 05 Yellow | E | 99 | OLC Yellow | E | 0 | | | |
| 01 Green | F | 0 | 05 Green | F | 99 | OLC Green | F | 0 | | | |

**W4IKS Table 10 Page 1**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

| (D+A+0+KEY) | | | (D+A+1+KEY) | | | (D+A+2+KEY) | | | (D+A+3+KEY) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **FUNCTION** | **KEY** | **CODE** | **FUNCTION** | **KEY** | **CODE** | **FUNCTION** | **KEY** | **CODE** | **FUNCTION** | **KEY** | **CODE** |
| 04 D/W | 0 | 0 | 08 D/W | 0 | 0 | 02 Ped Y | 0 | 0 | 01 D/W | 0 | 0 |
| 04 Walk | 1 | 0 | 08 Walk | 1 | 0 | 06 Ped Y | 1 | 0 | 01 Walk | 1 | 0 |
| 04 Red | 2 | 0 | 08 Red | 2 | 0 | 04 Ped Y | 2 | 0 | OLB Red | 2 | 0 |
| 04 Yellow | 3 | 0 | 08 Yellow | 3 | 0 | 08 Ped Y | 3 | 0 | OLB Yellow | 3 | 0 |
| 04 Green | 4 | 0 | 08 Green | 4 | 0 | 03 Ped Y | 4 | 0 | OLB Green | 4 | 0 |
| 03 Red | 5 | 0 | 07 Red | 5 | 0 | 01 Ped Y | 5 | 0 | OLA Red | 5 | 0 |
| 03 Yellow | 6 | 0 | 07 Yellow | 6 | 0 | Flash | 6 | 0 | OLA Yellow | 6 | 0 |
| 03 Green | 7 | 0 | 07 Green | 7 | 0 | Watchdog | 7 | 0 | OLA Green | 7 | 0 |
| 02 D/W | 8 | 0 | 06 D/W | 8 | 0 | 03 D/W | 8 | 0 | | 8 | 0 |
| 02 Walk | 9 | 0 | 06 Walk | 9 | 0 | 03 Walk | 9 | 0 | SD | 9 | 0 |
| 02 Red | A | 0 | 06 Red | A | 0 | OLD Red | A | 0 | LTT | A | 0 |
| 02 Yellow | B | 0 | 06 Yellow | B | 0 | OLD Yellow | B | 0 | | | |
| 02 Green | C | 0 | 06 Green | C | 0 | OLD Green | C | 0 | | | |
| 01 Red | D | 0 | 05 Red | D | 0 | OLC Red | D | 0 | | | |
| 01 Yellow | E | 0 | 05 Yellow | E | 0 | OLC Yellow | E | 0 | | | |
| 01 Green | F | 0 | 05 Green | F | 0 | OLC Green | F | 0 | | | |

**W4IKS Table 10 Page 2**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

| (D+A+7+KEY) | | | (D+A+8+KEY) | | | (D+A+9+KEY) | | | (D+A+A+KEY) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **FUNCTION** | **KEY** | **CODE** | **FUNCTION** | **KEY** | **CODE** | **FUNCTION** | **KEY** | **CODE** | **FUNCTION** | **KEY** | **CODE** |
| 04 D/W | 0 | 0 | 08 D/W | 0 | 0 | 02 Ped Y | 0 | 0 | 01 D/W | 0 | 0 |
| 04 Walk | 1 | 0 | 08 Walk | 1 | 0 | 06 Ped Y | 1 | 0 | 01 Walk | 1 | 0 |
| 04 Red | 2 | 0 | 08 Red | 2 | 0 | 04 Ped Y | 2 | 0 | OLB Red | 2 | 0 |
| 04 Yellow | 3 | 0 | 08 Yellow | 3 | 0 | 08 Ped Y | 3 | 0 | OLB Yellow | 3 | 0 |
| 04 Green | 4 | 0 | 08 Green | 4 | 0 | 03 Ped Y | 4 | 0 | OLB Green | 4 | 0 |
| 03 Red | 5 | 0 | 07 Red | 5 | 0 | 01 Ped Y | 5 | 0 | OLA Red | 5 | 0 |
| 03 Yellow | 6 | 0 | 07 Yellow | 6 | 0 | Flash | 6 | 0 | OLA Yellow | 6 | 0 |
| 03 Green | 7 | 0 | 07 Green | 7 | 0 | Watchdog | 7 | 0 | OLA Green | 7 | 0 |
| 02 D/W | 8 | 0 | 06 D/W | 8 | 0 | 03 D/W | 8 | 0 | | 8 | 0 |
| 02 Walk | 9 | 0 | 06 Walk | 9 | 0 | 03 Walk | 9 | 0 | SD | 9 | 0 |
| 02 Red | A | 0 | 06 Red | A | 0 | OLD Red | A | 0 | LTT | A | 0 |
| 02 Yellow | B | 0 | 06 Yellow | B | 0 | OLD Yellow | B | 0 | | | |
| 02 Green | C | 0 | 06 Green | C | 0 | OLD Green | C | 0 | | | |
| 01 Red | D | 0 | 05 Red | D | 0 | OLC Red | D | 0 | | | |
| 01 Yellow | E | 0 | 05 Yellow | E | 0 | OLC Yellow | E | 0 | | | |
| 01 Green | F | 0 | 05 Green | F | 0 | OLC Green | F | 0 | | | |

**W4IKS Table 11 Page 0**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(D+B+0+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| 05 D/W | 0 | 0 |
| 05 Walk | 1 | 0 |
| OLL Red | 2 | 0 |
| OLL Yellow | 3 | 0 |
| OLL Green | 4 | 0 |
| OLK Red | 5 | 0 |
| OLK Yellow | 6 | 0 |
| OLK Green | 7 | 0 |
| 07 D/W | 8 | 0 |
| 07 Walk | 9 | 0 |
| OLJ Red | A | 0 |
| OLJ Yellow | B | 0 |
| OLJ Green | C | 0 |
| OLH Red | D | 0 |
| OLH Yellow | E | 0 |
| OLH Green | F | 0 |

**(D+B+1+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| OLE Green | 0 | 0 |
| OLF Green | 1 | 0 |
| OLE Yellow | 2 | 0 |
| OLF Yellow | 3 | 0 |
| Adv Warning | 4 | 0 |
| RR Fl Yellow | 5 | 0 |
| Det Reset | 6 | 0 |
| RR On | 7 | 0 |
| EVA On | 8 | 0 |
| EVB On | 9 | 0 |
| EVC On | A | 0 |
| EVD On | B | 0 |
| Ring 1 Bit B | C | 0 |
| Ring 1 Bit C | D | 0 |
| Ring 2 Bit B | E | 0 |
| Ring 2 Bit C | F | 0 |

**(D+B+2+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Cycle 2 | 0 | 0 |
| Cycle 3 | 1 | 0 |
| Offset 1 | 2 | 0 |
| Offset 2 | 3 | 0 |
| Offset 3 | 4 | 0 |
| ------ | 5 | 0 |
| Free | 6 | 0 |
| Flash | 7 | 0 |
| Coord Plan 1 2 3 | 8 | 0 |
| Coord Plan 4 5 6 | 9 | 0 |
| Coord Plan 7 8 9 | A | 0 |
| Coord Plan 10 11 12 | B | 0 |
| Coord Plan 13 14 15 | C | 0 |
| Coord Plan 16 17 18 | D | 0 |
| Future | E | 0 |
| Future | F | 0 |

**W4IKS Table 11 Page 1**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(D+B+4+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| 05 D/W | 0 | 0 |
| 05 Walk | 1 | 0 |
| OLL Red | 2 | 0 |
| OLL Yellow | 3 | 0 |
| OLL Green | 4 | 0 |
| OLK Red | 5 | 0 |
| OLK Yellow | 6 | 0 |
| OLK Green | 7 | 0 |
| 07 D/W | 8 | 0 |
| 07 Walk | 9 | 0 |
| OLJ Red | A | 0 |
| OLJ Yellow | B | 0 |
| OLJ Green | C | 0 |
| OLH Red | D | 0 |
| OLH Yellow | E | 0 |
| OLH Green | F | 0 |

**(D+B+5+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| OLE Green | 0 | 0 |
| OLF Green | 1 | 0 |
| OLE Yellow | 2 | 0 |
| OLF Yellow | 3 | 0 |
| Adv Warning | 4 | 0 |
| RR Fl Yellow | 5 | 0 |
| Det Reset | 6 | 0 |
| RR On | 7 | 0 |
| EVA On | 8 | 0 |
| EVB On | 9 | 0 |
| EVC On | A | 0 |
| EVD On | B | 0 |
| Ring 1 Bit B | C | 0 |
| Ring 1 Bit C | D | 0 |
| Ring 2 Bit B | E | 0 |
| Ring 2 Bit C | F | 0 |

**(D+B+6+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Cycle 2 | 0 | 0 |
| Cycle 3 | 1 | 0 |
| Offset 1 | 2 | 0 |
| Offset 2 | 3 | 0 |
| Offset 3 | 4 | 0 |
| ------ | 5 | 0 |
| Free | 6 | 0 |
| Flash | 7 | 0 |
| Coord Plan 1 2 3 | 8 | 0 |
| Coord Plan 4 5 6 | 9 | 0 |
| Coord Plan 7 8 9 | A | 0 |
| Coord Plan 10 11 12 | B | 0 |
| Coord Plan 13 14 15 | C | 0 |
| Coord Plan 16 17 18 | D | 0 |
| Future | E | 0 |
| Future | F | 0 |

**W4IKS Table 11 Page 2**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(D+B+8+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| 05 D/W | 0 | 0 |
| 05 Walk | 1 | 0 |
| OLL Red | 2 | 0 |
| OLL Yellow | 3 | 0 |
| OLL Green | 4 | 0 |
| OLK Red | 5 | 0 |
| OLK Yellow | 6 | 0 |
| OLK Green | 7 | 0 |
| 07 D/W | 8 | 0 |
| 07 Walk | 9 | 0 |
| OLJ Red | A | 0 |
| OLJ Yellow | B | 0 |
| OLJ Green | C | 0 |
| OLH Red | D | 0 |
| OLH Yellow | E | 0 |
| OLH Green | F | 0 |

**(D+B+9+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| OLE Green | 0 | 0 |
| OLF Green | 1 | 0 |
| OLE Yellow | 2 | 0 |
| OLF Yellow | 3 | 0 |
| Adv Warning | 4 | 0 |
| RR Fl Yellow | 5 | 0 |
| Det Reset | 6 | 0 |
| RR On | 7 | 0 |
| EVA On | 8 | 0 |
| EVB On | 9 | 0 |
| EVC On | A | 0 |
| EVD On | B | 0 |
| Ring 1 Bit B | C | 0 |
| Ring 1 Bit C | D | 0 |
| Ring 2 Bit B | E | 0 |
| Ring 2 Bit C | F | 0 |

**(D+B+A+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Cycle 2 | 0 | 0 |
| Cycle 3 | 1 | 0 |
| Offset 1 | 2 | 0 |
| Offset 2 | 3 | 0 |
| Offset 3 | 4 | 0 |
| ------ | 5 | 0 |
| Free | 6 | 0 |
| Flash | 7 | 0 |
| Coord Plan 1 2 3 | 8 | 0 |
| Coord Plan 4 5 6 | 9 | 0 |
| Coord Plan 7 8 9 | A | 0 |
| Coord Plan 10 11 12 | B | 0 |
| Coord Plan 13 14 15 | C | 0 |
| Coord Plan 16 17 18 | D | 0 |
| Future | E | 0 |
| Future | F | 0 |

**W4IKS Table 12**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(D+8+KEY1+KEY2)**

| KEY1 = 0 | | | KEY1 = 1 | | | KEY1 = 2 | | | KEY1 = 3 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **FUNCTION** | **KEY2** | **VALUE** | **FUNCTION** | **KEY2** | **VALUE** | **FUNCTION** | **KEY2** | **VALUE** | **FUNCTION** | **KEY2** | **VALUE** |
| 1/Month | 0 | 0 | 3/Hour On | 0 | 0 | 5/Hour Off | 0 | 0 | 7/Plan | 0 | 0 |
| 1/DOM | 1 | 0 | 3/Min On | 1 | 0 | 5/Min Off | 1 | 0 | 8/Month | 1 | 0 |
| 1/Hour On | 2 | 0 | 3/Hour Off | 2 | 0 | 5/Plan | 2 | 0 | 8/DOM | 2 | 0 |
| 1/Min On | 3 | 0 | 3/Min Off | 3 | 0 | 6/Month | 3 | 0 | 8/Hour On | 3 | 0 |
| 1/Hour Off | 4 | 0 | 3/Plan | 4 | 0 | 6/DOM | 4 | 0 | 8/Min On | 4 | 0 |
| 1/Min Off | 5 | 0 | 4/Month | 5 | 0 | 6/Hour On | 5 | 0 | 8/Hour Off | 5 | 0 |
| 1/Plan | 6 | 0 | 4/DOM | 6 | 0 | 6/Min On | 6 | 0 | 8/Min Off | 6 | 0 |
| 2/Month | 7 | 0 | 4/Hour On | 7 | 0 | 6/Hour Off | 7 | 0 | 8/Plan | 7 | 0 |
| 2/DOM | 8 | 0 | 4/Min On | 8 | 0 | 6/Min Off | 8 | 0 | 9/Month | 8 | 0 |
| 2/Hour On | 9 | 0 | 4/Hour Off | 9 | 0 | 6/Plan | 9 | 0 | 9/DOM | 9 | 0 |
| 2/Min On | A | 0 | 4/Min Off | A | 0 | 7/Month | A | 0 | 9/Hour On | A | 0 |
| 2/Hour Off | B | 0 | 4/Plan | B | 0 | 7/DOM | B | 0 | 9/Min On | B | 0 |
| 2/Min Off | C | 0 | 5/Month | C | 0 | 7/Hour On | C | 0 | 9/Hour Off | C | 0 |
| 2/Plan | D | 0 | 5/DOM | D | 0 | 7/Min On | D | 0 | 9/Min Off | D | 0 |
| 3/Month | E | 0 | 5/Hour On | E | 0 | 7/Hour Off | E | 0 | 9/Plan | E | 0 |
| 3/DOM | F | 0 | 5/Min On | F | 0 | 7/Min Off | F | 0 | | | |

**W4IKS Table 13**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(D+9+0+KEY)**

| FUNCTION | KEY | VALUE |
|---|---|---|
| Overlap H | 0 | _____ |
| Overlap J | 1 | _____ |
| Overlap K | 2 | _____ |
| Overlap L | 3 | _____ |
| OLH Switchpack | 4 | _____ |
| OLJ Switchpack | 5 | _____ |
| OLK Switchpack | 6 | _____ |
| OLL Switchpack | 7 | _____ |
| Reserved | 8 | _____ |
| Reserved | 9 | _____ |
| All Red Before EV | A | _____ |

**(D+9+3+KEY)**

| FUNCTION | KEY | VALUE |
|---|---|---|
| OLH Green | 0 | 0.0 |
| OLH Yellow | 1 | 0.0 |
| OLH Red | 2 | 0.0 |
| OLJ Green | 3 | 0.0 |
| OLJ Yellow | 4 | 0.0 |
| OLJ Red | 5 | 0.0 |
| OLK Green | 6 | 0.0 |
| OLK Yellow | 7 | 0.0 |
| OLK Red | 8 | 0.0 |
| OLL Green | 9 | 0.0 |
| OLL Yellow | A | 0.0 |
| OLL Red | B | 0.0 |

**(E+F+KEY)**

| FUNCTION | KEY | VALUE |
|---|---|---|
| RR Max II | 0 | 0 |
| Ped Perm Pl 1 | 1 | 0 |
| Ped Perm Pl 2 | 2 | 0 |
| Ped Perm Pl 3 | 3 | 0 |
| Ped Perm Pl 4 | 4 | 0 |
| Ped Perm Pl 5 | 5 | 0 |
| Ped Perm Pl 6 | 6 | 0 |
| Ped Perm Pl 7 | 7 | 0 |
| Ped Perm Pl 8 | 8 | 0 |
| Ped Perm Pl 9 | 9 | 0 |
| # of Lng Pwrouts | A | 0 |
| # pf Sht Pwrouts | B | 0 |
| Failed Det | C | 0 |
| Max II On | D | 0 |
| No Daylite Save | E | 1 |
| Revision Level | F | 50 |

**W4IKS Table 14 Sheet 1**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(D+9+KEY1+KEY2)**

| KEY1 = 8 | | KEY1 = 9 | | KEY1 = A | | KEY1 = B | |
|---|---|---|---|---|---|---|---|
| KEY2 | CODE | KEY2 | CODE | KEY2 | CODE | KEY | CODE |
| 0 | 206 | 0 | 21 | 0 | 24 | 0 | 205 |
| 1 | 62 | 1 | 2 | 1 | 26 | 1 | 11 |
| 2 | 24 | 2 | 5 | 2 | 6 | 2 | 21 |
| 3 | 25 | 3 | 205 | 3 | 205 | 3 | 6 |
| 4 | 20 | 4 | 146 | 4 | 146 | 4 | 14 |
| 5 | 20 | 5 | 23 | 5 | 23 | 5 | 20 |
| 6 | 21 | 6 | 45 | 6 | 66 | 6 | 23 |
| 7 | 6 | 7 | 20 | 7 | 205 | 7 | 68 |
| 8 | 5 | 8 | 27 | 8 | 146 | 8 | 20 |
| 9 | 207 | 9 | 5 | 9 | 21 | 9 | 24 |
| A | 206 | A | 205 | A | 5 | A | 27 |
| B | 63 | B | 146 | B | 14 | B | 5 |
| C | 24 | C | 21 | C | 20 | C | 205 |
| D | 25 | D | 6 | D | 21 | D | 147 |
| E | 20 | E | 14 | E | 5 | E | 21 |
| F | 20 | F | 20 | F | 13 | F | 5 |

**W4IKS Table 14 Sheet 2**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(D+9+KEY1+KEY2)**

| KEY1 = C | | KEY1 = D | | KEY1 = E | | KEY1 = F | |
|---|---|---|---|---|---|---|---|
| KEY2 | CODE | KEY2 | CODE | KEY2 | CODE | KEY | CODE |
| 0 | 12 | 0 | 21 | 0 | 45 | 0 | 0 |
| 1 | 205 | 1 | 6 | 1 | 20 | 1 | 0 |
| 2 | 147 | 2 | 14 | 2 | 24 | 2 | 0 |
| 3 | 23 | 3 | 209 | 3 | 29 | 3 | 0 |
| 4 | 67 | 4 | 6 | 4 | 7 | 4 | 0 |
| 5 | 20 | 5 | 24 | 5 | 20 | 5 | 0 |
| 6 | 26 | 6 | 27 | 6 | 24 | 6 | 0 |
| 7 | 6 | 7 | 5 | 7 | 25 | 7 | 0 |
| 8 | 205 | 8 | 208 | 8 | 6 | 8 | 0 |
| 9 | 148 | 9 | 5 | 9 | 210 | 9 | 0 |
| A | 21 | A | 30 | A | 6 | A | 0 |
| B | 5 | B | 26 | B | 24 | B | 0 |
| C | 11 | C | 5 | C | 21 | C | 0 |
| D | 209 | D | 210 | D | 6 | D | 0 |
| E | 5 | E | 5 | E | 14 | E | 0 |
| F | 24 | F | 23 | F | 0 | F | 0 |

**W4IKS Table 14 Sheet 3**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(D+E+KEY1+KEY2)**

| KEY1 = 0 | | KEY1 = 1 | | KEY1 = 2 | | KEY1 = 3 | |
|---|---|---|---|---|---|---|---|
| KEY2 | CODE | KEY2 | CODE | KEY2 | CODE | KEY | CODE |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| 2 | 0 | 2 | 0 | 2 | 0 | 2 | 0 |
| 3 | 0 | 3 | 0 | 3 | 0 | 3 | 0 |
| 4 | 0 | 4 | 0 | 4 | 0 | 4 | 0 |
| 5 | 0 | 5 | 0 | 5 | 0 | 5 | 0 |
| 6 | 0 | 6 | 0 | 6 | 0 | 6 | 0 |
| 7 | 0 | 7 | 0 | 7 | 0 | 7 | 0 |
| 8 | 0 | 8 | 0 | 8 | 0 | 8 | 0 |
| 9 | 0 | 9 | 0 | 9 | 0 | 9 | 0 |
| A | 0 | A | 0 | A | 0 | A | 0 |
| B | 0 | B | 0 | B | 0 | B | 0 |
| C | 0 | C | 0 | C | 0 | C | 0 |
| D | 0 | D | 0 | D | 0 | D | 0 |
| E | 0 | E | 0 | E | 0 | E | 0 |
| F | 0 | F | 0 | F | 0 | F | 0 |

**W4IKS Table 14 Sheet 4**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(D+E+KEY1+KEY2)**

| KEY1 = 4 | | KEY1 = 5 | | KEY1 = 6 | | KEY1 = 7 | |
|---|---|---|---|---|---|---|---|
| KEY2 | CODE | KEY2 | CODE | KEY2 | CODE | KEY | CODE |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| 2 | 0 | 2 | 0 | 2 | 0 | 2 | 0 |
| 3 | 0 | 3 | 0 | 3 | 0 | 3 | 0 |
| 4 | 0 | 4 | 0 | 4 | 0 | 4 | 0 |
| 5 | 0 | 5 | 0 | 5 | 0 | 5 | 0 |
| 6 | 0 | 6 | 0 | 6 | 0 | 6 | 0 |
| 7 | 0 | 7 | 0 | 7 | 0 | 7 | 0 |
| 8 | 0 | 8 | 0 | 8 | 0 | 8 | 0 |
| 9 | 0 | 9 | 0 | 9 | 0 | 9 | 0 |
| A | 0 | A | 0 | A | 0 | A | 0 |
| B | 0 | B | 0 | B | 0 | B | 0 |
| C | 0 | C | 0 | C | 0 | C | 0 |
| D | 0 | D | 0 | D | 0 | D | 0 |
| E | 0 | E | 0 | E | 0 | E | 0 |
| F | 0 | F | 0 | F | 0 | F | 0 |

**W4IKS Table 14 Sheet 5**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(D+E+KEY1+KEY2)**

| KEY1 = 8 | | KEY1 = 9 | | KEY1 = A | | KEY1 = B | |
|---|---|---|---|---|---|---|---|
| KEY2 | CODE | KEY2 | CODE | KEY2 | CODE | KEY | CODE |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| 2 | 0 | 2 | 0 | 2 | 0 | 2 | 0 |
| 3 | 0 | 3 | 0 | 3 | 0 | 3 | 0 |
| 4 | 0 | 4 | 0 | 4 | 0 | 4 | 0 |
| 5 | 0 | 5 | 0 | 5 | 0 | 5 | 0 |
| 6 | 0 | 6 | 0 | 6 | 0 | 6 | 0 |
| 7 | 0 | 7 | 0 | 7 | 0 | 7 | 0 |
| 8 | 0 | 8 | 0 | 8 | 0 | 8 | 0 |
| 9 | 0 | 9 | 0 | 9 | 0 | 9 | 0 |
| A | 0 | A | 0 | A | 0 | A | 0 |
| B | 0 | B | 0 | B | 0 | B | 0 |
| C | 0 | C | 0 | C | 0 | C | 0 |
| D | 0 | D | 0 | D | 0 | D | 0 |
| E | 0 | E | 0 | E | 0 | E | 0 |
| F | 0 | F | 0 | F | 0 | F | 0 |

**W4IKS Table 14 Sheet 6**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(D+E+KEY1+KEY2)**

| KEY1 = C | | KEY1 = D | | KEY1 = E | | KEY1 = F | |
|---|---|---|---|---|---|---|---|
| KEY2 | CODE | KEY2 | CODE | KEY2 | CODE | KEY | CODE |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| 2 | 0 | 2 | 0 | 2 | 0 | 2 | 0 |
| 3 | 0 | 3 | 0 | 3 | 0 | 3 | 0 |
| 4 | 0 | 4 | 0 | 4 | 0 | 4 | 0 |
| 5 | 0 | 5 | 0 | 5 | 0 | 5 | 0 |
| 6 | 0 | 6 | 0 | 6 | 0 | 6 | 0 |
| 7 | 0 | 7 | 0 | 7 | 0 | 7 | 0 |
| 8 | 0 | 8 | 0 | 8 | 0 | 8 | 0 |
| 9 | 0 | 9 | 0 | 9 | 0 | 9 | 0 |
| A | 0 | A | 0 | A | 0 | A | 0 |
| B | 0 | B | 0 | B | 0 | B | 0 |
| C | 0 | C | 0 | C | 0 | C | 0 |
| D | 0 | D | 0 | D | 0 | D | 0 |
| E | 0 | E | 0 | E | 0 | E | 0 |
| F | 0 | F | 0 | F | 0 | F | 0 |

**W4IKS Table 15**
**Date: Wednesday, February 06, 2013 Time: 07:35 AM**
**Intersection #138  124th @ Tualatin**

**(D+B+3+KEY)**

| FUNCTION | KEY | VALUE |
|---|---|---|
| CB Output #1 | 0 | 0 |
| CB Output #2 | 1 | 0 |
| CB Output #3 | 2 | 0 |
| CB Output #4 | 3 | 0 |
| CB Output #5 | 4 | 0 |
| CB Output #6 | 5 | 0 |
| CB Output #7 | 6 | 0 |
| CB Output #8 | 7 | 0 |
| CB Flash Out #9 | 8 | 0 |
| CB Flash Out #10 | 9 | 0 |
| CB Flash Out #11 | A | 52 |
| CB Flash Out #12 | B | 0 |

Page ID - 0

**(D+B+7+KEY)**

| FUNCTION | KEY | VALUE |
|---|---|---|
| CB Output #1 | 0 | 0 |
| CB Output #2 | 1 | 0 |
| CB Output #3 | 2 | 0 |
| CB Output #4 | 3 | 0 |
| CB Output #5 | 4 | 0 |
| CB Output #6 | 5 | 0 |
| CB Output #7 | 6 | 0 |
| CB Output #8 | 7 | 0 |
| CB Flash Out #9 | 8 | 0 |
| CB Flash Out #10 | 9 | 0 |
| CB Flash Out #11 | A | 0 |
| CB Flash Out #12 | B | 0 |

Page ID - 1

**(D+B+B+KEY)**

| FUNCTION | KEY | VALUE |
|---|---|---|
| CB Output #1 | 0 | 0 |
| CB Output #2 | 1 | 0 |
| CB Output #3 | 2 | 0 |
| CB Output #4 | 3 | 0 |
| CB Output #5 | 4 | 0 |
| CB Output #6 | 5 | 0 |
| CB Output #7 | 6 | 0 |
| CB Output #8 | 7 | 0 |
| CB Flash Out #9 | 8 | 0 |
| CB Flash Out #10 | 9 | 0 |
| CB Flash Out #11 | A | 0 |
| CB Flash Out #12 | B | 0 |

Page ID - 2

*NORTH*

Friday, June 10, 2016 09:09

| | | | |
|---|---|---|---|
| **Intersection Name** | *1 - Tualatin_124th A* | **Local ID** | *1* |
| **Intersection Telephone Number** | | | |
| **System Name** | *19 - 99W_Tualatin* | **System ID** | *19* |
| **Controller Type** | *Voyage - C1-C11* | | |
| **Controller Serial Number** | | **Installation Date** | |
| **Programmed by** | | **Programmed Date** | |

| **Graphic Map Background** | **Phase Rotation Diagram** |
|---|---|
| | |

# Control Data (next/2/2)

## Controller Function and Timing (next/2/1, next/2/2)

### Security, Sequence, Initialization

| | | |
|---|---|---|
| **Security Code** | **** | 0 = disabled, or 1000-9999 |
| **Sequence** | *7* | 0 = sequential, 1 = quad left turn, 2-6 = special A-E, 7 = lead lag |

| **Lead Lag (next/2/2/3)** | | | |
|---|---|---|---|
| **Phases 1 - 2** | **Phases 3 - 4** | **Phases 5 - 6** | **Phases 7 - 8** |
| *2* | *2* | *2* | *2* |
| 0 = no reversal, 1 = reversal, 2 = by coord plan or clock | | | |

### Initialization and Flash (next/2/2/5)

| | **Initialization** | **Flash Entry** | **Flash Exit** | |
|---|---|---|---|---|
| **Ring 1 Phase** | *2* | *0* | *2* | phase 1-8 |
| **Ring 2 Phase** | *6* | *0* | *6* | phase 1-8 |
| **Interval** | *2* | *0* | *2* | 0 = red, 1 = yellow, 2 = green |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Power up Flash** | *0.0* | 0.0 - 25.5 seconds | | **First All Red** | *8.0* | 0.0 - 25.5 seconds |

**Soft Flash (next/2/2/5)**

| | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Phase** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | 0 = dark, 1=flash yel WIG, 2 = flash yel WAG, 3 = flash red WIG, 4 = flash red WAG | | | | |
| | *3* | *4* | *3* | *4* | *3* | *4* | *3* | *4* | | | | | |
| **Overlap** | **A** | **B** | **C** | **D** | **E** | **F** | **G** | **H** | **I** | **J** | **K** | **L** | same as phase |
| | *3* | *4* | *3* | *4* | *3* | *4* | *3* | *4* | *3* | *4* | *3* | *4* | |
| **Internal Logic Output** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **9** | **10** | **11** | **12** | 0 = normal, 1 = dark, 2 = flash WIG |
| | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | |

## Per Phase Functions (next/2/2/3, next/2/2/1)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|---|---|---|---|---|---|---|---|---|
| **Phases Used** | | X | | X | X | X | | X | X = on |
| **Restricted Phases** | | | | | | | | | X = on (Sequence 2, 6, 7 only) |
| **Exclusive Phases** | | | | | | | | | X = on (Sequence 7 only) |
| **Yellow Lock** | | | | | | | | | X = on |
| **Min Recall** | | X | | | | X | | | |
| **Max Recall** | | | | | | | | | |
| **Ped Recall** | | | | | | | | | |
| **Red Lock** | | | | | | | | | |
| **Max Out Recall Inhibit** | | | | | | | | | |
| **Soft Recall** | | | | | | | | | |
| **Free Walk Rest** | | | | | | | | | |
| **Conditional Ped** | | | | | | | | | |
| **Disable Inhibit Max Termination** | | | | | | | | | |
| **Call to Non Act 1** | | | | | | | | | |
| **Call to Non Act 2** | | | | | | | | | |

## Dual Entry (next/2/2/9/3)

| | | |
|---|---|---|
| **Mode** | 1 | 0 = off, 1 = on, 2 = Not Used, 3 = by coord plan, 4 = by time clock circuit 61 |

| **Dual Entry Phase -->** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|---|---|---|---|---|---|---|---|---|
| **Phase** | 0 | 6 | 0 | 8 | 0 | 2 | 0 | 4 | 0 = none, 1-8 = phase 1-8 |

## Conditional Service, Five Section Head

| **Conditional Service (next/2/2/9/3)** | | | **5 Section Head Logic (next/2/2/9/4)** | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | **Anti-Trap** | | | | **Yellow Blanking LT** | |
| | **Mode** | **CS Max Time** | **X Omits Y** | | | | | | | |
| **Phase 1** | 0 | 0 | **X : Y** | | **Trap Protected Phase** | | **Next Phase** | | **Phase** | |
| **Phase 3** | 0 | 0 | **6 : 1** | 0 | **1** | | **< (5)** | | **1** | |
| **Phase 5** | 0 | 0 | **8 : 3** | 0 | **3** | | **< (7)** | | **3** | |
| **Phase 7** | 0 | 0 | **2 : 5** | 0 | **5** | | **< (1)** | | **5** | |
| | | | **4 : 7** | 0 | **7** | | **< (3)** | | **7** | |
| 0 = off, 1 = C.S.On. 2 = C.S. on by TOD circuit 57, 3 = N/A, 4 = C.S. and C.R. On, 5 = C.R. on by TOD circuit 57. | | | 0=off, 1=side call, 2=no side call | | X = On | | | | | |

| Phase Times (next/2/2/2, next/2/2/9/5) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| **Movement** | | *SB* | | *WB* | *SBL* | *NB* | | *PED* | |
| **Minimum Green** | *0* | *10* | *0* | *5* | *10* | *10* | *0* | *0* | 0 - 255 sec |
| **Passage** | *0.0* | *3.0* | *0.0* | *3.0* | *3.0* | *3.9* | *0.0* | *0.0* | 0.0 - 25.5 sec |
| **Yellow** | *0.0* | *4.0* | *0.0* | *4.0* | *4.0* | *4.0* | *0.0* | *2.0* | 0.0 - 25.5 sec |
| **Red Clearance** | *0.0* | *1.0* | *0.0* | *1.0* | *1.0* | *1.0* | *0.0* | *0.0* | 0.0 - 25.5 sec or 0 - 255 sec |
| **Max 1** | *0* | *50* | *0* | *15* | *40* | *50* | *0* | *30* | 0 - 255 sec |
| **Max 2** | *0* | *50* | *0* | *15* | *40* | *50* | *0* | *30* | 0 - 255 sec |
| **Walk** | *0* | *0* | *0* | *0* | *0* | *10* | *0* | *9* | 0 - 255 sec |
| **Ped Clear** | *0* | *0* | *0* | *0* | *0* | *15* | *0* | *23* | 0 - 255 sec |
| **Seconds Per Actuation** | *0.0* | *1.0* | *0.0* | *0.0* | *1.0* | *1.0* | *0.0* | *0.0* | 0.0 - 25.5 sec |
| **Time Before Reduction** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec |
| **Time to Reduce** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec |
| **Minimum Gap** | *0.0* | *3.0* | *0.0* | *0.0* | *3.0* | *3.0* | *0.0* | *0.0* | 0.0 - 25.5 sec |
| **Max Variable Initial** | *0* | *10* | *0* | *0* | *10* | *10* | *0* | *0* | 0 - 255 sec |
| **Auto Max Adjust** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 sec |
| **Auto Max Limit** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec |
| **Inhibit Min Yellow** | | | | | | | | *X* | X = On |
| **Red Decimal Off** | | | | | | | | | X = On |
| **Advance Walk** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec |
| **Other Controller Functions (next/2/2/9)** | | | | | | | | | |
| **Phase -->** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| **Inhibit Simultaneous Gap Out** | *X* | | *X* | *X* | *X* | | *X* | *X* | X = On |
| **Last Car Passage** | *2* | 0 = recall phase, 1 = last car passage, 2 = NOT recall - Not last car passage | | | | | | | |
| **Red Revert (+2 seconds)** | *3.0* | 0 - 25.5 sec | | | | | | | |
| **Auto Ped Clear** | | X = On | | | | | | | |
| **Flashing Don't Walk Into Yellow** | | X = On | | | | | | | |
| **Soft Recall / Red Rest Delay** | *0.0* | 0 - 25.5 sec | | | | | | | |
| **Ped Pushbutton** | *0* | 0 - 5 sec, 0 = disable | | | | | | | |
| **Advance Flash Rate** | *0* | 0 = disable, 1 = 120 FPM | | | | | | | |
| **Change Sequence** | | X = On (After a download with a power on - off cycle) | | | | | | | |
| **Phase -->** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| **Red Clear Extension Detector** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 = none 1 - 32 = detector 1 - 32 |
| **Red Clear Extension Red Time** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0 - 25.5 sec. |

## Local Detectors (next/2/2/4)

### Detector Data

| | Yellow Lock | Detector Inhibit | Call Phase | Extend Phase | Switch Phase | Delay Time | Stretch / Disconnect Time | Delay or Disconnect Mode |
|---|---|---|---|---|---|---|---|---|
| *Detector 1 - I1* | | | *1* | *1* | *0* | *0* | *0.0* | *0* |
| *Detector 2 - I9U* | | | *1* | *1* | *0* | *0* | *0.0* | *0* |
| *Detector 3 - I5* | | | *3* | *3* | *0* | *0* | *0.0* | *0* |
| *Detector 4 - I9L* | | | *3* | *3* | *0* | *0* | *0.0* | *0* |
| *Detector 5 - J1U* | | | *5* | *5* | *0* | *0* | *0.0* | *0* |
| *Detector 6 - J9U* | | | *5* | *5* | *0* | *0* | *0.0* | *0* |
| *Detector 7 - J5* | | | *7* | *7* | *0* | *0* | *0.0* | *0* |
| *Detector 8 - J9L* | | | *7* | *7* | *0* | *0* | *0.0* | *0* |
| *Detector 9 - I2U* | | | *2* | *2* | *0* | *0* | *0.0* | *0* |
| *Detector 10 - I2L* | | | *2* | *2* | *0* | *0* | *0.0* | *0* |
| *Detector 11 - I3U* | | | *2* | *2* | *0* | *0* | *0.0* | *0* |
| *Detector 12 - I3L* | | | *2* | *2* | *0* | *0* | *0.0* | *0* |
| *Detector 13 - I4* | | | *2* | *2* | *0* | *0* | *0.0* | *0* |
| *Detector 14 - I6U* | | | *4* | *4* | *0* | *5* | *0.0* | *0* |
| *Detector 15 - I6L* | | | *4* | *4* | *0* | *0* | *0.0* | *0* |
| *Detector 16 - I7U* | | | *4* | *4* | *0* | *5* | *0.0* | *0* |
| *Detector 17 - I7L* | | | *4* | *4* | *0* | *0* | *0.0* | *0* |
| *Detector 18 - I8* | | | *4* | *4* | *0* | *0* | *0.0* | *0* |
| *Detector 19 - J2U* | | | *6* | *6* | *0* | *0* | *0.0* | *0* |
| *Detector 20 - J2L* | | | *6* | *6* | *0* | *0* | *0.0* | *0* |
| *Detector 21 - J3U* | | | *6* | *6* | *0* | *0* | *0.0* | *0* |
| *Detector 22 - J3L* | | | *6* | *6* | *0* | *0* | *0.0* | *0* |
| *Detector 23 - J4* | | | *6* | *6* | *0* | *0* | *0.0* | *0* |
| *Detector 24 - J6U* | | | *8* | *8* | *0* | *0* | *0.0* | *0* |
| *Detector 25 - J6L* | | | *8* | *8* | *0* | *0* | *0.0* | *0* |
| *Detector 26 - J7U* | | | *8* | *8* | *0* | *0* | *0.0* | *0* |
| *Detector 27 - J7L* | | | *8* | *8* | *0* | *0* | *0.0* | *0* |
| *Detector 28 - J1L* | | | *5* | *5* | *0* | *0* | *0.0* | *0* |
| *Detector 29 -* | | | *0* | *0* | *0* | *0* | *0.0* | *0* |
| *Detector 30 -* | | | *0* | *0* | *0* | *0* | *0.0* | *0* |
| *Detector 31 -* | | | *0* | *0* | *0* | *0* | *0.0* | *0* |
| *Detector 32 -* | | | *0* | *0* | *0* | *0* | *0.0* | *0* |

yellow lock, detector inhibit, - X = On; call, extend, phase - 0 = none 1 - 8 = phase 1 - 8 ; delay time - 0 - 255 sec
stretch / disconnect time - 0.0 - 25.5 sec.; delay or disconnect Mode - 0 -13

## Detector Plans (next/2/2/4/5)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Loop Number** | | | | | | | | | |
| | **Plan Detectors** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 32, 0 = none, 1 -3 2 = detectors 1 - 32 |
| **Detector Plan 1** | **Call Phase** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 8, 0 = none, 1 - 8 = phase 1 - 8 |
| | **Extend Phase** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | |
| | **Switch Phase** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | |
| | **Delay Time** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec |
| | **Stretch/Disconnect Time** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 sec |
| | **Delay/ Disconnect Mode** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 13 |
| **Detector Plan 2** | **Call Phase** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 8, 0 = none, 1 - 8 = phase 1 - 8 |
| | **Extend Phase** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | |
| | **Switch Phase** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | |
| | **Delay Time** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec |
| | **Stretch/Disconnect Time** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 sec |
| | **Delay/ Disconnect Mode** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 13 |
| **Detector Plan 3** | **Call Phase** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 8, 0 = none, 1 - 8 = phase 1 - 8 |
| | **Extend Phase** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | |
| | **Switch Phase** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | |
| | **Delay Time** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec |
| | **Stretch/Disconnect Time** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 sec |
| | **Delay/ Disconnect Mode** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 13 |

| Detector Fail Monitor (next/2/2/4/3) | | | | | Detectors 33-64 (next/2/2/4/6) | | |
|---|---|---|---|---|---|---|---|
| | Fail Monitor Enable | Recall Phase | Min Counts | Max Counts | | Call Phase | Extend Phase |
| *Detector 1 - I1* | | *0* | *0* | *0* | Detector 33 - | 0 | 0 |
| *Detector 2 - I9U* | | *0* | *0* | *0* | Detector 34 - | 0 | 0 |
| *Detector 3 - I5* | | *0* | *0* | *0* | Detector 35 - | 0 | 0 |
| *Detector 4 - I9L* | | *0* | *0* | *0* | Detector 36 - | 0 | 0 |
| *Detector 5 - J1U* | | *0* | *0* | *0* | Detector 37 - | 0 | 0 |
| *Detector 6 - J9U* | | *0* | *0* | *0* | Detector 38 - | 0 | 0 |
| *Detector 7 - J5* | | *0* | *0* | *0* | Detector 39 - | 0 | 0 |
| *Detector 8 - J9L* | | *0* | *0* | *0* | Detector 40 - | 0 | 0 |
| *Detector 9 - I2U* | | *0* | *0* | *0* | Detector 41 - | 0 | 0 |
| *Detector 10 - I2L* | | *0* | *0* | *0* | Detector 42 - | 0 | 0 |
| *Detector 11 - I3U* | | *0* | *0* | *0* | Detector 43 - | 0 | 0 |
| *Detector 12 - I3L* | | *0* | *0* | *0* | Detector 44 - | 0 | 0 |
| *Detector 13 - I4* | | *0* | *0* | *0* | Detector 45 - | 0 | 0 |
| *Detector 14 - I6U* | | *0* | *0* | *0* | Detector 46 - | 0 | 0 |
| *Detector 15 - I6L* | | *0* | *0* | *0* | Detector 47 - | 0 | 0 |
| *Detector 16 - I7U* | | *0* | *0* | *0* | Detector 48 - | 0 | 0 |
| *Detector 17 - I7L* | | *0* | *0* | *0* | Detector 49 - | 0 | 0 |
| *Detector 18 - I8* | | *0* | *0* | *0* | Detector 50 - | 0 | 0 |
| *Detector 19 - J2U* | | *0* | *0* | *0* | Detector 51 - | 0 | 0 |
| *Detector 20 - J2L* | | *0* | *0* | *0* | Detector 52 - | 0 | 0 |
| *Detector 21 - J3U* | | *0* | *0* | *0* | Detector 53 - | 0 | 0 |
| *Detector 22 - J3L* | | *0* | *0* | *0* | Detector 54 - | 0 | 0 |
| *Detector 23 - J4* | | *0* | *0* | *0* | Detector 55 - | 0 | 0 |
| *Detector 24 - J6U* | | *0* | *0* | *0* | Detector 56 - | 0 | 0 |
| *Detector 25 - J6L* | | *0* | *0* | *0* | Detector 57 - | 0 | 0 |
| *Detector 26 - J7U* | | *0* | *0* | *0* | Detector 58 - | 0 | 0 |
| *Detector 27 - J7L* | | *0* | *0* | *0* | Detector 59 - | 0 | 0 |
| *Detector 28 - J1L* | | *0* | *0* | *0* | Detector 60 - | 0 | 0 |
| *Detector 29 -* | | *0* | *0* | *0* | Detector 61 - | 0 | 0 |
| *Detector 30 -* | | *0* | *0* | *0* | Detector 62 - | 0 | 0 |
| *Detector 31 -* | | *0* | *0* | *0* | Detector 63 - | 0 | 0 |
| *Detector 32 -* | | *0* | *0* | *0* | Detector 64 - | 0 | 0 |
| fail monitor enable - X = On, recall phase - 0 = none 1 - 8 = phase 1 - 8, min, max | | | | | call / extend phase - 0 = none 1 - 8 = phase 1 - 8 | | |

| | | |
|---|---|---|
| **Detector Fail Sample Period (all detectors)** | *0* | 0 - 255 minutes |

| **Video Fail Inputs (next/2/2/4/3) -->** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | |
|---|---|---|---|---|---|---|---|---|---|
| **Phase Recalled** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 = none, 1 - 8 = phase 1 - 8 |

## System Detectors (next/2/2/4/4)

| **System Detectors -->** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | |
|---|---|---|---|---|---|---|---|---|---|
| **Local Detector** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 = none, 1 - 32 = phase 1 - 32 |

## Overlaps / FYLTA (next/2/2/8)

| Vehicle Overlaps | | Phase or Movement | Phases 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Extension Green | Clearance Yellow | Red |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Overlaps | A | WBR | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0.0 | 4.0 | 0.0 |
| | B | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| | C | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| | D | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| | E | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| | F | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| | G | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| | H | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| | I | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| | J | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| | K | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |
| | L | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 |

A - D
0 = none
1 = overlap
2 = 60 FPM
3 = Not ped
4=Comp. Ph.
5=Prevent. Ext.
6=Not Veh.
7=Adv. FF

E - L
0 = no Overlap
1 = Overlap

Green,Yellow Red

### Not Ped - Ped Overlaps (next/2/2/8/5)

| Ped Overlaps -> | | A | B | C | D | E | F | G | H |
|---|---|---|---|---|---|---|---|---|---|
| Overlaps | A | | | | | | | | |
| | B | | | | | | | | |
| | C | | | | | | | | |
| | D | | | | | | | | |

X = Nor Ped Ped Overlap

### Advance Warning (next/2/2/8/3)

| | E | F | G | H | I | J | K | L | |
|---|---|---|---|---|---|---|---|---|---|
| Enable | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 = disabled, 1 = enabled |
| 1st Conditional Overlap | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 = none, 1 - overlap E, 2 = overlap F, etc. |
| 2nd Conditional Overlap | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Advance Deactivation Delay | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 99 seconds |

### Ped Overlaps (next/2/2/8/5)

| Phase --> | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Walk | Ped Clear | Ped Recall |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Ped Overlap | A | | | | | | | | | 0 | 0 | |
| | B | | | | | | | | | 0 | 0 | |
| | C | | | | | | | | | 0 | 0 | |
| | D | | | | | | | | | 0 | 0 | |
| | E | | | | | | | | | 0 | 0 | |
| | F | | | | | | | | | 0 | 0 | |
| | G | | | | | | | | | 0 | 0 | |
| | H | | | | | | | | | 0 | 0 | |

Phase, Ped Recall: X = on

Walk, Ped Clear: 0 - 255 seconds

### Flashing Yellow Left Turn Arrow (FYLTA) (next/2/2/8/6)

| Phase Pairs --> | 1 - 2 | 3 - 4 | 5 - 6 | 7 - 8 | |
|---|---|---|---|---|---|
| Enable | 0 | 0 | 4 | 0 | 0 = off, 3 = 3 outputs, 4 = 4 outputs, 5 = 5 outputs |
| Even Omits Odd | 0 | 0 | 1 | 0 | 0 = off, 1 = on, 2 = on, place call across barrier |
| Detector Switch Odd / Even | | | | | X = on, odd phase must be omitted |
| Red Transition | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 or 2.0 - 25.5 sec |
| Red Extension | 0.0 | 0.0 | 3.0 | 0.0 | 0.0 - 25.5 sec |
| Return to GLTA | 0 | 0 | 0 | 0 | 0 = off, 1 = max out, 2 = yellow lock |

Flashing Yellow Left Turn Arrow (FYLTA) - Continued on last page

## Service Plans (next/2/2/6)

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Phase -->** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | |
| **Service Plan 1** | **Call Mode** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | |
| | 0 = actuated, 1 = omit, 2 = CNA, 3 = min recall, 4 = max recall, 5 = soft recall, 6 = ped recall, 7 = omit ped, 8 = red rest | | | | | | | | | |
| | **Minimum Green** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec. |
| | **Passage** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 sec. |
| | **Yellow** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 or 3.0 - 25.5 |
| | **Red** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 sec. |
| | **Walk** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec. |
| | **Pedestrian Clearance** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec. |

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Phase -->** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | |
| **Service Plan 2** | **Call Mode** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | |
| | 0 = actuated, 1 = omit, 2 = CNA, 3 = min recall, 4 = max recall, 5 = soft recall, 6 = ped recall, 7 = omit ped, 8 = red rest | | | | | | | | | |
| | **Minimum Green** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec. |
| | **Passage** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 sec. |
| | **Yellow** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 or 3.0 - 25.5 |
| | **Red** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 sec. |
| | **Walk** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec. |
| | **Pedestrian Clearance** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec. |

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Phase -->** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | |
| **Service Plan 3** | **Call Mode** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | |
| | 0 = actuated, 1 = omit, 2 = CNA, 3 = min recall, 4 = max recall, 5 = soft recall, 6 = ped recall, 7 = omit ped, 8 = red rest | | | | | | | | | |
| | **Minimum Green** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec. |
| | **Passage** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 sec. |
| | **Yellow** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 or 3.0 - 25.5 |
| | **Red** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 sec. |
| | **Walk** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec. |
| | **Pedestrian Clearance** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec. |

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Phase -->** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | |
| **Service Plan 4** | **Call Mode** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | |
| | 0 = actuated, 1 = omit, 2 = CNA, 3 = min recall, 4 = max recall, 5 = soft recall, 6 = ped recall, 7 = omit ped, 8 = red rest | | | | | | | | | |
| | **Minimum Green** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec. |
| | **Passage** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 sec. |
| | **Yellow** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 or 3.0 - 25.5 |
| | **Red** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 sec. |
| | **Walk** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec. |
| | **Pedestrian Clearance** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec. |

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Phase -->** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | |
| **Service Plan 5** | **Call Mode** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | |
| | 0 = actuated, 1 = omit, 2 = CNA, 3 = min recall, 4 = max recall, 5 = soft recall, 6 = ped recall, 7 = omit ped, 8 = red rest | | | | | | | | | |
| | **Minimum Green** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec. |
| | **Passage** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 sec. |
| | **Yellow** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 or 3.0 - 25.5 |
| | **Red** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 sec. |
| | **Walk** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec. |
| | **Pedestrian Clearance** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec. |

| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | **Phase -->** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | |
| **Service Plan 6** | **Call Mode** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | |
| | 0 = actuated, 1 = omit, 2 = CNA, 3 = min recall, 4 = max recall, 5 = soft recall, 6 = ped recall, 7 = omit ped, 8 = red rest | | | | | | | | | |
| | **Minimum Green** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec. |
| | **Passage** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 sec. |
| | **Yellow** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 or 3.0 - 25.5 |
| | **Red** | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 sec. |
| | **Walk** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec. |
| | **Pedestrian Clearance** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec. |

## Service Plans Cont.

| | Phase --> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Service Plan 7 | Call Mode | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 = actuated, 1 = omit, 2 = CNA, 3 = min recall, 4 = max recall, 5 = soft recall, 6 = ped recall, 7 = omit ped, 8 = red rest | | | | | | | | | |
| | Minimum Green | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec. |
| | Passage | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 - 25.5 sec. |
| | Yellow | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 - 25.5 or 3.0 - 25.5 |
| | Red | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 - 25.5 sec. |
| | Walk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec. |
| | Pedestrian Clearance | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec. |

| | Phase --> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Service Plan 8 | Call Mode | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 0 = actuated, 1 = omit, 2 = CNA, 3 = min recall, 4 = max recall, 5 = soft recall, 6 = ped recall, 7 = omit ped, 8 = red rest | | | | | | | | | |
| | Minimum Green | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec. |
| | Passage | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 - 25.5 sec. |
| | Yellow | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 - 25.5 or 3.0 - 25.5 |
| | Red | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 - 25.5 sec. |
| | Walk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec. |
| | Pedestrian Clearance | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec. |

## Max Plans (next/2/2/7)

| | Phase --> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Max Plan 1 | Normal Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| | Fail Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Auto Max Adjust | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 - 25.5 sec |
| | Auto Max Limit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| Max Plan 2 | Normal Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| | Fail Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Auto Max Adjust | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 - 25.5 sec |
| | Auto Max Limit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| Max Plan 3 | Normal Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| | Fail Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Auto Max Adjust | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 - 25.5 sec |
| | Auto Max Limit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| Max Plan 4 | Normal Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| | Fail Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Auto Max Adjust | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 - 25.5 sec |
| | Auto Max Limit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| Max Plan 5 | Normal Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| | Fail Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Auto Max Adjust | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 - 25.5 sec |
| | Auto Max Limit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| Max Plan 6 | Normal Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| | Fail Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Auto Max Adjust | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 - 25.5 sec |
| | Auto Max Limit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| Max Plan 7 | Normal Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| | Fail Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Auto Max Adjust | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 - 25.5 sec |
| | Auto Max Limit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| Max Plan 8 | Normal Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| | Fail Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Auto Max Adjust | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 - 25.5 sec |
| | Auto Max Limit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |

# Coordination Data (next/2/3)

## Coordination Modes (next/2/3/1, next/2/3/4/1, next/2/3/4/3)

| | | |
|---|---|---|
| **Flash Mode** | *33* | 0=off, 1=on, 33=time clock, 34=comm, 35=hardwire, 36=NWS Set only, 37=AB3418 / NTCIP S |
| **Coordination Plan Mode** | *33* | 0=free, 1-32 = coord plan 1-32, 33=time clock, 34=comm, 35=hardwire, 36=NWS Set only, 37= |
| **Offset Seeking Mode** | *2* | 0=add only, 1=dwell, 2=fastway |
| **Late Ped** | *0* | 0 = off, 1 = on |
| **Coord Walk Rest** | *0* | 0 = off, 1 = on, 2 = by TOD circuit 160, 3 = end of walk, 4 = coord ped during perms |
| **Repeated Phase Service** | *0* | 0=off, 1=on (no coord ped), 2=on (beginning green coord ped), 3=on (coord ped always) |
| **Zero Mode (TS2 only)** | *0* | 0=start of main street, 1=end of main street, 2=by TOD circuit 144 |

| **Phase -->** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | 0 = service allowed<br>1 = service prevented |
|---|---|---|---|---|---|---|---|---|---|
| **Omit Phase During Repeated Phase Service** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | |
| **Auto Permissive Min Green** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 seconds |

## Coordination Plans (next/2/3/2)

| **Coord Plan** | **Coordination Phases** | | **Cycle Length** | **Offset Time** | **Min Cycle Length Dwell Time** | **Permissive** | **Service Plan** | **Max Plan** |
|---|---|---|---|---|---|---|---|---|
| | **Ring 1** | **Ring 2** | | | | | | |
| *1 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *2 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *3 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *4 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *5 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *6 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *7 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *8 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *9 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *10 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *11 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *12 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *13 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *14 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *15 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *16 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *17 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *18 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *19 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *20 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *21 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *22 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *23 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *24 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *25 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *26 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *27 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *28 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *29 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *30 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *31 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| *32 -* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| | 0 - 8 | | 0 - 255 sec. | | | | 0 - 8 | |

## Coordination Plans cont.

| Coord Plan | * = Force Offs / Split Times (TS2) | | | | | | | | * = Yield Points / Actuated Times (TS2) | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | Ring 1 | Ring 2 |
| 1 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 - 255 sec * = force offs and yield points | | | | | | | | | |

## Circuit Mapping (next/2/3/3)

| Circuit Map | Coord Plan | Time Clock Circuit | | Time Clock Circuit | | Time Clock Circuit | | Time Clock Circuit | | Time Clock Circuit | | Time Clock Circuit | | Time Clock Circuit | | Time Clock Circuit | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 34 | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U |
| 2 | 34 | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U |
| 3 | 34 | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U |
| 4 | 34 | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U |
| 5 | 34 | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U |
| 6 | 34 | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U |
| 7 | 34 | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U |
| 8 | 34 | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U |
| 9 | 34 | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U |
| 10 | 34 | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U |
| 11 | 34 | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U |
| 12 | 34 | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U |
| 13 | 34 | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U |
| 14 | 34 | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U |
| 15 | 34 | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U |
| 16 | 34 | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U |
| 17 | 34 | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U |
| 18 | 34 | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U |
| 19 | 34 | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U |
| 20 | 34 | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U | 0 | N/U |

coord plan - 0 = free, 1 - 32 = coord plan 1 - 32, 33 = any, 34 none selected
time clock circuits - 0 = not used, or circuits 6 - 196

## Dynamic Phase Length (next/2/3/4/4)

| | | Phase --> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Back Detector | 0 | 9 | 0 | 0 | 0 | 19 | 0 | 0 | 0 = none, 1-32 = detector 1-32 |
| | | Lane Factor | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 = none, 1.0 - 5.0 |
| | | Check Out Detector | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 = none, 1-32 = detector 1-32 |
| Coord Delta Force Off | | Set A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| | | Set B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | Set C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | Set D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Free Delta Max | | Set A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | Set B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | Set C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | Set D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

## Platoon Progression (next/2/3/4/5)

| Entry Local Only | | | Master Local Only | | |
|---|---|---|---|---|---|
| Platoon Max | 0 | 0 - 255 sec | Smoothing Factor | 0.0 | 0.0 - 1.0 |
| Min Platoon Green | 0 | 0 - 255 sec | | | |
| Entry Detector Gap | 0.0 | 0.0 - 25.5 | | | |
| Min Platoon Cycle | 0 | 0 - 255 sec | | | |

| Inbound | | | Outbound | | |
|---|---|---|---|---|---|
| Only for Entry Inbound Local or Master Local | | | Only for Entry Outbound Local or Master Local | | |
| Entry IB Local also Last OB Local | 0 | 0 - 50 | Entry OB Local also Last IB Local | 0 | 0 - 50 |
| | | | | | |
| Speed | 0 | 0 - 55 mph | Speed | 0 | 0 - 55 mph |
| Distance from Entry Local | 0 | 0 - 65000 feet | Distance from Entry Local | 0 | 0 - 65000 feet |

| Entry Local Only | | | | Entry Local Only | | | |
|---|---|---|---|---|---|---|---|
| Distance from Entry Local Detector | 0 | 0 - 999 feet | | Distance from Entry Local Detector | 0 | 0 - 999 feet | |
| Entry Local Detector | 0 | 0 | 0 - 32 | Entry Local Detector | 0 | 0 | 0 - 32 |

| Master Local | | | | Master Local | | | |
|---|---|---|---|---|---|---|---|
| Master Mid - System Critical Detectors | 0 | 0 | 0 - 16 | Master Mid - System Critical Detectors | 0 | 0 | 0 - 16 |

## Force Off Percents

| Inbound | 1 | 3 | 4 | 5 | 7 | 8 | Outbound | 1 | 3 | 4 | 5 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Split 1 | 0 | 0 | 0 | 0 | 0 | 0 | Split 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Split 2 | 0 | 0 | 0 | 0 | 0 | 0 | Split 2 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 - 100 % | | | | | | | 0 - 100 % | | | | | |

# Time of Day Data (next/2/4)

**Day Program (next/2/4/1)**

| | Day Prog. | Time | Coord Plan | Coord Plan or Circuit | | State On / Off | | Day Prog. | Time | Coord Plan | Coord Plan or Circuit | | State On/Off |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1** | *1* | *06:00* | | *8* | ESR | *X* | **51** | | | | | | |
| **2** | *1* | *06:00* | | *99* | LG5 | *X* | **52** | | | | | | |
| **3** | *1* | *20:00* | | *8* | ESR | | **53** | | | | | | |
| **4** | *1* | *20:00* | | *99* | LG5 | | **54** | | | | | | |
| **5** | *2* | *06:00* | | *8* | ESR | *X* | **55** | | | | | | |
| **6** | *2* | *06:00* | | *99* | LG5 | *X* | **56** | | | | | | |
| **7** | *2* | *20:00* | | *8* | ESR | | **57** | | | | | | |
| **8** | *2* | *20:00* | | *99* | LG5 | | **58** | | | | | | |
| **9** | *3* | *06:00* | | *8* | ESR | *X* | **59** | | | | | | |
| **10** | *3* | *06:00* | | *99* | LG5 | *X* | **60** | | | | | | |
| **11** | *3* | *20:00* | | *8* | ESR | | **61** | | | | | | |
| **12** | *3* | *20:00* | | *99* | LG5 | | **62** | | | | | | |
| **13** | | | | | | | **63** | | | | | | |
| **14** | | | | | | | **64** | | | | | | |
| **15** | | | | | | | **65** | | | | | | |
| **16** | | | | | | | **66** | | | | | | |
| **17** | | | | | | | **67** | | | | | | |
| **18** | | | | | | | **68** | | | | | | |
| **19** | | | | | | | **69** | | | | | | |
| **20** | | | | | | | **70** | | | | | | |
| **21** | | | | | | | **71** | | | | | | |
| **22** | | | | | | | **72** | | | | | | |
| **23** | | | | | | | **73** | | | | | | |
| **24** | | | | | | | **74** | | | | | | |
| **25** | | | | | | | **75** | | | | | | |
| **26** | | | | | | | **76** | | | | | | |
| **27** | | | | | | | **77** | | | | | | |
| **28** | | | | | | | **78** | | | | | | |
| **29** | | | | | | | **79** | | | | | | |
| **30** | | | | | | | **80** | | | | | | |
| **31** | | | | | | | **81** | | | | | | |
| **32** | | | | | | | **82** | | | | | | |
| **33** | | | | | | | **83** | | | | | | |
| **34** | | | | | | | **84** | | | | | | |
| **35** | | | | | | | **85** | | | | | | |
| **36** | | | | | | | **86** | | | | | | |
| **37** | | | | | | | **87** | | | | | | |
| **38** | | | | | | | **88** | | | | | | |
| **39** | | | | | | | **89** | | | | | | |
| **40** | | | | | | | **90** | | | | | | |
| **41** | | | | | | | **91** | | | | | | |
| **42** | | | | | | | **92** | | | | | | |
| **43** | | | | | | | **93** | | | | | | |
| **44** | | | | | | | **94** | | | | | | |
| **45** | | | | | | | **95** | | | | | | |
| **46** | | | | | | | **96** | | | | | | |
| **47** | | | | | | | **97** | | | | | | |
| **48** | | | | | | | **98** | | | | | | |
| **49** | | | | | | | **99** | | | | | | |
| **50** | | | | | | | **100** | | | | | | |
| | 1 - 15 | hh : mm | X = on | coord plan 0 - 32 or circuit 1-196 | | X = on | | 1 - 15 | hh : mm | X = on | coord plan 0 - 32 or circuit 1-196 | | X = on |

| Day Program cont. | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Day Prog. | Time | Coord Plan | Coord Plan or Circuit | | State On / Off | | Day Prog. | Time | Coord Plan | Coord Plan or Circuit | | State On / Off |
| 101 | | | | | | | 151 | | | | | | |
| 102 | | | | | | | 152 | | | | | | |
| 103 | | | | | | | 153 | | | | | | |
| 104 | | | | | | | 154 | | | | | | |
| 105 | | | | | | | 155 | | | | | | |
| 106 | | | | | | | 156 | | | | | | |
| 107 | | | | | | | 157 | | | | | | |
| 108 | | | | | | | 158 | | | | | | |
| 109 | | | | | | | 159 | | | | | | |
| 110 | | | | | | | 160 | | | | | | |
| 111 | | | | | | | 161 | | | | | | |
| 112 | | | | | | | 162 | | | | | | |
| 113 | | | | | | | 163 | | | | | | |
| 114 | | | | | | | 164 | | | | | | |
| 115 | | | | | | | 165 | | | | | | |
| 116 | | | | | | | 166 | | | | | | |
| 117 | | | | | | | 167 | | | | | | |
| 118 | | | | | | | 168 | | | | | | |
| 119 | | | | | | | 169 | | | | | | |
| 120 | | | | | | | 170 | | | | | | |
| 121 | | | | | | | 171 | | | | | | |
| 122 | | | | | | | 172 | | | | | | |
| 123 | | | | | | | 173 | | | | | | |
| 124 | | | | | | | 174 | | | | | | |
| 125 | | | | | | | 175 | | | | | | |
| 126 | | | | | | | 176 | | | | | | |
| 127 | | | | | | | 177 | | | | | | |
| 128 | | | | | | | 178 | | | | | | |
| 129 | | | | | | | 179 | | | | | | |
| 130 | | | | | | | 180 | | | | | | |
| 131 | | | | | | | 181 | | | | | | |
| 132 | | | | | | | 182 | | | | | | |
| 133 | | | | | | | 183 | | | | | | |
| 134 | | | | | | | 184 | | | | | | |
| 135 | | | | | | | 185 | | | | | | |
| 136 | | | | | | | 186 | | | | | | |
| 137 | | | | | | | 187 | | | | | | |
| 138 | | | | | | | 188 | | | | | | |
| 139 | | | | | | | 189 | | | | | | |
| 140 | | | | | | | 190 | | | | | | |
| 141 | | | | | | | 191 | | | | | | |
| 142 | | | | | | | 192 | | | | | | |
| 143 | | | | | | | 193 | | | | | | |
| 144 | | | | | | | 194 | | | | | | |
| 145 | | | | | | | 195 | | | | | | |
| 146 | | | | | | | 196 | | | | | | |
| 147 | | | | | | | 197 | | | | | | |
| 148 | | | | | | | 198 | | | | | | |
| 149 | | | | | | | 199 | | | | | | |
| 150 | | | | | | | 200 | | | | | | |
| | 1 - 15 | hh : mm | X = on | coord plan 0 - 32 or circuit 1-196 | | X = on | | 1 - 15 | hh : mm | X = on | coord plan 0 - 32 or circuit 1-196 | | X = on |

**Week Program (next/2/4/2)**

| | Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 1 | 1 | 1 | 1 | 1 | 3 |
| 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 7 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

0 = none, 1 - 15 = day plan

**Exception Days (next/2/4/6)**

| | DOW | WOM | DOM | MOY | Day Prog. |
|---|---|---|---|---|---|
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
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| 11 | | | | | |
| 12 | | | | | |
| 13 | | | | | |
| 14 | | | | | |
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| 18 | | | | | |
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| 29 | | | | | |
| 30 | | | | | |
| 31 | | | | | |
| 32 | | | | | |
| 33 | | | | | |
| 34 | | | | | |
| 35 | | | | | |
| | 0-10 | 0 - 5 | 0-31 | 0-12 | 0 - 15 |

**Year Program (next/2/4/3)**

| From Date | To Date | Week Program |
|---|---|---|
| 01/01/2016 | 12/31/2016 | 1 |

New Years Day - Date - January 1st

Martin Luther King Day - DOW WOM - 3rd Monday of January

President's Day - DOW WOM - 3rd Monday February

Memorial Day - DOW WOM - Last Monday May

Fourth of July - Date - July 4th

Labor Day - DOW WOM - 1st Monday September

Columbus Day - DOW WOM - 2nd Monday October

Veteran's Day - Date - November 11th

Thanksgiving - DOW WOM - 4th Thursday November

Christmas - Date - December 25th

**Time Clock References (next/2/4/5)**

| | | |
|---|---|---|
| **Synch reference Mode** | 0 | 0 = timed, 1 = by event |
| **Synch Reference Time** | 00:00 | 00:00 - 23:59 |
| **Daylight Savings Enable** | X | X = on |
| **Reset Time** | 00:00 | 00:00 - 23:59 |

Exception day headings - DOW = Day of Week, WOM = Week of Month, DOM = Day of Month, MOY = Month of Year

| Circuit Overrides (next/2/4/4) | | | | | | | |
|---|---|---|---|---|---|---|---|
| 1 - Coord Line 1 | CL1 | *TOD* | | 51 - Ped Omit 3 | PO3 | *TOD* | |
| 2 - Coord Line 2 | CL2 | *TOD* | | 52 - Ped Omit 4 | PO4 | *TOD* | |
| 3 - Coord Line 4 | CL4 | *TOD* | | 53 - Ped Omit 5 | PO5 | *TOD* | |
| 4 - Coord Line 8 | CL8 | *TOD* | | 54 - Ped Omit 6 | PO6 | *TOD* | |
| 5 - Coord Line 16 | C16 | *TOD* | | 55 - Ped Omit 7 | PO7 | *TOD* | |
| 6 - Coord Operation | CRD | *TOD* | | 56 - Ped Omit 8 | PO8 | *TOD* | |
| 7 - Soft Flash | SFL | *TOD* | | 57 - Conditional Service | CVS | *TOD* | |
| 8 - Enable System Relays | ESR | *On* | | 58 - Inhibit Simultaneous Gap Out | ISG | *On* | |
| 9 - Call to Non Act 1 | CN1 | *TOD* | | 59 - Inhibit Hardwire | HWI | *TOD* | |
| 10 - Call to Non Act 2 | CN2 | *TOD* | | 60 - Ped Override Mode | POM | *On* | |
| 11 - Walk Rest Modifier | WRM | *TOD* | | 61 - Dual Entry | DLE | *On* | |
| 12 - Min Recall | MIN | *TOD* | | 62 - Exclusive Ped | EPD | *TOD* | |
| 13 - Max 2 Both Rings | MX2 | *TOD* | | 63 - Call to Time Clock Mode | CTC | *TOD* | |
| 14 - Coord Inhibit Max Ring 1, 2 | IMT | *TOD* | | 64 - Dual Enhanced Ped | DEP | *TOD* | |
| 15 - Enable Service Log | ESL | *TOD* | | 65 - Service Plan 1 | SP1 | *TOD* | |
| 16 - Call to Free | CTF | *TOD* | | 66 - Service Plan 2 | SP2 | *TOD* | |
| 17 - TOD Output 1 | TO1 | *TOD* | | 67 - Service Plan 3 | SP3 | *TOD* | |
| 18 - TOD Output 2 | TO2 | *TOD* | | 68 - Service Plan 4 | SP4 | *TOD* | |
| 19 - TOD Output 3 | TO3 | *TOD* | | 69 - Service Plan 5 | SP5 | *TOD* | |
| 20 - TOD Output 4 | TO4 | *TOD* | | 70 - Service Plan 6 | SP6 | *TOD* | |
| 21 - TOD Output 5 | TO5 | *TOD* | | 71 - Service Plan 7 | SP7 | *TOD* | |
| 22 - TOD Output 6 | TO6 | *TOD* | | 72 - Service Plan 8 | SP8 | *TOD* | |
| 23 - TOD Output 7 | TO7 | *TOD* | | 73 - Max Plan 1 | MP1 | *TOD* | |
| 24 - TOD Output 8 | TO8 | *TOD* | | 74 - Max Plan 2 | MP2 | *TOD* | |
| 25 - Vehicle Call Phase 1 | VC1 | *TOD* | On / Off / TOD | 75 - Max Plan 3 | MP3 | *TOD* | On / Off / TOD |
| 26 - Vehicle Call Phase 2 | VC2 | *TOD* | | 76 - Max Plan 4 | MP4 | *TOD* | |
| 27 - Vehicle Call Phase 3 | VC3 | *TOD* | | 77 - Max Plan 5 | MP5 | *TOD* | |
| 28 - Vehicle Call Phase 4 | VC4 | *TOD* | | 78 - Max Plan 6 | MP6 | *TOD* | |
| 29 - Vehicle Call Phase 5 | VC5 | *TOD* | | 79 - Max Plan 7 | MP7 | *TOD* | |
| 30 - Vehicle Call Phase 6 | VC6 | *TOD* | | 80 - Max Plan 8 | MP8 | *TOD* | |
| 31 - Vehicle Call Phase 7 | VC7 | *TOD* | | 81 - Transit Priority Max Group 1 | TG1 | *TOD* | |
| 32 - Vehicle Call Phase 8 | VC8 | *TOD* | | 82 - Transit Priority Max Group 2 | TG2 | *TOD* | |
| 33 - Ped Call Phase 1 | PC1 | *TOD* | | 83 - Transit Priority Max Group 3 | TG3 | *TOD* | |
| 34 - Ped Call Phase 2 | PC2 | *TOD* | | 84 - Transit Priority Max Group 4 | TG4 | *TOD* | |
| 35 - Ped Call Phase 3 | PC3 | *TOD* | | 85 - Transit Priority Max Group 5 | TG5 | *TOD* | |
| 36 - Ped Call Phase 4 | PC4 | *TOD* | | 86 - Transit Priority Max Group 6 | TG6 | *TOD* | |
| 37 - Ped Call Phase 5 | PC5 | *TOD* | | 87 - Transit Priority Max Group 7 | TG7 | *TOD* | |
| 38 - Ped Call Phase 6 | PC6 | *TOD* | | 88 - Transit Priority Max Group 8 | TG8 | *TOD* | |
| 39 - Ped Call Phase 7 | PC7 | *TOD* | | 89 - Inhibit Volume Density 1 | IV1 | *TOD* | |
| 40 - Ped Call Phase 8 | PC8 | *TOD* | | 90 - Inhibit Volume Density 2 | IV2 | *TOD* | |
| 41 - Vehicle Omit 1 | VO1 | *TOD* | | 91 - Inhibit Volume Density 3 | Iv3 | *TOD* | |
| 42 - Vehicle Omit 2 | VO2 | *TOD* | | 92 - Inhibit Volume Density 4 | IV4 | *TOD* | |
| 43 - Vehicle Omit 3 | VO3 | *TOD* | | 93 - Inhibit Volume Density 5 | IV5 | *TOD* | |
| 44 - Vehicle Omit 4 | VO4 | *TOD* | | 94 - Inhibit Volume Density 6 | IV6 | *TOD* | |
| 45 - Vehicle Omit 5 | VO5 | *TOD* | | 95 - Inhibit Volume Density 7 | IV7 | *TOD* | |
| 46 - Vehicle Omit 6 | VO6 | *TOD* | | 96 - Inhibit Volume Density 8 | IV8 | *TOD* | |
| 47 - Vehicle Omit 7 | VO7 | *TOD* | | 97 - Lag 1 | LG1 | *TOD* | |
| 48 - Vehicle Omit 8 | VO8 | *TOD* | | 98 - Lag 3 | LG3 | *TOD* | |
| 49 - Ped Omit 1 | PO1 | *TOD* | | 99 - Lag 5 | LG5 | *TOD* | |
| 50 - Ped Omit 2 | PO2 | *TOD* | | 100 - Lag 7 | LG7 | *TOD* | |

| Circuit Overrides cont. | | | | | | | |
|---|---|---|---|---|---|---|---|
| 101 - Inhibit Overlap A | OLA | TOD | | 151 - Coord Hold 7 | HD7 | TOD | |
| 102 - Inhibit Overlap B | OLB | TOD | | 152 - Coord Hold 8 | HD8 | TOD | |
| 103 - Inhibit Overlap C | OLC | TOD | | 153 - PE Priority Return B | PRB | TOD | |
| 104 - Inhibit Overlap D | OLD | TOD | | 154 - PE Priority Return C | PRC | TOD | |
| 105 - Enable Schedule A Phone 1 | AT1 | TOD | | 155 - PE Priority Return D | PRD | TOD | |
| 106 - Enable Schedule A Phone 2 | AT2 | TOD | | 156 - PE Priority Return E | PRE | TOD | |
| 107 - Enable Schedule B Phone 1 | BT1 | TOD | | 157 - Platoon Inbound | PPI | TOD | |
| 108 - Enable Schedule B Phone 2 | BT2 | TOD | | 158 - Platoon Outbound | PPO | TOD | |
| 109 - Enable Schedule C Phone 1 | CT1 | TOD | | 159 - Platoon Spl 2 | PS2 | TOD | |
| 110 - Enable Schedule C Phone 2 | CT2 | TOD | | 160 - Coord Walk Rest | CWR | TOD | |
| 111 - Enable Volume to Call Phone 1 | VT1 | TOD | | 161 - Dynamic Phase Length Short Inhibit 1 | SI1 | TOD | |
| 112 - Enable Volume to Call Phone 2 | VT2 | TOD | | 162 - Dynamic Phase Length Short Inhibit 2 | SI2 | TOD | |
| 113 - Enable Volume Logging | EVL | On | | 163 - Dynamic Phase Length Short Inhibit 3 | SI3 | TOD | |
| 114 - Enable MOE Logging | EML | On | | 164 - Dynamic Phase Length Short Inhibit 4 | SI4 | TOD | |
| 115 - Detector Low Threshold Inhibit | DLI | TOD | | 165 - Dynamic Phase Length Short Inhibit 5 | SI5 | TOD | |
| 116 - Detector Continue Presence Inhibit | DPI | TOD | | 166 - Dynamic Phase Length Short Inhibit 6 | SI6 | TOD | |
| 117 - Inhibit Detector Based on Programming | IND | TOD | | 167 - Dynamic Phase Length Short Inhibit 7 | SI7 | TOD | |
| 118 - Inhibit Detector Delay | IDD | TOD | | 168 - Dynamic Phase Length Short Inhibit 8 | SI8 | TOD | |
| 119 - Inhibit Conditional Ped | ICP | TOD | | 169 - Coord Late Left Turn 1 | CT1 | TOD | |
| 120 - Inhibit Transit Priority | ITP | TOD | | 170 - Coord Late Left Turn 3 | CT3 | TOD | |
| 121 - Red Rest Ring 1,2 | RRM | TOD | | 171 - Coord Late Left Turn 5 | CT5 | TOD | |
| 122 - Enable Transcend | TRA | TOD | | 172 - Coord Late Left Turn 7 | CT7 | TOD | |
| 123 - Omit Red Clear Ring 1,2 | ORC | TOD | | 173 - Dynamic Phase Length Enable A | DPA | TOD | |
| 124 - Enable Classification Logging | CLE | TOD | | 174 - Dynamic Phase Length Enable B | DPB | TOD | |
| 125 - Ped Recycle Ring 1,2 | PCY | TOD | On / Off / TOD | 175 - Dynamic Phase Length Enable C | DPC | TOD | On / Off / TOD |
| 126 - Not Used | N/U | TOD | | 176 - Dynamic Phase Length Enable D | DPD | TOD | |
| 127 - Enable MOE Log to Call Phone 1 | MT1 | TOD | | 177 - Proactive Plan Select Average | PSA | TOD | |
| 128 - Enable MOE Log to Call Phone 2 | MT2 | TOD | | 178 - Proactive Plan Select Inbound | PSI | TOD | |
| 129 - Transit Inhibit Short Time 1 | IS1 | TOD | | 179 - Proactive Plan Select Outbound | PSO | TOD | |
| 130 - Transit Inhibit Short Time 2 | IS2 | TOD | | 180 - Split Variant Inbound | SVI | TOD | |
| 131 - Transit Inhibit Short Time 3 | IS3 | TOD | | 181 - Split Variant Outbound | SVO | TOD | |
| 132 - Transit Inhibit Short Time 4 | IS4 | TOD | | 182 - Disable Coord Walk Rest Ring 1 | DW1 | TOD | |
| 133 - Transit Inhibit Short Time 5 | IS5 | TOD | | 183 - Disable Coord Walk Rest Ring 2 | DW2 | TOD | |
| 134 - Transit Inhibit Short Time 6 | IS6 | TOD | | 184 - Proactive Plan Select New Look | NLK | TOD | |
| 135 - Transit Inhibit Short Time 7 | IS7 | TOD | | 185 - Disable Red Clearance Extension | DRX | TOD | |
| 136 - Transit Inhibit Short Time 8 | IS8 | TOD | | 186 - Detector Plan Line 1 | DL1 | TOD | |
| 137 - Enable Transit Priority Logging | ETL | TOD | | 187 - Detector Plan Line 2 | DL2 | TOD | |
| 138 - Disable Flashing Yellow Arrow 1 | DF1 | TOD | | 188 - Disable LRT 1 Vertical Flashing Bar | DV1 | TOD | |
| 139 - Disable Flashing Yellow Arrow 3 | DF3 | TOD | | 189 - Disable LRT 2 Vertical Flashing Bar | DV2 | TOD | |
| 140 - Disable Flashing Yellow Arrow 5 | DF5 | TOD | | 190 - Disable LRT 3 Vertical Flashing Bar | DV3 | TOD | |
| 141 - Disable Flashing Yellow Arrow 7 | DF7 | TOD | | 191 - Disable LRT 4 Vertical Flashing Bar | DV4 | TOD | |
| 142 - Disable Auto Max | DAM | TOD | | 192 - Datakey Enable | DKE | On | |
| 143 - Disable Repeat Phase Service | DRS | TOD | | 193 - Dynamic Phase Reversal Enable 1 | DR1 | TOD | |
| 144 - Coord End of Main Street | EMS | TOD | | 194 - Dynamic Phase Reversal Enable 3 | DR3 | TOD | |
| 145 - Coord Hold 1 | HD1 | TOD | | 195 - Dynamic Phase Reversal Enable 5 | DR5 | TOD | |
| 146 - Coord Hold 2 | HD2 | TOD | | 196 - Dynamic Phase Reversal Enable 7 | DR7 | TOD | |
| 147 - Coord Hold 3 | HD3 | TOD | | 197 - Enable Coord Logging | ECL | On | |
| 148 - Coord Hold 4 | HD4 | TOD | | 198 - Disable Gap FYLTA 1,3,5,7 | DGF | TOD | |
| 149 - Coord Hold 5 | HD5 | TOD | | 199 - Coordination Auto Walk | CAW | TOD | |
| 150 - Coord Hold 6 | HD6 | TOD | | 200 - Enable Coordinated Auto Max | ECM | TOD | |

# Preemption Data (next/2/5)

**Sequence (next/2/5/1 - 8)**

| Sequences / Intervals | | Instruction | Phases Serviced | Interval Time | Hold On Input | Outputs On | Output Mode |
|---|---|---|---|---|---|---|---|
| 1 | 1 | 0 | 25 | 0 | 1 | | 0 |
| | 2 | 98 | | 0 | 0 | | 0 |
| | 3 | 0 | | 0 | 0 | | 0 |
| | 4 | 0 | | 0 | 0 | | 0 |
| | 5 | 0 | | 0 | 0 | | 0 |
| | 6 | 0 | | 0 | 0 | | 0 |
| | 7 | 0 | | 0 | 0 | | 0 |
| | 8 | 0 | | 0 | 0 | | 0 |
| | 9 | 0 | | 0 | 0 | | 0 |
| | 10 | 0 | | 0 | 0 | | 0 |
| 2 | 1 | 0 | 4 | 0 | 1 | | 0 |
| | 2 | 98 | | 0 | 0 | | 0 |
| | 3 | 0 | | 0 | 0 | | 0 |
| | 4 | 0 | | 0 | 0 | | 0 |
| | 5 | 0 | | 0 | 0 | | 0 |
| | 6 | 0 | | 0 | 0 | | 0 |
| | 7 | 0 | | 0 | 0 | | 0 |
| | 8 | 0 | | 0 | 0 | | 0 |
| | 9 | 0 | | 0 | 0 | | 0 |
| | 10 | 0 | | 0 | 0 | | 0 |
| 3 | 1 | 0 | 6 | 0 | 1 | | 0 |
| | 2 | 98 | | 0 | 0 | | 0 |
| | 3 | 0 | | 0 | 0 | | 0 |
| | 4 | 0 | | 0 | 0 | | 0 |
| | 5 | 0 | | 0 | 0 | | 0 |
| | 6 | 0 | | 0 | 0 | | 0 |
| | 7 | 0 | | 0 | 0 | | 0 |
| | 8 | 0 | | 0 | 0 | | 0 |
| | 9 | 0 | | 0 | 0 | | 0 |
| | 10 | 0 | | 0 | 0 | | 0 |
| 4 | 1 | 0 | | 0 | 0 | | 0 |
| | 2 | 0 | | 0 | 0 | | 0 |
| | 3 | 0 | | 0 | 0 | | 0 |
| | 4 | 0 | | 0 | 0 | | 0 |
| | 5 | 0 | | 0 | 0 | | 0 |
| | 6 | 0 | | 0 | 0 | | 0 |
| | 7 | 0 | | 0 | 0 | | 0 |
| | 8 | 0 | | 0 | 0 | | 0 |
| | 9 | 0 | | 0 | 0 | | 0 |
| | 10 | 0 | | 0 | 0 | | 0 |
| 5 | 1 | 0 | | 0 | 0 | | 0 |
| | 2 | 0 | | 0 | 0 | | 0 |
| | 3 | 0 | | 0 | 0 | | 0 |
| | 4 | 0 | | 0 | 0 | | 0 |
| | 5 | 0 | | 0 | 0 | | 0 |
| | 6 | 0 | | 0 | 0 | | 0 |
| | 7 | 0 | | 0 | 0 | | 0 |
| | 8 | 0 | | 0 | 0 | | 0 |
| | 9 | 0 | | 0 | 0 | | 0 |
| | 10 | 0 | | 0 | 0 | | 0 |

Instructions
0 - Service Phases
1-9 = Special Interval 1-9
10 - Preempt Sequence Allows FYLTA
11 - Preempt Interval Disables FYLTA
15 - Alternate Trap Protection
90 - Go to all Red
91 - Soft Flash On
92 - Soft Flash Off
93 - Enable Ped
94 - Disable Peds
95 - Priority Return
96 - Enable Coordination with peds
97 - Enable Coordination without peds
98 - Return with NO Calls
99 - Return with Vehicle Calls
100 - jump to step in Interval Time
101 - Use Interval Time as Resetable Gap Timer
196 - Coord Re-synch with Peds
197 - Coord Re-synch without Peds
200 - Light Rail Train phase without Peds
201 - Light Rail Train phase with Peds
202 - Return to highest queue/delay phase (this uses the Dynamic Phase Length Back Detectors)
216 - Light Rail Train Coord Re-synch with Peds
217 - Light Rail Train Coord Re-synch without Peds

Phases Serviced - phases 1 - 8

Interval Time - 0 - 255 sec or interval 1 - 10

Hold on Input:
0 = Do not hold
1 = Hold
2 = Ped Service to Rest in Walk

Outputs On - output 1 - 8

Output Modes -
0 = all steady on
1 = all flash together
2 = odd flashes WIG, even flashes WAG
3 = 1 - 4 steady on, 5 - 8 all flash together

| Sequence cont. | | | | | | | |
|---|---|---|---|---|---|---|---|
| Sequences / Intervals | | Instruction | Phases Serviced | Interval Time | Hold On Input | Outputs On | Output Mode |
| 6 | 1 | 0 | | 0 | 0 | | 0 |
| | 2 | 0 | | 0 | 0 | | 0 |
| | 3 | 0 | | 0 | 0 | | 0 |
| | 4 | 0 | | 0 | 0 | | 0 |
| | 5 | 0 | | 0 | 0 | | 0 |
| | 6 | 0 | | 0 | 0 | | 0 |
| | 7 | 0 | | 0 | 0 | | 0 |
| | 8 | 0 | | 0 | 0 | | 0 |
| | 9 | 0 | | 0 | 0 | | 0 |
| | 10 | 0 | | 0 | 0 | | 0 |
| 7 | 1 | 0 | | 0 | 0 | | 0 |
| | 2 | 0 | | 0 | 0 | | 0 |
| | 3 | 0 | | 0 | 0 | | 0 |
| | 4 | 0 | | 0 | 0 | | 0 |
| | 5 | 0 | | 0 | 0 | | 0 |
| | 6 | 0 | | 0 | 0 | | 0 |
| | 7 | 0 | | 0 | 0 | | 0 |
| | 8 | 0 | | 0 | 0 | | 0 |
| | 9 | 0 | | 0 | 0 | | 0 |
| | 10 | 0 | | 0 | 0 | | 0 |
| 8 | 1 | 0 | | 0 | 0 | | 0 |
| | 2 | 0 | | 0 | 0 | | 0 |
| | 3 | 0 | | 0 | 0 | | 0 |
| | 4 | 0 | | 0 | 0 | | 0 |
| | 5 | 0 | | 0 | 0 | | 0 |
| | 6 | 0 | | 0 | 0 | | 0 |
| | 7 | 0 | | 0 | 0 | | 0 |
| | 8 | 0 | | 0 | 0 | | 0 |
| | 9 | 0 | | 0 | 0 | | 0 |
| | 10 | 0 | | 0 | 0 | | 0 |

| Sequence Timing (next/2/5/0) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Sequence -- > | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| | Input Memory | | | | | | | | | X = on |
| | Input Priority | 6 | 6 | 6 | 0 | 0 | 0 | 0 | 0 | 0 = lowest, - 8 = highest |
| Entry (Transition) Parameters | Min Green | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 - 25.5 sec |
| | Walk | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 would time the normal function time |
| | Ped Clear | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Overlap Yellow | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 - 25.5 sec |
| | Overlap Red | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | Delay to Preempt | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| | Delay Ped Omit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Delay Phase Omit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Min Reservice | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 min |
| Overlap Inhibits | A | | | | | | | | | X = inhibit |
| | B | | | | | | | | | |
| | C | | | | | | | | | |
| | D | | | | | | | | | |
| Exit Parameters | Exit to Coord Plan Offset by X | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 20 |
| | Exit Coord Plan Time | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 60 min |
| | Exit to Max Plan | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 8 |
| | Exit Free Time | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 60 min |
| | Override Time | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Fail Time | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Exit Mode Time | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

| Priority Return and Special Intervals (next/2/5/0/6, next/2/5/9) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Phase / Overlap -->** | | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** | **A** | **B** | **C** | **D** |
| **Priority Return** | **Enable** | *0* | 0 = disabled, 1 = enabled, 2 = enabled, skip preemption phases on exit | | | | | | | | | | |
| | **A (max)** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 100% of currently used max | | | |
| | **B (max)** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | | | | |
| | **C (max)** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | | | | |
| | **D (max)** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | | | | |
| | **E (max)** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | | | | |
| | **Ped Clear** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 100% of currently used ped clearance | | | |
| **Queue Delay Recovery** | | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | 0 - 255 sec. | | | |
| **Special Intervals** | **1** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| | **2** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| | **3** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| | **4** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| | **5** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| | **6** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| | **7** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| | **8** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |
| | **9** | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* | *0* |

0 = Dark
1 = green don't walk
2 = green walk
3 = green flashing don't walk
4 = yellow
5 = red
6 = flashing yellow WIG
7 = flashing yellow WAG
8 = flashing red WIG
9 = flashing red WAG
10 = walk only
11=flashing don't walk only

| Light Rail Train (next/2/5/0/7) | | | | | | |
|---|---|---|---|---|---|---|
| **Light Rail Train -->** | **1** | **2** | **3** | **4** | |
| **Associated Preempt** | *0* | *0* | *0* | *0* | 0 = none, preempt 1 - 8 |
| **Time to Green** | *0* | *0* | *0* | *0* | 0 - 255 sec |
| **Horizontal Bar Flash Time** | *0.0* | *0.0* | *0.0* | *0.0* | 0.0 - 25.5 sec |
| **Vertical Bar Flash Time** | *0.0* | *0.0* | *0.0* | *0.0* | |
| **Min Duration** | *0* | *0* | *0* | *0* | 0 - 255 sec |

# Communications Data (next/2/6)

| | | | | | |
|---|---|---|---|---|---|
| **System ID** | *19* | | **Local ID** | *1* | |
| **1st Central Phone Number** | | | **2nd Central Phone Number** | | |
| **Modem Setup String** | | | **Intersection Name** | *124th @ Tualatin* | |
| **Subnet Mask 1** | *0.0.0.0* | | **Subnet Mask 2** | *0.0.0.0* | |
| **IP (Ethernet) Port 1** | *25000* | | **IP (Ethernet) Port 2** | *0* | |
| **Central Port** | *0* | | | | |
| **System Mode** | *1* | | | | |
| **System Port** | *1* | | **Alternate System Port** | *0* | |

| | | | | | |
|---|---|---|---|---|---|
| **IP Address 1** | *0.0.0.0* | **IP Address 2** | *0.0.0.0* | **AB3418e Physical Address** | *1* |
| **Gateway Address 1** | *0.0.0.0* | **Gateway Address 2** | *0.0.0.0* | **AB3418e Group Address** | *0* |

| **Baud Rates** | | **Flow Control** | **Port Use** |
|---|---|---|---|
| **Port 1 (Slot A2 Upper)** | *0* | *1* | *Suggested Use - FSK* |
| **Port 2 (Slot A2 Lower)** | *0* | *1* | *Suggested Use - Not Used* |
| **Port 3 (Slot A1 Upper)** | *0* | *0* | *Suggested Use - Modem to Central* |
| **Port 4 (Slot A1 Lower or C50S)** | *2* | *NIU* | *Suggested Use - RS232 to Laptop* |
| 0 = 1200, 1 = 2400, 2 = 9600, 3 = 19200 baud | | 0 = off, 1 = on | |

**Reports**

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Volume Log Period** | *15* | minutes | **Volume/Occ Log Period** | *0* | second | **MOE Log Period** | *15* | minute |

0 = disabled, 1,2,3,4,5,6,10,12,15,20,30,60 minutes

**Function Schedule Mapping (next/2/6/7)**

| | | | | | |
|---|---|---|---|---|---|
| **Alarm 1** | *0* | | **Soft Flash** | *1* | |
| **Alarm 2** | *0* | | **Manual Control Enable (MCE)** | *4* | |
| **Alarm 3** | *0* | | **Emergency or Railroad Preempt** | *1* | |
| **Alarm 4** | *0* | | **Light Rail Train (LRT)** | *0* | |
| **Alarm 5** | *0* | 0 = none | **Cycle Failure** | *2* | 0 = none |
| **Not Used** | *0* | 1 = schedule A | **Coordination Failure** | *2* | 1 = schedule A |
| **Not Used** | *0* | 2 = schedule B | **Keyboard use / Data Changed** | *3* | 2 = schedule B |
| **Not Used** | *0* | 3 = schedule C | **Coord Running / Free** | *2* | 3 = schedule C |
| **Power On / Off** | *1* | 4 = schedule R | **Cabinet Door** | *3* | 4 = schedule R |
| **Checksum Failure** | *4* | | **Extended Ped Pushbutton** | *0* | |
| **Video / Detector Failure** | *4* | | **Monitor Status** | *4* | |
| **Master to Local Comm Lost** | *0* | | **Red Extension** | *0* | |

# Miscellaneous Data

## Transit Priority (next/2/7)

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|---|---|---|---|---|---|---|---|---|
| **Phases** | | | | | | | | | Phases 1 - 8 (max of 2 compatible phases) |
| **PE Enable (6.25Hz TP call on PE)** | | | | | | | | | X = 6.25 Hz signal will activate TP |
| **Priority** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 8, 8 = highest |
| **Memory** | | | | | | | | | X = on |
| **Delay Time** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| **Minimum Reservice Time (per input)** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 min |
| **Override Time** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| **Bus Extend** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| **Minimum Reservice Time (all inputs)** | 0 | 0 - 255 min | | | | | | | |
| **Free Operation Mode** | 0 | 0 = use shortest of max 1 or 2, 1 - 8 = use max time of group 1 - 8, 9 = use time of day | | | | | | | |

## Transit Priority Alternate Force Off Plans

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Current Coord Plan** | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| **Alternate TP Force Off Plan** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Current Coord Plan** | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| **Alternate TP Force Off Plan** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

0 = none
17 - 32 = coord plan 17 - 32

## Group Timing

| Phase --> | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|
| **Group 1** | **Max Times** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | **Walk Times** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Group 2** | **Max Times** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | **Walk Times** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Group 3** | **Max Times** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | **Walk Times** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Group 4** | **Max Times** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | **Walk Times** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Group 5** | **Max Times** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | **Walk Times** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Group 6** | **Max Times** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | **Walk Times** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Group 7** | **Max Times** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | **Walk Times** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| **Group 8** | **Max Times** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | **Walk Times** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

0 - 255 sec
0 would time the normal function time

## Truck Priority (next/2/7/9)

| Truck Priority--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|---|---|---|---|---|---|---|---|---|
| **Associated Transit Priority** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 = none 1 - 8 = transit priority 1 - 8 |
| **Leading Detector** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 = none, 1 - 32 = detector 1 - 32 |
| **Trailing Detector** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Stop Bar Distance** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 999 feet |
| **Trap Distance** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 - 99.9 feet |
| **Minimum Speed** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 100 mph |
| **Minimum Length** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 feet |
| **Downhill Grade** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 20 % |
| **Uphill Grade** | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| **Undersized Vehicle** | | | | | | | | | X = Enabled |

| | | |
|---|---|---|
| **Change I/O** | | X = On (After a download with a power on - off cycle) |

**Inputs (Non Default I/O is offset to the right) (next/2/8/1)**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **C1-39** | *101* | *VD9* | **C1-55** | *15* | *VD5* | **C1-67** | *22* | *PED2* | **C11-15** | *254* | *N/U* |
| **C1-40** | *113* | *VD19* | **C1-56** | *11* | *VD1* | **C1-68** | *26* | *PED6* | **C11-16** | *254* | *N/U* |
| **C1-41** | *106* | *VD14* | **C1-57** | *17* | *VD7* | **C1-69** | *24* | *PED4* | **C11-17** | *254* | *N/U* |
| **C1-42** | *118* | *VD24* | **C1-58** | *13* | *VD3* | **C1-70** | *28* | *PED8* | **C11-18** | *254* | *N/U* |
| **C1-43** | *102* | *VD10* | **C1-59** | *16* | *VD6* | **C1-71** | *151* | *PE1* | **C11-19** | *254* | *N/U* |
| **C1-44** | *114* | *VD20* | **C1-60** | *12* | *VD2* | **C1-72** | *152* | *PE2* | **C11-20** | *254* | *N/U* |
| **C1-45** | *107* | *VD15* | **C1-61** | *18* | *VD8* | **C1-73** | *153* | *PE3* | **C11-21** | *254* | *N/U* |
| **C1-46** | *161* | *VD25* | **C1-62** | *14* | *VD4* | **C1-74** | *154* | *PE4* | **C11-22** | *254* | *N/U* |
| **C1-47** | *105* | *VD13* | **C11-10** | *254* | *N/U* | **C1-75** | *254* | *N/U* | **C11-23** | *254* | *N/U* |
| **C1-48** | *117* | *VD23* | **C11-11** | *254* | *N/U* | **C1-76** | *104* | *VD12* | **C11-24** | *254* | *N/U* |
| **C1-49** | *112* | *VD18* | **C11-12** | *254* | *N/U* | **C1-77** | *116* | *VD22* | **C11-25** | *254* | *N/U* |
| **C1-50** | *164* | *VD28* | **C11-13** | *254* | *N/U* | **C1-78** | *111* | *VD17* | **C11-26** | *254* | *N/U* |
| **C1-51** | *199* | *PEDI* | **C1-63** | *103* | *VD11* | **C1-79** | *163* | *VD27* | **C11-27** | *254* | *N/U* |
| **C1-52** | *155* | *PE5* | **C1-64** | *115* | *VD21* | **C1-80** | *82* | *IADV* | **C11-28** | *254* | *N/U* |
| **C1-53** | *85* | *MCE* | **C1-65** | *108* | *VD16* | **C1-81** | *137* | *MONS* | **C11-29** | *254* | *N/U* |
| **C1-54** | *254* | *N/U* | **C1-66** | *162* | *VD26* | **C1-82** | *62* | *ST1* | **C11-30** | *254* | *N/U* |

**Outputs (Non Default I/O is offset to the right) (next/2/8/2)**

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **C1-2** | *44* | *4DWK* | **C1-19** | *48* | *8DWK* | **C1-35** | *131* | *TO1* | **C1-91** | *41* | *1DWK* |
| **C1-3** | *64* | *4WLK* | **C1-20** | *68* | *8WLK* | **C1-36** | *217* | *FYA5* | **C1-93** | *61* | *1WLK* |
| **C1-4** | *14* | *4RED* | **C1-21** | *18* | *8RED* | **C1-37** | *133* | *TO3* | **C1-94** | *106* | *OLBR* |
| **C1-5** | *24* | *4YEL* | **C1-22** | *28* | *8YEL* | **C1-38** | *134* | *TO4* | **C1-95** | *105* | *OLBY* |
| **C1-6** | *34* | *4GRN* | **C1-23** | *38* | *8GRN* | **C1-100** | *53* | *3PCL* | **C1-96** | *104* | *OLBG* |
| **C1-7** | *103* | *OLAR* | **C1-24** | *17* | *7RED* | **C1-101** | *51* | *1PCL* | **C1-97** | *254* | *N/U* |
| **C1-8** | *102* | *OLAY* | **C1-25** | *27* | *7YEL* | **C1-102** | *187* | *SFL* | **C1-98** | *254* | *N/U* |
| **C1-9** | *101* | *OLAG* | **C1-26** | *37* | *7GRN* | **C1-103** | *147* | *WDOG* | **C1-99** | *254* | *N/U* |
| **C1-10** | *42* | *2DWK* | **C1-27** | *46* | *6DWK* | **C1-83** | *43* | *3DWK* | **C11-1** | *254* | *N/U* |
| **C1-11** | *62* | *2WLK* | **C1-28** | *66* | *6WLK* | **C1-84** | *63* | *3WLK* | **C11-2** | *254* | *N/U* |
| **C1-12** | *12* | *2RED* | **C1-29** | *16* | *6RED* | **C1-85** | *116* | *OLDR* | **C11-3** | *254* | *N/U* |
| **C1-13** | *22* | *2YEL* | **C1-30** | *26* | *6YEL* | **C1-86** | *115* | *OLDY* | **C11-4** | *254* | *N/U* |
| **C1-15** | *32* | *2GRN* | **C1-31** | *36* | *6GRN* | **C1-87** | *114* | *OLDG* | **C11-5** | *254* | *N/U* |
| **C1-16** | *11* | *1RED* | **C1-32** | *15* | *5RED* | **C1-88** | *113* | *OLCR* | **C11-6** | *254* | *N/U* |
| **C1-17** | *21* | *1YEL* | **C1-33** | *223* | *FYC5* | **C1-89** | *112* | *OLCY* | **C11-7** | *254* | *N/U* |
| **C1-18** | *31* | *1GRN* | **C1-34** | *35* | *5GRN* | **C1-90** | *111* | *OLCG* | **C11-8** | *254* | *N/U* |

| Internal Logic (next/2/9) | | | |
|---|---|---|---|
| **Step** | **Inst.** | **Description** | **Comment** |
| **1** | *220* | Input Off if Test(s) are True | |
| **2** | *15* | Vehicle Detector 5 | |
| **3** | *35* | System Relay 1-32 - Tested for Set | |
| **4** | *1* | Relay - 1 | |
| **5** | *220* | Input Off if Test(s) are True | |
| **6** | *16* | Vehicle Detector 6 | |
| **7** | *35* | System Relay 1-32 - Tested for Set | |
| **8** | *1* | Relay - 1 | |
| **9** | *220* | Input Off if Test(s) are True | |
| **10** | *106* | Vehicle Detector 14 | |
| **11** | *35* | System Relay 1-32 - Tested for Set | |
| **12** | *1* | Relay - 1 | |
| **13** | *220* | Input Off if Test(s) are True | |
| **14** | *107* | Vehicle Detector 15 | |
| **15** | *35* | System Relay 1-32 - Tested for Set | |
| **16** | *1* | Relay - 1 | |
| **17** | *220* | Input Off if Test(s) are True | |
| **18** | *108* | Vehicle Detector 16 | |
| **19** | *35* | System Relay 1-32 - Tested for Set | |
| **20** | *1* | Relay - 1 | |
| **21** | *220* | Input Off if Test(s) are True | |
| **22** | *111* | Vehicle Detector 17 | |
| **23** | *35* | System Relay 1-32 - Tested for Set | |
| **24** | *1* | Relay - 1 | |
| **25** | *220* | Input Off if Test(s) are True | |
| **26** | *112* | Vehicle Detector 18 | |
| **27** | *35* | System Relay 1-32 - Tested for Set | |
| **28** | *1* | Relay - 1 | |
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| Internal Logic cont. | | | |
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| **Step** | **Inst.** | **Description** | **Comment** |
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| Internal Logic cont. | | | |
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| **Step** | **Inst.** | **Description** | **Comment** |
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| Internal Logic cont. | | | |
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| **Step** | **Inst.** | **Description** | **Comment** |
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| Internal Logic cont. | | | |
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| **Step** | **Inst.** | **Description** | **Comment** |
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| FYLTA - Continued (next/2/2/8/6) | | | | | | | |
|---|---|---|---|---|---|---|---|
| | **Phase Pairs -->** | **1 - 2** | **3 - 4** | **5 - 6** | **7 - 8** | |
| **Gap-Dependent FYLTA (next/2/2/8/6-A)** | **Detector Input** | *0* | *0* | *21* | *0* | 0 = disable, 1 - 64 detectors |
| | **Min Delay** | *0* | *0* | *3* | *0* | 0 - 255 sec |
| | **Detector Gap** | *0.0* | *0.0* | *5.0* | *0.0* | 0 - 25.5 sec |
| | **Max Delay** | *0* | *0* | *255* | *0* | 0 - 255 sec |
| | **Not Ped** | *0* | *0* | *4* | *0* | 0 - 255 sec |

| FYLTA Gap-Dependent Plans (next/2/2/8/6) | | | | | | |
|---|---|---|---|---|---|---|
| | **Phase Pairs -->** | **1 - 2** | **3 - 4** | **5 - 6** | **7 - 8** | |
| **FYLTA Gap-Dependent Plan A** | **Detector Input** | *0* | *0* | *0* | *0* | 0 = disable, 1 - 64 detectors |
| | **Min Delay** | *0* | *0* | *0* | *0* | 0 - 255 sec |
| | **Detector Gap** | *0.0* | *0.0* | *0.0* | *0.0* | 0 - 25.5 sec |
| | **Max Delay** | *0* | *0* | *0* | *0* | 0 - 255 sec |
| | **Not Ped** | *0* | *0* | *0* | *0* | 0 - 255 sec |
| **FYLTA Gap-Dependent Plan B** | **Detector Input** | *0* | *0* | *0* | *0* | 0 = disable, 1 - 64 detectors |
| | **Min Delay** | *0* | *0* | *0* | *0* | 0 - 255 sec |
| | **Detector Gap** | *0.0* | *0.0* | *0.0* | *0.0* | 0 - 25.5 sec |
| | **Max Delay** | *0* | *0* | *0* | *0* | 0 - 255 sec |
| | **Not Ped** | *0* | *0* | *0* | *0* | 0 - 255 sec |
| **FYLTA Gap-Dependent Plan C** | **Detector Input** | *0* | *0* | *0* | *0* | 0 = disable, 1 - 64 detectors |
| | **Min Delay** | *0* | *0* | *0* | *0* | 0 - 255 sec |
| | **Detector Gap** | *0.0* | *0.0* | *0.0* | *0.0* | 0 - 25.5 sec |
| | **Max Delay** | *0* | *0* | *0* | *0* | 0 - 255 sec |

| | | | | | | |
|---|---|---|---|---|---|---|
| | Not Ped | 0 | 0 | 0 | 0 | 0 - 255 sec |
| FYLTA Gap-Dependent Plan D | Detector Input | 0 | 0 | 0 | 0 | 0 = disable, 1 - 64 detectors |
| | Min Delay | 0 | 0 | 0 | 0 | 0 - 255 sec |
| | Detector Gap | 0.0 | 0.0 | 0.0 | 0.0 | 0 - 25.5 sec |
| | Max Delay | 0 | 0 | 0 | 0 | 0 - 255 sec |
| | Not Ped | 0 | 0 | 0 | 0 | 0 - 255 sec |

**Preemption - Continued**

**Railroad Communications (IEEE 1570) (next/2/5/0/8)**

| | ATC | Wayside | |
|---|---|---|---|
| Railroad Number | 0 | 0 | 0 - 999, represents railroad |
| Railroad Line Number | 0 | 0 | 0 - 999, represents railroad line |
| Group Number | 0 | 0 | 0 - 999, represents physical group of equipment |
| Subnode Number | 0 | 0 | 0 - 99, subnode within physical group of equipment |
| Device Number | 0 | 0 | 0 - 99, device within physical group of equipment |

| | | |
|---|---|---|
| Associated Preempt | 0 | 0 - 8 |
| Communication Port | 0 | 0 - 4 |

**Reports - Continued**

**Reports - Service Delay Modes (next/2/6/0)**

| Phase --> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|---|---|---|---|---|---|---|---|---|
| Mode | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 = disable, 1 = enable, 2 = Ped, 3 = Veh/P |

| Ped Overlap --> | A | B | C | D | E | F | G | H | |
|---|---|---|---|---|---|---|---|---|---|
| Mode | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 = disable, 1 = enable |

| Detector --> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Enable | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector --> | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| Enable | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector --> | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 |
| Enable | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Detector --> | 49 | 50 | 51 | 52 | 53 | 54 | 55 | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 |
| Enable | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**Truck Priority - Continued**

**Truck Priority (next/2/7/9)**

| Truck Priority--> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|---|---|---|---|---|---|---|---|---|
| Minimum Log Speed | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 100 mph |
| Minimum Log Length | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 feet |

**Transcend Logic**

| Step | Inst. | Description | Comment |
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# SIGNAL PLAN
# 124TH AVENUE AT LEVETON DRIVE
## WORK CHANGE DIRECTIVE NO. 1

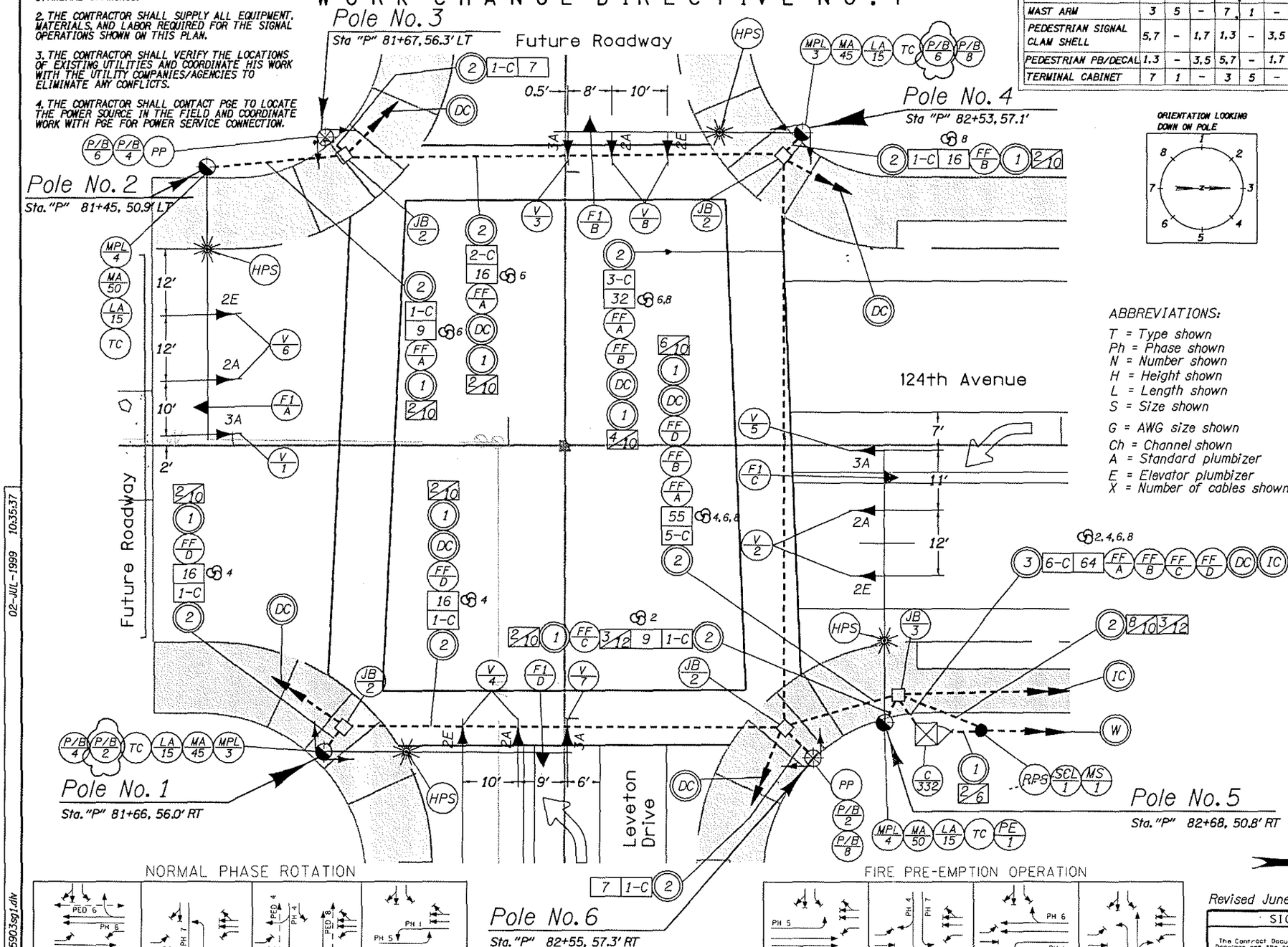
GENERAL NOTES:

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE 1996 OREGON DEPARTMENT OF TRANSPORTATION (ODOT) STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND THE ODOT STANDARD DRAWINGS.

2. THE CONTRACTOR SHALL SUPPLY ALL EQUIPMENT, MATERIALS, AND LABOR REQUIRED FOR THE SIGNAL OPERATIONS SHOWN ON THIS PLAN.

3. THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF EXISTING UTILITIES AND COORDINATE HIS WORK WITH THE UTILITY COMPANIES/AGENCIES TO ELIMINATE ANY CONFLICTS.

4. THE CONTRACTOR SHALL CONTACT PGE TO LOCATE THE POWER SOURCE IN THE FIELD AND COORDINATE WORK WITH PGE FOR POWER SERVICE CONNECTION.




POLE ENTRANCE CHART

| POLE NUMBER | 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|---|
| LUMINARE ARM | 3 | 5 | - | 7 | 1 | - |
| MAST ARM | 3 | 5 | - | 7 | 1 | - |
| PEDESTRIAN SIGNAL CLAM SHELL | 5,7 | - | 1,7 | 1,3 | - | 3,5 |
| PEDESTRIAN PB/DECAL | 1,3 | - | 3,5 | 5,7 | - | 1,7 |
| TERMINAL CABINET | 7 | 1 | - | 3 | 5 | - |

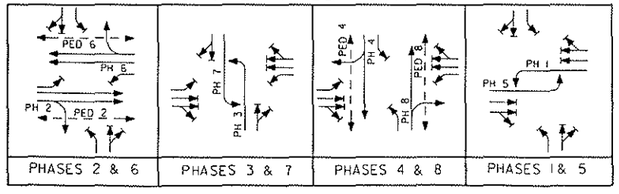
ORIENTATION LOOKING DOWN ON POLE



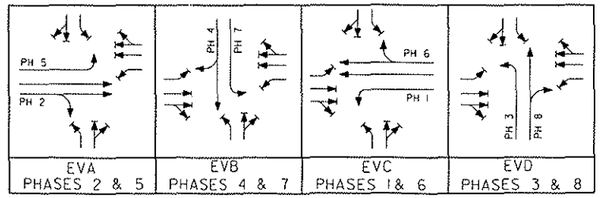

ABBREVIATIONS:

T = Type shown
Ph = Phase shown
N = Number shown
H = Height shown
L = Length shown
S = Size shown
G = AWG size shown
Ch = Channel shown
A = Standard plumbizer
E = Elevator plumbizer
X = Number of cables shown

NORMAL PHASE ROTATION




FIRE PRE-EMPTION OPERATION




## CH2MHILL
### L E G E N D

- C 332 — Install model 170 controller in model 332 cabinet with riser frame, orient front(louvered) door as shown
- MPL T — Install type (T) standard traffic signal mast arm pole with luminaire pole extension (40 ft. mounting ht.)
- MA L — Install (L) feet traffic signal mast arm
- LA L — Install (L) feet luminaire arm
- PP — Install pedestrian signal pedestal
- RPS — Install remote power service post
- HPS — Install 400 watt high pressure sodium luminaire, type M-N-IV, 120, 208, 240, 277 multi-volt mag-regulator ballast
- PE 1 — Install photoelectric cell on pole (20' - 35' above pole base)
- TC — Install terminal cabinet
- SCL 1 — Install service cabinet, 120 volt, for both signal and illumination circuits
- MS 1 — Install 120 volt meter base
- V Ph — Install phase (Ph) vehicle signal with LED's
  2 = 12" R, 12" Y, 12" G
  3 = 12" RLTA, 12" YLTA, 12" GLTA
- Ph — Includes 3 spare wires for phase (Ph) as per table
- P/B Ph — Install phase (Ph) pedestrian signal with LED's, pushbutton and instruction decal
- JB 2 — Install 22" x 12" x 12" (min. dimension) precast concrete junction box
- JB 2A — Install 22" x 12" x 12" (min. dimension) precast concrete junction box with concrete apron
- JB 3 — Install 30" x 17" x 12" (min. dimension) precast concrete junction box with concrete apron
- S — Install (S) inch electrical conduit
- DC — Detector conduit (See Detector Plan)
- IC — Interconnect conduit (See Interconnect Plan)
- W — Install conduit and wire as required by power company
- N-C — Install (N) No. 8 type THWN (Signal system common)
- N — Install (N) No. 14 type THWN wires
- N/G — Install (N) No. (G) type THWN wires
- FF Ch — Install channel (Ch) fire pre-emption detector feeder cable
- FN Ch — Install channel(Ch), (N) barrel fire pre-emption detector unit

0 10 20 30 40 50
FEET

Revised June 30, 1999

SIGNAL PLANS & DETAILS

The Contract Document Drawings are the printed documents dated May 1999 as subsequently officially amended, which define the scope, extent, and character of the work. This originally issued Contract Document Drawing was sealed and signed by Belying Wang P.T.E. No. 17,047

Jennifer Ringert - Designed
Gary D. Gray - Drafter
Belying Wang - Checked

S.W. 124TH AVENUE / S.W. LEVETON DRIVE
TRAFFIC SIGNAL PLAN
S.W. 124TH AVE. AND W. LEVETON DRIVE
WASHINGTON COUNTY

TUALATIN DEVELOPMENT COMMISSION

SHEET NO. 15


skatko
02-JUL-1999 10:35:37
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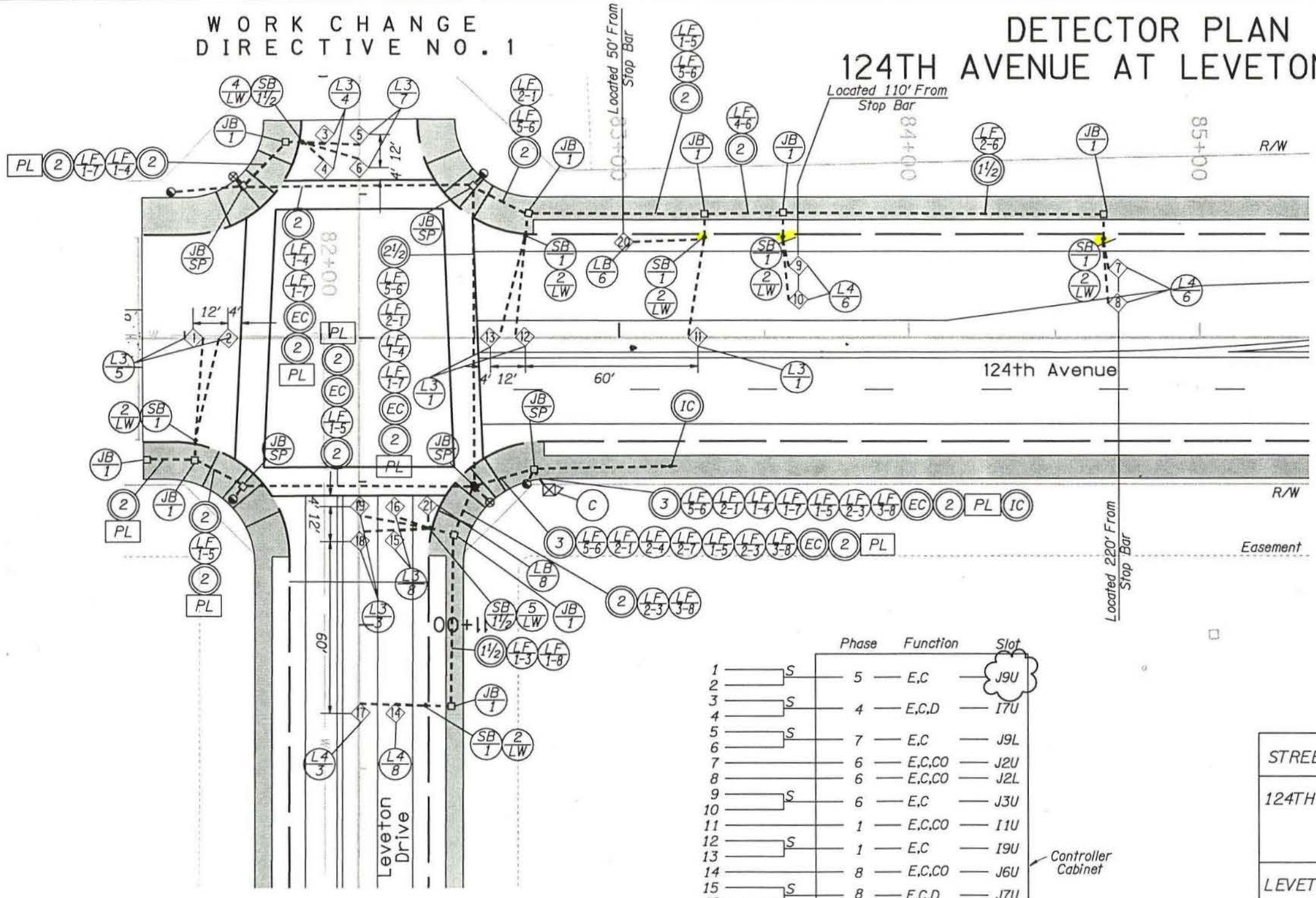
VIEW 1

WORK CHANGE DIRECTIVE NO. 1

# DETECTOR PLAN
# 124TH AVENUE AT LEVETON DRIVE

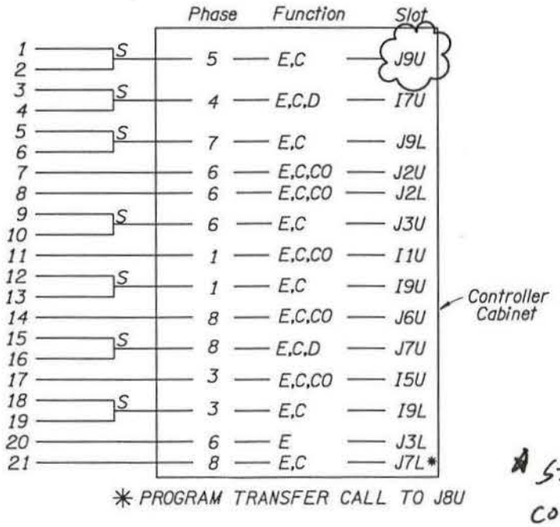
CH2MHILL




LEGEND

| | |
|---|---|
| C | Controller (See Signal Plan) |
| S | Install (S) inch electrical conduit |
| EC | Electrical conduit (See Signal Plan) |
| IC | Interconnect conduit (See Interconnect Plan) |
| LB Ph | Install phase (Ph) 2½FT. diamond bicycle detector loop |
| L3 Ph | Install phase (Ph) 3 FT. diamond vehicle detector loop |
| L4 Ph | Install phase (Ph) 4 FT. diamond vehicle detector loop |
| LF X-Ph | Install (X) phase (Ph) loop feeder cables |
| N LW | Install (N) pair of loop wires |
| SB S | Install 4" x4" x4" galv. cast iron street box with (S) inch conduit to junction box |
| JB 1 | Install 17" x 10" x 12" (min. dimension) precast concrete junction box |
| JB 1A | Install 17" x 10" x 12" (min. dimension) precast concrete junction box with concrete apron |
| JB SP | Junction box (See Signal Plan) |
| PL | Install poly pull line (1 kn min-strength) |

ABBREVIATIONS:
PH= Phase Shown
S = Size Shown
X = Number Of Cables Shown
N = Number Shown




* PROGRAM TRANSFER CALL TO J8U

GENERAL NOTES:
1. All Loops Are To Be Individually Wound Clockwise And Series Wired At Junction Boxes Or Controller, As Shown On The Loop Detector Wiring Diagram.
2. All Detector Loops Shall Be Located In The Center Of The Lane Unless Otherwise Indicated On The Detector Plan.
3. All Materials And Workmanship Shall Conform To The 1996 Oregon Department Of Transportation (ODOT) Standard Specifications For Highway Construction And The ODOT Standard Drawings And Special Provisions.

## LOOP DETECTOR WIRING DIAGRAM

S = Series, E=Extension, C=Call, CO=Carry-over, D=Delay
See T.E.S. Drwg. No. TM408 for loop detector details
Center all loops in travel lanes or as shown on plan

POSTED APPROACH SPEEDS

| STREET | APPROACH | POSTED SPEED |
|---|---|---|
| 124TH AVENUE | NORTHBOUND | 35 MPH |
| | SOUTHBOUND | 35 MPH |
| LEVETON DRIVE | WESTBOUND | 35 MPH |

0 20 40 60 80 100
FEET

? * STATE is using cold mix, epoxy boxes.

Revised June 30, 1999

TRAFFIC ENGINEER

The Contract Document Drawings are the printed documents dated May 1999 as subsequently officially amended, which define the scope, extent, and character of the work. This originally issued Contract Document Drawing was sealed and signed by Beiying Wang, P.T.E. No. 17,047

S.W. 124TH AVENUE / S.W. LEVETON DRIVE
DETECTOR PLAN
S.W. 124TH AVE. AND W. LEVETON DRIVE
WASHINGTON COUNTY

TUALATIN DEVELOPMENT COMMISSION

SHEET NO. 15A

skatko 02-JUL-1999 10:41:07 NDW:145903:45903sg2.dw

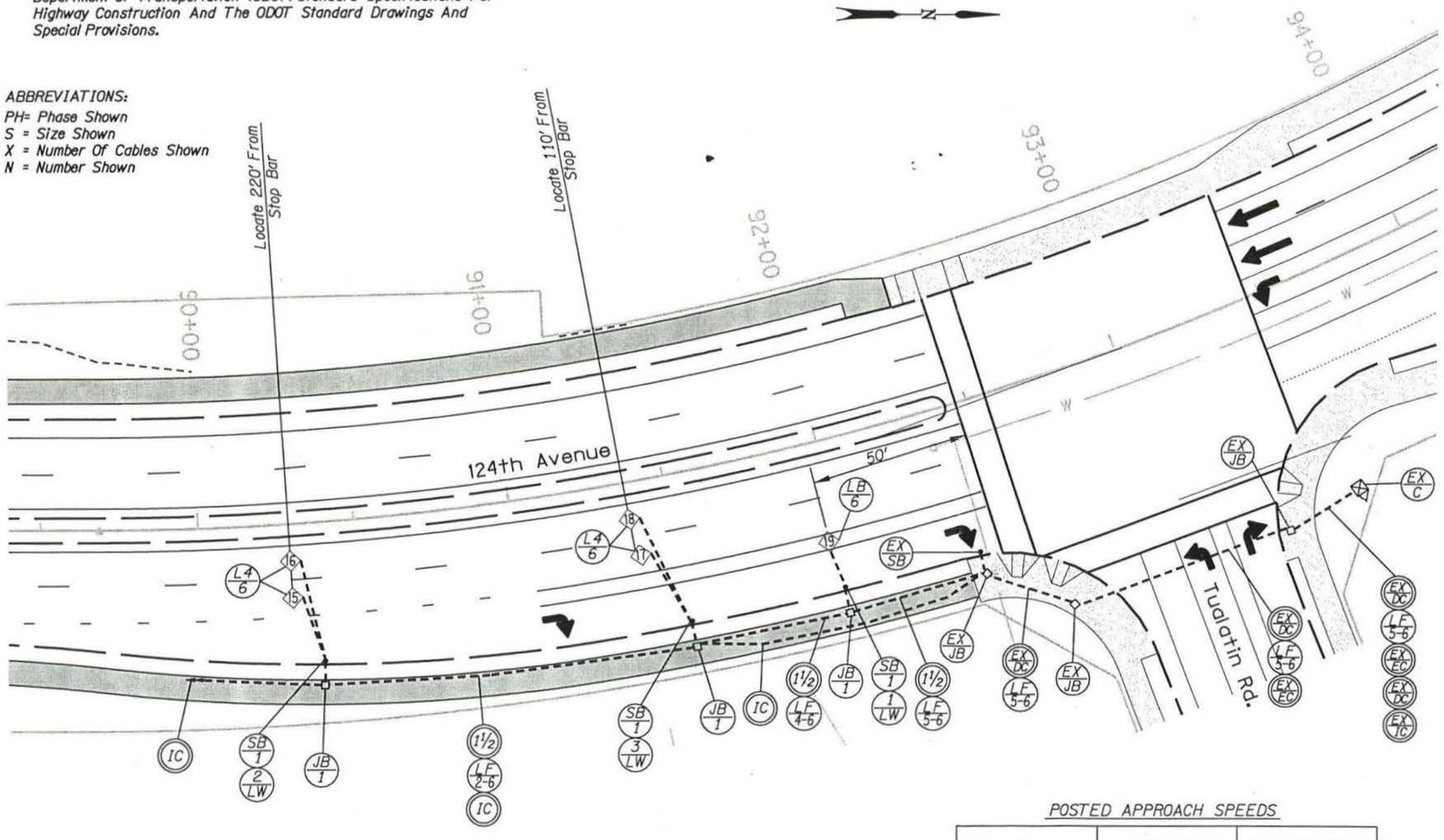
VIEW 1

CH2MHILL

# DETECTOR PLAN
# 124TH AVENUE AT TUALATIN ROAD

GENERAL NOTES:
1. All Loops Are To Be Individually Wound Clockwise And Series Wired At Junction Boxes Or Controller, As Shown On The Loop Detector Wiring Diagram.
2. All Detector Loops Shall Be Located In The Center Of The Lane Unless Otherwise Indicated On The Detector Plan.
3. All Materials And Workmanship Shall Conform To The 1996 Oregon Department Of Transportation (ODOT) Standard Specifications For Highway Construction And The ODOT Standard Drawings And Special Provisions.

ABBREVIATIONS:
PH= Phase Shown
S = Size Shown
X = Number Of Cables Shown
N = Number Shown




0 20 40 60 80 100
FEET

POSTED APPROACH SPEEDS

| STREET | APPROACH | POSTED SPEED |
|---|---|---|
| 124TH AVENUE | NORTHBOUND | 35 MPH |
| | SOUTHBOUND | 35 MPH |
| TUALATIN ROAD | WESTBOUND | 35 MPH |

LEGEND

- C — Controller (See Signal Plan)
- S — Install (S) inch electrical conduit
- IC — Interconnect conduit (See Interconnect Plan)
- L3/Ph — Install phase (Ph) 3 FT. diamond vehicle detector loop
- L4/Ph — Install phase (Ph) 4 FT. diamond vehicle detector loop
- LF/X-Ph — Install (X) phase (Ph) loop feeder cables
- N/LW — Install (N) pair of loop wires
- SB/S — Install 4" x4" x4" galv. cast iron street box with (S) inch conduit to junction box
- JB/1 — Install 17" x 10" x 12" (min. dimension) precast concrete junction box
- JB/1A — Install 17" x 10" x 12" (min. dimension) precast concrete junction box with concrete apron
- JB/SP — Junction box (See Signal Plan)
- EX/JB — Retain and protect existing junction box
- EX/C — Retain and protect existing Model 170 controller and Model 332 cabinet
- EX/EC — Retain and protect existing electrical conduit
- EX/DC — Retain and protect existing detector conduit
- EX/IC — Retain and protect existing interconnect conduit
- EX/SB — Retain and protect existing galv. cast iron street box with 1" conduit to junction box

| | Phase | Function | Slot | |
|---|---|---|---|---|
| 15 | 6 | E,C,CO | J2U | Controller Cabinet |
| 16 | 6 | E,C,CO | J2L | |
| 17 (S) | 6 | E,C | J3U | |
| 18 | | | | |
| 19 | 6 | E | J3L | |

## LOOP DETECTOR WIRING DIAGRAM

S = Series, E=Extension, C=Call, CO=Carry-over, D=Delay
See T.E.S. Drwg. No. TM408 for loop detector details
Center all loops in travel lanes or as shown on plan

Cold mix in Epoxy Boxes ?

TRAFFIC ENGINEER
Exp. 6/30/00
4/30/99

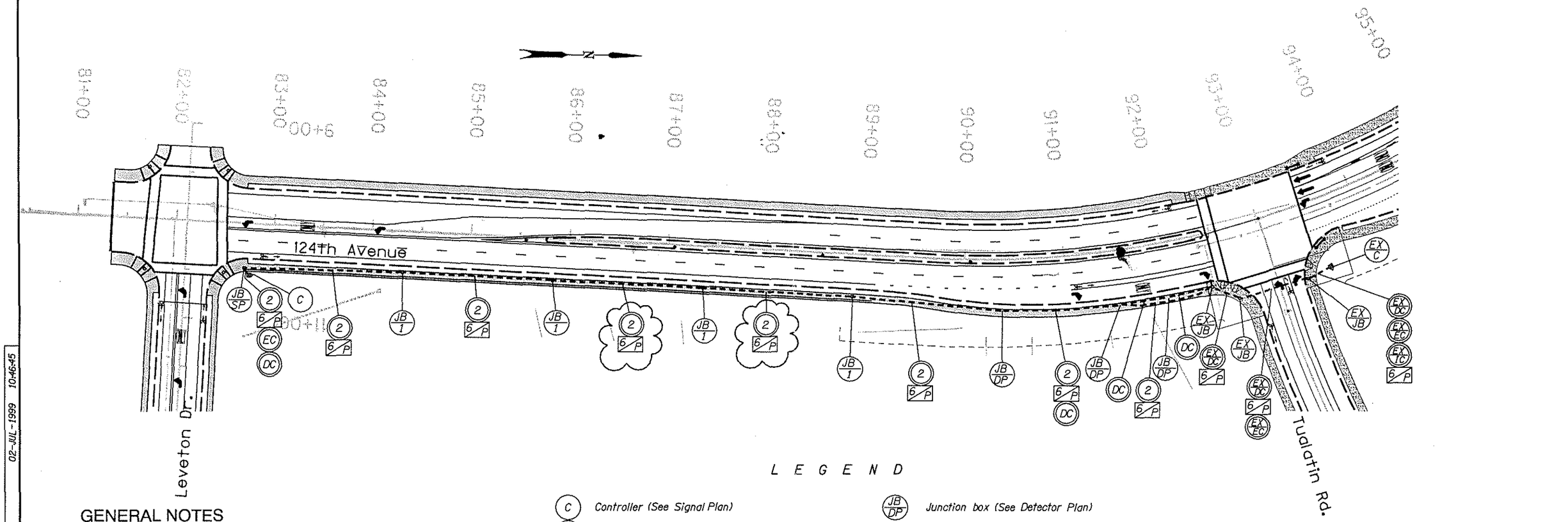
S.W. 124TH AVENUE / S.W. LEVETON DRIVE
DETECTOR PLAN
S.W. 124TH AVE. AND TUALATIN ROAD
WASHINGTON COUNTY

TUALATIN DEVELOPMENT COMMISSION

SHEET NO. 15B

CH2MHILL

# INTERCONNECT PLAN
# 124TH AVENUE AT LEVETON DRIVE
## WORK CHANGE DIRECTIVE NO. 1




## GENERAL NOTES

1. *All Material And Workmanship Shall Conform To The 1996 Standard Specifications For Highway Construction Of The Oregon Department Of Transportation And The Special Provisions.*
2. *All Electrical Equipment Shall Conform To The Current Standards Of the National Electrical Manufacturers Association (NEMA) And The Underwriters Laboratories, Inc. (U.L.). Wherever Applicable. In Addition To The Requirements Of All The Plans, Standars Specifications, And The Special Provisions, All Materials and Workmanship Shall Conform To The Current Requirements Of The National Electrical Code (NEC) The National Electrical Safety Code, Standards Of The American National Standards Institute (ANSI), And Any Local Ordinances Which May Apply.*
3. *Location Of Interconnect Conduits And Junction Boxes Are Approximate. Contractor Shall Coordinate With Other Utilities To Proper Installation.*
4. *Rigid Non-metallic Electrical Conduit Shall Be Acceptable For Interconnect Conduit*

## L E G E N D

- (C) *Controller (See Signal Plan)*
- (S) *Install (S) inch electrical conduit*
- (DC) *Detector conduit (See Detector Plan)*
- (EC) *Electrical conduit (See Signal Plan)*
- (JB / 1) *Install 17" x 10" x 12" (min. dimension) precast concrete junction box*
- (JB / 1A) *Install 17" x 10" x 12" (min. dimension) precast concrete junction box with concrete apron*
- (JB / SP) *Junction box (See Signal Plan)*
- (JB / DP) *Junction box (See Detector Plan)*
- (EX / JB) *Retain and protect existing junction box*
- (EX / EC) *Retain and protect existing electrical conduit*
- (EX / DC) *Retain and protect existing detector conduit*
- (EX / IC) *Retain and protect existing interconnect conduit*
- (N / G) *Install (N) No. (G) type THWN wires*
- (EX / C) *Retain and protect existing controller and cabinet*

0' 50' 100' 150'

*Revised June 30, 1999*

TRAFFIC ENGINEER

The Contract Document Drawings are the printed documents dated May 1999 as subsequently officially amended, which define the scope, extent, and character of the work. This originally issued Contract Document Drawing was sealed and signed by Beiying Wang P.T.E. No. 17,047

**S.W. 124TH AVENUE / S.W. LEVETON DRIVE**
**SYSTEM INTERCONNECT PLAN**
**124th AVE. @ LEVETON DR.**
WASHINGTON COUNTY

**TUALATIN DEVELOPMENT COMMISSION**

SHEET NO. 15C

skatko 02-JUL-1999 10:46:45 MDN:145903; 45903sg4.dw

VIEW 1

**W4IKS Table 1 Page 0**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(0+KEY)**

| FUNCTIONS | KEY | 12345678 |
|---|---|---|
| Veh Recall | 0 | _2___6__ |
| Ped Recall | 1 | _____ |
| Red Lock | 2 | _____ |
| Yellow Lock | 3 | _____ |
| Permit | 4 | 12345678 |
| Ped Phases | 5 | _2_4_6_8 |
| Lead Phases | 6 | 1_3_5_7_ |
| Double Entry | 7 | _____ |
| Sequential Timing | 8 | _____ |
| Startup Green | 9 | _2___6__ |
| Overlap A | A | 12_____ |
| Overlap B | B | _____ |
| Overlap C | C | ____56__ |
| Overlap D | D | _____ |
| Exclusive | E | _____ |
| Simultaneous Gap | F | _2___6__ |

**(PHASE+KEY)**

| FUNCTIONS | KEY | PH1 | PH2 | PH3 | PH4 | PH5 | PH6 | PH7 | PH8 |
|---|---|---|---|---|---|---|---|---|---|
| Max I | 0 | 25 | 25 | 10 | 30 | 20 | 40 | 15 | 30 |
| Max II | 1 | 25 | 25 | 10 | 30 | 20 | 40 | 15 | 30 |
| Walk | 2 | 0 | 7 | 0 | 7 | 0 | 7 | 0 | 7 |
| Flash DW | 3 | 0 | 17 | 0 | 20 | 0 | 16 | 0 | 23 |
| Max Initial | 4 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 |
| Min Green | 5 | 8 | 12 | 7 | 6 | 5 | 12 | 4 | 6 |
| TBR | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TTR | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Observe Gap | 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Passage | 9 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Min Gap | A | 1.0 | 3.0 | 1.0 | 1.0 | 1.0 | 3.0 | 1.0 | 1.0 |
| Added Actuation | B | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 |
| Yellow | C | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Red Clear | D | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Red Revert | E | 5.0 | 5.0 | 5.0 | 5.0 | 0.0 | 5.0 | 5.0 | 5.0 |
| Walk II | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**W4IKS Table 1 Page 1**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(D+C+0+KEY)**

| FUNCTIONS | KEY | 12345678 |
|---|---|---|
| Veh Recall | 0 | _____ |
| Ped Recall | 1 | _____ |
| Red Lock | 2 | _____ |
| Yellow Lock | 3 | _____ |
| Permit | 4 | _____ |
| Ped Phases | 5 | _____ |
| Lead Phases | 6 | _____ |
| Double Entry | 7 | _____ |
| Sequential Timing | 8 | _____ |
| Startup Green | 9 | _____ |
| Overlap A | A | _____ |
| Overlap B | B | _____ |
| Overlap C | C | _____ |
| Overlap D | D | _____ |
| Exclusive | E | _____ |
| Simultaneous Gap | F | _____ |

**(D+C+PHASE+KEY)**

| FUNCTIONS | KEY | PH1 | PH2 | PH3 | PH4 | PH5 | PH6 | PH7 | PH8 |
|---|---|---|---|---|---|---|---|---|---|
| Max I | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max II | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Walk | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Flash DW | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max Initial | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Min Green | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TBR | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TTR | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Observe Gap | 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Passage | 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Min Gap | A | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Added Actuation | B | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Yellow | C | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Red Clear | D | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Red Revert | E | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Walk II | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**W4IKS Table 1 Page 2**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(D+D+0+KEY)**

| FUNCTIONS | KEY | 12345678 |
|---|---|---|
| Veh Recall | 0 | _____ |
| Ped Recall | 1 | _____ |
| Red Lock | 2 | _____ |
| Yellow Lock | 3 | _____ |
| Permit | 4 | _____ |
| Ped Phases | 5 | _____ |
| Lead Phases | 6 | _____ |
| Double Entry | 7 | _____ |
| Sequential Timing | 8 | _____ |
| Startup Green | 9 | _____ |
| Overlap A | A | _____ |
| Overlap B | B | _____ |
| Overlap C | C | _____ |
| Overlap D | D | _____ |
| Exclusive | E | _____ |
| Simultaneous Gap | F | _____ |

**(D+D+PHASE+KEY)**

| FUNCTIONS | KEY | PH1 | PH2 | PH3 | PH4 | PH5 | PH6 | PH7 | PH8 |
|---|---|---|---|---|---|---|---|---|---|
| Max I | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max II | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Walk | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Flash DW | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max Initial | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Min Green | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TBR | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TTR | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Observe Gap | 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Passage | 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Min Gap | A | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Added Actuation | B | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Yellow | C | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Red Clear | D | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Red Revert | E | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Walk II | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

**W4IKS Table 2 Page 0**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(9+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Short Power Down | 0 | 0 |
| Long Power Down | 1 | 0 |
| EVA Delay Type | 2 | 1 |
| EVB Delay Type | 3 | 1 |
| EVC Delay Type | 4 | 1 |
| EVD Delay Type | 5 | 1 |
| RR Delay Type | 6 | 0 |
| Ped Inhibit | 7 | 0 |
| OLA Green | 8 | 0.0 |
| OLA Yellow | 9 | 0.0 |
| OLB Green | A | 0.0 |
| OLB Yellow | B | 0.0 |
| OLC Green | C | 0.0 |
| OLC Yellow | D | 0.0 |
| OLD Green | E | 0.0 |
| OLD Yellow | F | 0.0 |

**(C+F+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Page ID | 0 | 0 |
| Future | 1 | 0 |
| Future | 2 | 0 |
| Future | 3 | 0 |
| OLA Red | 4 | 0.0 |
| OLB Red | 5 | 0.0 |
| OLC Red | 6 | 0.0 |
| OLD Red | 7 | 0.0 |
| Overlap E | 8 | _____ |
| Overlap F | 9 | _____ |
| Red Rest | A | _____ |
| Max Recall | B | _____ |
| Flash Green | C | _____ |
| Flash Walk | D | _____ |
| Advance Walk | E | _____ |
| Restrictive Phase | F | _____ |

**W4IKS Table 2 Page 1**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(D+C+9+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Short Power Down | 0 | 0 |
| Long Power Down | 1 | 0 |
| EVA Delay Type | 2 | 0 |
| EVB Delay Type | 3 | 0 |
| EVC Delay Type | 4 | 0 |
| EVD Delay Type | 5 | 0 |
| RR Delay Type | 6 | 0 |
| Ped Inhibit | 7 | 0 |
| OLA Green | 8 | 0.0 |
| OLA Yellow | 9 | 0.0 |
| OLB Green | A | 0.0 |
| OLB Yellow | B | 0.0 |
| OLC Green | C | 0.0 |
| OLC Yellow | D | 0.0 |
| OLD Green | E | 0.0 |
| OLD Yellow | F | 0.0 |

**(D+C+B+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Page ID | 0 | 1 |
| Future | 1 | 0 |
| Future | 2 | 0 |
| Future | 3 | 0 |
| OLA Red | 4 | 0.0 |
| OLB Red | 5 | 0.0 |
| OLC Red | 6 | 0.0 |
| OLD Red | 7 | 0.0 |
| Overlap E | 8 | _____ |
| Overlap F | 9 | _____ |
| Red Rest | A | _____ |
| Max Recall | B | _____ |
| Flash Green | C | _____ |
| Flash Walk | D | _____ |
| Advance Walk | E | _____ |
| Restrictive Phase | F | _____ |

**W4IKS Table 2 Page 2**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(D+D+9+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Short Power Down | 0 | 0 |
| Long Power Down | 1 | 0 |
| EVA Delay Type | 2 | 0 |
| EVB Delay Type | 3 | 0 |
| EVC Delay Type | 4 | 0 |
| EVD Delay Type | 5 | 0 |
| RR Delay Type | 6 | 0 |
| Ped Inhibit | 7 | 0 |
| OLA Green | 8 | 0.0 |
| OLA Yellow | 9 | 0.0 |
| OLB Green | A | 0.0 |
| OLB Yellow | B | 0.0 |
| OLC Green | C | 0.0 |
| OLC Yellow | D | 0.0 |
| OLD Green | E | 0.0 |
| OLD Yellow | F | 0.0 |

**(D+D+B+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Page ID | 0 | 2 |
| Future | 1 | 0 |
| Future | 2 | 0 |
| Future | 3 | 0 |
| OLA Red | 4 | 0.0 |
| OLB Red | 5 | 0.0 |
| OLC Red | 6 | 0.0 |
| OLD Red | 7 | 0.0 |
| Overlap E | 8 | _____ |
| Overlap F | 9 | _____ |
| Red Rest | A | _____ |
| Max Recall | B | _____ |
| Flash Green | C | _____ |
| Flash Walk | D | _____ |
| Advance Walk | E | _____ |
| Restrictive Phase | F | _____ |

**W4IKS Table 3**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(C+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Year | 0 | 13 |
| Month | 1 | 2 |
| Day of Month | 2 | 5 |
| Day of Week | 3 | 4 |
| Hour | 4 | 12 |
| Minute | 5 | 15 |
| Second | 6 | 5 |
| Reserved | 7 | 3 |
| Trigs On In Flash | 8 | 0 |
| Startup Yellow | 9 | ________ |
| EVA Phases | A | _2__5___ |
| EVB Phases | B | ___4__7_ |
| EVC Phases | C | 1____6__ |
| EVD Phases | D | __3____8 |
| Handicap Ped | E | ________ |

**(E+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| EVA Delay | 0 | 0 |
| EVA Min | 1 | 1 |
| EVB Delay | 2 | 0 |
| EVB Min | 3 | 1 |
| EVC Delay | 4 | 0 |
| EVC Min | 5 | 1 |
| EVD Delay | 6 | 0 |
| EVD Min | 7 | 1 |
| OL Red Revert | 8 | 5.0 |
| RR Delay | 9 | 0 |
| RR Clear | A | 0 |
| RR Clear Phases | B | ________ |
| RR Permit | C | ________ |
| RR OL Permit | D | ________ |
| NEMA Hold Phases | E | ________ |

**W4IKS Table 4 Part 1**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(D+COL+KEY)**

| DETECTOR TYPE | | DELAY | | | CARRYOVER | | |
|---|---|---|---|---|---|---|---|
| COLUMN NUM | 2 | | 3 | | 4 | | 5 |
| FUNCTIONSKEY | PH | TIME | PH | TIME | PH | TIME | PH | TIME |
| ------ (1)0 | 1 | 10.0 | 5 | 10.0 | 1 | 0.0 | 5 | 0.0 |
| Upper (9)1 | 1 | 10.0 | 5 | 10.0 | 1 | 0.0 | 5 | 0.0 |
| Upper (2)2 | 2 | 0.0 | 6 | 0.0 | 2 | 0.0 | 6 | 0.0 |
| Lower (2)3 | 2 | 0.0 | 6 | 0.0 | 2 | 0.0 | 6 | 0.0 |
| Upper (3)4 | 2 | 0.0 | 6 | 0.0 | 2 | 0.0 | 6 | 0.0 |
| Lower (3)5 | | 0.0 | | 0.0 | 2 | 0.0 | 6 | 0.0 |
| ------ (4)6 | 2 | 0.0 | 6 | 0.0 | 2* | 0.0 | 6* | 0.0 |
| ------ (5)7 | 3 | 0.0 | 7 | 0.0 | 3 | 0.0 | 7 | 0.0 |
| Lower (9)8 | 3 | 10.0 | 7 | 5.0 | 3 | 0.0 | 7 | 0.0 |
| Upper (6)9 | 4 | 0.0 | 8 | 10.0 | 4 | 0.0 | 8 | 0.0 |
| Lower (6)A | 4 | 0.0 | 8 | 10.0 | 4 | 0.0 | 8 | 0.0 |
| Upper (7)B | 4 | 0.0 | 8 | 10.0 | 4 | 0.0 | 8 | 0.0 |
| Lower (7)C | | 0.0 | | 0.0 | 4 | 0.0 | 8 | 0.0 |
| ------ (8)D | 4 | 0.0 | 8 | 0.0 | 4* | 0.0 | 8* | 0.0 |
| CABINET FILE | | I | | J | | I | | J |

Note:  () = Slot Number  * = Set Type 3 Detector

**W4IKS Table 4 Part 2**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(D+9+4+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Detector Fail On | 0 | 0 |
| Detector Fail Off | 1 | 0 |
| Fail Det Backup | 2 | 0 |
| Max II In Delay | 3 | 0 |
| Max II In Carryover | 4 | 0 |
| Plan 9 In Delay | 5 | 0 |
| Plan 9 In Carryover | 6 | 0 |
| Plan 18 In Delay | 7 | 0 |
| Plan 18 In Carryover | 8 | 0 |
| TT Page 1 Delay | 9 | 0 |
| TT Page 1 Carryover | A | 0 |
| TT Page 2 Delay | B | 0 |
| TT Page 2 Carryover | C | 0 |
| NOVRAM | D | 0 |
| Computran | E | 0 |
| Release | F | 0 |

**(D+9+5+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| DF 01 Min | 0 | 0 |
| DF 02 Min | 1 | 0 |
| DF 03 Min | 2 | 0 |
| DF 04 Min | 3 | 0 |
| DF 05 Min | 4 | 0 |
| DF 06 Min | 5 | 0 |
| DF 07 Min | 6 | 0 |
| DF 08 Min | 7 | 0 |
| DF 01 Max | 8 | 0 |
| DF 02 Max | 9 | 0 |
| DF 03 Max | A | 0 |
| DF 04 Max | B | 0 |
| DF 05 Max | C | 0 |
| DF 06 Max | D | 0 |
| DF 07 Max | E | 0 |
| DF 08 Max | F | 0 |

**W4IKS Table 5 Sheet 1**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(A+CODE)**

| EVENT | 1234567 | HR | MIN | FUNC | CODE | EVENT | 1234567 | HR | MIN | FUNC | CODE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | _____ | 0 | 0 | 0 | 80-83 | 17 | _____ | 0 | 0 | 0 | CO-C3 |
| 2 | _____ | 0 | 0 | 0 | 84-87 | 18 | _____ | 0 | 0 | 0 | C4-C7 |
| 3 | _____ | 0 | 0 | 0 | 88-8B | 19 | _____ | 0 | 0 | 0 | C8-CB |
| 4 | _____ | 0 | 0 | 0 | 8C-8F | 20 | _____ | 0 | 0 | 0 | CC-CF |
| 5 | _____ | 0 | 0 | 0 | 90-93 | 21 | _____ | 0 | 0 | 0 | D0-D3 |
| 6 | _____ | 0 | 0 | 0 | 94-97 | 22 | _____ | 0 | 0 | 0 | D4-D7 |
| 7 | _____ | 0 | 0 | 0 | 98-9B | 23 | _____ | 0 | 0 | 0 | D8-DB |
| 8 | _____ | 0 | 0 | 0 | 9C-9F | 24 | _____ | 0 | 0 | 0 | DC-DF |
| 9 | _____ | 0 | 0 | 0 | A0-A3 | 25 | _____ | 0 | 0 | 0 | E0-E3 |
| 10 | _____ | 0 | 0 | 0 | A4-A7 | 26 | _____ | 0 | 0 | 0 | E4-E7 |
| 11 | _____ | 0 | 0 | 0 | A8-AB | 27 | _____ | 0 | 0 | 0 | E8-EB |
| 12 | _____ | 0 | 0 | 0 | AC-AF | 28 | _____ | 0 | 0 | 0 | EC-EF |
| 13 | _____ | 0 | 0 | 0 | B0-B3 | 29 | _____ | 0 | 0 | 0 | F0-F3 |
| 14 | _____ | 0 | 0 | 0 | B4-B7 | 30 | _____ | 0 | 0 | 0 | F4-F7 |
| 15 | _____ | 0 | 0 | 0 | B8-BB | 31 | _____ | 0 | 0 | 0 | F8-FB |
| 16 | _____ | 0 | 0 | 0 | BC-BF | 32 | _____ | 0 | 0 | 0 | FC-FF |

**W4IKS Table 5 Sheet 2**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(D+8+CODE)**

| EVENT | 1234567 | HR | MIN | FUNC | CODE | EVENT | 1234567 | HR | MIN | FUNC | CODE |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 33 | _____ | 0 | 0 | 0 | 80-83 | 49 | _____ | 0 | 0 | 0 | CO-C3 |
| 34 | _____ | 0 | 0 | 0 | 84-87 | 50 | _____ | 0 | 0 | 0 | C4-C7 |
| 35 | _____ | 0 | 0 | 0 | 88-8B | 51 | _____ | 0 | 0 | 0 | C8-CB |
| 36 | _____ | 0 | 0 | 0 | 8C-8F | 52 | _____ | 0 | 0 | 0 | CC-CF |
| 37 | _____ | 0 | 0 | 0 | 90-93 | 53 | _____ | 0 | 0 | 0 | D0-D3 |
| 38 | _____ | 0 | 0 | 0 | 94-97 | 54 | _____ | 0 | 0 | 0 | D4-D7 |
| 39 | _____ | 0 | 0 | 0 | 98-9B | 55 | _____ | 0 | 0 | 0 | D8-DB |
| 40 | _____ | 0 | 0 | 0 | 9C-9F | 56 | _____ | 0 | 0 | 0 | DC-DF |
| 41 | _____ | 0 | 0 | 0 | A0-A3 | 57 | _____ | 0 | 0 | 0 | E0-E3 |
| 42 | _____ | 0 | 0 | 0 | A4-A7 | 58 | _____ | 0 | 0 | 0 | E4-E7 |
| 43 | _____ | 0 | 0 | 0 | A8-AB | 59 | _____ | 0 | 0 | 0 | E8-EB |
| 44 | _____ | 0 | 0 | 0 | AC-AF | 60 | _____ | 0 | 0 | 0 | EC-EF |
| 45 | _____ | 0 | 0 | 0 | B0-B3 | 61 | _____ | 0 | 0 | 0 | F0-F3 |
| 46 | _____ | 0 | 0 | 0 | B4-B7 | 62 | _____ | 0 | 0 | 0 | F4-F7 |
| 47 | _____ | 0 | 0 | 0 | B8-BB | 63 | _____ | 0 | 0 | 0 | F8-FB |
| 48 | _____ | 0 | 0 | 0 | BC-BF | 64 | _____ | 0 | 0 | 0 | FC-FF |

**W4IKS Table 6**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(B+0+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Present Plan | 0 | 0 |
| TOD/DOW Plan | 1 | 0 |
| Hardwire Plan | 2 | 0 |
| Modem Plan | 3 | 0 |
| Mode (0-4) | 4 | 0 |
| Master (0-OFF) | 5 | 0 |
| Master Clock | 6 | 0 |
| Local Clock | 7 | 0 |
| Dwell Clock | 8 | 0 |
| Future | 9 | 0 |
| Future | A | 0 |
| Future | B | 0 |
| Future | C | _____ |
| NEMA CNA Phases | D | _____ |
| Adv Warning Phases | E | _____ |
| MRI Phases | F | _____ |

**(D+KEY1+KEY2)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Floating Ped | 2E | 0 |
| ID Number | 2F | 139 |
| No Coord Ped Recall | 3E | 0 |
| Rest In Walk | 3F | 0 |
| Adv Warning EOG | 4E | 0 |
| Adv Warning SOG | 4F | 0 |
| RR Red Clear | 5E | 0 |
| RR Clear Color | 5F | 0 |
| Bus Delay | 6D | 0.0 |
| Bus Free T1 | 6E | 0 |
| Bus Free T3 | 6F | 0 |
| EV Min Aft Clear | 7E | 0 |
| EV Indicators | 7F | 0 |
| NEMA Inputs | 66 | 0.0 |

**W4IKS Table 7 Sheet 1**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(B+PLAN+KEY)**

| FUNCTION | KEY | Plan 1 | Plan 2 | Plan 3 | Plan 4 | Plan 5 | Plan 6 | Plan 7 | Plan 8 | Plan 9 |
|---|---|---|---|---|---|---|---|---|---|---|
| Cycle Length | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 01 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 02 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 03 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 04 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 05 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 06 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 07 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 08 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offset | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Perm Length | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max Dwell | B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lead Phases | C | | | | | | | | | |
| Coord Phases | D | | | | | | | | | |
| Perm 2 Phases | E | | | | | | | | | |
| Min Recall | F | | | | | | | | | |

**W4IKS Table 7 Sheet 2**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(B+D+KEY1+KEY2)**

| | KEY1 | 7 | 8 | 9 | A | B | C | D | E | F |
|---|---|---|---|---|---|---|---|---|---|---|
| FUNCTION | KEY2 | Plan 10 | Plan 11 | Plan 12 | Plan 13 | Plan 14 | Plan 15 | Plan 16 | Plan 17 | Plan 18 |
| Cycle Length | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 01 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 02 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 03 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 04 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 05 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 06 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 07 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Forceoff 08 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Offset | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Perm Length | A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max Dwell | B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Lead Phases | C | | | | | | | | | |
| Coord Phases | D | | | | | | | | | |
| Perm 2 Phases | E | | | | | | | | | |
| Min Recall | F | | | | | | | | | |

**W4IKS Table 8**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(B+A+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Bus P1 T1 | 0 | 0 |
| Bus P1 T2 | 1 | 0 |
| Bus P1 T3 | 2 | 0 |
| Bus P2 T1 | 3 | 0 |
| Bus P2 T2 | 4 | 0 |
| Bus P2 T3 | 5 | 0 |
| Bus P3 T1 | 6 | 0 |
| Bus P3 T2 | 7 | 0 |
| Bus P3 T3 | 8 | 0 |
| Perm 2 P1 | 9 | 0 |
| Perm 2 P2 | A | 0 |
| Perm 2 P3 | B | 0 |
| Flash Yellow | C | |
| Flash Circuit | D | |
| TOD/DOW Max | E | |
| OLB Switchpack | F | |

**(B+B+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Bus P4 T1 | 0 | 0 |
| Bus P4 T2 | 1 | 0 |
| Bus P4 T3 | 2 | 0 |
| Bus P5 T1 | 3 | 0 |
| Bus P5 T2 | 4 | 0 |
| Bus P5 T3 | 5 | 0 |
| Bus P6 T1 | 6 | 0 |
| Bus P6 T2 | 7 | 0 |
| Bus P6 T3 | 8 | 0 |
| Perm 2 P4 | 9 | 0 |
| Perm 2 P5 | A | 0 |
| Perm 2 P6 | B | 0 |
| OL Flash Yellow | C | |
| OL Flash Clear | D | |
| TOD/DOW Ped | E | |
| OLC Switchpack | F | |

**(B+C+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Bus P7 T1 | 0 | 0 |
| Bus P7 T2 | 1 | 0 |
| Bus P7 T3 | 2 | 0 |
| Bus P8 T1 | 3 | 0 |
| Bus P8 T2 | 4 | 0 |
| Bus P8 T3 | 5 | 0 |
| Bus P9 T1 | 6 | 0 |
| Bus P9 T2 | 7 | 0 |
| Bus P9 T3 | 8 | 0 |
| Perm 2 P7 | 9 | 0 |
| Perm 2 P8 | A | 0 |
| Perm 2 P9 | B | 0 |
| Coord Max | C | |
| TOD Red Rest | D | |
| OLA Switchpack | E | |
| OLD Switchpack | F | |

**W4IKS Table 9 Page 0**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(A+4+KEY)**

| C1 PIN | KEY | CODE |
|---|---|---|
| 39 | 0 | 0 |
| 40 | 1 | 0 |
| 41 | 2 | 0 |
| 42 | 3 | 0 |
| 43 | 4 | 0 |
| 44 | 5 | 0 |
| 45 | 6 | 0 |
| 46 | 7 | 0 |
| 47 | 8 | 0 |
| 48 | 9 | 0 |
| 49 | A | 0 |
| 50 | B | 0 |
| 51 | C | 0 |
| 52 | D | 0 |
| 53 | E | 0 |
| 54 | F | 0 |

**(A+5+KEY)**

| C1 PIN | KEY | CODE |
|---|---|---|
| 55 | 0 | 0 |
| 56 | 1 | 0 |
| 57 | 2 | 0 |
| 58 | 3 | 0 |
| 59 | 4 | 0 |
| 60 | 5 | 0 |
| 61 | 6 | 0 |
| 62 | 7 | 0 |
|  | 8 | 0 |
|  | 9 | 0 |
|  | A | 0 |
|  | B | 0 |
| 63 | C | 0 |
| 64 | D | 0 |
| 65 | E | 0 |
| 66 | F | 0 |

**(A+6+KEY)**

| C1 PIN | KEY | CODE |
|---|---|---|
| 67 | 0 | 0 |
| 68 | 1 | 0 |
| 69 | 2 | 0 |
| 70 | 3 | 0 |
| 71 | 4 | 0 |
| 72 | 5 | 0 |
| 73 | 6 | 0 |
| 74 | 7 | 0 |
| 75 | 8 | 0 |
| 76 | 9 | 0 |
| 77 | A | 0 |
| 78 | B | 0 |
| 79 | C | 0 |
| 80 | D | 0 |
| 81 | E | 0 |
| 82 | F | 0 |

**W4IKS Table 9 Page 1**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(D+A+4+KEY)**

| C1 PIN | KEY | CODE |
|---|---|---|
| 39 | 0 | 0 |
| 40 | 1 | 0 |
| 41 | 2 | 0 |
| 42 | 3 | 0 |
| 43 | 4 | 0 |
| 44 | 5 | 0 |
| 45 | 6 | 0 |
| 46 | 7 | 0 |
| 47 | 8 | 0 |
| 48 | 9 | 0 |
| 49 | A | 0 |
| 50 | B | 0 |
| 51 | C | 0 |
| 52 | D | 0 |
| 53 | E | 0 |
| 54 | F | 0 |

**(D+A+5+KEY)**

| C1 PIN | KEY | CODE |
|---|---|---|
| 55 | 0 | 0 |
| 56 | 1 | 0 |
| 57 | 2 | 0 |
| 58 | 3 | 0 |
| 59 | 4 | 0 |
| 60 | 5 | 0 |
| 61 | 6 | 0 |
| 62 | 7 | 0 |
|  | 8 | 0 |
|  | 9 | 0 |
|  | A | 0 |
|  | B | 0 |
| 63 | C | 0 |
| 64 | D | 0 |
| 65 | E | 0 |
| 66 | F | 0 |

**(D+A+6+KEY)**

| C1 PIN | KEY | CODE |
|---|---|---|
| 67 | 0 | 0 |
| 68 | 1 | 0 |
| 69 | 2 | 0 |
| 70 | 3 | 0 |
| 71 | 4 | 0 |
| 72 | 5 | 0 |
| 73 | 6 | 0 |
| 74 | 7 | 0 |
| 75 | 8 | 0 |
| 76 | 9 | 0 |
| 77 | A | 0 |
| 78 | B | 0 |
| 79 | C | 0 |
| 80 | D | 0 |
| 81 | E | 0 |
| 82 | F | 0 |

**W4IKS Table 9 Page 2**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(D+A+B+KEY)**

| C1 PIN | KEY | CODE |
|---|---|---|
| 39 | 0 | 0 |
| 40 | 1 | 0 |
| 41 | 2 | 0 |
| 42 | 3 | 0 |
| 43 | 4 | 0 |
| 44 | 5 | 0 |
| 45 | 6 | 0 |
| 46 | 7 | 0 |
| 47 | 8 | 0 |
| 48 | 9 | 0 |
| 49 | A | 0 |
| 50 | B | 0 |
| 51 | C | 0 |
| 52 | D | 0 |
| 53 | E | 0 |
| 54 | F | 0 |

**(D+A+C+KEY)**

| C1 PIN | KEY | CODE |
|---|---|---|
| 55 | 0 | 0 |
| 56 | 1 | 0 |
| 57 | 2 | 0 |
| 58 | 3 | 0 |
| 59 | 4 | 0 |
| 60 | 5 | 0 |
| 61 | 6 | 0 |
| 62 | 7 | 0 |
|  | 8 | 0 |
|  | 9 | 0 |
|  | A | 0 |
|  | B | 0 |
| 63 | C | 0 |
| 64 | D | 0 |
| 65 | E | 0 |
| 66 | F | 0 |

**(D+A+D+KEY)**

| C1 PIN | KEY | CODE |
|---|---|---|
| 67 | 0 | 0 |
| 68 | 1 | 0 |
| 69 | 2 | 0 |
| 70 | 3 | 0 |
| 71 | 4 | 0 |
| 72 | 5 | 0 |
| 73 | 6 | 0 |
| 74 | 7 | 0 |
| 75 | 8 | 0 |
| 76 | 9 | 0 |
| 77 | A | 0 |
| 78 | B | 0 |
| 79 | C | 0 |
| 80 | D | 0 |
| 81 | E | 0 |
| 82 | F | 0 |

**W4IKS Table 10 Page 0**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

| (A+0+KEY) | | | (A+1+KEY) | | | (A+2+KEY) | | | (A+3+KEY) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **FUNCTION** | **KEY** | **CODE** | **FUNCTION** | **KEY** | **CODE** | **FUNCTION** | **KEY** | **CODE** | **FUNCTION** | **KEY** | **CODE** |
| 04 D/W | 0 | 0 | 08 D/W | 0 | 0 | 02 Ped Y | 0 | 99 | 01 D/W | 0 | 0 |
| 04 Walk | 1 | 0 | 08 Walk | 1 | 0 | 06 Ped Y | 1 | 99 | 01 Walk | 1 | 0 |
| 04 Red | 2 | 0 | 08 Red | 2 | 0 | 04 Ped Y | 2 | 0 | OLB Red | 2 | 0 |
| 04 Yellow | 3 | 0 | 08 Yellow | 3 | 0 | 08 Ped Y | 3 | 0 | OLB Yellow | 3 | 0 |
| 04 Green | 4 | 0 | 08 Green | 4 | 0 | 03 Ped Y | 4 | 0 | OLB Green | 4 | 0 |
| 03 Red | 5 | 0 | 07 Red | 5 | 0 | 01 Ped Y | 5 | 0 | OLA Red | 5 | 0 |
| 03 Yellow | 6 | 0 | 07 Yellow | 6 | 0 | Flash | 6 | 0 | OLA Yellow | 6 | 0 |
| 03 Green | 7 | 0 | 07 Green | 7 | 0 | Watchdog | 7 | 0 | OLA Green | 7 | 0 |
| 02 D/W | 8 | 0 | 06 D/W | 8 | 0 | 03 D/W | 8 | 0 | | 8 | 0 |
| 02 Walk | 9 | 0 | 06 Walk | 9 | 0 | 03 Walk | 9 | 0 | SD | 9 | 0 |
| 02 Red | A | 0 | 06 Red | A | 0 | OLD Red | A | 0 | LTT | A | 0 |
| 02 Yellow | B | 0 | 06 Yellow | B | 0 | OLD Yellow | B | 0 | | | |
| 02 Green | C | 0 | 06 Green | C | 0 | OLD Green | C | 0 | High Byte IDC | | 0 |
| 01 Red | D | 99 | 05 Red | D | 99 | OLC Red | D | 0 | | | |
| 01 Yellow | E | 99 | 05 Yellow | E | 99 | OLC Yellow | E | 0 | | | |
| 01 Green | F | 99 | 05 Green | F | 99 | OLC Green | F | 0 | | | |

**W4IKS Table 10 Page 1**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

| (D+A+0+KEY) | | | (D+A+1+KEY) | | | (D+A+2+KEY) | | | (D+A+3+KEY) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **FUNCTION** | **KEY** | **CODE** | **FUNCTION** | **KEY** | **CODE** | **FUNCTION** | **KEY** | **CODE** | **FUNCTION** | **KEY** | **CODE** |
| 04 D/W | 0 | 0 | 08 D/W | 0 | 0 | 02 Ped Y | 0 | 0 | 01 D/W | 0 | 0 |
| 04 Walk | 1 | 0 | 08 Walk | 1 | 0 | 06 Ped Y | 1 | 0 | 01 Walk | 1 | 0 |
| 04 Red | 2 | 0 | 08 Red | 2 | 0 | 04 Ped Y | 2 | 0 | OLB Red | 2 | 0 |
| 04 Yellow | 3 | 0 | 08 Yellow | 3 | 0 | 08 Ped Y | 3 | 0 | OLB Yellow | 3 | 0 |
| 04 Green | 4 | 0 | 08 Green | 4 | 0 | 03 Ped Y | 4 | 0 | OLB Green | 4 | 0 |
| 03 Red | 5 | 0 | 07 Red | 5 | 0 | 01 Ped Y | 5 | 0 | OLA Red | 5 | 0 |
| 03 Yellow | 6 | 0 | 07 Yellow | 6 | 0 | Flash | 6 | 0 | OLA Yellow | 6 | 0 |
| 03 Green | 7 | 0 | 07 Green | 7 | 0 | Watchdog | 7 | 0 | OLA Green | 7 | 0 |
| 02 D/W | 8 | 0 | 06 D/W | 8 | 0 | 03 D/W | 8 | 0 | | 8 | 0 |
| 02 Walk | 9 | 0 | 06 Walk | 9 | 0 | 03 Walk | 9 | 0 | SD | 9 | 0 |
| 02 Red | A | 0 | 06 Red | A | 0 | OLD Red | A | 0 | LTT | A | 0 |
| 02 Yellow | B | 0 | 06 Yellow | B | 0 | OLD Yellow | B | 0 | | | |
| 02 Green | C | 0 | 06 Green | C | 0 | OLD Green | C | 0 | | | |
| 01 Red | D | 0 | 05 Red | D | 0 | OLC Red | D | 0 | | | |
| 01 Yellow | E | 0 | 05 Yellow | E | 0 | OLC Yellow | E | 0 | | | |
| 01 Green | F | 0 | 05 Green | F | 0 | OLC Green | F | 0 | | | |

**W4IKS Table 10 Page 2**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

| (D+A+7+KEY) | | | (D+A+8+KEY) | | | (D+A+9+KEY) | | | (D+A+A+KEY) | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **FUNCTION** | **KEY** | **CODE** | **FUNCTION** | **KEY** | **CODE** | **FUNCTION** | **KEY** | **CODE** | **FUNCTION** | **KEY** | **CODE** |
| 04 D/W | 0 | 0 | 08 D/W | 0 | 0 | 02 Ped Y | 0 | 0 | 01 D/W | 0 | 0 |
| 04 Walk | 1 | 0 | 08 Walk | 1 | 0 | 06 Ped Y | 1 | 0 | 01 Walk | 1 | 0 |
| 04 Red | 2 | 0 | 08 Red | 2 | 0 | 04 Ped Y | 2 | 0 | OLB Red | 2 | 0 |
| 04 Yellow | 3 | 0 | 08 Yellow | 3 | 0 | 08 Ped Y | 3 | 0 | OLB Yellow | 3 | 0 |
| 04 Green | 4 | 0 | 08 Green | 4 | 0 | 03 Ped Y | 4 | 0 | OLB Green | 4 | 0 |
| 03 Red | 5 | 0 | 07 Red | 5 | 0 | 01 Ped Y | 5 | 0 | OLA Red | 5 | 0 |
| 03 Yellow | 6 | 0 | 07 Yellow | 6 | 0 | Flash | 6 | 0 | OLA Yellow | 6 | 0 |
| 03 Green | 7 | 0 | 07 Green | 7 | 0 | Watchdog | 7 | 0 | OLA Green | 7 | 0 |
| 02 D/W | 8 | 0 | 06 D/W | 8 | 0 | 03 D/W | 8 | 0 | | 8 | 0 |
| 02 Walk | 9 | 0 | 06 Walk | 9 | 0 | 03 Walk | 9 | 0 | SD | 9 | 0 |
| 02 Red | A | 0 | 06 Red | A | 0 | OLD Red | A | 0 | LTT | A | 0 |
| 02 Yellow | B | 0 | 06 Yellow | B | 0 | OLD Yellow | B | 0 | | | |
| 02 Green | C | 0 | 06 Green | C | 0 | OLD Green | C | 0 | | | |
| 01 Red | D | 0 | 05 Red | D | 0 | OLC Red | D | 0 | | | |
| 01 Yellow | E | 0 | 05 Yellow | E | 0 | OLC Yellow | E | 0 | | | |
| 01 Green | F | 0 | 05 Green | F | 0 | OLC Green | F | 0 | | | |

**W4IKS Table 11 Page 0**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(D+B+0+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| 05 D/W | 0 | 0 |
| 05 Walk | 1 | 0 |
| OLL Red | 2 | 0 |
| OLL Yellow | 3 | 0 |
| OLL Green | 4 | 0 |
| OLK Red | 5 | 0 |
| OLK Yellow | 6 | 0 |
| OLK Green | 7 | 0 |
| 07 D/W | 8 | 0 |
| 07 Walk | 9 | 0 |
| OLJ Red | A | 0 |
| OLJ Yellow | B | 0 |
| OLJ Green | C | 0 |
| OLH Red | D | 0 |
| OLH Yellow | E | 0 |
| OLH Green | F | 0 |

**(D+B+1+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| OLE Green | 0 | 0 |
| OLF Green | 1 | 0 |
| OLE Yellow | 2 | 0 |
| OLF Yellow | 3 | 0 |
| Adv Warning | 4 | 0 |
| RR Fl Yellow | 5 | 0 |
| Det Reset | 6 | 0 |
| RR On | 7 | 0 |
| EVA On | 8 | 0 |
| EVB On | 9 | 0 |
| EVC On | A | 0 |
| EVD On | B | 0 |
| Ring 1 Bit B | C | 0 |
| Ring 1 Bit C | D | 0 |
| Ring 2 Bit B | E | 0 |
| Ring 2 Bit C | F | 0 |

**(D+B+2+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Cycle 2 | 0 | 0 |
| Cycle 3 | 1 | 0 |
| Offset 1 | 2 | 0 |
| Offset 2 | 3 | 0 |
| Offset 3 | 4 | 0 |
| ------ | 5 | 0 |
| Free | 6 | 0 |
| Flash | 7 | 0 |
| Coord Plan 1 2 3 | 8 | 0 |
| Coord Plan 4 5 6 | 9 | 0 |
| Coord Plan 7 8 9 | A | 0 |
| Coord Plan 10 11 12 | B | 0 |
| Coord Plan 13 14 15 | C | 0 |
| Coord Plan 16 17 18 | D | 0 |
| Future | E | 0 |
| Future | F | 0 |

**W4IKS Table 11 Page 1**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(D+B+4+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| 05 D/W | 0 | 0 |
| 05 Walk | 1 | 0 |
| OLL Red | 2 | 0 |
| OLL Yellow | 3 | 0 |
| OLL Green | 4 | 0 |
| OLK Red | 5 | 0 |
| OLK Yellow | 6 | 0 |
| OLK Green | 7 | 0 |
| 07 D/W | 8 | 0 |
| 07 Walk | 9 | 0 |
| OLJ Red | A | 0 |
| OLJ Yellow | B | 0 |
| OLJ Green | C | 0 |
| OLH Red | D | 0 |
| OLH Yellow | E | 0 |
| OLH Green | F | 0 |

**(D+B+5+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| OLE Green | 0 | 0 |
| OLF Green | 1 | 0 |
| OLE Yellow | 2 | 0 |
| OLF Yellow | 3 | 0 |
| Adv Warning | 4 | 0 |
| RR Fl Yellow | 5 | 0 |
| Det Reset | 6 | 0 |
| RR On | 7 | 0 |
| EVA On | 8 | 0 |
| EVB On | 9 | 0 |
| EVC On | A | 0 |
| EVD On | B | 0 |
| Ring 1 Bit B | C | 0 |
| Ring 1 Bit C | D | 0 |
| Ring 2 Bit B | E | 0 |
| Ring 2 Bit C | F | 0 |

**(D+B+6+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Cycle 2 | 0 | 0 |
| Cycle 3 | 1 | 0 |
| Offset 1 | 2 | 0 |
| Offset 2 | 3 | 0 |
| Offset 3 | 4 | 0 |
| ------ | 5 | 0 |
| Free | 6 | 0 |
| Flash | 7 | 0 |
| Coord Plan 1 2 3 | 8 | 0 |
| Coord Plan 4 5 6 | 9 | 0 |
| Coord Plan 7 8 9 | A | 0 |
| Coord Plan 10 11 12 | B | 0 |
| Coord Plan 13 14 15 | C | 0 |
| Coord Plan 16 17 18 | D | 0 |
| Future | E | 0 |
| Future | F | 0 |

**W4IKS Table 11 Page 2**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(D+B+8+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| 05 D/W | 0 | 0 |
| 05 Walk | 1 | 0 |
| OLL Red | 2 | 0 |
| OLL Yellow | 3 | 0 |
| OLL Green | 4 | 0 |
| OLK Red | 5 | 0 |
| OLK Yellow | 6 | 0 |
| OLK Green | 7 | 0 |
| 07 D/W | 8 | 0 |
| 07 Walk | 9 | 0 |
| OLJ Red | A | 0 |
| OLJ Yellow | B | 0 |
| OLJ Green | C | 0 |
| OLH Red | D | 0 |
| OLH Yellow | E | 0 |
| OLH Green | F | 0 |

**(D+B+9+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| OLE Green | 0 | 0 |
| OLF Green | 1 | 0 |
| OLE Yellow | 2 | 0 |
| OLF Yellow | 3 | 0 |
| Adv Warning | 4 | 0 |
| RR Fl Yellow | 5 | 0 |
| Det Reset | 6 | 0 |
| RR On | 7 | 0 |
| EVA On | 8 | 0 |
| EVB On | 9 | 0 |
| EVC On | A | 0 |
| EVD On | B | 0 |
| Ring 1 Bit B | C | 0 |
| Ring 1 Bit C | D | 0 |
| Ring 2 Bit B | E | 0 |
| Ring 2 Bit C | F | 0 |

**(D+B+A+KEY)**

| FUNCTIONS | KEY | VALUE |
|---|---|---|
| Cycle 2 | 0 | 0 |
| Cycle 3 | 1 | 0 |
| Offset 1 | 2 | 0 |
| Offset 2 | 3 | 0 |
| Offset 3 | 4 | 0 |
| ------ | 5 | 0 |
| Free | 6 | 0 |
| Flash | 7 | 0 |
| Coord Plan 1 2 3 | 8 | 0 |
| Coord Plan 4 5 6 | 9 | 0 |
| Coord Plan 7 8 9 | A | 0 |
| Coord Plan 10 11 12 | B | 0 |
| Coord Plan 13 14 15 | C | 0 |
| Coord Plan 16 17 18 | D | 0 |
| Future | E | 0 |
| Future | F | 0 |

**W4IKS Table 12**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(D+8+KEY1+KEY2)**

| KEY1 = 0 | | | KEY1 = 1 | | | KEY1 = 2 | | | KEY1 = 3 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **FUNCTION** | **KEY2** | **VALUE** | **FUNCTION** | **KEY2** | **VALUE** | **FUNCTION** | **KEY2** | **VALUE** | **FUNCTION** | **KEY2** | **VALUE** |
| 1/Month | 0 | 0 | 3/Hour On | 0 | 0 | 5/Hour Off | 0 | 0 | 7/Plan | 0 | 0 |
| 1/DOM | 1 | 0 | 3/Min On | 1 | 0 | 5/Min Off | 1 | 0 | 8/Month | 1 | 0 |
| 1/Hour On | 2 | 0 | 3/Hour Off | 2 | 0 | 5/Plan | 2 | 0 | 8/DOM | 2 | 0 |
| 1/Min On | 3 | 0 | 3/Min Off | 3 | 0 | 6/Month | 3 | 0 | 8/Hour On | 3 | 0 |
| 1/Hour Off | 4 | 0 | 3/Plan | 4 | 0 | 6/DOM | 4 | 0 | 8/Min On | 4 | 0 |
| 1/Min Off | 5 | 0 | 4/Month | 5 | 0 | 6/Hour On | 5 | 0 | 8/Hour Off | 5 | 0 |
| 1/Plan | 6 | 0 | 4/DOM | 6 | 0 | 6/Min On | 6 | 0 | 8/Min Off | 6 | 0 |
| 2/Month | 7 | 0 | 4/Hour On | 7 | 0 | 6/Hour Off | 7 | 0 | 8/Plan | 7 | 0 |
| 2/DOM | 8 | 0 | 4/Min On | 8 | 0 | 6/Min Off | 8 | 0 | 9/Month | 8 | 0 |
| 2/Hour On | 9 | 0 | 4/Hour Off | 9 | 0 | 6/Plan | 9 | 0 | 9/DOM | 9 | 0 |
| 2/Min On | A | 0 | 4/Min Off | A | 0 | 7/Month | A | 0 | 9/Hour On | A | 0 |
| 2/Hour Off | B | 0 | 4/Plan | B | 0 | 7/DOM | B | 0 | 9/Min On | B | 0 |
| 2/Min Off | C | 0 | 5/Month | C | 0 | 7/Hour On | C | 0 | 9/Hour Off | C | 0 |
| 2/Plan | D | 0 | 5/DOM | D | 0 | 7/Min On | D | 0 | 9/Min Off | D | 0 |
| 3/Month | E | 0 | 5/Hour On | E | 0 | 7/Hour Off | E | 0 | 9/Plan | E | 0 |
| 3/DOM | F | 0 | 5/Min On | F | 0 | 7/Min Off | F | 0 | | | |

**W4IKS Table 13**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(D+9+0+KEY)**

| FUNCTION | KEY | VALUE |
|---|---|---|
| Overlap H | 0 | _____ |
| Overlap J | 1 | _____ |
| Overlap K | 2 | _____ |
| Overlap L | 3 | _____ |
| OLH Switchpack | 4 | _____ |
| OLJ Switchpack | 5 | _____ |
| OLK Switchpack | 6 | _____ |
| OLL Switchpack | 7 | _____ |
| Reserved | 8 | _____ |
| Reserved | 9 | _____ |
| All Red Before EV | A | _____ |

**(D+9+3+KEY)**

| FUNCTION | KEY | VALUE |
|---|---|---|
| OLH Green | 0 | 0.0 |
| OLH Yellow | 1 | 0.0 |
| OLH Red | 2 | 0.0 |
| OLJ Green | 3 | 0.0 |
| OLJ Yellow | 4 | 0.0 |
| OLJ Red | 5 | 0.0 |
| OLK Green | 6 | 0.0 |
| OLK Yellow | 7 | 0.0 |
| OLK Red | 8 | 0.0 |
| OLL Green | 9 | 0.0 |
| OLL Yellow | A | 0.0 |
| OLL Red | B | 0.0 |

**(E+F+KEY)**

| FUNCTION | KEY | VALUE |
|---|---|---|
| RR Max II | 0 | 0 |
| Ped Perm Pl 1 | 1 | 0 |
| Ped Perm Pl 2 | 2 | 0 |
| Ped Perm Pl 3 | 3 | 0 |
| Ped Perm Pl 4 | 4 | 0 |
| Ped Perm Pl 5 | 5 | 0 |
| Ped Perm Pl 6 | 6 | 0 |
| Ped Perm Pl 7 | 7 | 0 |
| Ped Perm Pl 8 | 8 | 0 |
| Ped Perm Pl 9 | 9 | 0 |
| # of Lng Pwrouts | A | 0 |
| # pf Sht Pwrouts | B | 0 |
| Failed Det | C | 0 |
| Max II On | D | 0 |
| No Daylite Save | E | 0 |
| Revision Level | F | 46 |

**W4IKS Table 14 Sheet 1**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(D+9+KEY1+KEY2)**

| KEY1 = 8 | | KEY1 = 9 | | KEY1 = A | | KEY1 = B | |
|---|---|---|---|---|---|---|---|
| KEY2 | CODE | KEY2 | CODE | KEY2 | CODE | KEY | CODE |
| 0 | 205 | 0 | 205 | 0 | 2 | 0 | 23 |
| 1 | 126 | 1 | 126 | 1 | 14 | 1 | 77 |
| 2 | 23 | 2 | 23 | 2 | 20 | 2 | 20 |
| 3 | 25 | 3 | 76 | 3 | 23 | 3 | 26 |
| 4 | 20 | 4 | 205 | 4 | 78 | 4 | 2 |
| 5 | 27 | 5 | 126 | 5 | 20 | 5 | 205 |
| 6 | 1 | 6 | 21 | 6 | 24 | 6 | 128 |
| 7 | 205 | 7 | 1 | 7 | 27 | 7 | 21 |
| 8 | 126 | 8 | 14 | 8 | 1 | 8 | 1 |
| 9 | 21 | 9 | 20 | 9 | 205 | 9 | 11 |
| A | 2 | A | 21 | A | 127 | A | 209 |
| B | 14 | B | 1 | B | 21 | B | 1 |
| C | 20 | C | 13 | C | 1 | C | 24 |
| D | 24 | D | 205 | D | 12 | D | 21 |
| E | 26 | E | 9 | E | 205 | E | 2 |
| F | 2 | F | 21 | F | 127 | F | 14 |

**W4IKS Table 14 Sheet 2**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(D+9+KEY1+KEY2)**

| KEY1 = C | | KEY1 = D | | KEY1 = E | | KEY1 = F | |
|---|---|---|---|---|---|---|---|
| KEY2 | CODE | KEY2 | CODE | KEY2 | CODE | KEY | CODE |
| 0 | 209 | 0 | 29 | 0 | 20 | 0 | 205 |
| 1 | 2 | 1 | 7 | 1 | 27 | 1 | 146 |
| 2 | 24 | 2 | 20 | 2 | 5 | 2 | 21 |
| 3 | 27 | 3 | 24 | 3 | 205 | 3 | 5 |
| 4 | 1 | 4 | 25 | 4 | 146 | 4 | 14 |
| 5 | 208 | 5 | 6 | 5 | 21 | 5 | 20 |
| 6 | 1 | 6 | 210 | 6 | 6 | 6 | 21 |
| 7 | 30 | 7 | 2 | 7 | 14 | 7 | 5 |
| 8 | 26 | 8 | 24 | 8 | 20 | 8 | 13 |
| 9 | 1 | 9 | 21 | 9 | 24 | 9 | 205 |
| A | 210 | A | 2 | A | 26 | A | 11 |
| B | 1 | B | 14 | B | 6 | B | 21 |
| C | 23 | C | 205 | C | 205 | C | 6 |
| D | 25 | D | 146 | D | 146 | D | 14 |
| E | 20 | E | 23 | E | 23 | E | 20 |
| F | 24 | F | 45 | F | 66 | F | 23 |

**W4IKS Table 14 Sheet 3**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(D+E+KEY1+KEY2)**

| KEY1 = 0 | | KEY1 = 1 | | KEY1 = 2 | | KEY1 = 3 | |
|---|---|---|---|---|---|---|---|
| KEY2 | CODE | KEY2 | CODE | KEY2 | CODE | KEY | CODE |
| 0 | 68 | 0 | 6 | 0 | 5 | 0 | 25 |
| 1 | 20 | 1 | 205 | 1 | 208 | 1 | 6 |
| 2 | 24 | 2 | 148 | 2 | 5 | 2 | 210 |
| 3 | 27 | 3 | 21 | 3 | 30 | 3 | 6 |
| 4 | 5 | 4 | 5 | 4 | 26 | 4 | 24 |
| 5 | 205 | 5 | 11 | 5 | 5 | 5 | 21 |
| 6 | 147 | 6 | 209 | 6 | 210 | 6 | 6 |
| 7 | 21 | 7 | 5 | 7 | 5 | 7 | 14 |
| 8 | 5 | 8 | 24 | 8 | 23 | 8 | 0 |
| 9 | 12 | 9 | 21 | 9 | 45 | 9 | 0 |
| A | 205 | A | 6 | A | 20 | A | 0 |
| B | 147 | B | 14 | B | 24 | B | 0 |
| C | 23 | C | 209 | C | 29 | C | 0 |
| D | 67 | D | 6 | D | 7 | D | 0 |
| E | 20 | E | 24 | E | 20 | E | 0 |
| F | 26 | F | 27 | F | 24 | F | 0 |

**W4IKS Table 14 Sheet 4**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(D+E+KEY1+KEY2)**

| KEY1 = 4 | | KEY1 = 5 | | KEY1 = 6 | | KEY1 = 7 | |
|---|---|---|---|---|---|---|---|
| KEY2 | CODE | KEY2 | CODE | KEY2 | CODE | KEY | CODE |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| 2 | 0 | 2 | 0 | 2 | 0 | 2 | 0 |
| 3 | 0 | 3 | 0 | 3 | 0 | 3 | 0 |
| 4 | 0 | 4 | 0 | 4 | 0 | 4 | 0 |
| 5 | 0 | 5 | 0 | 5 | 0 | 5 | 0 |
| 6 | 0 | 6 | 0 | 6 | 0 | 6 | 0 |
| 7 | 0 | 7 | 0 | 7 | 0 | 7 | 0 |
| 8 | 0 | 8 | 0 | 8 | 0 | 8 | 0 |
| 9 | 0 | 9 | 0 | 9 | 0 | 9 | 0 |
| A | 0 | A | 0 | A | 0 | A | 0 |
| B | 0 | B | 0 | B | 0 | B | 0 |
| C | 0 | C | 0 | C | 0 | C | 0 |
| D | 0 | D | 0 | D | 0 | D | 0 |
| E | 0 | E | 0 | E | 0 | E | 0 |
| F | 0 | F | 0 | F | 0 | F | 0 |

**W4IKS Table 14 Sheet 5**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(D+E+KEY1+KEY2)**

| KEY1 = 8 | | KEY1 = 9 | | KEY1 = A | | KEY1 = B | |
|---|---|---|---|---|---|---|---|
| KEY2 | CODE | KEY2 | CODE | KEY2 | CODE | KEY | CODE |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| 2 | 0 | 2 | 0 | 2 | 0 | 2 | 0 |
| 3 | 0 | 3 | 0 | 3 | 0 | 3 | 0 |
| 4 | 0 | 4 | 0 | 4 | 0 | 4 | 0 |
| 5 | 0 | 5 | 0 | 5 | 0 | 5 | 0 |
| 6 | 0 | 6 | 0 | 6 | 0 | 6 | 0 |
| 7 | 0 | 7 | 0 | 7 | 0 | 7 | 0 |
| 8 | 0 | 8 | 0 | 8 | 0 | 8 | 0 |
| 9 | 0 | 9 | 0 | 9 | 0 | 9 | 0 |
| A | 0 | A | 0 | A | 0 | A | 0 |
| B | 0 | B | 0 | B | 0 | B | 0 |
| C | 0 | C | 0 | C | 0 | C | 0 |
| D | 0 | D | 0 | D | 0 | D | 0 |
| E | 0 | E | 0 | E | 0 | E | 0 |
| F | 0 | F | 0 | F | 0 | F | 0 |

**W4IKS Table 14 Sheet 6**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(D+E+KEY1+KEY2)**

| KEY1 = C | | KEY1 = D | | KEY1 = E | | KEY1 = F | |
|---|---|---|---|---|---|---|---|
| KEY2 | CODE | KEY2 | CODE | KEY2 | CODE | KEY | CODE |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 0 | 1 | 0 | 1 | 0 | 1 | 0 |
| 2 | 0 | 2 | 0 | 2 | 0 | 2 | 0 |
| 3 | 0 | 3 | 0 | 3 | 0 | 3 | 0 |
| 4 | 0 | 4 | 0 | 4 | 0 | 4 | 0 |
| 5 | 0 | 5 | 0 | 5 | 0 | 5 | 0 |
| 6 | 0 | 6 | 0 | 6 | 0 | 6 | 0 |
| 7 | 0 | 7 | 0 | 7 | 0 | 7 | 0 |
| 8 | 0 | 8 | 0 | 8 | 0 | 8 | 0 |
| 9 | 0 | 9 | 0 | 9 | 0 | 9 | 0 |
| A | 0 | A | 0 | A | 0 | A | 0 |
| B | 0 | B | 0 | B | 0 | B | 0 |
| C | 0 | C | 0 | C | 0 | C | 0 |
| D | 0 | D | 0 | D | 0 | D | 0 |
| E | 0 | E | 0 | E | 0 | E | 0 |
| F | 0 | F | 0 | F | 0 | F | 0 |

**W4IKS Table 15**
**Date: Wednesday, February 06, 2013 Time: 07:36 AM**
**Intersection #139  124th @ Leviton**

**(D+B+3+KEY)**

| FUNCTION | KEY | VALUE |
|---|---|---|
| CB Output #1 | 0 | 0 |
| CB Output #2 | 1 | 0 |
| CB Output #3 | 2 | 0 |
| CB Output #4 | 3 | 0 |
| CB Output #5 | 4 | 0 |
| CB Output #6 | 5 | 0 |
| CB Output #7 | 6 | 0 |
| CB Output #8 | 7 | 0 |
| CB Flash Out #9 | 8 | 51 |
| CB Flash Out #10 | 9 | 0 |
| CB Flash Out #11 | A | 52 |
| CB Flash Out #12 | B | 0 |

Page ID - 0

**(D+B+7+KEY)**

| FUNCTION | KEY | VALUE |
|---|---|---|
| CB Output #1 | 0 | 0 |
| CB Output #2 | 1 | 0 |
| CB Output #3 | 2 | 0 |
| CB Output #4 | 3 | 0 |
| CB Output #5 | 4 | 0 |
| CB Output #6 | 5 | 0 |
| CB Output #7 | 6 | 0 |
| CB Output #8 | 7 | 0 |
| CB Flash Out #9 | 8 | 0 |
| CB Flash Out #10 | 9 | 0 |
| CB Flash Out #11 | A | 0 |
| CB Flash Out #12 | B | 0 |

Page ID - 1

**(D+B+B+KEY)**

| FUNCTION | KEY | VALUE |
|---|---|---|
| CB Output #1 | 0 | 0 |
| CB Output #2 | 1 | 0 |
| CB Output #3 | 2 | 0 |
| CB Output #4 | 3 | 0 |
| CB Output #5 | 4 | 0 |
| CB Output #6 | 5 | 0 |
| CB Output #7 | 6 | 0 |
| CB Output #8 | 7 | 0 |
| CB Flash Out #9 | 8 | 0 |
| CB Flash Out #10 | 9 | 0 |
| CB Flash Out #11 | A | 0 |
| CB Flash Out #12 | B | 0 |

Page ID - 2

337.801

11/6/13 Timing Changes

W4IKS Table 1 Page 0
Date: Wednesday, February 06, 2013 Time: 07:36 AM
Intersection #139 124th @ Leviton

(0+KEY)

| FUNCTIONS | KEY | 12345678 |
|---|---|---|
| Veh Recall | 0 | _2___6__ |
| Ped Recall | 1 | _____ |
| Red Lock | 2 | _____ |
| Yellow Lock | 3 | _____ |
| Permit | 4 | 12345678 |
| Ped Phases | 5 | _2_4_6_8 |
| Lead Phases | 6 | 1_3_5_7_ |
| Double Entry | 7 | ___4___8 |
| Sequential Timing | 8 | _____ |
| Startup Green | 9 | _2___6__ |
| Overlap A | A | 12_____ |
| Overlap B | B | _____ |
| Overlap C | C | ____56__ |
| Overlap D | D | _____ |
| Exclusive | E | _____ |
| Simultaneous Gap | F | _2___6__ |

(PHASE+KEY)

| FUNCTIONS | KEY | PH1 | PH2 | PH3 | PH4 | PH5 | PH6 | PH7 | PH8 |
|---|---|---|---|---|---|---|---|---|---|
| Max I | 0 | 25 | 25 | 10 | 30 | 20 | 40 | 15 | 30 |
| Max II | 1 | 25 | 25 | 10 | 30 | 20 | 40 | 15 | 30 |
| Walk | 2 | 0 | 7 | 0 | 8 7 | 0 | 7 | 0 | 8 7 |
| Flash DW | 3 | 0 | ~~17~~ 14 | 0 | ~~20~~ 23 | 0 | ~~16~~ 14 | 0 | 23 |
| Max Initial | 4 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 |
| Min Green | 5 | 8 | ~~12~~ 10 | 7 | 6 | 5 | ~~12~~ 10 | 4 | 6 |
| TBR | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TTR | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Observe Gap | 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Passage | 9 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Min Gap | A | 1.0 | 3.0 | 1.0 | 1.0 | 1.0 | 3.0 | 1.0 | 1.0 |
| Added Actuation | B | 1.0 | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 | 0.0 | 0.0 |
| Yellow | C | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Red Clear | D | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |
| Red Revert | E | 5.0 | 5.0 | 5.0 | 5.0 | 0.0 | 5.0 | 5.0 | 5.0 |
| Walk II | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

W4IKS Table 1 Page 1
Date: Wednesday, February 06, 2013 Time: 07:36 AM
Intersection #139 124th @ Leviton

(D+C+0+KEY)

| FUNCTIONS | KEY | 12345678 |
|---|---|---|
| Veh Recall | 0 | _____ |
| Ped Recall | 1 | _____ |
| Red Lock | 2 | _____ |
| Yellow Lock | 3 | _____ |
| Permit | 4 | _____ |
| Ped Phases | 5 | _____ |
| Lead Phases | 6 | _____ |
| Double Entry | 7 | _____ |
| Sequential Timing | 8 | _____ |
| Startup Green | 9 | _____ |
| Overlap A | A | _____ |
| Overlap B | B | _____ |
| Overlap C | C | _____ |
| Overlap D | D | _____ |
| Exclusive | E | _____ |
| Simultaneous Gap | F | _____ |

(D+C+PHASE+KEY)

| FUNCTIONS | KEY | PH1 | PH2 | PH3 | PH4 | PH5 | PH6 | PH7 | PH8 |
|---|---|---|---|---|---|---|---|---|---|
| Max I | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max II | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Walk | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Flash DW | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max Initial | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Min Green | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TBR | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TTR | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Observe Gap | 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Passage | 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Min Gap | A | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Added Actuation | B | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Yellow | C | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Red Clear | D | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Red Revert | E | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Walk II | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

W4IKS Table 1 Page 2
Date: Wednesday, February 06, 2013 Time: 07:36 AM
Intersection #139 124th @ Leviton

(D+D+0+KEY)

| FUNCTIONS | KEY | 12345678 |
|---|---|---|
| Veh Recall | 0 | _____ |
| Ped Recall | 1 | _____ |
| Red Lock | 2 | _____ |
| Yellow Lock | 3 | _____ |
| Permit | 4 | _____ |
| Ped Phases | 5 | _____ |
| Lead Phases | 6 | _____ |
| Double Entry | 7 | _____ |
| Sequential Timing | 8 | _____ |
| Startup Green | 9 | _____ |
| Overlap A | A | _____ |
| Overlap B | B | _____ |
| Overlap C | C | _____ |
| Overlap D | D | _____ |
| Exclusive | E | _____ |
| Simultaneous Gap | F | _____ |

(D+D+PHASE+KEY)

| FUNCTIONS | KEY | PH1 | PH2 | PH3 | PH4 | PH5 | PH6 | PH7 | PH8 |
|---|---|---|---|---|---|---|---|---|---|
| Max I | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max II | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Walk | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Flash DW | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Max Initial | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Min Green | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TBR | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TTR | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Observe Gap | 8 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Passage | 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Min Gap | A | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Added Actuation | B | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Yellow | C | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Red Clear | D | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Red Revert | E | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Walk II | F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Intersection Name: 99W @ 124th Ave
Controller 122367.2 Channel: - Drop: 0
System: TransCore TransSuite TCS
Controller Type: Voyage
Revision - Version -
TransCore Unified Controller Manager 17.2.1

## Zero Tables

DetectorPlans
DetectorFailMonitor
PedOverlaps
ADVANCE WARNING
FYLTA
DYNAMIC FYLTA
ServicePlans1 4
ServicePlans5 8
MaxPlans
CoordinationPlans
CoordinationPlansCont
DynamicPhaseLength
PlatoonProgression
ForceOffPercents
DayProgram 41 80
DayProgram 81 120
DayProgram 121 160
DayProgram 161 200
ExceptionDays
PreemptionSequence 5 8
PriorityReturnAndSpecialIntervals
LightRailTrain
IEEE1570
ServiceDelayLog
ServiceDelay Detectors
TransitPriority
TransitPriorityAOFP
GroupTiming
TruckPriority
IO Options
CommandBox 97 192
CommandBox 193 256
StrategyMapping

## Non-Zero Tables

ControllerFunctionTiming
Phase Timing
Dual Entry
OtherControllerFunctions
DetectorData
SystemDetector
Vehicle Overlaps
CoordinationModes
CircuitMapping
DayProgram 1 40
WeekProgram
YearDays
TimeClockReferences
CircuitOverrides 1 100
CircuitOverrides 101 199
CircuitOverrides 201 216
PreemptionSequence 1 4
SequenceTiming
CommData
CommReports
170 Inputs
170 Outputs
CommandBox 1 96
CONTROLLER ID

# Controller Function and Timing

| Security, Sequence and Timing (Next/2/1, Next/2/2/3/A, Next/2/2/5) | | | | | |
|---|---|---|---|---|---|
| Security Code | 0 | 0 = disabled, or 1000-9999 | First All Red | 8.0 | 0.0 to 25.5 seconds |
| Sequence | 7 | 0 = sequential, 1 = quad left turn, 2-6 = special A-E, 7 = lead lag | | | |
| Power up Flash | 0.0 | 0.0 - 25.5 seconds | | | |

| Initialization (Next/2/2/5) | | | Lead Lag (Next/2/2/3/A) | | | |
|---|---|---|---|---|---|---|
| Ring 1 | Ring 2 | Interval | Phases 1 - 2 | Phases 3 - 4 | Phases 5 - 6 | Phases 7 - 8 |
| 1 | 0 | 0 | 2 | 2 | 2 | 2 |
| Phase 1 - 8 | | 0 = Red, 1 = Yel, 2 = Grn | 0 = no reversal, 1 = reversal, 2 = by coord plan or clock | | | |

| (Next/2/2/3) Phase Functions | |
|---|---|
| Phase Used | 1 2 3 4 - 6 - 8 |
| Restricted Phases | - - - - - - - - |
| Exclusive Phases | - - - - - - - - |

| (Next/2/2/1) | |
|---|---|
| Yellow Lock | - - - - - - - - |
| Min Recall | - 2 - - - 6 - - |
| Max Recall | - - - - - - - - |
| Ped Recall | - - - - - - - - |
| Red Lock | - - - - - - - - |
| Max Out Recall Inhibit | 1 2 3 4 5 6 7 8 |
| Soft Recall | - - - - - - - - |
| Free Walk Rest | - - - - - - - - |
| Conditional Ped | - - - - - - - - |
| Disable Inhibit Max Termination | - - - - - - - - |
| Call To Non-Act 1 | - - - - - - - - |
| Call To Non-Act 2 | - - - - - - - - |

| Phase Times (Next/2/2/2) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Phase | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
| Movement | | | | | | | | | |
| Minimum Green | 4 | 10 | 4 | 6 | 0 | 10 | 0 | 6 | 0 - 255 sec. |
| Passage | 2.3 | 5.4 | 0.2 | 2.3 | 0.0 | 5.4 | 0.0 | 2.3 | 0.0 - 25.5 sec. |
| Yellow | 4.5 | 5.0 | 4.0 | 4.0 | 0.0 | 5.0 | 0.0 | 4.0 | 0.0 - 25.5 sec. |
| Red Clearance | 1.1 | 1.0 | 0.0 | 1.0 | 0.0 | 1.0 | 0.0 | 2.0 | 0.0 - 25.5 sec. or 0 - 255 sec. |
| Max 1 | 21 | 50 | 10 | 20 | 0 | 50 | 0 | 20 | 0 - 255 sec. |
| Max 2 | 32 | 60 | 10 | 25 | 0 | 60 | 0 | 25 | 0 - 255 sec. |
| Walk | 0 | 9 | 5 | 0 | 0 | 0 | 0 | 8 | 0 - 255 sec. |
| Ped Clear | 0 | 22 | 6 | 0 | 0 | 0 | 0 | 27 | 0 - 255 sec. |
| Seconds Per Actuation | 0.0 | 1.2 | 0.0 | 0.0 | 0.0 | 1.2 | 0.0 | 0.0 | 0.0 - 25.5 sec. |
| Time Before Reduction | 8 | 10 | 0 | 8 | 0 | 10 | 0 | 8 | 0 - 255 sec. |
| Time to Reduce | 3 | 20 | 0 | 3 | 0 | 20 | 0 | 3 | 0 - 255 sec. |
| Minimum Gap | 0.5 | 3.4 | 0.2 | 0.5 | 0.0 | 3.4 | 0.0 | 0.5 | 0.0 - 25.5 sec. |
| Max Variable Initial | 4 | 21 | 4 | 6 | 0 | 21 | 0 | 6 | 0 - 255 sec. |
| Max Extend | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 - 25.5 sec. |
| Auto Max | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec. |
| Advanced walk | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec. |

| Phase Times (Next/2/2/9/5) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Inhibit Min Yellow | | | | | | | | | X = On |
| Red Decimal Off | | | | | | | | | X = On |

## Dual Entry (Next/2/2/9/3)

| | | |
|---|---|---|
| Mode | 1 | 0 = off, 1 = on, 2 = Not Used, 3 = by coord plan, 4 = by time clock circuit 61 |

| Dual Entry Ph --> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|---|---|---|---|---|---|---|---|---|
| Phase | 0 | 0 | 8 | 8 | 0 | 0 | 0 | 4 | 0 = none, 1-8 = phase 1-8 |

| Cond Service (Next/2/2/9/3/A) | | | 5 Sec Head Logic (Next/2/2/9/4) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Mode | CS Max Time | X Omits Y | | Anti-Trap | | | Yellow Blanking LT | |
| Phase 1 | 0 | 0 | X:Y | | Trap Protected Phase | | Next Phase | Phase | |
| Phase 3 | 0 | 0 | 6:1 | 0 | 1 | 0 | < (5) | 1 | 0 |
| Phase 5 | 0 | 0 | 8:3 | 0 | 3 | 0 | < (7) | 3 | 0 |
| Phase 7 | 0 | 0 | 2:5 | 0 | 5 | 0 | < (1) | 5 | 0 |
| 0 = off, 1 = C.S.On. 2 = C.S. on by TOD circuit 57, 3 = N/A, 4 = C.S. and C.R. On, 5 = C.R. on by TOD circuit 57. | | | 4:7 | 0 | 7 | 0 | < (3) | 7 | 0 |
| | | | 0 = off, 1 = side call, 2 = no side call | | X = On | | | | |

## Other Controller Functions (Next/2/2/9/1, Next/2/2/9/5)

| | | |
|---|---|---|
| Inhibit Simultaneous Gap Out | 1 - 3 4 5 - 7 8 | |
| Last Car Passage | 2 | 0 = recall phase, 1 = last car passage, 2 = NOT recall - Not last car passage |
| Red Revert (+2seconds) | 0.0 | 0 - 25.5 sec. |
| Auto Ped Clear | On | X = On |
| FDW thru Yellow | Off | X = On |
| Red Rest Delay | 0.0 | 0 - 25.5 sec. |
| Change Sequence | Off | X = On (After a download without a power on - off cycle) |
| Advanced Flash Rate | 60 FPM | 0 = Disabled (60 FPM), 1 = 120 FPM |
| Ped Push Button Time | null | 0 = Disable, 0 - 5 Seconds |

| Phase -> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|---|---|---|---|---|---|---|---|---|
| Red Clear Extension Detector | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 = none 1 - 32 = detector 1 - 32 |
| Red Clear Extension Red Time | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 - 25.5 sec. |

## Local Detectors (Next/2/2/4/1)

### Detector Data

| Detector | Description | Yellow Lock | Detector Inhibit | Call Phase | Extend Phase | Switch Phase | Delay Time | Stretch / Disconnect Time | Delay or Disconnect Mode |
|---|---|---|---|---|---|---|---|---|---|
| 1 | | | | 1 | 1 | 0 | 0 | 2.0 | 0 |
| 2 | | | | 1 | 1 | 0 | 0 | 0.0 | 0 |
| 3 | | | | 3 | 3 | 0 | 0 | 0.0 | 0 |
| 4 | | | | 3 | 3 | 0 | 0 | 0.0 | 0 |
| 5 | | | | 5 | 5 | 0 | 0 | 0.0 | 0 |
| 6 | | | | 5 | 5 | 0 | 0 | 0.0 | 0 |
| 7 | | | | 7 | 7 | 0 | 0 | 0.0 | 0 |
| 8 | | | | 7 | 7 | 0 | 0 | 0.0 | 0 |
| 9 | | | | 2 | 2 | 0 | 0 | 1.0 | 0 |
| 10 | | | | 2 | 2 | 0 | 0 | 1.0 | 0 |
| 11 | | | | 2 | 2 | 0 | 0 | 0.0 | 0 |
| 12 | | | | 2 | 2 | 0 | 0 | 0.0 | 0 |
| 13 | | | | 2 | 2 | 0 | 0 | 0.0 | 0 |
| 14 | | | | 4 | 4 | 0 | 0 | 2.0 | 0 |
| 15 | | | | 4 | 4 | 0 | 0 | 2.0 | 0 |
| 16 | | | | 4 | 4 | 0 | 0 | 0.0 | 0 |
| 17 | | | | 4 | 4 | 0 | 0 | 0.0 | 0 |
| 18 | | | | 4 | 4 | 0 | 0 | 0.0 | 0 |
| 19 | | | | 6 | 6 | 0 | 0 | 1.0 | 0 |
| 20 | | | | 6 | 6 | 0 | 0 | 1.0 | 0 |
| 21 | | | | 6 | 6 | 0 | 0 | 0.0 | 0 |
| 22 | | | | 6 | 6 | 0 | 0 | 0.0 | 0 |
| 23 | | | | 6 | 6 | 0 | 0 | 0.0 | 0 |
| 24 | | | | 8 | 8 | 0 | 0 | 2.0 | 0 |
| 25 | | | | 8 | 8 | 0 | 0 | 2.0 | 0 |
| 26 | | | | 8 | 8 | 0 | 0 | 0.0 | 0 |
| 27 | | | | 8 | 8 | 0 | 0 | 7.5 | 0 |
| 28 | | | | 8 | 8 | 0 | 0 | 0.0 | 0 |
| 29 | | | | 0 | 0 | 0 | 0 | 0.0 | 0 |
| 30 | | | | 0 | 0 | 0 | 0 | 0.0 | 0 |
| 31 | | | | 0 | 0 | 0 | 0 | 0.0 | 0 |
| 32 | | | | 0 | 0 | 0 | 0 | 0.0 | 0 |

yellow lock, detector inhibit, - X = On; call, extend, phase - 0 = none 1 - 8 = phase 1 - 8; delay time - 0 - 255 sec
stretch / disconnect time - 0.0 - 25.5 sec.; delay or disconnect Mode - 0 -12

## Local Detectors 33 - 64 (Next/2/2/4/6)

### Detector Data

| Detector | Description | Yellow Lock | Detector Inhibit | Call Phase | Extend Phase | Switch Phase | Delay Time | Stretch / Disconnect Time | Delay or Disconnect Mode |
|---|---|---|---|---|---|---|---|---|---|
| 33 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 34 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 35 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 36 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 37 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 38 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 39 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 40 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 41 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 42 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 43 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 44 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 45 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 46 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 47 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 48 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 49 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 50 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 51 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 52 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 53 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 54 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 55 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 56 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 57 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 58 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 59 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 60 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 61 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 62 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 63 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |
| 64 | | N/A | N/A | 0 | 0 | N/A | N/A | N/A | N/A |

yellow lock, detector inhibit, - X = On; call, extend, phase - 0 = none 1 - 8 = phase 1 - 8; delay time - 0 - 255 sec
stretch / disconnect time - 0.0 - 25.5 sec.; delay or disconnect Mode - 0 -12

## Detector Plans (Next/2/2/4/5)

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Loop Number | | | | | | | | | | |
| Plan Detectors | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 32, 0 = none, 1 - 32 = detectors 1- 32 |
| Detector Plan 1 | Call Phase | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 8, 0 = none, 1 - 8 = phase 1 - 8 |
| | Extended Phase | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Switch Phase | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Delay Time | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 seconds |
| | Stretch / Disconnect Time | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 - 25.5 seconds |
| | Delay / Disconnect Mode | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 14 |
| Detector Plan 2 | Call Phase | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 8, 0 = none, 1 - 8 = phase 1 - 8 |
| | Extended Phase | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Switch Phase | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Delay Time | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 seconds |
| | Stretch / Disconnect Time | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 - 25.5 seconds |
| | Delay / Disconnect Mode | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 14 |
| Detector Plan 3 | Call Phase | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 8, 0 = none, 1 - 8 = phase 1 - 8 |
| | Extended Phase | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Switch Phase | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Delay Time | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 seconds |
| | Stretch / Disconnect Time | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 - 25.5 seconds |
| | Delay / Disconnect Mode | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 14 |

### Detector Fail (Next/2/2/4/3)

| | | |
|---|---|---|
| Detector Fail Sample Period (all detectors) | 0 | 0 - 255 minutes |
| Dynamic Phase Length Fail Period | 0 | 0 - 255 minutes |

| Video Fail Inputs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 0 = none, 1 - 8 = phase 1 - 8 |
|---|---|---|---|---|---|---|---|---|---|
| Phase Recalled | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

| System Detectors | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 0 = none, 1 - 32 = detector 1 - 32 |
|---|---|---|---|---|---|---|---|---|---|
| Local Detector | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

### Flash (Next/2/2/5)

| Flash Entry | | | Flash Exit | | |
|---|---|---|---|---|---|
| Ring 1 | Ring 2 | Interval | Ring 1 | Ring 2 | Interval |
| 0 | 0 | red | 1 | 0 | 0 |
| 0 = none, phase 1 - 8 | | 0 = red, 1 = yel, 2 = grn | 0 = none, phase 1 - 8 | | 0 = red, 1 = yel, 2 = grn |

### Soft Flash (Next/2/2/5/A)

| Phase | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|
| | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 |

| Overlap | A | B | C | D | E | F | G | H | I | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 | 3 | 4 |

0 = dark, 1=flash yel WIG, 2 = flash yel WAG, 3 = flash red WIG, 4 = flash red WAG

| Internal Logic Output | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 0 = normal, 1 = dark, 2 = flash WIG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

## Overlaps (Next/2/2/8/1)

| Vehicle Overlaps | Phase or Movement | Phase or Movement | | | | | | | | Extension Green | Clearance | | A - D<br>0 = no overlap<br>1 = overlap<br>2 = 60 FPM<br>3 = Not ped overlap<br>4 = Comp Phase<br>5 = Prevent Ext<br>6 = Not Vehicle<br>7 = Adv. FF<br><br>E - L<br>0 = no Overlap<br>1 = Overlap<br><br>Green, Yellow, Red<br>0.0 - 25.5 sec |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | Yellow | Red | |
| A | | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0.0 | 4.0 | 1.0 | |
| B | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | |
| C | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | |
| D | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | |
| E | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | |
| F | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | |
| G | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | |
| H | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | |
| I | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | |
| J | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | |
| K | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | |
| L | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | 0.0 | |

## (Next/2/2/8/6/8)

| | Not Ped-Ped Overlaps |
|---|---|
| Overlap | A B C D E F G H |
| A | - - - - - - - - |
| B | - - - - - - - - |
| C | - - - - - - - - |
| D | - - - - - - - - |

## Ped Overlaps (Next/2/2/8/5)

| Ped Overlap | Phase | Recall | Walk | Ped Clear | Walk, Ped Clear<br>0 - 255 seconds |
|---|---|---|---|---|---|
| A | - - - - - - - - | | 0 | 0 | |
| B | - - - - - - - - | | 0 | 0 | |
| C | - - - - - - - - | | 0 | 0 | |
| D | - - - - - - - - | | 0 | 0 | |
| E | - - - - - - - - | | 0 | 0 | |
| F | - - - - - - - - | | 0 | 0 | |
| G | - - - - - - - - | | 0 | 0 | |
| H | - - - - - - - - | | 0 | 0 | |

## Advance Warning (Next/2/2/8/3)

| | E | F | G | H | I | J | K | L | |
|---|---|---|---|---|---|---|---|---|---|
| Enable | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 = Disable, 1 = Enable |
| 1st Conditional Overlaps | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 = None, 1 = OL E, 2 = OL F, 3 = OL G, 4 = OL H, 5 = OL I, 6 = OL J, 7 = OL K, 8 = OL L |
| 2nd Conditional Overlaps | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Advance Deactivation Delay | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 99 sec |

| CoordinationData | | |
|---|---|---|
| **Coordination Modes (Next/2/3/1)** | | |
| Flash Mode | 33 | 0=off, 1=on, 33=time clock, 34=comm, 35=hardwire |
| Coordination Plan Mode | 34 | 0=free, 1-32 = coord plan 1-32, 33=time clock, 34=comm, 35=hardwire |
| Offset Seeking Mode | 2 | 0=add only, 1=dwell, 2=fastway |
| Late Ped | 0 | 0 = off, 1 = on |
| Coord Walk Rest | 0 | 0 = off, 1 = on, 2 = by tod circuit 160, 3 = end of walk, 4 = coord ped during perms |
| Zero Mode(TS2 only) | 0 | 0=start of main street, 1=end of main street, 2=by TOD circuit 144, 3 = first green |
| **(Next/2/3/4/1)** | | |
| Repeated Ped Service | 0 | 0=off, 1=on (no coord ped), 2=on (beginning green coord ped), 3=on (coord ped always) |
| Omit Phase During Repeated Phase | - - - - - - - - | -- = service allowed ; # = service prevented |

**Coordination Plans (Next/2/3/2)**

| Coord Plan | Coordination Phases | | Cycle Length | Offset Time | Min Cycle Len Dwell Time | Permissive | Service Plan | Max Plan |
|---|---|---|---|---|---|---|---|---|
| | Ring 1 | Ring 2 | | | | | | |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 22 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 25 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 27 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 28 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 32 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 0 - 8 | | 0 - 255 sec | | | | 0 - 8 | |

## Circuit Mapping (Next/2/3/3)

| Circuit Map | Coord Plan | Time Clock Circuit 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 3 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 4 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 5 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 6 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 9 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 10 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 11 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 12 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 13 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 14 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 15 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 16 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 17 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 18 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 20 | 34 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

coord plan - 0 = free, 1 - 32 = coord plan 1 - 32, 33 = any, 34 none selected
time clock circuits - 0 = not used, or circuits 6 - 199

## Dynamic Phase Lengths (Next/2/3/4/4)

| | | Phase -> 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|---|---|---|---|---|---|---|---|---|---|
| Back Detector | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 = none, 1-32 = detector 1-32 |
| Lane Factor | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0 = none, 0.5 - 5.0 |
| Check Out Detector | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 = none, 1-32 = detector 1-32 |
| Coord Delta Force Off | Set A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| | Set B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Set C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Set D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| Free Delta Max | Set A | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Set B | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Set C | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | Set D | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

## Auto Permissive Min Green (Next/2/3/4/3)

| Phase -> | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|---|---|---|---|---|---|---|---|---|
| Auto Perm Min Green | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec. |

## Time of Day Data (Next/2/4/1)

| Day Program | | | | | | |
|---|---|---|---|---|---|---|
| | Day Prog | Time | Coord Plan or Circuit | Coord Plan # or Circuit # | Circuit Abbrev | State On/Off |
| 1 | 1 | 05:45 | Circuit | 13 | MX2 | X |
| 2 | 1 | 06:00 | Circuit | 8 | ESR | X |
| 3 | 1 | 08:00 | Circuit | 13 | MX2 | |
| 4 | 1 | 15:00 | Circuit | 13 | MX2 | X |
| 5 | 1 | 18:00 | Circuit | 13 | MX2 | |
| 6 | 1 | 20:00 | Circuit | 8 | ESR | |
| 7 | 2 | 06:00 | Circuit | 8 | ESR | X |
| 8 | 2 | 20:00 | Circuit | 8 | ESR | |
| 9 | 3 | 06:00 | Circuit | 8 | ESR | X |
| 10 | 3 | 20:00 | Circuit | 8 | ESR | |
| 11 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 12 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 13 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 14 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 15 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 16 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 17 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 18 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 19 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 20 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 21 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 22 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 23 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 24 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 25 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 26 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 27 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 28 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 29 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 30 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 31 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 32 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 33 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 34 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 35 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 36 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 37 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 38 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 39 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| 40 | 0 | 00:00 | Circuit | 0 | None / Coord Plan | |
| | 1 - 15 | hh:mm | X = On = Coord Plan | coord plan 0 - 32 or circuit 1-199 | | X = On |

## WEEK PROGRAM (Next/2/4/2)

| | Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|---|---|---|---|---|---|---|---|
| 1 | 2 | 1 | 1 | 1 | 1 | 1 | 3 |
| 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 7 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 10 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

0 = none, 1 - 15 = day plan

## EXCEPTION DAYS (Next/2/4/6)

| | Week of Month | Month | Day of Month | Day of Week | Day Prog |
|---|---|---|---|---|---|
| 1 | 0 | 0 | 0 | | 0 |
| 2 | 0 | 0 | 0 | | 0 |
| 3 | 0 | 0 | 0 | | 0 |
| 4 | 0 | 0 | 0 | | 0 |
| 5 | 0 | 0 | 0 | | 0 |
| 6 | 0 | 0 | 0 | | 0 |
| 7 | 0 | 0 | 0 | | 0 |
| 8 | 0 | 0 | 0 | | 0 |
| 9 | 0 | 0 | 0 | | 0 |
| 10 | 0 | 0 | 0 | | 0 |
| 11 | 0 | 0 | 0 | | 0 |
| 12 | 0 | 0 | 0 | | 0 |
| 13 | 0 | 0 | 0 | | 0 |
| 14 | 0 | 0 | 0 | | 0 |
| 15 | 0 | 0 | 0 | | 0 |
| 16 | 0 | 0 | 0 | | 0 |
| 17 | 0 | 0 | 0 | | 0 |
| 18 | 0 | 0 | 0 | | 0 |
| 19 | 0 | 0 | 0 | | 0 |
| 20 | 0 | 0 | 0 | | 0 |
| 21 | 0 | 0 | 0 | | 0 |
| 22 | 0 | 0 | 0 | | 0 |
| 23 | 0 | 0 | 0 | | 0 |
| 24 | 0 | 0 | 0 | | 0 |
| 25 | 0 | 0 | 0 | | 0 |
| 26 | 0 | 0 | 0 | | 0 |
| 27 | 0 | 0 | 0 | | 0 |
| 28 | 0 | 0 | 0 | | 0 |
| 29 | 0 | 0 | 0 | | 0 |
| 30 | 0 | 0 | 0 | | 0 |
| 31 | 0 | 0 | 0 | | 0 |
| 32 | 0 | 0 | 0 | | 0 |
| 33 | 0 | 0 | 0 | | 0 |
| 34 | 0 | 0 | 0 | | 0 |
| 35 | 0 | 0 | 0 | | 0 |
| | 0 - 5 | 0 - 12 | 1 - 31 | 1 - 7 | 0 - 15 |

## Time Clock References (Next/2/4/5)

| | | |
|---|---|---|
| Synch reference Mode | 0 | 0 = timed, 1 = by event |
| Synch Reference Time | 00:00 | 00:00 - 23:59 |
| Daylight Saving Enable | On | X = On |
| Reset Time | 00:00 | 00:00 - 23:59 |

## Time Zone Offset (Next/2/4/8)

| | | |
|---|---|---|
| Time Zone | Not Loaded | 0 |

-43200 - 43200: EST -18000; CST -21600; MST -25200; PST -28800

## YEAR PROGRAM (Next/2/4/3)

| From Date | To Date | Week Program |
|---|---|---|
| 12/30/2012 | 01/04/2014 | 1 |
| 00/00/0000 | 00/00/0000 | 0 |
| 00/00/0000 | 00/00/0000 | 0 |
| 00/00/0000 | 00/00/0000 | 0 |
| 00/00/0000 | 00/00/0000 | 0 |
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| 00/00/0000 | 00/00/0000 | 0 |
| 00/00/0000 | 00/00/0000 | 0 |

New Years Day - Date - January 1st

Martin Luther King Day - DOW WOM - 3rd Monday of January

President's Day - DOW WOM - 3rd Monday February

Memorial Day - DOW WOM - Last Monday May

Four of July - Date - July 4th

Labor Day - DOW WOM - 1st Monday September

Columbus Day - DOW WOM - 2nd Monday October

Vetern's Day - Date - November 11th

Thankgiving - DOW WOM - 4th Thursday November

Christmas - Date - December 25th

## CIRCUIT OVERRIDES 1 - 100 (Next/2/4/4)

| | | | | | |
|---|---|---|---|---|---|
| 1 - Coord Line 1 | CL1 | 2 = TOD | 51 - Ped Omit 3 | PO3 | 2 = TOD |
| 2 - Coord Line 2 | CL2 | 2 = TOD | 52 - Ped Omit 4 | PO4 | 2 = TOD |
| 3 - Coord Line 4 | CL4 | 2 = TOD | 53 - Ped Omit 5 | PO5 | 2 = TOD |
| 4 - Coord Line 8 | CL8 | 2 = TOD | 54 - Ped Omit 6 | PO6 | 2 = TOD |
| 5 - Coord Line 16 | C16 | 2 = TOD | 55 - Ped Omit 7 | PO7 | 2 = TOD |
| 6 - Coordinated Operation | CRD | 2 = TOD | 56 - Ped Omit 8 | PO8 | 2 = TOD |
| 7 - Soft Flash | SFL | 2 = TOD | 57 - Conditonal Service | CVS | 2 = TOD |
| 8 - Enable System Relays | ESR | 2 = TOD | 58 - Inhibit Simultaneous Gap Out | ISG | 1 = On |
| 9 - Call to Non Actuated Ring 1 | CN1 | 2 = TOD | 59 - Inhibit Hardwire | HWI | 2 = TOD |
| 10 -Call to Non Actuated Ring 2 | CN2 | 2 = TOD | 60 - Ped Override Mode | POM | 1 = On |
| 11 - Walk Rest Modifier | WRM | 2 = TOD | 61 - Dual Entry | DLE | 1 = On |
| 12 - Min Recall | MIN | 2 = TOD | 62 - Exclusive Ped | EPD | 2 = TOD |
| 13 - Max 2 Both Rings | MX2 | 2 = TOD | 63 - Call to Time Clock Mode | CTC | 2 = TOD |
| 14 - Coord Inhibit Max Ring 1,2 | IMT | 2 = TOD | 64 - Dual Enhanced Ped | DEP | 2 = TOD |
| 15 - Enable Service Log | ESL | 2 = TOD | 65 - Service Plan 1 | SP1 | 2 = TOD |
| 16 - Call to Free | CTF | 2 = TOD | 66 - Service Plan 2 | SP2 | 2 = TOD |
| 17 - TOD Output 1 | TO1 | 2 = TOD | 67 - Service Plan 3 | SP3 | 2 = TOD |
| 18 - TOD Output 2 | TO2 | 2 = TOD | 68 - Service Plan 4 | SP4 | 2 = TOD |
| 19 - TOD Output 3 | TO3 | 2 = TOD | 69 - Service Plan 5 | SP5 | 2 = TOD |
| 20 - TOD Output 4 | TO4 | 2 = TOD | 70 - Service Plan 6 | SP6 | 2 = TOD |
| 21 - TOD Output 5 | TO5 | 2 = TOD | 71 - Service Plan 7 | SP7 | 2 = TOD |
| 22 - TOD Output 6 | TO6 | 2 = TOD | 72 - Service Plan 8 | SP8 | 2 = TOD |
| 23 - TOD Output 7 | TO7 | 2 = TOD | 73 - Max Plan 1 | MP1 | 2 = TOD |
| 24 - TOD Output 8 | TO8 | 2 = TOD | 74 - Max Plan 2 | MP2 | 2 = TOD |
| 25 - Vehicle Call Phase 1 | VC1 | 2 = TOD | 75 - Max Plan 3 | MP3 | 2 = TOD |
| 26 - Vehicle Call Phase 2 | VC2 | 2 = TOD | 76 - Max Plan 4 | MP4 | 2 = TOD |
| 27 - Vehicle Call Phase 3 | VC3 | 2 = TOD | 77 - Max Plan 5 | MP5 | 2 = TOD |
| 28 - Vehicle Call Phase 4 | VC4 | 2 = TOD | 78 - Max Plan 6 | MP6 | 2 = TOD |
| 29 - Vehicle Call Phase 5 | VC5 | 2 = TOD | 79 - Max Plan 7 | MP7 | 2 = TOD |
| 30 - Vehicle Call Phase 6 | VC6 | 2 = TOD | 80 - Max Plan 8 | MP8 | 2 = TOD |
| 31 - Vehicle Call Phase 7 | VC7 | 2 = TOD | 81 - Transit Priority Max Group 1 | TG1 | 2 = TOD |
| 32 - Vehicle Call Phase 8 | VC8 | 2 = TOD | 82 - Transit Priority Max Group 2 | TG2 | 2 = TOD |
| 33 - Ped Call Phase 1 | PC1 | 2 = TOD | 83 - Transit Priority Max Group 3 | TG3 | 2 = TOD |
| 34 - Ped Call Phase 2 | PC2 | 2 = TOD | 84 - Transit Priority Max Group 4 | TG4 | 2 = TOD |
| 35 - Ped Call Phase 3 | PC3 | 2 = TOD | 85 - Transit Priority Max Group 5 | TG5 | 2 = TOD |
| 36 - Ped Call Phase 4 | PC4 | 2 = TOD | 86 - Transit Priority Max Group 6 | TG6 | 2 = TOD |
| 37 - Ped Call Phase 5 | PC5 | 2 = TOD | 87 - Transit Priority Max Group 7 | TG7 | 2 = TOD |
| 38 - Ped Call Phase 6 | PC6 | 2 = TOD | 88 - Transit Priority Max Group 8 | TG8 | 2 = TOD |
| 39 - Ped Call Phase 7 | PC7 | 2 = TOD | 89 - Inhibit Gap Reducing 1 | GR1 | 2 = TOD |
| 40 - Ped Call Phase 8 | PC8 | 2 = TOD | 90 - Inhibit Gap Reducing 2 | GR2 | 2 = TOD |
| 41 - Phase Omit 1 | VO1 | 2 = TOD | 91 - Inhibit Gap Reducing 3 | GR3 | 2 = TOD |
| 42 - Phase Omit 2 | VO2 | 2 = TOD | 92 - Inhibit Gap Reducing 4 | GR4 | 2 = TOD |
| 43 - Phase Omit 3 | VO3 | 2 = TOD | 93 - Inhibit Gap Reducing 5 | GR5 | 2 = TOD |
| 44 - Phase Omit 4 | VO4 | 2 = TOD | 94 - Inhibit Gap Reducing 6 | GR6 | 2 = TOD |
| 45 - Phase Omit 5 | VO5 | 2 = TOD | 95 - Inhibit Gap Reducing 7 | GR7 | 2 = TOD |
| 46 - Phase Omit 6 | VO6 | 2 = TOD | 96 - Inhibit Gap Reducing 8 | GR8 | 2 = TOD |
| 47 - Phase Omit 7 | VO7 | 2 = TOD | 97 - Lag 1 | LG1 | 2 = TOD |
| 48 - Phase Omit 8 | VO8 | 2 = TOD | 98 - Lag 3 | LG3 | 2 = TOD |
| 49 - Ped Omit 1 | PO1 | 2 = TOD | 99 - Lag 5 | LG5 | 2 = TOD |
| 50 - Ped Omit 2 | PO2 | 2 = TOD | 100 - Lag 7 | LG8 | 2 = TOD |

## CIRCUIT OVERRIDES 101 - 200 (Next/2/4/4)

| | | |
|---|---|---|
| 101 - Inhibit Overlap A | OLA | 2 = TOD |
| 102 - Inhibit Overlap B | OLB | 2 = TOD |
| 103 - Inhibit Overlap C | OLC | 2 = TOD |
| 104 - Inhibit Overlap D | OLD | 2 = TOD |
| 105 - Enable Schedule A Phone 1 | AT1 | 2 = TOD |
| 106 - Enable Schedule A Phone 2 | AT2 | 2 = TOD |
| 107 - Enable Schedule B Phone 1 | BT1 | 2 = TOD |
| 108 - Enable Schedule B Phone 2 | BT2 | 2 = TOD |
| 109 - Enable Schedule C Phone 1 | CT1 | 2 = TOD |
| 110 - Enable Schedule C Phone 2 | CT2 | 2 = TOD |
| 111 - Enable Volume to Call Phone 1 | VT1 | 2 = TOD |
| 112 - Enable Volume to Call Phone 1 | VT2 | 2 = TOD |
| 113 - Enable Volume Logging | EVL | 1 = On |
| 114 - Enable MOE Logging | EML | 1 = On |
| 115 - Detector Low Threshold Inhibit | DLI | 2 = TOD |
| 116 - Detector Continue Presence Inhibit | DPI | 2 = TOD |
| 117 - Inhibit Detector Based On Progrmming | IND | 2 = TOD |
| 118 - Inhibit Detector Delay | IDD | 2 = TOD |
| 119 - Inhibit Conditional Ped | ICP | 2 = TOD |
| 120 - Inhibit Transit Priority | ITP | 2 = TOD |
| 121 - Red Rest Ring 1,2 | RRM | 2 = TOD |
| 122 - Enable Transcend | TRA | 2 = TOD |
| 123 - Omit Red Clear Ring 1,2 | ORC | 2 = TOD |
| 124 - Enable Classification Logging | CLE | 2 = TOD |
| 125 - Ped Recycle Ring 1,2 | PCY | 2 = TOD |
| 126 - Not Used" | N/U | 2 = TOD |
| 127 - Enable MOE Log to Call Phone 1 | MT1 | 2 = TOD |
| 128 - Enable MOE Log to Call Phone 2 | MT2 | 2 = TOD |
| 129 - Transit Inhibit Short Time 1 | IS1 | 2 = TOD |
| 130 - Transit Inhibit Short Time 2 | IS2 | 2 = TOD |
| 131 - Transit Inhibit Short Time 3 | IS3 | 2 = TOD |
| 132 - Transit Inhibit Short Time 4 | IS4 | 2 = TOD |
| 133 - Transit Inhibit Short Time 5 | IS5 | 2 = TOD |
| 134 - Transit Inhibit Short Time 6 | IS6 | 2 = TOD |
| 135 - Transit Inhibit Short Time 7 | IS7 | 2 = TOD |
| 136 - Transit Inhibit Short Time 8 | IS8 | 2 = TOD |
| 137 - Enable Transit Priority Logging | ETL | 2 = TOD |
| 138 - Disable Flashing Yellow Arrow 1 | DF1 | 2 = TOD |
| 139 - Disable Flashing Yellow Arrow 3 | DF3 | 2 = TOD |
| 140 - Disable Flashing Yellow Arrow 5 | DF5 | 2 = TOD |
| 141 - Disable Flashing Yellow Arrow 7 | DF7 | 2 = TOD |
| 142 - Disable Auto Max | DAM | 2 = TOD |
| 143 - Disable Repeated Phase Service | DRS | 2 = TOD |
| 144 - End of Main Street | EMS | 2 = TOD |
| 145 - Coord Hold 1 | HD1 | 2 = TOD |
| 146 - Coord Hold 2 | HD2 | 2 = TOD |
| 147 - Coord Hold 3 | HD3 | 2 = TOD |
| 148 - Coord Hold 4 | HD4 | 2 = TOD |
| 149 - Coord Hold 5 | HD5 | 2 = TOD |
| 150 - Coord Hold 6 | HD6 | 2 = TOD |

| | | |
|---|---|---|
| 151 - Coord Hold 7 | HD7 | 2 = TOD |
| 152 - Coord Hold 8 | HD8 | 2 = TOD |
| 153 - PE Priority Return B | PRB | 2 = TOD |
| 154 - PE Priority Return C | PRC | 2 = TOD |
| 155 - PE Priority Return D | PRD | 2 = TOD |
| 156 - PE Priority Return E | PRE | 2 = TOD |
| 157 - Platoon Inbound | PPI | 2 = TOD |
| 158 - Platoon Outbound | PPO | 2 = TOD |
| 159 - Platoon Spl 2 | PS2 | 2 = TOD |
| 160 - Coord Walk Rest | CWR | 2 = TOD |
| 161 - Dynamic Phase Length Short Inhibit 1 | SL1 | 2 = TOD |
| 162 - Dynamic Phase Length Short Inhibit 2 | SL2 | 2 = TOD |
| 163 - Dynamic Phase Length Short Inhibit 3 | SL3 | 2 = TOD |
| 164 - Dynamic Phase Length Short Inhibit 4 | SL4 | 2 = TOD |
| 165 - Dynamic Phase Length Short Inhibit 5 | SL5 | 2 = TOD |
| 166 - Dynamic Phase Length Short Inhibit 6 | SL6 | 2 = TOD |
| 167 - Dynamic Phase Length Short Inhibit 7 | SL7 | 2 = TOD |
| 168 - Dynamic Phase Length Short Inhibit 8 | SL8 | 2 = TOD |
| 169 - Coord Late Left Turn 1 | CT1 | 2 = TOD |
| 170 - Coord Late Left Turn 3 | CT3 | 2 = TOD |
| 171 - Coord Late Left Turn 5 | CT5 | 2 = TOD |
| 172 - Coord Late Left Turn 7 | CT7 | 2 = TOD |
| 173 - Dynamic Phase Length Enable A | DPA | 2 = TOD |
| 174 - Dynamic Phase Length Enable B | DPB | 2 = TOD |
| 175 - Dynamic Phase Length Enable C | DPC | 2 = TOD |
| 176 - Dynamic Phase Length Enable D | DPD | 2 = TOD |
| 177 - Proactive Plan Select Average | PSA | 2 = TOD |
| 178 - Proactive Plan Select Inbound | PSI | 2 = TOD |
| 179 - Proactive Plan Select Outbound | PSO | 2 = TOD |
| 180 - Split Variant Inbound | SVI | 2 = TOD |
| 181 - Split Variant Outbound | SVO | 2 = TOD |
| 182 - Disable Coord Walk Rest Ring 1 | WR1 | 2 = TOD |
| 183 - Disable Coord Walk Rest Ring 2 | WR2 | 2 = TOD |
| 184 - Proactive Plan Select New Look | NLK | 2 = TOD |
| 185 - Disable Red Clearance Extension | DRX | 2 = TOD |
| 186 - Detector Plan Line 1 | DL1 | 2 = TOD |
| 187 - Detector Plan Line 2 | DL2 | 2 = TOD |
| 188 - Disable LRT 1 Vertical Flashing Bar | DV1 | 2 = TOD |
| 189 - Disable LRT 2 Vertical Flashing Bar | DV2 | 2 = TOD |
| 190 - Disable LRT 3 Vertical Flashing Bar | DV3 | 2 = TOD |
| 191 - Disable LRT 4 Vertical Flashing Bar | DV4 | 2 = TOD |
| 192 - Datakey Enable | DKE | 1 = On |
| 193 - Dynamic Phase Reversal Enable 1 | DR1 | 2 = TOD |
| 194 - Dynamic Phase Reversal Enable 3 | DR3 | 2 = TOD |
| 195 - Dynamic Phase Reversal Enable 5 | DR5 | 2 = TOD |
| 196 - Dynamic Phase Reversal Enable 7 | DR7 | 2 = TOD |
| 197 - Enable Coordination Log | ECL | 1 = On |
| 198 - Disable Gap For FYLTA | DGF | 2 = TOD |
| 199 - Coordination Auto Walk | CAW | 2 = TOD |
| 200 - Enable Coordinated Auto Max | ECM | 2 = TOD |

# PREEMPTION SEQUENCE 1 - 4 (Next/2/5)

| Seq | Interval | Instruction | Phases Serviced | Interval Time | Hold On Input | Output On | Output Mode |
|---|---|---|---|---|---|---|---|
| 1 | 1 | 0 | - 2 - - 5 - - - | 0 | On | - - - - - - - - | 0 |
| | 2 | 98 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 3 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 4 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 5 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 6 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 7 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 8 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 9 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 10 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| 2 | 1 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 2 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 3 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 4 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 5 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 6 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 7 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 8 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 9 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 10 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| 3 | 1 | 0 | 1 - - - - 6 - - | 0 | On | - - - - - - - - | 0 |
| | 2 | 98 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 3 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 4 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 5 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 6 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 7 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 8 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 9 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 10 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| 4 | 1 | 0 | - - - 4 - - - 8 | 0 | On | - - - - - - - - | 0 |
| | 2 | 98 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 3 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 4 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 5 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 6 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 7 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 8 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 9 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |
| | 10 | 0 | - - - - - - - - | 0 | Off | - - - - - - - - | 0 |

Instructions -
0 = service phases defined in phases location
1-9 = use special intervals 1-9
10 = preempt sequence allows fylta
11 = preempt interval disables fylta
15 = alternate trap protection
90 = go to all red
91 = turn cvm off
92 = turn cvm on
93 = enable ped service and phases defined in phases location
94 = disable ped service
96 = enable coordination w/peds
97 = enable coordination w/o peds
98 = return with no calls
99 = return with ped calls and phases defined in phases location
100 = jump to step defined in time location and input has to be active for jump
101 = use time as resetable gap timer and service phases defined in phases location
196 = coordination sync w/peds
197 = coordination sync w/o peds
200 = lrt phase service w/o peds
201 = lrt phase service w/peds
202 = priority return-queue/delay
216 = lrt coordination sync w/peds
217 = lrt coordination sync w/o peds

Phases Serviced - phases 1 - 8

Interval Time - 0 - 255 sec or interval 1 - 10

Hold on Input:
0 = Do not hold
1 = Hold
2 = Ped Service to Rest in Walk

Outputs On - output 1 - 8

Output Modes -
0 = all steady on
1 = all flash together
2 = odd flashes WIG, even flashes WAG
3 = 1 - 4 steady on, 5 - 8 all flash together

## SEQUENCE TIMING (Next/2/5/0)

| | | Sequence | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Input Memory | | | | | | | | | X = on |
| | | Input Priority | 6 | 0 | 6 | 6 | 0 | 0 | 0 | 0 | 0 = lowest, - 8 = highest |
| Entry (Transition) Parameters | | Min Green | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 - 25.5 sec<br>0.0 would time the normal function time |
| | | Walk | 0.1 | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | | Ped Clear | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | | Overlap Yellow | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 - 25.5 sec |
| | | Overlap Red | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | |
| | | Delay to Preempt | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec |
| | | Delay Ped Omit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | Delay Phase Omit | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | Min Reservice | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 min |
| | Overlap Inhibits | A | | | | | | | | | X = on |
| | | B | | | | | | | | | |
| | | C | | | | | | | | | |
| | | D | | | | | | | | | |
| Exit Parameters | | Exit to Coord Plan Offset by X | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 20 |
| | | Exit Coord Plan Time | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 60 min |
| | | Exit to Max Plan | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 8 |
| | | Exit Free Time | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 60 min |
| | | Override Time | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | Fail Time | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | Exit Mode Time | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

## PRIORITY RETURN AND SPECIAL INTERVALS (Next/2/5/0/6, Next/2/5/9)

| | | Phase / Overlap | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | A | B | C | D | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Priority Return | | Enable | Off | 0 = disabled; 1 = enabled; 2 = enabled and skip preempt phase on exit | | | | | | | | | | | |
| | | A (max) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 100% of currently used max | | | | |
| | | B (max) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| | | C (max) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| | | D (max) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| | | E (max) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | | | | |
| | | Ped Clear | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 100% of currently used ped clearance | | | | |
| Queue Delay Recovery | | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 - 255 sec | | | | |
| Special Intervals | | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 = Dark<br>1 = green don't walk<br>2 = green walk<br>3 = green flashing don't walk<br>4 = yellow<br>5 = red<br>6 = flashing yellow WIG<br>7 = flashing yellow WAG<br>8 = flashing red WIG<br>9 = flashing red WAG<br>10 = walk only<br>11=flashing don't walk only |
| | | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |

## LIGHT RAIL TRAIN (Next/2/5/0/7)

| Light Rail Train | 1 | 2 | 3 | 4 | |
|---|---|---|---|---|---|
| Associated Preempt | 0 | 0 | 0 | 0 | 0 = none, preempt 1 - 8 |
| Time to Green | 0 | 0 | 0 | 0 | 0 - 255 sec |
| Horizontal Bar Flash Time | 0.0 | 0.0 | 0.0 | 0.0 | |
| Vertical Bar Flash Time | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 - 25.5 sec |
| Min Duration | 0 | 0 | 0 | 0 | 0 - 255 sec |

## COMMUNICATION DATA (Next/2/6)

| | | | |
|---|---|---|---|
| 1st Central Phone Number | | 2nd Central Phone Number | |
| Modem Setup String | | | |
| Intersection Name | 2B367: 99W @ 124th | | |
| Central Port | 6 = UDP/AB3418/C14S | | |
| System Mode | 0 | | |
| System Port | 0 | | |

| | |
|---|---|
| System ID | 19 |
| Local ID | 2 |

| | |
|---|---|
| AB3418 Physical Address | 1 |
| AB3418 Group Address | 0 |

| Serial Port Parameters | Baud Rates | Flow |
|---|---|---|
| Port1 (Slot A2 Upper) | 0 = 1200 | 1 |
| Port2 (Slot A2 Lower) | 0 = 1200 | 1 |
| Port3 (Slot A1 Upper) | 0 = 1200 | 0 |
| Port4 (Slot A1 :pwer pr C50S) | 2 = 9600 | Not Used |

| Ethernet Parameters 1, 2 | | |
|---|---|---|
| IP Address | 167.131.138.203 | ..... |
| Gateway Address | 167.131.138.193 | ..... |
| Subnet Mask | 255.255.255.192 | 0 . 0 . 0 . 0 |
| IP Port | 25000 | 0 |

0 = 1200, 1 = 2400, 2 = 9600, 3 = 19200 baud

## COMMUNICATION REPORTS (Next/2/6/6, Next/2/6/7)

| | | | | | |
|---|---|---|---|---|---|
| Volume Log Period | 15 | 0 - 255 seconds or see below | MOE Log Period | 15 | See below |
| Volume OCC Period | 0 | 0 - 255 seconds | | | |

0 = disabled, 1,2,3,4,5,6,10,12,15,20,30,60 minutes

| | | | | | |
|---|---|---|---|---|---|
| Alarm 1 | 0 | 0 = none<br>1 = schedule A<br>2 = schedule B<br>3 = schedule C<br>4 = schedule R | Soft Flash | 1 | 0 = none<br>1 = schedule A<br>2 = schedule B<br>3 = schedule C<br>4 = schedule R |
| Alarm 2 | 0 | | Manual Control Enable (MCE) | 4 | |
| Alarm 3 | 0 | | Emergency or Railroad Preempt | 1 | |
| Alarm 4 | 0 | | Light Rail Train (LRG) | 0 | |
| Alarm 5 | 0 | | Cycle Failure | 2 | |
| Not Used | | | Coordination Failure | 2 | |
| Not Used | | | Keyboard use /Data Changed | 3 | |
| Not Used | | | Coord Running / Free | 2 | |
| Power On / Off | 1 | | Cabinet Door | 3 | |
| Checksum Failure | 4 | | Extended Ped Pushbuton | 0 | |
| Video / Detector Failure | 4 | | Monitor Status | 4 | |
| Master to Local Comm Lost | 0 | | Red Extension | 0 | |

## 170 INPUTS (Next/2/8/1)

| | | | |
|---|---|---|---|
| C1-39 | 101 - Veh Detector 9 | C1-67 | 22 - Ped Detector 2 |
| C1-40 | 113 - Veh Detector 19 | C1-68 | 26 - Ped Detector 6 |
| C1-41 | 106 - Veh Detector 14 | C1-69 | 23 - Ped Detector 3 |
| C1-42 | 118 - Veh Detector 24 | C1-70 | 28 - Ped Detector 8 |
| C1-43 | 102 - Veh Detector 10 | C1-71 | 151 - Preempt In 1 |
| C1-44 | 114 - Veh Detector 20 | C1-72 | 152 - Preempt In 2 |
| C1-45 | 107 - Veh Detector 15 | C1-73 | 153 - Preempt In 3 |
| C1-46 | 161 - Veh Detector 25 | C1-74 | 154 - Preempt In 4 |
| C1-47 | 105 - Veh Detector 13 | C1-75 | 254 - Pin Not Used |
| C1-48 | 117 - Veh Detector 23 | C1-76 | 104 - Veh Detector 12 |
| C1-49 | 112 - Veh Detector 18 | C1-77 | 116 - Veh Detector 22 |
| C1-50 | 164 - Veh Detector 28 | C1-78 | 111 - Veh Detector 17 |
| C1-51 | 199 - LRT Ped Inhibit | C1-79 | 163 - Veh Detector 27 |
| C1-52 | 155 - Preempt In 5 | C1-80 | 82 - Interval Advance |
| C1-53 | 85 - Manual Control Enable | C1-81 | 137 - Conflict Monitor Status/Flash |
| C1-54 | 254 - Pin Not Used | C1-82 | 62 - Stop Timing Ring 1 |
| C1-55 | 15 - Veh Detector 5 | C11-15 | 254 - Pin Not Used |
| C1-56 | 11 - Veh Detector 1 | C11-16 | 254 - Pin Not Used |
| C1-57 | 17 - Veh Detector 7 | C11-17 | 254 - Pin Not Used |
| C1-58 | 13 - Veh Detector 3 | C11-18 | 254 - Pin Not Used |
| C1-59 | 16 - Veh Detector 6 | C11-19 | 254 - Pin Not Used |
| C1-60 | 12 - Veh Detector 2 | C11-20 | 254 - Pin Not Used |
| C1-61 | 18 - Veh Detector 8 | C11-21 | 254 - Pin Not Used |
| C1-62 | 14 - Veh Detector 4 | C11-22 | 254 - Pin Not Used |
| C11-10 | 254 - Pin Not Used | C11-23 | 254 - Pin Not Used |
| C11-11 | 254 - Pin Not Used | C11-24 | 254 - Pin Not Used |
| C11-12 | 254 - Pin Not Used | C11-25 | 254 - Pin Not Used |
| C11-13 | 254 - Pin Not Used | C11-26 | 254 - Pin Not Used |
| C1-63 | 103 - Veh Detector 11 | C11-27 | 254 - Pin Not Used |
| C1-64 | 115 - Veh Detector 21 | C11-28 | 254 - Pin Not Used |
| C1-65 | 108 - Veh Detector 16 | C11-29 | 254 - Pin Not Used |
| C1-66 | 162 - Veh Detector 26 | C11-30 | 254 - Pin Not Used |

## INPUTS AND OUTPUTS OPTIONS (Next/2/8/3)

| | | | |
|---|---|---|---|
| Connector Type | C1/C11 | Change I/O | 0 = Disabled |
| 0 = C1/C11; 1 = MS-A/B/C/D;<br>2 = TS2 Port 1; 3 = ITS Cabinet | | X = On (After a download without a power on - off cycle) | |

## 170 OUTPUTS (Next/2/8/2)

| | | | |
|---|---|---|---|
| C1-2 | 43 - Don't Walk, Ph 3 | C1-35 | 131 - TOD Output 1 |
| C1-3 | 63 - Walk, Ph 3 | C1-36 | 132 - TOD Output 2 |
| C1-4 | 14 - Red, Ph 4 | C1-37 | 133 - TOD Output 3 |
| C1-5 | 24 - Yellow, Ph 4 | C1-38 | 134 - TOD Output 4 |
| C1-6 | 34 - Green, Ph 4 | C1-100 | 53 - Ped Clear, Ph 3 |
| C1-7 | 13 - Red, Ph 3 | C1-101 | 51 - Ped Clear, Ph 1 |
| C1-8 | 23 - Yellow, Ph 3 | C1-102 | 187 - Soft Flash |
| C1-9 | 33 - Green, Ph 3 | C1-103 | 147 - Watchdog |
| C1-10 | 42 - Don't Walk, Ph 2 | C1-83 | 43 - Don't Walk, Ph 3 |
| C1-11 | 62 - Walk, Ph 2 | C1-84 | 63 - Walk, Ph 3 |
| C1-12 | 12 - Red, Ph 2 | C1-85 | 116 - Overlap D, Red |
| C1-13 | 22 - Yellow, Ph 2 | C1-86 | 115 - Overlap D, Yellow |
| C1-15 | 32 - Green, Ph 2 | C1-87 | 114 - Overlap D, Green |
| C1-16 | 11 - Red, Ph 1 | C1-88 | 113 - Overlap C, Red |
| C1-17 | 21 - Yellow, Ph 1 | C1-89 | 112 - Overlap C, Yellow |
| C1-18 | 31 - Green, Ph 1 | C1-90 | 111 - Overlap C, Green |
| C1-19 | 48 - Don't Walk, Ph 8 | C1-91 | 41 - Don't Walk, Ph 1 |
| C1-20 | 68 - Walk, Ph 8 | C1-93 | 61 - Walk, Ph 1 |
| C1-21 | 18 - Red, Ph 8 | C1-94 | 106 - Overlap B, Red |
| C1-22 | 28 - Yellow, Ph 8 | C1-95 | 105 - Overlap B, Yellow |
| C1-23 | 38 - Green, Ph 8 | C1-96 | 104 - Overlap B, Green |
| C1-24 | 17 - Red, Ph 7 | C1-97 | 103 - Overlap A, Red |
| C1-25 | 27 - Yellow, Ph 7 | C1-98 | 102 - Overlap A, Yellow |
| C1-26 | 37 - Green, Ph 7 | C1-99 | 101 - Overlap A, Green |
| C1-27 | 46 - Don't Walk, Ph 6 | C11-1 | 254 - Pin Not Used |
| C1-28 | 66 - Walk, Ph 6 | C11-2 | 254 - Pin Not Used |
| C1-29 | 16 - Red, Ph 6 | C11-3 | 254 - Pin Not Used |
| C1-30 | 26 - Yellow, Ph 6 | C11-4 | 254 - Pin Not Used |
| C1-31 | 36 - Green, Ph 6 | C11-5 | 254 - Pin Not Used |
| C1-32 | 15 - Red, Ph 5 | C11-6 | 254 - Pin Not Used |
| C1-33 | 25 - Yellow, Ph 5 | C11-7 | 254 - Pin Not Used |
| C1-34 | 35 - Green, Ph 5 | C11-8 | 254 - Pin Not Used |

## INTERNAL LOGIC 1 - 96 (Next/2/9)

| Step | Inst. | Comment | Step | Inst. | Comment |
|---|---|---|---|---|---|
| 1 | 208 | Transfer | 49 | 0 | VD30 - for logging |
| 2 | 1 | I9U | 50 | 0 | |
| 3 | 200 | VD29 - for logging | 51 | 0 | |
| 4 | 28 | Transfer | 52 | 0 | |
| 5 | 1 | J9U | 53 | 0 | |
| 6 | 223 | VD29 - for logging | 54 | 0 | |
| 7 | 1 | Transfer | 55 | 0 | |
| 8 | 27 | VD9 - I2U to | 56 | 0 | |
| 9 | 1 | VD30 - for logging | 57 | 0 | |
| 10 | 0 | Transfer | 58 | 0 | |
| 11 | 0 | VD10 - I2L to | 59 | 0 | |
| 12 | 0 | VD30 - for logging | 60 | 0 | |
| 13 | 0 | Transfer | 61 | 0 | |
| 14 | 0 | | 62 | 0 | |
| 15 | 0 | VD31 - for logging | 63 | 0 | |
| 16 | 0 | Transfer | 64 | 0 | |
| 17 | 0 | | 65 | 0 | |
| 18 | 0 | VD31 - for logging | 66 | 0 | |
| 19 | 0 | Transfer | 67 | 0 | |
| 20 | 0 | | 68 | 0 | |
| 21 | 0 | VD32 - for logging | 69 | 0 | |
| 22 | 0 | Transfer | 70 | 0 | |
| 23 | 0 | | 71 | 0 | |
| 24 | 0 | VD32 - for logging | 72 | 0 | |
| 25 | 0 | | 73 | 0 | |
| 26 | 0 | | 74 | 0 | |
| 27 | 0 | VD33 - for logging | 75 | 0 | |
| 28 | 0 | | 76 | 0 | |
| 29 | 0 | | 77 | 0 | |
| 30 | 0 | VD33 - for logging | 78 | 0 | |
| 31 | 0 | | 79 | 0 | |
| 32 | 0 | | 80 | 0 | |
| 33 | 0 | | 81 | 0 | |
| 34 | 0 | | 82 | 0 | |
| 35 | 0 | | 83 | 0 | |
| 36 | 0 | | 84 | 0 | |
| 37 | 0 | | 85 | 0 | |
| 38 | 0 | | 86 | 0 | |
| 39 | 0 | | 87 | 0 | |
| 40 | 0 | | 88 | 0 | |
| 41 | 0 | | 89 | 0 | |
| 42 | 0 | | 90 | 0 | |
| 43 | 0 | | 91 | 0 | |
| 44 | 0 | | 92 | 0 | |
| 45 | 0 | | 93 | 0 | |
| 46 | 0 | | 94 | 0 | |
| 47 | 0 | | 95 | 0 | |
| 48 | 0 | | 96 | 0 | |

# CONTROLLER ID

| | |
|---|---|
| **Manufacturer ID** | NORTHWEST SIGNAL |
| **Model ID** | Voyage-0 v05.03.00 |
| **Protocol Revision ID** | AB3418E V1 |

APPENDIX I.

# OPERATIONS CALCULATIONS

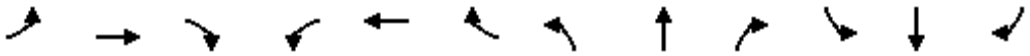
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 1469 | 509 | 979 | 773 | 112 | 248 |
| Future Volume (vph) | 1469 | 509 | 979 | 773 | 112 | 248 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 0.97 | 0.95 | 0.97 | 0.88 |
| Frpb, ped/bikes | 1.00 | 0.99 | 1.00 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3374 | 1562 | 3400 | 3343 | 3273 | 2257 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3374 | 1562 | 3400 | 3343 | 3273 | 2257 |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 1632 | 566 | 1088 | 859 | 124 | 276 |
| RTOR Reduction (vph) | 0 | 90 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 1632 | 476 | 1088 | 859 | 124 | 276 |
| Confl. Peds. (#/hr) | | 1 | 1 | | | 7 |
| Confl. Bikes (#/hr) | | 1 | | | | |
| Heavy Vehicles (%) | 7% | 2% | 3% | 8% | 7% | 23% |
| Turn Type | NA | Perm | Prot | NA | Prot | custom |
| Protected Phases | 2 | | 1 | 6 | 8 | 4 |
| Permitted Phases | | 2 | | | | 1 |
| Actuated Green, G (s) | 52.5 | 52.5 | 34.8 | 92.8 | 10.9 | 46.2 |
| Effective Green, g (s) | 54.5 | 54.5 | 36.3 | 94.8 | 12.9 | 49.2 |
| Actuated g/C Ratio | 0.47 | 0.47 | 0.31 | 0.82 | 0.11 | 0.43 |
| Clearance Time (s) | 6.0 | 6.0 | 5.5 | 6.0 | 6.0 | 5.5 |
| Vehicle Extension (s) | 5.4 | 5.4 | 2.3 | 5.4 | 2.3 | 2.3 |
| Lane Grp Cap (vph) | 1589 | 735 | 1066 | 2739 | 364 | 1037 |
| v/s Ratio Prot | c0.48 | | c0.32 | 0.26 | c0.04 | 0.03 |
| v/s Ratio Perm | | 0.30 | | | | 0.09 |
| v/c Ratio | 1.03 | 0.65 | 1.02 | 0.31 | 0.34 | 0.27 |
| Uniform Delay, d1 | 30.6 | 23.3 | 39.7 | 2.5 | 47.5 | 21.5 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 29.8 | 2.9 | 32.9 | 0.2 | 0.3 | 0.1 |
| Delay (s) | 60.4 | 26.2 | 72.6 | 2.7 | 47.8 | 21.6 |
| Level of Service | E | C | E | A | D | C |
| Approach Delay (s) | 51.6 | | | 41.7 | 29.7 | |
| Approach LOS | D | | | D | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 45.4 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.94 | | |
| Actuated Cycle Length (s) | 115.7 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 88.6% | ICU Level of Service | E |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 27 | 165 | 193 | 28 | 784 | 760 |
| Future Volume (vph) | 27 | 165 | 193 | 28 | 784 | 760 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 0.85 | 1.00 | 1.00 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 1736 | 1509 | 2798 | 1415 | 1766 | 3438 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 1.00 | 0.44 | 1.00 |
| Satd. Flow (perm) | 1736 | 1509 | 2798 | 1415 | 821 | 3438 |
| Peak-hour factor, PHF | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 |
| Adj. Flow (vph) | 33 | 199 | 233 | 34 | 945 | 916 |
| RTOR Reduction (vph) | 0 | 73 | 0 | 28 | 0 | 0 |
| Lane Group Flow (vph) | 33 | 126 | 233 | 6 | 945 | 916 |
| Confl. Peds. (#/hr) | 1 | | | 5 | 5 | |
| Heavy Vehicles (%) | 4% | 7% | 29% | 11% | 2% | 5% |
| Turn Type | Prot | pm+ov | NA | Perm | pm+pt | NA |
| Protected Phases | 4 | 5 | 6 | | 5 | 2 |
| Permitted Phases | | 4 | | 6 | 2 | |
| Actuated Green, G (s) | 5.4 | 48.6 | 13.4 | 13.4 | 61.6 | 61.6 |
| Effective Green, g (s) | 5.4 | 48.6 | 13.4 | 13.4 | 61.6 | 61.6 |
| Actuated g/C Ratio | 0.07 | 0.63 | 0.17 | 0.17 | 0.80 | 0.80 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 121 | 1050 | 486 | 246 | 1186 | 2750 |
| v/s Ratio Prot | c0.02 | 0.07 | 0.08 | | c0.45 | 0.27 |
| v/s Ratio Perm | | 0.02 | | 0.00 | c0.19 | |
| v/c Ratio | 0.27 | 0.12 | 0.48 | 0.02 | 0.80 | 0.33 |
| Uniform Delay, d1 | 33.9 | 5.7 | 28.7 | 26.4 | 5.2 | 2.1 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 1.2 | 0.1 | 0.7 | 0.0 | 3.8 | 0.1 |
| Delay (s) | 35.2 | 5.7 | 29.4 | 26.4 | 9.0 | 2.2 |
| Level of Service | D | A | C | C | A | A |
| Approach Delay (s) | 9.9 | | 29.0 | | | 5.6 |
| Approach LOS | A | | C | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 8.7 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.80 | | |
| Actuated Cycle Length (s) | 77.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 70.4% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

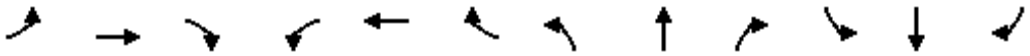
c Critical Lane Group



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 29 | 752 | 19 | 10 | 182 | 12 | 3 | 0 | 2 | 2 | 0 | 4 |
| Future Volume (Veh/h) | 29 | 752 | 19 | 10 | 182 | 12 | 3 | 0 | 2 | 2 | 0 | 4 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Hourly flow rate (vph) | 33 | 855 | 22 | 11 | 207 | 14 | 3 | 0 | 2 | 2 | 0 | 5 |
| Pedestrians | | | | | | | | 6 | | | 2 | |
| Lane Width (ft) | | | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | | | | | | | 1 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | TWLTL | | | TWLTL | | | | | | | |
| Median storage veh) | | 2 | | | 2 | | | | | | | |
| Upstream signal (ft) | | 595 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 223 | | | 883 | | | 1172 | 1183 | 872 | 1161 | 1187 | 216 |
| vC1, stage 1 conf vol | | | | | | | 938 | 938 | | 238 | 238 | |
| vC2, stage 2 conf vol | | | | | | | 234 | 245 | | 923 | 949 | |
| vCu, unblocked vol | 223 | | | 883 | | | 1172 | 1183 | 872 | 1161 | 1187 | 216 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.4 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | 6.4 | 5.5 | | 6.1 | 5.5 | |
| tF (s) | 2.2 | | | 2.2 | | | 3.8 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 99 | | | 99 | 100 | 99 | 99 | 100 | 99 |
| cM capacity (veh/h) | 1355 | | | 770 | | | 259 | 317 | 351 | 292 | 306 | 827 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total | 33 | 877 | 11 | 221 | 5 | 7 |
| Volume Left | 33 | 0 | 11 | 0 | 3 | 2 |
| Volume Right | 0 | 22 | 0 | 14 | 2 | 5 |
| cSH | 1355 | 1700 | 770 | 1700 | 289 | 543 |
| Volume to Capacity | 0.02 | 0.52 | 0.01 | 0.13 | 0.02 | 0.01 |
| Queue Length 95th (ft) | 2 | 0 | 1 | 0 | 1 | 1 |
| Control Delay (s) | 7.7 | 0.0 | 9.7 | 0.0 | 17.7 | 11.7 |
| Lane LOS | A | | A | | C | B |
| Approach Delay (s) | 0.3 | | 0.5 | | 17.7 | 11.7 |
| Approach LOS | | | | | C | B |

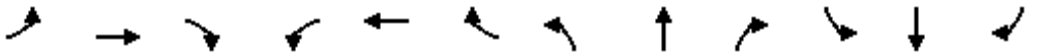
| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.5 | | |
| Intersection Capacity Utilization | 50.7% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 9 | 744 | 1 | 0 | 185 | 1 | 1 | 0 | 0 | 6 | 0 | 18 |
| Future Volume (Veh/h) | 9 | 744 | 1 | 0 | 185 | 1 | 1 | 0 | 0 | 6 | 0 | 18 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| Hourly flow rate (vph) | 11 | 875 | 1 | 0 | 218 | 1 | 1 | 0 | 0 | 7 | 0 | 21 |
| Pedestrians | | | | | | | | 5 | | | 2 | |
| Lane Width (ft) | | | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | | | | | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | TWLTL | | | TWLTL | | | | | | | |
| Median storage veh) | | 2 | | | 2 | | | | | | | |
| Upstream signal (ft) | | 814 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 221 | | | 881 | | | 1142 | 1124 | 880 | 1118 | 1124 | 220 |
| vC1, stage 1 conf vol | | | | | | | 902 | 902 | | 220 | 220 | |
| vC2, stage 2 conf vol | | | | | | | 239 | 221 | | 897 | 903 | |
| vCu, unblocked vol | 221 | | | 881 | | | 1142 | 1124 | 880 | 1118 | 1124 | 220 |
| tC, single (s) | 4.2 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.3 |
| tC, 2 stage (s) | | | | | | | 6.1 | 5.5 | | 6.1 | 5.5 | |
| tF (s) | 2.3 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.4 |
| p0 queue free % | 99 | | | 100 | | | 100 | 100 | 100 | 98 | 100 | 97 |
| cM capacity (veh/h) | 1294 | | | 772 | | | 314 | 337 | 347 | 319 | 337 | 808 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total | 11 | 876 | 0 | 219 | 1 | 28 |
| Volume Left | 11 | 0 | 0 | 0 | 1 | 7 |
| Volume Right | 0 | 1 | 0 | 1 | 0 | 21 |
| cSH | 1294 | 1700 | 1700 | 1700 | 314 | 584 |
| Volume to Capacity | 0.01 | 0.52 | 0.00 | 0.13 | 0.00 | 0.05 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 4 |
| Control Delay (s) | 7.8 | 0.0 | 0.0 | 0.0 | 16.5 | 11.5 |
| Lane LOS | A | | | | C | B |
| Approach Delay (s) | 0.1 | | 0.0 | | 16.5 | 11.5 |
| Approach LOS | | | | | C | B |

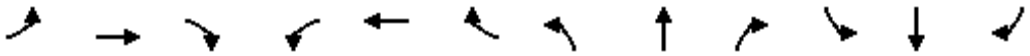
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.4 | | | |
| Intersection Capacity Utilization | 49.2% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 11 | 723 | 0 | 3 | 177 | 3 | 0 | 0 | 0 | 20 | 0 | 12 |
| Future Volume (Veh/h) | 11 | 723 | 0 | 3 | 177 | 3 | 0 | 0 | 0 | 20 | 0 | 12 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 |
| Hourly flow rate (vph) | 14 | 893 | 0 | 4 | 219 | 4 | 0 | 0 | 0 | 25 | 0 | 15 |
| Pedestrians | | 1 | | | | | | 3 | | | 1 | |
| Lane Width (ft) | | 12.0 | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 0 | | | | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | TWLTL | | | TWLTL | | | | | | | |
| Median storage veh) | | 2 | | | 2 | | | | | | | |
| Upstream signal (ft) | | 1288 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 224 | | | 896 | | | 1167 | 1156 | 896 | 1151 | 1154 | 223 |
| vC1, stage 1 conf vol | | | | | | | 924 | 924 | | 230 | 230 | |
| vC2, stage 2 conf vol | | | | | | | 243 | 232 | | 921 | 924 | |
| vCu, unblocked vol | 224 | | | 896 | | | 1167 | 1156 | 896 | 1151 | 1154 | 223 |
| tC, single (s) | 4.3 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.3 |
| tC, 2 stage (s) | | | | | | | 6.1 | 5.5 | | 6.1 | 5.5 | |
| tF (s) | 2.4 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.4 |
| p0 queue free % | 99 | | | 99 | | | 100 | 100 | 100 | 92 | 100 | 98 |
| cM capacity (veh/h) | 1255 | | | 764 | | | 305 | 328 | 341 | 299 | 325 | 800 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total | 14 | 893 | 4 | 223 | 0 | 40 |
| Volume Left | 14 | 0 | 4 | 0 | 0 | 25 |
| Volume Right | 0 | 0 | 0 | 4 | 0 | 15 |
| cSH | 1255 | 1700 | 764 | 1700 | 1700 | 391 |
| Volume to Capacity | 0.01 | 0.53 | 0.01 | 0.13 | 0.00 | 0.10 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 8 |
| Control Delay (s) | 7.9 | 0.0 | 9.7 | 0.0 | 0.0 | 15.3 |
| Lane LOS | A | | A | | A | C |
| Approach Delay (s) | 0.1 | | 0.2 | | 0.0 | 15.3 |
| Approach LOS | | | | | A | C |

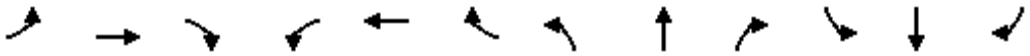
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.6 | | | |
| Intersection Capacity Utilization | 48.4% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 17 | 69 | 23 | 11 | 7 | 25 | 25 | 182 | 41 | 261 | 507 | 27 |
| Future Volume (vph) | 17 | 69 | 23 | 11 | 7 | 25 | 25 | 182 | 41 | 261 | 507 | 27 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | | 4.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.95 | | 1.00 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.96 | | 1.00 | 0.88 | | 1.00 | 0.97 | | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1094 | 1740 | | 1530 | 1339 | | 1504 | 2845 | | 1768 | 3405 | |
| Flt Permitted | 0.66 | 1.00 | | 0.69 | 1.00 | | 0.41 | 1.00 | | 0.46 | 1.00 | |
| Satd. Flow (perm) | 756 | 1740 | | 1104 | 1339 | | 645 | 2845 | | 850 | 3405 | |
| Peak-hour factor, PHF | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 |
| Adj. Flow (vph) | 20 | 83 | 28 | 13 | 8 | 30 | 30 | 219 | 49 | 314 | 611 | 33 |
| RTOR Reduction (vph) | 0 | 19 | 0 | 0 | 25 | 0 | 0 | 21 | 0 | 0 | 3 | 0 |
| Lane Group Flow (vph) | 20 | 92 | 0 | 13 | 13 | 0 | 30 | 247 | 0 | 314 | 641 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 1 | | 2 | 2 | | 1 |
| Heavy Vehicles (%) | 65% | 1% | 17% | 18% | 29% | 24% | 20% | 22% | 27% | 2% | 5% | 7% |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | 10.2 | 9.7 | | 9.2 | 8.7 | | 19.2 | 17.6 | | 32.4 | 25.8 | |
| Effective Green, g (s) | 10.2 | 9.7 | | 9.2 | 8.7 | | 19.2 | 17.6 | | 32.4 | 25.8 | |
| Actuated g/C Ratio | 0.18 | 0.17 | | 0.16 | 0.15 | | 0.34 | 0.31 | | 0.57 | 0.46 | |
| Clearance Time (s) | 5.0 | 5.0 | | 4.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 2.5 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 139 | 298 | | 183 | 205 | | 243 | 884 | | 645 | 1552 | |
| v/s Ratio Prot | c0.00 | c0.05 | | 0.00 | 0.01 | | 0.00 | 0.09 | | c0.08 | 0.19 | |
| v/s Ratio Perm | 0.02 | | | 0.01 | | | 0.04 | | | c0.19 | | |
| v/c Ratio | 0.14 | 0.31 | | 0.07 | 0.06 | | 0.12 | 0.28 | | 0.49 | 0.41 | |
| Uniform Delay, d1 | 19.8 | 20.5 | | 20.0 | 20.5 | | 12.6 | 14.7 | | 6.6 | 10.3 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.5 | 0.6 | | 0.1 | 0.1 | | 0.2 | 0.2 | | 0.6 | 0.2 | |
| Delay (s) | 20.2 | 21.1 | | 20.1 | 20.6 | | 12.8 | 14.9 | | 7.2 | 10.5 | |
| Level of Service | C | C | | C | C | | B | B | | A | B | |
| Approach Delay (s) | | 21.0 | | | 20.5 | | | 14.7 | | | 9.4 | |
| Approach LOS | | C | | | C | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 12.0 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.50 | | |
| Actuated Cycle Length (s) | 56.6 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 43.5% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

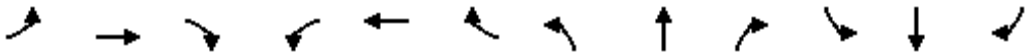
c Critical Lane Group



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 16 | 354 | 11 | 1 | 43 | 7 | 1 | 0 | 1 | 0 | 0 | 3 |
| Future Volume (Veh/h) | 16 | 354 | 11 | 1 | 43 | 7 | 1 | 0 | 1 | 0 | 0 | 3 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Hourly flow rate (vph) | 18 | 398 | 12 | 1 | 48 | 8 | 1 | 0 | 1 | 0 | 0 | 3 |
| Pedestrians | | 1 | | | | | | 1 | | | | |
| Lane Width (ft) | | 12.0 | | | | | | 12.0 | | | | |
| Walking Speed (ft/s) | | 3.5 | | | | | | 3.5 | | | | |
| Percent Blockage | | 0 | | | | | | 0 | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 558 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.91 | | | 0.91 | 0.91 | 0.91 | 0.91 | 0.91 | |
| vC, conflicting volume | 56 | | | 411 | | | 499 | 499 | 405 | 495 | 501 | 53 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 56 | | | 301 | | | 398 | 398 | 295 | 394 | 400 | 53 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 99 | | | 100 | | | 100 | 100 | 100 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1562 | | | 1154 | | | 506 | 486 | 680 | 511 | 485 | 1019 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 428 | 57 | 2 | 3 |
| Volume Left | 18 | 1 | 1 | 0 |
| Volume Right | 12 | 8 | 1 | 3 |
| cSH | 1562 | 1154 | 580 | 1019 |
| Volume to Capacity | 0.01 | 0.00 | 0.00 | 0.00 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 |
| Control Delay (s) | 0.4 | 0.1 | 11.2 | 8.5 |
| Lane LOS | A | A | B | A |
| Approach Delay (s) | 0.4 | 0.1 | 11.2 | 8.5 |
| Approach LOS | | | B | A |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.5 | | | |
| Intersection Capacity Utilization | 37.2% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 11 | 313 | 19 | 4 | 43 | 2 | 13 | 3 | 8 | 0 | 2 | 1 |
| Future Volume (vph) | 11 | 313 | 19 | 4 | 43 | 2 | 13 | 3 | 8 | 0 | 2 | 1 |
| Peak Hour Factor | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| Hourly flow rate (vph) | 13 | 364 | 22 | 5 | 50 | 2 | 15 | 3 | 9 | 0 | 2 | 1 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 399 | 57 | 27 | 3 |
| Volume Left (vph) | 13 | 5 | 15 | 0 |
| Volume Right (vph) | 22 | 2 | 9 | 1 |
| Hadj (s) | 0.05 | 0.31 | 0.42 | 0.37 |
| Departure Headway (s) | 4.1 | 4.7 | 5.3 | 5.3 |
| Degree Utilization, x | 0.45 | 0.07 | 0.04 | 0.00 |
| Capacity (veh/h) | 869 | 741 | 620 | 614 |
| Control Delay (s) | 10.5 | 8.1 | 8.5 | 8.3 |
| Approach Delay (s) | 10.5 | 8.1 | 8.5 | 8.3 |
| Approach LOS | B | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 10.1 | | |
| Level of Service | B | | |
| Intersection Capacity Utilization | 35.0% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

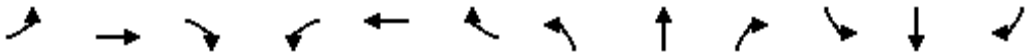
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 910 | 168 | 578 | 1401 | 537 | 664 |
| Future Volume (vph) | 910 | 168 | 578 | 1401 | 537 | 664 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 0.97 | 0.95 | 0.97 | 0.88 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3471 | 1538 | 3335 | 3539 | 3433 | 2765 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3471 | 1538 | 3335 | 3539 | 3433 | 2765 |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 948 | 175 | 602 | 1459 | 559 | 692 |
| RTOR Reduction (vph) | 0 | 107 | 0 | 0 | 0 | 41 |
| Lane Group Flow (vph) | 948 | 68 | 602 | 1459 | 559 | 651 |
| Confl. Peds. (#/hr) | | | | | | 11 |
| Heavy Vehicles (%) | 4% | 5% | 5% | 2% | 2% | 1% |
| Turn Type | NA | Perm | Prot | NA | Prot | custom |
| Protected Phases | 2 | | 1 | 6 | 8 | 4 |
| Permitted Phases | | 2 | | | | 1 |
| Actuated Green, G (s) | 35.5 | 35.5 | 21.7 | 62.7 | 21.3 | 43.5 |
| Effective Green, g (s) | 37.5 | 37.5 | 23.2 | 64.7 | 23.3 | 46.5 |
| Actuated g/C Ratio | 0.39 | 0.39 | 0.24 | 0.67 | 0.24 | 0.48 |
| Clearance Time (s) | 6.0 | 6.0 | 5.5 | 6.0 | 6.0 | 5.5 |
| Vehicle Extension (s) | 5.4 | 5.4 | 2.3 | 5.4 | 2.3 | 2.3 |
| Lane Grp Cap (vph) | 1355 | 600 | 805 | 2385 | 833 | 1454 |
| v/s Ratio Prot | c0.27 | | c0.18 | 0.41 | c0.16 | 0.11 |
| v/s Ratio Perm | | 0.04 | | | | 0.13 |
| v/c Ratio | 0.70 | 0.11 | 0.75 | 0.61 | 0.67 | 0.45 |
| Uniform Delay, d1 | 24.5 | 18.7 | 33.7 | 8.7 | 32.9 | 16.3 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 2.2 | 0.2 | 3.5 | 0.7 | 1.8 | 0.1 |
| Delay (s) | 26.7 | 18.9 | 37.2 | 9.4 | 34.7 | 16.4 |
| Level of Service | C | B | D | A | C | B |
| Approach Delay (s) | 25.5 | | | 17.5 | 24.6 | |
| Approach LOS | C | | | B | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 21.5 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.70 | | |
| Actuated Cycle Length (s) | 96.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 71.2% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 27 | 582 | 695 | 37 | 381 | 361 |
| Future Volume (vph) | 27 | 582 | 695 | 37 | 381 | 361 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 0.96 | 1.00 | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 0.85 | 1.00 | 1.00 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 1687 | 1583 | 3610 | 1550 | 1751 | 3505 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 1.00 | 0.17 | 1.00 |
| Satd. Flow (perm) | 1687 | 1583 | 3610 | 1550 | 315 | 3505 |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 28 | 613 | 732 | 39 | 401 | 380 |
| RTOR Reduction (vph) | 0 | 18 | 0 | 24 | 0 | 0 |
| Lane Group Flow (vph) | 28 | 595 | 732 | 15 | 401 | 380 |
| Confl. Peds. (#/hr) | | | | 14 | 14 | |
| Confl. Bikes (#/hr) | | | | 1 | | |
| Heavy Vehicles (%) | 7% | 2% | 0% | 0% | 3% | 3% |
| Turn Type | Prot | pm+ov | NA | Perm | pm+pt | NA |
| Protected Phases | 4 | 5 | 6 | | 5 | 2 |
| Permitted Phases | | 4 | | 6 | 2 | |
| Actuated Green, G (s) | 4.8 | 34.8 | 20.0 | 20.0 | 55.0 | 55.0 |
| Effective Green, g (s) | 4.8 | 34.8 | 20.0 | 20.0 | 55.0 | 55.0 |
| Actuated g/C Ratio | 0.07 | 0.50 | 0.29 | 0.29 | 0.79 | 0.79 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 116 | 902 | 1034 | 444 | 865 | 2761 |
| v/s Ratio Prot | 0.02 | c0.28 | c0.20 | | 0.20 | 0.11 |
| v/s Ratio Perm | | 0.09 | | 0.01 | 0.17 | |
| v/c Ratio | 0.24 | 0.66 | 0.71 | 0.03 | 0.46 | 0.14 |
| Uniform Delay, d1 | 30.8 | 13.1 | 22.3 | 17.9 | 6.4 | 1.8 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 1.1 | 1.8 | 2.2 | 0.0 | 0.4 | 0.0 |
| Delay (s) | 31.9 | 14.8 | 24.5 | 18.0 | 6.8 | 1.8 |
| Level of Service | C | B | C | B | A | A |
| Approach Delay (s) | 15.6 | | 24.2 | | | 4.4 |
| Approach LOS | B | | C | | | A |

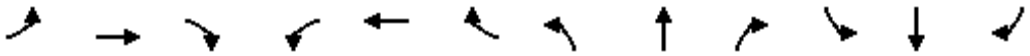
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.6 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.74 | | |
| Actuated Cycle Length (s) | 69.8 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 64.2% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 5 | 406 | 3 | 4 | 540 | 1 | 25 | 0 | 8 | 14 | 0 | 26 |
| Future Volume (Veh/h) | 5 | 406 | 3 | 4 | 540 | 1 | 25 | 0 | 8 | 14 | 0 | 26 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Hourly flow rate (vph) | 5 | 419 | 3 | 4 | 557 | 1 | 26 | 0 | 8 | 14 | 0 | 27 |
| Pedestrians | | | | | | | | 4 | | | 3 | |
| Lane Width (ft) | | | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | | | | | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | TWLTL | | | TWLTL | | | | | | | |
| Median storage veh) | | 2 | | | 2 | | | | | | | |
| Upstream signal (ft) | | 595 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 561 | | | 426 | | | 1026 | 1004 | 424 | 1006 | 1004 | 560 |
| vC1, stage 1 conf vol | | | | | | | 434 | 434 | | 568 | 568 | |
| vC2, stage 2 conf vol | | | | | | | 592 | 569 | | 437 | 436 | |
| vCu, unblocked vol | 561 | | | 426 | | | 1026 | 1004 | 424 | 1006 | 1004 | 560 |
| tC, single (s) | 4.1 | | | 4.8 | | | 7.1 | 6.5 | 6.3 | 7.2 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | 6.1 | 5.5 | | 6.2 | 5.5 | |
| tF (s) | 2.2 | | | 2.9 | | | 3.5 | 4.0 | 3.4 | 3.6 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 93 | 100 | 99 | 97 | 100 | 95 |
| cM capacity (veh/h) | 1017 | | | 829 | | | 393 | 425 | 605 | 412 | 426 | 530 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total | 5 | 422 | 4 | 558 | 34 | 41 |
| Volume Left | 5 | 0 | 4 | 0 | 26 | 14 |
| Volume Right | 0 | 3 | 0 | 1 | 8 | 27 |
| cSH | 1017 | 1700 | 829 | 1700 | 429 | 483 |
| Volume to Capacity | 0.00 | 0.25 | 0.00 | 0.33 | 0.08 | 0.08 |
| Queue Length 95th (ft) | 0 | 0 | 0 | 0 | 6 | 7 |
| Control Delay (s) | 8.6 | 0.0 | 9.4 | 0.0 | 14.1 | 13.2 |
| Lane LOS | A | | A | | B | B |
| Approach Delay (s) | 0.1 | | 0.1 | | 14.1 | 13.2 |
| Approach LOS | | | | | B | B |

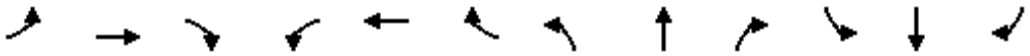
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 1.0 | | | |
| Intersection Capacity Utilization | 38.8% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 25 | 408 | 0 | 0 | 517 | 9 | 4 | 0 | 2 | 7 | 0 | 19 |
| Future Volume (Veh/h) | 25 | 408 | 0 | 0 | 517 | 9 | 4 | 0 | 2 | 7 | 0 | 19 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Hourly flow rate (vph) | 26 | 416 | 0 | 0 | 528 | 9 | 4 | 0 | 2 | 7 | 0 | 19 |
| Pedestrians | | | | | | | | 1 | | | 4 | |
| Lane Width (ft) | | | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | | | | | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | TWLTL | | | TWLTL | | | | | | | |
| Median storage veh) | | 2 | | | 2 | | | | | | | |
| Upstream signal (ft) | | 814 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 541 | | | 417 | | | 1016 | 1010 | 417 | 1006 | 1006 | 536 |
| vC1, stage 1 conf vol | | | | | | | 469 | 469 | | 536 | 536 | |
| vC2, stage 2 conf vol | | | | | | | 547 | 541 | | 470 | 469 | |
| vCu, unblocked vol | 541 | | | 417 | | | 1016 | 1010 | 417 | 1006 | 1006 | 536 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | 6.1 | 5.5 | | 6.1 | 5.5 | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 97 | | | 100 | | | 99 | 100 | 100 | 98 | 100 | 97 |
| cM capacity (veh/h) | 1034 | | | 1152 | | | 402 | 414 | 640 | 424 | 426 | 546 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total | 26 | 416 | 0 | 537 | 6 | 26 |
| Volume Left | 26 | 0 | 0 | 0 | 4 | 7 |
| Volume Right | 0 | 0 | 0 | 9 | 2 | 19 |
| cSH | 1034 | 1700 | 1700 | 1700 | 459 | 507 |
| Volume to Capacity | 0.03 | 0.24 | 0.00 | 0.32 | 0.01 | 0.05 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 1 | 4 |
| Control Delay (s) | 8.6 | 0.0 | 0.0 | 0.0 | 13.0 | 12.5 |
| Lane LOS | A | | | | B | B |
| Approach Delay (s) | 0.5 | | 0.0 | | 13.0 | 12.5 |
| Approach LOS | | | | | B | B |

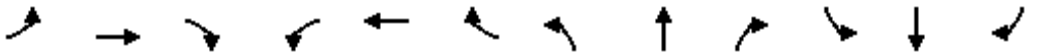
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.6 | | | |
| Intersection Capacity Utilization | 37.8% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 19 | 400 | 1 | 3 | 526 | 29 | 0 | 0 | 2 | 16 | 1 | 16 |
| Future Volume (Veh/h) | 19 | 400 | 1 | 3 | 526 | 29 | 0 | 0 | 2 | 16 | 1 | 16 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 20 | 421 | 1 | 3 | 554 | 31 | 0 | 0 | 2 | 17 | 1 | 17 |
| Pedestrians | | | | | | | | 4 | | | 6 | |
| Lane Width (ft) | | | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | | | | | | | 0 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | TWLTL | | | TWLTL | | | | | | | |
| Median storage veh) | | 2 | | | 2 | | | | | | | |
| Upstream signal (ft) | | 1288 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 591 | | | 426 | | | 1043 | 1062 | 426 | 1044 | 1048 | 576 |
| vC1, stage 1 conf vol | | | | | | | 466 | 466 | | 582 | 582 | |
| vC2, stage 2 conf vol | | | | | | | 578 | 597 | | 463 | 466 | |
| vCu, unblocked vol | 591 | | | 426 | | | 1043 | 1062 | 426 | 1044 | 1048 | 576 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | 6.1 | 5.5 | | 6.1 | 5.5 | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 100 | | | 100 | 100 | 100 | 96 | 100 | 97 |
| cM capacity (veh/h) | 989 | | | 1140 | | | 393 | 399 | 631 | 409 | 411 | 518 |

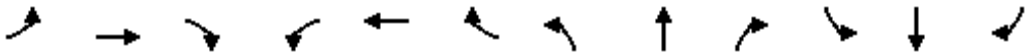
| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total | 20 | 422 | 3 | 585 | 2 | 35 |
| Volume Left | 20 | 0 | 3 | 0 | 0 | 17 |
| Volume Right | 0 | 1 | 0 | 31 | 2 | 17 |
| cSH | 989 | 1700 | 1140 | 1700 | 631 | 456 |
| Volume to Capacity | 0.02 | 0.25 | 0.00 | 0.34 | 0.00 | 0.08 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 6 |
| Control Delay (s) | 8.7 | 0.0 | 8.2 | 0.0 | 10.7 | 13.6 |
| Lane LOS | A | | A | | B | B |
| Approach Delay (s) | 0.4 | | 0.0 | | 10.7 | 13.6 |
| Approach LOS | | | | | B | B |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.7 | | | |
| Intersection Capacity Utilization | 44.7% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 29 | 24 | 22 | 41 | 1 | 357 | 7 | 414 | 16 | 85 | 283 | 8 |
| Future Volume (vph) | 29 | 24 | 22 | 41 | 1 | 357 | 7 | 414 | 16 | 85 | 283 | 8 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | | 4.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.95 | | 1.00 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.93 | | 1.00 | 0.85 | | 1.00 | 0.99 | | 1.00 | 1.00 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1805 | 1764 | | 1770 | 1596 | | 1803 | 3532 | | 1805 | 3479 | |
| Flt Permitted | 0.35 | 1.00 | | 0.73 | 1.00 | | 0.57 | 1.00 | | 0.40 | 1.00 | |
| Satd. Flow (perm) | 667 | 1764 | | 1354 | 1596 | | 1083 | 3532 | | 762 | 3479 | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 30 | 24 | 22 | 42 | 1 | 364 | 7 | 422 | 16 | 87 | 289 | 8 |
| RTOR Reduction (vph) | 0 | 17 | 0 | 0 | 291 | 0 | 0 | 3 | 0 | 0 | 2 | 0 |
| Lane Group Flow (vph) | 30 | 29 | 0 | 42 | 74 | 0 | 7 | 435 | 0 | 87 | 295 | 0 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | | | | 2 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 0% | 0% | 0% | 1% | 19% | 0% | 3% | 13% |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | 12.5 | 11.4 | | 11.5 | 10.4 | | 16.6 | 16.1 | | 23.8 | 19.7 | |
| Effective Green, g (s) | 12.5 | 11.4 | | 11.5 | 10.4 | | 16.6 | 16.1 | | 23.8 | 19.7 | |
| Actuated g/C Ratio | 0.24 | 0.22 | | 0.22 | 0.20 | | 0.32 | 0.31 | | 0.46 | 0.38 | |
| Clearance Time (s) | 5.0 | 5.0 | | 4.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 2.5 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 185 | 388 | | 310 | 321 | | 354 | 1099 | | 433 | 1325 | |
| v/s Ratio Prot | c0.00 | 0.02 | | 0.00 | c0.05 | | 0.00 | c0.12 | | c0.02 | 0.08 | |
| v/s Ratio Perm | 0.04 | | | 0.03 | | | 0.01 | | | 0.08 | | |
| v/c Ratio | 0.16 | 0.07 | | 0.14 | 0.23 | | 0.02 | 0.40 | | 0.20 | 0.22 | |
| Uniform Delay, d1 | 15.5 | 16.0 | | 16.0 | 17.3 | | 12.0 | 14.0 | | 8.1 | 10.8 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.4 | 0.1 | | 0.1 | 0.4 | | 0.0 | 0.2 | | 0.2 | 0.1 | |
| Delay (s) | 15.9 | 16.1 | | 16.2 | 17.7 | | 12.0 | 14.2 | | 8.3 | 10.9 | |
| Level of Service | B | B | | B | B | | B | B | | A | B | |
| Approach Delay (s) | | 16.0 | | | 17.5 | | | 14.2 | | | 10.3 | |
| Approach LOS | | B | | | B | | | B | | | B | |

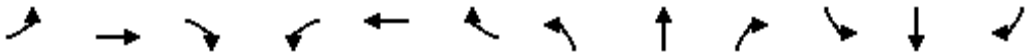
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.2 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.31 | | |
| Actuated Cycle Length (s) | 51.7 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 55.2% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 1 | 132 | 0 | 0 | 379 | 3 | 5 | 0 | 1 | 9 | 0 | 15 |
| Future Volume (Veh/h) | 1 | 132 | 0 | 0 | 379 | 3 | 5 | 0 | 1 | 9 | 0 | 15 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Hourly flow rate (vph) | 1 | 147 | 0 | 0 | 421 | 3 | 6 | 0 | 1 | 10 | 0 | 17 |
| Pedestrians | | 2 | | | | | | 1 | | | 2 | |
| Lane Width (ft) | | 12.0 | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 0 | | | | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 558 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 426 | | | 148 | | | 592 | 576 | 148 | 574 | 574 | 426 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 426 | | | 148 | | | 592 | 576 | 148 | 574 | 574 | 426 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 99 | 100 | 100 | 98 | 100 | 97 |
| cM capacity (veh/h) | 1142 | | | 1445 | | | 408 | 429 | 903 | 430 | 430 | 630 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 148 | 424 | 7 | 27 |
| Volume Left | 1 | 0 | 6 | 10 |
| Volume Right | 0 | 3 | 1 | 17 |
| cSH | 1142 | 1445 | 442 | 537 |
| Volume to Capacity | 0.00 | 0.00 | 0.02 | 0.05 |
| Queue Length 95th (ft) | 0 | 0 | 1 | 4 |
| Control Delay (s) | 0.1 | 0.0 | 13.3 | 12.1 |
| Lane LOS | A | | B | B |
| Approach Delay (s) | 0.1 | 0.0 | 13.3 | 12.1 |
| Approach LOS | | | B | B |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.7 | | | |
| Intersection Capacity Utilization | 30.8% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 9 | 133 | 11 | 19 | 312 | 4 | 34 | 4 | 6 | 3 | 5 | 7 |
| Future Volume (vph) | 9 | 133 | 11 | 19 | 312 | 4 | 34 | 4 | 6 | 3 | 5 | 7 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Hourly flow rate (vph) | 10 | 153 | 13 | 22 | 359 | 5 | 39 | 5 | 7 | 3 | 6 | 8 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 176 | 386 | 51 | 17 |
| Volume Left (vph) | 10 | 22 | 39 | 3 |
| Volume Right (vph) | 13 | 5 | 7 | 8 |
| Hadj (s) | 0.03 | 0.02 | 0.15 | -0.25 |
| Departure Headway (s) | 4.5 | 4.3 | 5.3 | 5.0 |
| Degree Utilization, x | 0.22 | 0.46 | 0.08 | 0.02 |
| Capacity (veh/h) | 771 | 815 | 608 | 633 |
| Control Delay (s) | 8.8 | 10.9 | 8.8 | 8.1 |
| Approach Delay (s) | 8.8 | 10.9 | 8.8 | 8.1 |
| Approach LOS | A | B | A | A |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Delay | 10.1 | | | |
| Level of Service | B | | | |
| Intersection Capacity Utilization | 36.6% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |

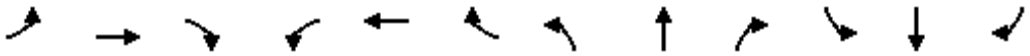
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 1528 | 529 | 1027 | 804 | 117 | 259 |
| Future Volume (vph) | 1528 | 529 | 1027 | 804 | 117 | 259 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 0.97 | 0.95 | 0.97 | 0.88 |
| Frpb, ped/bikes | 1.00 | 0.99 | 1.00 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3374 | 1562 | 3400 | 3343 | 3273 | 2257 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3374 | 1562 | 3400 | 3343 | 3273 | 2257 |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 1698 | 588 | 1141 | 893 | 130 | 288 |
| RTOR Reduction (vph) | 0 | 89 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 1698 | 499 | 1141 | 893 | 130 | 288 |
| Confl. Peds. (#/hr) | | 1 | 1 | | | 7 |
| Confl. Bikes (#/hr) | | 1 | | | | |
| Heavy Vehicles (%) | 7% | 2% | 3% | 8% | 7% | 23% |
| Turn Type | NA | Perm | Prot | NA | Prot | custom |
| Protected Phases | 2 | | 1 | 6 | 8 | 4 |
| Permitted Phases | | 2 | | | | 1 |
| Actuated Green, G (s) | 52.5 | 52.5 | 34.8 | 92.8 | 10.9 | 46.2 |
| Effective Green, g (s) | 54.5 | 54.5 | 36.3 | 94.8 | 12.9 | 49.2 |
| Actuated g/C Ratio | 0.47 | 0.47 | 0.31 | 0.82 | 0.11 | 0.43 |
| Clearance Time (s) | 6.0 | 6.0 | 5.5 | 6.0 | 6.0 | 5.5 |
| Vehicle Extension (s) | 5.4 | 5.4 | 2.3 | 5.4 | 2.3 | 2.3 |
| Lane Grp Cap (vph) | 1589 | 735 | 1066 | 2739 | 364 | 1037 |
| v/s Ratio Prot | c0.50 | | c0.34 | 0.27 | c0.04 | 0.03 |
| v/s Ratio Perm | | 0.32 | | | | 0.10 |
| v/c Ratio | 1.07 | 0.68 | 1.07 | 0.33 | 0.36 | 0.28 |
| Uniform Delay, d1 | 30.6 | 23.8 | 39.7 | 2.6 | 47.6 | 21.7 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 43.4 | 3.5 | 48.4 | 0.2 | 0.4 | 0.1 |
| Delay (s) | 74.0 | 27.3 | 88.1 | 2.7 | 47.9 | 21.8 |
| Level of Service | E | C | F | A | D | C |
| Approach Delay (s) | 62.0 | | | 50.7 | 29.9 | |
| Approach LOS | E | | | D | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 54.3 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.98 | | |
| Actuated Cycle Length (s) | 115.7 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 91.6% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 28 | 172 | 204 | 29 | 815 | 803 |
| Future Volume (vph) | 28 | 172 | 204 | 29 | 815 | 803 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 0.85 | 1.00 | 1.00 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 1736 | 1509 | 2798 | 1415 | 1766 | 3438 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 1.00 | 0.44 | 1.00 |
| Satd. Flow (perm) | 1736 | 1509 | 2798 | 1415 | 813 | 3438 |
| Peak-hour factor, PHF | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 |
| Adj. Flow (vph) | 34 | 207 | 246 | 35 | 982 | 967 |
| RTOR Reduction (vph) | 0 | 77 | 0 | 29 | 0 | 0 |
| Lane Group Flow (vph) | 34 | 130 | 246 | 6 | 982 | 967 |
| Confl. Peds. (#/hr) | 1 | | | 5 | 5 | |
| Heavy Vehicles (%) | 4% | 7% | 29% | 11% | 2% | 5% |
| Turn Type | Prot | pm+ov | NA | Perm | pm+pt | NA |
| Protected Phases | 4 | 5 | 6 | | 5 | 2 |
| Permitted Phases | | 4 | | 6 | 2 | |
| Actuated Green, G (s) | 5.4 | 48.6 | 13.5 | 13.5 | 61.7 | 61.7 |
| Effective Green, g (s) | 5.4 | 48.6 | 13.5 | 13.5 | 61.7 | 61.7 |
| Actuated g/C Ratio | 0.07 | 0.63 | 0.18 | 0.18 | 0.80 | 0.80 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 121 | 1049 | 489 | 247 | 1184 | 2751 |
| v/s Ratio Prot | c0.02 | 0.07 | 0.09 | | c0.46 | 0.28 |
| v/s Ratio Perm | | 0.02 | | 0.00 | c0.20 | |
| v/c Ratio | 0.28 | 0.12 | 0.50 | 0.02 | 0.83 | 0.35 |
| Uniform Delay, d1 | 34.0 | 5.7 | 28.8 | 26.3 | 5.9 | 2.1 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 1.3 | 0.1 | 0.8 | 0.0 | 4.9 | 0.1 |
| Delay (s) | 35.3 | 5.8 | 29.6 | 26.4 | 10.8 | 2.2 |
| Level of Service | D | A | C | C | B | A |
| Approach Delay (s) | 9.9 | | 29.2 | | | 6.5 |
| Approach LOS | A | | C | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 9.4 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.83 | | |
| Actuated Cycle Length (s) | 77.1 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 72.1% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

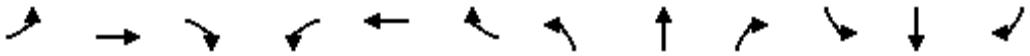
c Critical Lane Group



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 29 | 782 | 19 | 10 | 189 | 12 | 3 | 0 | 2 | 2 | 0 | 4 |
| Future Volume (Veh/h) | 29 | 782 | 19 | 10 | 189 | 12 | 3 | 0 | 2 | 2 | 0 | 4 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Hourly flow rate (vph) | 33 | 889 | 22 | 11 | 215 | 14 | 3 | 0 | 2 | 2 | 0 | 5 |
| Pedestrians | | | | | | | | 6 | | | 2 | |
| Lane Width (ft) | | | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | | | | | | | 1 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | TWLTL | | | TWLTL | | | | | | | |
| Median storage veh) | | 2 | | | 2 | | | | | | | |
| Upstream signal (ft) | | 595 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 231 | | | 917 | | | 1214 | 1225 | 906 | 1203 | 1229 | 224 |
| vC1, stage 1 conf vol | | | | | | | 972 | 972 | | 246 | 246 | |
| vC2, stage 2 conf vol | | | | | | | 242 | 253 | | 957 | 983 | |
| vCu, unblocked vol | 231 | | | 917 | | | 1214 | 1225 | 906 | 1203 | 1229 | 224 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.4 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | 6.4 | 5.5 | | 6.1 | 5.5 | |
| tF (s) | 2.2 | | | 2.2 | | | 3.8 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 99 | | | 99 | 100 | 99 | 99 | 100 | 99 |
| cM capacity (veh/h) | 1346 | | | 748 | | | 247 | 305 | 335 | 279 | 294 | 819 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total | 33 | 911 | 11 | 229 | 5 | 7 |
| Volume Left | 33 | 0 | 11 | 0 | 3 | 2 |
| Volume Right | 0 | 22 | 0 | 14 | 2 | 5 |
| cSH | 1346 | 1700 | 748 | 1700 | 276 | 528 |
| Volume to Capacity | 0.02 | 0.54 | 0.01 | 0.13 | 0.02 | 0.01 |
| Queue Length 95th (ft) | 2 | 0 | 1 | 0 | 1 | 1 |
| Control Delay (s) | 7.7 | 0.0 | 9.9 | 0.0 | 18.3 | 11.9 |
| Lane LOS | A | | A | | C | B |
| Approach Delay (s) | 0.3 | | 0.5 | | 18.3 | 11.9 |
| Approach LOS | | | | | C | B |

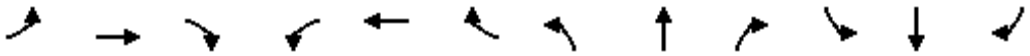
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.5 | | | |
| Intersection Capacity Utilization | 52.3% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 9 | 774 | 1 | 0 | 192 | 1 | 1 | 0 | 0 | 6 | 0 | 18 |
| Future Volume (Veh/h) | 9 | 774 | 1 | 0 | 192 | 1 | 1 | 0 | 0 | 6 | 0 | 18 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| Hourly flow rate (vph) | 11 | 911 | 1 | 0 | 226 | 1 | 1 | 0 | 0 | 7 | 0 | 21 |
| Pedestrians | | | | | | | | 5 | | | 2 | |
| Lane Width (ft) | | | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | | | | | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | TWLTL | | | TWLTL | | | | | | | |
| Median storage veh) | | 2 | | | 2 | | | | | | | |
| Upstream signal (ft) | | 814 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 229 | | | 917 | | | 1186 | 1168 | 916 | 1162 | 1168 | 228 |
| vC1, stage 1 conf vol | | | | | | | 938 | 938 | | 228 | 228 | |
| vC2, stage 2 conf vol | | | | | | | 247 | 229 | | 933 | 939 | |
| vCu, unblocked vol | 229 | | | 917 | | | 1186 | 1168 | 916 | 1162 | 1168 | 228 |
| tC, single (s) | 4.2 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.3 |
| tC, 2 stage (s) | | | | | | | 6.1 | 5.5 | | 6.1 | 5.5 | |
| tF (s) | 2.3 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.4 |
| p0 queue free % | 99 | | | 100 | | | 100 | 100 | 100 | 98 | 100 | 97 |
| cM capacity (veh/h) | 1285 | | | 749 | | | 300 | 324 | 331 | 305 | 324 | 799 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total | 11 | 912 | 0 | 227 | 1 | 28 |
| Volume Left | 11 | 0 | 0 | 0 | 1 | 7 |
| Volume Right | 0 | 1 | 0 | 1 | 0 | 21 |
| cSH | 1285 | 1700 | 1700 | 1700 | 300 | 569 |
| Volume to Capacity | 0.01 | 0.54 | 0.00 | 0.13 | 0.00 | 0.05 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 4 |
| Control Delay (s) | 7.8 | 0.0 | 0.0 | 0.0 | 17.1 | 11.7 |
| Lane LOS | A | | | | C | B |
| Approach Delay (s) | 0.1 | | 0.0 | | 17.1 | 11.7 |
| Approach LOS | | | | | C | B |

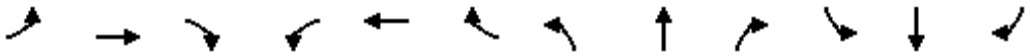
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.4 | | | |
| Intersection Capacity Utilization | 50.8% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 11 | 752 | 0 | 3 | 184 | 3 | 0 | 0 | 0 | 20 | 0 | 12 |
| Future Volume (Veh/h) | 11 | 752 | 0 | 3 | 184 | 3 | 0 | 0 | 0 | 20 | 0 | 12 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 |
| Hourly flow rate (vph) | 14 | 928 | 0 | 4 | 227 | 4 | 0 | 0 | 0 | 25 | 0 | 15 |
| Pedestrians | | 1 | | | | | | 3 | | | 1 | |
| Lane Width (ft) | | 12.0 | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 0 | | | | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | TWLTL | | | TWLTL | | | | | | | |
| Median storage veh) | | 2 | | | 2 | | | | | | | |
| Upstream signal (ft) | | 1288 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 232 | | | 931 | | | 1210 | 1199 | 931 | 1194 | 1197 | 231 |
| vC1, stage 1 conf vol | | | | | | | 959 | 959 | | 238 | 238 | |
| vC2, stage 2 conf vol | | | | | | | 251 | 240 | | 956 | 959 | |
| vCu, unblocked vol | 232 | | | 931 | | | 1210 | 1199 | 931 | 1194 | 1197 | 231 |
| tC, single (s) | 4.3 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.3 |
| tC, 2 stage (s) | | | | | | | 6.1 | 5.5 | | 6.1 | 5.5 | |
| tF (s) | 2.4 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.4 |
| p0 queue free % | 99 | | | 99 | | | 100 | 100 | 100 | 91 | 100 | 98 |
| cM capacity (veh/h) | 1246 | | | 741 | | | 292 | 316 | 325 | 286 | 313 | 792 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total | 14 | 928 | 4 | 231 | 0 | 40 |
| Volume Left | 14 | 0 | 4 | 0 | 0 | 25 |
| Volume Right | 0 | 0 | 0 | 4 | 0 | 15 |
| cSH | 1246 | 1700 | 741 | 1700 | 1700 | 376 |
| Volume to Capacity | 0.01 | 0.55 | 0.01 | 0.14 | 0.00 | 0.11 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 9 |
| Control Delay (s) | 7.9 | 0.0 | 9.9 | 0.0 | 0.0 | 15.7 |
| Lane LOS | A | | A | | A | C |
| Approach Delay (s) | 0.1 | | 0.2 | | 0.0 | 15.7 |
| Approach LOS | | | | | A | C |

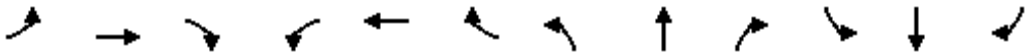
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.6 | | | |
| Intersection Capacity Utilization | 49.9% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 20 | 73 | 25 | 11 | 11 | 26 | 36 | 190 | 43 | 271 | 531 | 37 |
| Future Volume (vph) | 20 | 73 | 25 | 11 | 11 | 26 | 36 | 190 | 43 | 271 | 531 | 37 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | | 4.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.95 | | 1.00 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.96 | | 1.00 | 0.89 | | 1.00 | 0.97 | | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1094 | 1739 | | 1530 | 1354 | | 1504 | 2843 | | 1768 | 3395 | |
| Flt Permitted | 0.65 | 1.00 | | 0.68 | 1.00 | | 0.39 | 1.00 | | 0.45 | 1.00 | |
| Satd. Flow (perm) | 754 | 1739 | | 1097 | 1354 | | 619 | 2843 | | 842 | 3395 | |
| Peak-hour factor, PHF | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 |
| Adj. Flow (vph) | 24 | 88 | 30 | 13 | 13 | 31 | 43 | 229 | 52 | 327 | 640 | 45 |
| RTOR Reduction (vph) | 0 | 19 | 0 | 0 | 26 | 0 | 0 | 21 | 0 | 0 | 5 | 0 |
| Lane Group Flow (vph) | 24 | 99 | 0 | 13 | 18 | 0 | 43 | 260 | 0 | 327 | 680 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 1 | | 2 | 2 | | 1 |
| Heavy Vehicles (%) | 65% | 1% | 17% | 18% | 29% | 24% | 20% | 22% | 27% | 2% | 5% | 7% |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | 10.4 | 9.9 | | 9.4 | 8.9 | | 19.4 | 17.8 | | 32.7 | 26.1 | |
| Effective Green, g (s) | 10.4 | 9.9 | | 9.4 | 8.9 | | 19.4 | 17.8 | | 32.7 | 26.1 | |
| Actuated g/C Ratio | 0.18 | 0.17 | | 0.16 | 0.16 | | 0.34 | 0.31 | | 0.57 | 0.46 | |
| Clearance Time (s) | 5.0 | 5.0 | | 4.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 2.5 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 140 | 301 | | 184 | 211 | | 235 | 886 | | 642 | 1551 | |
| v/s Ratio Prot | c0.00 | c0.06 | | 0.00 | 0.01 | | 0.01 | 0.09 | | c0.09 | 0.20 | |
| v/s Ratio Perm | 0.03 | | | 0.01 | | | 0.06 | | | c0.20 | | |
| v/c Ratio | 0.17 | 0.33 | | 0.07 | 0.08 | | 0.18 | 0.29 | | 0.51 | 0.44 | |
| Uniform Delay, d1 | 20.0 | 20.7 | | 20.1 | 20.6 | | 12.8 | 14.9 | | 6.7 | 10.5 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.6 | 0.6 | | 0.1 | 0.2 | | 0.4 | 0.2 | | 0.6 | 0.2 | |
| Delay (s) | 20.6 | 21.3 | | 20.2 | 20.8 | | 13.2 | 15.1 | | 7.3 | 10.7 | |
| Level of Service | C | C | | C | C | | B | B | | A | B | |
| Approach Delay (s) | | 21.2 | | | 20.7 | | | 14.8 | | | 9.6 | |
| Approach LOS | | C | | | C | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 12.2 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.52 | | |
| Actuated Cycle Length (s) | 57.1 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 44.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

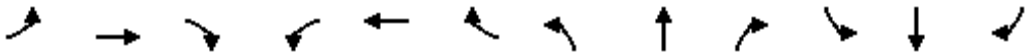
c Critical Lane Group



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 16 | 369 | 11 | 1 | 49 | 7 | 1 | 0 | 1 | 0 | 0 | 3 |
| Future Volume (Veh/h) | 16 | 369 | 11 | 1 | 49 | 7 | 1 | 0 | 1 | 0 | 0 | 3 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Hourly flow rate (vph) | 18 | 415 | 12 | 1 | 55 | 8 | 1 | 0 | 1 | 0 | 0 | 3 |
| Pedestrians | | 1 | | | | | | 1 | | | | |
| Lane Width (ft) | | 12.0 | | | | | | 12.0 | | | | |
| Walking Speed (ft/s) | | 3.5 | | | | | | 3.5 | | | | |
| Percent Blockage | | 0 | | | | | | 0 | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 558 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.90 | | | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | |
| vC, conflicting volume | 63 | | | 428 | | | 523 | 523 | 422 | 519 | 525 | 60 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 63 | | | 311 | | | 417 | 417 | 305 | 412 | 419 | 60 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 99 | | | 100 | | | 100 | 100 | 100 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1553 | | | 1136 | | | 488 | 471 | 667 | 493 | 470 | 1010 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 445 | 64 | 2 | 3 |
| Volume Left | 18 | 1 | 1 | 0 |
| Volume Right | 12 | 8 | 1 | 3 |
| cSH | 1553 | 1136 | 564 | 1010 |
| Volume to Capacity | 0.01 | 0.00 | 0.00 | 0.00 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 |
| Control Delay (s) | 0.4 | 0.1 | 11.4 | 8.6 |
| Lane LOS | A | A | B | A |
| Approach Delay (s) | 0.4 | 0.1 | 11.4 | 8.6 |
| Approach LOS | | | B | A |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.5 | | | |
| Intersection Capacity Utilization | 38.0% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 11 | 327 | 20 | 4 | 49 | 2 | 14 | 3 | 8 | 0 | 2 | 1 |
| Future Volume (vph) | 11 | 327 | 20 | 4 | 49 | 2 | 14 | 3 | 8 | 0 | 2 | 1 |
| Peak Hour Factor | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| Hourly flow rate (vph) | 13 | 380 | 23 | 5 | 57 | 2 | 16 | 3 | 9 | 0 | 2 | 1 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 416 | 64 | 28 | 3 |
| Volume Left (vph) | 13 | 5 | 16 | 0 |
| Volume Right (vph) | 23 | 2 | 9 | 1 |
| Hadj (s) | 0.05 | 0.31 | 0.43 | 0.37 |
| Departure Headway (s) | 4.1 | 4.7 | 5.4 | 5.4 |
| Degree Utilization, x | 0.47 | 0.08 | 0.04 | 0.00 |
| Capacity (veh/h) | 866 | 738 | 610 | 604 |
| Control Delay (s) | 10.8 | 8.1 | 8.6 | 8.4 |
| Approach Delay (s) | 10.8 | 8.1 | 8.6 | 8.4 |
| Approach LOS | B | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 10.3 | | |
| Level of Service | B | | |
| Intersection Capacity Utilization | 36.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

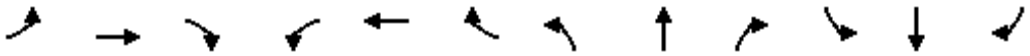
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 946 | 175 | 602 | 1457 | 564 | 695 |
| Future Volume (vph) | 946 | 175 | 602 | 1457 | 564 | 695 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 0.97 | 0.95 | 0.97 | 0.88 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3471 | 1538 | 3335 | 3539 | 3433 | 2765 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3471 | 1538 | 3335 | 3539 | 3433 | 2765 |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 985 | 182 | 627 | 1518 | 588 | 724 |
| RTOR Reduction (vph) | 0 | 111 | 0 | 0 | 0 | 36 |
| Lane Group Flow (vph) | 985 | 71 | 627 | 1518 | 588 | 688 |
| Confl. Peds. (#/hr) | | | | | | 11 |
| Heavy Vehicles (%) | 4% | 5% | 5% | 2% | 2% | 1% |
| Turn Type | NA | Perm | Prot | NA | Prot | custom |
| Protected Phases | 2 | | 1 | 6 | 8 | 4 |
| Permitted Phases | | 2 | | | | 1 |
| Actuated Green, G (s) | 36.8 | 36.8 | 22.6 | 64.9 | 22.1 | 45.2 |
| Effective Green, g (s) | 38.8 | 38.8 | 24.1 | 66.9 | 24.1 | 48.2 |
| Actuated g/C Ratio | 0.39 | 0.39 | 0.24 | 0.68 | 0.24 | 0.49 |
| Clearance Time (s) | 6.0 | 6.0 | 5.5 | 6.0 | 6.0 | 5.5 |
| Vehicle Extension (s) | 5.4 | 5.4 | 2.3 | 5.4 | 2.3 | 2.3 |
| Lane Grp Cap (vph) | 1360 | 602 | 811 | 2391 | 835 | 1457 |
| v/s Ratio Prot | c0.28 | | c0.19 | 0.43 | c0.17 | 0.11 |
| v/s Ratio Perm | | 0.05 | | | | 0.13 |
| v/c Ratio | 0.72 | 0.12 | 0.77 | 0.63 | 0.70 | 0.47 |
| Uniform Delay, d1 | 25.6 | 19.2 | 34.9 | 9.1 | 34.2 | 16.9 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 2.5 | 0.2 | 4.3 | 0.8 | 2.4 | 0.1 |
| Delay (s) | 28.1 | 19.4 | 39.2 | 10.0 | 36.6 | 17.1 |
| Level of Service | C | B | D | A | D | B |
| Approach Delay (s) | 26.7 | | | 18.5 | 25.8 | |
| Approach LOS | C | | | B | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 22.7 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.73 | | |
| Actuated Cycle Length (s) | 99.0 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 73.4% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 28 | 605 | 737 | 38 | 396 | 377 |
| Future Volume (vph) | 28 | 605 | 737 | 38 | 396 | 377 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 0.96 | 1.00 | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 0.85 | 1.00 | 1.00 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 1687 | 1583 | 3610 | 1549 | 1752 | 3505 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 1.00 | 0.15 | 1.00 |
| Satd. Flow (perm) | 1687 | 1583 | 3610 | 1549 | 284 | 3505 |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 29 | 637 | 776 | 40 | 417 | 397 |
| RTOR Reduction (vph) | 0 | 15 | 0 | 23 | 0 | 0 |
| Lane Group Flow (vph) | 29 | 623 | 776 | 17 | 417 | 397 |
| Confl. Peds. (#/hr) | | | | 14 | 14 | |
| Confl. Bikes (#/hr) | | | | 1 | | |
| Heavy Vehicles (%) | 7% | 2% | 0% | 0% | 3% | 3% |
| Turn Type | Prot | pm+ov | NA | Perm | pm+pt | NA |
| Protected Phases | 4 | 5 | 6 | | 5 | 2 |
| Permitted Phases | | 4 | | 6 | 2 | |
| Actuated Green, G (s) | 4.9 | 36.0 | 21.0 | 21.0 | 57.1 | 57.1 |
| Effective Green, g (s) | 4.9 | 36.0 | 21.0 | 21.0 | 57.1 | 57.1 |
| Actuated g/C Ratio | 0.07 | 0.50 | 0.29 | 0.29 | 0.79 | 0.79 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 114 | 901 | 1052 | 451 | 859 | 2779 |
| v/s Ratio Prot | 0.02 | c0.30 | c0.21 | | 0.21 | 0.11 |
| v/s Ratio Perm | | 0.09 | | 0.01 | 0.18 | |
| v/c Ratio | 0.25 | 0.69 | 0.74 | 0.04 | 0.49 | 0.14 |
| Uniform Delay, d1 | 31.8 | 13.7 | 23.0 | 18.3 | 7.8 | 1.7 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 1.2 | 2.3 | 2.7 | 0.0 | 0.4 | 0.0 |
| Delay (s) | 33.0 | 16.1 | 25.8 | 18.3 | 8.2 | 1.8 |
| Level of Service | C | B | C | B | A | A |
| Approach Delay (s) | 16.8 | | 25.4 | | | 5.1 |
| Approach LOS | B | | C | | | A |

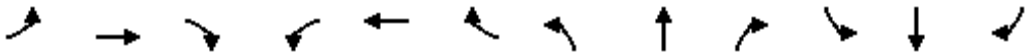
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 15.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.77 | | |
| Actuated Cycle Length (s) | 72.0 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 66.3% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 5 | 422 | 3 | 4 | 562 | 1 | 25 | 0 | 8 | 14 | 0 | 26 |
| Future Volume (Veh/h) | 5 | 422 | 3 | 4 | 562 | 1 | 25 | 0 | 8 | 14 | 0 | 26 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Hourly flow rate (vph) | 5 | 435 | 3 | 4 | 579 | 1 | 26 | 0 | 8 | 14 | 0 | 27 |
| Pedestrians | | | | | | | | 4 | | | 3 | |
| Lane Width (ft) | | | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | | | | | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | TWLTL | | | TWLTL | | | | | | | |
| Median storage veh) | | 2 | | | 2 | | | | | | | |
| Upstream signal (ft) | | 595 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 583 | | | 442 | | | 1064 | 1042 | 440 | 1044 | 1042 | 582 |
| vC1, stage 1 conf vol | | | | | | | 450 | 450 | | 590 | 590 | |
| vC2, stage 2 conf vol | | | | | | | 614 | 591 | | 453 | 452 | |
| vCu, unblocked vol | 583 | | | 442 | | | 1064 | 1042 | 440 | 1044 | 1042 | 582 |
| tC, single (s) | 4.1 | | | 4.8 | | | 7.1 | 6.5 | 6.3 | 7.2 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | 6.1 | 5.5 | | 6.2 | 5.5 | |
| tF (s) | 2.2 | | | 2.9 | | | 3.5 | 4.0 | 3.4 | 3.6 | 4.0 | 3.3 |
| p0 queue free % | 99 | | | 100 | | | 93 | 100 | 99 | 96 | 100 | 95 |
| cM capacity (veh/h) | 998 | | | 816 | | | 381 | 414 | 592 | 399 | 415 | 515 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total | 5 | 438 | 4 | 580 | 34 | 41 |
| Volume Left | 5 | 0 | 4 | 0 | 26 | 14 |
| Volume Right | 0 | 3 | 0 | 1 | 8 | 27 |
| cSH | 998 | 1700 | 816 | 1700 | 416 | 469 |
| Volume to Capacity | 0.01 | 0.26 | 0.00 | 0.34 | 0.08 | 0.09 |
| Queue Length 95th (ft) | 0 | 0 | 0 | 0 | 7 | 7 |
| Control Delay (s) | 8.6 | 0.0 | 9.4 | 0.0 | 14.4 | 13.4 |
| Lane LOS | A | | A | | B | B |
| Approach Delay (s) | 0.1 | | 0.1 | | 14.4 | 13.4 |
| Approach LOS | | | | | B | B |

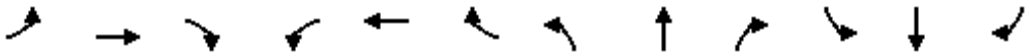
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 1.0 | | | |
| Intersection Capacity Utilization | 40.0% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 25 | 424 | 0 | 0 | 538 | 9 | 4 | 0 | 2 | 7 | 0 | 19 |
| Future Volume (Veh/h) | 25 | 424 | 0 | 0 | 538 | 9 | 4 | 0 | 2 | 7 | 0 | 19 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Hourly flow rate (vph) | 26 | 433 | 0 | 0 | 549 | 9 | 4 | 0 | 2 | 7 | 0 | 19 |
| Pedestrians | | | | | | | | 1 | | | 4 | |
| Lane Width (ft) | | | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | | | | | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | TWLTL | | | TWLTL | | | | | | | |
| Median storage veh) | | 2 | | | 2 | | | | | | | |
| Upstream signal (ft) | | 814 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 562 | | | 434 | | | 1054 | 1048 | 434 | 1044 | 1044 | 558 |
| vC1, stage 1 conf vol | | | | | | | 486 | 486 | | 558 | 558 | |
| vC2, stage 2 conf vol | | | | | | | 568 | 562 | | 487 | 486 | |
| vCu, unblocked vol | 562 | | | 434 | | | 1054 | 1048 | 434 | 1044 | 1044 | 558 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | 6.1 | 5.5 | | 6.1 | 5.5 | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 97 | | | 100 | | | 99 | 100 | 100 | 98 | 100 | 96 |
| cM capacity (veh/h) | 1016 | | | 1135 | | | 390 | 404 | 626 | 412 | 415 | 531 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total | 26 | 433 | 0 | 558 | 6 | 26 |
| Volume Left | 26 | 0 | 0 | 0 | 4 | 7 |
| Volume Right | 0 | 0 | 0 | 9 | 2 | 19 |
| cSH | 1016 | 1700 | 1700 | 1700 | 446 | 493 |
| Volume to Capacity | 0.03 | 0.25 | 0.00 | 0.33 | 0.01 | 0.05 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 1 | 4 |
| Control Delay (s) | 8.6 | 0.0 | 0.0 | 0.0 | 13.2 | 12.7 |
| Lane LOS | A | | | | B | B |
| Approach Delay (s) | 0.5 | | 0.0 | | 13.2 | 12.7 |
| Approach LOS | | | | | B | B |

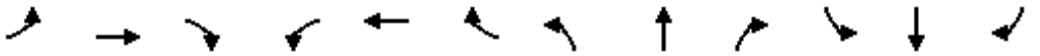
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.6 | | | |
| Intersection Capacity Utilization | 38.9% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 19 | 416 | 1 | 3 | 547 | 29 | 0 | 0 | 2 | 16 | 1 | 16 |
| Future Volume (Veh/h) | 19 | 416 | 1 | 3 | 547 | 29 | 0 | 0 | 2 | 16 | 1 | 16 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 20 | 438 | 1 | 3 | 576 | 31 | 0 | 0 | 2 | 17 | 1 | 17 |
| Pedestrians | | | | | | | | 4 | | | 6 | |
| Lane Width (ft) | | | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | | | | | | | 0 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | TWLTL | | | TWLTL | | | | | | | |
| Median storage veh) | | 2 | | | 2 | | | | | | | |
| Upstream signal (ft) | | 1288 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 613 | | | 443 | | | 1082 | 1102 | 442 | 1084 | 1086 | 598 |
| vC1, stage 1 conf vol | | | | | | | 482 | 482 | | 604 | 604 | |
| vC2, stage 2 conf vol | | | | | | | 600 | 619 | | 480 | 483 | |
| vCu, unblocked vol | 613 | | | 443 | | | 1082 | 1102 | 442 | 1084 | 1086 | 598 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | 6.1 | 5.5 | | 6.1 | 5.5 | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 100 | | | 100 | 100 | 100 | 96 | 100 | 97 |
| cM capacity (veh/h) | 971 | | | 1123 | | | 381 | 388 | 617 | 397 | 401 | 503 |

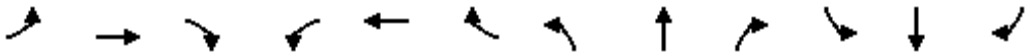
| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total | 20 | 439 | 3 | 607 | 2 | 35 |
| Volume Left | 20 | 0 | 3 | 0 | 0 | 17 |
| Volume Right | 0 | 1 | 0 | 31 | 2 | 17 |
| cSH | 971 | 1700 | 1123 | 1700 | 617 | 442 |
| Volume to Capacity | 0.02 | 0.26 | 0.00 | 0.36 | 0.00 | 0.08 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 0 | 6 |
| Control Delay (s) | 8.8 | 0.0 | 8.2 | 0.0 | 10.9 | 13.8 |
| Lane LOS | A | | A | | B | B |
| Approach Delay (s) | 0.4 | | 0.0 | | 10.9 | 13.8 |
| Approach LOS | | | | | B | B |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.6 | | | |
| Intersection Capacity Utilization | 45.8% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 40 | 29 | 34 | 43 | 2 | 371 | 8 | 435 | 17 | 88 | 295 | 9 |
| Future Volume (vph) | 40 | 29 | 34 | 43 | 2 | 371 | 8 | 435 | 17 | 88 | 295 | 9 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | | 4.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.95 | | 1.00 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.92 | | 1.00 | 0.85 | | 1.00 | 0.99 | | 1.00 | 1.00 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1805 | 1747 | | 1770 | 1596 | | 1803 | 3531 | | 1805 | 3477 | |
| Flt Permitted | 0.34 | 1.00 | | 0.71 | 1.00 | | 0.56 | 1.00 | | 0.39 | 1.00 | |
| Satd. Flow (perm) | 650 | 1747 | | 1331 | 1596 | | 1069 | 3531 | | 740 | 3477 | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 41 | 30 | 35 | 44 | 2 | 379 | 8 | 444 | 17 | 90 | 301 | 9 |
| RTOR Reduction (vph) | 0 | 27 | 0 | 0 | 288 | 0 | 0 | 3 | 0 | 0 | 2 | 0 |
| Lane Group Flow (vph) | 41 | 38 | 0 | 44 | 93 | 0 | 8 | 458 | 0 | 90 | 308 | 0 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | | | | 2 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 0% | 0% | 0% | 1% | 19% | 0% | 3% | 13% |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | 12.8 | 11.7 | | 11.8 | 10.7 | | 17.1 | 16.5 | | 23.9 | 19.9 | |
| Effective Green, g (s) | 12.8 | 11.7 | | 11.8 | 10.7 | | 17.1 | 16.5 | | 23.9 | 19.9 | |
| Actuated g/C Ratio | 0.24 | 0.22 | | 0.23 | 0.20 | | 0.33 | 0.32 | | 0.46 | 0.38 | |
| Clearance Time (s) | 5.0 | 5.0 | | 4.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 2.5 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 183 | 390 | | 309 | 326 | | 357 | 1113 | | 419 | 1322 | |
| v/s Ratio Prot | c0.00 | 0.02 | | 0.00 | c0.06 | | 0.00 | c0.13 | | c0.02 | 0.09 | |
| v/s Ratio Perm | 0.05 | | | 0.03 | | | 0.01 | | | 0.08 | | |
| v/c Ratio | 0.22 | 0.10 | | 0.14 | 0.29 | | 0.02 | 0.41 | | 0.21 | 0.23 | |
| Uniform Delay, d1 | 15.8 | 16.1 | | 16.1 | 17.6 | | 11.9 | 14.1 | | 8.3 | 11.0 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.6 | 0.1 | | 0.2 | 0.5 | | 0.0 | 0.2 | | 0.3 | 0.1 | |
| Delay (s) | 16.4 | 16.2 | | 16.2 | 18.1 | | 11.9 | 14.3 | | 8.5 | 11.1 | |
| Level of Service | B | B | | B | B | | B | B | | A | B | |
| Approach Delay (s) | | 16.3 | | | 17.9 | | | 14.3 | | | 10.5 | |
| Approach LOS | | B | | | B | | | B | | | B | |

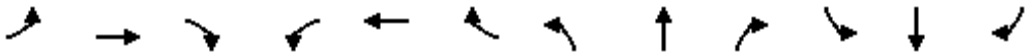
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.5 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.34 | | |
| Actuated Cycle Length (s) | 52.3 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 62.5% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 1 | 141 | 0 | 0 | 395 | 3 | 5 | 0 | 1 | 9 | 0 | 15 |
| Future Volume (Veh/h) | 1 | 141 | 0 | 0 | 395 | 3 | 5 | 0 | 1 | 9 | 0 | 15 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Hourly flow rate (vph) | 1 | 157 | 0 | 0 | 439 | 3 | 6 | 0 | 1 | 10 | 0 | 17 |
| Pedestrians | | 2 | | | | | | 1 | | | 2 | |
| Lane Width (ft) | | 12.0 | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 0 | | | | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 558 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 444 | | | 158 | | | 620 | 604 | 158 | 602 | 602 | 444 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 444 | | | 158 | | | 620 | 604 | 158 | 602 | 602 | 444 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 98 | 100 | 100 | 98 | 100 | 97 |
| cM capacity (veh/h) | 1125 | | | 1433 | | | 390 | 414 | 892 | 412 | 414 | 615 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 158 | 442 | 7 | 27 |
| Volume Left | 1 | 0 | 6 | 10 |
| Volume Right | 0 | 3 | 1 | 17 |
| cSH | 1125 | 1433 | 424 | 520 |
| Volume to Capacity | 0.00 | 0.00 | 0.02 | 0.05 |
| Queue Length 95th (ft) | 0 | 0 | 1 | 4 |
| Control Delay (s) | 0.1 | 0.0 | 13.6 | 12.3 |
| Lane LOS | A | | B | B |
| Approach Delay (s) | 0.1 | 0.0 | 13.6 | 12.3 |
| Approach LOS | | | B | B |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.7 | | | |
| Intersection Capacity Utilization | 31.6% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 9 | 142 | 11 | 20 | 325 | 4 | 35 | 4 | 6 | 3 | 5 | 7 |
| Future Volume (vph) | 9 | 142 | 11 | 20 | 325 | 4 | 35 | 4 | 6 | 3 | 5 | 7 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Hourly flow rate (vph) | 10 | 163 | 13 | 23 | 374 | 5 | 40 | 5 | 7 | 3 | 6 | 8 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 186 | 402 | 52 | 17 |
| Volume Left (vph) | 10 | 23 | 40 | 3 |
| Volume Right (vph) | 13 | 5 | 7 | 8 |
| Hadj (s) | 0.03 | 0.02 | 0.15 | -0.25 |
| Departure Headway (s) | 4.5 | 4.3 | 5.4 | 5.1 |
| Degree Utilization, x | 0.23 | 0.48 | 0.08 | 0.02 |
| Capacity (veh/h) | 767 | 812 | 599 | 623 |
| Control Delay (s) | 8.9 | 11.3 | 8.8 | 8.2 |
| Approach Delay (s) | 8.9 | 11.3 | 8.8 | 8.2 |
| Approach LOS | A | B | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 10.3 | | |
| Level of Service | B | | |
| Intersection Capacity Utilization | 38.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

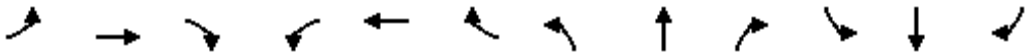
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 1528 | 533 | 1032 | 804 | 117 | 260 |
| Future Volume (vph) | 1528 | 533 | 1032 | 804 | 117 | 260 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 0.97 | 0.95 | 0.97 | 0.88 |
| Frpb, ped/bikes | 1.00 | 0.99 | 1.00 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3374 | 1562 | 3400 | 3343 | 3273 | 2257 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3374 | 1562 | 3400 | 3343 | 3273 | 2257 |
| Peak-hour factor, PHF | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Adj. Flow (vph) | 1698 | 592 | 1147 | 893 | 130 | 289 |
| RTOR Reduction (vph) | 0 | 89 | 0 | 0 | 0 | 0 |
| Lane Group Flow (vph) | 1698 | 503 | 1147 | 893 | 130 | 289 |
| Confl. Peds. (#/hr) | | 1 | 1 | | | 7 |
| Confl. Bikes (#/hr) | | 1 | | | | |
| Heavy Vehicles (%) | 7% | 2% | 3% | 8% | 7% | 23% |
| Turn Type | NA | Perm | Prot | NA | Prot | custom |
| Protected Phases | 2 | | 1 | 6 | 8 | 4 |
| Permitted Phases | | 2 | | | | 1 |
| Actuated Green, G (s) | 52.5 | 52.5 | 34.8 | 92.8 | 10.9 | 46.2 |
| Effective Green, g (s) | 54.5 | 54.5 | 36.3 | 94.8 | 12.9 | 49.2 |
| Actuated g/C Ratio | 0.47 | 0.47 | 0.31 | 0.82 | 0.11 | 0.43 |
| Clearance Time (s) | 6.0 | 6.0 | 5.5 | 6.0 | 6.0 | 5.5 |
| Vehicle Extension (s) | 5.4 | 5.4 | 2.3 | 5.4 | 2.3 | 2.3 |
| Lane Grp Cap (vph) | 1589 | 735 | 1066 | 2739 | 364 | 1037 |
| v/s Ratio Prot | c0.50 | | c0.34 | 0.27 | c0.04 | 0.03 |
| v/s Ratio Perm | | 0.32 | | | | 0.10 |
| v/c Ratio | 1.07 | 0.68 | 1.08 | 0.33 | 0.36 | 0.28 |
| Uniform Delay, d1 | 30.6 | 23.9 | 39.7 | 2.6 | 47.6 | 21.7 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 43.4 | 3.6 | 50.4 | 0.2 | 0.4 | 0.1 |
| Delay (s) | 74.0 | 27.5 | 90.1 | 2.7 | 47.9 | 21.8 |
| Level of Service | E | C | F | A | D | C |
| Approach Delay (s) | 62.0 | | | 51.9 | 29.9 | |
| Approach LOS | E | | | D | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 54.8 | HCM 2000 Level of Service | D |
| HCM 2000 Volume to Capacity ratio | 0.98 | | |
| Actuated Cycle Length (s) | 115.7 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 91.7% | ICU Level of Service | F |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 28 | 173 | 204 | 29 | 824 | 803 |
| Future Volume (vph) | 28 | 173 | 204 | 29 | 824 | 803 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 0.97 | 1.00 | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 0.85 | 1.00 | 1.00 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 1736 | 1509 | 2798 | 1415 | 1766 | 3438 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 1.00 | 0.44 | 1.00 |
| Satd. Flow (perm) | 1736 | 1509 | 2798 | 1415 | 813 | 3438 |
| Peak-hour factor, PHF | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 |
| Adj. Flow (vph) | 34 | 208 | 246 | 35 | 993 | 967 |
| RTOR Reduction (vph) | 0 | 77 | 0 | 29 | 0 | 0 |
| Lane Group Flow (vph) | 34 | 131 | 246 | 6 | 993 | 967 |
| Confl. Peds. (#/hr) | 1 | | | 5 | 5 | |
| Heavy Vehicles (%) | 4% | 7% | 29% | 11% | 2% | 5% |
| Turn Type | Prot | pm+ov | NA | Perm | pm+pt | NA |
| Protected Phases | 4 | 5 | 6 | | 5 | 2 |
| Permitted Phases | | 4 | | 6 | 2 | |
| Actuated Green, G (s) | 5.4 | 48.6 | 13.5 | 13.5 | 61.7 | 61.7 |
| Effective Green, g (s) | 5.4 | 48.6 | 13.5 | 13.5 | 61.7 | 61.7 |
| Actuated g/C Ratio | 0.07 | 0.63 | 0.18 | 0.18 | 0.80 | 0.80 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 121 | 1049 | 489 | 247 | 1184 | 2751 |
| v/s Ratio Prot | c0.02 | 0.07 | 0.09 | | c0.47 | 0.28 |
| v/s Ratio Perm | | 0.02 | | 0.00 | c0.20 | |
| v/c Ratio | 0.28 | 0.12 | 0.50 | 0.02 | 0.84 | 0.35 |
| Uniform Delay, d1 | 34.0 | 5.7 | 28.8 | 26.3 | 6.0 | 2.1 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 1.3 | 0.1 | 0.8 | 0.0 | 5.4 | 0.1 |
| Delay (s) | 35.3 | 5.8 | 29.6 | 26.4 | 11.4 | 2.2 |
| Level of Service | D | A | C | C | B | A |
| Approach Delay (s) | 9.9 | | 29.2 | | | 6.9 |
| Approach LOS | A | | C | | | A |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 9.7 | HCM 2000 Level of Service | A |
| HCM 2000 Volume to Capacity ratio | 0.84 | | |
| Actuated Cycle Length (s) | 77.1 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 72.6% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

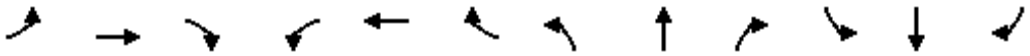
c Critical Lane Group



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 29 | 782 | 28 | 13 | 189 | 12 | 4 | 0 | 3 | 2 | 0 | 4 |
| Future Volume (Veh/h) | 29 | 782 | 28 | 13 | 189 | 12 | 4 | 0 | 3 | 2 | 0 | 4 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 | 0.88 |
| Hourly flow rate (vph) | 33 | 889 | 32 | 15 | 215 | 14 | 5 | 0 | 3 | 2 | 0 | 5 |
| Pedestrians | | | | | | | | 6 | | | 2 | |
| Lane Width (ft) | | | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | | | | | | | 1 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | TWLTL | | | TWLTL | | | | | | | |
| Median storage veh) | | 2 | | | 2 | | | | | | | |
| Upstream signal (ft) | | 595 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 231 | | | 927 | | | 1227 | 1238 | 911 | 1212 | 1247 | 224 |
| vC1, stage 1 conf vol | | | | | | | 977 | 977 | | 254 | 254 | |
| vC2, stage 2 conf vol | | | | | | | 250 | 261 | | 958 | 993 | |
| vCu, unblocked vol | 231 | | | 927 | | | 1227 | 1238 | 911 | 1212 | 1247 | 224 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.4 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | 6.4 | 5.5 | | 6.1 | 5.5 | |
| tF (s) | 2.2 | | | 2.2 | | | 3.8 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 98 | | | 98 | 100 | 99 | 99 | 100 | 99 |
| cM capacity (veh/h) | 1346 | | | 741 | | | 245 | 303 | 333 | 274 | 287 | 819 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total | 33 | 921 | 15 | 229 | 8 | 7 |
| Volume Left | 33 | 0 | 15 | 0 | 5 | 2 |
| Volume Right | 0 | 32 | 0 | 14 | 3 | 5 |
| cSH | 1346 | 1700 | 741 | 1700 | 272 | 522 |
| Volume to Capacity | 0.02 | 0.54 | 0.02 | 0.13 | 0.03 | 0.01 |
| Queue Length 95th (ft) | 2 | 0 | 2 | 0 | 2 | 1 |
| Control Delay (s) | 7.7 | 0.0 | 10.0 | 0.0 | 18.6 | 12.0 |
| Lane LOS | A | | A | | C | B |
| Approach Delay (s) | 0.3 | | 0.6 | | 18.6 | 12.0 |
| Approach LOS | | | | | C | B |

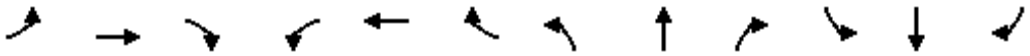
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.5 | | | |
| Intersection Capacity Utilization | 52.9% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 9 | 775 | 1 | 0 | 195 | 1 | 1 | 0 | 0 | 6 | 0 | 18 |
| Future Volume (Veh/h) | 9 | 775 | 1 | 0 | 195 | 1 | 1 | 0 | 0 | 6 | 0 | 18 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 | 0.85 |
| Hourly flow rate (vph) | 11 | 912 | 1 | 0 | 229 | 1 | 1 | 0 | 0 | 7 | 0 | 21 |
| Pedestrians | | | | | | | | 5 | | | 2 | |
| Lane Width (ft) | | | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | | | | | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | TWLTL | | | TWLTL | | | | | | | |
| Median storage veh) | | 2 | | | 2 | | | | | | | |
| Upstream signal (ft) | | 814 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 232 | | | 918 | | | 1190 | 1172 | 918 | 1166 | 1172 | 232 |
| vC1, stage 1 conf vol | | | | | | | 940 | 940 | | 232 | 232 | |
| vC2, stage 2 conf vol | | | | | | | 250 | 232 | | 934 | 940 | |
| vCu, unblocked vol | 232 | | | 918 | | | 1190 | 1172 | 918 | 1166 | 1172 | 232 |
| tC, single (s) | 4.2 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.3 |
| tC, 2 stage (s) | | | | | | | 6.1 | 5.5 | | 6.1 | 5.5 | |
| tF (s) | 2.3 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.4 |
| p0 queue free % | 99 | | | 100 | | | 100 | 100 | 100 | 98 | 100 | 97 |
| cM capacity (veh/h) | 1282 | | | 748 | | | 299 | 323 | 331 | 305 | 324 | 796 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total | 11 | 913 | 0 | 230 | 1 | 28 |
| Volume Left | 11 | 0 | 0 | 0 | 1 | 7 |
| Volume Right | 0 | 1 | 0 | 1 | 0 | 21 |
| cSH | 1282 | 1700 | 1700 | 1700 | 299 | 567 |
| Volume to Capacity | 0.01 | 0.54 | 0.00 | 0.14 | 0.00 | 0.05 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 | 0 | 4 |
| Control Delay (s) | 7.8 | 0.0 | 0.0 | 0.0 | 17.1 | 11.7 |
| Lane LOS | A | | | | C | B |
| Approach Delay (s) | 0.1 | | 0.0 | | 17.1 | 11.7 |
| Approach LOS | | | | | C | B |

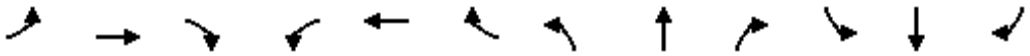
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.4 | | | |
| Intersection Capacity Utilization | 50.9% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 11 | 753 | 0 | 4 | 187 | 3 | 0 | 0 | 0 | 20 | 0 | 12 |
| Future Volume (Veh/h) | 11 | 753 | 0 | 4 | 187 | 3 | 0 | 0 | 0 | 20 | 0 | 12 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 | 0.81 |
| Hourly flow rate (vph) | 14 | 930 | 0 | 5 | 231 | 4 | 0 | 0 | 0 | 25 | 0 | 15 |
| Pedestrians | | 1 | | | | | | 3 | | | 1 | |
| Lane Width (ft) | | 12.0 | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 0 | | | | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | TWLTL | | | TWLTL | | | | | | | |
| Median storage veh) | | 2 | | | 2 | | | | | | | |
| Upstream signal (ft) | | 1288 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 236 | | | 933 | | | 1218 | 1207 | 933 | 1202 | 1205 | 235 |
| vC1, stage 1 conf vol | | | | | | | 961 | 961 | | 244 | 244 | |
| vC2, stage 2 conf vol | | | | | | | 257 | 246 | | 958 | 961 | |
| vCu, unblocked vol | 236 | | | 933 | | | 1218 | 1207 | 933 | 1202 | 1205 | 235 |
| tC, single (s) | 4.3 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.3 |
| tC, 2 stage (s) | | | | | | | 6.1 | 5.5 | | 6.1 | 5.5 | |
| tF (s) | 2.4 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.4 |
| p0 queue free % | 99 | | | 99 | | | 100 | 100 | 100 | 91 | 100 | 98 |
| cM capacity (veh/h) | 1241 | | | 740 | | | 291 | 315 | 325 | 284 | 312 | 788 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total | 14 | 930 | 5 | 235 | 0 | 40 |
| Volume Left | 14 | 0 | 5 | 0 | 0 | 25 |
| Volume Right | 0 | 0 | 0 | 4 | 0 | 15 |
| cSH | 1241 | 1700 | 740 | 1700 | 1700 | 373 |
| Volume to Capacity | 0.01 | 0.55 | 0.01 | 0.14 | 0.00 | 0.11 |
| Queue Length 95th (ft) | 1 | 0 | 1 | 0 | 0 | 9 |
| Control Delay (s) | 7.9 | 0.0 | 9.9 | 0.0 | 0.0 | 15.8 |
| Lane LOS | A | | A | | A | C |
| Approach Delay (s) | 0.1 | | 0.2 | | 0.0 | 15.8 |
| Approach LOS | | | | | A | C |

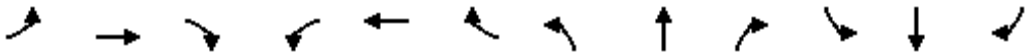
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.6 | | | |
| Intersection Capacity Utilization | 50.0% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 20 | 73 | 25 | 12 | 11 | 26 | 36 | 190 | 49 | 271 | 531 | 37 |
| Future Volume (vph) | 20 | 73 | 25 | 12 | 11 | 26 | 36 | 190 | 49 | 271 | 531 | 37 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | | 4.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.95 | | 1.00 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.96 | | 1.00 | 0.89 | | 1.00 | 0.97 | | 1.00 | 0.99 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1094 | 1739 | | 1530 | 1354 | | 1504 | 2831 | | 1768 | 3395 | |
| Flt Permitted | 0.65 | 1.00 | | 0.68 | 1.00 | | 0.39 | 1.00 | | 0.45 | 1.00 | |
| Satd. Flow (perm) | 754 | 1739 | | 1097 | 1354 | | 619 | 2831 | | 836 | 3395 | |
| Peak-hour factor, PHF | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 | 0.83 |
| Adj. Flow (vph) | 24 | 88 | 30 | 14 | 13 | 31 | 43 | 229 | 59 | 327 | 640 | 45 |
| RTOR Reduction (vph) | 0 | 19 | 0 | 0 | 26 | 0 | 0 | 25 | 0 | 0 | 5 | 0 |
| Lane Group Flow (vph) | 24 | 99 | 0 | 14 | 18 | 0 | 43 | 263 | 0 | 327 | 680 | 0 |
| Confl. Peds. (#/hr) | | | | | | | 1 | | 2 | 2 | | 1 |
| Heavy Vehicles (%) | 65% | 1% | 17% | 18% | 29% | 24% | 20% | 22% | 27% | 2% | 5% | 7% |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | 10.4 | 9.9 | | 9.4 | 8.9 | | 19.4 | 17.8 | | 32.7 | 26.1 | |
| Effective Green, g (s) | 10.4 | 9.9 | | 9.4 | 8.9 | | 19.4 | 17.8 | | 32.7 | 26.1 | |
| Actuated g/C Ratio | 0.18 | 0.17 | | 0.16 | 0.16 | | 0.34 | 0.31 | | 0.57 | 0.46 | |
| Clearance Time (s) | 5.0 | 5.0 | | 4.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 2.5 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 140 | 301 | | 184 | 211 | | 235 | 882 | | 640 | 1551 | |
| v/s Ratio Prot | c0.00 | c0.06 | | 0.00 | 0.01 | | 0.01 | 0.09 | | c0.09 | 0.20 | |
| v/s Ratio Perm | 0.03 | | | 0.01 | | | 0.06 | | | c0.20 | | |
| v/c Ratio | 0.17 | 0.33 | | 0.08 | 0.08 | | 0.18 | 0.30 | | 0.51 | 0.44 | |
| Uniform Delay, d1 | 20.0 | 20.7 | | 20.1 | 20.6 | | 12.8 | 14.9 | | 6.7 | 10.5 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.6 | 0.6 | | 0.1 | 0.2 | | 0.4 | 0.2 | | 0.7 | 0.2 | |
| Delay (s) | 20.6 | 21.3 | | 20.2 | 20.8 | | 13.2 | 15.1 | | 7.4 | 10.7 | |
| Level of Service | C | C | | C | C | | B | B | | A | B | |
| Approach Delay (s) | | 21.2 | | | 20.7 | | | 14.9 | | | 9.7 | |
| Approach LOS | | C | | | C | | | B | | | A | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 12.2 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.52 | | |
| Actuated Cycle Length (s) | 57.1 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 44.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

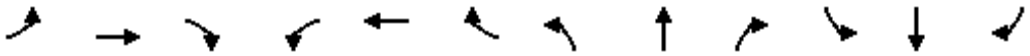
c Critical Lane Group



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 22 | 369 | 11 | 1 | 49 | 9 | 1 | 0 | 1 | 0 | 0 | 4 |
| Future Volume (Veh/h) | 22 | 369 | 11 | 1 | 49 | 9 | 1 | 0 | 1 | 0 | 0 | 4 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 | 0.89 |
| Hourly flow rate (vph) | 25 | 415 | 12 | 1 | 55 | 10 | 1 | 0 | 1 | 0 | 0 | 4 |
| Pedestrians | | 1 | | | | | | 1 | | | | |
| Lane Width (ft) | | 12.0 | | | | | | 12.0 | | | | |
| Walking Speed (ft/s) | | 3.5 | | | | | | 3.5 | | | | |
| Percent Blockage | | 0 | | | | | | 0 | | | | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 558 | | | | | | | | | | |
| pX, platoon unblocked | | | | 0.90 | | | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | |
| vC, conflicting volume | 65 | | | 428 | | | 539 | 539 | 422 | 534 | 540 | 61 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 65 | | | 311 | | | 434 | 434 | 305 | 429 | 435 | 61 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 100 | | | 100 | 100 | 100 | 100 | 100 | 100 |
| cM capacity (veh/h) | 1550 | | | 1136 | | | 473 | 459 | 667 | 480 | 458 | 1009 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 452 | 66 | 2 | 4 |
| Volume Left | 25 | 1 | 1 | 0 |
| Volume Right | 12 | 10 | 1 | 4 |
| cSH | 1550 | 1136 | 554 | 1009 |
| Volume to Capacity | 0.02 | 0.00 | 0.00 | 0.00 |
| Queue Length 95th (ft) | 1 | 0 | 0 | 0 |
| Control Delay (s) | 0.6 | 0.1 | 11.5 | 8.6 |
| Lane LOS | A | A | B | A |
| Approach Delay (s) | 0.6 | 0.1 | 11.5 | 8.6 |
| Approach LOS | | | B | A |

| Intersection Summary | | | |
|---|---|---|---|
| Average Delay | 0.6 | | |
| Intersection Capacity Utilization | 38.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 11 | 327 | 20 | 4 | 51 | 2 | 14 | 3 | 8 | 0 | 2 | 1 |
| Future Volume (vph) | 11 | 327 | 20 | 4 | 51 | 2 | 14 | 3 | 8 | 0 | 2 | 1 |
| Peak Hour Factor | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 | 0.86 |
| Hourly flow rate (vph) | 13 | 380 | 23 | 5 | 59 | 2 | 16 | 3 | 9 | 0 | 2 | 1 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 416 | 66 | 28 | 3 |
| Volume Left (vph) | 13 | 5 | 16 | 0 |
| Volume Right (vph) | 23 | 2 | 9 | 1 |
| Hadj (s) | 0.05 | 0.30 | 0.43 | 0.37 |
| Departure Headway (s) | 4.1 | 4.7 | 5.4 | 5.4 |
| Degree Utilization, x | 0.48 | 0.09 | 0.04 | 0.00 |
| Capacity (veh/h) | 866 | 738 | 610 | 603 |
| Control Delay (s) | 10.8 | 8.1 | 8.6 | 8.4 |
| Approach Delay (s) | 10.8 | 8.1 | 8.6 | 8.4 |
| Approach LOS | B | A | A | A |

| Intersection Summary | | | |
|---|---|---|---|
| Delay | 10.3 | | |
| Level of Service | B | | |
| Intersection Capacity Utilization | 36.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

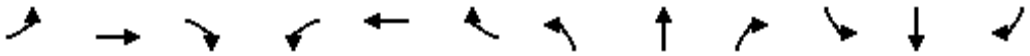
| Movement | EBT | EBR | WBL | WBT | NBL | NBR |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 946 | 175 | 603 | 1457 | 567 | 700 |
| Future Volume (vph) | 946 | 175 | 603 | 1457 | 567 | 700 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 | 4.0 |
| Lane Util. Factor | 0.95 | 1.00 | 0.97 | 0.95 | 0.97 | 0.88 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.98 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 1.00 | 1.00 | 0.85 |
| Flt Protected | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 3471 | 1538 | 3335 | 3539 | 3433 | 2765 |
| Flt Permitted | 1.00 | 1.00 | 0.95 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (perm) | 3471 | 1538 | 3335 | 3539 | 3433 | 2765 |
| Peak-hour factor, PHF | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 | 0.96 |
| Adj. Flow (vph) | 985 | 182 | 628 | 1518 | 591 | 729 |
| RTOR Reduction (vph) | 0 | 111 | 0 | 0 | 0 | 36 |
| Lane Group Flow (vph) | 985 | 71 | 628 | 1518 | 591 | 693 |
| Confl. Peds. (#/hr) | | | | | | 11 |
| Heavy Vehicles (%) | 4% | 5% | 5% | 2% | 2% | 1% |
| Turn Type | NA | Perm | Prot | NA | Prot | custom |
| Protected Phases | 2 | | 1 | 6 | 8 | 4 |
| Permitted Phases | | 2 | | | | 1 |
| Actuated Green, G (s) | 36.8 | 36.8 | 22.7 | 65.0 | 22.2 | 45.4 |
| Effective Green, g (s) | 38.8 | 38.8 | 24.2 | 67.0 | 24.2 | 48.4 |
| Actuated g/C Ratio | 0.39 | 0.39 | 0.24 | 0.68 | 0.24 | 0.49 |
| Clearance Time (s) | 6.0 | 6.0 | 5.5 | 6.0 | 6.0 | 5.5 |
| Vehicle Extension (s) | 5.4 | 5.4 | 2.3 | 5.4 | 2.3 | 2.3 |
| Lane Grp Cap (vph) | 1357 | 601 | 813 | 2390 | 837 | 1460 |
| v/s Ratio Prot | c0.28 | | c0.19 | 0.43 | c0.17 | 0.12 |
| v/s Ratio Perm | | 0.05 | | | | 0.13 |
| v/c Ratio | 0.73 | 0.12 | 0.77 | 0.64 | 0.71 | 0.47 |
| Uniform Delay, d1 | 25.7 | 19.3 | 34.9 | 9.2 | 34.3 | 16.9 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 2.6 | 0.2 | 4.3 | 0.8 | 2.4 | 0.1 |
| Delay (s) | 28.2 | 19.5 | 39.3 | 10.0 | 36.7 | 17.1 |
| Level of Service | C | B | D | A | D | B |
| Approach Delay (s) | 26.9 | | | 18.6 | 25.8 | |
| Approach LOS | C | | | B | C | |

| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 22.7 | HCM 2000 Level of Service | C |
| HCM 2000 Volume to Capacity ratio | 0.73 | | |
| Actuated Cycle Length (s) | 99.2 | Sum of lost time (s) | 12.0 |
| Intersection Capacity Utilization | 73.5% | ICU Level of Service | D |
| Analysis Period (min) | 15 | | |

c Critical Lane Group

| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | |
| Traffic Volume (vph) | 28 | 613 | 737 | 38 | 397 | 377 |
| Future Volume (vph) | 28 | 613 | 737 | 38 | 397 | 377 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Lane Util. Factor | 1.00 | 1.00 | 0.95 | 1.00 | 1.00 | 0.95 |
| Frpb, ped/bikes | 1.00 | 1.00 | 1.00 | 0.96 | 1.00 | 1.00 |
| Flpb, ped/bikes | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Frt | 1.00 | 0.85 | 1.00 | 0.85 | 1.00 | 1.00 |
| Flt Protected | 0.95 | 1.00 | 1.00 | 1.00 | 0.95 | 1.00 |
| Satd. Flow (prot) | 1687 | 1583 | 3610 | 1549 | 1752 | 3505 |
| Flt Permitted | 0.95 | 1.00 | 1.00 | 1.00 | 0.15 | 1.00 |
| Satd. Flow (perm) | 1687 | 1583 | 3610 | 1549 | 285 | 3505 |
| Peak-hour factor, PHF | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Adj. Flow (vph) | 29 | 645 | 776 | 40 | 418 | 397 |
| RTOR Reduction (vph) | 0 | 14 | 0 | 23 | 0 | 0 |
| Lane Group Flow (vph) | 29 | 631 | 776 | 17 | 418 | 397 |
| Confl. Peds. (#/hr) | | | | 14 | 14 | |
| Confl. Bikes (#/hr) | | | | 1 | | |
| Heavy Vehicles (%) | 7% | 2% | 0% | 0% | 3% | 3% |
| Turn Type | Prot | pm+ov | NA | Perm | pm+pt | NA |
| Protected Phases | 4 | 5 | 6 | | 5 | 2 |
| Permitted Phases | | 4 | | 6 | 2 | |
| Actuated Green, G (s) | 4.9 | 36.2 | 20.9 | 20.9 | 57.2 | 57.2 |
| Effective Green, g (s) | 4.9 | 36.2 | 20.9 | 20.9 | 57.2 | 57.2 |
| Actuated g/C Ratio | 0.07 | 0.50 | 0.29 | 0.29 | 0.79 | 0.79 |
| Clearance Time (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Vehicle Extension (s) | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 |
| Lane Grp Cap (vph) | 114 | 904 | 1046 | 449 | 862 | 2780 |
| v/s Ratio Prot | 0.02 | c0.30 | c0.21 | | 0.21 | 0.11 |
| v/s Ratio Perm | | 0.10 | | 0.01 | 0.17 | |
| v/c Ratio | 0.25 | 0.70 | 0.74 | 0.04 | 0.48 | 0.14 |
| Uniform Delay, d1 | 31.9 | 13.8 | 23.2 | 18.4 | 7.7 | 1.7 |
| Progression Factor | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Incremental Delay, d2 | 1.2 | 2.4 | 2.9 | 0.0 | 0.4 | 0.0 |
| Delay (s) | 33.0 | 16.1 | 26.0 | 18.4 | 8.2 | 1.8 |
| Level of Service | C | B | C | B | A | A |
| Approach Delay (s) | 16.8 | | 25.7 | | | 5.0 |
| Approach LOS | B | | C | | | A |

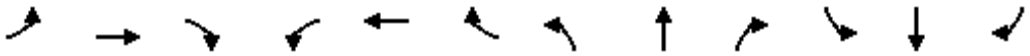
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 15.8 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.77 | | |
| Actuated Cycle Length (s) | 72.1 | Sum of lost time (s) | 15.0 |
| Intersection Capacity Utilization | 66.8% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 5 | 422 | 4 | 5 | 564 | 1 | 31 | 0 | 11 | 14 | 0 | 26 |
| Future Volume (Veh/h) | 5 | 422 | 4 | 5 | 564 | 1 | 31 | 0 | 11 | 14 | 0 | 26 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 | 0.97 |
| Hourly flow rate (vph) | 5 | 435 | 4 | 5 | 581 | 1 | 32 | 0 | 11 | 14 | 0 | 27 |
| Pedestrians | | | | | | | | 4 | | | 3 | |
| Lane Width (ft) | | | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | | | | | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | TWLTL | | | TWLTL | | | | | | | |
| Median storage veh) | | 2 | | | 2 | | | | | | | |
| Upstream signal (ft) | | 595 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 585 | | | 443 | | | 1069 | 1046 | 441 | 1050 | 1048 | 584 |
| vC1, stage 1 conf vol | | | | | | | 451 | 451 | | 594 | 594 | |
| vC2, stage 2 conf vol | | | | | | | 618 | 595 | | 456 | 453 | |
| vCu, unblocked vol | 585 | | | 443 | | | 1069 | 1046 | 441 | 1050 | 1048 | 584 |
| tC, single (s) | 4.1 | | | 4.8 | | | 7.1 | 6.5 | 6.3 | 7.2 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | 6.1 | 5.5 | | 6.2 | 5.5 | |
| tF (s) | 2.2 | | | 2.9 | | | 3.5 | 4.0 | 3.4 | 3.6 | 4.0 | 3.3 |
| p0 queue free % | 99 | | | 99 | | | 92 | 100 | 98 | 96 | 100 | 95 |
| cM capacity (veh/h) | 997 | | | 815 | | | 379 | 412 | 592 | 396 | 413 | 513 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total | 5 | 439 | 5 | 582 | 43 | 41 |
| Volume Left | 5 | 0 | 5 | 0 | 32 | 14 |
| Volume Right | 0 | 4 | 0 | 1 | 11 | 27 |
| cSH | 997 | 1700 | 815 | 1700 | 417 | 466 |
| Volume to Capacity | 0.01 | 0.26 | 0.01 | 0.34 | 0.10 | 0.09 |
| Queue Length 95th (ft) | 0 | 0 | 0 | 0 | 9 | 7 |
| Control Delay (s) | 8.6 | 0.0 | 9.4 | 0.0 | 14.6 | 13.5 |
| Lane LOS | A | | A | | B | B |
| Approach Delay (s) | 0.1 | | 0.1 | | 14.6 | 13.5 |
| Approach LOS | | | | | B | B |

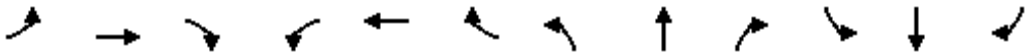
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 1.1 | | | |
| Intersection Capacity Utilization | 41.0% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 25 | 427 | 0 | 0 | 541 | 9 | 4 | 0 | 2 | 7 | 0 | 19 |
| Future Volume (Veh/h) | 25 | 427 | 0 | 0 | 541 | 9 | 4 | 0 | 2 | 7 | 0 | 19 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Hourly flow rate (vph) | 26 | 436 | 0 | 0 | 552 | 9 | 4 | 0 | 2 | 7 | 0 | 19 |
| Pedestrians | | | | | | | | 1 | | | 4 | |
| Lane Width (ft) | | | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | | | | | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | TWLTL | | | TWLTL | | | | | | | |
| Median storage veh) | | 2 | | | 2 | | | | | | | |
| Upstream signal (ft) | | 814 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 565 | | | 437 | | | 1060 | 1054 | 437 | 1050 | 1050 | 560 |
| vC1, stage 1 conf vol | | | | | | | 489 | 489 | | 560 | 560 | |
| vC2, stage 2 conf vol | | | | | | | 571 | 565 | | 490 | 489 | |
| vCu, unblocked vol | 565 | | | 437 | | | 1060 | 1054 | 437 | 1050 | 1050 | 560 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | 6.1 | 5.5 | | 6.1 | 5.5 | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 97 | | | 100 | | | 99 | 100 | 100 | 98 | 100 | 96 |
| cM capacity (veh/h) | 1013 | | | 1132 | | | 388 | 402 | 623 | 410 | 413 | 529 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total | 26 | 436 | 0 | 561 | 6 | 26 |
| Volume Left | 26 | 0 | 0 | 0 | 4 | 7 |
| Volume Right | 0 | 0 | 0 | 9 | 2 | 19 |
| cSH | 1013 | 1700 | 1700 | 1700 | 444 | 491 |
| Volume to Capacity | 0.03 | 0.26 | 0.00 | 0.33 | 0.01 | 0.05 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 1 | 4 |
| Control Delay (s) | 8.6 | 0.0 | 0.0 | 0.0 | 13.2 | 12.7 |
| Lane LOS | A | | | | B | B |
| Approach Delay (s) | 0.5 | | 0.0 | | 13.2 | 12.7 |
| Approach LOS | | | | | B | B |

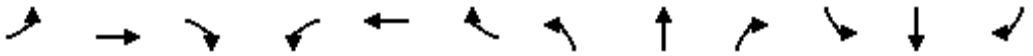
| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.6 | | | |
| Intersection Capacity Utilization | 39.0% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 19 | 419 | 1 | 3 | 548 | 29 | 2 | 0 | 3 | 16 | 1 | 16 |
| Future Volume (Veh/h) | 19 | 419 | 1 | 3 | 548 | 29 | 2 | 0 | 3 | 16 | 1 | 16 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Hourly flow rate (vph) | 20 | 441 | 1 | 3 | 577 | 31 | 2 | 0 | 3 | 17 | 1 | 17 |
| Pedestrians | | | | | | | | 4 | | | 6 | |
| Lane Width (ft) | | | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | | | | | | | 0 | | | 1 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | TWLTL | | | TWLTL | | | | | | | |
| Median storage veh) | | 2 | | | 2 | | | | | | | |
| Upstream signal (ft) | | 1288 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 614 | | | 446 | | | 1086 | 1106 | 446 | 1088 | 1090 | 598 |
| vC1, stage 1 conf vol | | | | | | | 486 | 486 | | 604 | 604 | |
| vC2, stage 2 conf vol | | | | | | | 600 | 620 | | 484 | 486 | |
| vCu, unblocked vol | 614 | | | 446 | | | 1086 | 1106 | 446 | 1088 | 1090 | 598 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | 6.1 | 5.5 | | 6.1 | 5.5 | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 98 | | | 100 | | | 99 | 100 | 100 | 96 | 100 | 97 |
| cM capacity (veh/h) | 970 | | | 1121 | | | 380 | 387 | 615 | 395 | 400 | 503 |

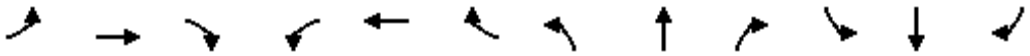
| Direction, Lane # | EB 1 | EB 2 | WB 1 | WB 2 | NB 1 | SB 1 |
|---|---|---|---|---|---|---|
| Volume Total | 20 | 442 | 3 | 608 | 5 | 35 |
| Volume Left | 20 | 0 | 3 | 0 | 2 | 17 |
| Volume Right | 0 | 1 | 0 | 31 | 3 | 17 |
| cSH | 970 | 1700 | 1121 | 1700 | 493 | 441 |
| Volume to Capacity | 0.02 | 0.26 | 0.00 | 0.36 | 0.01 | 0.08 |
| Queue Length 95th (ft) | 2 | 0 | 0 | 0 | 1 | 6 |
| Control Delay (s) | 8.8 | 0.0 | 8.2 | 0.0 | 12.4 | 13.9 |
| Lane LOS | A | | A | | B | B |
| Approach Delay (s) | 0.4 | | 0.0 | | 12.4 | 13.9 |
| Approach LOS | | | | | B | B |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.7 | | | |
| Intersection Capacity Utilization | 40.6% | ICU Level of Service | | A |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (vph) | 40 | 29 | 34 | 47 | 2 | 371 | 8 | 435 | 18 | 88 | 295 | 9 |
| Future Volume (vph) | 40 | 29 | 34 | 47 | 2 | 371 | 8 | 435 | 18 | 88 | 295 | 9 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 5.0 | 5.0 | | 4.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Lane Util. Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.95 | | 1.00 | 0.95 | |
| Frpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.92 | | 1.00 | 0.85 | | 1.00 | 0.99 | | 1.00 | 1.00 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1805 | 1747 | | 1770 | 1596 | | 1803 | 3529 | | 1805 | 3477 | |
| Flt Permitted | 0.34 | 1.00 | | 0.71 | 1.00 | | 0.56 | 1.00 | | 0.39 | 1.00 | |
| Satd. Flow (perm) | 650 | 1747 | | 1331 | 1596 | | 1069 | 3529 | | 739 | 3477 | |
| Peak-hour factor, PHF | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 | 0.98 |
| Adj. Flow (vph) | 41 | 30 | 35 | 48 | 2 | 379 | 8 | 444 | 18 | 90 | 301 | 9 |
| RTOR Reduction (vph) | 0 | 27 | 0 | 0 | 288 | 0 | 0 | 3 | 0 | 0 | 2 | 0 |
| Lane Group Flow (vph) | 41 | 38 | 0 | 48 | 93 | 0 | 8 | 459 | 0 | 90 | 308 | 0 |
| Confl. Peds. (#/hr) | 1 | | | | | 1 | 2 | | | | | 2 |
| Confl. Bikes (#/hr) | | | | | | | | | | | | 1 |
| Heavy Vehicles (%) | 0% | 0% | 0% | 2% | 0% | 0% | 0% | 1% | 19% | 0% | 3% | 13% |
| Turn Type | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | | pm+pt | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | 4 | | | 8 | | | 2 | | | 6 | | |
| Actuated Green, G (s) | 12.8 | 11.7 | | 11.8 | 10.7 | | 17.1 | 16.5 | | 23.9 | 19.9 | |
| Effective Green, g (s) | 12.8 | 11.7 | | 11.8 | 10.7 | | 17.1 | 16.5 | | 23.9 | 19.9 | |
| Actuated g/C Ratio | 0.24 | 0.22 | | 0.23 | 0.20 | | 0.33 | 0.32 | | 0.46 | 0.38 | |
| Clearance Time (s) | 5.0 | 5.0 | | 4.0 | 5.0 | | 5.0 | 5.0 | | 5.0 | 5.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 2.5 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 183 | 390 | | 309 | 326 | | 357 | 1113 | | 419 | 1322 | |
| v/s Ratio Prot | c0.00 | 0.02 | | 0.00 | c0.06 | | 0.00 | c0.13 | | c0.02 | 0.09 | |
| v/s Ratio Perm | 0.05 | | | 0.03 | | | 0.01 | | | 0.08 | | |
| v/c Ratio | 0.22 | 0.10 | | 0.16 | 0.29 | | 0.02 | 0.41 | | 0.21 | 0.23 | |
| Uniform Delay, d1 | 15.8 | 16.1 | | 16.1 | 17.6 | | 11.9 | 14.1 | | 8.3 | 11.0 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 0.6 | 0.1 | | 0.2 | 0.5 | | 0.0 | 0.2 | | 0.3 | 0.1 | |
| Delay (s) | 16.4 | 16.2 | | 16.3 | 18.1 | | 11.9 | 14.3 | | 8.5 | 11.1 | |
| Level of Service | B | B | | B | B | | B | B | | A | B | |
| Approach Delay (s) | | 16.3 | | | 17.9 | | | 14.3 | | | 10.5 | |
| Approach LOS | | B | | | B | | | B | | | B | |

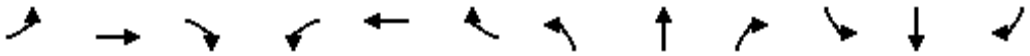
| Intersection Summary | | | |
|---|---|---|---|
| HCM 2000 Control Delay | 14.5 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.34 | | |
| Actuated Cycle Length (s) | 52.3 | Sum of lost time (s) | 20.0 |
| Intersection Capacity Utilization | 62.5% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Traffic Volume (veh/h) | 2 | 141 | 0 | 0 | 395 | 3 | 5 | 0 | 1 | 11 | 0 | 19 |
| Future Volume (Veh/h) | 2 | 141 | 0 | 0 | 395 | 3 | 5 | 0 | 1 | 11 | 0 | 19 |
| Sign Control | | Free | | | Free | | | Stop | | | Stop | |
| Grade | | 0% | | | 0% | | | 0% | | | 0% | |
| Peak Hour Factor | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 | 0.90 |
| Hourly flow rate (vph) | 2 | 157 | 0 | 0 | 439 | 3 | 6 | 0 | 1 | 12 | 0 | 21 |
| Pedestrians | | 2 | | | | | | 1 | | | 2 | |
| Lane Width (ft) | | 12.0 | | | | | | 12.0 | | | 12.0 | |
| Walking Speed (ft/s) | | 3.5 | | | | | | 3.5 | | | 3.5 | |
| Percent Blockage | | 0 | | | | | | 0 | | | 0 | |
| Right turn flare (veh) | | | | | | | | | | | | |
| Median type | | None | | | None | | | | | | | |
| Median storage veh) | | | | | | | | | | | | |
| Upstream signal (ft) | | 558 | | | | | | | | | | |
| pX, platoon unblocked | | | | | | | | | | | | |
| vC, conflicting volume | 444 | | | 158 | | | 626 | 606 | 158 | 604 | 604 | 444 |
| vC1, stage 1 conf vol | | | | | | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | | | | | | |
| vCu, unblocked vol | 444 | | | 158 | | | 626 | 606 | 158 | 604 | 604 | 444 |
| tC, single (s) | 4.1 | | | 4.1 | | | 7.1 | 6.5 | 6.2 | 7.1 | 6.5 | 6.2 |
| tC, 2 stage (s) | | | | | | | | | | | | |
| tF (s) | 2.2 | | | 2.2 | | | 3.5 | 4.0 | 3.3 | 3.5 | 4.0 | 3.3 |
| p0 queue free % | 100 | | | 100 | | | 98 | 100 | 100 | 97 | 100 | 97 |
| cM capacity (veh/h) | 1125 | | | 1433 | | | 384 | 412 | 892 | 410 | 413 | 615 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total | 159 | 442 | 7 | 33 |
| Volume Left | 2 | 0 | 6 | 12 |
| Volume Right | 0 | 3 | 1 | 21 |
| cSH | 1125 | 1433 | 418 | 521 |
| Volume to Capacity | 0.00 | 0.00 | 0.02 | 0.06 |
| Queue Length 95th (ft) | 0 | 0 | 1 | 5 |
| Control Delay (s) | 0.1 | 0.0 | 13.8 | 12.4 |
| Lane LOS | A | | B | B |
| Approach Delay (s) | 0.1 | 0.0 | 13.8 | 12.4 |
| Approach LOS | | | B | B |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Average Delay | 0.8 | | | |
| Intersection Capacity Utilization | 31.6% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Configurations | | | | | | | | | | | | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Traffic Volume (vph) | 9 | 144 | 11 | 20 | 325 | 4 | 35 | 4 | 6 | 3 | 5 | 7 |
| Future Volume (vph) | 9 | 144 | 11 | 20 | 325 | 4 | 35 | 4 | 6 | 3 | 5 | 7 |
| Peak Hour Factor | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 | 0.87 |
| Hourly flow rate (vph) | 10 | 166 | 13 | 23 | 374 | 5 | 40 | 5 | 7 | 3 | 6 | 8 |

| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 |
|---|---|---|---|---|
| Volume Total (vph) | 189 | 402 | 52 | 17 |
| Volume Left (vph) | 10 | 23 | 40 | 3 |
| Volume Right (vph) | 13 | 5 | 7 | 8 |
| Hadj (s) | 0.03 | 0.02 | 0.15 | -0.25 |
| Departure Headway (s) | 4.5 | 4.3 | 5.4 | 5.1 |
| Degree Utilization, x | 0.24 | 0.48 | 0.08 | 0.02 |
| Capacity (veh/h) | 767 | 812 | 598 | 621 |
| Control Delay (s) | 9.0 | 11.3 | 8.9 | 8.2 |
| Approach Delay (s) | 9.0 | 11.3 | 8.9 | 8.2 |
| Approach LOS | A | B | A | A |

| Intersection Summary | | | | |
|---|---|---|---|---|
| Delay | 10.4 | | | |
| Level of Service | B | | | |
| Intersection Capacity Utilization | 38.1% | ICU Level of Service | A | |
| Analysis Period (min) | 15 | | | |

APPENDIX J.

# QUEUING ANALYSIS

## Intersection: 1: SW 124th Avenue & OR 99W

| Movement | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | T | T | R | L | L | T | T | L | L | R | R |
| Maximum Queue (ft) | 2008 | 2004 | 425 | 850 | 1000 | 1998 | 1980 | 99 | 100 | 116 | 136 |
| Average Queue (ft) | 1073 | 1086 | 379 | 847 | 994 | 1872 | 1822 | 40 | 46 | 19 | 32 |
| 95th Queue (ft) | 2076 | 2105 | 545 | 859 | 1041 | 2314 | 2415 | 85 | 88 | 79 | 104 |
| Link Distance (ft) | 2048 | 2048 | | | | 1935 | 1935 | 501 | 501 | | |
| Upstream Blk Time (%) | 4 | 10 | | | | 63 | 17 | | | | |
| Queuing Penalty (veh) | 0 | 0 | | | | 0 | 0 | | | | |
| Storage Bay Dist (ft) | | | 225 | 700 | 700 | | | | | 300 | 300 |
| Storage Blk Time (%) | | 44 | 9 | 92 | 70 | 7 | | | | | |
| Queuing Penalty (veh) | | 223 | 68 | 357 | 269 | 70 | | | | | |

## Intersection: 2: SW 124th Avenue & SW Tualatin Road

| Movement | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | L | R | T | T | R | L | T | T |
| Maximum Queue (ft) | 68 | 113 | 93 | 238 | 122 | 354 | 427 | 360 |
| Average Queue (ft) | 24 | 40 | 30 | 87 | 22 | 163 | 89 | 48 |
| 95th Queue (ft) | 58 | 82 | 73 | 179 | 79 | 339 | 319 | 187 |
| Link Distance (ft) | | 504 | 1033 | 1033 | | | 501 | 501 |
| Upstream Blk Time (%) | | | | | | | 0 | 0 |
| Queuing Penalty (veh) | | | | | | | 1 | 0 |
| Storage Bay Dist (ft) | 310 | | | | 150 | 200 | | |
| Storage Blk Time (%) | | | | 2 | | 7 | 1 | |
| Queuing Penalty (veh) | | | | 1 | | 29 | 9 | |

## Intersection: 3: West Site Access/Office Building Access & SW Tualatin Road

| Movement | EB | EB | WB | NB | SB |
|---|---|---|---|---|---|
| Directions Served | L | TR | L | LTR | LTR |
| Maximum Queue (ft) | 29 | 5 | 31 | 42 | 34 |
| Average Queue (ft) | 3 | 0 | 4 | 5 | 4 |
| 95th Queue (ft) | 18 | 4 | 21 | 27 | 23 |
| Link Distance (ft) | | 504 | | 402 | 228 |
| Upstream Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |
| Storage Bay Dist (ft) | 25 | | 25 | | |
| Storage Blk Time (%) | 0 | 0 | 1 | | |
| Queuing Penalty (veh) | 2 | 0 | 2 | | |

## Intersection: 4: Center Site Access/Woodridge Apartments West Access & SW Tualatin Road

| Movement | EB | EB | NB | SB |
|---|---|---|---|---|
| Directions Served | L | TR | LTR | LTR |
| Maximum Queue (ft) | 30 | 16 | 12 | 55 |
| Average Queue (ft) | 2 | 1 | 0 | 19 |
| 95th Queue (ft) | 13 | 8 | 6 | 49 |
| Link Distance (ft) | | 165 | 210 | 262 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 25 | | | |
| Storage Blk Time (%) | 0 | 0 | | |
| Queuing Penalty (veh) | 1 | 0 | | |

## Intersection: 5: East Site Access/Woodridge Apartments East Access & SW Tualatin Road

| Movement | EB | WB | SB |
|---|---|---|---|
| Directions Served | L | L | LTR |
| Maximum Queue (ft) | 29 | 19 | 70 |
| Average Queue (ft) | 1 | 1 | 24 |
| 95th Queue (ft) | 16 | 10 | 56 |
| Link Distance (ft) | | | 385 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | 25 | 25 | |
| Storage Blk Time (%) | 0 | 0 | |
| Queuing Penalty (veh) | 0 | 0 | |

## Intersection: 6: SW 124th Avenue & SW Leveton Drive

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | TR | L | TR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 84 | 102 | 55 | 90 | 73 | 69 | 164 | 150 | 138 | 161 |
| Average Queue (ft) | 18 | 42 | 9 | 24 | 17 | 22 | 70 | 70 | 39 | 63 |
| 95th Queue (ft) | 60 | 83 | 36 | 62 | 53 | 55 | 142 | 127 | 109 | 135 |
| Link Distance (ft) | | 1027 | | 489 | | 2044 | 2044 | | 1033 | 1033 |
| Upstream Blk Time (%) | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | |
| Storage Bay Dist (ft) | 100 | | 145 | | 155 | | | 165 | | |
| Storage Blk Time (%) | 0 | 0 | | 0 | | | | 0 | 0 | |
| Queuing Penalty (veh) | 0 | 0 | | 0 | | | | 0 | 1 | |

## Intersection: 7: Industrial Access/Site Access & SW Leveton Drive

| Movement | EB | NB | SB |
|---|---|---|---|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 21 | 35 | 35 |
| Average Queue (ft) | 1 | 3 | 4 |
| 95th Queue (ft) | 10 | 18 | 22 |
| Link Distance (ft) | 489 | 439 | 591 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

## Intersection: 8: SW 118th Avenue/Manufacturing Site Access & SW Leveton Drive

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 90 | 88 | 76 | 49 |
| Average Queue (ft) | 58 | 36 | 21 | 6 |
| 95th Queue (ft) | 83 | 72 | 55 | 29 |
| Link Distance (ft) | 663 | 1032 | 873 | 492 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Zone Summary

Zone wide Queuing Penalty: 1035

## Intersection: 1: SW 124th Avenue & OR 99W

| Movement | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | T | T | R | L | L | T | T | L | L | R | R |
| Maximum Queue (ft) | 378 | 388 | 186 | 451 | 390 | 358 | 360 | 288 | 287 | 205 | 213 |
| Average Queue (ft) | 241 | 239 | 59 | 295 | 186 | 173 | 174 | 175 | 188 | 78 | 99 |
| 95th Queue (ft) | 357 | 354 | 129 | 465 | 316 | 284 | 289 | 263 | 276 | 170 | 194 |
| Link Distance (ft) | 2048 | 2048 | | | | 1935 | 1935 | 501 | 501 | | |
| Upstream Blk Time (%) | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | |
| Storage Bay Dist (ft) | | | 225 | 700 | 700 | | | | | 300 | 300 |
| Storage Blk Time (%) | | 9 | | | | | | | 0 | | |
| Queuing Penalty (veh) | | 16 | | | | | | | 0 | | |

## Intersection: 2: SW 124th Avenue & SW Tualatin Road

| Movement | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | L | R | T | T | R | L | T | T |
| Maximum Queue (ft) | 85 | 388 | 237 | 306 | 61 | 317 | 147 | 121 |
| Average Queue (ft) | 30 | 175 | 106 | 177 | 20 | 150 | 13 | 20 |
| 95th Queue (ft) | 70 | 303 | 184 | 276 | 53 | 294 | 71 | 80 |
| Link Distance (ft) | | 504 | 1033 | 1033 | | | 501 | 501 |
| Upstream Blk Time (%) | | 0 | | | | | | |
| Queuing Penalty (veh) | | 0 | | | | | | |
| Storage Bay Dist (ft) | 310 | | | | 150 | 200 | | |
| Storage Blk Time (%) | | 1 | | 13 | | 6 | 0 | |
| Queuing Penalty (veh) | | 0 | | 5 | | 11 | 0 | |

## Intersection: 3: West Site Access/Office Building Access & SW Tualatin Road

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | L | L | LTR | LTR |
| Maximum Queue (ft) | 18 | 24 | 64 | 76 |
| Average Queue (ft) | 2 | 0 | 21 | 32 |
| 95th Queue (ft) | 14 | 8 | 48 | 65 |
| Link Distance (ft) | | | 402 | 228 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 25 | 25 | | |
| Storage Blk Time (%) | 0 | 0 | | |
| Queuing Penalty (veh) | 1 | 0 | | |

## Intersection: 4: Center Site Access/Woodridge Apartments West Access & SW Tualatin Road

| Movement | EB | EB | NB | SB |
|---|---|---|---|---|
| Directions Served | L | TR | LTR | LTR |
| Maximum Queue (ft) | 34 | 12 | 38 | 40 |
| Average Queue (ft) | 8 | 0 | 8 | 20 |
| 95th Queue (ft) | 30 | 8 | 31 | 47 |
| Link Distance (ft) | | 165 | 210 | 262 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 25 | | | |
| Storage Blk Time (%) | 1 | | | |
| Queuing Penalty (veh) | 5 | | | |

## Intersection: 5: East Site Access/Woodridge Apartments East Access & SW Tualatin Road

| Movement | EB | EB | WB | WB | NB | SB |
|---|---|---|---|---|---|---|
| Directions Served | L | TR | L | TR | LTR | LTR |
| Maximum Queue (ft) | 34 | 16 | 20 | 5 | 32 | 78 |
| Average Queue (ft) | 8 | 1 | 1 | 0 | 3 | 25 |
| 95th Queue (ft) | 29 | 12 | 11 | 3 | 18 | 57 |
| Link Distance (ft) | | 418 | | 1161 | 462 | 385 |
| Upstream Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |
| Storage Bay Dist (ft) | 25 | | 25 | | | |
| Storage Blk Time (%) | 1 | | 0 | 0 | | |
| Queuing Penalty (veh) | 4 | | 1 | 0 | | |

## Intersection: 6: SW 124th Avenue & SW Leveton Drive

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | TR | L | TR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 51 | 77 | 76 | 202 | 34 | 137 | 189 | 112 | 122 | 151 |
| Average Queue (ft) | 18 | 23 | 25 | 82 | 4 | 61 | 88 | 47 | 36 | 57 |
| 95th Queue (ft) | 44 | 59 | 62 | 141 | 21 | 116 | 152 | 90 | 92 | 120 |
| Link Distance (ft) | | 1027 | | 489 | | 2044 | 2044 | | 1033 | 1033 |
| Upstream Blk Time (%) | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | |
| Storage Bay Dist (ft) | 100 | | 145 | | 155 | | | 165 | | |
| Storage Blk Time (%) | | 0 | | 1 | | 0 | | 0 | | |
| Queuing Penalty (veh) | | 0 | | 0 | | 0 | | 0 | | |

## Intersection: 7: Industrial Access/Site Access & SW Leveton Drive

| Movement | EB | NB | SB |
|---|---|---|---|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 19 | 40 | 57 |
| Average Queue (ft) | 1 | 5 | 21 |
| 95th Queue (ft) | 10 | 25 | 52 |
| Link Distance (ft) | 489 | 439 | 591 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

## Intersection: 8: SW 118th Avenue/Manufacturing Site Access & SW Leveton Drive

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 86 | 114 | 40 | 44 |
| Average Queue (ft) | 47 | 63 | 25 | 17 |
| 95th Queue (ft) | 74 | 97 | 47 | 46 |
| Link Distance (ft) | 663 | 1032 | 873 | 492 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Zone Summary

Zone wide Queuing Penalty: 43

## Intersection: 1: SW 124th Avenue & OR 99W

| Movement | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | T | T | R | L | L | T | T | L | L | R | R |
| Maximum Queue (ft) | 2093 | 2119 | 425 | 850 | 1000 | 1996 | 1986 | 103 | 114 | 124 | 143 |
| Average Queue (ft) | 1526 | 1550 | 404 | 842 | 976 | 1766 | 1708 | 44 | 45 | 25 | 41 |
| 95th Queue (ft) | 2553 | 2580 | 515 | 894 | 1094 | 2539 | 2620 | 91 | 92 | 85 | 117 |
| Link Distance (ft) | 2048 | 2048 | | | | 1935 | 1935 | 501 | 501 | | |
| Upstream Blk Time (%) | 13 | 28 | | | | 61 | 17 | | | | |
| Queuing Penalty (veh) | 0 | 0 | | | | 0 | 0 | | | | |
| Storage Bay Dist (ft) | | | 225 | 700 | 700 | | | | | 300 | 300 |
| Storage Blk Time (%) | | 47 | 10 | 87 | 68 | 7 | | | | | |
| Queuing Penalty (veh) | | 250 | 76 | 349 | 273 | 70 | | | | | |

## Intersection: 2: SW 124th Avenue & SW Tualatin Road

| Movement | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | L | R | T | T | R | L | T | T |
| Maximum Queue (ft) | 81 | 90 | 112 | 241 | 70 | 344 | 400 | 184 |
| Average Queue (ft) | 22 | 39 | 32 | 95 | 20 | 154 | 67 | 33 |
| 95th Queue (ft) | 60 | 76 | 81 | 189 | 57 | 324 | 263 | 109 |
| Link Distance (ft) | | 504 | 1033 | 1033 | | | 501 | 501 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | 310 | | | | 150 | 200 | | |
| Storage Blk Time (%) | | | | 3 | | 5 | 1 | |
| Queuing Penalty (veh) | | | | 1 | | 21 | 7 | |

## Intersection: 3: West Site Access/Office Building Access & SW Tualatin Road

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | L | L | LTR | LTR |
| Maximum Queue (ft) | 30 | 31 | 42 | 35 |
| Average Queue (ft) | 4 | 4 | 5 | 8 |
| 95th Queue (ft) | 20 | 22 | 23 | 31 |
| Link Distance (ft) | | | 402 | 228 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 25 | 25 | | |
| Storage Blk Time (%) | 0 | 1 | | |
| Queuing Penalty (veh) | 2 | 2 | | |

## Intersection: 4: Center Site Access/Woodridge Apartments West Access & SW Tualatin Road

| Movement | EB | EB | NB | SB |
|---|---|---|---|---|
| Directions Served | L | TR | LTR | LTR |
| Maximum Queue (ft) | 12 | 10 | 19 | 55 |
| Average Queue (ft) | 1 | 0 | 1 | 19 |
| 95th Queue (ft) | 10 | 0 | 10 | 49 |
| Link Distance (ft) | | 165 | 210 | 262 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 25 | | | |
| Storage Blk Time (%) | 0 | | | |
| Queuing Penalty (veh) | 1 | | | |

## Intersection: 5: East Site Access/Woodridge Apartments East Access & SW Tualatin Road

| Movement | EB | EB | WB | WB | SB |
|---|---|---|---|---|---|
| Directions Served | L | TR | L | TR | LTR |
| Maximum Queue (ft) | 31 | 6 | 19 | 10 | 73 |
| Average Queue (ft) | 2 | 0 | 2 | 0 | 28 |
| 95th Queue (ft) | 16 | 4 | 12 | 7 | 58 |
| Link Distance (ft) | | 418 | | 1161 | 385 |
| Upstream Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |
| Storage Bay Dist (ft) | 25 | | 25 | | |
| Storage Blk Time (%) | 0 | 0 | 0 | 0 | |
| Queuing Penalty (veh) | 1 | 0 | 0 | 0 | |

## Intersection: 6: SW 124th Avenue & SW Leveton Drive

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | TR | L | TR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 91 | 115 | 67 | 88 | 73 | 72 | 151 | 190 | 151 | 176 |
| Average Queue (ft) | 22 | 43 | 8 | 26 | 23 | 24 | 66 | 70 | 39 | 66 |
| 95th Queue (ft) | 64 | 88 | 36 | 69 | 58 | 62 | 130 | 144 | 102 | 137 |
| Link Distance (ft) | | 1027 | | 489 | | 2044 | 2044 | | 1033 | 1033 |
| Upstream Blk Time (%) | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | |
| Storage Bay Dist (ft) | 100 | | 145 | | 155 | | | 165 | | |
| Storage Blk Time (%) | 0 | 1 | | | | | | 1 | 0 | |
| Queuing Penalty (veh) | 0 | 0 | | | | | | 3 | 0 | |

## Intersection: 7: Industrial Access/Site Access & SW Leveton Drive

| Movement | EB | NB | SB |
|---|---|---|---|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 7 | 35 | 27 |
| Average Queue (ft) | 0 | 3 | 2 |
| 95th Queue (ft) | 5 | 20 | 16 |
| Link Distance (ft) | 489 | 439 | 591 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

## Intersection: 8: SW 118th Avenue/Manufacturing Site Access & SW Leveton Drive

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 116 | 90 | 77 | 33 |
| Average Queue (ft) | 58 | 33 | 20 | 2 |
| 95th Queue (ft) | 91 | 69 | 56 | 16 |
| Link Distance (ft) | 663 | 1032 | 873 | 492 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Zone Summary

Zone wide Queuing Penalty: 1055

## Intersection: 1: SW 124th Avenue & OR 99W

| Movement | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | T | T | R | L | L | T | T | L | L | R | R |
| Maximum Queue (ft) | 448 | 430 | 204 | 591 | 480 | 382 | 345 | 330 | 340 | 190 | 207 |
| Average Queue (ft) | 275 | 268 | 73 | 343 | 201 | 183 | 185 | 188 | 196 | 80 | 101 |
| 95th Queue (ft) | 402 | 388 | 175 | 568 | 380 | 314 | 310 | 287 | 294 | 167 | 194 |
| Link Distance (ft) | 2048 | 2048 | | | | 1935 | 1935 | 501 | 501 | | |
| Upstream Blk Time (%) | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | |
| Storage Bay Dist (ft) | | | 225 | 700 | 700 | | | | | 300 | 300 |
| Storage Blk Time (%) | | 14 | | 1 | 0 | | | | 1 | | |
| Queuing Penalty (veh) | | 24 | | 9 | 0 | | | | 6 | | |

## Intersection: 2: SW 124th Avenue & SW Tualatin Road

| Movement | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | L | R | T | T | R | L | T | T |
| Maximum Queue (ft) | 75 | 402 | 236 | 361 | 167 | 351 | 239 | 145 |
| Average Queue (ft) | 29 | 200 | 113 | 190 | 21 | 171 | 21 | 22 |
| 95th Queue (ft) | 67 | 334 | 194 | 307 | 75 | 321 | 118 | 82 |
| Link Distance (ft) | | 504 | 1033 | 1033 | | | 501 | 501 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | 310 | | | | 150 | 200 | | |
| Storage Blk Time (%) | | 1 | | 14 | | 6 | | |
| Queuing Penalty (veh) | | 0 | | 5 | | 12 | | |

## Intersection: 3: West Site Access/Office Building Access & SW Tualatin Road

| Movement | EB | EB | WB | WB | NB | SB |
|---|---|---|---|---|---|---|
| Directions Served | L | TR | L | TR | LTR | LTR |
| Maximum Queue (ft) | 24 | 6 | 26 | 19 | 58 | 71 |
| Average Queue (ft) | 2 | 0 | 1 | 1 | 19 | 30 |
| 95th Queue (ft) | 12 | 4 | 15 | 11 | 45 | 60 |
| Link Distance (ft) | | 504 | | 165 | 402 | 228 |
| Upstream Blk Time (%) | | | | | | |
| Queuing Penalty (veh) | | | | | | |
| Storage Bay Dist (ft) | 25 | | 25 | | | |
| Storage Blk Time (%) | 0 | 0 | 0 | 0 | | |
| Queuing Penalty (veh) | 1 | 0 | 0 | 0 | | |

## Intersection: 4: Center Site Access/Woodridge Apartments West Access & SW Tualatin Road

| Movement | EB | EB | NB | SB |
|---|---|---|---|---|
| Directions Served | L | TR | LTR | LTR |
| Maximum Queue (ft) | 38 | 22 | 33 | 44 |
| Average Queue (ft) | 12 | 2 | 6 | 20 |
| 95th Queue (ft) | 37 | 17 | 26 | 48 |
| Link Distance (ft) | | 165 | 210 | 262 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 25 | | | |
| Storage Blk Time (%) | 2 | | | |
| Queuing Penalty (veh) | 7 | | | |

## Intersection: 5: East Site Access/Woodridge Apartments East Access & SW Tualatin Road

| Movement | EB | EB | WB | NB | SB |
|---|---|---|---|---|---|
| Directions Served | L | TR | L | LTR | LTR |
| Maximum Queue (ft) | 38 | 23 | 30 | 31 | 60 |
| Average Queue (ft) | 10 | 1 | 1 | 2 | 26 |
| 95th Queue (ft) | 34 | 12 | 12 | 14 | 55 |
| Link Distance (ft) | | 418 | | 462 | 385 |
| Upstream Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |
| Storage Bay Dist (ft) | 25 | | 25 | | |
| Storage Blk Time (%) | 1 | | 0 | | |
| Queuing Penalty (veh) | 6 | | 1 | | |

## Intersection: 6: SW 124th Avenue & SW Leveton Drive

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | TR | L | TR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 81 | 83 | 76 | 170 | 33 | 142 | 237 | 116 | 139 | 162 |
| Average Queue (ft) | 22 | 28 | 23 | 82 | 6 | 66 | 98 | 45 | 40 | 67 |
| 95th Queue (ft) | 55 | 63 | 57 | 137 | 25 | 116 | 178 | 90 | 106 | 132 |
| Link Distance (ft) | | 1027 | | 489 | | 2044 | 2044 | | 1033 | 1033 |
| Upstream Blk Time (%) | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | |
| Storage Bay Dist (ft) | 100 | | 145 | | 155 | | | 165 | | |
| Storage Blk Time (%) | 0 | 0 | | 1 | | 0 | | 0 | 0 | |
| Queuing Penalty (veh) | 0 | 0 | | 0 | | 0 | | 0 | 0 | |

## Intersection: 7: Industrial Access/Site Access & SW Leveton Drive

| Movement | EB | NB | SB |
|---|---|---|---|
| Directions Served | LTR | LTR | LTR |
| Maximum Queue (ft) | 7 | 35 | 44 |
| Average Queue (ft) | 0 | 7 | 19 |
| 95th Queue (ft) | 5 | 29 | 48 |
| Link Distance (ft) | 489 | 439 | 591 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | | | |
| Storage Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |

## Intersection: 8: SW 118th Avenue/Manufacturing Site Access & SW Leveton Drive

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 84 | 106 | 58 | 39 |
| Average Queue (ft) | 45 | 63 | 28 | 15 |
| 95th Queue (ft) | 72 | 94 | 51 | 43 |
| Link Distance (ft) | 663 | 1032 | 873 | 492 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Zone Summary

Zone wide Queuing Penalty: 73

## Intersection: 1: SW 124th Avenue & OR 99W

| Movement | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | T | T | R | L | L | T | T | L | L | R | R |
| Maximum Queue (ft) | 2091 | 2120 | 425 | 850 | 1000 | 2005 | 1973 | 107 | 112 | 130 | 146 |
| Average Queue (ft) | 1445 | 1469 | 398 | 841 | 983 | 1809 | 1754 | 42 | 44 | 27 | 40 |
| 95th Queue (ft) | 2553 | 2561 | 529 | 905 | 1098 | 2517 | 2552 | 93 | 92 | 92 | 118 |
| Link Distance (ft) | 2048 | 2048 | | | | 1935 | 1935 | 501 | 501 | | |
| Upstream Blk Time (%) | 14 | 28 | | | | 60 | 17 | | | | |
| Queuing Penalty (veh) | 0 | 0 | | | | 0 | 0 | | | | |
| Storage Bay Dist (ft) | | | 225 | 700 | 700 | | | | | 300 | 300 |
| Storage Blk Time (%) | | 47 | 11 | 88 | 73 | 6 | | | | | |
| Queuing Penalty (veh) | | 252 | 82 | 356 | 293 | 65 | | | | | |

## Intersection: 2: SW 124th Avenue & SW Tualatin Road

| Movement | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | L | R | T | T | R | L | T | T |
| Maximum Queue (ft) | 61 | 112 | 91 | 222 | 84 | 344 | 340 | 209 |
| Average Queue (ft) | 23 | 40 | 31 | 93 | 22 | 166 | 70 | 45 |
| 95th Queue (ft) | 52 | 82 | 76 | 184 | 60 | 328 | 255 | 141 |
| Link Distance (ft) | | 504 | 1033 | 1033 | | | 501 | 501 |
| Upstream Blk Time (%) | | | | | | | 0 | |
| Queuing Penalty (veh) | | | | | | | 0 | |
| Storage Bay Dist (ft) | 310 | | | | 150 | 200 | | |
| Storage Blk Time (%) | | | | 3 | | 6 | 1 | |
| Queuing Penalty (veh) | | | | 1 | | 23 | 4 | |

## Intersection: 3: West Site Access/Office Building Access & SW Tualatin Road

| Movement | EB | WB | WB | NB | SB |
|---|---|---|---|---|---|
| Directions Served | L | L | TR | LTR | LTR |
| Maximum Queue (ft) | 30 | 34 | 11 | 51 | 35 |
| Average Queue (ft) | 3 | 5 | 0 | 9 | 7 |
| 95th Queue (ft) | 17 | 25 | 8 | 35 | 29 |
| Link Distance (ft) | | | 165 | 402 | 228 |
| Upstream Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |
| Storage Bay Dist (ft) | 25 | 25 | | | |
| Storage Blk Time (%) | 0 | 2 | | | |
| Queuing Penalty (veh) | 2 | 3 | | | |

## Intersection: 4: Center Site Access/Woodridge Apartments West Access & SW Tualatin Road

| Movement | EB | EB | NB | SB |
|---|---|---|---|---|
| Directions Served | L | TR | LTR | LTR |
| Maximum Queue (ft) | 12 | 8 | 13 | 53 |
| Average Queue (ft) | 1 | 0 | 1 | 20 |
| 95th Queue (ft) | 8 | 6 | 10 | 50 |
| Link Distance (ft) | | 165 | 210 | 262 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 25 | | | |
| Storage Blk Time (%) | 0 | | | |
| Queuing Penalty (veh) | 0 | | | |

## Intersection: 5: East Site Access/Woodridge Apartments East Access & SW Tualatin Road

| Movement | EB | WB | SB |
|---|---|---|---|
| Directions Served | L | L | LTR |
| Maximum Queue (ft) | 33 | 32 | 61 |
| Average Queue (ft) | 1 | 3 | 22 |
| 95th Queue (ft) | 12 | 16 | 53 |
| Link Distance (ft) | | | 385 |
| Upstream Blk Time (%) | | | |
| Queuing Penalty (veh) | | | |
| Storage Bay Dist (ft) | 25 | 25 | |
| Storage Blk Time (%) | 0 | 0 | |
| Queuing Penalty (veh) | 1 | 1 | |

## Intersection: 6: SW 124th Avenue & SW Leveton Drive

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | TR | L | TR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 97 | 134 | 57 | 80 | 84 | 98 | 176 | 188 | 146 | 156 |
| Average Queue (ft) | 25 | 50 | 9 | 29 | 22 | 22 | 69 | 78 | 37 | 64 |
| 95th Queue (ft) | 72 | 101 | 37 | 66 | 60 | 64 | 135 | 150 | 103 | 124 |
| Link Distance (ft) | | 1027 | | 489 | | 2044 | 2044 | | 1033 | 1033 |
| Upstream Blk Time (%) | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | |
| Storage Bay Dist (ft) | 100 | | 145 | | 155 | | | 165 | | |
| Storage Blk Time (%) | 0 | 1 | | | | 0 | | 1 | 0 | |
| Queuing Penalty (veh) | 0 | 0 | | | | 0 | | 2 | 0 | |

## Intersection: 7: Industrial Access/Site Access & SW Leveton Drive

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 27 | 6 | 34 | 28 |
| Average Queue (ft) | 1 | 0 | 2 | 3 |
| 95th Queue (ft) | 13 | 4 | 15 | 19 |
| Link Distance (ft) | 489 | 663 | 439 | 591 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Intersection: 8: SW 118th Avenue/Manufacturing Site Access & SW Leveton Drive

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 113 | 89 | 76 | 55 |
| Average Queue (ft) | 62 | 37 | 26 | 4 |
| 95th Queue (ft) | 95 | 73 | 64 | 27 |
| Link Distance (ft) | 663 | 1032 | 873 | 492 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Zone Summary

Zone wide Queuing Penalty: 1086

## Intersection: 1: SW 124th Avenue & OR 99W

| Movement | EB | EB | EB | WB | WB | WB | WB | NB | NB | NB | NB |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | T | T | R | L | L | T | T | L | L | R | R |
| Maximum Queue (ft) | 423 | 430 | 309 | 620 | 514 | 410 | 330 | 310 | 305 | 189 | 211 |
| Average Queue (ft) | 262 | 256 | 69 | 409 | 259 | 192 | 187 | 184 | 195 | 85 | 105 |
| 95th Queue (ft) | 383 | 375 | 169 | 681 | 535 | 361 | 298 | 271 | 285 | 174 | 200 |
| Link Distance (ft) | 2048 | 2048 | | | | 1935 | 1935 | 501 | 501 | | |
| Upstream Blk Time (%) | | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | | |
| Storage Bay Dist (ft) | | | 225 | 700 | 700 | | | | | 300 | 300 |
| Storage Blk Time (%) | | 11 | | 3 | 0 | | | | 0 | | |
| Queuing Penalty (veh) | | 20 | | 23 | 1 | | | | 2 | | |

## Intersection: 2: SW 124th Avenue & SW Tualatin Road

| Movement | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|
| Directions Served | L | R | T | T | R | L | T | T |
| Maximum Queue (ft) | 167 | 398 | 244 | 384 | 125 | 334 | 121 | 118 |
| Average Queue (ft) | 31 | 200 | 126 | 200 | 28 | 174 | 20 | 28 |
| 95th Queue (ft) | 103 | 351 | 209 | 324 | 98 | 323 | 76 | 89 |
| Link Distance (ft) | | 504 | 1033 | 1033 | | | 501 | 501 |
| Upstream Blk Time (%) | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | |
| Storage Bay Dist (ft) | 310 | | | | 150 | 200 | | |
| Storage Blk Time (%) | | 2 | | 16 | | 8 | | |
| Queuing Penalty (veh) | | 1 | | 6 | | 15 | | |

## Intersection: 3: West Site Access/Office Building Access & SW Tualatin Road

| Movement | EB | WB | WB | NB | SB |
|---|---|---|---|---|---|
| Directions Served | L | L | TR | LTR | LTR |
| Maximum Queue (ft) | 30 | 56 | 26 | 66 | 75 |
| Average Queue (ft) | 3 | 3 | 1 | 23 | 29 |
| 95th Queue (ft) | 17 | 25 | 16 | 50 | 63 |
| Link Distance (ft) | | | 165 | 402 | 228 |
| Upstream Blk Time (%) | | | | | |
| Queuing Penalty (veh) | | | | | |
| Storage Bay Dist (ft) | 25 | 25 | | | |
| Storage Blk Time (%) | 0 | 0 | 0 | | |
| Queuing Penalty (veh) | 2 | 2 | 0 | | |

## Intersection: 4: Center Site Access/Woodridge Apartments West Access & SW Tualatin Road

| Movement | EB | EB | NB | SB |
|---|---|---|---|---|
| Directions Served | L | TR | LTR | LTR |
| Maximum Queue (ft) | 37 | 39 | 32 | 44 |
| Average Queue (ft) | 12 | 2 | 7 | 21 |
| 95th Queue (ft) | 36 | 19 | 28 | 48 |
| Link Distance (ft) | | 165 | 210 | 262 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 25 | | | |
| Storage Blk Time (%) | 2 | 0 | | |
| Queuing Penalty (veh) | 8 | 0 | | |

## Intersection: 5: East Site Access/Woodridge Apartments East Access & SW Tualatin Road

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | L | L | LTR | LTR |
| Maximum Queue (ft) | 30 | 13 | 38 | 60 |
| Average Queue (ft) | 7 | 0 | 5 | 23 |
| 95th Queue (ft) | 27 | 7 | 25 | 55 |
| Link Distance (ft) | | | 462 | 385 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | 25 | 25 | | |
| Storage Blk Time (%) | 1 | 0 | | |
| Queuing Penalty (veh) | 5 | 0 | | |

## Intersection: 6: SW 124th Avenue & SW Leveton Drive

| Movement | EB | EB | WB | WB | NB | NB | NB | SB | SB | SB |
|---|---|---|---|---|---|---|---|---|---|---|
| Directions Served | L | TR | L | TR | L | T | TR | L | T | TR |
| Maximum Queue (ft) | 69 | 94 | 74 | 186 | 39 | 149 | 212 | 114 | 142 | 163 |
| Average Queue (ft) | 25 | 31 | 29 | 86 | 7 | 67 | 96 | 46 | 43 | 69 |
| 95th Queue (ft) | 58 | 69 | 64 | 145 | 28 | 122 | 171 | 90 | 109 | 139 |
| Link Distance (ft) | | 1027 | | 489 | | 2044 | 2044 | | 1033 | 1033 |
| Upstream Blk Time (%) | | | | | | | | | | |
| Queuing Penalty (veh) | | | | | | | | | | |
| Storage Bay Dist (ft) | 100 | | 145 | | 155 | | | 165 | | |
| Storage Blk Time (%) | 0 | 0 | | 1 | | 0 | | 0 | 0 | |
| Queuing Penalty (veh) | 0 | 0 | | 0 | | 0 | | 0 | 0 | |

## Intersection: 7: Industrial Access/Site Access & SW Leveton Drive

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 12 | 7 | 45 | 61 |
| Average Queue (ft) | 0 | 0 | 8 | 26 |
| 95th Queue (ft) | 6 | 5 | 32 | 56 |
| Link Distance (ft) | 489 | 663 | 439 | 591 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Intersection: 8: SW 118th Avenue/Manufacturing Site Access & SW Leveton Drive

| Movement | EB | WB | NB | SB |
|---|---|---|---|---|
| Directions Served | LTR | LTR | LTR | LTR |
| Maximum Queue (ft) | 84 | 124 | 59 | 44 |
| Average Queue (ft) | 46 | 65 | 24 | 15 |
| 95th Queue (ft) | 76 | 102 | 50 | 43 |
| Link Distance (ft) | 663 | 1032 | 873 | 492 |
| Upstream Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |
| Storage Bay Dist (ft) | | | | |
| Storage Blk Time (%) | | | | |
| Queuing Penalty (veh) | | | | |

## Zone Summary

Zone wide Queuing Penalty: 84

APPENDIX K.

# TURNING LANE EVALUATION

Project: Mittleman Properties at Leveton
Job #: 2170617.00
Date: November 22, 2017
Subject: Right-Turn Lane Evaluation - West Site Access

| Condition | Posted Speed | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|
| | | Approaching | Right | Result | Approaching | Right | Result |
| Existing | 35 | 771 | 19 | Possible Shoulder | 414 | 3 | None |
| Pre-Dev | 35 | 801 | 19 | Possible Shoulder | 430 | 3 | None |
| Post-Dev | 35 | 810 | 28 | Possible Lane | 431 | 4 | None |


*Source: Texas Transportation Institute*

Note: If there is no right-turn lane, a shoulder needs to be provided.
If this intersection is in a rural area and is a connection to a public street, a right-turn lane is needed.

Project: Mittleman Properties at Leveton
Job #: 2170617.00
Date: November 22, 2017
Subject: Right-Turn Lane Evaluation - Center Site Access

| Condition | Posted Speed | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|
| | | Approaching | Right | Result | Approaching | Right | Result |
| Existing | 35 | 745 | 1 | Possible Shoulder | 408 | 0 | None |
| Pre-Dev | 35 | 775 | 1 | Possible Shoulder | 424 | 0 | None |
| Post-Dev | 35 | 776 | 1 | Possible Shoulder | 427 | 0 | None |


*Source: Texas Transportation Institute*

Note: If there is no right-turn lane, a shoulder needs to be provided.
If this intersection is in a rural area and is a connection to a public street, a right-turn lane is needed.

Project: Mittleman Properties at Leveton
Job #: 2170617.00
Date: November 22, 2017
Subject: Right-Turn Lane Evaluation - East Site Access

| Condition | Posted Speed | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|
| | | Approaching | Right | Result | Approaching | Right | Result |
| Existing | 35 | 723 | 0 | Possible Shoulder | 401 | 1 | None |
| Pre-Dev | 35 | 752 | 0 | Possible Shoulder | 417 | 1 | None |
| Post-Dev | 35 | 753 | 0 | Possible Shoulder | 420 | 1 | None |


*Source: Texas Transportation Institute*

Note: If there is no right-turn lane, a shoulder needs to be provided.
If this intersection is in a rural area and is a connection to a public street, a right-turn lane is needed.

Project: Mittleman Properties at Leveton
Job #: 2170617.00
Date: November 22, 2017
Subject: Right-Turn Lane Evaluation - Leveton Site Access

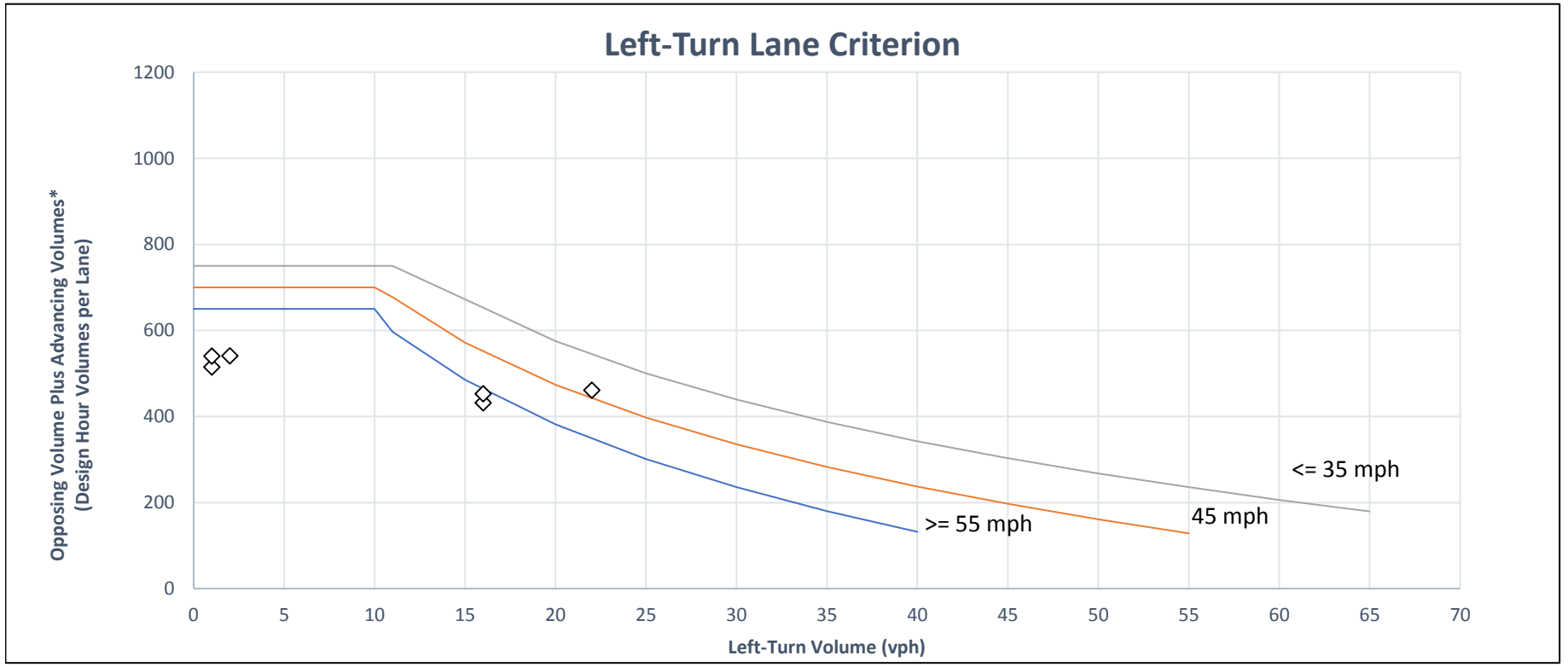
| Condition | Posted Speed | AM Peak Hour | | | PM Peak Hour | | |
|---|---|---|---|---|---|---|---|
| | | Approaching | Right | Result | Approaching | Right | Result |
| Existing | 35 | 51 | 7 | None | 382 | 3 | None |
| Pre-Dev | 35 | 57 | 7 | None | 398 | 3 | None |
| Post-Dev | 35 | 89 | 9 | None | 398 | 3 | None |


*Source: Texas Transportation Institute*

Note: If there is no right-turn lane, a shoulder needs to be provided.
If this intersection is in a rural area and is a connection to a public street, a right-turn lane is needed.

Project: Mittleman Properties at Leveton
Job #: 2170617.00
Date: November 22, 2017
Subject: Left-Turn Lane Evaluation - Leveton Site Access

| Condition | Posted Speed | AM Peak Hour | | | | | | PM Peak Hour | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Approaching | | Opposing | | | | Approaching | | Opposing | | | |
| | | Vol | Lanes | Vol | Lanes | Left | Result | Vol | Lanes | Vol | Lanes | Left | Result |
| Existing | 35 | 381 | 1 | 51 | 1 | 16 | None | 133 | 1 | 382 | 1 | 1 | None |
| Pre-Dev | 35 | 396 | 1 | 57 | 1 | 16 | None | 142 | 1 | 398 | 1 | 1 | None |
| Post-Dev | 35 | 402 | 1 | 59 | 1 | 22 | None | 143 | 1 | 398 | 1 | 2 | None |




*Source: Texas Transportation Institute*

* ((Advancing volume/number of advancing through lanes) + (opposing volume/number of opposing through lanes))

**Received: Thursday, January 19, 2017 10:12 AM**
**From: Lynette Sanford <LSanford@ci.tualatin.or.us>**
**To: "gene@mdgpc.com" <gene@mdgpc.com>**
**Subject: Scoping Meeting - 11555 SW Leveton Rd - Mittleman IMP**
**Date: Thu, 19 Jan 2017 18:11:48 +0000**

**Attachment: 20170117-Scoping Meeting- Draft Site Plan.pdf**
**Attachment: scoping_request_new_020416.pdf**
**Attachment: scoping_request_new_20170117-1.pdf**

When: Wednesday, February 08, 2017 2:00 PM-3:00 PM (UTC-08:00) Pacific Time (US & Canada).
Where: Develop Service Conference Room

Note: The GMT offset above does not reflect daylight saving time adjustments.

*~*~*~*~*~*~*~*~*~*~*

# City of Tualatin

COMMUNITY DEVELOPMENT PLANNING DIVISION

# Scoping Meeting Request

The purpose of the Scoping and Pre-Application meetings is to offer early assistance in the land use and permitting process. This includes thoughtful feedback on preliminary design direction and visioning, outlining expectations, and to assist the applicant in attaining a complete application at first submittal.

## PROJECT DESCRIPTION

Project name/title: Mittleman IMP

What is the primary purpose of this scoping meeting (What would you like to accomplish)? (Attach additional sheets if needed.)

Review proposed use. See attachment for questions.

## PROPERTY INFORMATION

Property address/location(s): 11555 SW Leveton Road

Tax map and tax lot no.(s): W444584 Zoning: MP - Manufacturing Park

## PROPERTY OWNER/HOLDER INFORMATION

Name(s): Mittleman Properties

c/o: Kidder Mathews, Attention: Steven Klein

Address: One Columbia, Suite 950 Phone: 503-221-9900

City/state: Portland, Oregon Zip: 97258

## APPLICANT INFORMATION

Name: Mildren Design Group, P.C.

Address: 7650 SW Beveland Street, Suite 120 Phone: 503-244-0552

City/state: Tigard, Oregon Zip: 97223

Contact person: Gene Mildren

Phone: _____ Email: gene@mdgpc.com

### Scoping Meeting Information

All of the information identified on this form is required and must be submitted to the Planning Division with this application. Conferences are scheduled subject to availability and a minimim of two weeks after receiving this application and all materials. Scoping meetings are one (1) hour long and are typically held on Mondays between the hours of 3-4 p.m. or Wednesdays between 2-4 p.m.

### REQUIRED SUBMITTAL ELEMENTS

*(Note: Requests will not be accepted without the required submittal elements)*

☐ A complete application form.

**1 hard copy and an electronic set of the following:**

☐ Preliminary site and building plans, drawn to scale, showing existing and proposed features. (Plans do not need to be professionaly prepared; just accurate and reliable.)

☐ A detailed narrative description of the proposal that clearly identifies the location, existing and proposed uses, and any proposed construction.

☐ A list of all questions or issues the applicant would like the City to address.

**FOR STAFF USE ONLY**

Case No.: _____

Related Case No.(s): _____

Application accepted:

By: _____ Date: _____

Date of Scoping: _____

Time of Scoping: _____

Planner assigned to Scoping: _____

**If more than four (4) people are expected to attend the scoping meeting in your group, please inform the City in advance so that alternate room arrangements can be made to accommodate the group.**

**What type of development are you proposing? (Check all that apply)**

[X] Industrial [ ] Commercial [ ] Residential [ ] Institutional [ ] Mixed-use

**Please provide a brief description of your project: (Attach additional sheets if needed.) Please include description of existing uses and structures in addition to what is proposed.**

Proposed speculative building shell. Currently the site is undeveloped.

**Are you familiar with the development process in Washington or Clackamas County or Tualatin?**

[X] Yes [ ] No

**If yes, please identify an example project:**

Franklin Business Park on SW 112th Avenue, Lakeside Lumber and Arlington Development on Tualatin Sherwood Road

**Are you familiar with the sections of the Tualatin Development Code (TDC) that pertain to your proposed development?**

[X] Yes [ ] No

**Is the property under enforcement action? If yes, please attached a notice of the violation.**

None to our knowledge.

**Please provide the names of City, TVF&R, CWS, and County staff with whom you have already discussed this proposal:**

None.

AR17-0008

To lessen the bulk of the notice of application and to address privacy concerns, this sheet substitutes for the photocopy of the mailing labels.  A copy is available upon request.

# Scoping Meeting Request

MILDREN DESIGN GROUP, P.C.
Architecture • Space Planning

To: City of Tualatin
Community Development Planning Division
Project #116190.00

Date: 17 January 2017

Project Description (Continued):

1. Are any improvements to either of the two frontage roads required?
2. Are any storm/water/sanitary public extensions required?
3. Does the City have copies of storm drainage analysis prepared for the existing developments adjacent to this site and/or for the public infrastructure?
4. What records of the downstream storm systems can the City provide, what are the known deficiencies downstream?
5. Other than meeting current CWS requirements (per CWS R & O 07-20) will be required for storm runoff discharge flow control and/or storm treatment?
6. Is public sanitary sewer available to the site, are record drawings available, are there any capacity deficiencies?
7. Is public water available to the site for both domestic and fire protection use? Are record drawings available? What are available pressures and flows?
8. Is a transportation analysis required and if so, what is the scope of the analysis?
9. Are there any known environmentally sensitive areas on or abutting the site?



7650 SW Beveland Street, Suite 120
Tigard, Oregon 97223
503 244 0552 Fax 503 244 0417

Mittleman Properties at Leveton Business Park
Neighborhood Meeting September 12, 2017
Sign-in Sheet

| Name | Company | Email |
|---|---|---|
| Dirk Otis | Stratus Developers | Dirk@stratusdevelopers.com |
| Curt Trolan | Mildren Design Group | curt@mdgpc.com |

# Fidelity National Title Insurance Company

1001 SW Fifth Avenue #400, Portland, OR 97204
FAX

## SUBDIVISION GUARANTEE FOR THE PROPOSED MITTLEMAN PROPERTIES PARTITION

---

ORDER NO.: 20090000477-FTPOR55 FEE: $ 400.00

DATED: January 13, 2009

Fidelity National Title Insurance Company

GUARANTEES

Any County or City within which the subdivision or proposed subdivision is located.

That the estate or interest in the land which is covered by this Guarantee is:

A Fee

According to the public records which impart constructive notice of matters affecting title to the premises described on Exhibit "One", we find that as of December 31, 2008, at 05:00-PM the last deed of record runs to:

Mittleman Properties, a general partnership

We also find the following apparent encumbrances, which include 'Blanket Encumbrances' as defined by ORS 92.305(1), and also easements, restrictive covenants and rights of way.

Note: Property taxes for the fiscal year shown below are paid in full.

| | |
|---|---|
| Fiscal Year: | 2008-2009 |
| Amount: | $285,307.54 |
| Levy Code: | 088.07 |
| Account No.: | R2035253 |
| Map No.: | 2S122B-00500 |
| Affects: | Real property and improvements assessed as real property |

Note: Property taxes for the fiscal year shown below are paid in full.

| | |
|---|---|
| Fiscal Year: | 2008-2009 |
| Amount: | $51,447.34 |
| Levy Code: | 088.07 |
| Account No.: | R2134710 |
| Map No.: | 2S122B-00500-A4 |
| Affects: | Equipment and fixtures assessed to GE Security |

1. City Liens, if any, in favor of the City of Tualatin. None found as of December 31, 2008.

2. Restrictions, but omitting restrictions, if any, based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said restriction is permitted by applicable law, as shown on that certain plat

   Name of Plat: Leveton Business Campus
   Recording Date: July 30, 1993
   Recording No: Book 86, Page 47, Plat Records

3. Easement(s) for the purpose(s) shown below and rights incidental thereto as delineated or as offered for dedication, on the map of said tract/plat;

   Purpose: Slope and public utility
   Affects: 25 feet along street frontage

4. Street Improvement Agreement, including the terms and provisions thereof,

   Executed by: City of Tualatin and owner of the subject property
   Recording Date: July 30, 1993
   Recording No.: 93061424

5. Covenants, conditions and restrictions but omitting any covenants or restrictions, if any, including but not limited to those based upon race, color, religion, sex, sexual orientation, familial status, marital status, disability, handicap, national origin, ancestry, or source of income, as set forth in applicable state or federal laws, except to the extent that said covenant or restriction is permitted by applicable law, as set forth in the document

   Recording Date: July 30, 1993
   Recording No: 93061430

6. Liens and charges as set forth in the above mentioned declaration,

   Payable to: Leveton Lot 3 Owners Association

7. An unrecorded lease with certain terms, covenants, conditions and provisions set forth therein as disclosed by the document

   Entitled: Memorandum of Lease and Agreement
   Lessor: Tualatin Investment Partners - I, Limited Partnership
   Lessee: Sentrol, Inc.
   Recording Date: November 7, 1996
   Recording No: 96100510

   Amendment(s)/Modification(s) of said lease

   Recording Date: December 16, 1996
   Recording No: 96111404

   Subordination, Nondisturbance and Attornment Agreement, and the terms and conditions thereof:

   Lender: Metropolitan Life Insurance Company
   Tenant: Sentrol Inc.
   Landlord: Mittleman Properties, a general partnership
   Recording Date: April 1, 1997
   Recording No: 97028867

8. An unrecorded lease with certain terms, covenants, conditions and provisions set forth therein as disclosed by the document

| | |
|---|---|
| Entitled: | Subordination, Non-Disturbance and Attornment Agreement |
| Lessor: | Mittleman Properties, an Oregon general partnership |
| Lessee: | Successful Money Management Seminars, Inc. |
| Recording Date: | April 1, 1997 |
| Recording No: | 97028868 |

9. An unrecorded lease with certain terms, covenants, conditions and provisions set forth therein as disclosed by the document

| | |
|---|---|
| Entitled: | Subordination, Non-Disturbance and Attornment Agreement |
| Lessor: | Mittleman Properties, an Oregon general partnership |
| Lessee: | VWR Scientific Products Corporation |
| Recording Date: | April 1, 1997 |
| Recording No: | 97028869 |

10. A deed of trust to secure an indebtedness in the amount shown below,

| | |
|---|---|
| Amount: | $10,500,000.00 |
| Dated: | April 1, 1997 |
| Trustor/Grantor | Mittleman Properties, an Oregon general partnership |
| Trustee: | Chicago Title Insurance Company |
| Beneficiary: | Metropolitan Life Insurance Company |
| Loan No.: | None shown |
| Recording Date: | April 1, 1997 |
| Recording No: | 97028870 |

11. An assignment of all the moneys due, or to become due as rental, as additional security for the obligations secured by deed of trust shown next above

| | |
|---|---|
| Recording Date: | April 1, 1997 |
| Recording No: | 97028871 |
| Assigned to: | Metropolitan Life Insurance Company |

12. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

| | |
|---|---|
| Granted to: | City of Tualatin |
| Purpose: | Construction easement |
| Recording Date: | December 2, 1998 |
| Recording No: | 98136023 |
| Affects: | See document for specifics |

13. Easement(s) for the purpose(s) shown below and rights incidental thereto, as granted in a document:

| | |
|---|---|
| Granted to: | City of Tualatin |
| Purpose: | Slope and public utility easement |
| Recording Date: | December 2, 1998 |
| Recording No: | 98136025 |
| Affects: | See document for specifics |

14. If the entity named below does NOT operate under the Uniform Partnership Act, the Company will require the following documents for review prior to the issuance of any title assurance predicated upon a conveyance or encumbrance from:

    Name: Mittleman Properties

    a) A complete copy of the partnership agreement and all amendments thereto.

    b) If less than all partners are executing documents, furnish evidence of the signing partners' authority, unless the authority is granted in the agreements referred to above.

    The Company reserves the right to add additional items or make further requirements after review of the requested documentation.

15. Leases and/or tenancies, if any.

16. Personal property taxes, if any.

17. No search has been made for financing statements filed with the Secretary of State, and no liability is assumed therefor.

We have also searched our General Index for judgments and state and federal liens against the grantees named above and find:

NONE

This is not a report issued preliminary to the issuance of a title insurance policy. Our search is limited and its use is intended as an informational report only, to be used in conjunction with the development of real property. Liability is limited to an aggregate sum not to exceed $ 1,000.00

Fidelity National Title Insurance Company

By: _____

Kerry Steinmetz
Senior Project Coordinator

NOTE - ORS 92.305(1) reads as follows:

"Blanket encumbrance" means a trust deed or mortgage or any other lien or encumbrance, mechanics' lien or otherwise, securing or evidencing the payment of money and affecting more than one interest in subdivided or series partitioned land, or an agreement affecting more than one such lot, parcel or interest by which the subdivider, series partitioner or developer holds such subdivision or series partition under an option, contract to sell or trust agreement.

EXHIBIT "ONE"

The premises are in County and are described as follows:

Lot 3, LEVETON BUSINESS CAMPUS, in the City of Tualatin, Washington County, Oregon.

Excepting therefrom that portion conveyed to the City of Tualatin for right of way purposes by instrument recorded December 2, 1998, Recorder's No. 136024.

Also excepting therefrom that portion conveyed to the City of Tualatin for right of way purposes by instrument recorded January 25, 2000, Recorder's No. 2000005695.

# Mittleman Properties at Leveton Business Park

## - Building 1 Shell *NO OCCUPANCY THIS PERMIT Tualatin, Oregon

## Owner


MITTLEMAN PROPERTIES
HARRY HAIMSOHN
1585 COAST WALK ROAD
LA JOLLA, CALIFORNIA
92307 hhaimshon@gmail.com


## Project Contacts


ARCHITECT:
Mildren Design Group, P.C.
7650 SW BEVELAND STREET, SUITE 120
TIGARD, OREGON 97223
VOICE: 503-244-0552 FAX: 503-244-0417
CONTACT PERSON: GENE MILDREN
EMAIL: gene@mdgpc.om

ELECTRICAL ENGINEER:
MKE Consulting Engineers
6915 S.W. MACADAM AVENUE; SUITE 120
PORTLAND, OREGON 97219
VOICE: 503-892-1188 FAX: 503-892-1190
CONTACT PERSON: HANK BARLEEN
EMAIL: hankb@mke-inc.com

CIVIL ENGINEER:
TM Rippey Consulting Engineers
7650 S.W. BEVELAND STREET; SUITE 100
TIGARD, OREGON 97223
VOICE: 503-443-3900 FAX: 503-443-3700
CONTACT PERSON: KARL KOROCH
EMAIL: kkoroch@tmrippey.com

LANDSCAPE ARCHITECT:
AAI Engineering
4875 SW GRIFFITH DRIVE; SUITE 300
BEAVERTON, OREGON 97005
VOICE: 503-352-7682 FAX: 503-620-5539
CONTACT PERSON: YOSHI YANO
EMAIL: yoshiy@aaieng.com


## Location

LOT 1100, NE ¼ SECTION 22 T 2 S, R 1 W, W.M., CITY OF TUALATIN, WASHINGTON COUNTY, OREGON

## Zoning

ZONING MP MAP NUMBER 2S122B, LOT 1100

## Project Description

ONE NEW BUILDING SHELL OF 43,659 SF, SINGLE STORY, SPRINKLED, CONCRETE TILT-UP BUILDING LOCATED ON SW TUALATIN ROAD

## Sheet Index

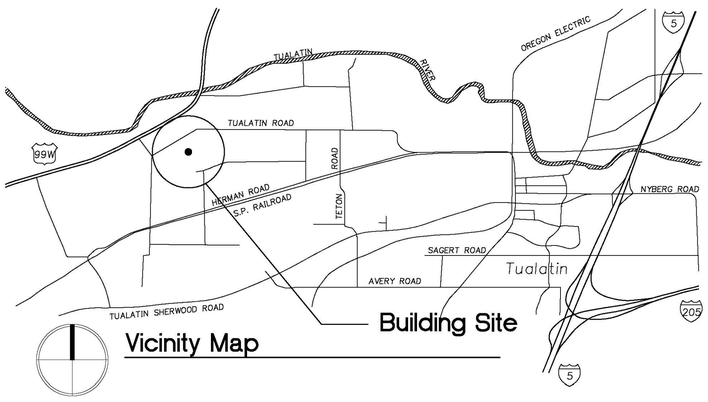


## Site Analysis

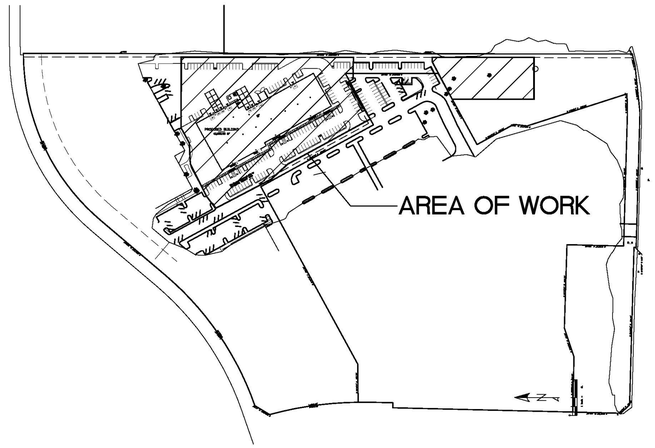
| | AREA: | % COVERAGE: | % COVERAGE ALLOWED: |
|---|---|---|---|
| SITE | | | |
| PROPOSED SITE | 192,464 SF | N.A. | N.A. |
| IMPERVIOUS AREA | | | |
| BUILDING (FOOTPRINT): | 43,659 SF | 22.6% | |
| PAVING AREA | 72,087 SF | 37.4% | |
| SIDEWALK | 3,482 SF | 1.8% | |
| TOTAL IMPERVIOUS AREA: | 119,228 SF | 61.8% | |
| LANDSCAPING | | | |
| LANDSCAPING LOT | 73,236 SF | 37.2% | 20% MIN. |
| PARKING LOT LANDSCAPING | 7,630 SF | 25SF x 130 = 3,250 SF REQUIRED | |

| | # SPACES PROVIDED: | # SPACES REQUIRED: |
|---|---|---|
| PARKING | | |
| STANDARD: | 119 | |
| ACCESSIBLE: | 6 | |
| CAR/VANPOOL: | 5 | |
| COMPACT: | 0 | |
| TOTAL SPACES PROVIDED: | 130 | 73 - UNLIMITED |
| BICYCLE PARKING | 12 | 12 |

| | | | | | |
|---|---|---|---|---|---|
| 25% OFFICE | 10,914 SF | 2.7/1000 | 4.1/1000 | .5/1000 | |
| | | 30 | 54 | 5.5 | |
| 40% MANUFACTURING | 17,464 SF | 1.6/1000 | UNLIMITED | .1/1000 | |
| | | 28 | UNLIMITED | 1.8 | |
| 35% WAREHOUSE | 15,281 SF | .3/1000 | .5/1000 | .1/1000 | |
| | | 5 | 7.6 | 1.6 | |
| TOTAL | 43695 SF | 63 | UNLIMITED | 9 | |




Vicinity Map




Site Plan

Architectural Review Submittal - September 2017


MILDREN DESIGN GROUP, P.C.
ARCHITECTURE • SPACE PLANNING
7650 S.W. Beveland, Suite 120
Tigard, Oregon 97223-8692
(503) 244-0552


REGISTERED ARCHITECT
3056
EXPIRATION DATE: 12/31/17
STATE OF OREGON

Client:
Mittleman Properties

Project:
Mittleman Properties at Leveton Business Park
Tualatin, Oregon

Sheet Title:
Cover Sheet

Revisions:



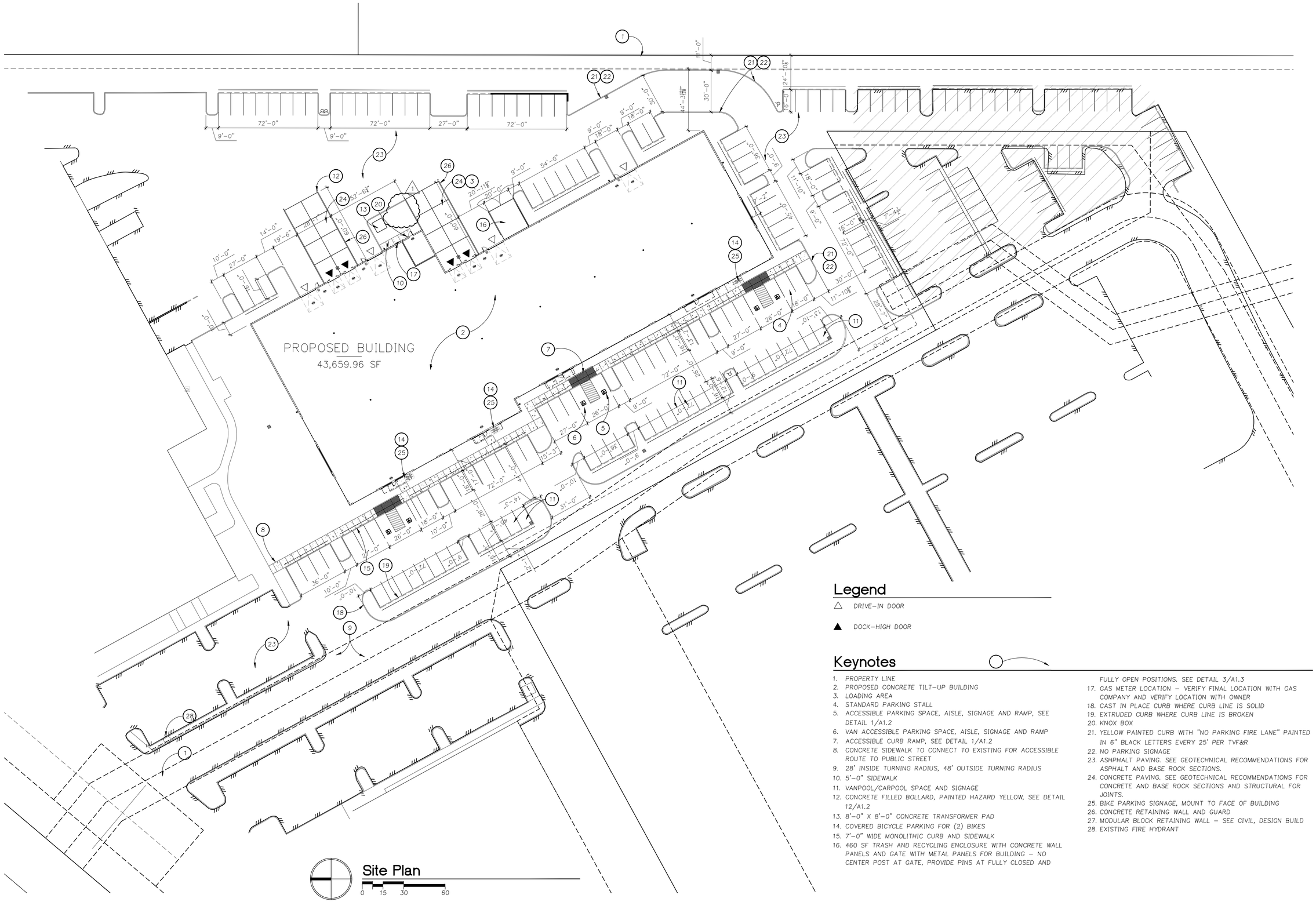
Date: 29 September 2017

Drawn by: CLT Checked by:

Job Number: 116190

Sheet

A0.1




## Legend

△ DRIVE-IN DOOR

▲ DOCK-HIGH DOOR

## Keynotes

1. PROPERTY LINE
2. PROPOSED CONCRETE TILT-UP BUILDING
3. LOADING AREA
4. STANDARD PARKING STALL
5. ACCESSIBLE PARKING SPACE, AISLE, SIGNAGE AND RAMP, SEE DETAIL 1/A1.2
6. VAN ACCESSIBLE PARKING SPACE, AISLE, SIGNAGE AND RAMP
7. ACCESSIBLE CURB RAMP, SEE DETAIL 1/A1.2
8. CONCRETE SIDEWALK TO CONNECT TO EXISTING FOR ACCESSIBLE ROUTE TO PUBLIC STREET
9. 28' INSIDE TURNING RADIUS, 48' OUTSIDE TURNING RADIUS
10. 5'-0" SIDEWALK
11. VANPOOL/CARPOOL SPACE AND SIGNAGE
12. CONCRETE FILLED BOLLARD, PAINTED HAZARD YELLOW, SEE DETAIL 12/A1.2
13. 8'-0" X 8'-0" CONCRETE TRANSFORMER PAD
14. COVERED BICYCLE PARKING FOR (2) BIKES
15. 7'-0" WIDE MONOLITHIC CURB AND SIDEWALK
16. 460 SF TRASH AND RECYCLING ENCLOSURE WITH CONCRETE WALL PANELS AND GATE WITH METAL PANELS FOR BUILDING – NO CENTER POST AT GATE, PROVIDE PINS AT FULLY CLOSED AND FULLY OPEN POSITIONS. SEE DETAIL 3/A1.3
17. GAS METER LOCATION – VERIFY FINAL LOCATION WITH GAS COMPANY AND VERIFY LOCATION WITH OWNER
18. CAST IN PLACE CURB WHERE CURB LINE IS SOLID
19. EXTRUDED CURB WHERE CURB LINE IS BROKEN
20. KNOX BOX
21. YELLOW PAINTED CURB WITH "NO PARKING FIRE LANE" PAINTED IN 6" BLACK LETTERS EVERY 25' PER TVF&R
22. NO PARKING SIGNAGE
23. ASHPHALT PAVING. SEE GEOTECHNICAL RECOMMENDATIONS FOR ASPHALT AND BASE ROCK SECTIONS.
24. CONCRETE PAVING. SEE GEOTECHNICAL RECOMMENDATIONS FOR CONCRETE AND BASE ROCK SECTIONS AND STRUCTURAL FOR JOINTS.
25. BIKE PARKING SIGNAGE, MOUNT TO FACE OF BUILDING
26. CONCRETE RETAINING WALL AND GUARD
27. MODULAR BLOCK RETAINING WALL – SEE CIVIL, DESIGN BUILD
28. EXISTING FIRE HYDRANT

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REGISTERED ARCHITECT
3056
JANUARY 1, 1982
CHRISTOPHER L. TOMICH
STATE OF OREGON

Client:
Mittleman Properties

Project:
Mittleman Properties at Leveton Business Park

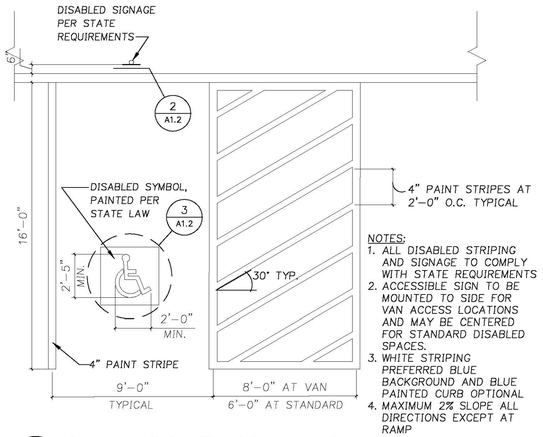
Tualatin, Oregon

Sheet Title:
Site Plan

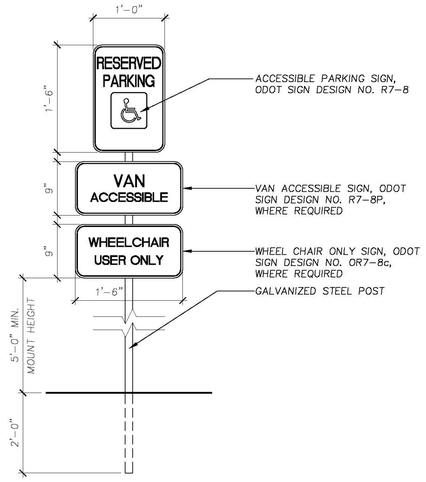
Revisions:
1 December 2017
Site Utility Revisions



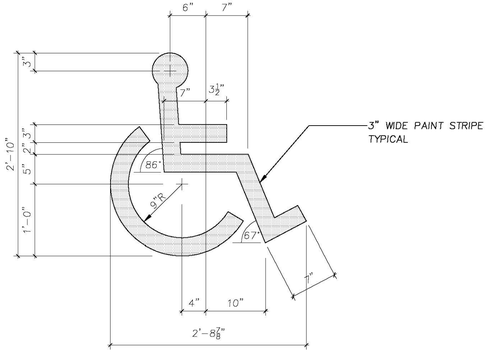
Date: 29 September 2017
Drawn by: CLT
Checked by:
Job Number: 116190
Sheet: A1.1



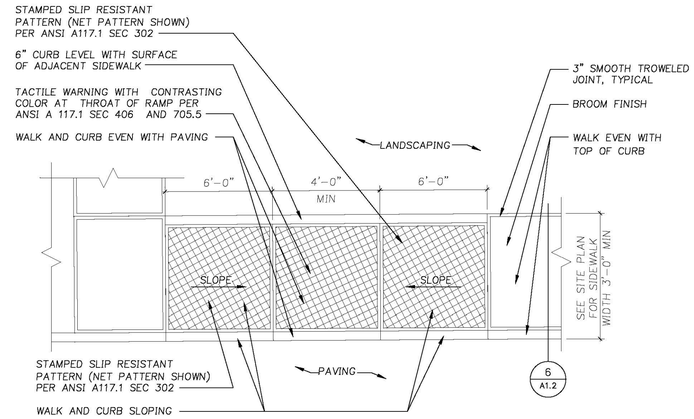

## 1 A1.2 Accessible Parking Stall
1/4"=1'-0"
D9900-1



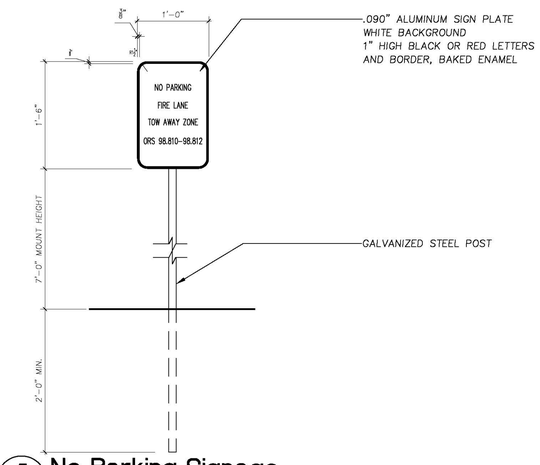

## 2 A1.2 Accessible Parking Signage
1"=1'-0"
15b3b-r1



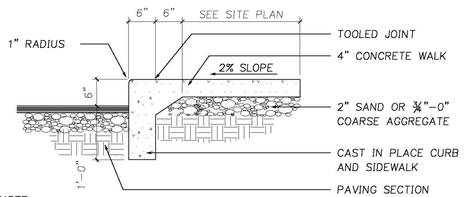

## 3 A1.2 International Accessible Symbol
1"=1'-0"
15b2




## 4 A1.2 Accessible Sidewalk Ramp
1/4"=1'-0"
15a6-r2

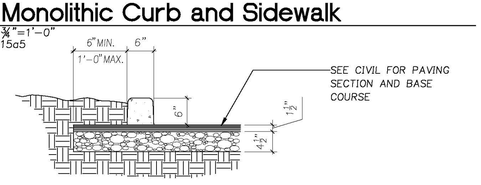



## 5 A1.2 No Parking Signage
1"=1'-0"
D5

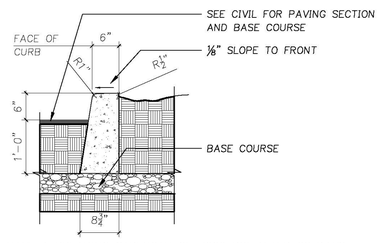



NOTE:
* CONCRETE TO HAVE STRENGTH OF 3,000 PSI IN 28 DAYS, 2" TO 4" SLUMP
* PROVIDE EXPANSION JOINTS @ 20'-0" O.C. ALIGN CURB AND WALK JOINTS.
* PROVIDE CONTROL JOINTS IN WALK @ 5'-0" O.C.

## 6 A1.2 Monolithic Curb and Sidewalk
¾"=1'-0"
15a5

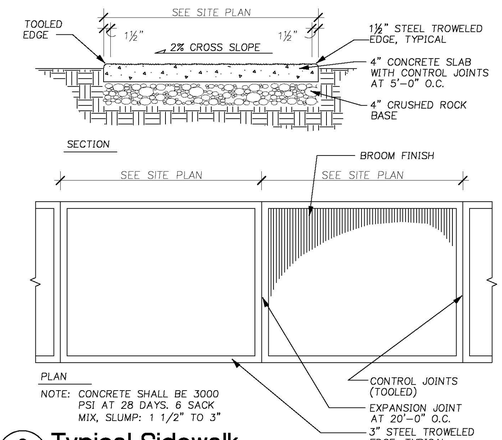



## 7 A1.2 Extruded Curb Section
¾"=1'-0"
15a4

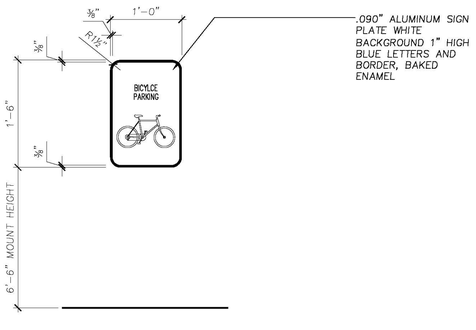



NOTE:
1. CONCRETE TO HAVE A BREAKING STRENGTH OF 3000 PSI AFTER 28 DAYS
2. EXPANSION JOINTS TO BE PROVIDED:
   A. AT EACH POINT OF TANGENCY OF THE CURB
   B. AT EACH COLD JOINT
   C. AT EACH SIDE OF INLET STRUCTURES
   D. AT EACH END OF DRIVEWAYS
   E. AT LOCATIONS NECESSARY TO LIMIT SPACING TO 45 FEET
3. CONTRACTION JOINTS:
   A. SPACING TO BE NOT MORE THAN 15 FEET
   B. THE DEPTH OF THE JOINT SHALL BE AT LEAST 1½"
4. BASE ROCK TO BE 2" OR ¾" COMPACTED TO 95% OF AASHTO T-99 AND SHALL BE TO SUBGRADE, STREET STRUCTURE, OR 4" IN DEPTH, WHICHEVER IS GREATER

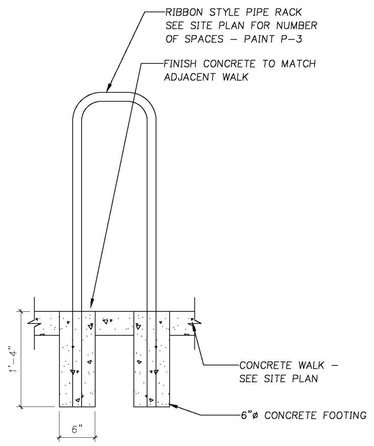
## 8 A1.2 Cast-in-Place Curb
¾"=1'-0"
15a9



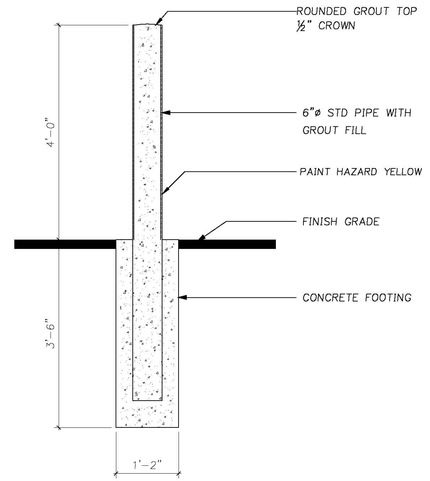

## 9 A1.2 Typical Sidewalk
no scale
15a1




## 10 A1.2 Bicycle Parking Signage
1"=1'-0"
15b3e




## 11 A1.2 Bicycle Rack
1"=1'-0"
15E1




## 12 A1.2 6" Bollard
¾"=1'-0"
15c2b-r1

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REGISTERED ARCHITECT
3056
OREGON
EXPIRES: 12/31/18
STATE OF OREGON

Client:
Mittleman Properties

Project:
Mittleman Properties at Leveton Business Park

Tualatin, Oregon

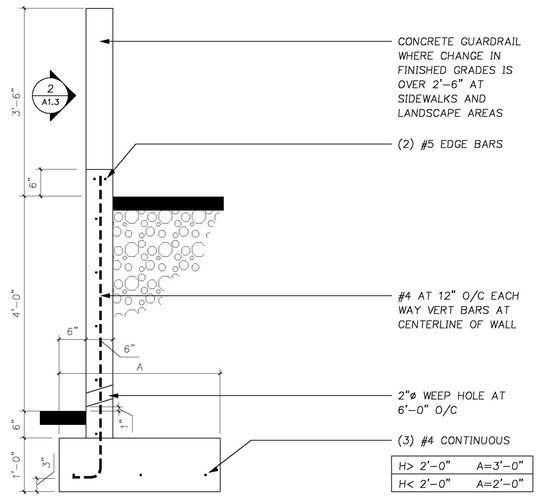
Sheet Title:
Details

Revisions:



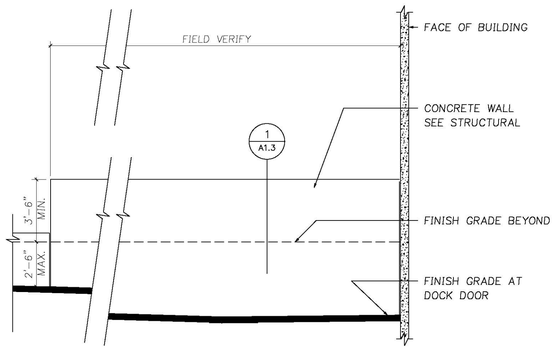
Date: 29 September 2017
Drawn by: Checked by:

Job Number: 116190
Sheet
A1.2



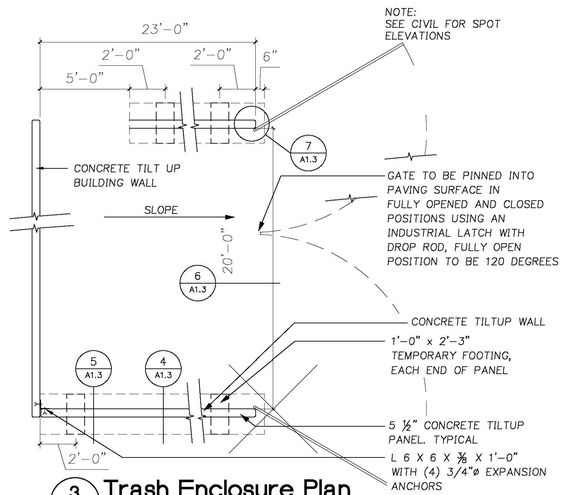

## 1 A1.3 Guardrail Wall Section at Recessed Dock

3/4"=1'-0"
f1h2-r1



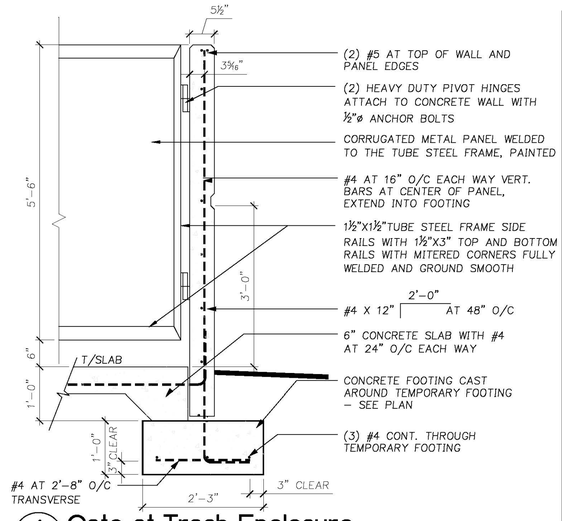

## 2 A1.3 Guardrail Elevation at Recessed Dock

1/4"=1'-0"
5f2b2



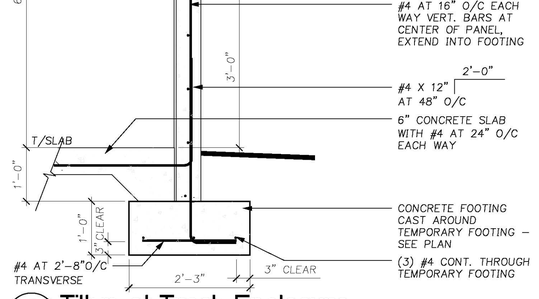

## 3 A1.3 Trash Enclosure Plan

1/4"=1'-0"
9A5B



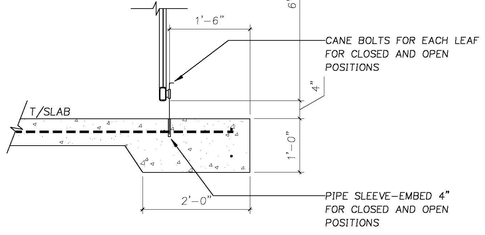

## 4 A1.3 Gate at Trash Enclosure

3/4"=1'-0"
9A5C



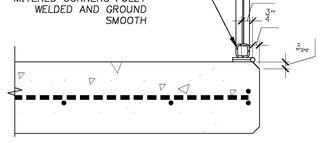

## 5 A1.3 Tiltup at Trash Enclosure

3/4"=1'-0"
9A5A




## 6 A1.3 Gate at Trash Enclosure

3/4"=1'-0"
d-03410-9




## 7 A1.3 Trash Enclosure Gate to Wall Panel

1 1/2"=1'-0"
d-03410-6

MILDREN DESIGN GROUP, P.C.
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7650 S.W. Beveland, Suite 120
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(503) 244-0552

REGISTERED ARCHITECT
3056
JEFFREY A. MILDREN
OREGON
EXPIRES: 12/31/17
STATE OF OREGON

Client:
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Details

Revisions:



Date: 29 September 2017
Drawn by: Checked by:

Job Number: 116190
Sheet

Architectural Review Submittal - September 2017

A1.3

## GENERAL GRADING NOTES

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE JURISDICTION AND THE PROJECT GEOTECHNICAL INVESTIGATION.
2. THE CONTRACTOR SHALL HAVE A FULL SET OF THE CURRENT APPROVED CONSTRUCTION DOCUMENTS, INCLUDING ADDENDA ON THE PROJECT SITE AT ALL TIMES.
3. THE CONTRACTOR SHALL NOTIFY THE OREGON UTILITY NOTIFICATION CENTER (800 332 2344) THREE BUSINESS DAYS PRIOR TO ANY EXCAVATION.
4. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF PRIVATE UTILITIES SUCH AS GAS, TELEPHONE, POWER, DATA, ETC. CONFIRM VAULT LOCATIONS WITH THE ARCHITECT.
5. THE CONTRACTOR SHALL KEEP THE ARCHITECT AND JURISDICTION INFORMED OF CONSTRUCTION PROGRESS TO FACILITATE SITE OBSERVATIONS AT REQUIRED INTERVALS. 48 HOURS NOTICE IS REQUIRED.
6. EXISTING CONDITIONS BASED ON TOPOGRAPHIC, BOUNDARY, AND UTILITY SURVEY PREPARED BY FORD ENGINEERING, INC., DATED AUGUST 2017.
7. FINISHED GRADES ARE TO BE BROUGHT TO WITHIN 0.08 FT. IN 10 FT. OF THE GRADES SHOWN AT SUBGRADE AND TO WITHIN 0.03 FT. IN 10 FT. AT FINISH GRADE. CONTRACTOR TO ALLOW FOR PLACEMENT OF REQUIRED TOPSOIL AND PLANTINGS IN ROUGH GRADING.
8. GRADING ELEVATIONS AS SHOWN ON PLANS ARE FINISHED GRADE, WHICH INCLUDES PAVING, BASE ROCK, AND SUBGRADE SOIL. GENERAL CONTRACTOR IS RESPONSIBLE TO COORDINATE GRADING WITH BOTH EXCAVATOR AND PAVING CONTRACTOR.
9. SEE PROJECT GEOTECHNICAL ANALYSIS PREPARED BY GEOTECH SOLUTIONS, INC., AND DATED JULY 2017 FOR PAVING, EXCAVATION, FILL, AND COMPACTION REQUIREMENTS.
10. IF DEWATERING IS REQUIRED DURING CONSTRUCTION, THE CONTRACTOR SHALL PREPARE A DEWATERING PLAN CONSISTENT WITH CITY OF TUALATIN AND CLEAN WATER SERVICES (CWS) REQUIREMENTS, AND OBTAIN APPROVAL OF THE PLAN FROM BOTH JURISDICTIONS PRIOR TO PROCEEDING WITH DEWATERING.
11. THE CONTRACTOR SHALL CLEAN ALL CATCH BASINS AND STORM LINES IMPACTED BY SITE DEVELOPMENT FOLLOWING COMPLETION OF CONSTRUCTION OR AS DIRECTED BY THE CITY OF TIGARD AND CWS. NO SEDIMENT SHALL BE ALLOWED TO ENTER NEW OR EXISTING INLETS.
12. SITE RETAINING WALLS (OTHER THAN AT TRUCK DOCKS) TO BE CONTRACTOR DESIGN–BUILD MODULAR BLOCK. MATERIAL TO BE AS APPROVED BY ARCHITECT.

## GENERAL UTILITY NOTES

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE JURISDICTION.
2. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT EDITION OF THE PLUMBING CODE, BUILDING CODE, AND THE FIRE CODE.
3. THE CONTRACTOR SHALL HAVE A FULL SET OF THE CURRENT APPROVED CONSTRUCTION DOCUMENTS INCLUDING ADDENDA ON THE PROJECT SITE AT ALL TIMES.
4. THE CONTRACTOR SHALL NOTIFY THE OREGON UTILITY NOTIFICATION CENTER (800 332 2344) THREE BUSINESS DAYS PRIOR TO ANY EXCAVATION.
5. EXISTING CONDITIONS BASED ON TOPOGRAPHIC, BOUNDARY, AND UTILITY SURVEY PREPARED BY FORD ENGINEERING, INC., DATED AUGUST 2017.
6. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF PRIVATE UTILITIES SUCH AS GAS, TELEPHONE, POWER, CABLE TELEVISION, ETC. CONFIRM VAULT LOCATIONS WITH ARCHITECT.
7. THE CONTRACTOR SHALL KEEP THE ARCHITECT AND JURISDICTION INFORMED OF CONSTRUCTION PROGRESS TO FACILITATE SITE OBSERVATIONS AT REQUIRED INTERVALS. 48–HOUR NOTICE IS REQUIRED.
8. THE CONTRACTOR SHALL VERIFY AND CONFIRM EXISTING CONDITIONS. EXISTING UTILITIES AND POINTS OF CONNECTION TO EXISTING UTILITIES AND LOCATIONS WHERE NEW UTILITIES WILL CROSS EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR BY POTHOLING PRIOR TO CONSTRUCTION OR ORDERING MATERIALS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO SCHEDULE POTHOLING SUCH THAT IF CONFLICTS ARE ENCOUNTERED, SUFFICIENT TIME EXISTS TO PREPARE MODIFIED DESIGNS AND HAVE THE MODIFICATIONS APPROVED BY THE JURISDICTION WITHOUT IMPACTING THE PROJECT SCHEDULE.
9. THIS PLAN IS GENERALLY DIAGRAMMATIC. IT DOES NOT SHOW EVERY JOINT, BEND, FITTING, OR ACCESSORY REQUIRED FOR CONSTRUCTION.
10. INSTALL CLEANOUTS AT 100' MAX. AND AT ALL LATERALS PER CODE. PROVIDE CLEANOUTS AS REQUIRED BY THE CURRENT OREGON PLUMBING SPECIALTY CODE. NOT ALL REQUIRED CLEANOUTS ARE SHOWN.
11. UTILITIES WITHIN TWO FEET OF A BUILDING SHALL BE CONSTRUCTED OF MATERIALS APPROVED FOR INTERIOR USE AS DESCRIBED IN THE CURRENT EDITION OF THE PLUMBING CODE.
12. CHANGES IN DIRECTION OF DRAINAGE AND SEWER PIPING SHALL BE MADE BY THE APPROPRIATE USE OF APPROVED FITTINGS AND SHALL BE OF THE ANGLES PRESENTED BY ONE–SIXTEENTH BEND, ONE–EIGHTH BEND, ONE–SIXTH BEND OR OTHER APPROVED FITTINGS OF EQUIVALENT SWEEP.
13. IF DEWATERING IS REQUIRED DURING CONSTRUCTION, THE CONTRACTOR SHALL PREPARE A DEWATERING PLAN CONSISTENT WITH CITY OF TUALATIN AND CLEAN WATER SERVICES (CWS) REQUIREMENTS, AND OBTAIN APPROVAL OF THE PLAN FROM BOTH JURISDICTIONS PRIOR TO PROCEEDING WITH DEWATERING.
14. THE CONTRACTOR SHALL CLEAN ALL CATCH BASINS AND STORM LINES IMPACTED BY SITE DEVELOPMENT FOLLOWING COMPLETION OF CONSTRUCTION OR AS DIRECTED BY THE CITY OF TUALATIN AND CWS. NO SEDIMENT SHALL BE ALLOWED TO ENTER THE STORM SYSTEM.
15. COORDINATE WITH CITY OF TUALATIN FOR PROVISION OF NEW FIRE TAP AND SERVICE AND NEW DOMESTIC WATER SERVICE AND METER AT SW TUALATIN ROAD FRONTAGE. CONTRACTOR TO INSTALL 2–INCH SERVICE PIPE FROM METER TO BUILDING RISER ROOM AND INSTALL A CITY OF TUALATIN APPROVED DOMESTIC BACKFLOW PREVENTER IN A VAULT ADJACENT TO THE METER. SIZE OF DOMESTIC SERVICE, CAPACITY OF METER, BUILDING DOMESTIC WATER DEMAND AND SIZE OF PIPING TO BUILDING IS ASSUMED AND TO BE CONFIRMED BY BUILDING PLUMBING DESIGNER PRIOR TO CONSTRUCTION OR ORDERING MATERIAL. CONTRACTOR TO DETERMINE REQUIRED BACKFLOW PREVENTER TYPE PRIOR TO CONSTRUCTION OR ORDERING MATERIALS; COORDINATE WITH BUILDING PLUMBING DESIGNER. CONTRACTOR TO DETERMINE IF REMOTE METER READER IS REQUIRED AND PROVIDE AS DIRECTED BY CITY OF TUALATIN. IRRIGATION CONNECTION IS TO BE DOWNSTREAM OF BUILDING WATER METER AND TO BE OF CITY OF TUALATIN APPROVED TYPE. SEE LANDSCAPE PLANS FOR DISCUSSION OF IRRIGATION BACKFLOW PREVENTER AND CONTINUATION TO IRRIGATION SYSTEM. NO CONNECTIONS MAY OCCUR BETWEEN DOMESTIC METER AND BACKFLOW PREVENTERS INSIDE BUILDING. FIRE LINE SIZE IS ASSUMED AND TO BE CONFIRMED BY BUILDING FIRE SYSTEM DESIGNER BASED ON THEIR FLOW TESTING.
16. FIRE DDCV WILL BE AT RIGHT OF WAY WITH SIZE TO BE CONFIRMED BY CONTRACTOR IN CONSULTATION WITH BUILDING FIRE SYSTEM DESIGNER.
17. INSTALL AUTOMATIC DRAIN VALVE IN VAULT AT LOW POINT OF FDC LINE. PROVIDE DRAINAGE FROM VAULT TO CITY OF TUALATIN APPROVED LOCATION. SIZE OF FDC PIPE IS ASSUMED AND TO BE CONFIRMED BY BUILDING FIRE SYSTEM DESIGNER. FDC TO CONFORM TO REQUIREMENTS OF TUALATIN VALLEY FIRE AND RESCUE (TVF&R).
18. WATER LINE, FITTINGS, VALVES, HYDRANTS, AND COMPONENTS TO CONFORM TO THE REQUIREMENTS OF CITY OF TUALATIN. HYDRANTS TO ALSO CONFORM TO REQUIREMENTS OF TVF&R. CONNECTIONS TO EXISTING ON SITE WATER MAINS TO CONFORM TO CITY OF TUALATIN REQUIREMENTS.
19. BUILDING SANITARY PIPE SIZE IS ASSUMED AND TO BE CONFIRMED BY BUILDING PLUMBING DESIGNER BASED ON THEIR CALCULATION OF DESIGN FIXTURE DISCHARGE. SEE BUILDING PLUMBING PLANS FOR SANITARY CONTINUATION WITHIN BUILDING.
20. CORE EXISTING PUBLIC SANITARY MANHOLE FOR BUILDING SERVICE CONNECTION. MODIFY CHANNEL AND RELOCATE STEPS AS REQUIRED. REMOVE LID, LOWER, AND ROTATE AS REQUIRED TO MATCH INTERNAL STEPS AND FINISHED GRADE. SEPARATE PUBLIC WORKS PERMIT REQUIRED FOR CONNECTION TO AND WORK ON THIS MANHOLE.
21. REMOVE LID AND RAISE AS REQUIRED TO MATCH FINISHED GRADE. SEPARATE PUBLIC WORKS PERMIT REQUIRED FOR CONNECTION TO AND WORK ON THIS MANHOLE.
22. REMOVE EXISTING STORM PIPE WITHIN BUILDING FOOTPRINT. PIPE FIVE FEET BEYOND BUILDING FOOTPRINT TO BE ABANDONED BY REMOVAL OR GROUTED FULL.

## LEGEND

| | PROPOSED | EXISTING |
|---|---|---|
| PROJECT BOUNDARY | | |
| PROPERTY LINE | | |
| EASEMENT LINE | | |
| FENCE | | — X — X — |
| CURB | | |
| EDGE OF PAVEMENT | | /// /// |
| 1' CONTOUR | 109 | 109 |
| 5' CONTOUR | 110 | 110 |
| STORM SEWER LINE | SD | STM |
| WATER LINE | W | WAT |
| FIRE DEPT. CONNECTION LINE | FDC | |
| FIRE WATER LINE | FW | |
| SANITARY SEWER LINE | SS | SAN |
| GAS LINE | | GAS |
| OVERHEAD UTILITY WIRE | | OHW |
| UNDERGROUND POWER LINE | | PWR |
| COMMUNICATION LINE | | COM |
| EXISTING FEATURE OR CONDITION | | (E) |
| CATCH BASIN | CB | |
| TOP OF CURB | TC | |
| GUTTER | G | |
| TOP OF STEP | TS | |
| BOTTOM OF STEP | BS | |
| TOP OF WALL | TW | |
| BOTTOM OF WALL AT FINISHED GRADE | BW | |
| FINISHED GRADE | FG | |
| FOOTING | FTG | |
| PERFORATED PIPE | PERF | |
| BACKFLOW PREVENTER | BFP | |
| BOTTOM | BOT | |
| GENERAL GRADING NOTES | GGN | |
| GENERAL UTILITY NOTES | GUN | |

DECIDUOUS TREE

CONIFEROUS TREE


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Client:
Mittleman Properties

Project:
Mittleman Properties at Leveton Business Park

Tualatin, Oregon

Sheet Title:
General Notes & Legend

Revisions:
1. 1 December 2017
Site Utility Revisions



Date: 29 September 2017

Drawn by: AS

Checked by: KJK

TMR Job Number: 17063

Sheet
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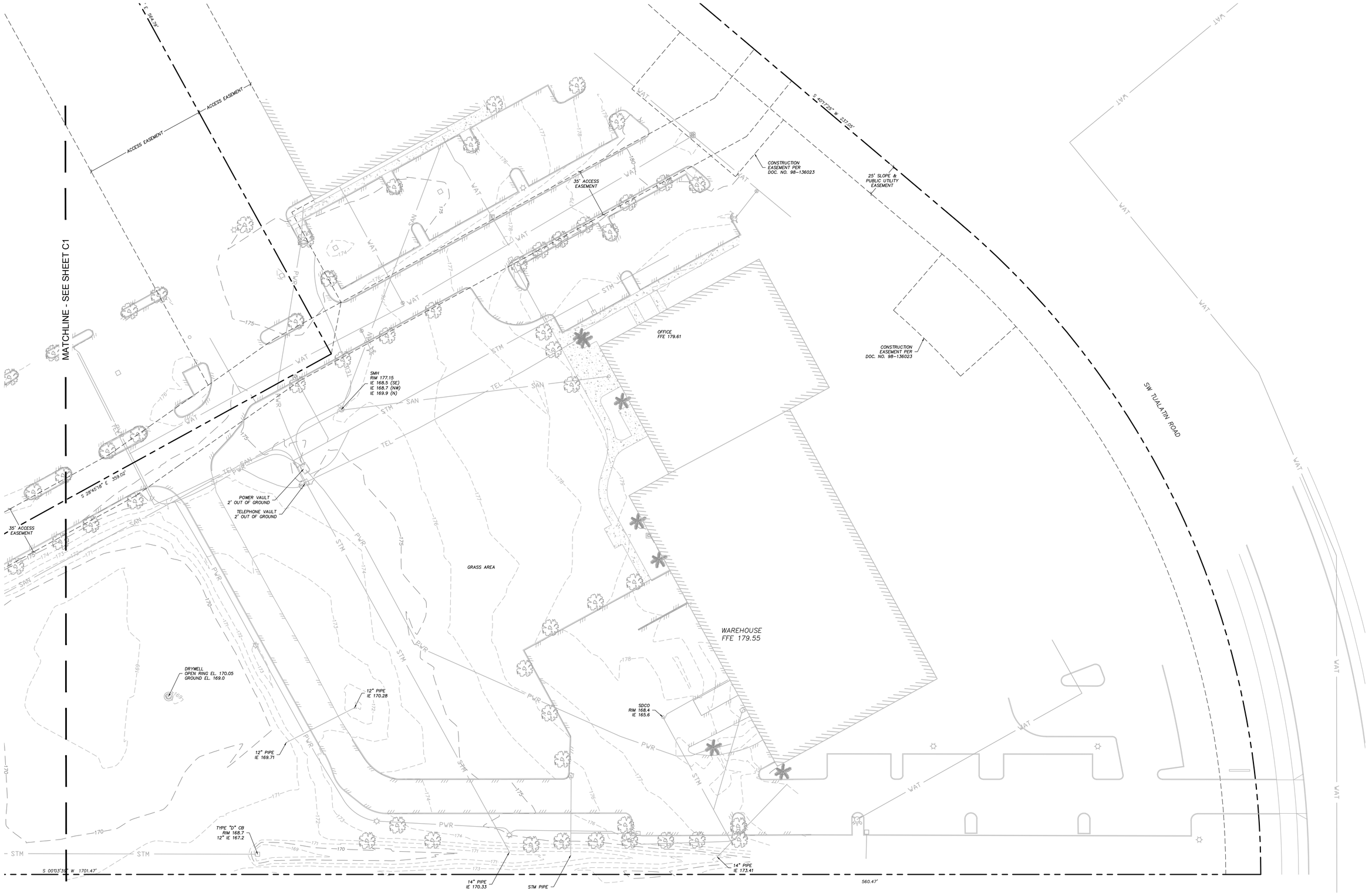


SCALE: 1" = 30'

0 15 30 60

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Fax (503) 296-2374


Client:
Mittleman Properties

Project:
Mittleman Properties at Leveton Business Park

Tualatin, Oregon

Sheet Title:
Existing Conditions Plan

Revisions:
1. 1 December 2017
Site Utility Revisions



Date: 29 September 2017

Drawn by: Checked by:

TMR Job Number: 17063

Sheet

C1


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Sheet
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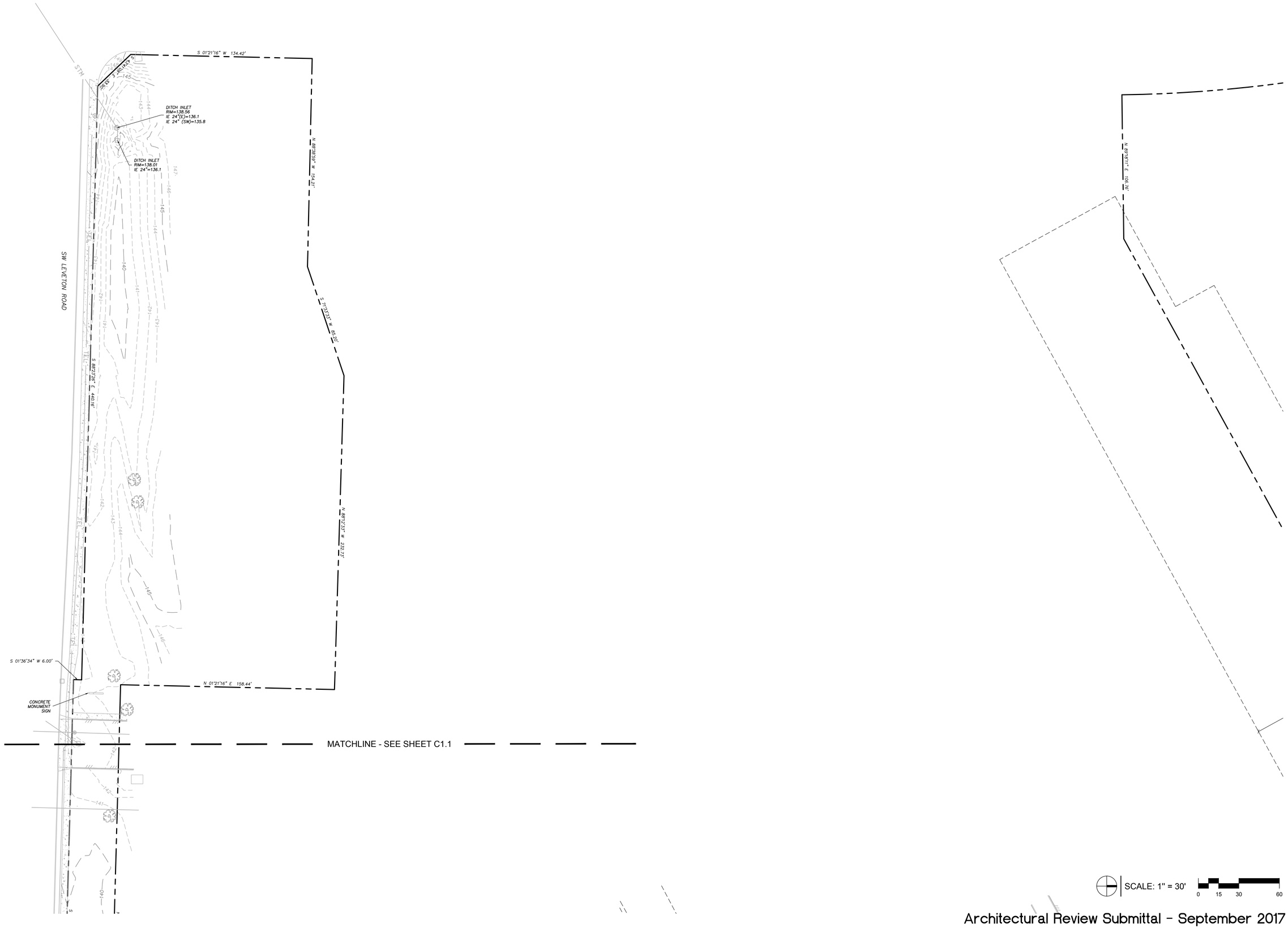


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Drawn by: Checked by:

TMR Job Number: 17063

Sheet
C1.2


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Client:
Mittleman Properties

Project:
Mittleman Properties at Leveton Business Park

Tualatin, Oregon

Sheet Title:
Grading Plan

Revisions:
1. 1 December 2017
Site Utility Revisions



Date: 29 September 2017

Drawn by: AS
Checked by: KJK

TMR Job Number: 17063

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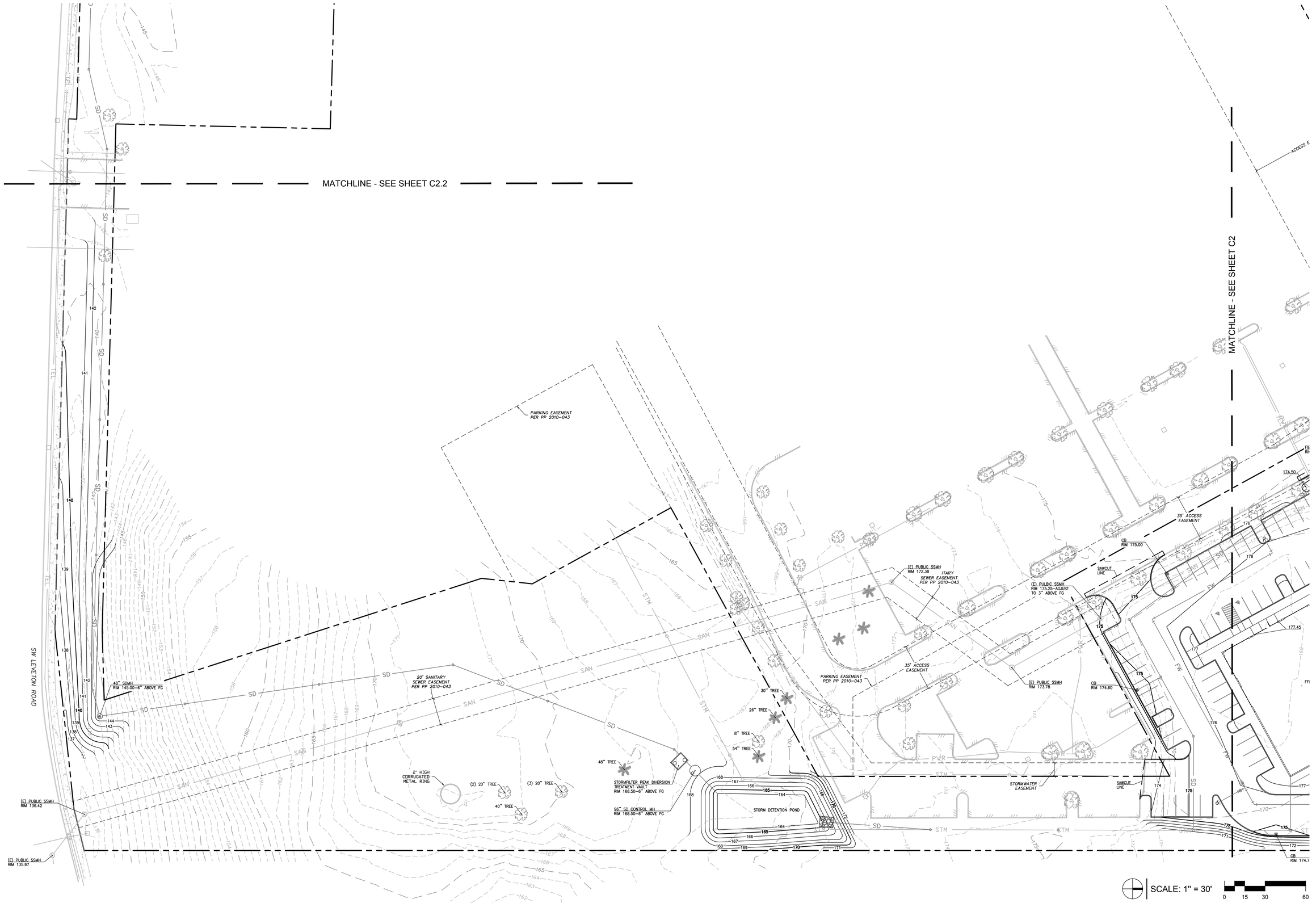


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Tualatin, Oregon

Sheet Title:
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Revisions:
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Date: 29 September 2017
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Checked by: KJK

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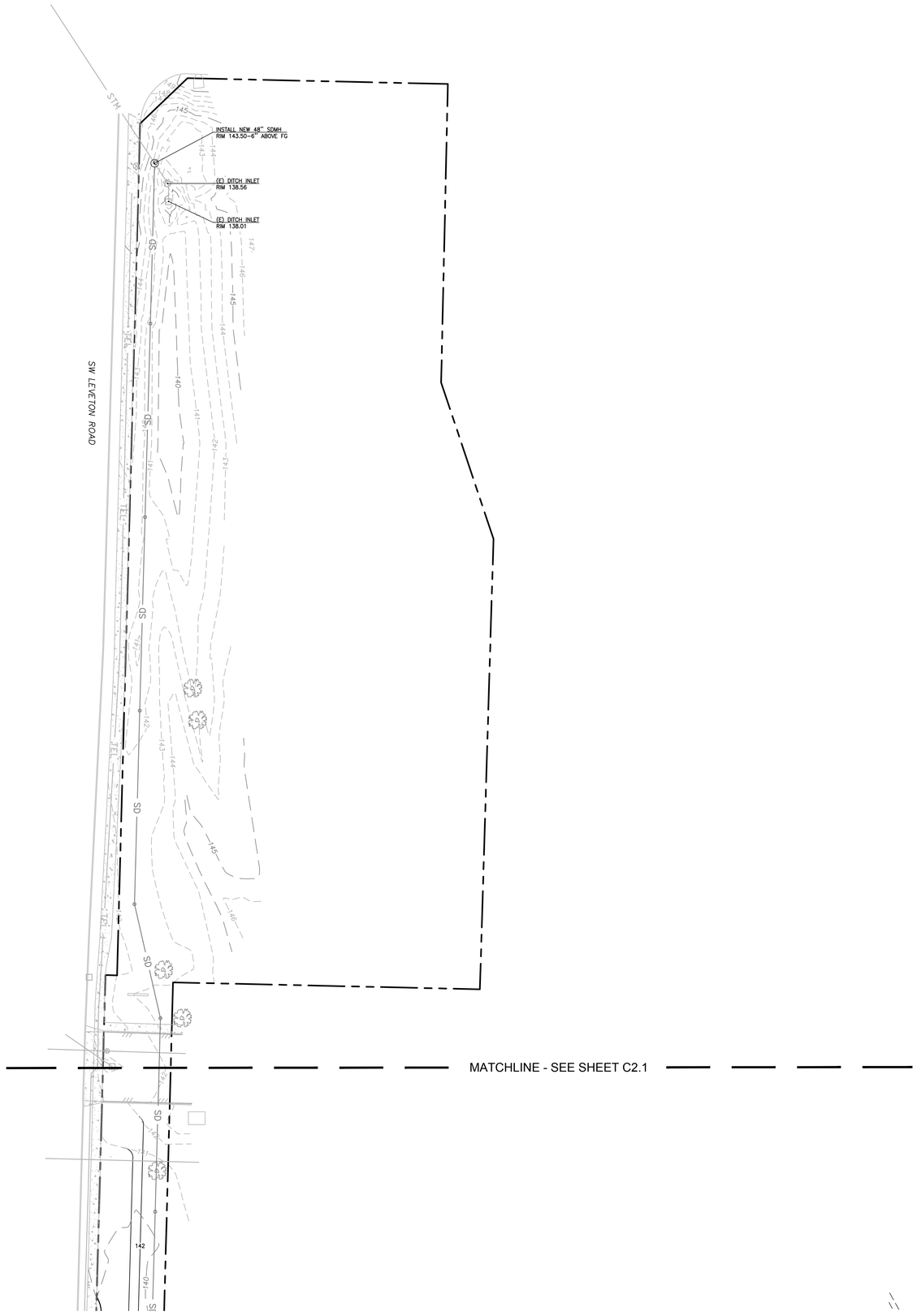


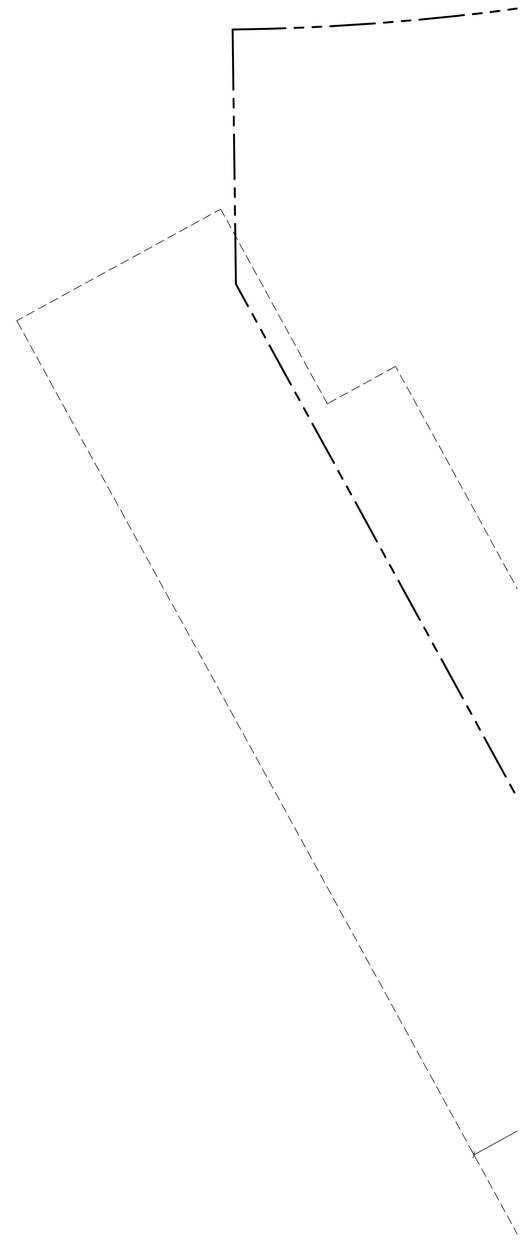

SCALE: 1" = 30'

0 15 30 60

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Project:
Mittleman Properties at Leveton Business Park

Tualatin, Oregon

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Date: 29 September 2017

Drawn by: AS | Checked by: KJK

TMR Job Number: 17063

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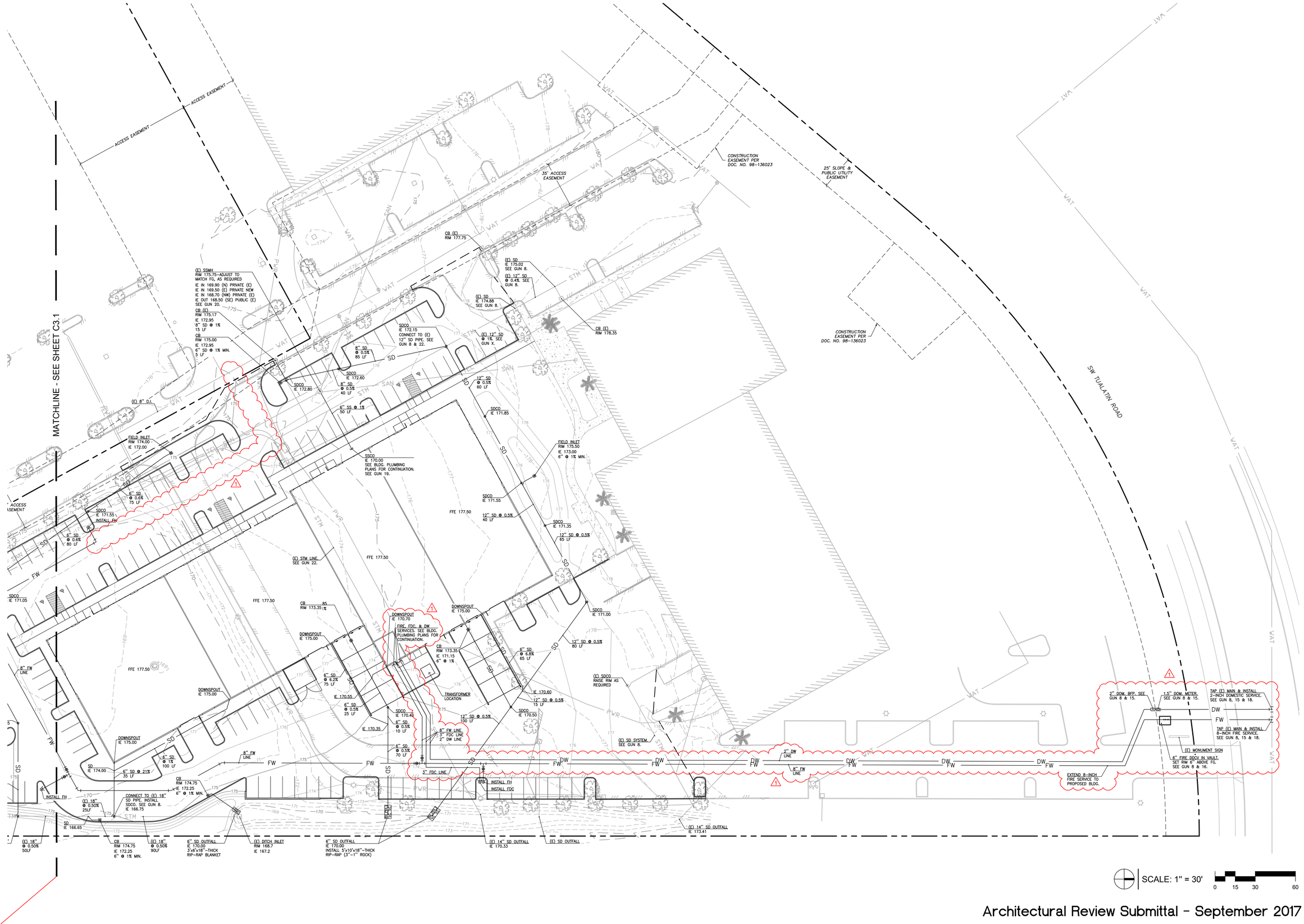


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Client:
Mittleman Properties

Project:
Mittleman Properties at Leveton Business Park

Tualatin, Oregon

Sheet Title:
Utiltiy Plan

Revisions:
1. 1 December 2017
Site Utility Revisions



Date: 29 September 2017

Drawn by: AS

Checked by: KJK

TMR Job Number: 17063

Sheet
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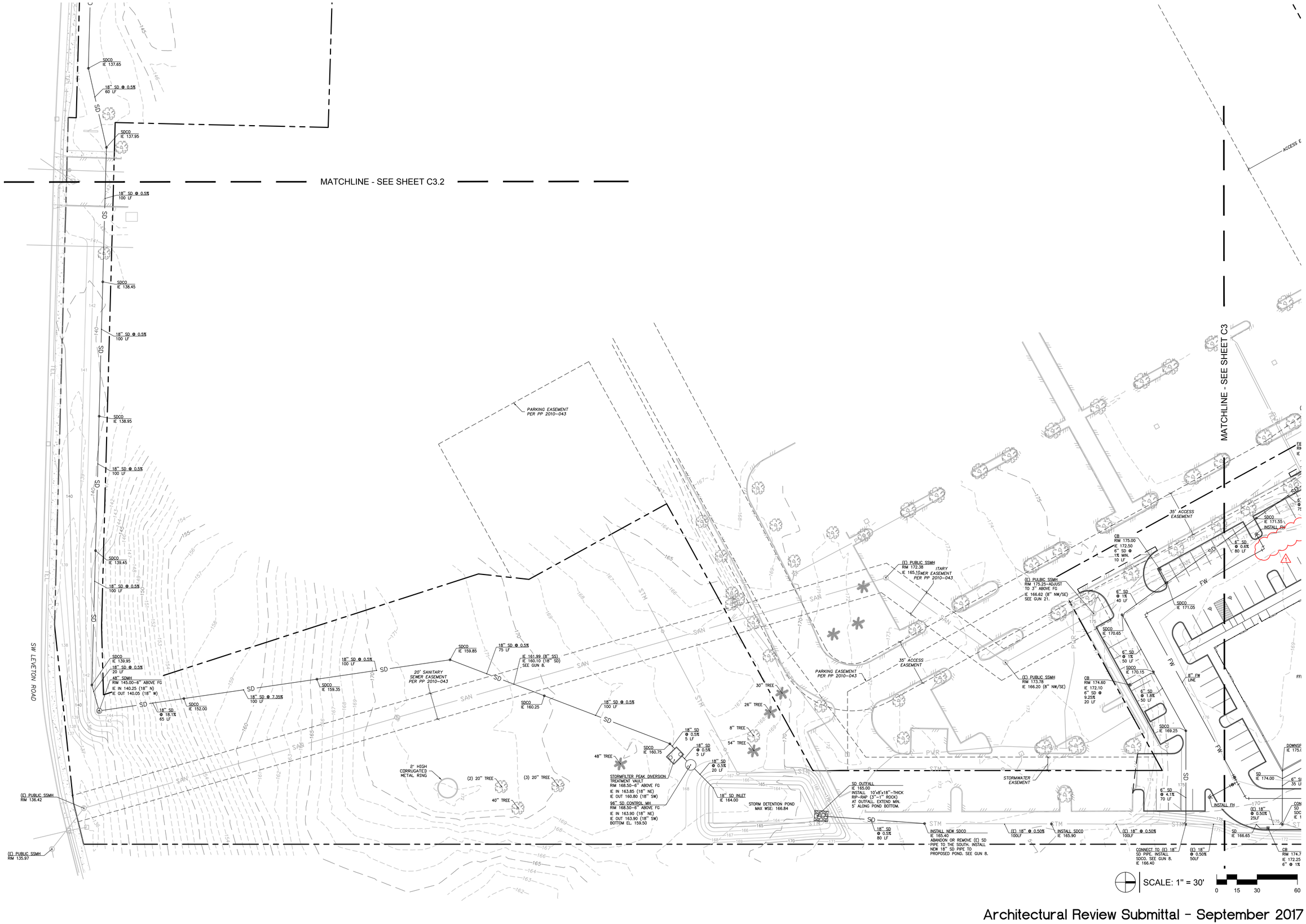


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Client:
Mittleman Properties

Project:
Mittleman Properties at Leveton Business Park

Tualatin, Oregon

Sheet Title:
Utility Plan

Revisions:
1. 1 December 2017
Site Utility Revisions



Date: 29 September 2017
Drawn by: AS
Checked by: KJK
TMR Job Number: 17063
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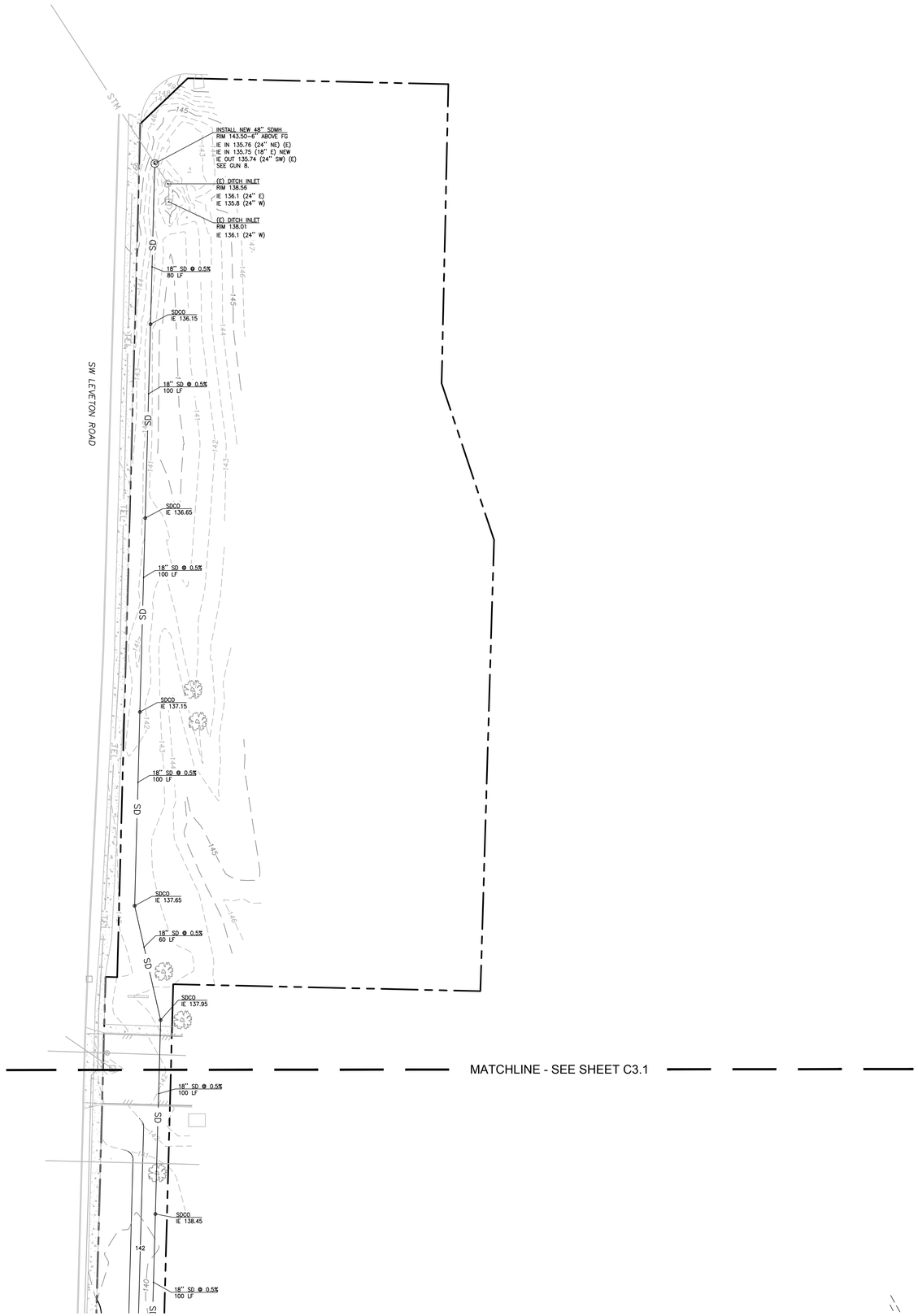


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Client:
Mittleman Properties

Project:
Mittleman Properties at Leveton Business Park

Tualatin, Oregon

Sheet Title:
Utility Plan

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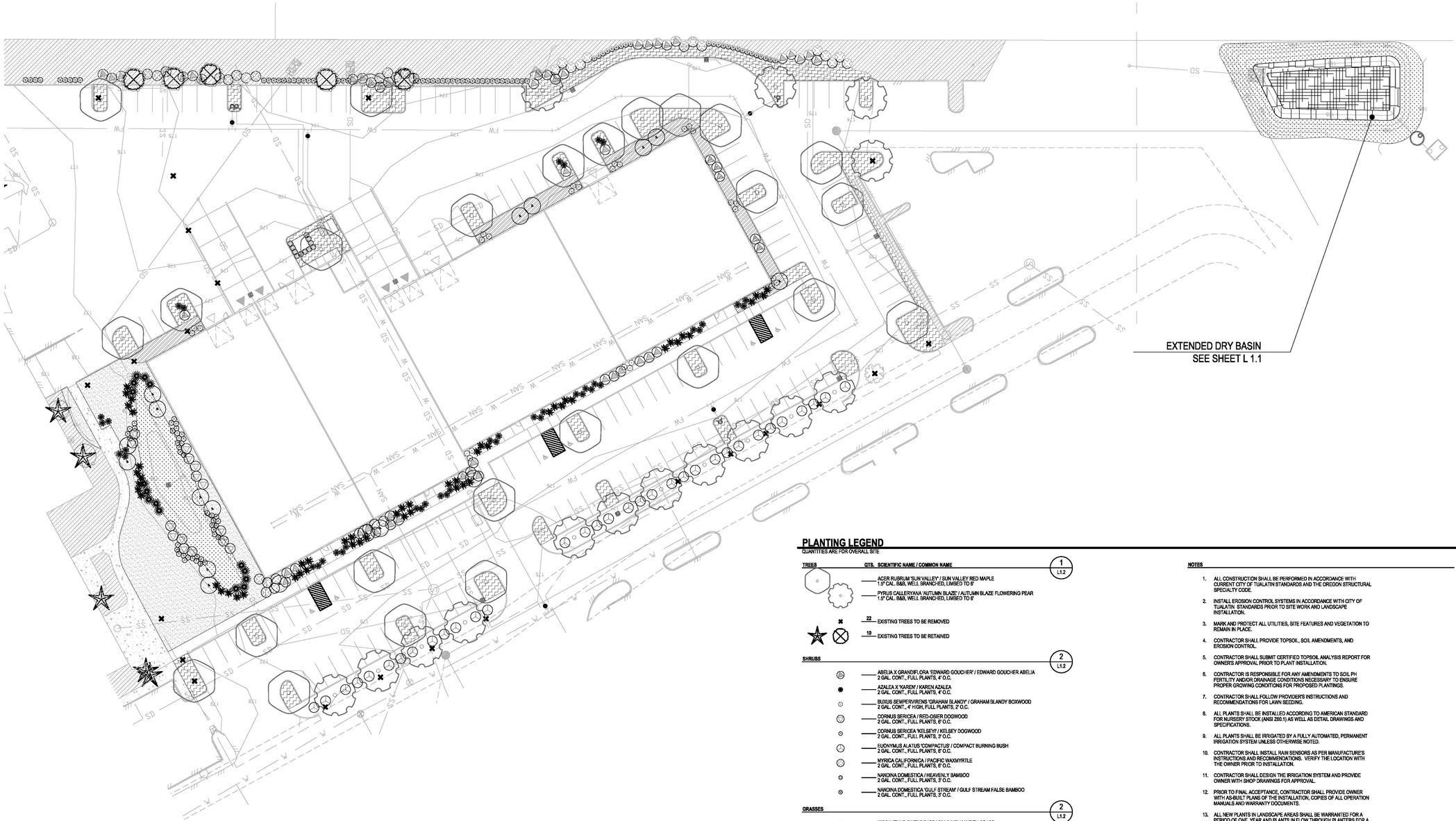


## PLANTING LEGEND

QUANTITIES ARE FOR OVERALL SITE

**TREES** — QTS. SCIENTIFIC NAME / COMMON NAME — 1 / L1.2

- ACER RUBRUM 'SUN VALLEY' / SUN VALLEY RED MAPLE — 1.5" CAL., B&B, WELL BRANCHED, LIMBED TO 6'
- PYRUS CALLERYANA 'AUTUMN BLAZE' / AUTUMN BLAZE FLOWERING PEAR — 1.5" CAL., B&B, WELL BRANCHED, LIMBED TO 6'
- 22 — EXISTING TREES TO BE REMOVED
- 10 — EXISTING TREES TO BE RETAINED

**SHRUBS** — 2 / L1.2

- ABELIA X GRANDIFLORA 'EDWARD GOUCHER' / EDWARD GOUCHER ABELIA — 2 GAL. CONT., FULL PLANTS, 4' O.C.
- AZALEA X 'KAREN' / KAREN AZALEA — 2 GAL. CONT., FULL PLANTS, 4' O.C.
- BUXUS SEMPERVIRENS 'GRAHAM BLANDY' / GRAHAM BLANDY BOXWOOD — 2 GAL. CONT., 4' HIGH, FULL PLANTS, 2' O.C.
- CORNUS SERICEA / RED-OSIER DOGWOOD — 2 GAL. CONT., FULL PLANTS, 6' O.C.
- CORNUS SERICEA 'KELSEYI' / KELSEY DOGWOOD — 2 GAL. CONT., FULL PLANTS, 3' O.C.
- EUONYMUS ALATUS 'COMPACTUS' / COMPACT BURNING BUSH — 2 GAL. CONT., FULL PLANTS, 6' O.C.
- MYRICA CALIFORNICA / PACIFIC WAXMYRTLE — 2 GAL. CONT., FULL PLANTS, 6' O.C.
- NANDINA DOMESTICA / HEAVENLY BAMBOO — 2 GAL. CONT., FULL PLANTS, 3' O.C.
- NANDINA DOMESTICA 'GULF STREAM' / GULF STREAM FALSE BAMBOO — 2 GAL. CONT., FULL PLANTS, 3' O.C.

**GRASSES** — 2 / L1.2

- MISCANTHUS SINENSIS 'GRACILLIMUS' / MAIDEN GRASS — 2 GAL. CONT., FULL PLANTS, 6' O.C.
- PHORMIUM TENAX 'PINK STRIPE' / PINK STRIPE NEW ZEALAND FLAX — 2 GAL. CONT., FULL PLANTS, 5' O.C.

**GROUNDCOVERS** — 3 / L1.2

- ARCTOSTAPHYLOS UVA-URSI / KINNIKINNICK — 4 INCH POT, FULL PLANTS, 24" O.C.
- MAHONIA REPENS / CREEPING MAHONIA — 4 INCH POT, FULL PLANTS, 24" O.C.

**SEEDING**

- LAWN SEEDING (IRRIGATED) — 1,380 SF. SEE NOTES FOR SPECIFICATIONS
- FIELDGRASS SEEDING (NON-IRRIGATED) — 5,330 SF. SEE NOTES FOR SPECIFICATIONS

**TREE PROTECTION FENCE** — 4 / L1.2

- TREE PROTECTION FENCE — 6 FEET HIGH
- EXISTING LANDSCAPE TO BE RETAINED

**NOTES**

1. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT CITY OF TUALATIN STANDARDS AND THE OREGON STRUCTURAL SPECIALTY CODE.
2. INSTALL EROSION CONTROL SYSTEMS IN ACCORDANCE WITH CITY OF TUALATIN STANDARDS PRIOR TO SITE WORK AND LANDSCAPE INSTALLATION.
3. MARK AND PROTECT ALL UTILITIES, SITE FEATURES AND VEGETATION TO REMAIN IN PLACE.
4. CONTRACTOR SHALL PROVIDE TOPSOIL, SOIL AMENDMENTS, AND EROSION CONTROL.
5. CONTRACTOR SHALL SUBMIT CERTIFIED TOPSOIL ANALYSIS REPORT FOR OWNER'S APPROVAL PRIOR TO PLANT INSTALLATION.
6. CONTRACTOR IS RESPONSIBLE FOR ANY AMENDMENTS TO SOIL PH FERTILITY AND/OR DRAINAGE CONDITIONS NECESSARY TO ENSURE PROPER GROWING CONDITIONS FOR PROPOSED PLANTINGS.
7. CONTRACTOR SHALL FOLLOW PROVIDERS INSTRUCTIONS AND RECOMMENDATIONS FOR LAWN SEEDING.
8. ALL PLANTS SHALL BE INSTALLED ACCORDING TO AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1) AS WELL AS DETAIL DRAWINGS AND SPECIFICATIONS.
9. ALL PLANTS SHALL BE IRRIGATED BY A FULLY AUTOMATED, PERMANENT IRRIGATION SYSTEM UNLESS OTHERWISE NOTED.
10. CONTRACTOR SHALL INSTALL RAIN SENSORS AS PER MANUFACTURE'S INSTRUCTIONS AND RECOMMENDATIONS. VERIFY THE LOCATION WITH THE OWNER PRIOR TO INSTALLATION.
11. CONTRACTOR SHALL DESIGN THE IRRIGATION SYSTEM AND PROVIDE OWNER WITH SHOP DRAWINGS FOR APPROVAL.
12. PRIOR TO FINAL ACCEPTANCE, CONTRACTOR SHALL PROVIDE OWNER WITH AS-BUILT PLANS OF THE INSTALLATION, COPIES OF ALL OPERATION MANUALS AND WARRANTY DOCUMENTS.
13. ALL NEW PLANTS IN LANDSCAPE AREAS SHALL BE WARRANTED FOR A PERIOD OF ONE YEAR AND PLANTS IN FLOW THROUGH PLANTERS FOR A PERIOD OF TWO YEARS FROM THE DATE OF FINAL ACCEPTANCE.
14. CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY IF THERE IS ANY DISCREPANCY BETWEEN THE PLAN AND EXISTING CONDITIONS.

NORTH

## LANDSCAPE PLAN

SCALE 1" = 20'

20 0 10 20 40 60 FEET

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AAI afghan associates, inc.
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4875 SW Griffith Drive | Suite 300 | Beaverton, OR | 97005
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Project No. A15067.11

REGISTERED 599 YOSHIMI YANO OREGON 04/13/06 LANDSCAPE ARCHITECT PRELIMINARY

Client:
Mittleman Properties

Project:
Mittleman Properties at Leveton Business Park

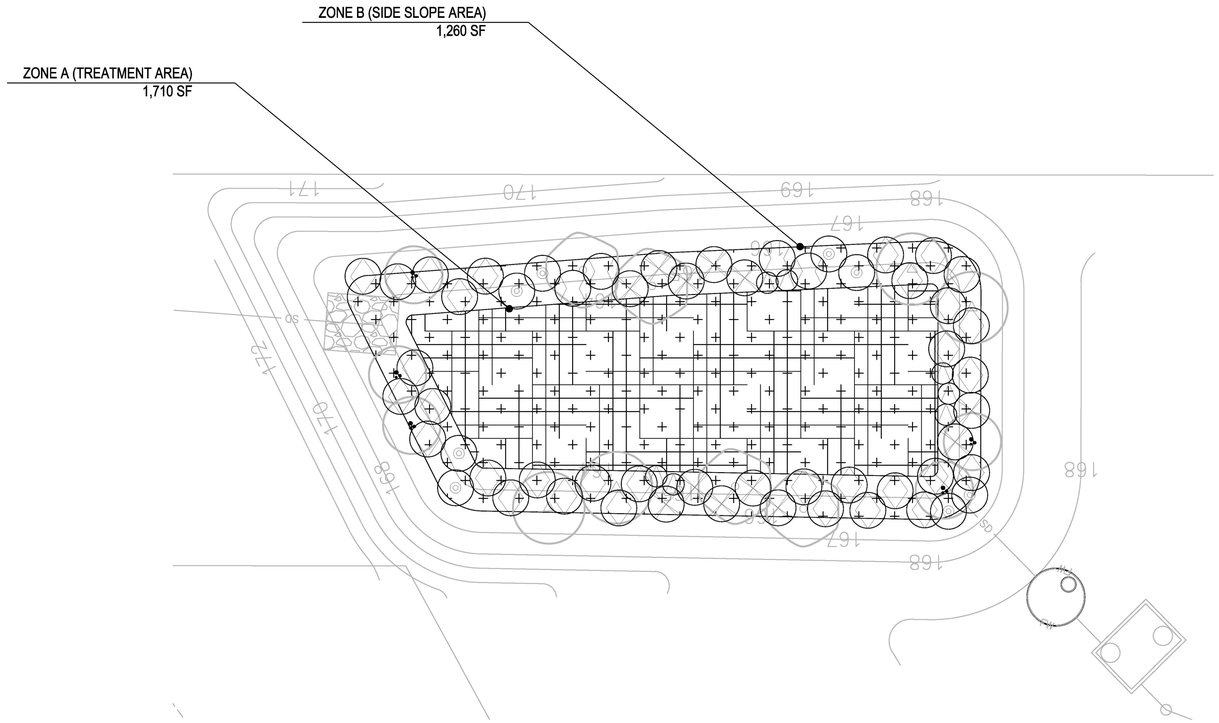
Tualatin, Oregon

Sheet Title:
**LANDSCAPE PLAN**

Revisions:



Date: 29 September 2017
Drawn by: YYN
Checked by: YYN
Job Number: 116190
Sheet
**L1.0**




NORTH

## EXTENDED DRY BASIN PLANTING PLAN

SCALE 1" = 10'

10 0 5 10 20 40 FEET

## PLANTING SUMMARY

| | | | |
|---|---|---|---|
| WATER QUALITY EXTENDED DRY POND AREA | = | 2,970 SF | (APPROXIMATELY) |
| 1.ZONE A (TREATMENT AREA) | = | 1,710 SF | |
| 2.ZONE B (SIDE SLOPE AREA) | = | 1,260 SF | |
| REQUIRED PLANTS (30 FEET WIDE OR MORE) | | | |
| 1. ZONE A (TREATMENT AREA) | | | |
| HERBACEOUS = 1,710 X 6 | = | 10,260 | |
| 2. ZONE B (SIDE SLOPE AREA) | | | |
| TREES = 1,260 X 0.01 | = | 13 | |
| SHRUBS = 1,260 X 0.05 | = | 63 | |
| PROPOSED PLANTS | | | |
| 1. ZONE A (TREATMENT AREA) | | | |
| HERBACEOUS | = | 10,260 | |
| 2. ZONE B (SIDE SLOPE AREA) | | | |
| TREES | = | 13 | |
| SHRUBS | = | 63 | |

### LEGEND

| SYMBOL | PLANT NAME | PLANTING NOTES | QTS. |
|---|---|---|---|
| ZONE A | | | |
| HERBACEOUS | | | |
| | Carex obnupta - Slough Sedge | plugs, 6" high, 1.5 per s.f. | 2565 |
| | Carex densa - Dense Sedge | plugs, 6" high, 1.5 per s.f. | 2565 |
| | Juncus patens - Spreading Rush | plugs, 6" high, 1.5 per s.f. | 2565 |
| | Scirpus microcarpus - Small Fruited Bulrush | plugs, 6" high, 1.5 per s.f. | 2565 |
| ZONE B | | | |
| TREES | | | |
| | Acer circinatum - Vine Maple | 2 gal. cont., 8' o.c., | 5 |
| | Prunus emarginata - Bitter Cherry | 2 gal. cont., 8' o.c. | 4 |
| | Rhamnus purshiana - Cascara | 2 gal. cont., 8' o.c. | 4 |
| SHRUBS | | | |
| | Cornus sericea - Red-Osier Dogwood | 1 gal. cont., 3.5' o.c. | 12 |
| | Holodiscus discolor - Ocean Spray | 1 gal. cont., 3.5' o.c. | 4 |
| | Mahonia aquifolium - Tall Oregon Grape | 1 gal. cont., 3.5' o.c. | 32 |
| | Ribes sanguineum - Red Currant | 1 gal. cont., 3.5' o.c. | 8 |
| | Rosa pisocarpa - Clustered Rose | 1 gal. cont., 3.5' o.c. | 7 |

SEEDING

SEED MIX
2,970 SF. OVER-SEED OVERALL WATER QUALITY AREA

PRO-TIME 870 OR APPROVED EQUAL

| BOTANICAL NAME | COMMON NAME | % OF MIXTURE |
|---|---|---|
| FESTUCA ARUNDINACEA | TALL FESCUE | 40 |
| LOLIUM PERENNE | BANFIELD PERENNIAL RYEGRASS | 30 |
| FESTUCA RUBRA | CHANTILLY CREEPING RED FESCUE | 25 |
| AGROSTIS TENUIS | HIGHLAND COLONIAL BENTGRASS | 5 |

APPLICATION RATE: 7 LBS / 1,000 SF

### EXTENDED DRY BASIN PLANTING NOTES

IN ADDITION TO THE NOTES ON 1.0 LANDSCAPE PLAN , FOLLOWING NOTES APPLY TO THE EXTENDED DRY BASIN PLANTING PLAN.

1. ALL CITY OF TUALATIN ADMINISTRATIVE PROVISIONS REGARDING MAINTENANCE APPLY TO THESE SPECIFICATIONS.
2. ENSURE 12" OF CLEAN WATER QUALITY MEDIA AS SPECIFIED.
3. CONTRACTOR SHALL VERIFY THAT INVASIVE SPECIES AND WEEDS HAVE BEEN ELIMINATED PRIOR TO THE PLACEMENT OF TOPSOIL. CONTRACTOR MUST NOT PLACE TOPSOIL UNTIL ALL LIVING WEED MATTER HAS BEEN ELIMINATED.
4. ALL NEW PLANTS SHALL BE WARRANTED FOR A PERIOD OF TWO YEARS FROM THE DATE OF FINAL ACCEPTANCE.
5. CONTRACTOR IS RESPONSIBLE TO MAINTAIN ALL PLANTS IN A HEALTHY, THRIVING CONDITION. INSPECT PLANTS IN APRIL, JUNE AND AUGUST AND PRE-GROWING SEASON IN MARCH FOR A PERIOD OF TWO YEARS FROM THE DATE OF FINAL ACCEPTANCE.
6. CONTRACTOR SHALL PROVIDE IRRIGATION DURING THE SUMMER MONTHS (FROM JUNE 15 TO OCTOBER 15), FOR UP TO TWO YEARS. SYSTEMS SHOULD BE WINTERIZED DURING THE WET SEASON TO ASSURE LONGEVITY AND GUARD AGAINST DAMAGE FROM FREEZING TEMPERATURES.
7. IRRIGATION SHALL BE PROVIDED SO THAT PLANTS RECEIVE 1-1/2INCH WATER PER WEEK.

### CONSTRUCTION

1. Water Quality Swale shall be over-excavated and filled to final grade with 12-inch amended topsoil. Topsoil amendments shall be garden compost, not conventional fertilizer amendments.
2. A biodegradable Erosion Control Matting shall be placed over the topsoil throughout the swale cross section, fabric shall be held in place in accordance with the manufacturer's installation requirements. Anchor spacing shall be based on 3 fps flow over the fabric.
   a. Treatment area - high-density jute matting (Geojute Plus or other approved equal)
   b. All other areas - low-density jute matting (Econojute or other approved equal)
3. 2.5-3 inches of 2"-$\frac{3}{4}$" river run rock shall be placed over the matting evenly throughout the length and width of the swale.
4. Plant materials shall be placed in accordance with the plan and plant table as shown on approved plans.
5. The water quality swale treatment area plantings can be deemed "substantially complete" once active green growth has occurred to an average growth of 3" and plant density is an average of approx. 6 plants (minimum 1-inch plugs or equivalent) per square foot.
6. The facility shall be deemed acceptable to begin the maintenance period when plant growth and density matches the engineer's design as shown on the approved plans and all other requirements have been met. The engineer must certify the facility to be functional, in accordance with the approved plan design to begin the two-year maintenance period.

### MAINTENANCE

1. The permittee is responsible for the maintenance of this facility for a minimum of two years following construction and acceptance of this facility per Chapter 2.
2. Irrigation is to be provided per separate irrigation plan as approved.
   Note: Irrigation needs are to be met using a temporary irrigation system with a timer during the dry season. Systems should be winterized during the wet season to assure longevity and guard against damage from freezing temperatures. Water source shall be as shown on the approved plans.
3. Engineer or Owners Representative is to visit and evaluate the site a minimum of twice annually (Spring and Fall). The landscaping shall be evaluated and replanted as necessary to ensure a minimum of 80% survival rate of the required vegetation and 90% aerial coverage. Non-native, invasive plant species shall be removed when occupying more than 20% of the site.
4. The facility shall be re-excavated and planted if siltation greater than 3 inches in depth occurs within the two-year maintenance period.

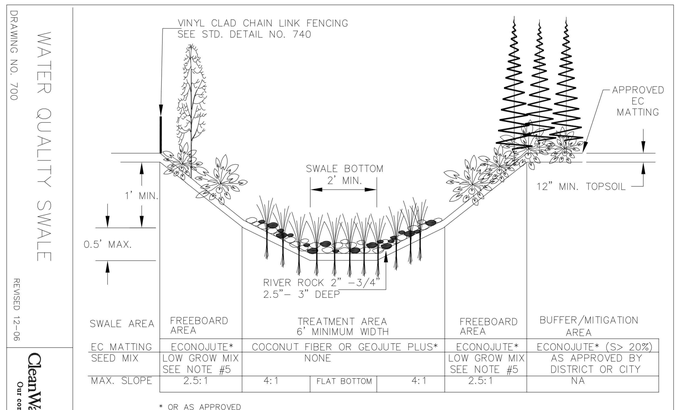
WATER QUALITY SWALE
CONSTRUCTION & MAINTENANCE NOTES
DETAIL NO. 710 REVISED 12-06

CleanWater Services
Our commitment is clear.

DRAWING NO. 700

WATER QUALITY SWALE

REVISED 12-06




| SWALE AREA | FREEBOARD AREA | TREATMENT AREA 6' MINIMUM WIDTH | | | FREEBOARD AREA | BUFFER/MITIGATION AREA |
|---|---|---|---|---|---|---|
| EC MATTING | ECONOJUTE* | COCONUT FIBER OR GEOJUTE PLUS* | | | ECONOJUTE* | ECONOJUTE* (S> 20%) |
| SEED MIX | LOW GROW MIX SEE NOTE #5 | NONE | | | LOW GROW MIX SEE NOTE #5 | AS APPROVED BY DISTRICT OR CITY |
| MAX. SLOPE | 2.5:1 | 4:1 | FLAT BOTTOM | 4:1 | 2.5:1 | NA |

* OR AS APPROVED

NOTES:
1. REFER TO APPENDIX A, CWS DESIGN & CONSTRUCTION STANDARDS, FOR LANDSCAPING REQUIREMENTS INCLUDING TREE PLACEMENT, TOPSOIL AND PLANTING SPECIFICATIONS.
2. PROVIDE IRRIGATION AS APPROVED BY CWS.
3. JUTE MATTING= GEOJUTE PLUS IN TREATMENT AREA, ECONOJUTE FOR ALL OTHER AREAS, OR SIMILIAR FABRICS. COCONUT FIBER IS ALSO ACCEPTABLE.
4. 12-INCHES OF TOPSOIL SHALL BE PLACED THROUGHOUT THE WATER QUALITY TRACT.
5. FREEBOARD AREA SEED MIX, DWARF TALL FESCUE 40%, DWARF PERENIAL RYE 30%, CREEPING RED FESCUE 25%, COLONIAL BENT GRASS 5%. APPLY AT A RATE OF 120# / ACRE.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Project No. A15067.11


REGISTERED 599 YOUNG YANO OREGON 04/13/06 LANDSCAPE ARCHITECT PRELIMINARY

Client:
Mittleman Properties

Project:
Mittleman Properties at Leveton Business Park

Tualatin, Oregon

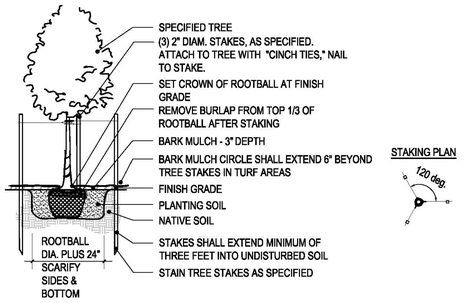
Sheet Title:
**EXTENDED DRY BASIN PLANTING**

Revisions:

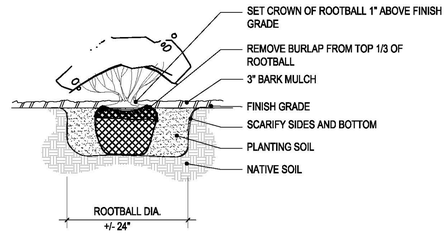


Date: 29 September 2017
Drawn by: YYN Checked by: YYN
Job Number: 116190
Sheet
L1.1

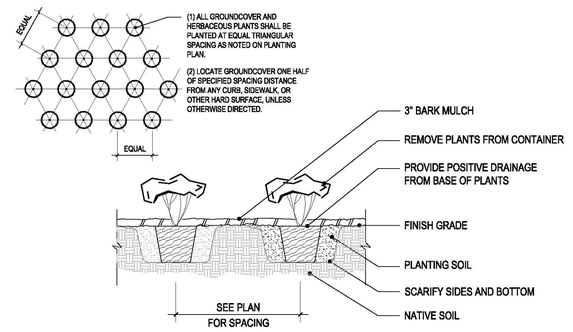
Architectural Review Submittal - September 2017



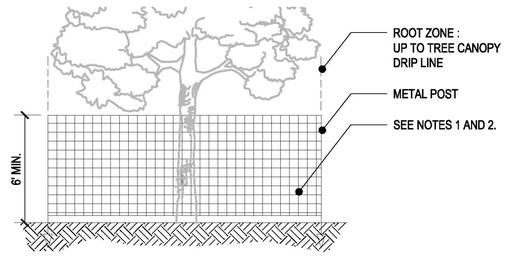

1 L1.2 DECIDUOUS TREE PLANTING
SCALE: NTS SECTION




2 L1.2 SHRUB PLANTING
SCALE: NTS SECTION




3 L1.2 GROUNDCOVER PLANTING
SCALE: NTS PLAN/SECTION




NOTES:
1. INSTALL FENCE AT THE ROOT PROTECTION ZONE OF ALL TREES TO BE PRESERVED. ROOT PROTECTION ZONE IS A CIRCULAR AREA AROUND A TREE THAT IS BASED ON THE DIAMETER OF THE TREE CANOPY.
2. FENCING SHALL BE EITHER:
   - 6-FOOT HIGH ORANGE PLASTIC AND BE SECURED TO THE GROUND WITH 8-FOOT METAL POSTS. AVOID DRIVING POSTS OR STAKES INTO MAJOR ROOTS. OR,
   - 6-FOOT HIGH CHAIN LINK FENCE WITH METAL POSTS ON CONCRETE BLOCKS.
3. FENCE SHALL BE INSTALLED PRIOR TO CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL AFTER CONSTRUCTION IS COMPLETE.
4. TREATMENT OF ROOTS EXPOSED DURING CONSTRUCTION: FOR ROOTS OVER 1" IN DIAMETER DAMAGED DURING CONSTRUCTION. MAKE A CLEAN STRAIGHT CUT TO REMOVE DAMAGED PORTION OF ROOT. ALL EXPOSED ROOTS SHALL BE TEMPORARILY COVERED WITH DAMP BURLAP TO PREVENT DRYING, AND COVERED WITH SOILS AS SOON AS POSSIBLE.
5. WORK WITHIN PROTECTION FENCE SHALL BE DONE MANUALLY. NO STOCKPILING OF MATERIALS, VEHICULAR TRAFFIC, OR STORAGE OF EQUIPMENT OR MACHINERY SHALL BE ALLOWED WITHIN THE LIMITS OF THE FENCING.
6. WITHIN CLEARING/GRADING LIMITS OR AT THE EDGE OF THE CLEARING/GRADING LIMITS, TREE PROTECTION MAY BE INSTALLED AROUND GROUPS OF TREES.

4 L1.2 TREE PROTECTION FENCE
SCALE: NTS SECTION

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Project No. A15067.11

REGISTERED PROFESSIONAL LANDSCAPE ARCHITECT
599
YOSHIMAY YANO
OREGON
04/13/06
PRELIMINARY

Client:
Mittleman Properties

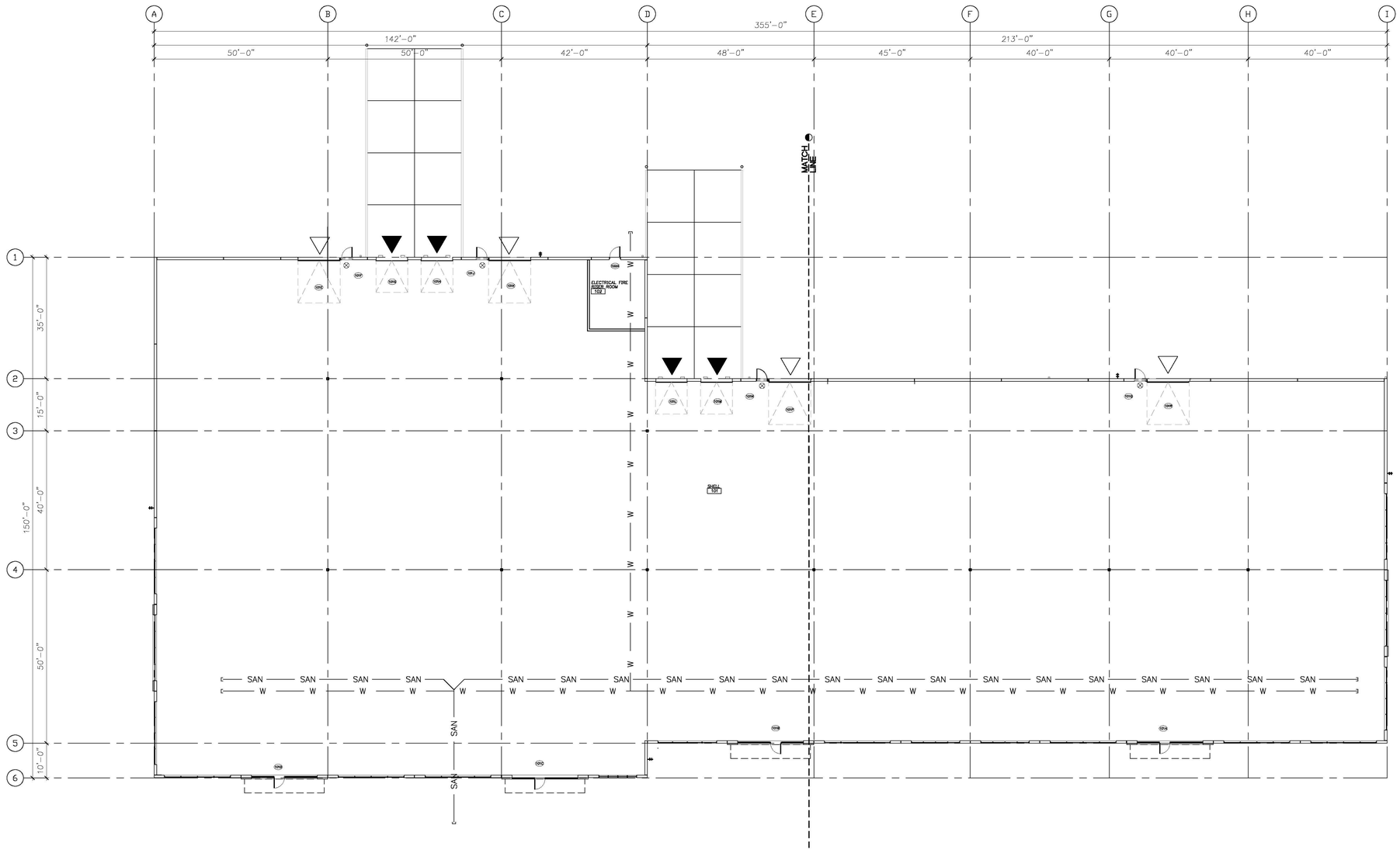
Project:
Mittleman Properties at Leveton Business Park
Tualatin, Oregon

Sheet Title:
**LANDSCAPE DETAILS**

Revisions:



Date: 29 September 2017
Drawn by: YYN
Checked by: YYN
Job Number: 116190
Sheet L1.2



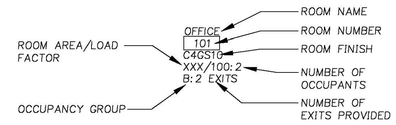

## Floor Plan

0 8 16 32

## General Notes

A. VERIFY AND CONFIRM ALL DIMENSIONS AND CONDITIONS. NOTIFY ARCHITECT OF ANY DISCREPANCIES PRIOR TO START OF WORK.
B. ALL HARDWARE IN ACCORDANCE WITH ANSI 117.1
C. PROVIDE (1) APPROVED FIRE EXTINGUISHER WITH RATING OF NOT LESS THAN 2-A:10B FOR EACH 3,000 SQ.FT. OF FLOOR AREA TRAVEL FROM ANY PORTION OF BUILDING NOT TO EXCEED 75'.
D. FIRE PROTECTION SPRINKLER HEADS TO BE DESIGNED TO ACCOUNT FOR POSSIBLE DEMISING WALL ON GRID LINE 4 OR 5
E. ALL EXPOSED INTERIOR CONCRETE WALLS TO RECEIVE (1) COAT PRIMER, (1) COAT ACRYLIC LATEX, P5 WAREHOUSE "WHITE"
F. ALL EXTERIOR KEYS TO PNWP MASTER

## Room Symbol Legend




## Legend

△ DRIVE-IN DOOR

▲ DOCK-HIGH DOOR

FIRE HYDRANT, MAINTAIN 3'-0" CLEAR BETWEEN FIRE HYDRANT AND FACE OF CURB

(FDC) FIRE DEPARTMENT CONNECTION, MAINTAIN 3'-0" CLEAR BETWEEN FDC AND FACE OF CURB

⊗ LIGHTED EXIT SIGN ON EMERGENCY BACKUP

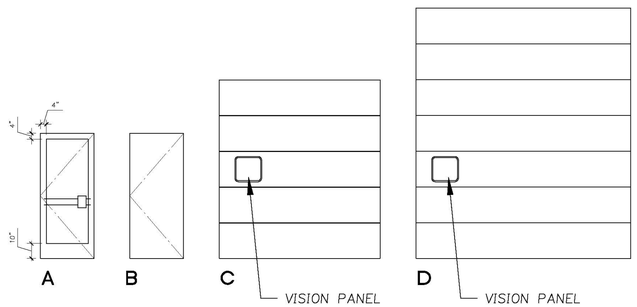
## Door Schedule

(E) EXISTING DOOR (#) DOOR NUMBER SYMBOL

| MARK | NOMINAL SIZE | | | Type | DOOR | | FRAME | | GLAZING | HRDW. | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | WIDTH | HEIGHT | THICK | | MAT'L | FINISH | MAT'L | FINISH | | | |
| 101A | 3'-0" | 8'-0" | 1 3/4" | A | AL | CLR | AL | CLR | -- | 1 | -- |
| 101B | 3'-0" | 8'-0" | 1 3/4" | A | AL | CLR | AL | CLR | -- | 1 | -- |
| 101C | 3'-0" | 8'-0" | 1 3/4" | A | AL | CLR | AL | CLR | -- | 1 | -- |
| 101D | 3'-0" | 8'-0" | 1 3/4" | A | AL | CLR | AL | CLR | -- | 1 | -- |
| 101E | 12'-0" | 14'-0" | 1 3/4" | D | STL | P | STL | -- | -- | -- | -- |
| 101F | 3'-0" | 8'-0" | 1 3/4" | B | HM | P | HM | P | -- | 2 | -- |
| 101G | 9'-0" | 10'-0" | 1 3/4" | C | STL | P | STL | -- | STL | -- | -- |
| 101H | 9'-0" | 10'-0" | 1 3/4" | C | STL | P | STL | -- | STL | -- | -- |
| 101J | 3'-0" | 8'-0" | 1 3/4" | B | HM | P | HM | P | -- | 2 | -- |
| 101K | 12'-0" | 14'-0" | 1 3/4" | D | STL | P | STL | -- | -- | -- | -- |
| 101L | 9'-0" | 10'-0" | 1 3/4" | C | STL | P | STL | -- | -- | -- | -- |
| 101M | 9'-0" | 10'-0" | 1 3/4" | C | STL | P | STL | -- | -- | -- | -- |
| 101N | 3'-0" | 8'-0" | 1 3/4" | B | HM | P | HM | P | -- | 2 | -- |
| 101P | 12'-0" | 14'-0" | 1 3/4" | D | STL | P | STL | -- | -- | -- | -- |
| 101Q | 3'-0" | 8'-0" | 1 3/4" | B | HM | P | HM | P | -- | 2 | -- |
| 101R | 12'-0" | 14'-0" | 1 3/4" | D | STL | P | STL | -- | -- | -- | -- |
| 102A | 3'-0" | 7'-0" | 2" | B | HM | P | HM | P | -- | -- | -- |

LEGEND

| | | | |
|---|---|---|---|
| AL | ALUMINUM | CLR | CLEAR ANODIZED |
| STL | STEEL | PT | PAINT |
| HM | HOLLOW METAL | | |




## Door Types

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REGISTERED ARCHITECT
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JEFFREY A. MILDREN
OREGON
STATE OF OREGON

Client:
Mittleman Properties

Project:
Mittleman Properties at Leveton Business Park

Tualatin, Oregon

Sheet Title:
Floor Plan
Door Schedule

Revisions:



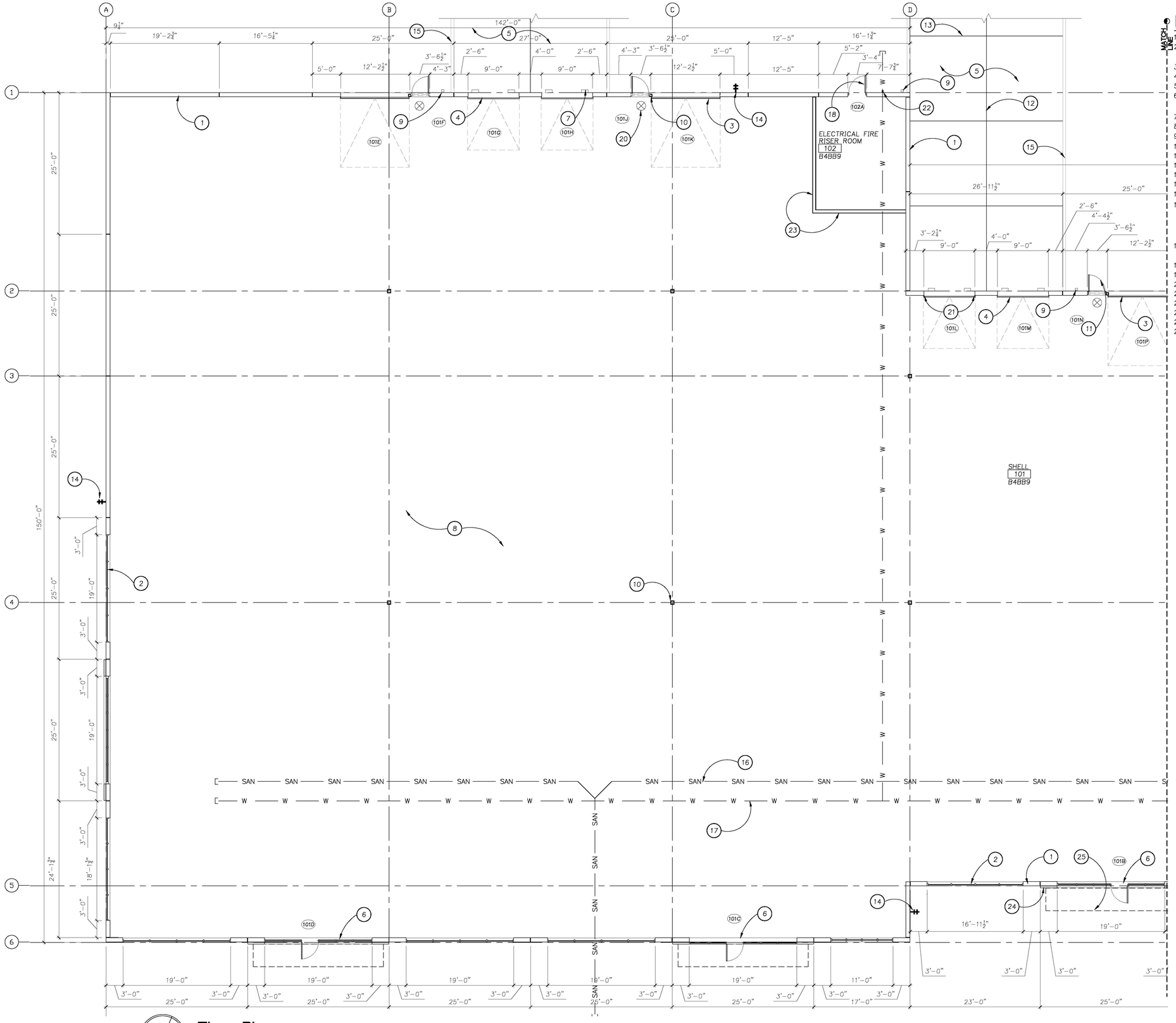
Date: 29 September 2017

Drawn by: Checked by:

Job Number: 116190

Sheet

A2.1




## Keynotes

1. CONCRETE TILT-UP WALL
2. THERMALLY BROKEN ALUMINUM STOREFRONT SYSTEM WITH OFFSET 1" INSULATED GLAZING UNITS
3. DRIVE-IN OVERHEAD DOOR
4. DOCK-HIGH OVERHEAD DOOR
5. CONCRETE TRUCK APRON
6. PROVIDE SIGNAGE AT THIS DOOR STATING "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED"
7. DOCK BUMPERS, TYPICAL AT ALL DOCK DOORS
8. SLAB ON GRADE – SEE STRUCTURAL
9. 5"x 5" DOWNSPOUT
10. TS COLUMN – SEE STRUCTURAL
11. HOLLOW METAL DOOR AND FRAME WITH TRANSOM ABOVE
12. CONSTRUCTION JOINT
13. SAW CUT CONTROL JOINT
14. FROST FREE HOSE BIBB
15. CONCRETE RETAINING WALL WITH 3'-6" CONCRETE GUARD
16. 4"Ø SANITARY SEWER; SLOPE AT 2%. PROVIDE CLEANOUTS AS REQUIRED BY SECTION 707 OF THE 2014 OREGON PLUMBING SPECIALTY CODE. LOCATE CLEANOUTS AT A MINIMUM OF 12" FROM A GRID LINES TO AVOID FUTURE DEMISING WALLS.
17. 1 ½"Ø OVERHEAD INSULATED WATER LINE, PROVIDE "T" AND VALVE AT EACH BAY
18. HM DOOR AND FRAME, PAINTED
19. WALL MOUNTED LIGHT – SEE ELEVATIONS
20. LIGHTED EXIT SIGN
21. DOOR ARMOR, TYPICAL AT ALL OVERHEAD DOORS
22. WATER SHUT OFF VALUE – SEE CIVIL
23. FULL HEIGHT WALL
24. BRICK VENEER – SEE ELEVATIONS
25. CANOPY ABOVE – SEE ELEVATIONS

## Floor Plan

0 8 16 32

**Architectural Review Submittal - September 2017**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JULY 31, 2001
JEFFREY S. MILDREN
STATE OF OREGON

Client:
Mittleman Properties

Project:
Mittleman Properties at Leveton Business Park

Tualatin, Oregon

Sheet Title:
Enlarged Floor Plan

Revisions:



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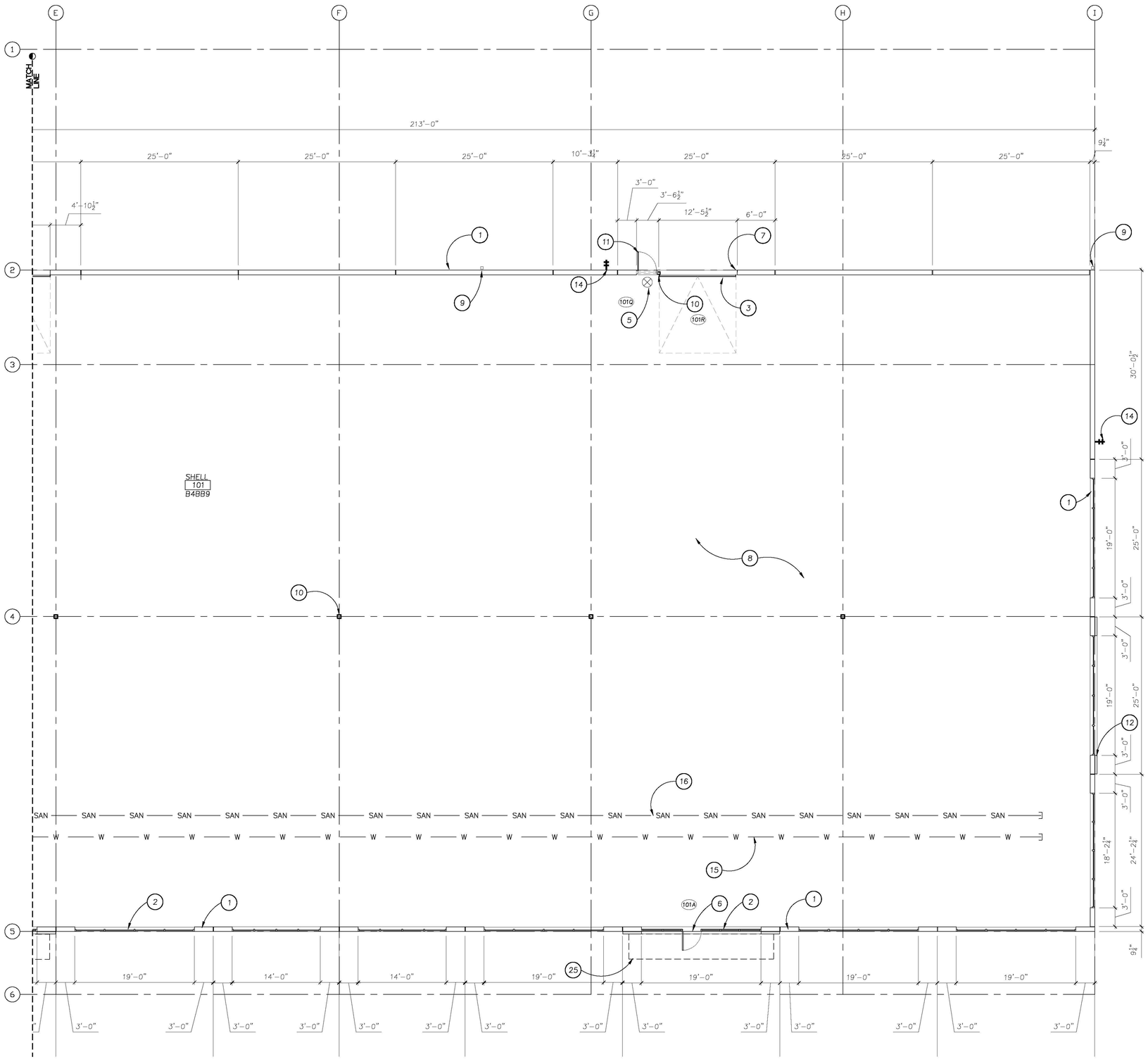
Job Number: 116190
Sheet
A2.2




## Keynotes

1. CONCRETE TILT-UP WALL
2. THERMALLY BROKEN ALUMINUM STOREFRONT SYSTEM WITH OFFSET 1" INSULATED GLAZING UNITS
3. DRIVE-IN OVERHEAD DOOR
4. WALL MOUNTED LIGHT – SEE ELEVATIONS
5. LIGHTED EXIT SIGN
6. PROVIDE SIGNAGE AT THIS DOOR STATING "THIS DOOR TO REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED"
7. DOOR ARMOR, TYPICAL AT ALL OVERHEAD DOORS
8. SLAB ON GRADE – SEE STRUCTURAL
9. 5"x 5" DOWNSPOUT
10. TS COLUMN – SEE STRUCTURAL
11. HOLLOW METAL DOOR AND FRAME WITH TRANSOM ABOVE
12. BRICK VENEER – SEE ELEVATIONS
13. FROST FREE HOSE BIBB
14. 4"Ø SANITARY SEWER; SLOPE AT 2%. PROVIDE CLEANOUTS AS REQUIRED BY SECTION 707 OF THE 2014 OREGON PLUMBING SPECIALTY CODE. LOCATE CLEANOUTS AT A MINIMUM OF 12" FROM A GRID LINES TO AVOID FUTURE DEMISING WALLS.
15. 1 ½"Ø OVERHEAD INSULATED WATER LINE, PROVIDE "T" AND VALVE AT EACH BAY

## Floor Plan

0 8 16 32

Architectural Review Submittal - September 2017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REGISTERED ARCHITECT
3056
WILLIAM F. MILDREN
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STATE OF OREGON

Client:
Mittleman Properties

Project:
Mittleman Properties at Leveton Business Park

Tualatin, Oregon

Sheet Title:
Enlarged Floor Plan

Revisions:

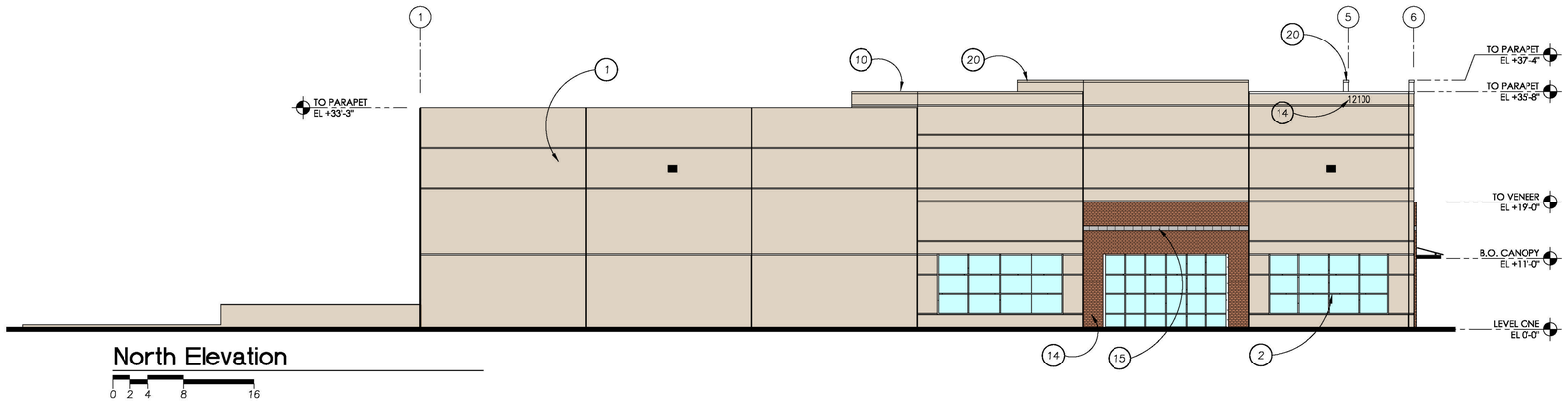


Date: 29 September 2017

Drawn by: Checked by:

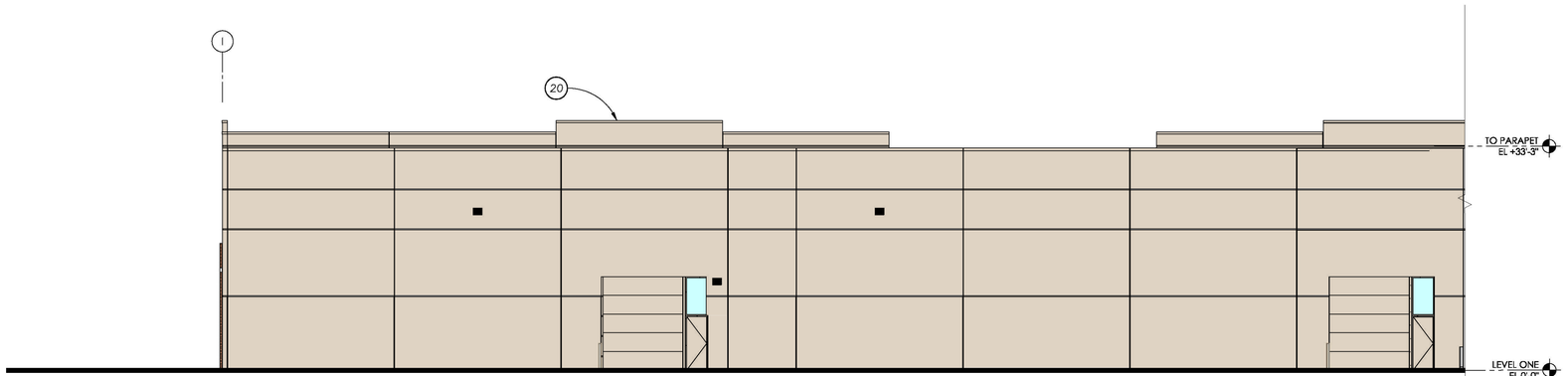
Job Number: 116190

Sheet A2.3



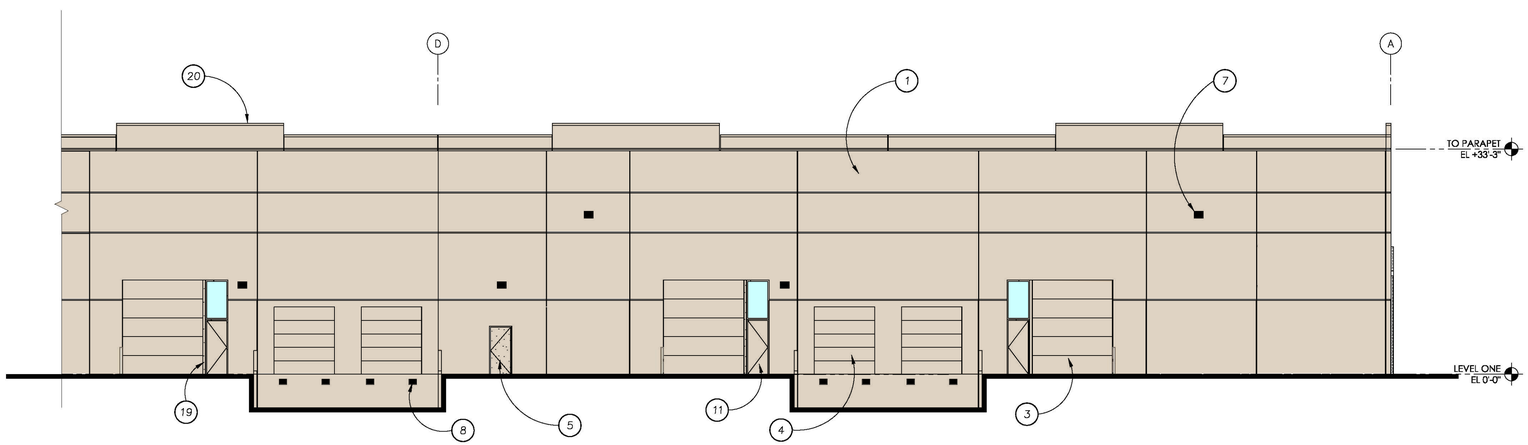

## North Elevation

0 2 4 8 16




## East Elevation

0 2 4 8 16




## East Elevation

0 2 4 8 16

## Keynotes

1. CONCRETE TILT-UP WALL, PAINTED P-1, TYPICAL U.N.O.
2. ALUMINUM STOREFRONT WITH 1" INSULATED GLAZING UNITS
3. OVERHEAD DOCK DOOR, PAINTED P-1
4. OVERHEAD DOCK DOOR, PAINTED P-1
5. HOLLOW METAL DOOR, PAINTED P-1
6. 6" CONCRETE FILLED PIPE BOLLARD, PAINTED HAZARD YELLOW
7. WALL MOUNTED LIGHT - PAINT HOUSING TO MATCH WALL ADJACENT COLOR
8. DOCK BUMPERS
9. CONCRETE RETAINING WALL AND GUARD, PAINTED P-1
10. CAP FLASHING, PAINTED P-1
11. HOLLOW METAL DOOR AND FRAME WITH TRANSOM ABOVE, DOOR AND FRAME PAINTED P-1
12. BIKE RACK, PAINTED P-2
13. 2" REVEAL
14. BUILDING SIGNAGE, 12" HIGH, 1" THICK DYNAFOAM WITH PLASTIC OVERLAY
15. GUTTER AND DOWNSPOUT, PAINTED P-1
16. T.S. JAMB, PAINTED P-1
17. BRICK VENEER, RUNNING BOND
18. BRICK VENEER, BRICK ON EDGE
19. GLASS CANOPY WITH STEEL FRAME, PAINTED P-2
20. PARAPET BEYOND

EXTERIOR MATERIALS/COLORS:

TILE-UP PANEL COLOR:
P-1: "NATURAL LINEN" SHERWIN-WILLIAMS # 9109

BIKE RACKS:
COLOR: "INKWELL" SHERWIN-WILLIAMS # 6992

ALUMINUM STOREFRONT:
THERMALLY BROKEN SYSTEM WITH CLEAR GLAZING;
COLOR: BLACK

OVERHEAD DOORS - MANUFACTURER TBD;
P-1: "NATURAL LINEN" SHERWIN-WILLIAMS # 9109

H.M. DOORS AND FRAMES:
COLOR: "NATURAL LINEN" SHERWIN-WILLIAMS # 9109

CANOPIES:
CLEAR GLASS WITH STEEL FRAMING
FRAMING COLOR: "INKWELL" SHERWIN-WILLIAMS # 6992

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REGISTERED ARCHITECT
OREGON
JULIE C. TRUMAN
3056
EXPIRATION DATE: 12/31/17
STATE OF OREGON

Client:
Mittleman Properties

Project:
Mittleman Properties at Leveton Business Park

Tualatin, Oregon

Sheet Title:
Building Elevations Option 1

Revisions:



Date: 29 September 2017

Drawn by: CLT/JCM

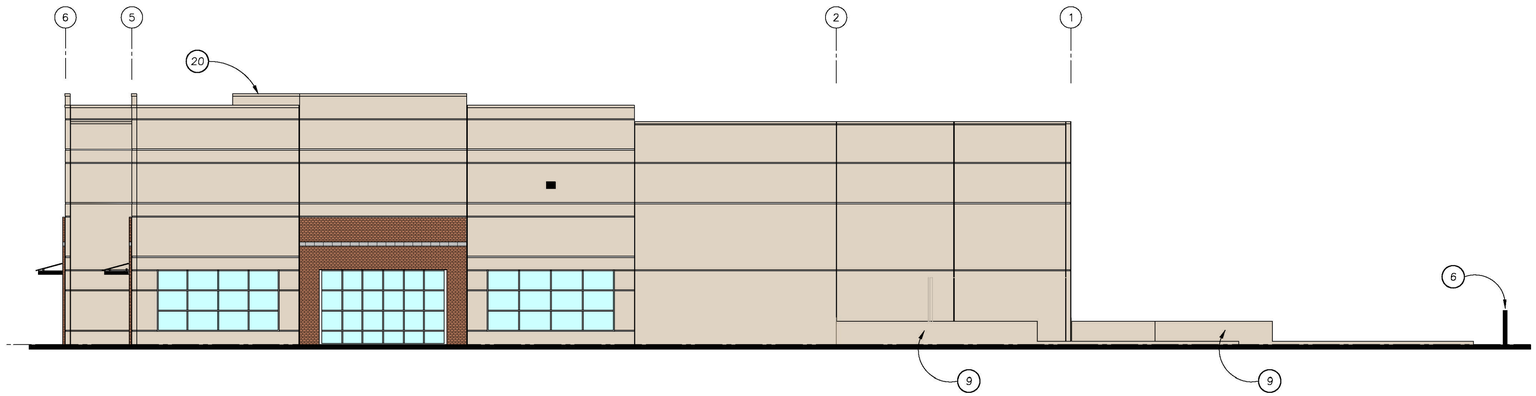
Checked by:

Job Number: 116190

Sheet

A3.1

Architectural Review Submittal - September 2017




## South Elevation

0 2 4 8 16

## Keynotes

1. CONCRETE TILT-UP WALL, PAINTED P-1, TYPICAL U.N.O.
2. ALUMINUM STOREFRONT WITH 1" INSULATED GLAZING UNITS
3. OVERHEAD DOCK DOOR, PAINTED P-1
4. OVERHEAD DOCK DOOR, PAINTED P-1
5. HOLLOW METAL DOOR, PAINTED P-3
6. 6" CONCRETE FILLED PIPE BOLLARD, PAINTED HAZARD YELLOW
7. WALL MOUNTED LIGHT - PAINT HOUSING TO MATCH WALL ADJACENT COLOR
8. DOCK BUMPERS
9. CONCRETE RETAINING WALL AND GUARD, PAINTED P-1
10. CAP FLASHING, PAINTED P-1
11. HOLLOW METAL DOOR AND FRAME WITH TRANSOM ABOVE, DOOR AND FRAME PAINTED P-1
12. BIKE RACK, PAINTED P-2
13. 2" REVEAL
14. BUILDING SIGNAGE, 12" HIGH, 1" THICK DYNAFOAM WITH PLASTIC OVERLAY
15. GUTTER AND DOWNSPOUT, PAINTED P-1
16. T.S. JAMB, PAINTED P-1
17. BRICK VENEER, RUNNING BOND
18. BRICK VENEER, BRICK ON EDGE
19. GLASS CANOPY WITH STEEL FRAME, PAINTED P-2
20. PARAPET BEYOND

EXTERIOR MATERIALS/COLORS:

TILE-UP PANEL COLOR:
P-1: "NATURAL LINEN" SHERWIN-WILLIAMS # 9109

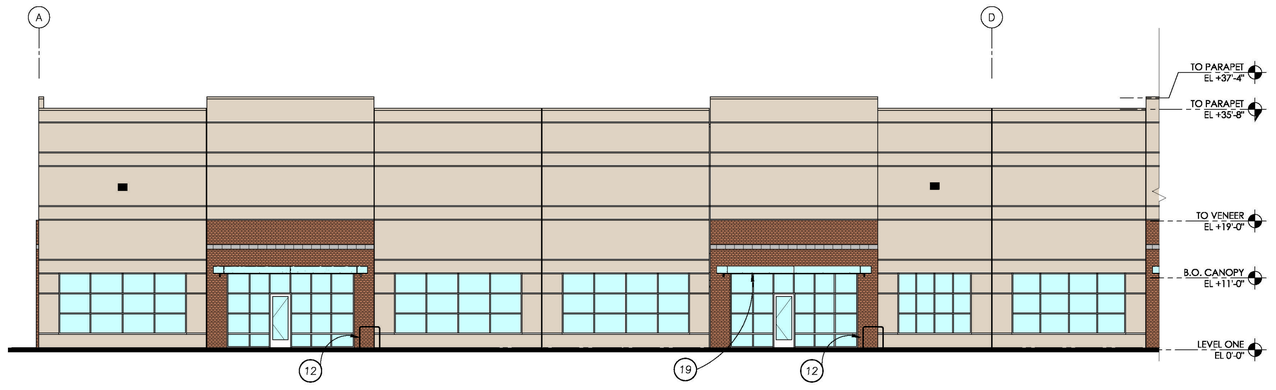
BIKE RACKS:
COLOR: "INKWELL" SHERWIN-WILLIAMS # 6992

ALUMINUM STOREFRONT:
THERMALLY BROKEN SYSTEM WITH CLEAR GLAZING;
COLOR: BLACK

OVERHEAD DOORS - MANUFACTURER TBD;
P-1: "NATURAL LINEN" SHERWIN-WILLIAMS # 9109

H.M. DOORS AND FRAMES:
COLOR: "NATURAL LINEN" SHERWIN-WILLIAMS # 9109

CANOPIES:
CLEAR GLASS WITH STEEL FRAMING
FRAMING COLOR: "INKWELL" SHERWIN-WILLIAMS # 6992




## West Elevation

0 2 4 8 16


## West Elevation

0 2 4 8 16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REGISTERED ARCHITECT
3056
JOHN C. MILDREN
OREGON
EXPIRES: 12-31-17
STATE OF OREGON

Client:
Mittleman Properties

Project:
Mittleman Properties at Leveton Business Park

Tualatin, Oregon

Sheet Title:
Building Elevations Option 1

Revisions:



Date: 29 September 2017
Drawn by: CLT/JCM
Checked by:
Job Number: 116190
Sheet

| Luminaire Schedule | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Symbol | Qty | Catalog Description | Label | Total Lamp Lumens | LLF | Description | Arr. Watts | Arr. Lum. Lumens |
| □ | 11 | DSX1 LED 30C 700 40K TFTM MVO | SA | N.A. | 0.850 | DSX1 LED 30C 700 40K TFTM MVOLT | 68 | 8222 |
| ◇ | 8 | WST LED 2 10A700 40K SR4 MVOL | SB | N.A. | 0.850 | WST LED 2 10A700 40K SR4 MVOLT | 47 | 3839 |
| ◇ | 8 | EVO CYL 35 10 WD LS | SC | N.A. | 0.850 | EVO CYL 35 10 WD LS | 18.4 | 1115 |
| H | 2 | KVE2 250M ASY HS (PULSE START | (E) | 23500 | 0.750 | KVE2 250M ASY HS (PULSE START) | 288 | 12444 |

| Calculation Summary | | | | | | | |
|---|---|---|---|---|---|---|---|
| Label | CalcType | Units | Avg | Max | Min | Avg/Min | Max/Min |
| ADA PARKING | Illuminance | Fc | 1.18 | 1.6 | 0.9 | 1.31 | 1.78 |
| OVERALL PARKING | Illuminance | Fc | 0.77 | 7.6 | 0.0 | N.A. | N.A. |
| PEDESTRIAN PATHS & ENTRIES | Illuminance | Fc | 1.94 | 8.1 | 0.3 | 6.47 | 27.00 |

1 ELC1.0 SITE PHOTOMETRIC
SCALE: 1"=20'-0"
0 10' 20' 40'

Xref Copyrite.dwg

PLOTTED: DANIEL DERHEIMER 8/29/2017 4:05 PM
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MK
MKE & ASSOCIATES, INC.
CONSULTING ENGINEERS
MECHANICAL AND ELECTRICAL SYSTEMS
6915 SW MACADAM AVE.
SUITE 200
PORTLAND, OREGON 97219
PHONE: 503.892.1188
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engineering@mke-inc.com


REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 20, 1985
STEPHEN M. LOEHMAN
EXPIRES: 12/31/18

Not for Construction Information

Developer:

Portland, Oregon 97210

Project:
Mittleton Properties

Sheet Title:

Revisions:



Date: 27 Sept. 2017

Drawn by: DD | Checked by: SL

Job Number:

Sheet
ELC1.0

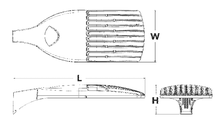
Check Set

# D-Series Size 1
## LED Area Luminaire

d-series

Catalog Number
Notes
Type 'SA-60C-TFTM' & 'SA-30C-TFTM'

Specifications
EPA: 1.01 ft² (0.09 m²)
Length: 35" (88.8 cm)
Width: 13" (33.0 cm)
Height: 7-1/2" (19.0 cm)
Weight (max): 27 lbs (12.2kg)




### Capable Luminaire
This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.
- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency.
- This luminaire is A+ Certified when ordered with DTL® control's marked by a shaded background. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocontrol interoperability†
- This luminaire is part of an A+ Certified solution for ROAM®X or XPoint™ Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a shaded background.

To learn more about A+, visit www.acuitybrands.com/aplus.
1. See ordering tree for details.
2. A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire. Sold Separately: Link to ROAM | Link to XPT | DLL

A+ Capable options indicated by this color background.

## Ordering Information
**EXAMPLE:** DSX1 LED 60C 1000 40K T3M MVOLT SPA DDBXD

**DSX1LED**

| Series | Lm | Drive current | Color temperature | Distribution | | | Voltage | Mounting |
|---|---|---|---|---|---|---|---|---|
| DSX1 LED | **Forward optics**<br>**30C** 3000 lm (two engines)<br>**40C** 4000 lm (two engines)<br>**60C** 6000 lm (two engines)<br>**Rotated optics**<br>**60C** 6000 lm (two engines) | 530 530 mA<br>700 700 mA<br>1000 1000 mA (1 A) | 30K 3000 K<br>40K 4000 K<br>50K 5000 K<br>AMBPC Amber phosphor converted | T1S Type I short<br>T2S Type II short<br>T2M Type II medium<br>T3M Type III medium<br>T3LG Type III long<br>T4M Type IV medium<br>TFTM Forward throw medium<br>T5VS Type V very short<br>T5S Type V short<br>T5M Type V medium<br>T5W Type V wide<br>BLC Backlight control[17]<br>LCCO Left corner cutoff[17]<br>RCCO Right corner cutoff[17] | SPA Square pole mounting<br>RPA Round pole mounting<br>WBA Wall bracket<br>SPABBA Square pole universal mounting adaptor[7]<br>RPABBA Round pole universal mounting adaptor[7]<br>**Ordered and shipped separately**<br>KMA8 DDBXD U Mast arm mounting bracket adaptor (see accessories)[7] | MVOLT[1] 120V-277V[1]<br>120[1] 120V[1]<br>208[1] 208V[1]<br>240[1] 240V[1]<br>277[1] 277V[1]<br>347[1,2] 347V[1,2]<br>480[1,2] 480V[1,2] | **Shipped included**<br>(blank) Surface mounting bracket<br>**Shipped separately**<br>BSW Surface-mounted back box[3]<br>PBBW Premium surface-mounted back box[3] |

| Control options | | Other options | | Finish (required) |
|---|---|---|---|---|
| **Shipped installed** | | **Shipped installed** | | DDBXD Dark bronze |
| PER NEMA twist-lock receptacle only (Controls ordered separately)[4] | BL30 Bi-level switched dimming, 30% blight[5,6,8] | HS House-side shield[9] | | DBLXD Black |
| PERS Five-wire receptacle only (Controls ordered separately)[4] | BL50 Bi-level switched dimming, 50% bight[5,6,8] | WTB Utility terminal block[9] | | DNAXD Natural aluminum |
| PE Photoelectric cell, button type | PIR480DTD3 Part night, dim 3 hrs[6,8] | SF Single fuse (120, 277, 347V)[9] | | DWHXD White |
| DMG 0-10V dimming extend out back of housing for external control (not to exit)[4] | PIR480DTD5 Part night, dim 5 hrs[6,8] | DF Double fuse (208, 240, 480V)[9] | | DDBTXD Textured dark bronze |
| PIR Motion/ambient light sensor, 8-15' mounting height, ambient sensor enabled at 5fc[4] | PIR480DTD7 Part night, dim 7 hrs[6,8] | | | DBLBXD Textured black |
| PIRTFC2V Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[4] | PIR480FAU Field adjustable output[8] | **Shipped separately** | | DNATXD Textured natural aluminum |
| PIRH Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[4] | | HSPW House-side shield[9] | | DWHGXD Textured white |
| PIRHFC2V Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[4] | | VG Vandal guard[10] | | DSSTXD Textured sandstone |
| PIRTFC3V Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[4] | | WG Wire guard[10] | | |

**Accessories**
Ordered and shipped separately.
MOUNTING ADAPTER Pendant adaptor (specify finish)
WGUARD Wire guard
RPAB Round pole adaptor
SPAB Square pole adaptor
KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)

NOTES
1 MVOLT driver operates on any line voltage from 120V through 277V (50 or 60 Hz). 208, 240 or 277 options only when ordering with button type photocell (PE), fusing (SF, DF), or dual switching (DS).
2 Also available as a separate accessory; see accessories information.
3 Top conduit entry standard.
4 Not available with E7WH, E7WC, E7WHR, E2WHC, E2WHR, or E2WHR. Not available with PE, PER, PERS, PE7, PER7, or PERS.
5 Not available with MVOLT option. Button photocell (PE) can be ordered with a dedicated voltage option. Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
6 Not available with E7WH, E7WC, E7WHR, E2WHC, E2WHR, or E2WHR. Used with 1/0 DMX driver. Not available with PIR, PIRH, PIR1FC3V, PIRHFC3V, PIR7FC3V, PIR7, PIR7FC3V, PIRH1FC3V, PIR1FC3V, PIR7FC3V, PIRTFC2V, PIRTFC3V, PIRTFC4V, PIRTFC5V, PIRTFC6V, PIRTFC7V, PIRTFC8V, PIRTFC9V, PIRTFC10V, PIRTFC11V, PIRTFC12V, PIRTFC13V, PIRTFC14V, PIRTFC15V, PIRTFC16V, PIRTFC17V, PIRTFC18V, PIRTFC19V, PIRTFC20V, PIRTFC21V, PIRTFC22V, PIRTFC23V, PIRTFC24V, PIRTFC25V, PIRTFC26V, PIRTFC27V, PIRTFC28V, PIRTFC29V, PIRTFC30V, PIRTFC31V, PIRTFC32V, PIRTFC33V, PIRTFC34V, PIRTFC35V, PIRTFC36V, PIRTFC37V, PIRTFC38V, PIRTFC39V, PIRTFC40V, PIRTFC41V, PIRTFC42V, PIRTFC43V, PIRTFC44V, PIRTFC45V, PIRTFC46V, PIRTFC47V, PIRTFC48V, PIRTFC49V, PIRTFC50V, PIRTFC51V, PIRTFC52V, PIRTFC53V, PIRTFC54V, PIRTFC55V, PIRTFC56V, PIRTFC57V, PIRTFC58V, PIRTFC59V, PIRTFC60V, PIRTFC61V, PIRTFC62V, PIRTFC63V, PIRTFC64V, PIRTFC65V, PIRTFC66V, PIRTFC67V, PIRTFC68V, PIRTFC69V, PIRTFC70V, PIRTFC71V, PIRTFC72V, PIRTFC73V, PIRTFC74V, PIRTFC75V, PIRTFC76V, PIRTFC77V, PIRTFC78V, PIRTFC79V, PIRTFC80V, PIRTFC81V, PIRTFC82V, PIRTFC83V, 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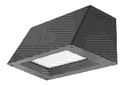


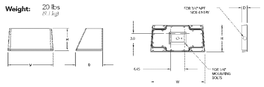
# WST LED
## Architectural Wall Sconce

Catalog Number
Notes
Type 'SB'

### Introduction
The WST LED is designed with the specifier in mind. The traditional, trapezoidal shape offers a soft, non-pixilated light source for end-user visual comfort. For emergency egress lighting, the WST LED offers six battery options, including remote. For additional code compliance and energy savings, there is also a Bi-level motion sensor option. With so many standard and optional features, three lumen packages, and high LPW, the WST LED is your "go to" luminaire for most any application.

### Specifications
**Luminaire**
Height: 8-1/2" (21.59 cm)
Width: 17" (43.18 cm)
Depth: 10-3/16" (25.9 cm)
Weight: 20 lbs (9.1 kg)

### Optional Back Box (BBW)
Height: 4" (10.2 cm)
Width: 5-1/2" (14.0 cm)
Depth: 1-1/2" (3.8 cm)




## Ordering Information
**EXAMPLE:** WST LED P1 40K VF MVOLT DDBTXD

**WST LED**

| Series | Performance Package | Color temperature | Distribution | Voltage | Mounting |
|---|---|---|---|---|---|
| WST LED | P1 1,400 lumen package<br>P2 3,000 lumen package<br>P3 6,000 lumen package | 27K 2700K<br>30K 3000K<br>40K 4000K<br>50K 5000K | VF Visual comfort forward throw<br>VW Visual comfort wide | MVOLT[1] 120V-277V[1]<br>120V[1]<br>240V[1] | 277[1]<br>347[1]<br>480[1] |

**Shipped included**
(blank) Surface mounting bracket
**Shipped separately**
BSW Surface-mounted back box[2]
PBBW Premium surface-mounted back box[2]

| Options | | Finish (required) |
|---|---|---|
| PE Photoelectric cell, button type | E7WC Emergency battery backup (cold, 7W)[3,4] | DDBXD Dark bronze |
| PER NEMA twist-lock receptacle only | E7WHR Remote emergency battery backup (remote 7W)[3,4] | DBLXD Black |
| PERS Five-wire receptacle only | E2WHR Emergency battery backup (10W)[3,4] | DNAXD Natural aluminum |
| PIR7 Motion/ambient light sensor, 8-15' mounting height | E2WHC Emergency battery backup (cold, 10W)[3,4] | DWHXD White |
| DMG 0-10V dimming extend out back of housing for external control (no exit only)[5] | E2WHRR Remote emergency battery backup (remote 20W)[3,4] | DSSTXD Sandstone |
| PIR Motion/ambient light sensor, 8-15' mounting height | ULL Left-side conduit entry[6] | DDBTXD Textured dark bronze |
| PIR7FC2V Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[5] | RCE Right-side conduit entry[6] | DBLBXD Textured black |
| PIRH Motion/ambient light sensor, 15-30' mounting height | **Shipped separately** | DNATXD Textured natural aluminum |
| PIRH1FC2V Motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[5] | HSPW House-side shield[7] | DWHGXD Textured white |
| | VG Vandal guard[8] | DSSTXD Textured sandstone |
| | WG Wire guard[8] | |

NOTES
1 MVOLT driver operates on any line voltage from 120V through 277V (50 or 60 Hz).
2 Premium surface-mounted back box (PBBW) must be ordered with fixture. Not available with PE, PER, PERS, PE7, PER7, or PERS.
3 Not available with MVOLT option. Button photocell (PE) can be ordered with a dedicated voltage option. Single fuse (SF) requires 120, 277 or 347 voltage option. Double fuse (DF) requires 208, 240 or 480 voltage option.
4 Not available with E7WH, E7WC, E7WHR, E2WHR, E2WHC, E2WHR, or E2WHR. Used with 1/0 DMX driver. Not available with PIR, PIRH, PIR1FC3V, PIRHFC3V, PIR7FC3V, PIR7, PIR7FC3V, PIRH1FC3V, PIR1FC3V, PIR7FC3V, PIRTFC2V, PIRTFC3V, PIRTFC4V, PIRTFC5V, PIRTFC6V, PIRTFC7V, PIRTFC8V, PIRTFC9V, PIRTFC10V, PIRTFC11V, PIRTFC12V, PIRTFC13V, PIRTFC14V, PIRTFC15V, PIRTFC16V, PIRTFC17V, PIRTFC18V, PIRTFC19V, PIRTFC20V, PIRTFC21V, PIRTFC22V, PIRTFC23V, PIRTFC24V, PIRTFC25V, PIRTFC26V, PIRTFC27V, PIRTFC28V, PIRTFC29V, PIRTFC30V, PIRTFC31V, PIRTFC32V, PIRTFC33V, PIRTFC34V, PIRTFC35V, PIRTFC36V, PIRTFC37V, PIRTFC38V, PIRTFC39V, PIRTFC40V, PIRTFC41V, PIRTFC42V, PIRTFC43V, PIRTFC44V, PIRTFC45V, PIRTFC46V, PIRTFC47V, PIRTFC48V, PIRTFC49V, PIRTFC50V, PIRTFC51V, PIRTFC52V, PIRTFC53V, PIRTFC54V, PIRTFC55V, PIRTFC56V, PIRTFC57V, PIRTFC58V, PIRTFC59V, PIRTFC60V, PIRTFC61V, PIRTFC62V, PIRTFC63V, PIRTFC64V, PIRTFC65V, PIRTFC66V, PIRTFC67V, PIRTFC68V, PIRTFC69V, PIRTFC70V, PIRTFC71V, PIRTFC72V, PIRTFC73V, PIRTFC74V, PIRTFC75V, PIRTFC76V, PIRTFC77V, PIRTFC78V, PIRTFC79V, PIRTFC80V, PIRTFC81V, PIRTFC82V, PIRTFC83V, PIRTFC84V, PIRTFC85V, PIRTFC86V, PIRTFC87V, PIRTFC88V, PIRTFC89V, PIRTFC90V, PIRTFC91V, PIRTFC92V, PIRTFC93V, PIRTFC94V, PIRTFC95V, PIRTFC96V, PIRTFC97V, PIRTFC98V, PIRTFC99V, PIRTFC100V, PIRTFC101V, PIRTFC102V, PIRTFC103V, PIRTFC104V, PIRTFC105V, PIRTFC106V, PIRTFC107V, PIRTFC108V, PIRTFC109V, PIRTFC110V, PIRTFC111V, PIRTFC112V, PIRTFC113V, PIRTFC114V, PIRTFC115V, PIRTFC116V, PIRTFC117V, PIRTFC118V, PIRTFC119V, PIRTFC120V, PIRTFC121V, PIRTFC122V, PIRTFC123V, PIRTFC124V, PIRTFC125V, PIRTFC126V, PIRTFC127V, PIRTFC128V, PIRTFC129V, PIRTFC130V, PIRTFC131V, PIRTFC132V, PIRTFC133V, PIRTFC134V, PIRTFC135V, PIRTFC136V, PIRTFC137V, PIRTFC138V, PIRTFC139V, PIRTFC140V, PIRTFC141V, PIRTFC142V, PIRTFC143V, PIRTFC144V, PIRTFC145V, PIRTFC146V, PIRTFC147V, PIRTFC148V, PIRTFC149V, PIRTFC150V, PIRTFC151V, PIRTFC152V, PIRTFC153V, PIRTFC154V, PIRTFC155V, PIRTFC156V, PIRTFC157V, PIRTFC158V, PIRTFC159V, PIRTFC160V, PIRTFC161V, PIRTFC162V, PIRTFC163V, PIRTFC164V, PIRTFC165V, PIRTFC166V, PIRTFC167V, PIRTFC168V, PIRTFC169V, PIRTFC170V, PIRTFC171V, PIRTFC172V, PIRTFC173V, PIRTFC174V, PIRTFC175V, PIRTFC176V, PIRTFC177V, PIRTFC178V, PIRTFC179V, PIRTFC180V, PIRTFC181V, PIRTFC182V, PIRTFC183V, PIRTFC184V, PIRTFC185V, PIRTFC186V, PIRTFC187V, PIRTFC188V, PIRTFC189V, PIRTFC190V, PIRTFC191V, PIRTFC192V, PIRTFC193V, PIRTFC194V, PIRTFC195V, PIRTFC196V, PIRTFC197V, PIRTFC198V, PIRTFC199V, PIRTFC200V, PIRTFC201V, PIRTFC202V, PIRTFC203V, PIRTFC204V, PIRTFC205V, PIRTFC206V, PIRTFC207V, PIRTFC208V, PIRTFC209V, PIRTFC210V, PIRTFC211V, PIRTFC212V, PIRTFC213V, PIRTFC214V, PIRTFC215V, PIRTFC216V, PIRTFC217V, PIRTFC218V, PIRTFC219V, PIRTFC220V, PIRTFC221V, PIRTFC222V, PIRTFC223V, PIRTFC224V, PIRTFC225V, PIRTFC226V, PIRTFC227V, PIRTFC228V, PIRTFC229V, PIRTFC230V, PIRTFC231V, PIRTFC232V, PIRTFC233V, PIRTFC234V, PIRTFC235V, PIRTFC236V, PIRTFC237V, PIRTFC238V, PIRTFC239V, PIRTFC240V, PIRTFC241V, PIRTFC242V, PIRTFC243V, PIRTFC244V, PIRTFC245V, PIRTFC246V, PIRTFC247V, PIRTFC248V, PIRTFC249V, PIRTFC250V, PIRTFC251V, PIRTFC252V, PIRTFC253V, PIRTFC254V, PIRTFC255V, PIRTFC256V, PIRTFC257V, PIRTFC258V, PIRTFC259V, PIRTFC260V, PIRTFC261V, PIRTFC262V, PIRTFC263V, PIRTFC264V, PIRTFC265V, PIRTFC266V, PIRTFC267V, PIRTFC268V, PIRTFC269