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MEMORANDUM

Date: May 1, 2018 Project #: 21001.0

To: Jacob Graichen, City of St Helens
Ken Shonkwiler, Oregon Department of Transportation (ODOT)

From: Matt Bell, Krista Purser, and Chris Brehmer, Kittelson & Associates, Inc.

Project: St Helens Riverfront Connector Plan

Subject: Existing Transportation System Conditions (Subtask 4.8)

TRANSPORTATION CONDITIONS OVERVIEW

This memorandum documents existing transportation system conditions in the southeast part of St. Helens in support of the St. Helens Riverfront Connector Plan. The information provided in this memorandum is intended to convey an understanding of existing infrastructure as well as opportunities and constraints in improving safety and mobility within the study area. This information is formatted to provide an overview of the study area and available facilities, information regarding known capacity and connectivity limitations, and an initial overview of potential improvement options identified to date. Policy and system planning information presented herein is based on a review of the adopted 2011 *City of St. Helens Transportation System Plan* (TSP, City Ordinance 3150), the 2015 *St. Helens - US 30 & Columbia Blvd./St. Helens St. Corridor Master Plan* (Corridor Plan, City Ordinance 3181), and the Waterfront Redevelopment Plan. Information from the adopted documents is supplemented by additional field data collection, updated information provided by the City and ODOT where noted as well as discussions with the project team.

EXECUTIVE SUMMARY

Key findings of this memorandum are as follows:

- The westbound (non-state) approach to the US 30/Millard Road intersection operates over capacity during the weekday p.m. peak hour. All remaining study intersections currently operate acceptably per the adopted City and ODOT intersection performance standards during the weekday a.m. and p.m. peak hours.
- The locations of access driveways along several study roadways are closer than applicable minimum access spacing standards would otherwise allow, especially within Old Portland Road's residential areas.
    - The driveway locations along City street closer than desired were constructed prior to the City adopting access spacing standards in 2011.

- Review of existing pedestrian facilities using a Pedestrian Level of Traffic Stress (PLTS) assessment methodology employed by ODOT found that all study roadway segments are rated with high traffic stress for pedestrians (PLTS 3 or PLTS 4 on a scale of 1 to 4).
    - Most of the study roadway segments fall outside the downtown core area and currently lack sidewalk facilities.
    - The rankings also reflect factors including pavement in poor condition (where there are no sidewalks), narrow facility widths, and/or a lack of illumination.
- Existing bicycle facilities were assessed using a Bicycle Level of Traffic Stress (BLTS) assessment methodology employed by ODOT, also on a scale of 1 (low stress) to 4 (high stress).
    - A relatively short segment of Old Portland Road within the downtown area was ranked BLTS 1 reflecting provision of striped bicycle lanes and a posted 25 miles per hour (mph) speed limit along the roadway.
    - Segments along US 30, Old Portland Road, and Gable Road with bicycle lanes are rated high stress (BLTS 4) due to narrow widths and adjacency to relatively high-speed traffic. (30 mph or higher)
    - Of the remaining segments rated with high traffic stress (BLTS 3 or BLTS 4), the facilities convey mixed traffic segments with relatively high-speed traffic.
- Local fixed-route, flex route, and dial-a-ride transit service is provided through St. Helens. The South County Flex route currently operates along Old Portland Road.
- The crash history of study intersections and road segments was reviewed to identify potential safety considerations.
    - Crash rates at the S 1st Street/St. Helens Street, Port Avenue/Old Portland Road, and Millard Road/US 30 intersections exceed critical crash rates identified by ODOT, suggesting the need for further investigation and consideration as future conditions and improvement options are assessed.
    - The Millard Road segment crash rate between McNulty Way and Old Portland Road exceeds the statewide average crash rate for similar facilities, also suggesting the need for consideration of improvements along the facility.
    - One fatality was reported midblock on Old Portland Road, approximately 1,300 feet south of its intersection with Gable Road. The fatality report documented a head-on collision attributed to a driver under the influence who was speeding and lost control of the vehicle. No other fatalities were reported in the study area.

This memorandum was reviewed and revised based on input from the project management team (PMT), the Committee Overseeing Overt Long-range Passageway Planning (COOLPPL), and the public during upcoming project meetings.

STUDY AREA

The study area is generally located east of the Columbia River Highway (US 30) and south of Columbia Boulevard. The study area consists of the roadways and intersections that connect US 30 to the Riverfront. This section provides an overview of the study area roadways, intersections, and adjacent land uses. The study area is shown in Figure 1.

STUDY AREA ROADWAYS

The study area roadways include primary and secondary facilities. The primary roadways provide direct access to the Riverfront from US 30 as well as other parts of the City. A large focus of the project is on identifying potential treatments to improve the multimodal environment along the primary roadways. The primary roadways include:

- Gable Road – US 30 to Old Portland Road
- Old Portland Road – Gable Road to Plymouth Street
- Plymouth Street – Old Portland Road to 1st Street
- 1st Street – Plymouth Road to St Helens Street

The secondary roadways provide alternative access to the Riverfront via the primary roadways. The project will also identify potential treatments to improve the multimodal environment along the secondary roadway; however, treatment emphasis is placed on primary facilities. The secondary roadways include:

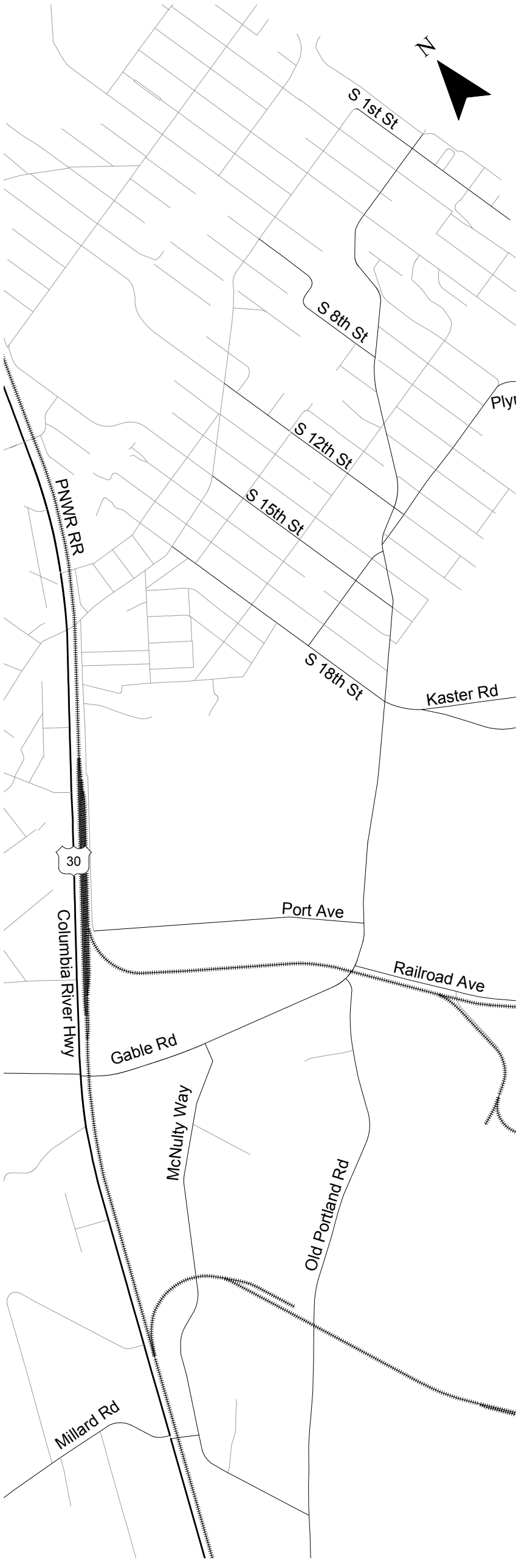
- McNulty Way from Millard Road to Gable Road
- Millard Road from McNulty Way to Old Portland Road
- Old Portland Road from the City's southern Urban Growth Boundary (UGB) to Gable Road

STUDY INTERSECTIONS

The study intersections were identified to evaluate existing traffic operations and safety at key points along the study area roadways. The study intersections include:

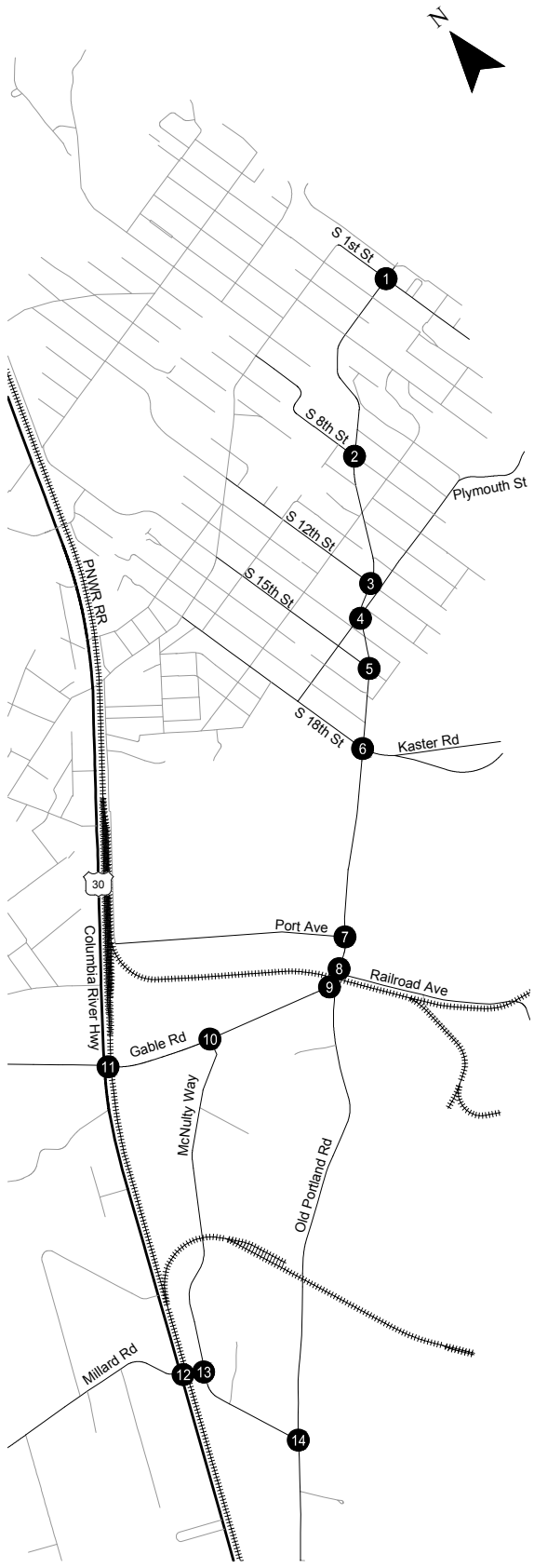
1. St Helens Street/S 1st Street
2. Old Portland Road/S 8th Street
3. Old Portland Road/S 12th Street
4. Old Portland Road/Plymouth Street
5. Old Portland Road/S 15th Street
6. Old Portland Road/S 18th Street/S Kaster Road
7. Old Portland Road/Port Avenue
8. Old Portland Road/Railroad Avenue
9. Old Portland Road/Gable Road
10. McNulty Way/Gable Road
11. US 30/Gable Road
12. US 30/Millard Road
13. McNulty Way/ Millard Road
14. Old Portland Road/ Millard Road

Figure 2 illustrates the existing lane configurations and traffic control devices at the study intersections.



Study Area
St. Helens, OR

Figure
1



- STOP SIGN
- YIELD SIGN
- TRAFFIC SIGNAL

Existing Lane Configurations & Traffic Control Devices
St. Helens, OR

Figure **2**

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Roadway Connectivity

US 30 is the primary roadway connecting St. Helens with the regional roadway network. US 30 is operated and maintained by the Oregon Department of Transportation (ODOT) and is classified by ODOT as both a Statewide Highway and Freight Route. The remaining roadways are operated and maintained by the City of St. Helens. The City classifies its facilities using three functional categories: arterials (major and minor), collectors, and local streets. Exhibit 1 illustrates the City's adopted Functional Classification Plan. A roadway's functional classification reflects its intended purpose, the amount and character of traffic it is expected to carry, the degree to which non-auto travel is emphasized, right-of-way requirements, and the roadway's design standards and overall management approach.

Exhibit 1: Functional Classification Plan

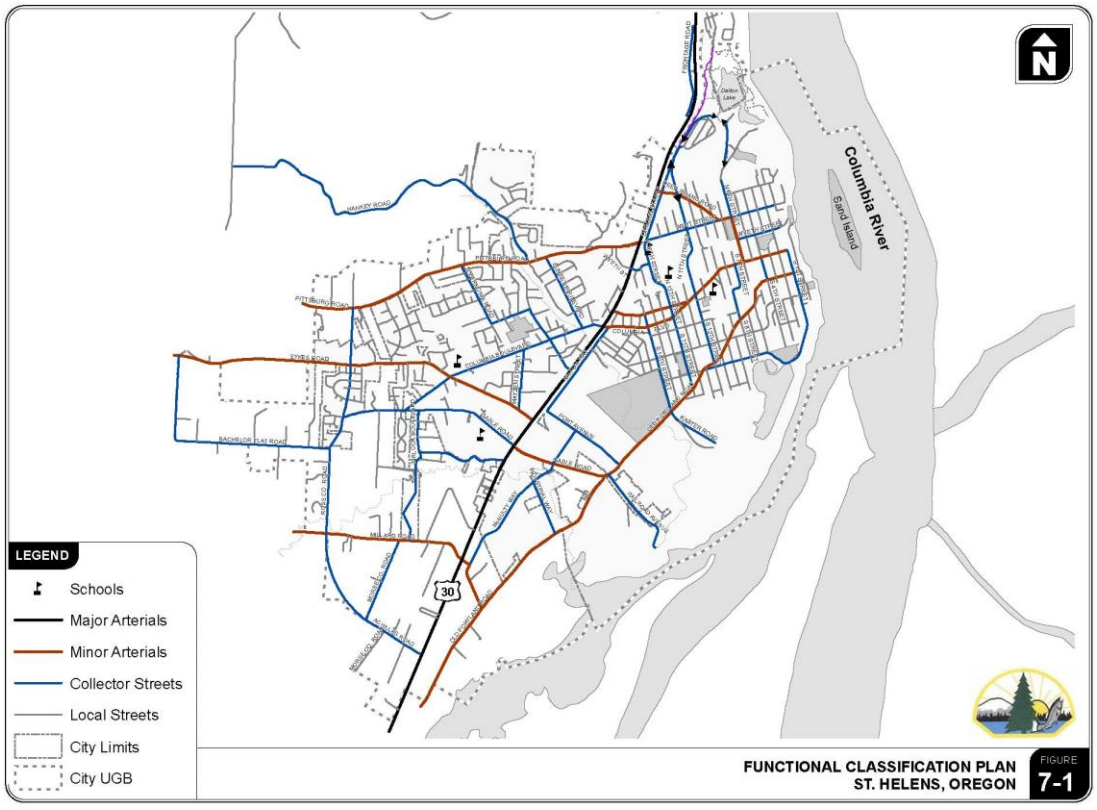


Image Source: St Helens Transportation System Plan, Ordinance 3150

As evidenced by Figure 1 and Exhibit 1, key roadway corridors within the study area include Columbia Boulevard/St. Helens Street, Old Portland Road, and Gable Road. Local connectivity to these key corridors is provided via collector level streets including McNulty Way, Port Avenue, Railroad Avenue, Kaster Road, Plymouth Street, S 15th Street, S 12th Street, S 8th Street, and S 1st Street.

Gable Road Connection

The Gable Road connection between US 30 and the study area is classified as a minor arterial and offers signalized access to US 30. While signalized, the Gable Road/US 30 intersection is relatively congested given its location (currently the southernmost traffic signal on US 30 in the City), surrounding land uses (including several large commercial retailers and St. Helens High School), and the industrial lands within and adjacent to the Port area that it serves. The City's TSP identified a recommended capacity improvement at the intersection involving the addition of a westbound right-turn lane that would also necessitate reconstruction of the adjacent Portland & Western Railroad (PNWR) railroad crossing. No funding for the turn lane improvement is currently programmed.

Millard Road Connection

Millard Road connects with US 30 at a stop-controlled intersection and links to both McNulty Way as well as Old Portland Road. The current intersection configuration offers limited capacity for additional trips and has been identified for geometric improvements and signalization in the City's TSP. Construction of the geometric improvements and signalization by ODOT is planned to begin in 2019.

Bennett Road Connection

Bennett Road currently connects with US 30 at a stop-controlled intersection to the south of the City's southern UGB. Bennett Road in turn links with Old Portland Road and is used by many as a parallel route to US 30, particularly for those traveling north to St. Helens on US 30. ODOT anticipates implementation of geometric changes at the US 30/Bennett Road intersection in 2019 including:

- Geometric improvements to the northbound right-turn lane onto Bennett Road;
- Elimination of eastbound and westbound left turns onto US 30 from Bennett Road through the construction of a raised median;
- Construction of a U-turn lane on US 30 between Millard Road and Bennett Road; and
- Closure of the existing Old Portland Road southern connection to US 30 (and associated passive railroad crossing).

LAND USE

Adjacent land use designations include Light Industrial (LI) and Heavy Industrial (HI) along McNulty Way and Old Portland Road from the City's southern UGB to Kaster Road. From Kaster Road to S 4th Street, land use designations include General Residential (R5) and Public Land (PL – McCormick Park). Toward S 1st Street and the proposed Plymouth Street extension, land uses include Mixed Use (MU) and Apartment Residential (AR). More information regarding existing and future land use designations is detailed in *Technical Memo #4: Land Use and Urban Design*.

PNWR RAILROAD

The PNWR "Portland-Astoria Line" connects the cities of Astoria, Clatskanie, Rainier, Columbia City, St. Helens, and Scappoose with PNWR's facilities and the Burlington Northern Santa Fe Railroad (BNSF) in Portland. The PNWR operates a rail yard in St. Helens east of US 30 that is generally situated north of Gable Road and south of Columbia Boulevard. The rail yard supports local customers served by the railroad, offering a location to stage and switch rail equipment. Trespassing is prohibited, though the yard area is not currently fenced.

Railroad Grade Crossing Terminology

Grade crossings are classified by the type of protection provided and are considered either active or passive. Active crossing systems generally have an electronic train detection system with flashing lights and audible devices that warn the motorist when a train is approaching or at the crossing (they may also have gates). A passive system simply denotes the location of the crossing (typically through signing or pavement markings) and depends on the motorist to detect and yield the right-of-way to the train. Each of the existing PNWR railroad crossings adjacent to US 30 in St. Helens and across Old Portland Road have active crossing systems. The existing grade crossings of McNulty Way, Railroad Avenue (south of Old Portland Road) and other roadways serving the study area are controlled with passive devices.

Grade Crossing Regulation

The ODOT Rail Division regulates all public grade crossings within Oregon and has the authority to eliminate public highway/rail at-grade crossings (ORS Section 824.206). Closure requests can be initiated by ODOT, the railroad or the local jurisdiction. In an effort to make closures more attractive to local communities, ODOT Rail offers assistance in improving intersections at locations near those which can be closed. Because at-grade crossing safety upgrades are expensive, ODOT Rail's approach to closures enables more frequently used crossings to receive the needed safety upgrades. Private railroad crossings are based on an agreement between the railroad and the property owner and are not regulated by ODOT Rail. It appears that some of the at-grade crossings with the Port facilities, including facilities near Old Portland Road and Railroad Avenue, are private railroad crossings.

ROADWAY FACILITIES

Kittelson & Associates, Inc. (KAI) staff visited and inventoried the study area in November 2017. At that time, KAI collected information regarding study area conditions, adjacent land uses, existing traffic operations, and transportation facilities in the study area. Roadway characteristics, vehicle operations, access spacing, truck routes, and other considerations are described in their respective sections below.

ROADWAY CHARACTERISTICS

Table 1 summarizes the characteristics of roadways within the study area.

Table 1: Existing Transportation Facilities

Roadway	Functional Classification[1]	Number of Lanes	Posted Speed (mph)	Sidewalks	Bicycle Lanes	On-Street Parking
US 30	Major Arterial / Statewide Freight Route[2]	4-5 Lanes	35/45[3]	West Side	Yes	No
Gable Road	Minor Arterial	2 Lanes	30/40[4]	Partial	Partial	No
Old Portland Road	Minor Arterial	2 Lanes	25/30/40/45[5]	Partial	Partial	Partial
Millard Road	Minor Arterial	2 Lanes	25/40[6]	No	No	No
McNulty Way	Collector Street	2 Lanes	25	Partial	Partial	No
Railroad Avenue	Collector Street	2 Lanes	30	No	No	No
Port Avenue	Collector Street	2 Lanes	40	No	No	No
S 18th Street/Kaster Road	Collector Street	2 Lanes	25	No	No	Partial
S 15th Street	Collector Street	2 Lanes	25	No	No	Yes
Plymouth Street	Collector Street	2 Lanes	25	No	No	No
S 12th Street	Collector Street	2 Lanes	25	No	No	Yes
S 8th Street	Collector Street	2 Lanes	25	No	No	No
S 1st Street	Collector Street	2 Lanes	25	No	Yes	Yes

1. Per *City of St. Helens Transportation System Plan* (TSP – Reference 1).
2. Per *Oregon Highway Plan* (OHP-Reference 2).
3. Speed limit is 35 mph north of Gable Road and 45 mph south of Gable Road.
4. Speed limit is 30 mph west of US 30 and 40 mph east of US 30.
5. Speed limit is 45 mph from Millard Road to the McNulty Creek bridge, 40 mph from McNulty Creek Bridge to Milton Creek Bridge, 30 mph from Milton Creek Bridge to S 4th Street, and 25 mph from S 4th Street to S 1st Street.
6. Speed limit is 40 mph west of US 30 and 25 mph east of US 30.

The US 30/Gable Road and US 30/Millard Road intersections are under ODOT's jurisdiction. All remaining roadways and study intersections are under the City of St. Helens' jurisdiction.

VEHICLE OPERATIONS ANALYSIS

The operational analysis methodology, traffic volumes, jurisdictional operating standards, and existing operations results are described in their respective sections below.

Operations Analysis Methodology

All analyses described in this report were performed in accordance with the procedures stated in the *Highway Capacity Manual* (HCM – Reference 3). A description of level of service (LOS) and the criteria

by which it is determined is presented in Appendix "A". Appendix "A" also indicates how level of service is measured and what is generally considered an acceptable range.

All analyses used the peak 15-minute flow rates that occurred during the weekday morning and evening peak hours. Using the peak 15-minute flow rates ensures that this analysis is based on a reasonable worst-case scenario. For this reason, the analysis reflects conditions that are only likely to occur for 15 minutes out of each average peak hour.

Traffic Volumes and Peak Hour Operations

Turning movement counts were conducted at the study intersections in May 2017. Each of the intersections was assessed during the weekday evening commuter peak hour while only key study intersections were also analyzed during the morning commuter peak hour. All the counts were conducted on a typical mid-week day during the morning (7:00 to 9:00 a.m.) and evening (4:00 to 6:00 p.m.) peak time periods while there was no inclement weather and school was in session. The system-wide morning and evening peak hours were found to occur from 7:15 to 8:15 a.m. and 4:45 to 5:45 p.m., respectively. Figures 3 and 4 summarize the turning movement counts for the weekday morning and evening peak hours. *Appendix "B" contains the traffic count worksheets used in this study.*

The traffic counts shown in Figure 4 were seasonally adjusted to 30th highest hour volumes (30 HV) in accordance with the Seasonal Trend Table methodology outlined in ODOT's *Analysis Procedures Manual* (APM – Reference 4). An average of the commuter and summer trends were used to determine the seasonal adjustment factor, resulting in an adjustment of 1.09. This method of seasonally adjusting peak hour volumes is consistent with the methodology used in the TSP and other recent studies conducted within St. Helens.

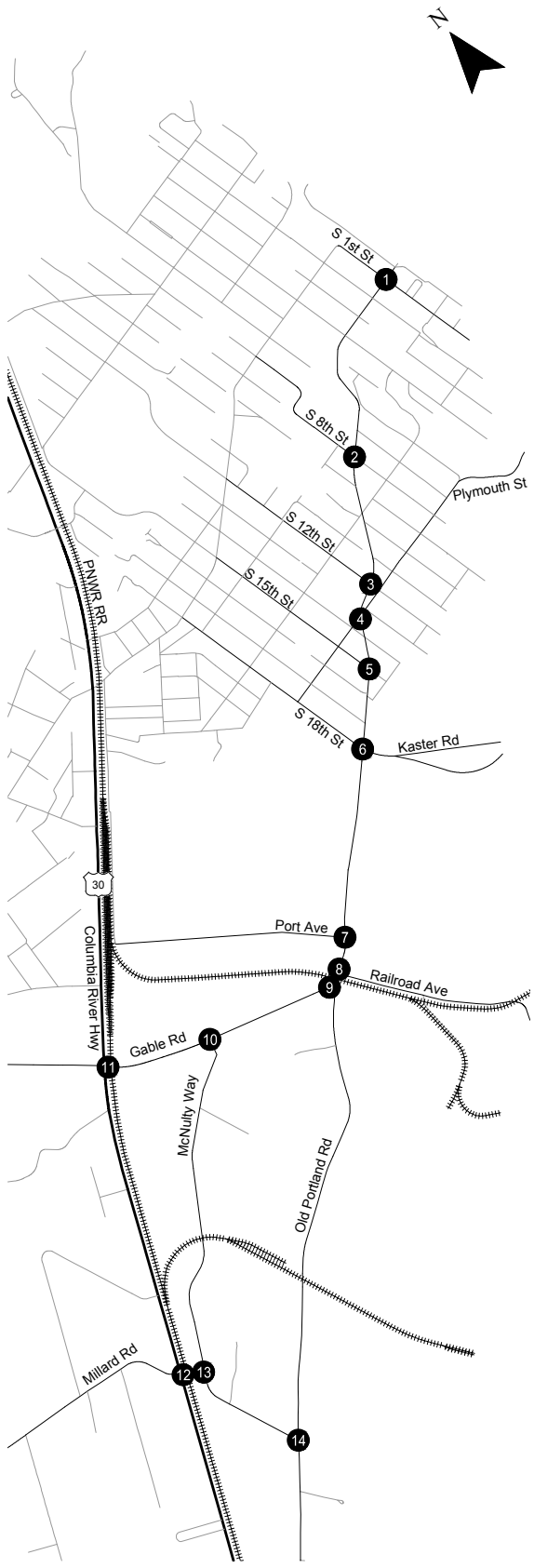
Jurisdictional Operating Standards and Thresholds

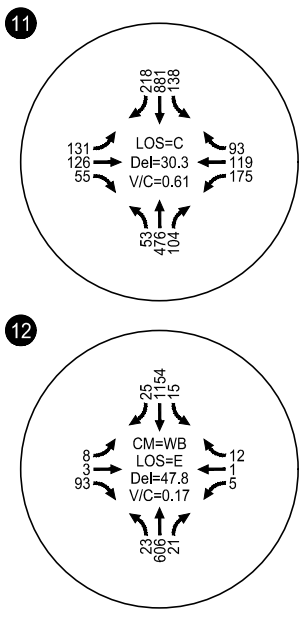
The City of St. Helens requires all signalized and all-way stop controlled intersections to perform at LOS "D" or better and maintain a volume-to-capacity (v/c) ratio at or below 1.0. For two-way stop controlled intersections, LOS "E" is acceptable for the worst approach and LOS "F" when a traffic signal is not warranted.

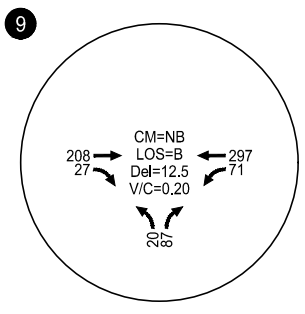
Per Table 6 of the *Oregon Highway Plan*, the signalized US 30/Gable Road intersection has a v/c target of 0.85 or below while the unsignalized US 30/Millard Road intersection has a v/c target of 0.80 or below. However, the non-state approach to the US 30/Millard Road intersection has a v/c target of 0.90 or below.

Current Intersection Operations

Figures 3 and 4 summarize the existing traffic volumes and intersection performance analysis. As shown, the stop-controlled Millard Road approach to US 30 operates over capacity during the weekday PM peak hour. All remaining study intersections currently operate acceptably during the weekday a.m. and p.m. peak hours. *Appendix "C" includes the worksheets used to evaluate existing traffic conditions at the study intersections.*



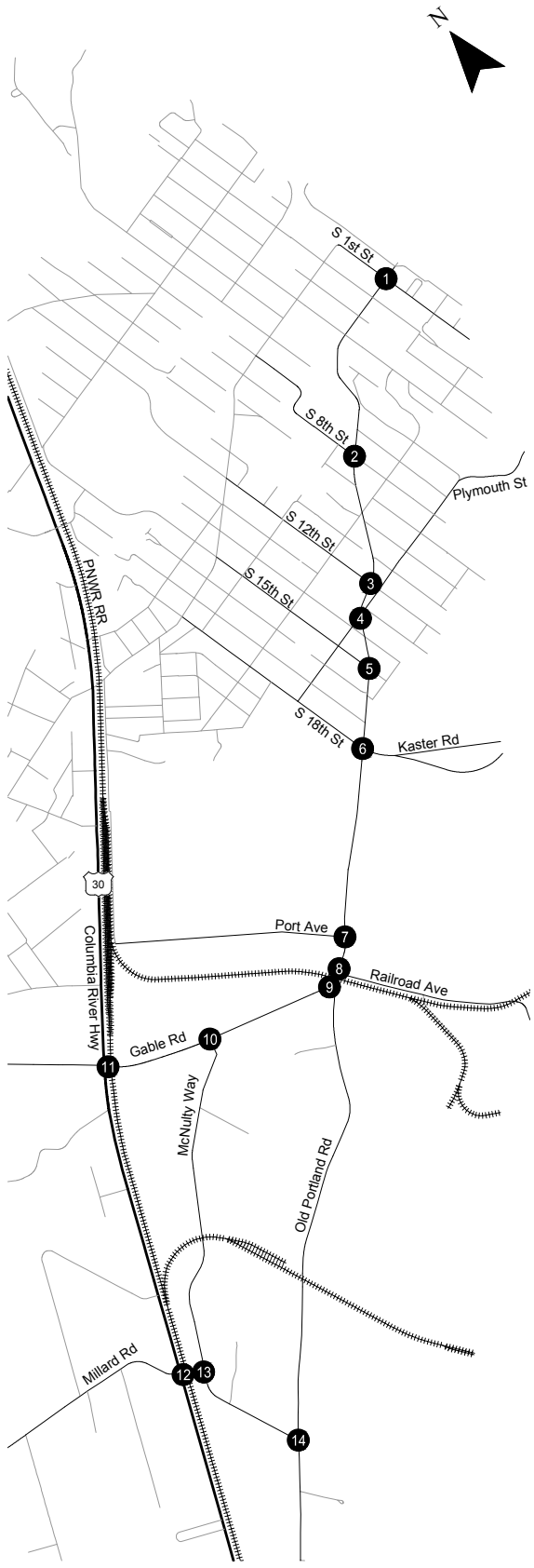


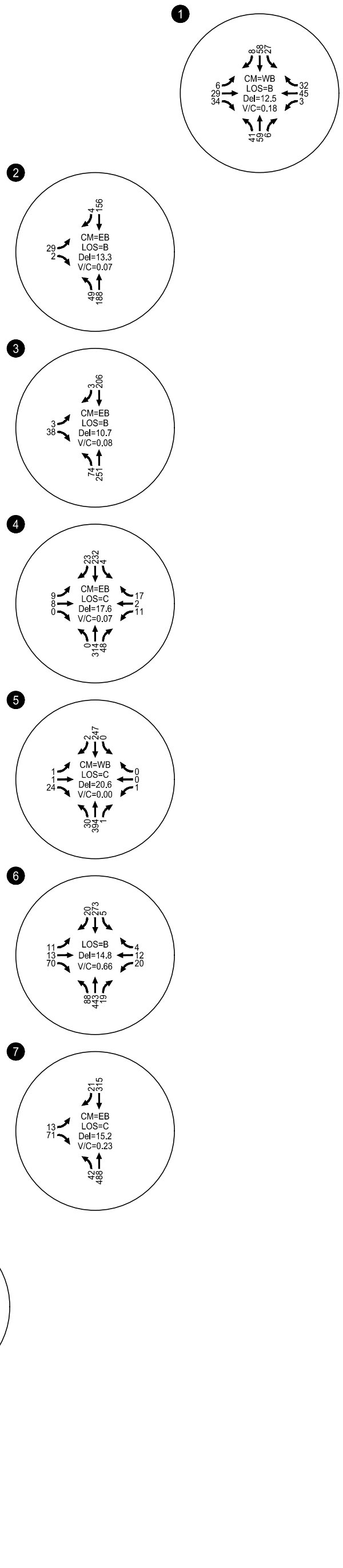


CM = CRITICAL MOVEMENT (UNSIGNALIZED)
LOS = CRITICAL MOVEMENT LEVEL OF SERVICE (SIGNALIZED)/ CRITICAL MOVEMENT LEVEL OF SERVICE (UNSIGNALIZED)
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED)/ CRITICAL MOVEMENT CONTROL DELAY (UNSIGNALIZED)
V/C = CRITICAL CRITICAL VOLUME-TO-CAPACITY RATIO

Existing Traffic Conditions
Weekday AM Peak Hour
St. Helens, OR

Figure **3**





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V/C = CRITICAL CRITICAL VOLUME-TO-CAPACITY RATIO

Existing Traffic Conditions
Weekday PM Peak Hour
St. Helens, OR

Figure **4**

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ACCESS SPACING

ODOT and the City of St. Helens have adopted access spacing standards for the study area roadways.

ODOT Access Management Standards

Access management standards for approaches to state highways are based on the classification of the highway and highway designation, type of area, and posted speed. Within St Helens, the OHP classifies US 30 as a Statewide Highway and a Freight Route. Future developments along US 30 (new development, redevelopment, zone changes, and/or comprehensive plan amendments) will be required to meet the OHP access management policies and standards. Table 2 summarizes ODOT's current access management standards for US 30 per the OHP.

Table 2: ODOT Access Spacing Standards (US 30)

Posted Speed (MPH)	Minimum Spacing Standard (Feet)[1]
≤ 25	520
30 and 35	720
40 and 45	990
50	1,100
≥ 55	1,320

[1] These access management spacing standards do not apply to approaches in existence prior to April 1, 2000 except as provided in OAR 734-051-0115(1)(c) and 734-051-0125(1)(c).

City Access Management Standards

The City's access management standards include spacing standards for public streets and private driveways. Table 3 identifies the minimum public street and private driveway access spacing standards for the City's roadway network as they relate to new development and redevelopment. County facilities within the City's Urban Growth Boundary (UGB) should also be planned and constructed in accordance with the City's access management standards.

Table 3: City Access Spacing Standards

Functional Classification	Public Street (feet)	Private Access Drive (feet)
Local Street	150	50
Collector	300	100
Minor Arterial	350 or block length	200 or mid-block

Several existing access points along the study roadways are not in compliance with the access spacing standards. For example, US 30 between Gable Road and Millard Road has accesses approximately every 320 feet, where ODOT spacing standards require at least 990 feet of separation. Within Old Portland Road's residential areas, many existing residential driveways are located 100 to 150 feet apart where the City's current requirements seek a minimum of 200 feet (or a mid-block length) of separation.

TRUCK ROUTES

Designated truck routes were established by the City to limit heavy truck traffic on local streets while connecting the industrial areas within St. Helens to US 30. Exhibit 2 illustrates the designated truck routes within St. Helens. As shown, several of the study area roadways are designated truck routes, including Gable Road, Millard Road, McNulty Way, Old Portland Road, and Plymouth Street.

Exhibit 2: Designated Truck Routes

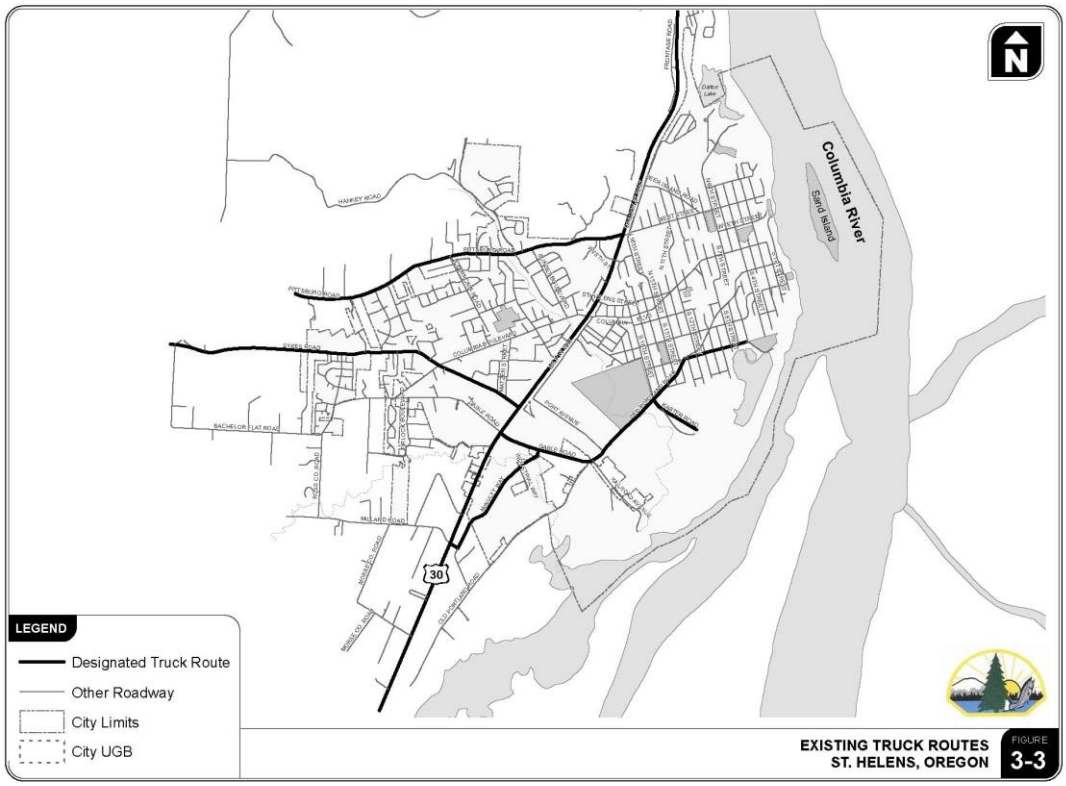

Image Source: St Helens Transportation System Plan, Ordinance 3150

Currently, many of the truck trips to and from the industrial areas east of US 30 access US 30 at Gable Road because it is signalized. This results in a relatively heavy volume of truck traffic on Gable Road that would otherwise use Old Portland Road to travel further south to US 30. Turning maneuvers at the at the Gable Road/US 30 signalized intersection are constrained due to the intersection and railroad crossing geometry, constraining maneuvers made by longer trucks (such as power pole delivery trailers) Consequently, alternate routes are utilized. Historically, re-routing reportedly resulted in situations where trucks struck other vehicles as they attempted to negotiate a turn at the Bennett Road/US 30 intersection. Pilot vehicles are currently used to accompany power pole trucks through the intersection to alert other drivers of the wide turning movement.

While large vehicles can generally navigate the designated truck routes, many of the routes have incomplete pedestrian and/or bicycle facilities. Old Portland Road, for example, is a designated truck and bicycle route; however, the roadway has no sidewalks or bicycle lanes south of Gable Road and offers relatively narrow travel lanes. The City's TSP recommends provision of a separate multi-use path along the east side of Old Portland Road in part to reduce interaction with truck traffic.

PEDESTRIAN FACILITIES

This section summarizes the existing physical and operational characteristics of the pedestrian facilities within the study area, including the location of known gaps and deficiencies. This section also summarizes the results of a Pedestrian Level of Traffic Stress (PLTS) analysis that was used to inform future concepts.

EXISTING PEDESTRIAN FACILITIES

Pedestrian facilities within St Helens consists of sidewalks, shared-use paths, and trails as well as marked and unmarked, signalized and unsignalized pedestrian crossings. These facilities provide local residents with the ability to access local retail, commercial, recreational, and other land uses by foot. In order to assess the adequacy of pedestrian facilities, existing sidewalks and crosswalks were inventoried. The following provides a summary of the facilities.

Sidewalks

Sidewalks are currently provided on at least one side of most arterial and collector streets within the study area. Sidewalks are provided along the west side of US 30 from Gable Road to south of Millard Road; along both sides of Gable Road near US 30, along the northwest side of Old Portland Road from Port Avenue to McCormick Park, and; along both sides of McNulty Way adjacent to new development and along both sides of 1st Street from St Helens Street to the southern terminus. There is also a shared-use path along the east side of Old Portland Road from S 4th Street to S 15th Street. However, the path is approximately 4-feet wide, which does not meet minimum width criteria for shared-use paths per the Oregon Highway Design Manual (HDM – Reference 5). Therefore, this path was evaluated as a sidewalk for the purposes of this analysis. Sidewalks are generally not provided along a majority of all other arterial, collector, and local roadways within the roadway. A summary of the gaps and deficiencies in the sidewalk network is provided below.

Crosswalks

Marked crosswalks, pedestrian push buttons, and pedestrian heads are provided at the signalized US 30/Gable Road intersection. A marked crosswalk is provided on the north leg at the signalized Old Portland Road/S 18th Street/S Kaster Road intersection. Marked crossings are provided at St Helens Street's unsignalized intersections with S 4th Street, S 3rd Street, S 2nd Street, and S 1st Street. Midblock marked crosswalks are provided along Old Portland Road approximately 90 feet south of S 15th Street, 150 feet south of S 10th Street, and 30 feet south of S 9th Street. No other marked crossings are provided in the study area.

Shared-use Paths and Trails

As mentioned, there is a shared-use path along the east side of Old Portland Road; however, the path was evaluated as a sidewalk for the purposes of this analysis. There are also several shared use paths and trails within the parks located adjacent to the study area roadways, including McCormick Park, Nob

Hill Nature Park, and Columbia View Park. Several of the paths and trail intersect or abut the study area roadways.

PEDESTRIAN LEVEL OF TRAFFIC STRESS ANALYSIS

The pedestrian facilities located within the study area were evaluated in an effort to identify potential issues that could be addressed as part of the Riverfront Connector Plan. The ODOT APM provides a methodology for evaluating pedestrian facilities within urban and rural environments called Pedestrian Level of Traffic Stress (PLTS). As applied by ODOT, this methodology classifies four levels of traffic stress that a pedestrian can experience on the roadway, ranging from PLTS 1 (little traffic stress) to PLTS 4 (high traffic stress). A road segment that is rated PLTS 1 generally has low traffic volumes and travel speeds and has a sidewalk that is separated from vehicular traffic. These segments are generally suitable for all users, including children. A road segment that is rated PLTS 4 generally has high traffic volumes and travel speeds and is perceived as unsafe by most adults. Road segments rated PLTS 4 also include those with no sidewalks or other pedestrian facilities. Per the APM, PLTS 2 is considered a reasonable target for most pedestrian facilities due to its acceptability with the majority of people.

The PLTS score is based on four criteria, including sidewalk condition, physical buffer type, total buffering width, and general land use. All four criteria are scored from 1 to 4 and the highest score determines the overall score for the road segment. Figure 5 illustrates the results of the PLTS analysis. It is important to note that while some segments are shown as PLTS 3 or 4, they may have shorter segments with lower PLTS scores. Table 4 summarizes the results of the PLTS analysis, which includes the scores for each criteria. As shown, there are 4 road segments rates PLTS 3 and 26 road segments rated PLTS 4.

A majority of the segments rated PLTS 4 have no sidewalks or other pedestrian facilities to accommodate pedestrians. In order for these segments to be rated PLTS 2, sidewalks with appropriate sidewalk and buffer widths would need to be installed along the full length of the roadway.

Of the remaining sidewalks, PLTS 3 or 4 rankings are often due to sidewalks in fair or poor condition; however, they are too narrow and/or do not have illumination present. In order for these segments to be rated LTS 2, the sidewalks would need to be widened to five feet or more and illumination would need to be installed along the full length of the roadway. Several road segments are also rated LTS 3 due to construction with curb-tight sidewalks on roadways with speeds of 30 mph or higher. In order for these segments to be rated LTS 2, the speeds would need to be reduced to 25 mph or a buffer would need to be installed between the sidewalk and vehicle travel lane. For several other segments rated LTS 3, adjusting the LTS score will be difficult because it is controlled by the general land use next to the segment. *Appendix "D" contains detailed information on the PLTS analysis results.*

Pedestrian Level of Traffic Stress
St. Helens, Oregon

Figure **5**

H:\21\21001 - St Helens Riverfront Connector\gis\5_PLTS.mxd - mbell - 9:56 AM 5/14/2018

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Coordinate System: NAD 1983 StatePlane Oregon North FIPS 3601 Feet Intl
Data Source: Delete if there isn't one.

Table 4: PLTS Analysis Results

Street	From	To	Side	Pedestrian LTS Criteria Scores				
				Sidewalk Condition	Buffer Type	Buffering Width	Land Use	PLTS
Major Arterial								
US 30	Millard Road	Gable Road	West	2[1]	2	3	3	3
	Millard Road	Gable Road	East	4	4	3	3	4
Minor Arterial								
Old Portland Road	S 1st Street	S 4th Street	Both	3[1]	2	1	1	3
	S 4th Street	S 8th Street	West	4	3	2	1	4
	S 4th Street	S 8th Street	East	4[1]	2	2	1	4
	S 8th Street	S 12th Street	West	4	3	2	1	4
	S 8th Street	S 12th Street	East	4[1]	2	2	1	4
	S 12th Street	Plymouth Street	West	4	3	2	1	4
	S 12th Street	Plymouth Street	East	4[1]	2	2	1	4
	Plymouth Street	S 15th Street	West	4	3	2	1	4
	Plymouth Street	S 15th Street	East	4[1]	2	2	1	4
	S 15th Street	S 18th Street/ Kaster Road	Both	4	3	2	1	4
	S 18th Street/ Kaster Road	Storage Pal Driveway	Both	4	2	2	1	4
	Storage Pal Driveway	Port Avenue	West	2[1]	2	2	2	2
	Storage Pal Driveway	Port Avenue	East	4	2	2	2	4
	Port Avenue	Gable Road	Both	4	2	2	3	4
	Gable Road	Columbia Drainage Driveway	Both	4	4	2	3	4
	Columbia Drainage Driveway	Millard Road	Both	4	4	2	2	4
Gable Road	McNulty Way	US 30	Both	4	2	2	3	4
	Eastern Walmart Driveway	McNulty Way	Both	4	2	2	3	4
	Old Portland Road	Eastern Walmart Driveway	Both	4	2	2	3	4
Millard Road	Old Portland Road	McNulty Way	Both	4	3	2	3	4
	McNulty Way	US 30	Both	4	2	3	3	4
Collector								
Plymouth Street	Old Portland Road	S 6th Street	Both	4	2	2	1	4
McNulty Way	Millard Road	Residential Driveway	Both	4	2	2	2	4

	Residential Driveway	PNWR Rail Crossing	Both	4	2	2	2	4
	PNWR Rail Crossing	Joint Maintenance Facility Driveway	West	4	2	2	3	4
	PNWR Rail Crossing	Joint Maintenance Facility Driveway	East	2[1]	2	2	3	3
	Joint Maintenance Facility Driveway	Industrial Way	West	2[1]	2	2	3	3
	Joint Maintenance Facility Driveway	Industrial Way	East	4	2	2	3	4
	Industrial Way	Gable Road	Both	4	2	2	3	4

Shaded cells segments that do not meet the LTS 2 target.
* The effective width of the pedestrian facility is greater than 6 feet. The LTS value is from the last line of the sidewalk condition criteria table in the APM.
[1] No illumination present. LTS reduced by one unless already at LTS 4.
[2] Segment located on a bridge. LTS improved to LTS 3.
[3] Existing non-striped parking. Assume parking area is six to eight feet wide.

PEDESTRIAN ACTIVITY

Pedestrian counts were conducted at the study intersections in May 2017 while school was in session. All of the counts include the total number of pedestrians that entered the intersections in 15-minute intervals. Table 5 summarizes the pedestrian count data for the study intersections.

Table 5: Peak Hour Pedestrian Crossing Volumes at Study Intersections

	Intersection	North/South Pedestrian Volume	East/West Pedestrian Volume	Pedestrian Peak Hour
1	S 1st Street/ St. Helens Street	115	26	6:00 PM
2	S 8th Street/ Old Portland Road	1	1	8:15 AM
3	S 12th Street/ Old Portland Road	4	4	2:30 PM
4	Plymouth Street/ Old Portland Road	0	0	N/A
5	S 15th Street/ Old Portland Road	7	7	2:15 PM
6	S 18th Street/ Old Portland Road	6	2	5:45 PM
7	Port Avenue/ Old Portland Road	0	0	N/A
8	Railroad Avenue/ Old Portland Road	0	12	5:00 PM
9	Gable Road/ Old Portland Road	0	8	5:00 PM
10	Gable Road/ McNulty Way	1	3	10:15 AM
11	Gable Road/ US 30	6	31	3:00 PM
12	Millard Road/ Old Portland Road	0	2	3:45 PM
13	Millard Road/ McNulty Way	9	0	2:45 PM
14	Millard Road/ US 30	4	0	3:45 PM

The pedestrian counts show a relatively high level of pedestrian activity at the US 30/Gable Road and the St Helens Street/1st street intersections and relatively low levels of pedestrian activity at the other study intersections. It should be noted that while the peak hour for vehicular traffic typically occurs between 4:45 to 5:45 p.m., the peak hour for pedestrian activity near schools and other activity centers typically occurs earlier in the day.

EXISTING GAPS AND DEFICIENCIES

Streets with no sidewalks or intermittent sidewalks generally result in pedestrians walking along the edge of the travel lane or using the shoulder if available. In many cases, this is not a desirable option for pedestrians due to narrow lane widths or uneven pavement conditions. Similarly, streets with no crosswalks or limited crosswalks may result in pedestrians making unsafe or illegal crossings. Ideally, adequate pedestrian facilities should be provided to allow for safe travel between neighborhoods and essential destinations. The following provides a summary of the existing gaps deficiencies in the pedestrian facilities. These gaps and deficiencies were updated based on input from the project team, the advisory committee, and the public throughout the planning process:

- There are several arterial and collector streets that currently do not provide sidewalks along one or two sides of the roadway. These streets include:

- Old Portland Road from S 4th Street to S 15th Street – west side
- Old Portland Road from S 15th Street to Millard Road – gaps on both sides
- Gable Road from McNulty Road to Old Portland Road – gaps on both sides
- Millard Road from Old Portland Road to US 30 – gaps on both sides
- Plymouth Street from Old Portland Road to its terminus – gaps on both sides
- McNulty Way from Millard Road to Gable Road – gaps on both sides

- Many sidewalks throughout the City do not provide sufficient width to accommodate pedestrian activity or are in a state of disrepair.
- Many sidewalks and pedestrian ramps throughout the City are not compliant with current American's with Disabilities Act (ADA) design standards.
- There are several major (and minor) intersections that do not provide marked pedestrian crossings.

BICYCLE FACILITIES

This section summarizes the existing physical and operational characteristics of the Bicycle facilities within the study area, including the location of known gaps and deficiencies. This section also summarizes the results of a Bicycle Level of Traffic Stress (BLTS) analysis that was used to inform future concepts.

EXISTING BICYCLE FACILITIES

Bicycle facilities within St Helens consist of on-street bike lanes and shared roadways as well as off-street bicycle facilities such as bicycle parking and shared-use paths. These facilities provide local residents with the ability to access local retail, commercial, recreational, and other land uses within St Helens and neighboring cities by bike. Safe and convenient bicycle facilities are essential to a vibrant community and economy within the city. In order to assess the adequacy of bicycle facilities, existing shared roadways, shoulder bikeways, on-street bike lanes, and separated bike facilities were inventoried. The following provides a summary of the facilities.

On-Street Bike Lanes

On-street bike lanes are currently provided along both sides of several arterial and collector street within the study area. On-street bike lanes are provided along both sides of US 30 throughout St Helens. On-street bike lanes are also provided on St Helens Street from S 1st Street to S 4th Street, Old Portland Road from S 18th Street/S Kaster Road to Gable Road, Gable Road from Old Portland Road to US 30, and McNulty Way from Industrial Way to 600 feet north of Millard Road.

Shared Roadways

Most of the study area roadways are shared roadways, meaning there are no on-street bike lanes or shoulder bikeways; therefore, bicyclists share the roadway with motorists. The shared roadways include Old Portland Road from S 4th Street to S 18th Street/S Kaster Road and from Gable Road to Millard Road; Millard Road from Old Portland Road to US 30; Plymouth Street from Old Portland Road to its terminus, and; McNulty Way from Millard Road to 600 feet north of Millard Road and from the Joint Maintenance Facility driveway to Gable Road.

Separated Bike Facilities

As mentioned, there is a shared-use path along the east side of Old Portland Road; however, the path was evaluated as a sidewalk for the purposes of this analysis. Also, while there are several shared use paths and trails within the parks located adjacent to the study area roadways, including McCormick Park, Nob Hill Nature Park, and Columbia View Park, bikes are not allowed within the parks or on the paths and trails.

BICYCLE LEVEL OF TRAFFIC STRESS ANALYSIS

The bicycle facilities located along the study area were evaluated to identify potential issues that could be addressed as part of the Riverfront Connector Plan. The APM provides a methodology for evaluating bicycle facilities within urban and rural environments called Bicycle Level of Traffic Stress (BLTS). As applied by ODOT, this methodology classifies four levels of traffic stress that a bicyclist can experience on the roadway, ranging from BLTS 1 (little traffic stress) to BLTS 4 (high traffic stress). A road segment that is rated BLTS 1 generally has low traffic volumes and travel speeds and is suitable for all cyclists, including children. A road segment that is rated BLTS 4 generally has high traffic volumes and travel speeds and is perceived as unsafe by most adults. Per the APM, BLTS 2 is considered a reasonable target for bicycle facilities due to its acceptability with the majority of people.

The BLTS score is determined based on the speed of the roadway, the number of travel lanes per direction, the presence and width of an on-street bicycle lane and/or adjacent parking lane, and several other factors. Figure 6 illustrates the results of the BLTS analysis for the study area. It is important to note that while some segments are shown as BLTS 3 or 4, they may have shorter segments with lower BLTS scores. Table 6 summarizes the results of the BLTS analysis. As shown, there are eight segments rated BLTS 3 and four segments rated BLTS 4.

As shown, the on-street bike lanes along US 30 are rated BLTS 4. These bike lanes are too narrow for roadway conditions per the APM methodology. For these segments to be rated BLTS 2, the bike lanes would need to be widened to 7 feet and the posted speed limits would need to be reduced to as low as 35 mph. Enhanced facilities, such as separated bike facilities or multi-use paths, may be considered as an alternative in areas where traffic volumes and/or travel speeds are high.

Several segments along Old Portland Road and Gable Road that are rated BLTS 4 have bike lanes that are too narrow for the adjacent high-speed traffic per the APM methodology. Bike lanes would either need to be widened to 7 feet and/or the posted speed limit would need to be reduced to as low as 35 mph to achieve a BLTS 2 rating.

All remaining segments that are rated BLTS 3 or 4 are along Old Portland Road in mixed traffic with high-speed traffic. Bike lanes or a separated bike path would need to be provided and/or the posted speed limit would need to be reduced to as low as 25 mph or the centerline stripe would need to be removed to achieve a BLTS 2 rating.

It should also be noted that a majority of the shared roadway segments that were rated LTS 2 could include signage and potentially striping to remind motorists to share the road. The signing and striping can also provide important wayfinding for cyclists to inform them of the preferred bicycle routes.

Bicycle Level of Traffic Stress
St. Helens, Oregon

Figure **6**

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KITTELSON & ASSOCIATES

Coordinate System: NAD 1983 StatePlane Oregon North FIPS 3601 Feet Intl
Data Source: Delete if there isn't one.

Table 6: BLTS Analysis Results

Street	From	To	Side	Facility Type	LTS Criteria					Bicycle LTS
					Speed (MPH)	Lanes per Direction	Bike Lane Width (feet)	Parking	Frequent Blockage	
Major Arterial										
US 30	Millard Road	Gable Road	West	Bike Lane	45	2	< 7	No	No	4
	Millard Road	Gable Road	East	Bike Lane	45	2	< 7	No	No	4
Minor Arterial										
Old Portland Road	S 1st Street	S 4th Street	Both	Bike Lane	25	1	> 7	Yes	No	1
	S 4th Street	S 8th Street	West	Mixed Traffic	30	1	N/A	No	No	3
	S 4th Street	S 8th Street	East	Mixed Traffic	30	1	N/A	No	No	3
	S 8th Street	S 12th Street	West	Mixed Traffic	30	1	N/A	No	No	3
	S 8th Street	S 12th Street	East	Mixed Traffic	30	1	N/A	No	No	3
	S 12th Street	Plymouth Street	West	Mixed Traffic	30	1	N/A	No	No	3
	S 12th Street	Plymouth Street	East	Mixed Traffic	30	1	N/A	No	No	3
	Plymouth Street	S 15th Street	West	Mixed Traffic	30	1	N/A	No	No	3
	Plymouth Street	S 15th Street	East	Mixed Traffic	30	1	N/A	No	No	3
	S 15th Street	S 18th Street/ Kaster Road	Both	Mixed Traffic	30	1	N/A	No	No	3
	S 18th Street/ Kaster Road	Storage Pal Driveway	Both	Bike Lane	40	1	5.5 – 7	No	No	4
	Storage Pal Driveway	Port Avenue	West	Bike Lane	40	1	5.5 – 7	No	No	4
	Storage Pal Driveway	Port Avenue	East	Bike Lane	40	1	5.5 – 7	No	No	4
	Port Avenue	Gable Road	Both	Bike Lane	40	1	5.5 – 7	No	No	4
	Gable Road	Columbia Drainage Driveway	Both	Mixed Traffic	45	1	N/A	No	No	4
	Columbia Drainage Driveway	Millard Road	Both	Mixed Traffic	45	1	N/A	No	No	4
Gable Road	McNulty Way	US 30	Both	Bike Lane	40	1	5.5 – 7	No	No	4
	Eastern Walmart Driveway	McNulty Way	Both	Bike Lane	40	1	> 7	No	No	3
	Old Portland Road	Eastern Walmart Driveway	Both	Bike Lane	40	1	5.5 – 7	No	No	4
Millard Road	Old Portland Road	McNulty Way	Both	Mixed Traffic	30	1	N/A	No	No	3
	McNulty Way	US 30	Both	Mixed Traffic	25	1	N/A	No	No	2
Collector										

Plymouth Street	Old Portland Road	S 6th Street	Both	Mixed Traffic	25	1	N/A	No	No	2
McNulty Way	Millard Road	Residential Driveway	Both	Mixed Traffic	25	1	N/A	No	No	2
	Residential Driveway	PNWR Rail Crossing	Both	Bike Lane	25	1	< 5.5	No	No	2
	PNWR Rail Crossing	Joint Maintenance Facility Driveway	West	Bike Lane	25	1	< 5.5	No	No	2
	PNWR Rail Crossing	Joint Maintenance Facility Driveway	East	Bike Lane	25	1	< 5.5	No	No	2
	Joint Maintenance Facility Driveway	Industrial Way	West	Bike Lane	25	1	< 5.5	No	No	2
	Joint Maintenance Facility Driveway	Industrial Way	East	Mixed Traffic	25	1	N/A	No	No	2
	Industrial Way	Gable Road	Both	Mixed Traffic	25	1	N/A	No	No	2

Shaded cells denote roadway segments that do not satisfy the LTS 2 target.

EXISTING GAPS AND DEFICIENCIES

Streets with no bike lanes or intermittent bike lanes result in bicyclists sharing the travel lane with motor vehicles or using the shoulder if available. In many cases, this is not a desirable option for bicyclists due to narrow lane widths or uneven pavement conditions. Ideally, adequate bicycle facilities should be provided to allow for safe travel between neighborhoods and essential destinations. The City TSP identifies bicycle infrastructure goals and bicycle facility needs.

The following provides a summary of the existing gaps deficiencies in the bicycle facilities within the study area. These gaps and deficiencies were updated based on input from the project team, the advisory committee, and the public throughout the planning process:

- There are several study roadways that currently do not provide on-street bike lanes. These roadways include:
  - Old Portland Road from S 4th Street to S 18th Street/S Kaster Road
  - Old Portland Road from Gable Road to Millard Road
  - Millard Road from Old Portland Road to US 30
  - Plymouth Street from Old Portland Road to its terminus
  - McNulty Way from Millard Road to 600 feet north of Millard Road
  - McNulty Way from the Joint Maintenance Facility driveway to Gable Road
- There are several study roadways whose bike lanes are too narrow or adjacent speeds are too high to achieve a BLTS 2 rating. These streets include:
  - US 30 from Gable Road to Millard Road
  - Old Portland Road from S 18th Street/S Kaster Road to Gable Road
  - Gable Road from Old Portland Road to US 30
- There are several study area roadways with mixed traffic where posted speed limits are too high and/or removal of the centerline would improve BLTS. These roadways include:
  - Old Portland Road from S 4th Street to S 18th Street/S Kaster Road
  - Old Portland Road from Gable Road to Millard Road
  - Millard Road from Old Portland Road to McNulty Way

TRANSIT FACILITIES

Columbia County Rider (CCR) provides transit service within the study area. Route 3, the South County Flex, operates Monday through Friday from 7:30 AM to 5:50 PM on 90-minute headways. Route 3 connects St. Helens to Scappoose with several stops along Old Portland Road and Gable Road in the study area. Several other CCR routes operate along US 30, stopping at the Columbia County Rider Transit Center toward the north side of St. Helens.

Columbia County also offers a flex route that operates on a fixed schedule and stops at certain designated locations on each trip, but is also allowed to make a limited number of deviations off-route each trip to pick up and drop off passengers at other locations. CCR Flex-Route service operates between St. Helens and Scappoose in an effort to reduce the number of dial-a-ride trips between the two cities. The route operates with 90-minute headways and connects with CCR's Fixed Routes to Portland, Washington County, and Tri-Met connections.

Columbia County also offers dial-a-ride service for seniors, individuals with disabilities, and citizens that require Dial-A-Ride for life needs. Dial-A-Ride is available in the study area Monday through Friday from 7:30 AM to 7:00 PM. CCR does not provide service on weekends and federal holidays.

TRAFFIC SAFETY SUMMARY

Five years of historical crash data for study intersections and study roadways was obtained from ODOT and reviewed to identify potential existing safety issues. Figure 7 shows the mapped crash data for the City of St. Helens, including locations of injuries and fatalities for the five-year period. As Millard Road is outside city limits, Millard Road crashes were not mapped.

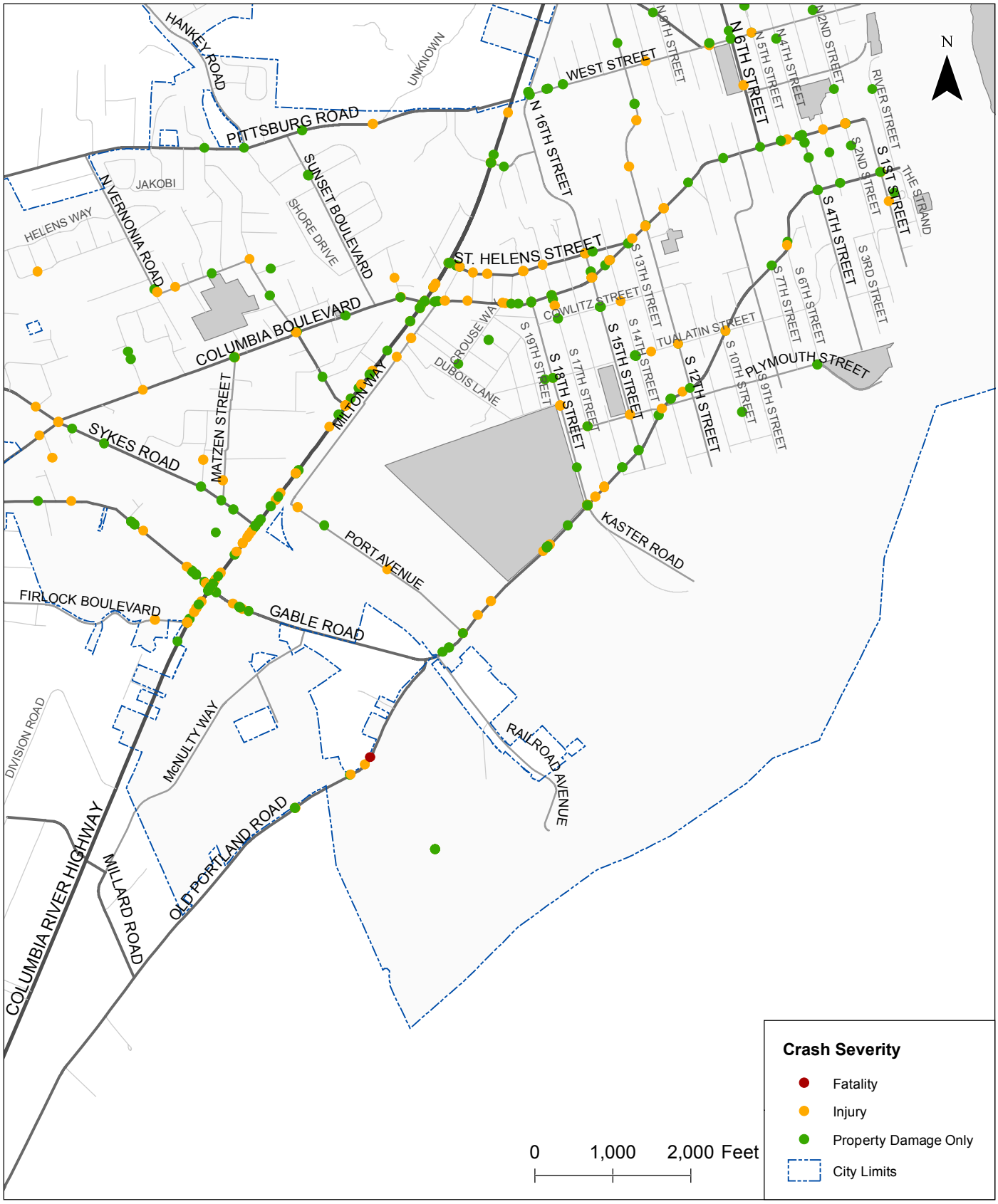
INTERSECTION CRASH HISTORY

Historical crash data for the study intersections was reviewed to identify potential safety issues that could be addressed as part of the Riverfront Connector Plan. Crash data for the study intersections was obtained from ODOT for the five-year period from January 1, 2011 through December 31, 2015 and is summarized in Table 7. As shown, no fatalities were reported at the study intersections over the five-year period. *Appendix "E" contains the historical traffic safety data provided by ODOT.*

Table 7: Intersection Crash History (January 1, 2011 through December 31, 2015)

Intersection	Crash Type						Crash Severity		
	Rear-End	Turning	Angle	Ped	Fixed Object	Other	Property Damage Only	Injury	Fatal
S 1st Street/ St. Helens Street	-	2	2[1]	-	-	-	1	3	-
S 8th Street/ Old Portland Road	-	-	-	-	-	-	-	-	-
S 12th Street/ Old Portland Road	-	-	-	-	1	-	1	-	-
Plymouth Street/ Old Portland Road	-	1	-	-	-	-	-	1	-
S 15th Street/ Old Portland Road	1	-	-	-	-	-	1	-	-
S 18th Street/ Old Portland Road	8	1	1	1	2	-	5	8	-
Port Avenue/ Old Portland Road	2	-	-	-	2	-	2	2	-
Railroad Avenue/ Old Portland Road	-	-	-	-	-	-	-	-	-
Gable Road/ Old Portland Road	-	-	-	-	-	-	-	-	-
Gable Road/ McNulty Way	-	-	-	-	-	-	-	-	-
Gable Road/ US 30	10	9	3	1	-	-	9	14	-
Millard Road/ Old Portland Road	-	1[1]	-	-	-	-	-	1	-
Millard Road/ McNulty Way	-	-	-	-	-	-	-	-	-
Millard Road/ US 30	2	4	2	-	-	-	5	3	-

1. Bicycle Collision



Reported Crash Locations, 2011-2015
St. Helens, Oregon

Figure **7**

Data Provided by ODOT
January 1, 2011 through December 31, 2015

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Coordinate System: NAD 1983 StatePlane Oregon North FIPS 3601 Feet Intl
Data Source: Delete if there isn't one.

Critical crash rates were calculated for each of the study intersections following the analysis methodology presented in ODOT's SPR 667 Assessment of Statewide Intersection Safety Performance (Reference 6). SPR 667 provides average crash rates at a variety of intersection configurations in Oregon based on number of approaches and traffic control types. The average crash rates represent the approximate number of crashes that are "expected" at a study intersection. Additionally, this average crash rate was used to calculate the critical crash rate for each study intersection, based on the Highway Safety Manual methodology (Reference 7). The critical crash rate is calculated for each intersection based on the average crash rate for each facility and serves as a threshold for further analysis.

Table 8 summarizes the critical crash rate for each intersection and compares those values to the observed crash rate. SPR 667 also provides 90th percentile crash rates based on number of approaches and traffic control types. For the signalized intersections whose critical crash rates could not be calculated, the observed crash rate was compared to the 90th percentile crash rate. Per ODOT, if the observed crash rate at the study location exceeds the critical rate, it is a possible indication that the location is exceeding average crash rates.

Table 8: Intersection Crash Rate Assessment

Location	Total Crashes	90th Percentile Crash Rate	Critical Crash Rate	Observed Crash Rate at Intersection	Observed Crash Rate > Critical Crash Rate?
S 1st Street/ St. Helens Street	4	-	0.48	0.63	**Yes**
S 8th Street/ Old Portland Road	0	-	0.29	0.00	No
S 12th Street/ Old Portland Road	1	-	0.25	0.09	No
Plymouth Street/ Old Portland Road	1	-	0.38	0.08	No
S 15th Street/ Old Portland Road	1	-	0.37	0.08	No
S 18th Street/ Old Portland Road	13	0.86	-	0.73	No
Port Avenue/ Old Portland Road	4	-	0.20	0.23	**Yes**
Railroad Avenue/ Old Portland Road	0	-	0.33	0.00	No
Gable Road/ Old Portland Road	0	-	0.20	0.00	No
Gable Road/ McNulty Way	0	-	0.21	0.00	No
Gable Road/ US 30	23	0.86	-	0.40	No
Millard Road/ Old Portland Road	1	-	0.26	0.02	No
Millard Road/ McNulty Way	0	-	0.79	0.00	No
Millard Road/ US 30	8	-	1.27	0.49	**Yes**

As shown in Table 8, the S 1st Street/St. Helens Street, Port Avenue/Old Portland Road, and Millard Road/US 30 intersections exceed the critical crash rate.

At S 1st Street/St. Helens Street, two of the four reported crashes involved turning maneuvers while the other two involved angle collisions. Four crashes were reported at Port Avenue/Old Portland Road, with two involving turning movements and two involving a collision with a fixed-object. No measures were identified to reduce the potential for these types of crashes at these locations based on review of the crash data alone.

Approximately 75% of crashes reported at Millard Road/US 30 involved angle or turning crashes. Signalization of the Millard Road/US 30 intersection is identified in the St. Helens TSP and would provide protected movements for vehicles approaching US 30 from Millard Road.

SEGMENT CRASH HISTORY

Historical crash data along study roadway segments was reviewed in an effort to identify potential existing roadway safety issues. Crash data for the study roadway segments was obtained from ODOT for the five-year period from January 1, 2011 through December 31, 2015. Table 9 identifies the reported crashes along each of the segments during this five-year period.

Table 9: Segment Crash History (January 1, 2011 through December 31, 2015)

Segment	Crash Type						Crash Severity		
	Rear-End	Turning	Angle	Ped	Fixed Object	Other	Property Damage Only	Injury	Fatal
Gable Road – US 30 to Old Portland Road	1	6	2	-	-	-	6	3	-
Old Portland Road – Millard Road to S 1st Street	5	4	3	1	17	5	20	14	1
Plymouth Street – Old Portland Road to Roadway terminus	-	-	-	-	1	-	1	-	-
McNulty Way – Millard Road to Gable Road	-	-	-	-	-	-	-	-	-
Millard Road – McNulty Way to Old Portland Road	-	-	1	-	3	2	5	1	-

As shown in Table 9, one fatality was reported on the study roadways. The fatality reportedly occurred midblock on Old Portland Road, approximately 1,300 feet south of its intersection with Gable Road. The crash report indicates the fatal crash involved a head-on collision attributed to a driver under the influence speeding and losing control of the vehicle.

Segment crash rates were calculated using the methodology provided in ODOT's *Analysis Procedures Manual*. Crash rates were compared to statewide average crash rates for similar facilities based on urban area context and functional classification using ODOT's *2015 Table II: Five-Year Comparison of State Highway Crash Rates* (Reference 8). Table 10 summarizes the average crash rate for each segment and compares those values to the observed crash rate.

Table 10: Segment Crash Rate Assessment

Location	Total Crashes	Segment Length (miles)	AADT	Average Crash Rate	Observed Crash Rate at Segment	Observed Crash Rate > Critical Crash Rate?
Gable Road – US 30 to Old Portland Road	9	0.57	11,290	2.82	0.77	No
Old Portland Road – Millard Road to S 1st Street	35	2.76	9,690	2.82	0.72	No
Plymouth Street – Old Portland Road to Roadway terminus	1	0.57	900	1.91	1.07	No
McNulty Way – Millard Road to Gable Road	0	0.78	1,160	1.91	0	No
Millard Road – McNulty Way to Old Portland Road	6	0.38	650	2.82	13.35	**Yes**

AADT= Average Annual Daily Traffic

As shown in Table 10, the Millard Road segment exceeds the statewide average crash rate. Half of the reported segment crashes involved fixed-object crashes, 33% involved head-on collisions, and 17% were angle crashes. Most reported crashes involved property damage only.

SAFETY PRIORITY INDEX SYSTEM

The ODOT 2016 Safety Priority Index System (SPIS) list identifies existing hazardous intersections for potential safety improvements. No study intersections are listed in the top ten percent of ODOT's SPIS ranking program.

NEXT STEPS

The information presented in this document was used to assist in the identification of near-term transportation improvement needs as well as for comparison to future conditions.

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4. Oregon Department of Transportation. *Analysis Procedures Manual*. December 2017 update.
5. Oregon Department of Transportation. *Highway Design Manual*. 2012.
6. Oregon Department of Transportation Research Section. *SPR 667 Assessment of Statewide Intersection Safety Performance*. June 2011.
7. American Association of State Highway and Transportation Officials. *Highway Safety Manual*. 2010.
8. Oregon Department of Transportation. *Table II: Five-Year Comparison of State Highway Crash Rates.* 2015.

Appendix A LOS Criteria Definitions

DESCRIPTION OF LEVEL-OF-SERVICE

Level of service (LOS) is a concept developed to quantify the degree of comfort (including such elements as travel time, number of stops, total amount of stopped delay, and impediments caused by other vehicles) afforded to drivers as they travel through an intersection or roadway segment. Six grades are used to denote the various level of service from "A" to "F".1

Signalized Intersections

The six level-of-service grades are described qualitatively for signalized intersections in Table A1. Additionally, Table A2 identifies the relationship between level of service and average control delay per vehicle. Control delay is defined to include initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Using this definition, Level of Service "D" is generally considered to represent the minimum acceptable design standard.

Table A1: Level-of-Service Definitions (Signalized Intersections)

Level of Service	Average Delay per Vehicle
A	Very low average control delay, less than 10 seconds per vehicle. This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	Average control delay is greater than 10 seconds per vehicle and less than or equal to 20 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for a level of service A, causing higher levels of average delay.
C	Average control delay is greater than 20 seconds per vehicle and less than or equal to 35 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
D	Average control delay is greater than 35 seconds per vehicle and less than or equal to 55 seconds per vehicle. The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle length, or high volume/capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	Average control delay is greater than 55 seconds per vehicle and less than or equal to 80 seconds per vehicle. This is usually considered to be the limit of acceptable delay. These high delay values generally (but not always) indicate poor progression, long cycle lengths, and high volume/capacity ratios. Individual cycle failures are frequent occurrences.
F	Average control delay is in excess of 80 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation. It may also occur at high volume/capacity ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also contribute to such high delay values.

1 Most of the material in this appendix is adapted from the Transportation Research Board, Highway Capacity Manual, (2000).

Table A2: Level-of-Service Criteria for Signalized Intersections

Level of Service	Average Control Delay per Vehicle (Seconds)
A	<10.0
B	>10 and ≤20
C	>20 and ≤35
D	>35 and ≤55
E	>55 and ≤80
F	>80

Unsignalized Intersections

Unsignalized intersections include two-way stop-controlled (TWSC) and all-way stop-controlled (AWSC) intersections. The 2000 Highway Capacity Manual (HCM) provides models for estimating control delay at both TWSC and AWSC intersections. A qualitative description of the various service levels associated with an unsignalized intersection is presented in Table A3. A quantitative definition of level of service for unsignalized intersections is presented in Table A4. Using this definition, Level of Service "E" is generally considered to represent the minimum acceptable design standard.

Table A3: Level-of-Service Criteria for Unsignalized Intersections

Level of Service	Average Delay per Vehicle to Minor Street
A	• Nearly all drivers find freedom of operation. • Very seldom is there more than one vehicle in queue.
B	• Some drivers begin to consider the delay an inconvenience. • Occasionally there is more than one vehicle in queue.
C	• Many times there is more than one vehicle in queue. • Most drivers feel restricted, but not objectionably so.
D	• Often there is more than one vehicle in queue. • Drivers feel quite restricted.
E	• Represents a condition in which the demand is near or equal to the probable maximum number of vehicles that can be accommodated by the movement. • There is almost always more than one vehicle in queue. • Drivers find the delays approaching intolerable levels.
F	• Forced flow. • Represents an intersection failure condition that is caused by geometric and/or operational constraints external to the intersection.

Table A4: Level-of-Service Criteria for Unsignalized Intersections

Level of Service	Average Control Delay per Vehicle (Seconds)
A	<10.0
B	>10.0 and ≤ 15.0
C	>15.0 and ≤ 25.0
D	>25.0 and ≤ 35.0
E	>35.0 and ≤ 50.0
F	>50.0

It should be noted that the level-of-service criteria for unsignalized intersections are somewhat different than the criteria used for signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an unsignalized intersection. Additionally, there are a number of driver behavior considerations that combine to make delays at signalized intersections less galling than at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, while drivers on the minor street approaches to TWSC intersections must remain attentive to the task of identifying

acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at unsignalized intersections than signalized intersections. For these reasons, it is considered that the control delay threshold for any given level of service is less for an unsignalized intersection than for a signalized intersection. While overall intersection level of service is calculated for AWSC intersections, level of service is only calculated for the minor approaches and the major street left turn movements at TWSC intersections. No delay is assumed to the major street through movements. For TWSC intersections, the overall intersection level of service remains undefined: level of service is only calculated for each minor street lane.

In the performance evaluation of TWSC intersections, it is important to consider other measures of effectiveness (MOEs) in addition to delay, such as v/c ratios for individual movements, average queue lengths, and 95th-percentile queue lengths. By focusing on a single MOE for the worst movement only, such as delay for the minor-street left turn, users may make inappropriate traffic control decisions. The potential for making such inappropriate decisions is likely to be particularly pronounced when the HCM level-of-service thresholds are adopted as legal standards, as is the case in many public agencies.

Appendix B Traffic Counts

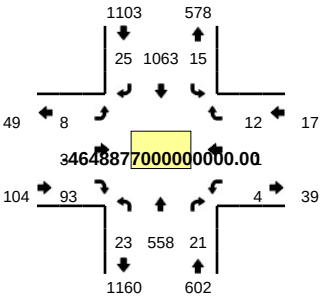
Type of peak hour being reported: User-Defined

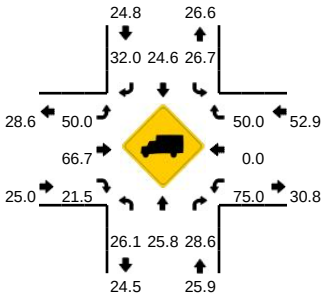
Method for determining peak hour: Total Entering Volume

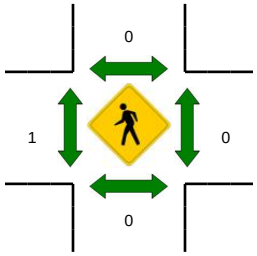
LOCATION: US 30 -- Millard Rd
CITY/STATE: Saint Helens, OR

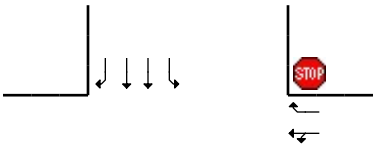
QC JOB #: 14560501
DATE: Thu, May 18 2017

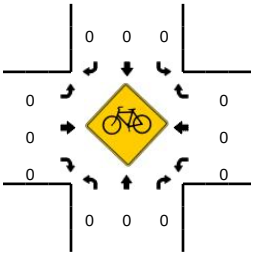
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

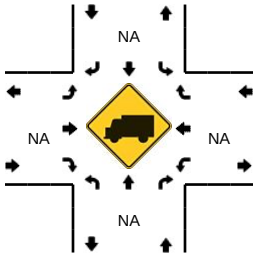


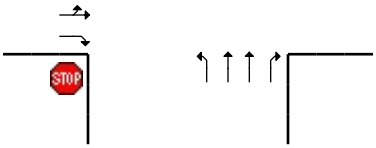


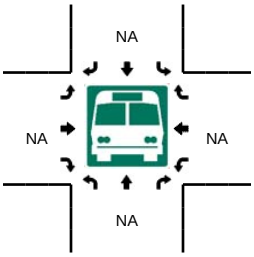












5-Min Count Period Beginning At	US 30 (Northbound)				US 30 (Southbound)				Millard Rd (Eastbound)				Millard Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	0	48	4	0	2	322	1	0	1	0	14	0	2	1	0	0	395	
6:15 AM	0	65	2	0	2	277	3	0	0	1	23	0	2	0	2	0	377	
6:30 AM	3	85	3	0	1	276	4	0	0	1	20	0	1	1	1	0	396	
6:45 AM	2	93	6	0	2	297	3	0	1	0	23	0	1	0	2	0	430	
7:00 AM	3	82	5	0	5	290	7	0	2	0	32	0	1	0	0	0	427	
7:15 AM	8	121	2	0	2	268	4	0	0	1	28	0	0	0	4	0	438	
7:30 AM	2	122	0	0	7	297	6	0	1	0	17	0	0	0	1	0	453	
7:45 AM	6	163	17	0	4	263	6	0	2	2	24	0	4	1	4	0	496	
8:00 AM	7	152	2	0	2	235	9	0	5	0	24	0	0	0	3	0	439	
8:15 AM	6	161	3	0	5	210	14	0	1	0	11	0	0	0	4	0	415	
8:30 AM	15	156	9	0	2	203	6	0	2	0	16	0	0	0	2	0	411	
8:45 AM	10	104	5	0	3	220	12	0	2	1	8	0	3	0	4	0	372	1637
9:00 AM	9	116	3	0	4	175	7	0	0	1	20	0	0	2	1	0	338	1536
9:15 AM	2	129	4	0	1	161	4	0	2	0	12	0	0	1	4	0	320	1441
9:30 AM	6	101	3	0	3	197	8	0	3	1	8	0	2	0	2	0	334	1364
9:45 AM	12	129	3	0	4	180	13	0	1	0	13	0	2	3	2	0	362	1354
10:00 AM	6	135	2	0	0	162	8	0	5	0	16	0	1	0	2	0	337	1353
10:15 AM	4	126	1	0	1	166	7	0	5	1	14	0	2	0	10	0	337	1370
10:30 AM	2	145	2	0	1	176	10	0	6	1	10	0	1	0	2	0	356	1392
10:45 AM	5	143	2	0	3	167	9	0	3	2	7	0	2	0	5	0	348	1378
11:00 AM	6	147	2	0	3	188	15	0	1	0	15	0	3	0	4	0	384	1425
11:15 AM	11	161	1	0	4	169	13	0	4	0	12	0	2	2	5	0	384	1472
11:30 AM	4	137	5	0	5	140	10	0	3	1	6	0	1	0	2	0	314	1430
11:45 AM	4	173	4	0	8	181	6	0	3	0	5	0	1	0	4	0	389	1471

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	652	68	0	16	1052	24	0	8	8	96	0	16	4	16	0	1984
Heavy Trucks	4	116	20		0	276	4		4	4	12		12	0	8		460
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 1/4/2018 12:15 PM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

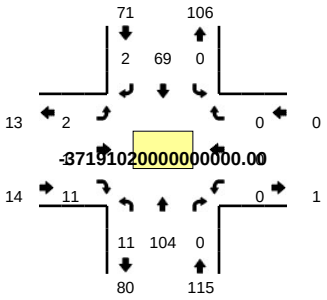
LOCATION: Old Portland Rd -- Millard Rd

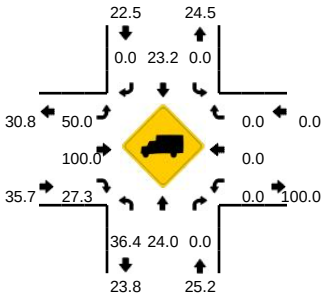
QC JOB #: 14560502

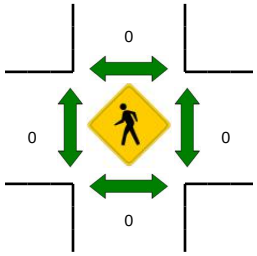
CITY/STATE: Warren, OR

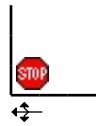
DATE: Thu, May 18 2017

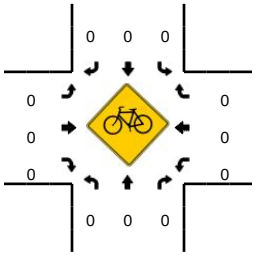
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

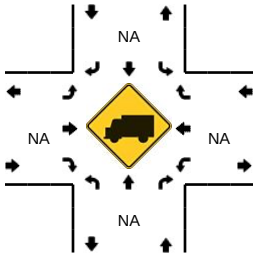


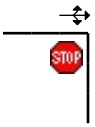


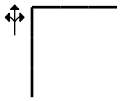


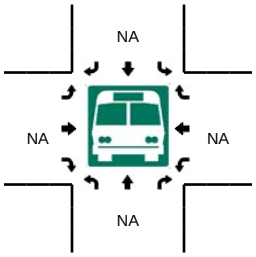












5-Min Count Period Beginning At	Old Portland Rd (Northbound)				Old Portland Rd (Southbound)				Millard Rd (Eastbound)				Millard Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	1	9	0	0	0	15	1	0	0	0	2	0	0	0	0	0	28	
6:15 AM	1	15	0	0	0	12	0	0	1	0	2	0	0	0	0	0	31	
6:30 AM	3	24	0	0	0	12	0	0	0	0	1	0	0	0	0	0	40	
6:45 AM	2	15	0	0	0	15	0	0	4	0	0	0	0	0	0	0	36	
7:00 AM	0	15	0	0	0	10	0	0	0	0	4	0	0	0	0	0	29	
7:15 AM	5	17	0	0	0	14	0	0	0	1	1	0	0	0	0	0	38	
7:30 AM	1	20	0	0	0	16	0	0	0	0	4	0	0	0	0	0	41	
7:45 AM	1	34	0	0	0	20	2	0	2	0	3	0	0	0	0	0	62	
8:00 AM	4	33	0	0	0	19	0	0	0	0	3	0	0	0	0	0	59	
8:15 AM	3	21	0	0	0	7	0	0	3	0	0	0	0	0	0	0	34	
8:30 AM	1	29	0	0	0	11	2	0	0	0	2	0	0	0	0	0	45	
8:45 AM	3	29	0	0	0	16	3	0	1	0	1	0	0	0	0	0	53	191
9:00 AM	0	12	0	0	0	15	3	0	2	1	1	0	0	0	0	0	34	166
9:15 AM	3	14	0	0	0	12	2	0	2	0	1	0	0	0	1	0	35	167
9:30 AM	0	12	0	0	0	12	1	0	0	0	2	0	0	0	0	0	27	149
9:45 AM	3	18	0	0	0	15	2	0	0	0	1	0	0	0	0	0	39	135
10:00 AM	1	18	0	0	0	8	1	0	2	0	1	0	0	1	0	0	32	133
10:15 AM	9	23	0	0	0	8	2	0	1	0	1	0	0	0	0	0	44	142
10:30 AM	2	17	0	0	0	16	1	0	2	0	3	0	0	0	0	0	41	156
10:45 AM	3	9	0	0	0	14	1	0	2	0	0	0	0	0	0	0	29	146
11:00 AM	1	16	0	0	0	8	3	0	2	0	2	0	0	0	0	0	32	146
11:15 AM	2	17	0	0	0	12	6	0	2	0	1	0	0	2	0	0	42	144
11:30 AM	1	30	0	0	1	17	0	0	3	0	2	0	1	0	0	0	55	158
11:45 AM	2	21	0	0	0	20	2	0	2	0	2	0	0	0	0	0	49	178

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	136	0	0	0	80	8	0	8	0	12	0	0	0	0	0	248
Heavy Trucks	4	40	0		0	20	0		4	0	0		0	0	0		68
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 1/4/2018 12:15 PM

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

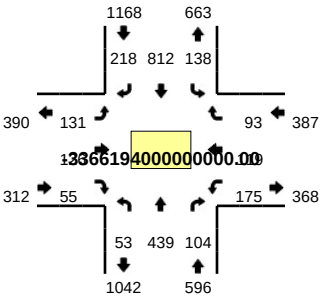
Type of peak hour being reported: User-Defined

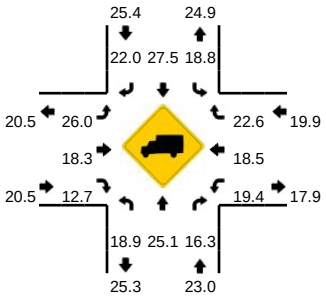
Method for determining peak hour: Total Entering Volume

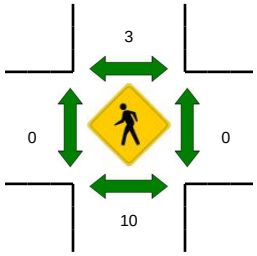
LOCATION: US 30 -- Gable Rd
CITY/STATE: Saint Helens, OR

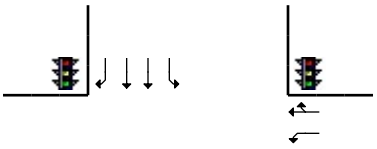
QC JOB #: 14560503
DATE: Thu, May 18 2017

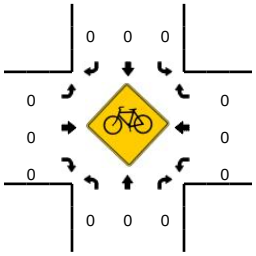
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

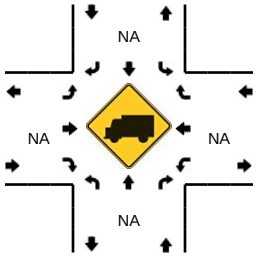


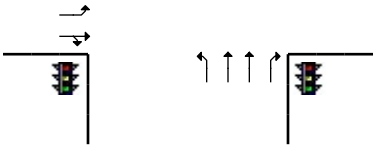


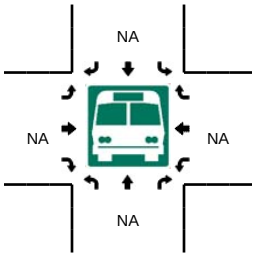












5-Min Count Period Beginning At	US 30 (Northbound)				US 30 (Southbound)				Gable Rd (Eastbound)				Gable Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	6	34	12	0	37	264	10	0	6	6	15	0	51	10	11	0	462	
6:15 AM	4	37	20	0	29	222	13	0	9	9	13	0	40	7	20	0	423	
6:30 AM	3	60	12	0	26	220	14	0	11	18	16	0	47	7	12	0	446	
6:45 AM	9	69	18	0	32	246	19	0	8	19	16	0	35	11	12	0	494	
7:00 AM	11	60	12	0	31	206	25	0	12	17	20	0	50	18	29	0	491	
7:15 AM	14	85	27	0	31	217	33	0	24	21	14	0	38	15	20	0	539	
7:30 AM	9	97	22	0	29	210	36	0	25	26	18	0	61	31	25	0	589	
7:45 AM	17	143	28	0	45	223	64	0	37	31	11	0	34	30	22	0	685	
8:00 AM	13	114	27	0	33	162	85	0	45	48	12	0	42	43	26	0	650	
8:15 AM	5	144	27	0	31	181	36	0	37	27	18	0	33	15	19	0	573	
8:30 AM	9	113	30	0	29	160	25	0	11	27	12	0	31	30	35	0	512	
8:45 AM	7	107	18	0	29	177	21	0	22	23	18	0	39	18	29	0	508	2243
9:00 AM	11	85	27	0	29	138	24	0	25	20	9	0	36	16	25	0	445	2038
9:15 AM	10	101	27	0	23	128	28	0	16	16	11	0	28	21	20	0	429	1894
9:30 AM	4	81	22	0	30	175	27	0	13	28	12	0	35	17	33	0	477	1859
9:45 AM	9	101	26	0	34	127	23	0	32	15	16	0	37	23	42	0	485	1836
10:00 AM	9	103	31	0	37	130	37	0	26	22	12	0	25	30	34	0	496	1887
10:15 AM	6	106	28	0	36	136	30	0	33	18	10	0	45	19	37	0	504	1962
10:30 AM	14	109	27	0	33	139	23	0	23	30	8	0	34	29	35	0	504	1989
10:45 AM	9	108	32	0	32	140	42	0	32	23	10	0	36	30	39	0	533	2037
11:00 AM	23	111	21	0	52	138	16	0	26	34	13	0	45	32	36	0	547	2088
11:15 AM	7	124	38	0	32	137	34	0	27	26	16	0	40	20	28	0	529	2113
11:30 AM	14	103	26	0	46	108	37	0	39	23	9	0	40	28	48	0	521	2130
11:45 AM	13	146	25	0	43	128	37	0	41	33	11	0	41	39	47	0	604	2201

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	68	572	112	0	180	892	256	0	148	124	44	0	136	120	88	0	2740
Heavy Trucks	8	128	8		36	216	52		28	20	0		32	28	36		592
Pedestrians		20				4				0				0			24
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/4/2018 12:15 PM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

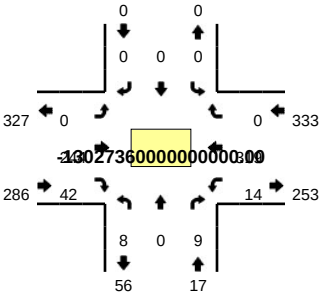
LOCATION: McNulty Way -- Gable Rd

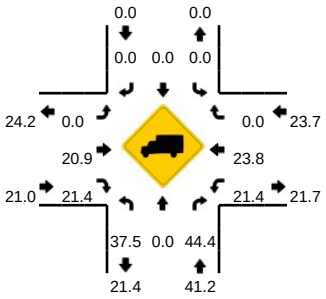
QC JOB #: 14560504

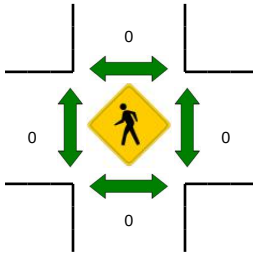
CITY/STATE: Saint Helens, OR

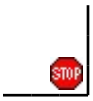
DATE: Thu, May 18 2017

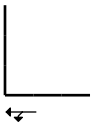
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

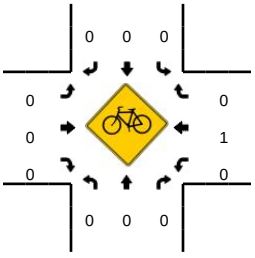


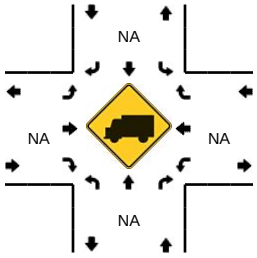


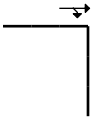


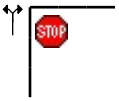


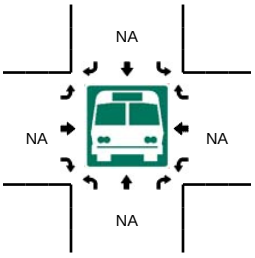












5-Min Count Period Beginning At	McNulty Way (Northbound)				McNulty Way (Southbound)				Gable Rd (Eastbound)				Gable Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	2	0	1	0	0	0	0	0	0	24	12	0	5	61	0	0	105	
6:15 AM	0	0	0	0	0	0	0	0	0	43	1	0	0	54	0	0	98	
6:30 AM	1	0	1	0	0	0	0	0	0	39	3	0	1	50	0	0	95	
6:45 AM	1	0	2	0	0	0	0	0	0	40	7	0	2	52	0	0	104	
7:00 AM	2	0	3	0	0	0	0	0	0	33	9	0	3	73	0	0	123	
7:15 AM	1	0	3	0	0	0	0	0	0	48	8	0	1	66	0	0	127	
7:30 AM	2	0	2	0	0	0	0	0	0	56	4	0	3	100	0	0	167	
7:45 AM	3	0	3	0	0	0	0	0	0	75	18	0	6	72	0	0	177	
8:00 AM	2	0	1	0	0	0	0	0	0	65	12	0	4	81	0	0	165	
8:15 AM	8	0	2	0	0	0	0	0	0	49	9	0	5	52	0	0	125	
8:30 AM	15	0	6	0	0	0	0	0	0	45	25	0	2	60	0	0	153	
8:45 AM	10	0	5	0	0	0	0	0	0	42	4	0	5	63	0	0	129	572
9:00 AM	3	0	4	0	0	0	0	0	0	49	5	0	11	57	0	0	129	536
9:15 AM	7	0	2	0	0	0	0	0	0	39	9	0	4	47	0	0	108	519
9:30 AM	8	0	4	0	0	0	0	0	0	47	10	0	4	63	0	0	136	502
9:45 AM	14	0	9	0	0	0	0	0	0	40	12	0	6	70	0	0	151	524
10:00 AM	12	0	8	0	0	0	0	0	0	50	11	0	1	55	0	0	137	532
10:15 AM	7	0	9	0	0	0	0	0	0	36	8	0	3	72	0	0	135	559
10:30 AM	8	0	6	0	0	0	0	0	0	70	11	0	11	57	0	0	163	586
10:45 AM	8	0	9	0	0	0	0	0	0	37	8	0	6	61	0	0	129	564
11:00 AM	27	0	7	0	0	0	0	0	0	62	16	0	7	80	0	0	199	626
11:15 AM	7	0	2	0	0	0	0	0	0	52	12	0	6	65	0	0	144	635
11:30 AM	12	0	4	0	0	0	0	0	0	68	4	0	9	74	0	0	171	643
11:45 AM	21	0	18	0	0	0	0	0	0	64	11	0	4	92	0	0	210	724

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	0	12	0	0	0	0	0	0	300	72	0	24	288	0	0	708
Heavy Trucks	8	0	4		0	0	0		0	64	16		4	92	0		188
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 1/4/2018 12:15 PM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

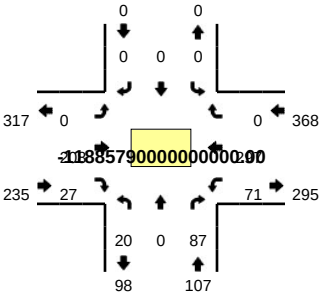
LOCATION: Old Portland Rd -- Gable Rd

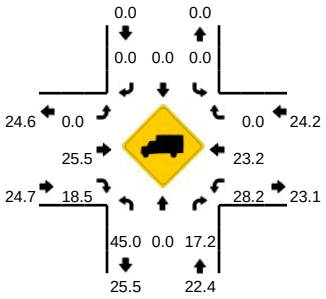
QC JOB #: 14560505

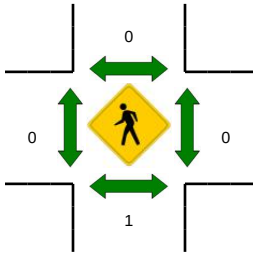
CITY/STATE: Saint Helens, OR

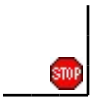
DATE: Thu, May 18 2017

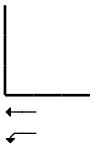
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

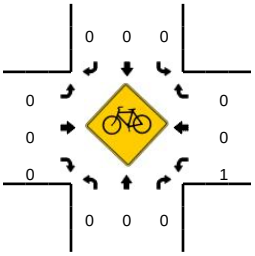


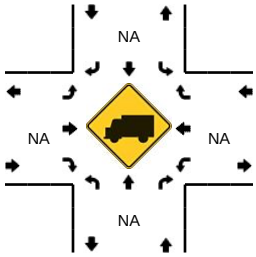


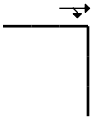


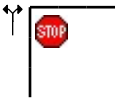


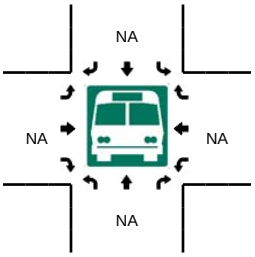












5-Min Count Period Beginning At	Old Portland Rd (Northbound)				Old Portland Rd (Southbound)				Gable Rd (Eastbound)				Gable Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	5	0	8	0	0	0	0	0	0	15	6	0	15	56	0	0	105	
6:15 AM	2	0	11	0	0	0	0	0	0	34	9	0	15	48	0	0	119	
6:30 AM	0	0	16	0	0	0	0	0	0	24	7	0	18	45	0	0	110	
6:45 AM	1	0	15	0	0	0	0	0	0	38	5	0	25	48	0	0	132	
7:00 AM	2	0	9	0	0	0	0	0	0	29	3	0	11	66	0	0	120	
7:15 AM	5	0	18	0	0	0	0	0	0	42	8	0	10	61	0	0	144	
7:30 AM	5	0	16	0	0	0	0	0	0	41	7	0	19	90	0	0	178	
7:45 AM	2	0	23	0	0	0	0	0	0	69	7	0	20	73	0	0	194	
8:00 AM	8	0	30	0	0	0	0	0	0	56	5	0	22	73	0	0	194	
8:15 AM	2	0	27	0	0	0	0	0	0	42	5	0	6	49	0	0	131	
8:30 AM	8	0	31	0	0	0	0	0	0	43	0	0	8	51	0	0	141	
8:45 AM	5	0	27	0	0	0	0	0	0	41	3	0	20	56	0	0	152	618
9:00 AM	1	0	13	0	0	0	0	0	0	39	5	0	14	61	0	0	133	557
9:15 AM	6	0	16	0	0	0	0	0	0	34	6	0	13	42	0	0	117	543
9:30 AM	5	0	15	0	0	0	0	0	0	39	6	0	10	56	0	0	131	533
9:45 AM	10	0	14	0	0	0	0	0	0	43	5	0	17	59	0	0	148	529
10:00 AM	7	0	19	0	0	0	0	0	0	46	5	0	10	42	0	0	129	525
10:15 AM	5	0	20	0	0	0	0	0	0	38	6	0	10	65	0	0	144	552
10:30 AM	4	0	18	0	0	0	0	0	0	62	6	0	14	55	0	0	159	580
10:45 AM	3	0	11	0	0	0	0	0	0	37	3	0	13	58	0	0	125	557
11:00 AM	7	0	17	0	0	0	0	0	0	57	7	0	12	74	0	0	174	602
11:15 AM	6	0	19	0	0	0	0	0	0	44	9	0	13	58	0	0	149	607
11:30 AM	5	0	31	0	0	0	0	0	0	59	5	0	17	71	0	0	188	636
11:45 AM	7	0	25	0	0	0	0	0	0	72	7	0	18	81	0	0	210	721

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	8	0	92	0	0	0	0	0	0	276	28	0	80	292	0	0	776
Heavy Trucks	8	0	12		0	0	0		0	72	8		20	92	0		212
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 1/4/2018 12:15 PM

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

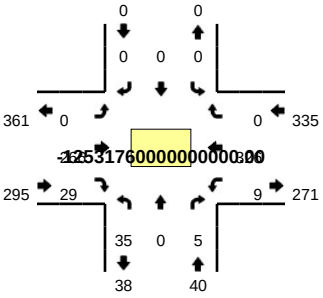
Type of peak hour being reported: User-Defined

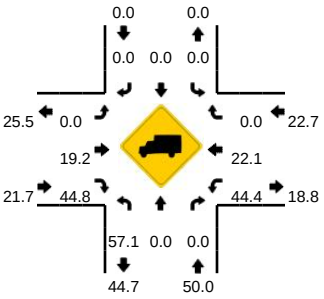
Method for determining peak hour: Total Entering Volume

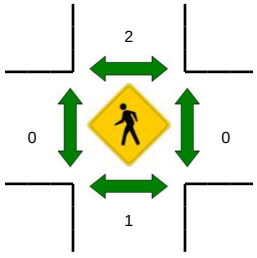
LOCATION: Railroad Ave -- Old Portland Rd
CITY/STATE: Saint Helens, OR

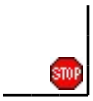
QC JOB #: 14560506
DATE: Thu, May 18 2017

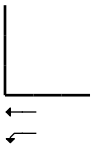
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

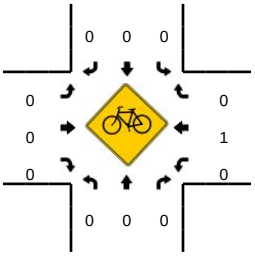


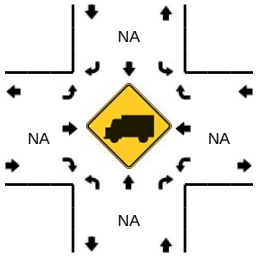


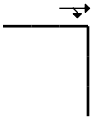


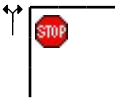


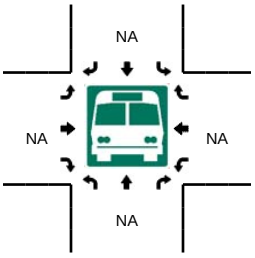












5-Min Count Period Beginning At	Railroad Ave (Northbound)				Railroad Ave (Southbound)				Old Portland Rd (Eastbound)				Old Portland Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	2	0	2	0	0	0	0	0	0	15	8	0	4	68	0	0	99	
6:15 AM	1	0	0	0	0	0	0	0	0	24	21	0	2	61	0	0	109	
6:30 AM	3	0	0	0	0	0	0	0	0	30	11	0	9	59	0	0	112	
6:45 AM	3	0	4	0	0	0	0	0	0	40	14	0	2	68	0	0	131	
7:00 AM	16	0	6	0	0	0	0	0	0	29	6	0	3	65	0	0	125	
7:15 AM	12	0	2	0	0	0	0	0	0	54	8	0	3	59	0	0	138	
7:30 AM	8	0	0	0	0	0	0	0	0	52	5	0	4	102	0	0	171	
7:45 AM	10	0	2	0	0	0	0	0	0	82	9	0	2	79	0	0	184	
8:00 AM	5	0	1	0	0	0	0	0	0	78	7	0	0	86	0	0	177	
8:15 AM	4	0	0	0	0	0	0	0	0	61	5	0	1	52	0	0	123	
8:30 AM	3	0	1	0	0	0	0	0	0	65	7	0	2	54	0	0	132	
8:45 AM	7	0	2	0	0	0	0	0	0	62	5	0	4	73	0	0	153	585
9:00 AM	7	0	1	0	0	0	0	0	0	45	9	0	4	64	0	0	130	538
9:15 AM	8	0	4	0	0	0	0	0	0	32	16	0	2	46	0	0	108	523
9:30 AM	8	0	4	0	0	0	0	0	0	51	6	0	4	61	0	0	134	525
9:45 AM	11	0	5	0	0	0	0	0	0	48	8	0	2	63	0	0	137	509
10:00 AM	9	0	2	0	0	0	0	0	0	58	8	0	3	42	0	0	122	501
10:15 AM	9	0	2	0	0	0	0	0	0	44	12	0	6	67	0	0	140	533
10:30 AM	9	0	1	0	0	0	0	0	0	67	13	0	2	59	0	0	151	550
10:45 AM	12	0	2	0	0	0	0	0	0	43	7	0	5	55	0	0	124	537
11:00 AM	7	0	3	0	0	0	0	0	0	60	8	0	2	81	0	0	161	576
11:15 AM	8	0	8	0	0	0	0	0	0	58	4	0	3	62	0	0	143	579
11:30 AM	10	0	3	0	0	0	0	0	0	81	9	0	2	77	0	0	182	610
11:45 AM	7	0	1	0	0	0	0	0	0	79	17	0	7	90	0	0	201	687

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	40	0	8	0	0	0	0	0	0	328	36	0	8	316	0	0	736
Heavy Trucks	32	0	0		0	0	0		0	64	16		4	76	0		192
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 1/4/2018 12:15 PM

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

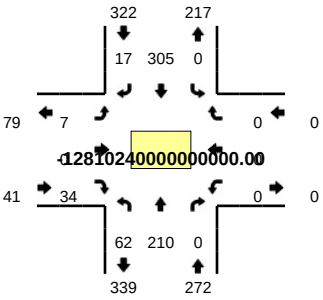
Type of peak hour being reported: User-Defined

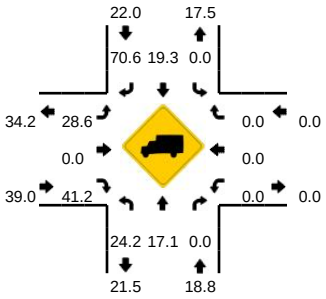
Method for determining peak hour: Total Entering Volume

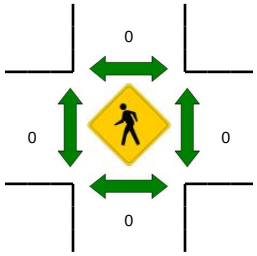
LOCATION: Old Portland Rd -- Port Ave
CITY/STATE: Saint Helens, OR

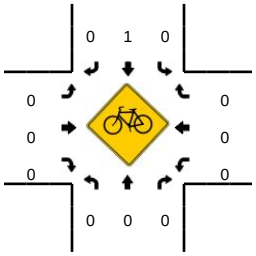
QC JOB #: 14560507
DATE: Thu, May 18 2017

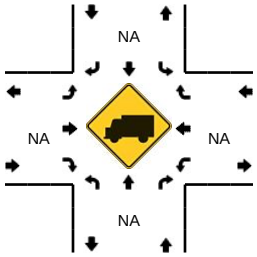
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

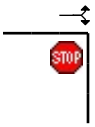


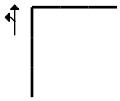


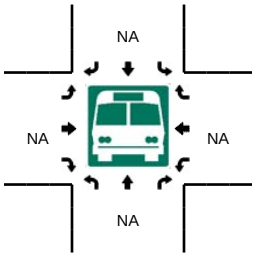












5-Min Count Period Beginning At	Old Portland Rd (Northbound)				Old Portland Rd (Southbound)				Port Ave (Eastbound)				Port Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	4	13	0	0	0	67	1	0	0	0	5	0	0	0	0	0	90	
6:15 AM	9	16	0	0	0	53	2	0	0	0	8	0	0	0	0	0	88	
6:30 AM	3	27	0	0	0	61	3	0	0	0	6	0	0	0	0	0	100	
6:45 AM	4	38	0	0	0	61	1	0	0	0	8	0	0	0	0	0	112	
7:00 AM	5	33	0	0	0	64	0	0	1	0	5	0	0	0	0	0	108	
7:15 AM	10	46	0	0	0	55	2	0	1	0	7	0	0	0	0	0	121	
7:30 AM	12	40	0	0	0	100	2	0	0	0	9	0	0	0	0	0	163	
7:45 AM	26	61	0	0	0	73	3	0	1	0	7	0	0	0	0	0	171	
8:00 AM	14	63	0	0	0	77	10	0	5	0	11	0	0	0	0	0	180	
8:15 AM	10	53	0	0	0	44	7	0	2	0	13	0	0	0	0	0	129	
8:30 AM	15	50	0	0	0	50	3	0	1	0	7	0	0	0	0	0	126	
8:45 AM	11	53	0	0	0	68	7	0	0	0	11	0	0	0	0	0	150	585
9:00 AM	11	33	0	0	0	60	5	0	0	0	8	0	0	0	0	0	117	522
9:15 AM	6	33	0	0	0	46	3	0	1	0	5	0	0	0	0	0	94	487
9:30 AM	14	39	0	0	0	54	4	0	3	0	12	0	0	0	0	0	126	487
9:45 AM	9	45	0	0	0	57	7	0	1	0	7	0	0	0	0	0	126	463
10:00 AM	9	50	0	0	0	41	2	0	6	0	3	0	0	0	0	0	111	457
10:15 AM	13	37	0	0	0	56	10	0	1	0	17	0	0	0	0	0	134	497
10:30 AM	8	55	0	0	0	56	1	0	2	0	8	0	0	0	0	0	130	501
10:45 AM	12	33	0	0	0	50	5	0	3	0	12	0	0	0	0	0	115	490
11:00 AM	13	55	0	0	0	70	6	0	2	0	14	0	0	0	0	0	160	539
11:15 AM	14	53	0	0	0	56	4	0	2	0	8	0	0	0	0	0	137	542
11:30 AM	14	74	0	0	0	64	2	0	2	0	16	0	0	0	0	0	172	584
11:45 AM	18	62	0	0	0	84	7	0	5	0	16	0	0	0	0	0	192	661

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	56	252	0	0	0	308	40	0	20	0	44	0	0	0	0	0	720
Heavy Trucks	16	44	0		0	64	40		4	0	16		0	0	0		184
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 1/4/2018 12:15 PM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

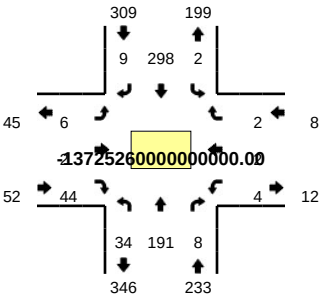
LOCATION: Old Portland Rd -- S 18th St/Kaster Rd

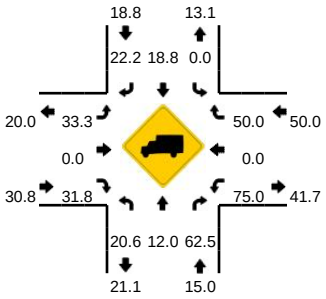
QC JOB #: 14560508

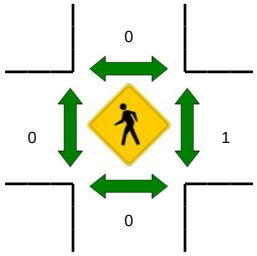
CITY/STATE: Saint Helens, OR

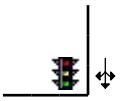
DATE: Thu, May 18 2017

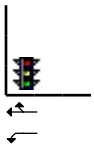
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:50 AM -- 8:05 AM

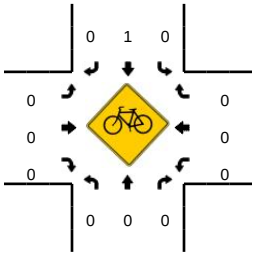


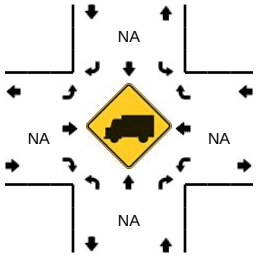


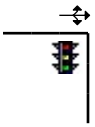


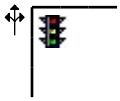


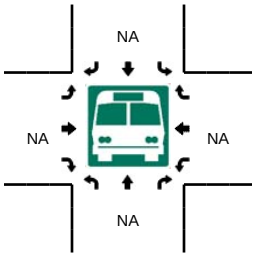












5-Min Count Period Beginning At	Old Portland Rd (Northbound)				Old Portland Rd (Southbound)				S 18th St/Kaster Rd (Eastbound)				S 18th St/Kaster Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	2	6	3	0	1	60	0	0	1	3	8	0	2	1	0	0	87	
6:15 AM	1	11	7	0	1	48	0	0	0	3	11	0	1	0	0	0	83	
6:30 AM	1	17	11	0	0	55	0	0	0	8	12	0	1	2	0	0	107	
6:45 AM	1	22	12	0	2	60	0	0	1	4	6	0	1	2	1	0	112	
7:00 AM	4	31	5	0	0	61	2	0	3	3	5	0	2	0	0	0	116	
7:15 AM	2	43	4	0	1	52	2	0	1	0	7	0	0	1	1	0	114	
7:30 AM	7	34	1	0	0	97	1	0	0	0	11	0	2	0	0	0	153	
7:45 AM	12	56	2	0	0	76	5	0	5	2	8	0	0	1	0	0	167	
8:00 AM	13	58	1	0	1	73	1	0	0	0	18	0	2	0	1	0	168	
8:15 AM	8	41	3	0	0	45	1	0	1	0	7	0	1	0	0	0	107	
8:30 AM	8	50	2	0	0	50	0	0	2	2	6	0	1	1	0	0	122	
8:45 AM	8	46	4	0	0	66	3	0	1	0	8	0	2	0	1	0	139	536
9:00 AM	6	28	2	0	2	61	1	0	1	1	10	0	2	1	0	0	115	483
9:15 AM	10	25	3	0	0	40	1	0	3	0	10	0	2	0	1	0	95	471
9:30 AM	7	32	5	0	0	51	0	0	0	1	10	0	1	1	1	0	109	458
9:45 AM	9	39	1	0	0	52	2	0	3	1	11	0	5	1	0	0	124	443
10:00 AM	11	43	1	0	0	35	1	0	3	1	7	0	4	0	1	0	107	435
10:15 AM	7	34	4	0	0	47	2	0	1	2	21	0	1	0	0	0	119	459
10:30 AM	15	38	4	0	0	46	3	0	4	0	12	0	1	0	0	0	123	473
10:45 AM	11	32	2	0	1	41	4	0	1	0	13	0	5	0	0	0	110	459
11:00 AM	14	46	2	0	0	63	4	0	5	0	20	0	2	1	2	0	159	511
11:15 AM	4	48	7	0	0	49	6	0	1	0	14	0	3	0	0	0	132	524
11:30 AM	7	56	3	0	0	56	9	0	0	1	16	0	3	0	1	0	152	553
11:45 AM	17	60	2	0	1	59	1	0	2	0	31	0	3	1	2	0	179	622

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	52	232	4	0	4	292	4	0	0	0	72	0	8	0	4	0	672
Heavy Trucks	16	24	4		0	68	0		0	0	36		4	0	4		156
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 1/4/2018 12:15 PM

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

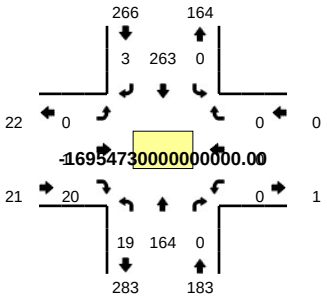
Type of peak hour being reported: User-Defined

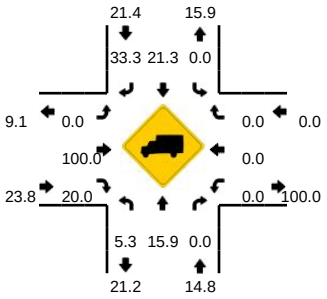
Method for determining peak hour: Total Entering Volume

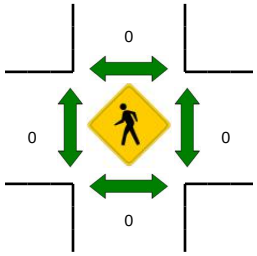
LOCATION: Old Portland Rd -- S 15th St
CITY/STATE: Saint Helens, OR

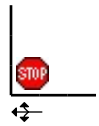
QC JOB #: 14560509
DATE: Thu, May 18 2017

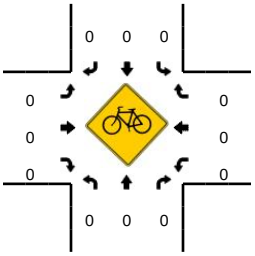
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:20 AM -- 7:35 AM

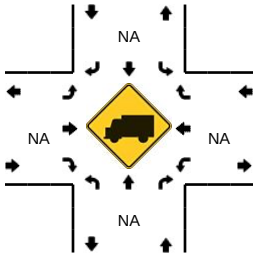


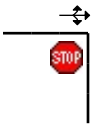


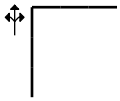


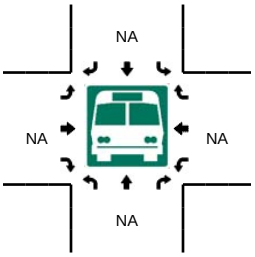












5-Min Count Period Beginning At	Old Portland Rd (Northbound)				Old Portland Rd (Southbound)				S 15th St (Eastbound)				S 15th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	0	9	0	0	0	59	0	0	0	0	0	0	0	0	0	0	68	
6:15 AM	1	8	0	0	0	39	0	0	0	0	3	0	0	0	0	0	51	
6:30 AM	1	14	0	0	0	42	0	0	1	0	3	0	1	0	0	0	62	
6:45 AM	2	20	0	0	0	46	0	0	0	0	8	0	0	0	0	0	76	
7:00 AM	4	27	0	0	0	59	1	0	0	0	3	0	0	1	0	0	95	
7:15 AM	2	38	0	0	0	45	0	0	0	0	2	0	0	0	0	0	87	
7:30 AM	7	31	0	0	0	89	2	0	0	1	6	0	0	0	0	0	136	
7:45 AM	5	48	0	0	0	70	1	0	0	0	5	0	0	0	0	0	129	
8:00 AM	5	47	0	0	0	59	0	0	0	0	7	0	0	0	0	0	118	
8:15 AM	5	35	0	0	0	37	1	0	0	0	6	0	0	0	0	0	84	
8:30 AM	5	38	0	0	0	43	0	0	1	1	2	0	0	0	0	0	90	
8:45 AM	1	45	0	0	0	61	0	0	4	0	5	0	1	0	0	0	117	409
9:00 AM	0	28	0	0	0	45	0	0	0	0	5	0	0	0	0	0	78	369
9:15 AM	2	25	1	0	0	35	0	0	0	0	4	0	0	0	0	0	67	352
9:30 AM	1	29	0	0	0	45	0	0	0	0	2	0	0	1	0	0	78	340
9:45 AM	1	32	0	0	0	43	0	0	0	0	3	0	0	0	0	0	79	302
10:00 AM	6	31	1	0	0	31	1	0	0	1	1	0	0	0	0	0	72	296
10:15 AM	1	33	0	0	0	41	0	0	0	0	5	0	0	0	0	0	80	309
10:30 AM	4	36	0	0	0	40	0	0	0	1	5	0	0	0	0	0	86	317
10:45 AM	2	28	1	0	0	40	1	0	1	0	4	0	0	0	0	0	77	315
11:00 AM	5	45	1	0	0	58	1	0	2	0	6	0	0	0	0	0	118	361
11:15 AM	3	43	0	0	0	50	0	0	0	0	7	0	0	0	1	0	104	385
11:30 AM	6	47	0	0	0	50	1	0	0	0	7	0	0	0	0	0	111	410
11:45 AM	7	51	0	0	0	53	0	0	0	0	6	0	0	0	0	0	117	450

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	28	124	0	0	0	356	8	0	0	4	24	0	0	0	0	0	544
Heavy Trucks	4	8	0		0	80	0		0	4	0		0	0	0		96
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 1/4/2018 12:15 PM

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

Type of peak hour being reported: User-Defined

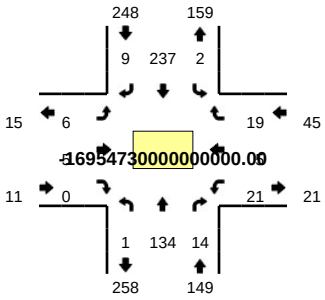
Method for determining peak hour: Total Entering Volume

LOCATION: Old Portland Rd -- Plymouth St

CITY/STATE: Saint Helens, OR

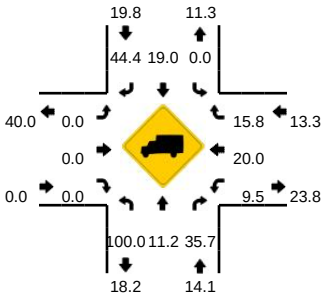
QC JOB #: 14560510

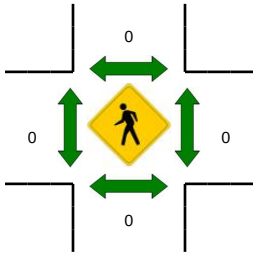
DATE: Thu, May 18 2017

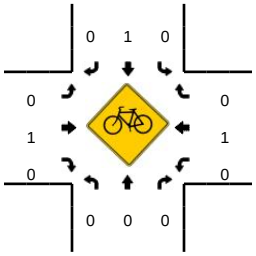


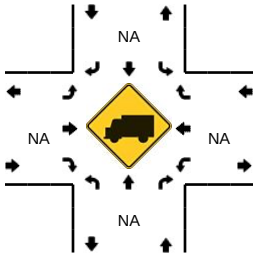
Peak-Hour: 7:15 AM -- 8:15 AM

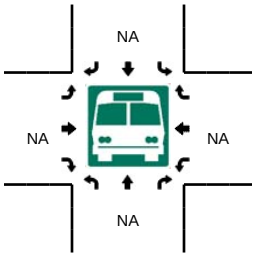
Peak 15-Min: 7:20 AM -- 7:35 AM











5-Min Count Period Beginning At	Old Portland Rd (Northbound)				Old Portland Rd (Southbound)				Plymouth St (Eastbound)				Plymouth St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	0	5	2	0	0	46	1	0	0	0	0	0	6	0	6	0	66	
6:15 AM	0	8	0	0	0	39	1	0	1	1	0	0	0	0	3	0	53	
6:30 AM	0	13	1	0	0	39	0	0	0	0	0	0	1	0	2	0	56	
6:45 AM	0	14	4	0	0	44	1	0	0	0	0	0	1	0	3	0	67	
7:00 AM	0	21	5	0	0	56	1	0	0	0	1	0	6	0	5	0	95	
7:15 AM	0	33	1	0	0	38	0	0	2	1	0	0	6	0	4	0	85	
7:30 AM	0	20	5	0	2	86	1	0	1	1	0	0	9	2	9	0	136	
7:45 AM	1	38	5	0	0	65	6	0	2	2	0	0	4	1	4	0	128	
8:00 AM	0	43	3	0	0	48	2	0	1	1	0	0	2	2	2	0	104	
8:15 AM	0	34	2	0	0	34	2	0	1	4	0	0	1	1	1	0	80	
8:30 AM	0	28	5	0	1	38	2	0	4	0	0	0	3	1	0	0	82	
8:45 AM	0	41	4	0	1	55	3	0	2	0	0	0	1	0	4	0	111	377
9:00 AM	0	27	3	0	1	40	1	0	2	0	0	0	4	0	2	0	80	353
9:15 AM	0	24	1	0	0	32	4	0	0	2	0	0	2	1	1	0	67	340
9:30 AM	1	23	1	0	1	42	3	0	1	0	0	0	0	0	0	0	72	330
9:45 AM	0	28	2	0	0	34	1	0	2	0	0	0	1	0	0	0	68	287
10:00 AM	0	28	2	0	0	30	4	0	0	2	0	0	1	0	2	0	69	276
10:15 AM	0	31	3	0	0	33	2	0	0	2	0	0	2	1	2	0	76	285
10:30 AM	0	29	6	0	0	36	3	0	1	1	0	0	2	0	5	0	83	296
10:45 AM	0	28	3	0	0	38	2	0	1	0	0	0	1	1	0	0	74	302
11:00 AM	0	35	8	0	0	50	5	0	1	2	6	0	0	0	5	0	112	345
11:15 AM	0	34	7	0	1	42	3	0	0	0	6	0	1	0	2	0	96	365
11:30 AM	1	41	4	0	1	45	3	0	0	3	3	0	4	0	2	0	107	389
11:45 AM	0	46	4	0	0	49	6	0	2	1	1	0	1	2	4	0	116	431

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	80	20	0	8	344	4	0	4	4	0	0	36	8	36	0	544
Heavy Trucks	0	4	0		0	64	0		0	0	0		0	0	0		68
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	1	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/4/2018 12:15 PM

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

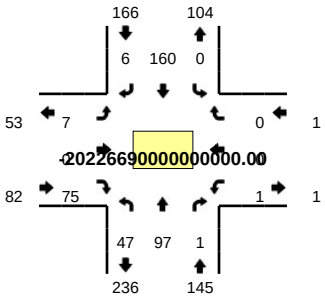
Type of peak hour being reported: User-Defined

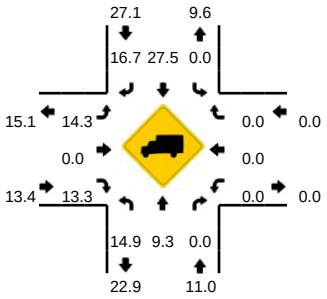
Method for determining peak hour: Total Entering Volume

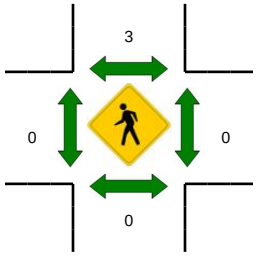
LOCATION: Old Portland Rd -- S 12th St
CITY/STATE: Saint Helens, OR

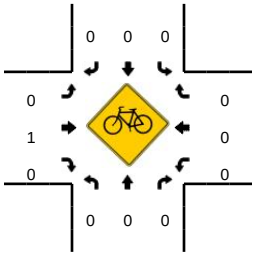
QC JOB #: 14560511
DATE: Thu, May 18 2017

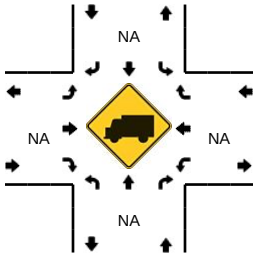
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

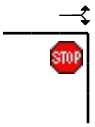


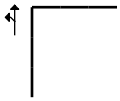


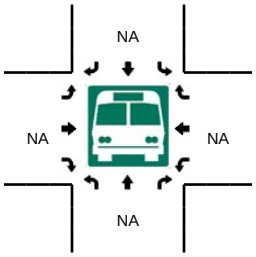












5-Min Count Period Beginning At	Old Portland Rd (Northbound)				Old Portland Rd (Southbound)				S 12th St (Eastbound)				S 12th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	1	6	0	0	0	33	0	0	0	0	8	0	0	0	0	0	48	
6:15 AM	0	8	0	0	0	25	0	0	0	0	8	0	0	0	0	0	41	
6:30 AM	3	10	0	0	0	37	1	0	0	0	3	0	0	0	0	0	54	
6:45 AM	6	8	0	0	0	33	0	0	2	0	8	0	0	0	0	0	57	
7:00 AM	9	13	0	0	0	40	0	0	1	0	8	0	0	0	0	0	71	
7:15 AM	15	21	1	0	0	24	1	0	1	0	15	0	0	0	0	0	78	
7:30 AM	6	19	0	0	0	46	4	0	1	0	36	0	0	0	0	0	112	
7:45 AM	14	28	0	0	0	47	1	0	5	0	18	0	1	0	0	0	114	
8:00 AM	12	29	0	0	0	43	0	0	0	0	6	0	0	0	0	0	90	
8:15 AM	5	27	0	0	0	24	0	0	2	0	5	0	0	0	0	0	63	
8:30 AM	1	34	0	0	0	36	1	0	1	0	5	0	0	0	0	0	78	
8:45 AM	5	37	0	0	0	50	1	0	0	0	6	0	0	0	0	0	99	330
9:00 AM	4	23	0	0	0	36	0	0	1	0	5	0	0	0	0	0	69	309
9:15 AM	6	16	0	0	0	27	0	0	2	0	5	0	0	0	0	0	56	302
9:30 AM	5	23	0	0	0	34	1	0	0	0	10	0	0	0	0	0	73	297
9:45 AM	3	24	0	0	0	27	0	0	1	0	9	0	0	1	0	0	65	263
10:00 AM	6	23	0	0	0	28	0	0	1	0	4	0	0	0	0	0	62	256
10:15 AM	9	22	0	0	0	25	0	0	0	0	6	0	0	0	0	0	62	262
10:30 AM	6	26	0	0	0	32	1	0	0	0	6	0	0	0	0	0	71	260
10:45 AM	1	27	0	0	0	38	0	0	1	0	2	0	0	0	0	0	69	264
11:00 AM	8	30	1	0	0	40	1	0	0	0	13	0	0	0	0	0	93	295
11:15 AM	7	27	0	0	0	38	0	0	0	0	6	0	1	0	0	0	79	312
11:30 AM	8	36	0	0	0	42	0	0	3	0	6	0	0	0	0	0	95	336
11:45 AM	7	37	0	0	0	41	1	0	0	0	7	0	0	0	0	0	93	360

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	56	112	0	0	0	188	4	0	20	0	72	0	4	0	0	0	456
Heavy Trucks	12	4	0		0	60	0		4	0	0		0	0	0		80
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 1/4/2018 12:15 PM

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

Type of peak hour being reported: User-Defined

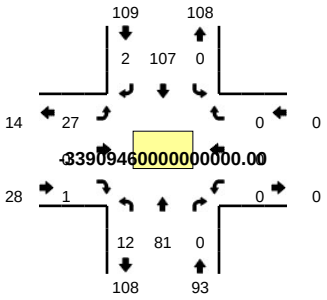
Method for determining peak hour: Total Entering Volume

LOCATION: Old Portland Rd -- S 8th St

CITY/STATE: Saint Helens, OR

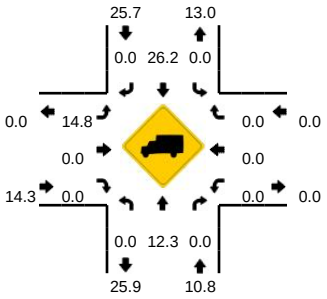
QC JOB #: 14560512

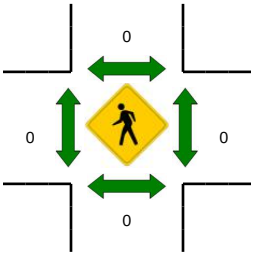
DATE: Thu, May 18 2017

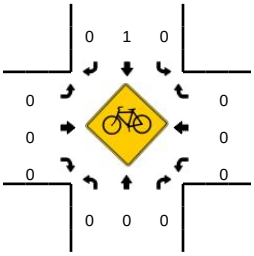


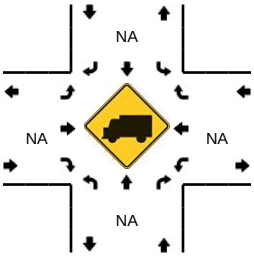
Peak-Hour: 7:15 AM -- 8:15 AM

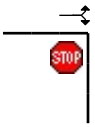
Peak 15-Min: 7:35 AM -- 7:50 AM

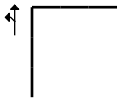


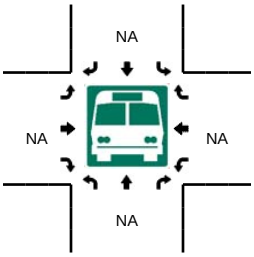












5-Min Count Period Beginning At	Old Portland Rd (Northbound)				Old Portland Rd (Southbound)				S 8th St (Eastbound)				S 8th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	3	2	0	0	0	20	0	0	7	0	0	0	0	0	0	0	32	
6:15 AM	1	9	0	0	0	18	1	0	1	0	0	0	0	0	0	0	30	
6:30 AM	1	10	0	0	0	21	0	0	4	0	0	0	0	0	0	0	36	
6:45 AM	1	11	0	0	0	25	0	0	6	0	0	0	0	0	0	0	43	
7:00 AM	1	11	0	0	0	31	1	0	2	0	0	0	0	0	0	0	46	
7:15 AM	3	17	0	0	0	16	1	0	2	0	1	0	0	0	0	0	40	
7:30 AM	5	10	0	0	0	35	1	0	7	0	0	0	0	0	0	0	58	
7:45 AM	3	27	0	0	0	30	0	0	8	0	0	0	0	0	0	0	68	
8:00 AM	1	27	0	0	0	26	0	0	10	0	0	0	0	0	0	0	64	
8:15 AM	7	22	0	0	0	12	3	0	5	0	0	0	0	0	0	0	49	
8:30 AM	2	27	0	0	0	18	0	0	8	0	1	0	0	0	0	0	56	
8:45 AM	6	32	0	0	0	31	0	0	9	0	0	0	0	0	0	0	78	247
9:00 AM	2	25	0	0	0	26	2	0	4	0	1	0	0	0	0	0	60	243
9:15 AM	3	12	0	0	0	23	0	0	0	0	1	0	0	0	0	0	39	233
9:30 AM	2	20	0	0	0	30	0	0	2	0	0	0	0	0	0	0	54	231
9:45 AM	3	21	0	0	0	22	0	0	2	0	0	0	0	0	0	0	48	201
10:00 AM	1	27	0	0	0	16	0	0	3	0	0	0	0	0	0	0	47	188
10:15 AM	1	18	0	0	0	18	0	0	4	0	0	0	0	0	0	0	41	190
10:30 AM	3	18	0	0	0	23	0	0	2	0	0	0	0	0	0	0	46	182
10:45 AM	2	28	0	0	0	32	0	0	1	0	0	0	0	0	0	0	63	197
11:00 AM	5	23	0	0	0	32	0	0	5	0	0	0	0	0	0	0	65	215
11:15 AM	8	17	0	0	0	27	1	0	5	0	0	0	0	0	0	0	58	232
11:30 AM	5	31	0	0	0	31	1	0	4	0	1	0	0	0	0	0	73	259
11:45 AM	6	32	0	0	0	34	0	0	6	0	0	0	0	0	0	0	78	274

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	108	0	0	0	120	0	0	32	0	0	0	0	0	0	0	272
Heavy Trucks	0	4	0		0	32	0		12	0	0		0	0	0		48
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 1/4/2018 12:15 PM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: S 1st St -- Saint Helens St

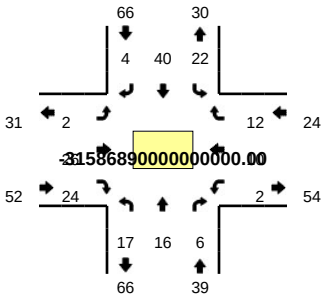
CITY/STATE: Saint Helens, OR

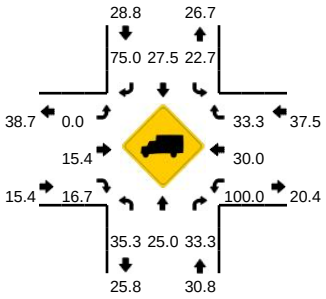
QC JOB #: 14560513

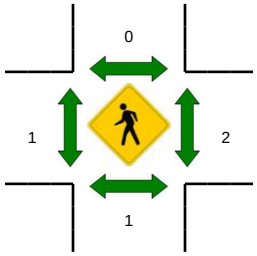
DATE: Thu, May 18 2017

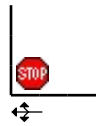
Peak-Hour: 7:15 AM -- 8:15 AM

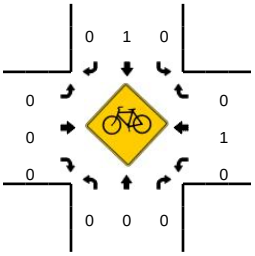
Peak 15-Min: 7:35 AM -- 7:50 AM

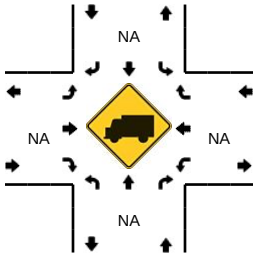


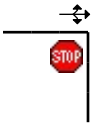


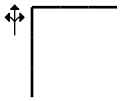


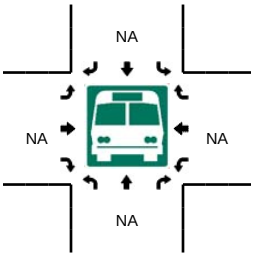












5-Min Count Period Beginning At	S 1st St (Northbound)				S 1st St (Southbound)				Saint Helens St (Eastbound)				Saint Helens St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	2	0	1	0	2	0	3	0	2	0	0	0	0	2	1	0	13	
6:15 AM	2	2	0	0	1	0	1	0	0	1	2	0	0	0	1	0	10	
6:30 AM	1	1	0	0	0	2	0	0	0	2	2	0	0	2	3	0	13	
6:45 AM	3	4	0	0	6	2	2	0	0	3	2	0	0	2	1	0	25	
7:00 AM	5	3	0	0	2	3	2	0	0	2	4	0	0	4	0	0	25	
7:15 AM	3	1	1	0	2	6	0	0	0	5	6	0	0	2	4	0	30	
7:30 AM	4	5	1	0	2	7	1	0	0	1	1	0	0	3	1	0	26	
7:45 AM	5	5	3	0	10	17	2	0	2	8	10	0	1	4	6	0	73	
8:00 AM	5	5	1	0	8	10	1	0	0	12	7	0	1	1	1	0	52	
8:15 AM	4	4	2	0	12	13	0	0	0	11	5	0	0	2	1	0	54	
8:30 AM	7	9	1	0	13	4	3	0	0	11	12	0	0	1	2	0	63	
8:45 AM	7	9	1	0	7	15	3	0	1	10	5	0	1	2	0	0	61	230
9:00 AM	6	9	0	0	5	11	0	0	0	9	9	0	1	2	4	0	56	234
9:15 AM	6	12	0	0	8	14	0	0	0	4	5	0	0	2	7	0	58	238
9:30 AM	12	10	6	0	7	11	0	0	0	3	6	0	1	5	5	0	66	241
9:45 AM	7	14	0	0	7	13	2	0	0	4	8	0	0	3	2	0	60	240
10:00 AM	7	17	1	0	6	18	1	0	2	5	6	0	0	3	4	0	70	254
10:15 AM	6	9	1	0	10	8	3	0	0	2	7	0	0	4	8	0	58	254
10:30 AM	8	14	3	0	5	18	2	0	2	8	3	0	0	2	1	0	66	254
10:45 AM	12	16	2	0	8	8	4	0	1	6	9	0	0	7	1	0	74	268
11:00 AM	16	7	1	0	14	14	1	0	1	6	8	0	0	4	3	0	75	273
11:15 AM	12	14	0	0	5	9	2	0	1	3	5	0	0	11	2	0	64	279
11:30 AM	12	15	2	0	8	17	1	0	2	3	11	0	0	5	2	0	78	291
11:45 AM	11	24	1	0	7	11	4	0	2	7	13	0	2	8	11	0	101	318

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	20	20	12	0	40	68	8	0	8	32	40	0	4	16	24	0	292
Heavy Trucks	8	4	4		16	20	8		0	4	4		4	8	8		88
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 1/4/2018 12:15 PM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

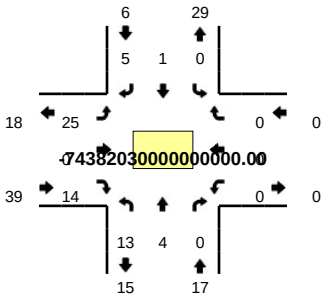
LOCATION: S McNulty Way -- Millard Rd

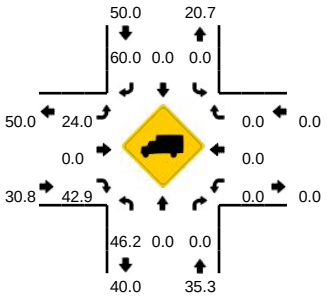
QC JOB #: 14560514

CITY/STATE: Warren, OR

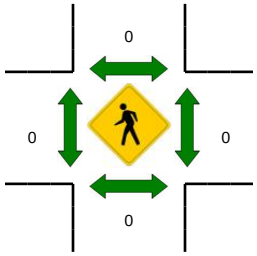
DATE: Thu, May 18 2017

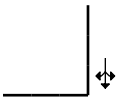
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:35 AM -- 7:50 AM

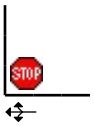


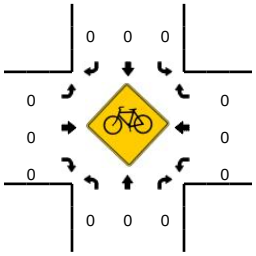


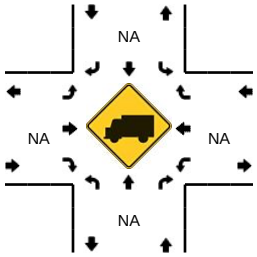
Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

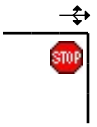


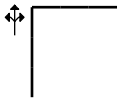


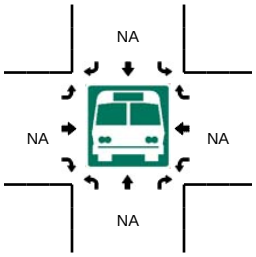












5-Min Count Period Beginning At	S McNulty Way (Northbound)				S McNulty Way (Southbound)				Millard Rd (Eastbound)				Millard Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
6:00 AM	2	0	0	0	0	0	1	0	4	0	2	0	0	0	0	0	9	
6:15 AM	3	0	0	0	0	0	1	0	2	0	3	0	0	0	0	0	9	
6:30 AM	2	1	0	0	0	0	1	0	3	0	1	0	0	0	0	0	8	
6:45 AM	3	0	0	0	0	1	0	0	5	0	3	0	0	0	0	0	12	
7:00 AM	0	0	0	0	0	1	1	0	5	0	5	0	0	0	0	0	12	
7:15 AM	4	1	0	0	0	0	0	0	3	0	2	0	0	0	0	0	10	
7:30 AM	1	2	0	0	0	0	1	0	1	0	6	0	0	0	0	0	11	
7:45 AM	4	0	0	0	0	0	4	0	19	0	4	0	0	0	0	0	31	
8:00 AM	4	1	0	0	0	1	0	0	2	0	2	0	0	0	0	0	10	
8:15 AM	3	2	0	0	0	0	0	0	4	1	3	0	0	0	0	0	13	
8:30 AM	1	2	0	0	0	0	2	0	9	0	2	0	0	0	1	0	17	
8:45 AM	6	1	0	0	0	0	0	0	7	0	2	0	0	0	0	0	16	56
9:00 AM	1	0	0	0	0	1	2	0	3	0	5	0	0	0	0	0	12	58
9:15 AM	3	2	0	0	1	1	3	0	3	0	2	0	0	0	0	0	15	60
9:30 AM	1	1	0	0	0	0	3	0	4	0	2	0	0	0	0	0	11	54
9:45 AM	5	0	1	0	0	0	1	0	5	1	1	0	0	0	0	0	14	52
10:00 AM	1	2	0	0	0	1	3	0	1	0	2	0	1	0	0	0	11	51
10:15 AM	10	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	13	49
10:30 AM	2	1	0	0	0	2	0	0	1	0	3	0	0	1	0	0	10	48
10:45 AM	5	0	0	0	0	1	1	0	3	0	2	0	0	0	0	0	12	46
11:00 AM	2	1	0	0	0	0	6	0	1	0	4	0	0	0	0	0	14	49
11:15 AM	8	2	0	0	0	2	0	0	4	0	1	0	0	0	0	0	17	53
11:30 AM	2	0	0	0	0	1	1	0	5	0	6	0	0	0	0	0	15	58
11:45 AM	3	3	0	0	0	0	3	0	8	0	4	0	0	0	0	0	21	67

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	16	0	0	0	0	0	16	0	76	0	16	0	0	0	0	0	124
Heavy Trucks	8	0	0		0	0	12		20	0	4		0	0	0		44
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 1/4/2018 12:15 PM

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

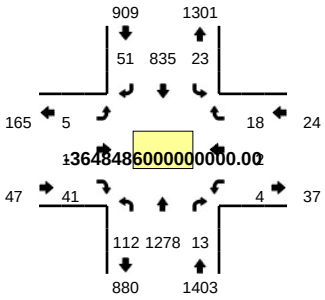
Type of peak hour being reported: User-Defined

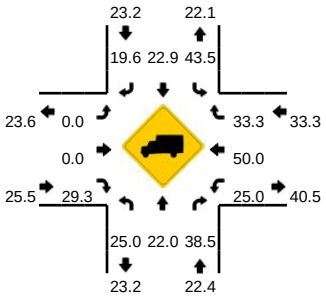
Method for determining peak hour: Total Entering Volume

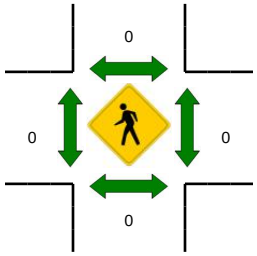
LOCATION: US 30 -- Millard Rd
CITY/STATE: Saint Helens, OR

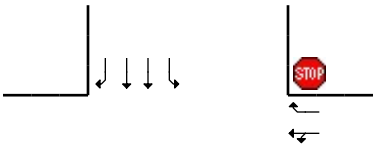
QC JOB #: 14560501
DATE: Thu, May 18 2017

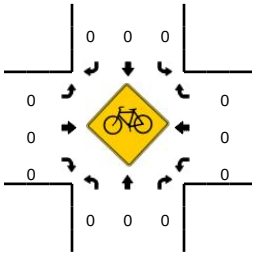
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:20 PM -- 5:35 PM

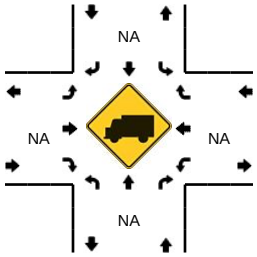


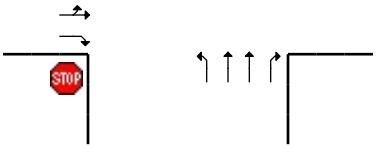


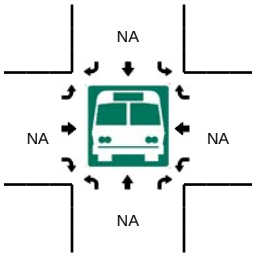












5-Min Count Period Beginning At	US 30 (Northbound)				US 30 (Southbound)				Millard Rd (Eastbound)				Millard Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
8:15 AM	6	161	3	0	5	210	14	0	1	0	11	0	0	0	4	0	415	
8:30 AM	15	156	9	0	2	203	6	0	2	0	16	0	0	0	2	0	411	
8:45 AM	10	104	5	0	3	220	12	0	2	1	8	0	3	0	4	0	372	1637
9:00 AM	9	116	3	0	4	175	7	0	0	1	20	0	0	2	1	0	338	1536
9:15 AM	2	129	4	0	1	161	4	0	2	0	12	0	0	1	4	0	320	1441
9:30 AM	6	101	3	0	3	197	8	0	3	1	8	0	2	0	2	0	334	1364
9:45 AM	12	129	3	0	4	180	13	0	1	0	13	0	2	3	2	0	362	1354
10:00 AM	6	135	2	0	0	162	8	0	5	0	16	0	1	0	2	0	337	1353
10:15 AM	4	126	1	0	1	166	7	0	5	1	14	0	2	0	10	0	337	1370
10:30 AM	2	145	2	0	1	176	10	0	6	1	10	0	1	0	2	0	356	1392
10:45 AM	5	143	2	0	3	167	9	0	3	2	7	0	2	0	5	0	348	1378
11:00 AM	6	147	2	0	3	188	15	0	1	0	15	0	3	0	4	0	384	1425
11:15 AM	11	161	1	0	4	169	13	0	4	0	12	0	2	2	5	0	384	1472
11:30 AM	4	137	5	0	5	140	10	0	3	1	6	0	1	0	2	0	314	1430
11:45 AM	4	173	4	0	8	181	6	0	3	0	5	0	1	0	4	0	389	1471
12:00 PM	3	172	2	0	6	203	8	0	4	0	12	0	2	3	8	0	423	1510
12:15 PM	15	182	4	0	5	179	13	0	1	0	9	0	2	0	3	0	413	1539
12:30 PM	12	164	2	0	2	181	20	0	7	0	10	0	0	0	2	0	400	1625
12:45 PM	11	146	1	0	5	188	12	0	4	0	13	0	1	0	2	0	383	1619
1:00 PM	16	176	3	0	3	175	10	0	8	0	11	0	1	0	3	0	406	1602
1:15 PM	12	169	6	0	8	159	15	0	2	0	7	0	0	1	7	0	386	1575
1:30 PM	11	151	4	0	7	180	13	0	4	0	11	0	4	0	6	0	391	1566
1:45 PM	11	185	2	0	3	168	14	0	3	0	13	0	0	0	4	0	403	1586
2:00 PM	15	190	6	0	2	175	12	0	9	1	6	0	3	0	4	0	423	1603

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	136	1432	16	0	16	832	44	0	0	0	32	0	4	4	12	0	2528
Heavy Trucks	24	304	8		8	180	4		0	0	4		0	4	4		540
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 1/4/2018 12:14 PM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: Old Portland Rd -- Millard Rd

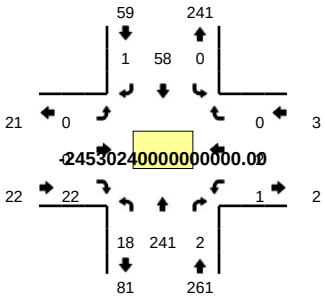
CITY/STATE: Warren, OR

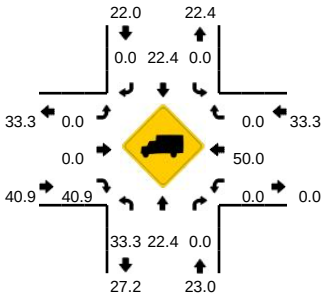
QC JOB #: 14560502

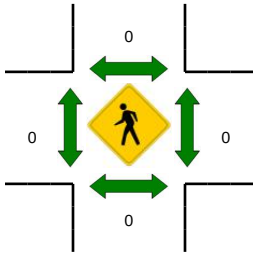
DATE: Thu, May 18 2017

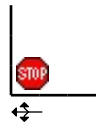
Peak-Hour: 4:45 PM -- 5:45 PM

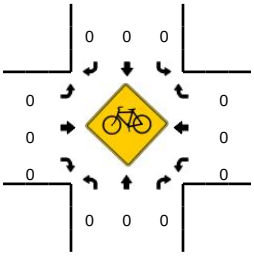
Peak 15-Min: 4:50 PM -- 5:05 PM

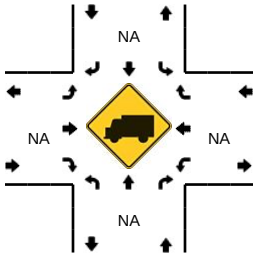


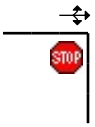


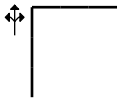


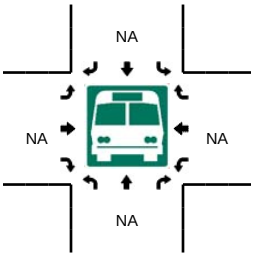












5-Min Count Period Beginning At	Old Portland Rd (Northbound)				Old Portland Rd (Southbound)				Millard Rd (Eastbound)				Millard Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
8:15 AM	3	21	0	0	0	7	0	0	3	0	0	0	0	0	0	0	34	
8:30 AM	1	29	0	0	0	11	2	0	0	0	2	0	0	0	0	0	45	
8:45 AM	3	29	0	0	0	16	3	0	1	0	1	0	0	0	0	0	53	191
9:00 AM	0	12	0	0	0	15	3	0	2	1	1	0	0	0	0	0	34	166
9:15 AM	3	14	0	0	0	12	2	0	2	0	1	0	0	0	1	0	35	167
9:30 AM	0	12	0	0	0	12	1	0	0	0	2	0	0	0	0	0	27	149
9:45 AM	3	18	0	0	0	15	2	0	0	0	1	0	0	0	0	0	39	135
10:00 AM	1	18	0	0	0	8	1	0	2	0	1	0	0	1	0	0	32	133
10:15 AM	9	23	0	0	0	8	2	0	1	0	1	0	0	0	0	0	44	142
10:30 AM	2	17	0	0	0	16	1	0	2	0	3	0	0	0	0	0	41	156
10:45 AM	3	9	0	0	0	14	1	0	2	0	0	0	0	0	0	0	29	146
11:00 AM	1	16	0	0	0	8	3	0	2	0	2	0	0	0	0	0	32	146
11:15 AM	2	17	0	0	0	12	6	0	2	0	1	0	0	2	0	0	42	144
11:30 AM	1	30	0	0	1	17	0	0	3	0	2	0	1	0	0	0	55	158
11:45 AM	2	21	0	0	0	20	2	0	2	0	2	0	0	0	0	0	49	178
12:00 PM	3	26	1	0	1	15	4	0	2	1	2	0	1	0	0	0	56	202
12:15 PM	2	22	0	0	1	9	0	0	1	0	3	0	1	0	1	0	40	200
12:30 PM	3	23	0	0	1	16	1	0	1	0	5	0	0	0	0	0	50	195
12:45 PM	4	24	0	0	1	15	0	0	2	0	4	0	0	0	2	0	52	198
1:00 PM	1	28	0	0	0	13	0	0	0	1	2	0	0	0	0	0	45	187
1:15 PM	6	28	0	0	0	17	2	0	1	0	6	0	0	0	1	0	61	208
1:30 PM	5	17	0	0	0	10	1	0	1	1	3	0	0	0	0	0	38	196
1:45 PM	1	33	0	0	0	18	1	0	2	0	0	0	0	1	0	0	56	200
2:00 PM	3	29	1	0	0	14	1	0	1	0	2	0	0	1	0	0	52	207

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	20	256	0	0	0	64	0	0	0	0	36	0	0	0	0	0	376
Heavy Trucks	12	88	0		0	12	0		0	0	16		0	0	0		128
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 1/4/2018 12:14 PM

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

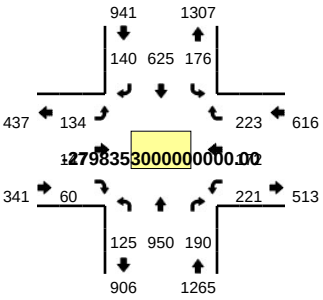
Type of peak hour being reported: User-Defined

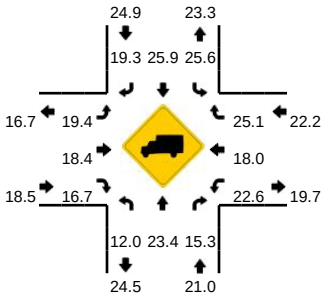
Method for determining peak hour: Total Entering Volume

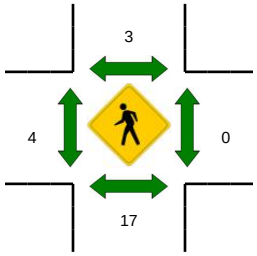
LOCATION: US 30 -- Gable Rd
CITY/STATE: Saint Helens, OR

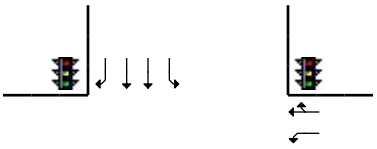
QC JOB #: 14560503
DATE: Thu, May 18 2017

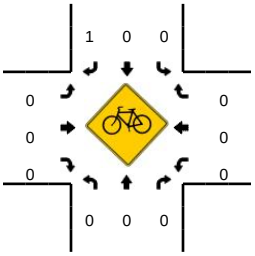
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 5:20 PM -- 5:35 PM

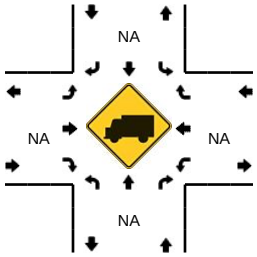


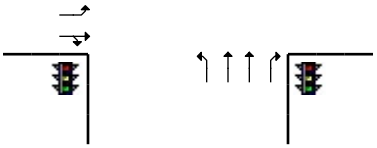


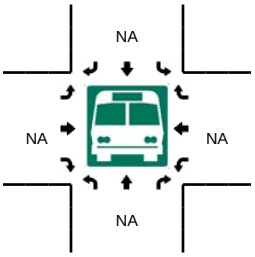












5-Min Count Period Beginning At	US 30 (Northbound)				US 30 (Southbound)				Gable Rd (Eastbound)				Gable Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
8:15 AM	5	144	27	0	31	181	36	0	37	27	18	0	33	15	19	0	573	
8:30 AM	9	113	30	0	29	160	25	0	11	27	12	0	31	30	35	0	512	
8:45 AM	7	107	18	0	29	177	21	0	22	23	18	0	39	18	29	0	508	2243
9:00 AM	11	85	27	0	29	138	24	0	25	20	9	0	36	16	25	0	445	2038
9:15 AM	10	101	27	0	23	128	28	0	16	16	11	0	28	21	20	0	429	1894
9:30 AM	4	81	22	0	30	175	27	0	13	28	12	0	35	17	33	0	477	1859
9:45 AM	9	101	26	0	34	127	23	0	32	15	16	0	37	23	42	0	485	1836
10:00 AM	9	103	31	0	37	130	37	0	26	22	12	0	25	30	34	0	496	1887
10:15 AM	6	106	28	0	36	136	30	0	33	18	10	0	45	19	37	0	504	1962
10:30 AM	14	109	27	0	33	139	23	0	23	30	8	0	34	29	35	0	504	1989
10:45 AM	9	108	32	0	32	140	42	0	32	23	10	0	36	30	39	0	533	2037
11:00 AM	23	111	21	0	52	138	16	0	26	34	13	0	45	32	36	0	547	2088
11:15 AM	7	124	38	0	32	137	34	0	27	26	16	0	40	20	28	0	529	2113
11:30 AM	14	103	26	0	46	108	37	0	39	23	9	0	40	28	48	0	521	2130
11:45 AM	13	146	25	0	43	128	37	0	41	33	11	0	41	39	47	0	604	2201
12:00 PM	9	137	31	0	47	167	39	0	35	30	13	0	38	44	47	0	637	2291
12:15 PM	12	149	28	0	38	154	38	0	41	27	14	0	40	38	51	0	630	2392
12:30 PM	19	104	52	0	30	143	29	0	37	37	17	0	37	28	49	0	582	2453
12:45 PM	14	124	26	0	64	166	37	0	30	29	8	0	51	27	34	0	610	2459
1:00 PM	12	141	21	0	31	137	27	0	27	33	15	0	35	35	58	0	572	2394
1:15 PM	14	137	41	0	53	142	38	0	35	18	9	0	41	33	43	0	604	2368
1:30 PM	21	93	29	0	47	121	32	0	29	27	10	0	34	34	54	0	531	2317
1:45 PM	19	154	35	0	41	128	41	0	26	24	16	0	25	33	32	0	574	2281
2:00 PM	22	145	37	0	30	140	39	0	46	42	14	0	39	36	55	0	645	2354

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	144	1084	204	0	220	652	144	0	116	120	48	0	220	168	176	0	3296
Heavy Trucks	16	224	36		36	172	28		20	12	12		52	36	44		688
Pedestrians		4				0				4				0			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/4/2018 12:14 PM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: McNulty Way -- Gable Rd

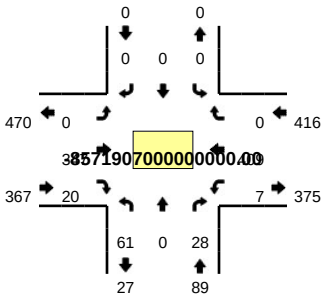
QC JOB #: 14560504

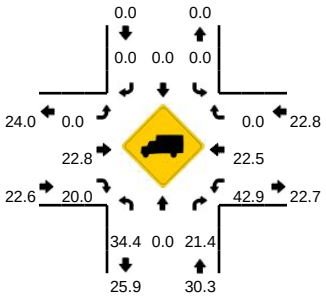
CITY/STATE: Saint Helens, OR

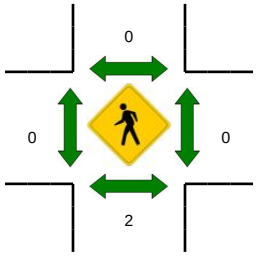
DATE: Thu, May 18 2017

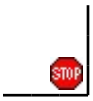
Peak-Hour: 4:45 PM -- 5:45 PM

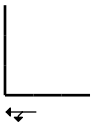
Peak 15-Min: 4:50 PM -- 5:05 PM

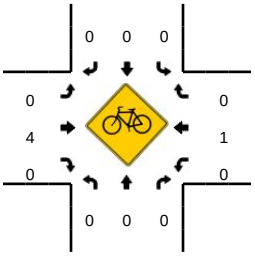


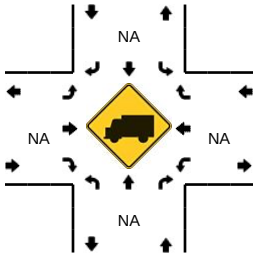


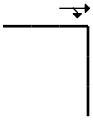


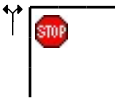


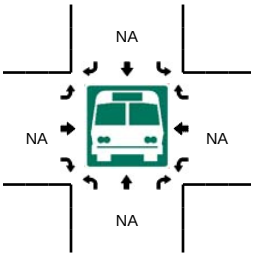












5-Min Count Period Beginning At	McNulty Way (Northbound)				McNulty Way (Southbound)				Gable Rd (Eastbound)				Gable Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
8:15 AM	8	0	2	0	0	0	0	0	0	49	9	0	5	52	0	0	125	
8:30 AM	15	0	6	0	0	0	0	0	0	45	25	0	2	60	0	0	153	
8:45 AM	10	0	5	0	0	0	0	0	0	42	4	0	5	63	0	0	129	572
9:00 AM	3	0	4	0	0	0	0	0	0	49	5	0	11	57	0	0	129	536
9:15 AM	7	0	2	0	0	0	0	0	0	39	9	0	4	47	0	0	108	519
9:30 AM	8	0	4	0	0	0	0	0	0	47	10	0	4	63	0	0	136	502
9:45 AM	14	0	9	0	0	0	0	0	0	40	12	0	6	70	0	0	151	524
10:00 AM	12	0	8	0	0	0	0	0	0	50	11	0	1	55	0	0	137	532
10:15 AM	7	0	9	0	0	0	0	0	0	36	8	0	3	72	0	0	135	559
10:30 AM	8	0	6	0	0	0	0	0	0	70	11	0	11	57	0	0	163	586
10:45 AM	8	0	9	0	0	0	0	0	0	37	8	0	6	61	0	0	129	564
11:00 AM	27	0	7	0	0	0	0	0	0	62	16	0	7	80	0	0	199	626
11:15 AM	7	0	2	0	0	0	0	0	0	52	12	0	6	65	0	0	144	635
11:30 AM	12	0	4	0	0	0	0	0	0	68	4	0	9	74	0	0	171	643
11:45 AM	21	0	18	0	0	0	0	0	0	64	11	0	4	92	0	0	210	724
12:00 PM	17	0	9	0	0	0	0	0	0	59	13	0	5	94	0	0	197	722
12:15 PM	14	0	9	0	0	0	0	0	0	68	15	0	5	79	0	0	190	768
12:30 PM	8	0	3	0	0	0	0	0	0	81	15	0	7	95	0	0	209	806
12:45 PM	7	0	8	0	0	0	0	0	0	78	16	0	6	72	0	0	187	783
1:00 PM	10	0	8	0	0	0	0	0	0	60	11	0	11	98	0	0	198	784
1:15 PM	9	0	5	0	0	0	0	0	0	65	10	0	6	74	0	0	169	763
1:30 PM	11	0	4	0	0	0	0	0	0	64	8	0	5	85	0	0	177	731
1:45 PM	10	0	6	0	0	0	0	0	0	64	12	0	5	81	0	0	178	722
2:00 PM	11	0	7	0	0	0	0	0	0	79	10	0	13	73	0	0	193	717

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	100	0	44	0	0	0	0	0	0	356	16	0	8	552	0	0	1076
Heavy Trucks	28	0	4		0	0	0		0	92	4		4	116	0		248
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	2	0		0	0	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/4/2018 12:14 PM

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

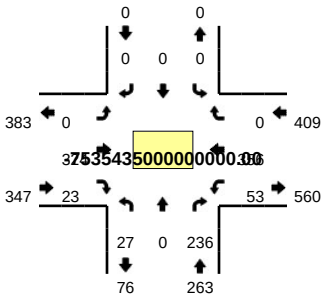
Type of peak hour being reported: User-Defined

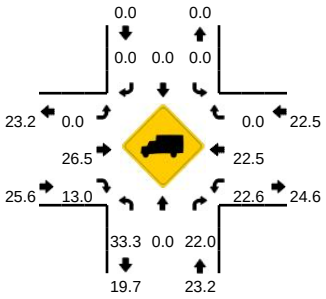
Method for determining peak hour: Total Entering Volume

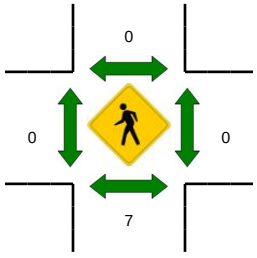
LOCATION: Old Portland Rd -- Gable Rd
CITY/STATE: Saint Helens, OR

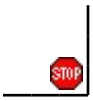
QC JOB #: 14560505
DATE: Thu, May 18 2017

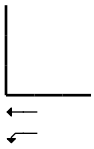
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 4:50 PM -- 5:05 PM

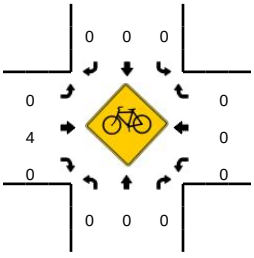


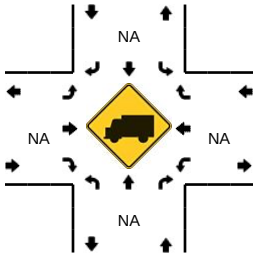


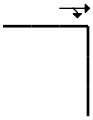


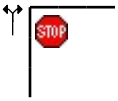


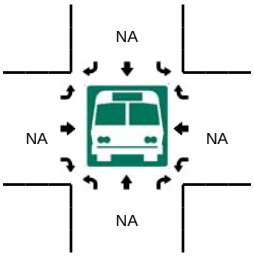












5-Min Count Period Beginning At	Old Portland Rd (Northbound)				Old Portland Rd (Southbound)				Gable Rd (Eastbound)				Gable Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
8:15 AM	2	0	27	0	0	0	0	0	0	42	5	0	6	49	0	0	131	
8:30 AM	8	0	31	0	0	0	0	0	0	43	0	0	8	51	0	0	141	
8:45 AM	5	0	27	0	0	0	0	0	0	41	3	0	20	56	0	0	152	618
9:00 AM	1	0	13	0	0	0	0	0	0	39	5	0	14	61	0	0	133	557
9:15 AM	6	0	16	0	0	0	0	0	0	34	6	0	13	42	0	0	117	543
9:30 AM	5	0	15	0	0	0	0	0	0	39	6	0	10	56	0	0	131	533
9:45 AM	10	0	14	0	0	0	0	0	0	43	5	0	17	59	0	0	148	529
10:00 AM	7	0	19	0	0	0	0	0	0	46	5	0	10	42	0	0	129	525
10:15 AM	5	0	20	0	0	0	0	0	0	38	6	0	10	65	0	0	144	552
10:30 AM	4	0	18	0	0	0	0	0	0	62	6	0	14	55	0	0	159	580
10:45 AM	3	0	11	0	0	0	0	0	0	37	3	0	13	58	0	0	125	557
11:00 AM	7	0	17	0	0	0	0	0	0	57	7	0	12	74	0	0	174	602
11:15 AM	6	0	19	0	0	0	0	0	0	44	9	0	13	58	0	0	149	607
11:30 AM	5	0	31	0	0	0	0	0	0	59	5	0	17	71	0	0	188	636
11:45 AM	7	0	25	0	0	0	0	0	0	72	7	0	18	81	0	0	210	721
12:00 PM	6	0	25	0	0	0	0	0	0	52	8	0	24	81	0	0	196	743
12:15 PM	6	0	29	0	0	0	0	0	0	66	5	0	11	74	0	0	191	785
12:30 PM	6	0	21	0	0	0	0	0	0	61	11	0	15	89	0	0	203	800
12:45 PM	4	0	25	0	0	0	0	0	0	71	10	0	16	68	0	0	194	784
1:00 PM	8	0	20	0	0	0	0	0	0	57	4	0	12	85	0	0	186	774
1:15 PM	6	0	35	0	0	0	0	0	0	57	9	0	17	68	0	0	192	775
1:30 PM	11	0	19	0	0	0	0	0	0	60	4	0	13	74	0	0	181	753
1:45 PM	11	0	27	0	0	0	0	0	0	63	3	0	16	70	0	0	190	749
2:00 PM	4	0	23	0	0	0	0	0	0	80	1	0	10	76	0	0	194	757

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	20	0	256	0	0	0	0	0	0	368	20	0	60	500	0	0	1224
Heavy Trucks	8	0	88		0	0	0		0	92	8		8	104	0		308
Pedestrians		20				0				0				0			20
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/4/2018 12:14 PM

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

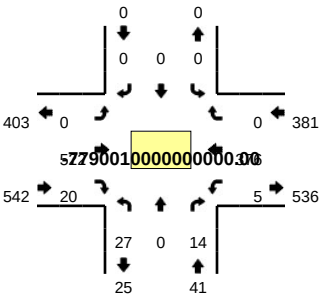
Type of peak hour being reported: User-Defined

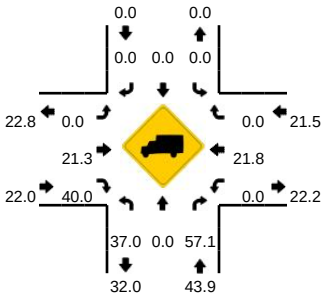
Method for determining peak hour: Total Entering Volume

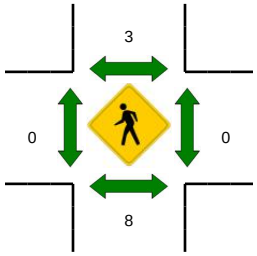
LOCATION: Railroad Ave -- Old Portland Rd
CITY/STATE: Saint Helens, OR

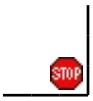
QC JOB #: 14560506
DATE: Thu, May 18 2017

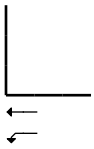
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 4:50 PM -- 5:05 PM

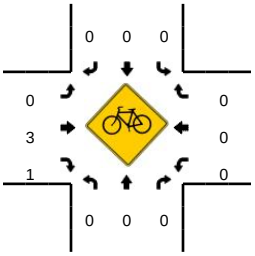


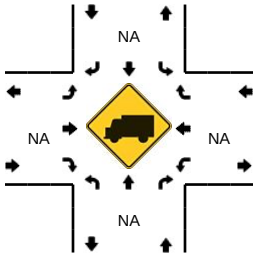


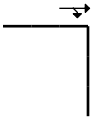


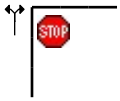


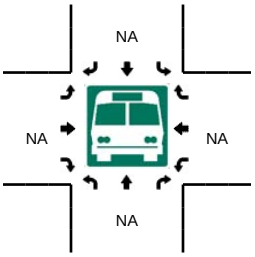












5-Min Count Period Beginning At	Railroad Ave (Northbound)				Railroad Ave (Southbound)				Old Portland Rd (Eastbound)				Old Portland Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
8:15 AM	4	0	0	0	0	0	0	0	0	61	5	0	1	52	0	0	123	
8:30 AM	3	0	1	0	0	0	0	0	0	65	7	0	2	54	0	0	132	
8:45 AM	7	0	2	0	0	0	0	0	0	62	5	0	4	73	0	0	153	585
9:00 AM	7	0	1	0	0	0	0	0	0	45	9	0	4	64	0	0	130	538
9:15 AM	8	0	4	0	0	0	0	0	0	32	16	0	2	46	0	0	108	523
9:30 AM	8	0	4	0	0	0	0	0	0	51	6	0	4	61	0	0	134	525
9:45 AM	11	0	5	0	0	0	0	0	0	48	8	0	2	63	0	0	137	509
10:00 AM	9	0	2	0	0	0	0	0	0	58	8	0	3	42	0	0	122	501
10:15 AM	9	0	2	0	0	0	0	0	0	44	12	0	6	67	0	0	140	533
10:30 AM	9	0	1	0	0	0	0	0	0	67	13	0	2	59	0	0	151	550
10:45 AM	12	0	2	0	0	0	0	0	0	43	7	0	5	55	0	0	124	537
11:00 AM	7	0	3	0	0	0	0	0	0	60	8	0	2	81	0	0	161	576
11:15 AM	8	0	8	0	0	0	0	0	0	58	4	0	3	62	0	0	143	579
11:30 AM	10	0	3	0	0	0	0	0	0	81	9	0	2	77	0	0	182	610
11:45 AM	7	0	1	0	0	0	0	0	0	79	17	0	7	90	0	0	201	687
12:00 PM	11	0	9	0	0	0	0	0	0	64	12	0	7	93	0	0	196	722
12:15 PM	6	0	7	0	0	0	0	0	0	83	10	0	3	79	0	0	188	767
12:30 PM	15	0	5	0	0	0	0	0	0	76	7	0	5	84	0	0	192	777
12:45 PM	13	0	7	0	0	0	0	0	1	78	17	0	2	73	0	0	191	767
1:00 PM	12	0	1	0	0	0	0	0	0	64	11	0	3	86	0	0	177	748
1:15 PM	8	0	2	0	0	0	1	0	0	81	11	0	3	74	0	0	180	740
1:30 PM	14	0	10	0	0	0	0	0	0	70	10	0	7	75	0	0	186	734
1:45 PM	11	0	4	0	0	0	0	0	0	77	11	0	4	75	0	0	182	725
2:00 PM	9	0	3	0	0	0	0	0	0	87	9	0	1	74	0	0	183	731

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	44	0	24	0	0	0	0	0	0	596	8	0	4	508	0	0	1184
Heavy Trucks	12	0	12		0	0	0		0	148	4		0	100	0		276
Pedestrians		20				0				0				0			20
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad Stopped Buses																	

Comments:

Report generated on 1/4/2018 12:14 PM

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

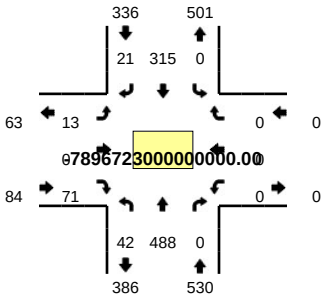
Type of peak hour being reported: User-Defined

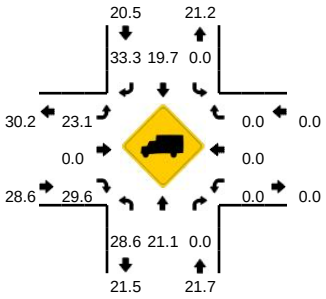
Method for determining peak hour: Total Entering Volume

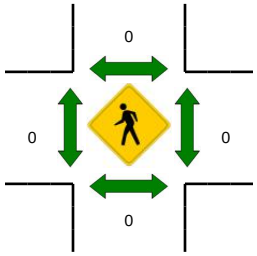
LOCATION: Old Portland Rd -- Port Ave
CITY/STATE: Saint Helens, OR

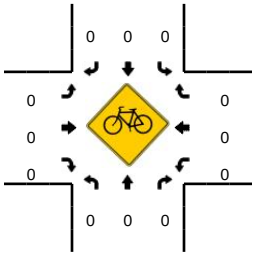
QC JOB #: 14560507
DATE: Thu, May 18 2017

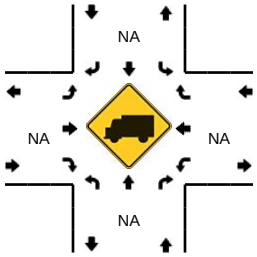
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 4:50 PM -- 5:05 PM

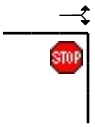


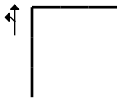


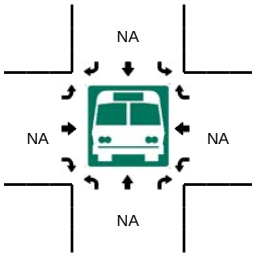












5-Min Count Period Beginning At	Old Portland Rd (Northbound)				Old Portland Rd (Southbound)				Port Ave (Eastbound)				Port Ave (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
8:15 AM	10	53	0	0	0	44	7	0	2	0	13	0	0	0	0	0	129	
8:30 AM	15	50	0	0	0	50	3	0	1	0	7	0	0	0	0	0	126	
8:45 AM	11	53	0	0	0	68	7	0	0	0	11	0	0	0	0	0	150	585
9:00 AM	11	33	0	0	0	60	5	0	0	0	8	0	0	0	0	0	117	522
9:15 AM	6	33	0	0	0	46	3	0	1	0	5	0	0	0	0	0	94	487
9:30 AM	14	39	0	0	0	54	4	0	3	0	12	0	0	0	0	0	126	487
9:45 AM	9	45	0	0	0	57	7	0	1	0	7	0	0	0	0	0	126	463
10:00 AM	9	50	0	0	0	41	2	0	6	0	3	0	0	0	0	0	111	457
10:15 AM	13	37	0	0	0	56	10	0	1	0	17	0	0	0	0	0	134	497
10:30 AM	8	55	0	0	0	56	1	0	2	0	8	0	0	0	0	0	130	501
10:45 AM	12	33	0	0	0	50	5	0	3	0	12	0	0	0	0	0	115	490
11:00 AM	13	55	0	0	0	70	6	0	2	0	14	0	0	0	0	0	160	539
11:15 AM	14	53	0	0	0	56	4	0	2	0	8	0	0	0	0	0	137	542
11:30 AM	14	74	0	0	0	64	2	0	2	0	16	0	0	0	0	0	172	584
11:45 AM	18	62	0	0	0	84	7	0	5	0	16	0	0	0	0	0	192	661
12:00 PM	10	61	0	0	0	71	1	0	5	0	31	0	0	0	0	0	179	680
12:15 PM	22	68	0	0	0	70	10	0	4	0	12	0	0	0	0	0	186	729
12:30 PM	8	69	0	0	0	62	5	0	1	0	25	0	0	0	0	0	170	727
12:45 PM	18	67	0	0	0	69	6	0	6	0	6	0	0	0	0	0	172	707
1:00 PM	12	53	0	0	0	73	7	0	3	0	15	0	0	0	0	0	163	691
1:15 PM	15	66	0	0	0	76	4	0	0	0	6	0	0	0	0	0	167	672
1:30 PM	8	72	0	0	0	69	5	0	3	0	9	0	0	0	0	0	166	668
1:45 PM	10	72	0	0	0	71	3	0	3	0	10	0	0	0	0	0	169	665
2:00 PM	8	82	0	0	0	59	4	0	1	0	16	0	0	0	0	0	170	672

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	60	544	0	0	0	400	12	0	20	0	132	0	0	0	0	0	1168
Heavy Trucks	20	140	0		0	56	0		4	0	44		0	0	0		264
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 1/4/2018 12:14 PM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: Old Portland Rd -- S 18th St/Kaster Rd

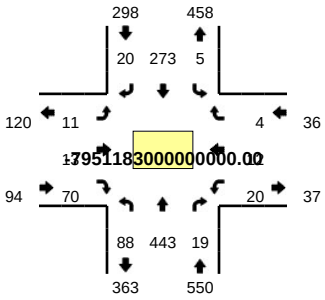
QC JOB #: 14560508

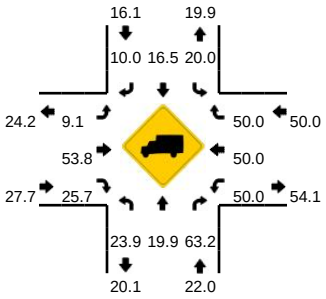
CITY/STATE: Saint Helens, OR

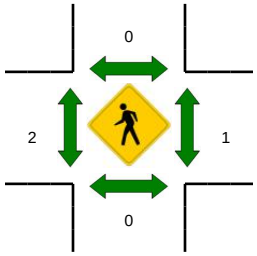
DATE: Thu, May 18 2017

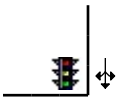
Peak-Hour: 4:45 PM -- 5:45 PM

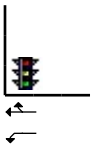
Peak 15-Min: 4:50 PM -- 5:05 PM

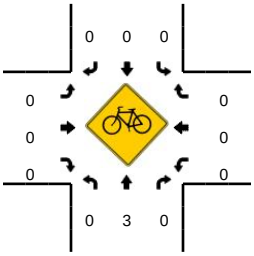


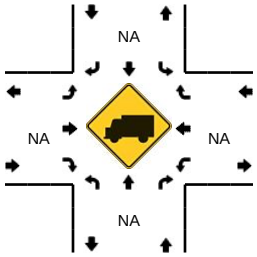


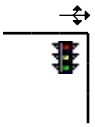


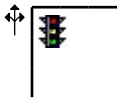


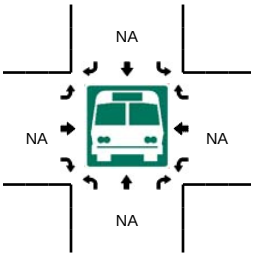












5-Min Count Period Beginning At	Old Portland Rd (Northbound)				Old Portland Rd (Southbound)				S 18th St/Kaster Rd (Eastbound)				S 18th St/Kaster Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
8:15 AM	8	41	3	0	0	45	1	0	1	0	7	0	1	0	0	0	107	
8:30 AM	8	50	2	0	0	50	0	0	2	2	6	0	1	1	0	0	122	
8:45 AM	8	46	4	0	0	66	3	0	1	0	8	0	2	0	1	0	139	536
9:00 AM	6	28	2	0	2	61	1	0	1	1	10	0	2	1	0	0	115	483
9:15 AM	10	25	3	0	0	40	1	0	3	0	10	0	2	0	1	0	95	471
9:30 AM	7	32	5	0	0	51	0	0	0	1	10	0	1	1	1	0	109	458
9:45 AM	9	39	1	0	0	52	2	0	3	1	11	0	5	1	0	0	124	443
10:00 AM	11	43	1	0	0	35	1	0	3	1	7	0	4	0	1	0	107	435
10:15 AM	7	34	4	0	0	47	2	0	1	2	21	0	1	0	0	0	119	459
10:30 AM	15	38	4	0	0	46	3	0	4	0	12	0	1	0	0	0	123	473
10:45 AM	11	32	2	0	1	41	4	0	1	0	13	0	5	0	0	0	110	459
11:00 AM	14	46	2	0	0	63	4	0	5	0	20	0	2	1	2	0	159	511
11:15 AM	4	48	7	0	0	49	6	0	1	0	14	0	3	0	0	0	132	524
11:30 AM	7	56	3	0	0	56	9	0	0	1	16	0	3	0	1	0	152	553
11:45 AM	17	60	2	0	1	59	1	0	2	0	31	0	3	1	2	0	179	622
12:00 PM	19	47	4	0	2	56	1	0	2	1	15	0	8	1	2	0	158	621
12:15 PM	14	57	3	0	0	62	2	0	2	1	14	0	4	0	0	0	159	648
12:30 PM	16	56	7	0	2	58	2	0	5	0	14	0	3	1	0	0	164	660
12:45 PM	15	67	2	0	0	57	5	0	1	2	14	0	5	1	1	0	170	651
1:00 PM	7	52	2	0	1	67	2	0	4	2	19	0	3	0	0	0	159	652
1:15 PM	19	48	1	0	0	57	3	0	4	0	21	0	5	0	0	0	158	651
1:30 PM	13	59	4	0	0	63	4	0	1	0	16	0	1	0	0	0	161	648
1:45 PM	18	61	0	0	0	55	1	0	3	1	17	0	3	1	0	0	160	638
2:00 PM	25	75	2	0	0	54	4	0	1	2	16	0	0	0	0	0	179	658

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	64	524	36	0	0	360	32	0	12	24	72	0	16	16	4	0	1160
Heavy Trucks	16	108	24		0	56	0		0	12	4		4	8	4		236
Pedestrians		0				0				0				4			4
Bicycles	0	1	0		0	0	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/4/2018 12:14 PM

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

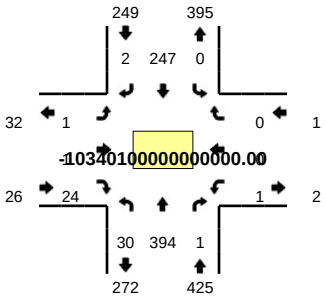
Type of peak hour being reported: User-Defined

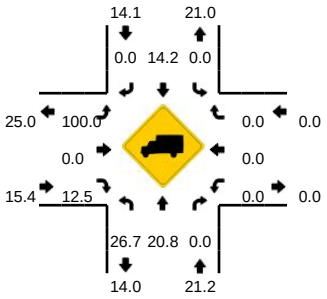
Method for determining peak hour: Total Entering Volume

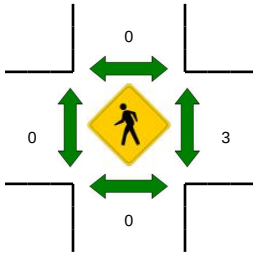
LOCATION: Old Portland Rd -- S 15th St
CITY/STATE: Saint Helens, OR

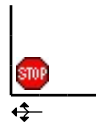
QC JOB #: 14560509
DATE: Thu, May 18 2017

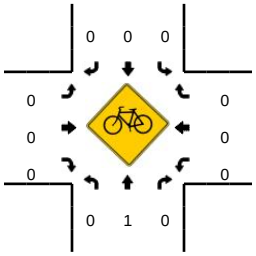
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 4:50 PM -- 5:05 PM

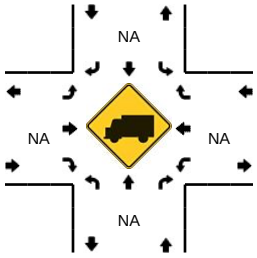


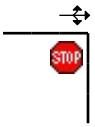


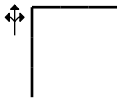


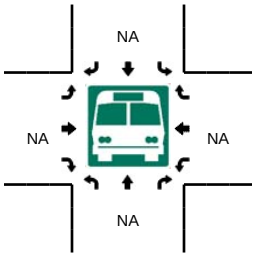












5-Min Count Period Beginning At	Old Portland Rd (Northbound)				Old Portland Rd (Southbound)				S 15th St (Eastbound)				S 15th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
8:15 AM	5	35	0	0	0	37	1	0	0	0	6	0	0	0	0	0	84	
8:30 AM	5	38	0	0	0	43	0	0	1	1	2	0	0	0	0	0	90	
8:45 AM	1	45	0	0	0	61	0	0	4	0	5	0	1	0	0	0	117	409
9:00 AM	0	28	0	0	0	45	0	0	0	0	5	0	0	0	0	0	78	369
9:15 AM	2	25	1	0	0	35	0	0	0	0	4	0	0	0	0	0	67	352
9:30 AM	1	29	0	0	0	45	0	0	0	0	2	0	0	1	0	0	78	340
9:45 AM	1	32	0	0	0	43	0	0	0	0	3	0	0	0	0	0	79	302
10:00 AM	6	31	1	0	0	31	1	0	0	1	1	0	0	0	0	0	72	296
10:15 AM	1	33	0	0	0	41	0	0	0	0	5	0	0	0	0	0	80	309
10:30 AM	4	36	0	0	0	40	0	0	0	1	5	0	0	0	0	0	86	317
10:45 AM	2	28	1	0	0	40	1	0	1	0	4	0	0	0	0	0	77	315
11:00 AM	5	45	1	0	0	58	1	0	2	0	6	0	0	0	0	0	118	361
11:15 AM	3	43	0	0	0	50	0	0	0	0	7	0	0	0	1	0	104	385
11:30 AM	6	47	0	0	0	50	1	0	0	0	7	0	0	0	0	0	111	410
11:45 AM	7	51	0	0	0	53	0	0	0	0	6	0	0	0	0	0	117	450
12:00 PM	2	44	2	0	0	55	0	0	2	0	4	0	0	0	0	0	109	441
12:15 PM	9	41	1	0	0	47	0	0	1	0	4	0	1	0	0	0	104	441
12:30 PM	4	47	0	0	1	55	0	0	2	0	5	0	0	0	0	0	114	444
12:45 PM	3	58	0	0	0	57	0	0	0	0	4	0	0	0	0	0	122	449
1:00 PM	2	53	0	0	0	51	0	0	0	0	8	0	0	0	0	0	114	454
1:15 PM	7	41	0	0	0	47	2	0	2	0	6	0	0	0	0	0	105	455
1:30 PM	3	51	0	0	0	52	1	0	1	1	9	0	0	0	0	0	118	459
1:45 PM	6	54	0	0	0	48	0	0	0	0	5	0	0	0	0	0	113	450
2:00 PM	6	62	0	0	0	47	1	0	1	0	8	0	0	0	0	0	125	461

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	36	480	0	0	0	356	4	0	4	0	12	0	0	0	0	0	892
Heavy Trucks	12	96	0		0	48	0		4	0	4		0	0	0		164
Pedestrians		0				0				0				4			4
Bicycles	0	1	0		0	0	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/4/2018 12:14 PM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

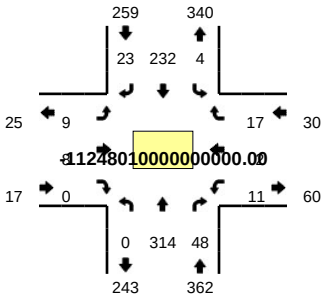
LOCATION: Old Portland Rd -- Plymouth St

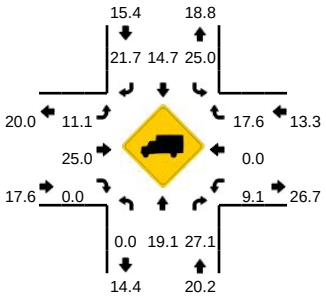
QC JOB #: 14560510

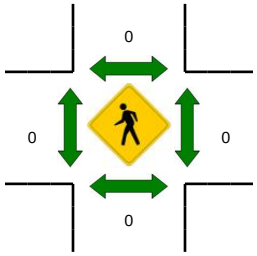
CITY/STATE: Saint Helens, OR

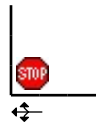
DATE: Thu, May 18 2017

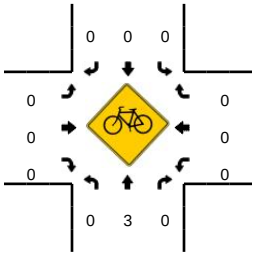
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 4:50 PM -- 5:05 PM

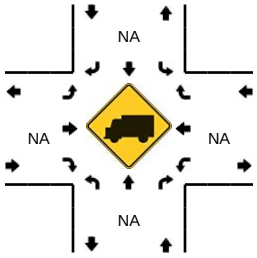


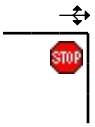


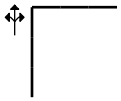


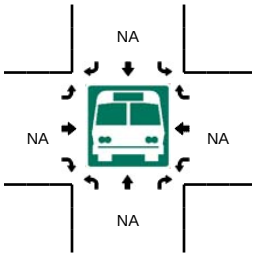












5-Min Count Period Beginning At	Old Portland Rd (Northbound)				Old Portland Rd (Southbound)				Plymouth St (Eastbound)				Plymouth St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
8:15 AM	0	34	2	0	0	34	2	0	1	4	0	0	1	1	1	0	80	
8:30 AM	0	28	5	0	1	38	2	0	4	0	0	0	3	1	0	0	82	
8:45 AM	0	41	4	0	1	55	3	0	2	0	0	0	1	0	4	0	111	377
9:00 AM	0	27	3	0	1	40	1	0	2	0	0	0	4	0	2	0	80	353
9:15 AM	0	24	1	0	0	32	4	0	0	2	0	0	2	1	1	0	67	340
9:30 AM	1	23	1	0	1	42	3	0	1	0	0	0	0	0	0	0	72	330
9:45 AM	0	28	2	0	0	34	1	0	2	0	0	0	1	0	0	0	68	287
10:00 AM	0	28	2	0	0	30	4	0	0	2	0	0	1	0	2	0	69	276
10:15 AM	0	31	3	0	0	33	2	0	0	2	0	0	2	1	2	0	76	285
10:30 AM	0	29	6	0	0	36	3	0	1	1	0	0	2	0	5	0	83	296
10:45 AM	0	28	3	0	0	38	2	0	1	0	0	0	1	1	0	0	74	302
11:00 AM	0	35	8	0	0	50	5	0	1	2	6	0	0	0	5	0	112	345
11:15 AM	0	34	7	0	1	42	3	0	0	0	6	0	1	0	2	0	96	365
11:30 AM	1	41	4	0	1	45	3	0	0	3	3	0	4	0	2	0	107	389
11:45 AM	0	46	4	0	0	49	6	0	2	1	1	0	1	2	4	0	116	431
12:00 PM	3	40	5	0	0	50	5	0	4	0	0	0	3	0	1	0	111	430
12:15 PM	3	34	4	0	0	38	2	0	1	1	0	0	2	0	2	0	87	421
12:30 PM	6	44	4	0	2	51	3	0	3	2	0	0	0	0	3	0	118	432
12:45 PM	3	52	7	0	1	50	4	0	2	1	0	0	3	0	4	0	127	443
1:00 PM	8	38	8	0	0	49	2	0	0	1	0	0	0	0	2	0	108	440
1:15 PM	5	33	5	0	0	44	2	0	1	0	0	0	1	0	2	0	93	446
1:30 PM	4	42	5	0	0	49	2	0	0	2	0	0	1	0	2	0	107	435
1:45 PM	2	47	8	0	0	42	4	0	0	0	0	0	1	2	0	0	106	414
2:00 PM	0	48	6	0	1	45	5	0	3	1	0	0	2	1	6	0	118	424

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	372	40	0	8	340	28	0	8	0	0	0	8	0	16	0	820
Heavy Trucks	0	76	12		4	52	8		0	0	0		0	0	8		160
Pedestrians		0				0				0				0			0
Bicycles	0	1	0		0	0	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/4/2018 12:14 PM

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

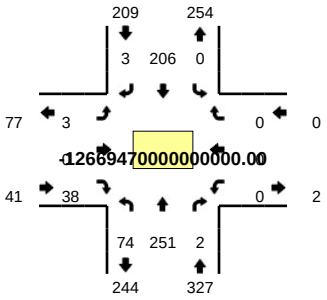
Type of peak hour being reported: User-Defined

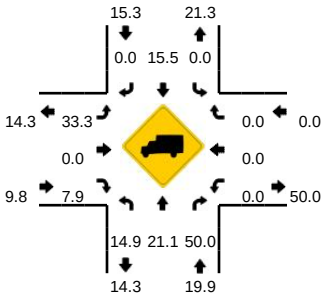
Method for determining peak hour: Total Entering Volume

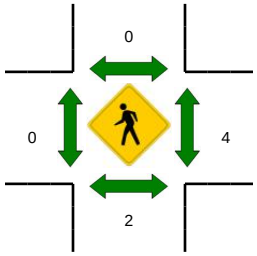
LOCATION: Old Portland Rd -- S 12th St
CITY/STATE: Saint Helens, OR

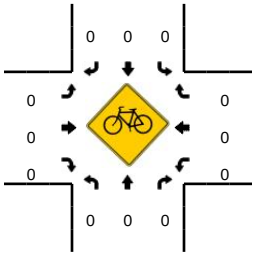
QC JOB #: 14560511
DATE: Thu, May 18 2017

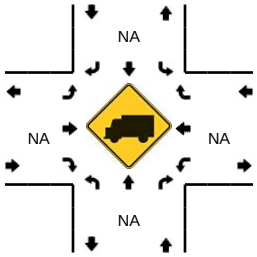
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 4:50 PM -- 5:05 PM

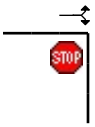


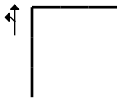


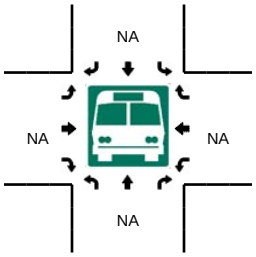












5-Min Count Period Beginning At	Old Portland Rd (Northbound)				Old Portland Rd (Southbound)				S 12th St (Eastbound)				S 12th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
8:15 AM	5	27	0	0	0	24	0	0	2	0	5	0	0	0	0	0	63	
8:30 AM	1	34	0	0	0	36	1	0	1	0	5	0	0	0	0	0	78	
8:45 AM	5	37	0	0	0	50	1	0	0	0	6	0	0	0	0	0	99	330
9:00 AM	4	23	0	0	0	36	0	0	1	0	5	0	0	0	0	0	69	309
9:15 AM	6	16	0	0	0	27	0	0	2	0	5	0	0	0	0	0	56	302
9:30 AM	5	23	0	0	0	34	1	0	0	0	10	0	0	0	0	0	73	297
9:45 AM	3	24	0	0	0	27	0	0	1	0	9	0	0	1	0	0	65	263
10:00 AM	6	23	0	0	0	28	0	0	1	0	4	0	0	0	0	0	62	256
10:15 AM	9	22	0	0	0	25	0	0	0	0	6	0	0	0	0	0	62	262
10:30 AM	6	26	0	0	0	32	1	0	0	0	6	0	0	0	0	0	71	260
10:45 AM	1	27	0	0	0	38	0	0	1	0	2	0	0	0	0	0	69	264
11:00 AM	8	30	1	0	0	40	1	0	0	0	13	0	0	0	0	0	93	295
11:15 AM	7	27	0	0	0	38	0	0	0	0	6	0	1	0	0	0	79	312
11:30 AM	8	36	0	0	0	42	0	0	3	0	6	0	0	0	0	0	95	336
11:45 AM	7	37	0	0	0	41	1	0	0	0	7	0	0	0	0	0	93	360
12:00 PM	6	37	0	0	0	43	1	0	1	0	9	0	0	0	0	0	97	364
12:15 PM	2	36	1	0	0	34	0	0	0	0	4	0	0	0	0	0	77	362
12:30 PM	4	38	2	0	0	44	3	0	2	0	8	0	1	1	0	0	103	370
12:45 PM	8	44	0	0	0	38	1	0	0	0	12	0	0	0	0	0	103	380
1:00 PM	8	35	0	0	0	46	1	0	0	0	5	0	0	0	0	0	95	378
1:15 PM	4	29	0	0	0	40	0	0	0	0	6	0	0	0	0	0	79	380
1:30 PM	4	38	0	0	0	37	0	0	0	0	12	0	0	0	0	0	91	368
1:45 PM	7	36	0	0	0	43	2	0	2	0	7	0	0	0	0	0	97	362
2:00 PM	11	38	0	0	0	42	0	0	2	0	4	0	0	0	0	0	97	364

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	108	276	8	0	0	292	4	0	0	0	40	0	0	0	0	0	728
Heavy Trucks	16	64	4		0	40	0		0	0	0		0	0	0		124
Pedestrians		8				0				0				8			16
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/4/2018 12:14 PM

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

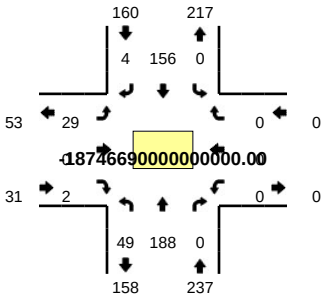
Type of peak hour being reported: User-Defined

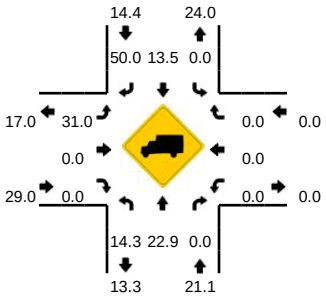
Method for determining peak hour: Total Entering Volume

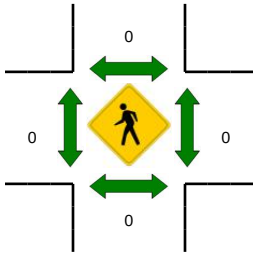
LOCATION: Old Portland Rd -- S 8th St
CITY/STATE: Saint Helens, OR

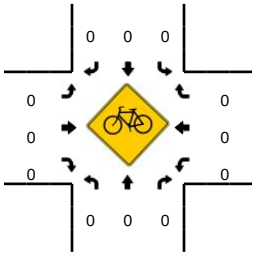
QC JOB #: 14560512
DATE: Thu, May 18 2017

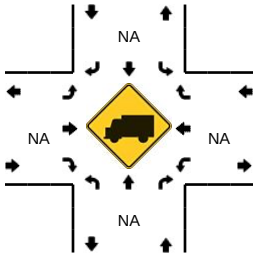
Peak-Hour: 4:45 PM -- 5:45 PM
Peak 15-Min: 4:50 PM -- 5:05 PM

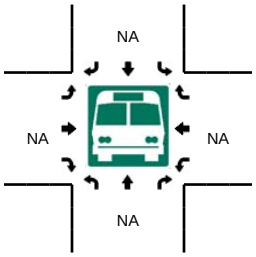












5-Min Count Period Beginning At	Old Portland Rd (Northbound)				Old Portland Rd (Southbound)				S 8th St (Eastbound)				S 8th St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
8:15 AM	7	22	0	0	0	12	3	0	5	0	0	0	0	0	0	0	49	
8:30 AM	2	27	0	0	0	18	0	0	8	0	1	0	0	0	0	0	56	
8:45 AM	6	32	0	0	0	31	0	0	9	0	0	0	0	0	0	0	78	247
9:00 AM	2	25	0	0	0	26	2	0	4	0	1	0	0	0	0	0	60	243
9:15 AM	3	12	0	0	0	23	0	0	0	0	1	0	0	0	0	0	39	233
9:30 AM	2	20	0	0	0	30	0	0	2	0	0	0	0	0	0	0	54	231
9:45 AM	3	21	0	0	0	22	0	0	2	0	0	0	0	0	0	0	48	201
10:00 AM	1	27	0	0	0	16	0	0	3	0	0	0	0	0	0	0	47	188
10:15 AM	1	18	0	0	0	18	0	0	4	0	0	0	0	0	0	0	41	190
10:30 AM	3	18	0	0	0	23	0	0	2	0	0	0	0	0	0	0	46	182
10:45 AM	2	28	0	0	0	32	0	0	1	0	0	0	0	0	0	0	63	197
11:00 AM	5	23	0	0	0	32	0	0	5	0	0	0	0	0	0	0	65	215
11:15 AM	8	17	0	0	0	27	1	0	5	0	0	0	0	0	0	0	58	232
11:30 AM	5	31	0	0	0	31	1	0	4	0	1	0	0	0	0	0	73	259
11:45 AM	6	32	0	0	0	34	0	0	6	0	0	0	0	0	0	0	78	274
12:00 PM	4	35	0	0	0	37	1	0	6	0	2	0	0	0	0	0	85	294
12:15 PM	4	28	0	0	0	27	0	0	1	0	1	0	0	0	0	0	61	297
12:30 PM	6	33	0	0	0	33	2	0	8	0	1	0	0	0	0	0	83	307
12:45 PM	2	42	0	0	0	37	1	0	1	0	1	0	0	0	0	0	84	313
1:00 PM	5	21	0	0	0	41	0	0	1	0	1	0	0	0	0	0	69	297
1:15 PM	3	27	0	0	0	30	0	0	7	0	0	0	0	0	0	0	67	303
1:30 PM	6	27	0	0	0	23	1	0	7	0	0	0	0	0	0	0	64	284
1:45 PM	9	30	0	0	0	36	0	0	4	0	0	0	0	0	0	0	79	279
2:00 PM	8	26	0	0	0	30	2	0	5	0	2	0	0	0	0	0	73	283

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	188	0	0	0	232	8	0	28	0	4	0	0	0	0	0	492
Heavy Trucks	0	52	0		0	28	4		8	0	0		0	0	0		92
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 1/4/2018 12:14 PM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: S 1st St -- Saint Helens St

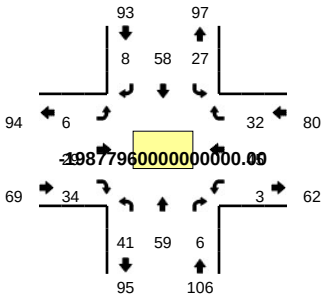
CITY/STATE: Saint Helens, OR

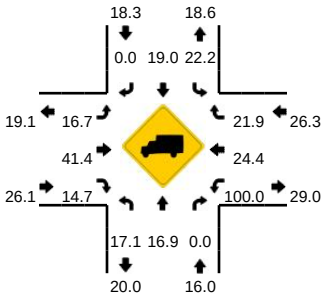
QC JOB #: 14560513

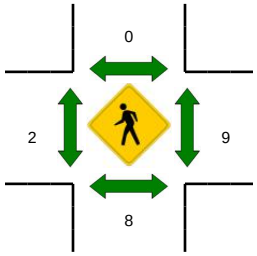
DATE: Thu, May 18 2017

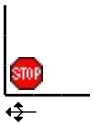
Peak-Hour: 4:45 PM -- 5:45 PM

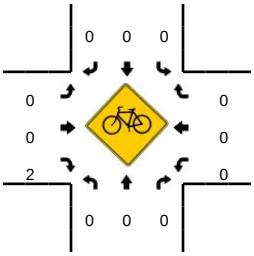
Peak 15-Min: 4:50 PM -- 5:05 PM

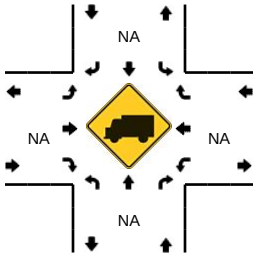


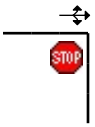


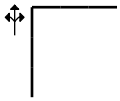


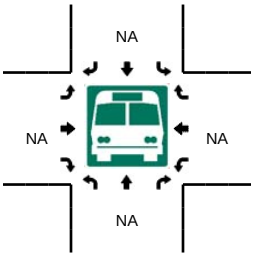












5-Min Count Period Beginning At	S 1st St (Northbound)				S 1st St (Southbound)				Saint Helens St (Eastbound)				Saint Helens St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
8:15 AM	4	4	2	0	12	13	0	0	0	11	5	0	0	2	1	0	54	
8:30 AM	7	9	1	0	13	4	3	0	0	11	12	0	0	1	2	0	63	
8:45 AM	7	9	1	0	7	15	3	0	1	10	5	0	1	2	0	0	61	230
9:00 AM	6	9	0	0	5	11	0	0	0	9	9	0	1	2	4	0	56	234
9:15 AM	6	12	0	0	8	14	0	0	0	4	5	0	0	2	7	0	58	238
9:30 AM	12	10	6	0	7	11	0	0	0	3	6	0	1	5	5	0	66	241
9:45 AM	7	14	0	0	7	13	2	0	0	4	8	0	0	3	2	0	60	240
10:00 AM	7	17	1	0	6	18	1	0	2	5	6	0	0	3	4	0	70	254
10:15 AM	6	9	1	0	10	8	3	0	0	2	7	0	0	4	8	0	58	254
10:30 AM	8	14	3	0	5	18	2	0	2	8	3	0	0	2	1	0	66	254
10:45 AM	12	16	2	0	8	8	4	0	1	6	9	0	0	7	1	0	74	268
11:00 AM	16	7	1	0	14	14	1	0	1	6	8	0	0	4	3	0	75	273
11:15 AM	12	14	0	0	5	9	2	0	1	3	5	0	0	11	2	0	64	279
11:30 AM	12	15	2	0	8	17	1	0	2	3	11	0	0	5	2	0	78	291
11:45 AM	11	24	1	0	7	11	4	0	2	7	13	0	2	8	11	0	101	318
12:00 PM	18	23	1	0	8	24	3	0	1	2	18	0	0	6	10	0	114	357
12:15 PM	11	11	3	0	8	16	2	0	3	5	7	0	1	2	9	0	78	371
12:30 PM	15	11	2	0	13	20	1	0	3	1	11	0	0	4	6	0	87	380
12:45 PM	15	15	6	0	10	24	1	0	4	9	8	0	1	6	8	0	107	386
1:00 PM	14	23	3	0	18	21	3	0	3	3	15	0	0	9	4	0	116	388
1:15 PM	12	15	3	0	10	13	2	0	1	11	4	0	1	9	5	0	86	396
1:30 PM	10	13	1	0	9	14	7	0	1	6	4	0	0	4	5	0	74	383
1:45 PM	13	24	1	0	12	16	1	0	2	7	12	0	0	7	8	0	103	379
2:00 PM	8	22	4	0	11	14	1	0	3	8	8	0	1	6	10	0	96	359

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	72	76	4	0	32	48	4	0	12	36	48	0	12	64	56	0	464
Heavy Trucks	8	12	0		4	12	0		0	12	8		12	12	20		100
Pedestrians		12				0				0				12			24
Bicycles	0	0	0		0	0	0		0	0	1		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 1/4/2018 12:14 PM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: S McNulty Way -- Millard Rd

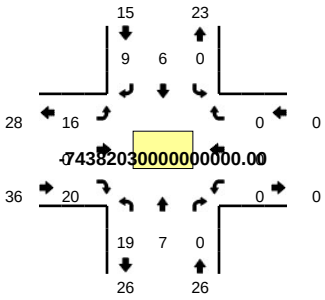
QC JOB #: 14560514

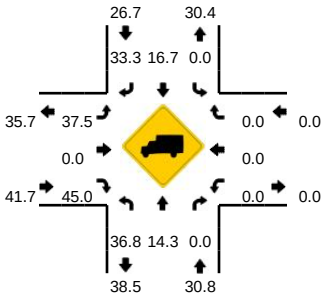
CITY/STATE: Warren, OR

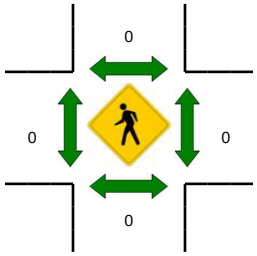
DATE: Thu, May 18 2017

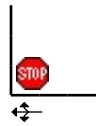
Peak-Hour: 4:45 PM -- 5:45 PM

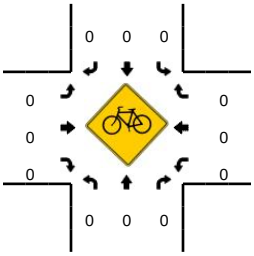
Peak 15-Min: 4:50 PM -- 5:05 PM

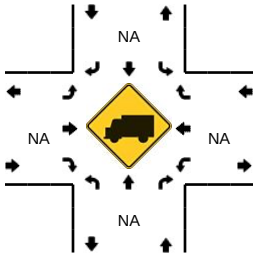


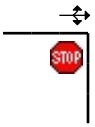


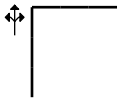


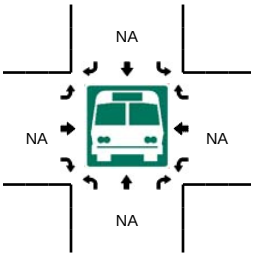












5-Min Count Period Beginning At	S McNulty Way (Northbound)				S McNulty Way (Southbound)				Millard Rd (Eastbound)				Millard Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
8:15 AM	3	2	0	0	0	0	0	0	4	1	3	0	0	0	0	0	13	
8:30 AM	1	2	0	0	0	0	2	0	9	0	2	0	0	0	1	0	17	
8:45 AM	6	1	0	0	0	0	0	0	7	0	2	0	0	0	0	0	16	56
9:00 AM	1	0	0	0	0	1	2	0	3	0	5	0	0	0	0	0	12	58
9:15 AM	3	2	0	0	1	1	3	0	3	0	2	0	0	0	0	0	15	60
9:30 AM	1	1	0	0	0	0	3	0	4	0	2	0	0	0	0	0	11	54
9:45 AM	5	0	1	0	0	0	1	0	5	1	1	0	0	0	0	0	14	52
10:00 AM	1	2	0	0	0	1	3	0	1	0	2	0	1	0	0	0	11	51
10:15 AM	10	1	0	0	0	0	0	0	2	0	0	0	0	0	0	0	13	49
10:30 AM	2	1	0	0	0	2	0	0	1	0	3	0	0	1	0	0	10	48
10:45 AM	5	0	0	0	0	1	1	0	3	0	2	0	0	0	0	0	12	46
11:00 AM	2	1	0	0	0	0	6	0	1	0	4	0	0	0	0	0	14	49
11:15 AM	8	2	0	0	0	2	0	0	4	0	1	0	0	0	0	0	17	53
11:30 AM	2	0	0	0	0	1	1	0	5	0	6	0	0	0	0	0	15	58
11:45 AM	3	3	0	0	0	0	3	0	8	0	4	0	0	0	0	0	21	67
12:00 PM	9	0	0	0	1	1	4	0	3	0	5	0	0	0	0	0	23	76
12:15 PM	2	0	0	0	0	1	2	0	6	0	3	0	0	0	0	0	14	73
12:30 PM	2	1	0	0	1	5	0	0	1	0	3	0	0	0	0	0	13	71
12:45 PM	2	3	0	0	0	3	1	0	3	0	3	0	0	0	0	0	15	65
1:00 PM	1	1	0	0	0	1	1	0	2	0	3	0	0	1	0	0	10	52
1:15 PM	8	3	1	0	0	0	0	0	7	0	8	0	0	1	0	0	28	66
1:30 PM	5	0	1	0	0	0	4	0	4	0	6	0	0	0	0	0	20	73
1:45 PM	3	1	0	0	0	1	0	0	4	0	2	0	0	0	0	0	11	69
2:00 PM	4	0	0	0	0	2	3	0	7	0	3	0	0	0	0	0	19	78

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	20	12	0	0	0	8	20	0	32	0	32	0	0	0	0	0	124
Heavy Trucks	8	4	0		0	0	8		8	0	16		0	0	0		44
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 1/4/2018 12:14 PM

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

Appendix C Existing Traffic Conditions

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	5	0	21	5	19	1	134	14	2	237	9
Future Volume (Veh/h)	6	5	0	21	5	19	1	134	14	2	237	9
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	7	6	0	25	6	23	1	161	17	2	286	11
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	493	476	292	470	472	170	297			178		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	493	476	292	470	472	170	297			178		
tC, single (s)	7.1	6.5	6.2	7.2	6.7	6.4	5.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.6	4.2	3.4	3.1			2.2		
p0 queue free %	99	99	100	95	99	97	100			100		
cM capacity (veh/h)	471	490	752	485	463	839	864			1410		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	13	54	179	299
Volume Left	7	25	1	2
Volume Right	0	23	17	11
cSH	479	588	864	1410
Volume to Capacity	0.03	0.09	0.00	0.00
Queue Length 95th (ft)	2	8	0	0
Control Delay (s)	12.7	11.7	0.1	0.1
Lane LOS	B	B	A	A
Approach Delay (s)	12.7	11.7	0.1	0.1
Approach LOS	B	B		

Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	24.4%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	58	4	4	259	343
v/c Ratio	0.21	0.03	0.02	0.29	0.37
Control Delay	10.1	18.2	15.2	6.5	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	10.1	18.2	15.2	6.5	7.1
Queue Length 50th (ft)	2	1	1	34	48
Queue Length 95th (ft)	27	7	7	66	89
Internal Link Dist (ft)	578		583	1147	882
Turn Bay Length (ft)					
Base Capacity (vph)	273	147	266	886	930
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.21	0.03	0.02	0.29	0.37

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	6	2	44	4	2	2	34	191	8	2	298	9
Future Volume (vph)	6	2	44	4	2	2	34	191	8	2	298	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.89		1.00	0.93			1.00			1.00	
Flt Protected		0.99		0.95	1.00			0.99			1.00	
Satd. Flow (prot)		1277		1031	1406			1630			1589	
Flt Permitted		0.97		0.72	1.00			0.92			1.00	
Satd. Flow (perm)		1240		781	1406			1511			1588	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	7	2	49	4	2	2	38	212	9	2	331	10
RTOR Reduction (vph)	0	40	0	0	2	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	18	0	4	2	0	0	257	0	0	341	0
Confl. Peds. (#/hr)									1	1		
Confl. Bikes (#/hr)												1
Heavy Vehicles (%)	33%	0%	32%	75%	0%	50%	21%	12%	62%	0%	19%	22%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)		10.0		10.0	10.0			31.0			31.0	
Effective Green, g (s)		10.0		10.0	10.0			31.0			31.0	
Actuated g/C Ratio		0.19		0.19	0.19			0.58			0.58	
Clearance Time (s)		6.0		6.0	6.0			6.0			6.0	
Lane Grp Cap (vph)		233		147	265			883			928	
v/s Ratio Prot					0.00							
v/s Ratio Perm		c0.01		0.01				0.17			c0.21	
v/c Ratio		0.08		0.03	0.01			0.29			0.37	
Uniform Delay, d1		17.7		17.5	17.5			5.5			5.8	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		0.7		0.3	0.1			0.8			1.1	
Delay (s)		18.4		17.9	17.5			6.3			6.9	
Level of Service		B		B	B			A			A	
Approach Delay (s)		18.4			17.7			6.3			6.9	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	53.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	52.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	208	27	71	297	20	87
Future Volume (Veh/h)	208	27	71	297	20	87
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Hourly flow rate (vph)	229	30	78	326	22	96
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			260		727	245
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			260		727	245
tC, single (s)			4.4		6.8	6.4
tC, 2 stage (s)						
tF (s)			2.5		3.9	3.5
p0 queue free %			93		93	87
cM capacity (veh/h)			1166		312	758

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	259	78	326	118
Volume Left	0	78	0	22
Volume Right	30	0	0	96
cSH	1700	1166	1700	598
Volume to Capacity	0.15	0.07	0.19	0.20
Queue Length 95th (ft)	0	5	0	18
Control Delay (s)	0.0	8.3	0.0	12.5
Lane LOS		A		B
Approach Delay (s)	0.0	1.6		12.5
Approach LOS				B

Intersection Summary			
Average Delay	2.7		
Intersection Capacity Utilization	33.0%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	141	194	188	228	57	573	112	148	1060	234
v/c Ratio	0.76	0.79	0.74	0.44	0.07	0.35	0.17	0.17	0.61	0.34
Control Delay	73.6	64.2	67.0	40.7	14.5	24.3	5.8	14.5	26.4	11.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	73.6	64.2	67.0	40.7	14.5	24.3	5.8	14.5	26.4	11.4
Queue Length 50th (ft)	106	133	141	139	18	147	0	51	310	41
Queue Length 95th (ft)	171	201	213	200	48	247	42	109	490	127
Internal Link Dist (ft)		1174		1250		3769			940	
Turn Bay Length (ft)	135		175		135		450	125		140
Base Capacity (vph)	247	370	328	760	964	1650	649	871	1731	683
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.52	0.57	0.30	0.06	0.35	0.17	0.17	0.61	0.34

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	131	126	55	175	119	93	53	533	104	138	986	218
Future Volume (vph)	131	126	55	175	119	93	53	533	104	138	986	218
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		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	1.00	1.00
Frt	1.00	0.95		1.00	0.93		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1319	1406		1833	2997		1655	3596	1282	1493	3426	1219
Flt Permitted	0.95	1.00		0.95	1.00		0.18	1.00	1.00	0.34	1.00	1.00
Satd. Flow (perm)	1319	1406		1833	2997		1655	3596	1282	1493	3426	1219
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	141	135	59	188	128	100	57	573	112	148	1060	234
RTOR Reduction (vph)	0	15	0	0	26	0	0	0	61	0	0	68
Lane Group Flow (vph)	141	179	0	188	202	0	57	573	51	148	1060	166
Confl. Peds. (#/hr)	3		10	10		3						
Heavy Vehicles (%)	26%	18%	18%	19%	19%	19%	19%	25%	16%	19%	27%	22%
Turn Type	Prot	NA		Prot	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2		2	6		6
Actuated Green, G (s)	16.9	19.9		16.6	19.6		60.8	55.0	55.0	70.0	59.7	59.7
Effective Green, g (s)	16.9	19.9		16.6	19.6		60.8	55.0	55.0	70.0	59.7	59.7
Actuated g/C Ratio	0.14	0.17		0.14	0.16		0.51	0.46	0.46	0.58	0.50	0.50
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.3	2.3		2.3	2.3		2.3	4.1	4.1	2.3	4.1	4.1
Lane Grp Cap (vph)	185	233		253	489		838	1648	587	870	1704	606
v/s Ratio Prot	c0.11	c0.13		0.10	0.07		0.00	0.16		c0.01	c0.31	
v/s Ratio Perm							0.03		0.04	0.08		0.14
v/c Ratio	0.76	0.77		0.74	0.41		0.07	0.35	0.09	0.17	0.62	0.27
Uniform Delay, d1	49.6	47.8		49.7	45.0		16.5	20.9	18.3	12.3	21.9	17.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	15.8	13.2		10.3	0.3		0.0	0.6	0.3	0.1	1.7	1.1
Delay (s)	65.4	61.1		60.0	45.4		16.5	21.5	18.6	12.4	23.7	18.6
Level of Service	E	E		E	D		B	C	B	B	C	B
Approach Delay (s)		62.9			52.0			20.7			21.7	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	30.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
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)	8	3	93	5	1	12	23	678	21	15	1291	25
Future Volume (Veh/h)	8	3	93	5	1	12	23	678	21	15	1291	25
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	9	3	101	5	1	13	25	737	23	16	1403	27
Pedestrians		1										
Lane Width (ft)		12.0										
Walking Speed (ft/s)		3.5										
Percent Blockage		0										
Right turn flare (veh)			10			5						
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1855	2246	702	1572	2223	368	1404			760		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1855	2246	702	1572	2223	368	1404			760		
tC, single (s)	8.5	7.8	7.3	9.0	6.5	7.9	4.6			4.6		
tC, 2 stage (s)												
tF (s)	4.0	4.7	3.5	4.2	4.0	3.8	2.5			2.5		
p0 queue free %	62	82	70	76	97	97	93			98		
cM capacity (veh/h)	24	16	337	21	40	509	375			702		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	113	19	25	368	368	23	16	702	702	27
Volume Left	9	5	25	0	0	0	16	0	0	0
Volume Right	101	13	0	0	0	23	0	0	0	27
cSH	206	75	375	1700	1700	1700	702	1700	1700	1700
Volume to Capacity	0.55	0.25	0.07	0.22	0.22	0.01	0.02	0.41	0.41	0.02
Queue Length 95th (ft)	73	22	5	0	0	0	2	0	0	0
Control Delay (s)	49.3	72.0	15.3	0.0	0.0	0.0	10.2	0.0	0.0	0.0
Lane LOS	E	F	C				B			
Approach Delay (s)	49.3	72.0	0.5				0.1			
Approach LOS	E	F								

Intersection Summary					
Average Delay	3.2				
Intersection Capacity Utilization	58.3%	ICU Level of Service		B	
Analysis Period (min)	15				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	29	34	3	45	32	41	59	6	27	58	8
Future Volume (Veh/h)	6	29	34	3	45	32	41	59	6	27	58	8
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	8	39	45	4	60	43	55	79	8	36	77	11
Pedestrians		2			9			8				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		3.5			3.5			3.5				
Percent Blockage		0			1			1				
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	422	362	92	429	364	92	90			96		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	422	362	92	429	364	92	90			96		
tC, single (s)	7.3	6.9	6.4	8.1	6.7	6.4	4.3			4.3		
tC, 2 stage (s)												
tF (s)	3.7	4.4	3.4	4.4	4.2	3.5	2.4			2.4		
p0 queue free %	98	92	95	99	88	95	96			97		
cM capacity (veh/h)	420	470	921	331	491	905	1413			1369		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	92	107	142	124
Volume Left	8	4	55	36
Volume Right	45	43	8	11
cSH	610	589	1413	1369
Volume to Capacity	0.15	0.18	0.04	0.03
Queue Length 95th (ft)	13	16	3	2
Control Delay (s)	11.9	12.5	3.2	2.4
Lane LOS	B	B	A	A
Approach Delay (s)	11.9	12.5	3.2	2.4
Approach LOS	B	B		

Intersection Summary				
Average Delay	6.8			
Intersection Capacity Utilization	24.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	29	2	49	188	156	4
Future Volume (Veh/h)	29	2	49	188	156	4
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	33	2	56	216	179	5
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	510	182	184			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	510	182	184			
tC, single (s)	6.7	6.2	4.2			
tC, 2 stage (s)						
tF (s)	3.8	3.3	2.3			
p0 queue free %	93	100	96			
cM capacity (veh/h)	456	866	1322			

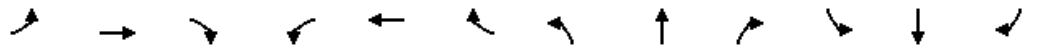
Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	35	272	184
Volume Left	33	56	0
Volume Right	2	0	5
cSH	468	1322	1700
Volume to Capacity	0.07	0.04	0.11
Queue Length 95th (ft)	6	3	0
Control Delay (s)	13.3	1.9	0.0
Lane LOS	B	A	
Approach Delay (s)	13.3	1.9	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	34.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	3	38	74	251	206	3
Future Volume (Veh/h)	3	38	74	251	206	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	4	48	94	318	261	4
Pedestrians				2		
Lane Width (ft)				12.0		
Walking Speed (ft/s)				3.5		
Percent Blockage				0		
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	769	265	265			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	769	265	265			
tC, single (s)	6.7	6.3	4.2			
tC, 2 stage (s)						
tF (s)	3.8	3.4	2.3			
p0 queue free %	99	94	92			
cM capacity (veh/h)	304	758	1227			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	52	412	265
Volume Left	4	94	0
Volume Right	48	0	4
cSH	680	1227	1700
Volume to Capacity	0.08	0.08	0.16
Queue Length 95th (ft)	6	6	0
Control Delay (s)	10.7	2.5	0.0
Lane LOS	B	A	
Approach Delay (s)	10.7	2.5	0.0
Approach LOS	B		

Intersection Summary			
Average Delay	2.2		
Intersection Capacity Utilization	42.3%	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	8	0	11	2	17	0	314	48	4	232	23
Future Volume (Veh/h)	9	8	0	11	2	17	0	314	48	4	232	23
Sign Control		Stop			Stop			Free			Free	
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)	11	10	0	14	2	21	0	388	59	5	286	28
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	750	757	300	732	742	418	314			447		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	750	757	300	732	742	418	314			447		
tC, single (s)	7.2	6.8	6.2	7.2	6.5	6.4	4.1			4.3		
tC, 2 stage (s)												
tF (s)	3.6	4.2	3.3	3.6	4.0	3.5	2.2			2.4		
p0 queue free %	96	97	100	96	99	97	100			100		
cM capacity (veh/h)	303	309	744	318	345	602	1258			1002		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	21	37	447	319
Volume Left	11	14	0	5
Volume Right	0	21	59	28
cSH	306	437	1258	1002
Volume to Capacity	0.07	0.08	0.00	0.00
Queue Length 95th (ft)	5	7	0	0
Control Delay (s)	17.6	14.0	0.0	0.2
Lane LOS	C	B		A
Approach Delay (s)	17.6	14.0	0.0	0.2
Approach LOS	C	B		

Intersection Summary				
Average Delay	1.1			
Intersection Capacity Utilization	29.4%	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 (veh/h)	1	1	24	1	0	0	30	394	1	0	247	2
Future Volume (Veh/h)	1	1	24	1	0	0	30	394	1	0	247	2
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79	0.79
Hourly flow rate (vph)	1	1	30	1	0	0	38	499	1	0	313	3
Pedestrians					3							
Lane Width (ft)					12.0							
Walking Speed (ft/s)					3.5							
Percent Blockage					0							
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)								962				
pX, platoon unblocked	0.88	0.88		0.88	0.88	0.88				0.88		
vC, conflicting volume	890	894	314	924	894	502	316			503		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	809	813	314	847	814	370	316			371		
tC, single (s)	8.1	6.5	6.3	7.1	6.5	6.2	4.4			4.1		
tC, 2 stage (s)												
tF (s)	4.4	4.0	3.4	3.5	4.0	3.3	2.4			2.2		
p0 queue free %	99	100	96	100	100	100	97			100		
cM capacity (veh/h)	179	268	703	232	267	599	1116			1055		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	32	1	538	316
Volume Left	1	1	38	0
Volume Right	30	0	1	3
cSH	616	232	1116	1055
Volume to Capacity	0.05	0.00	0.03	0.00
Queue Length 95th (ft)	4	0	3	0
Control Delay (s)	11.2	20.6	1.0	0.0
Lane LOS	B	C	A	
Approach Delay (s)	11.2	20.6	1.0	0.0
Approach LOS	B	C		

Intersection Summary				
Average Delay	1.0			
Intersection Capacity Utilization	48.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Lane Group	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	111	24	19	655	355
v/c Ratio	0.36	0.15	0.08	0.82	0.38
Control Delay	11.5	20.6	16.6	20.3	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	11.5	20.6	16.6	20.3	7.1
Queue Length 50th (ft)	7	6	4	139	49
Queue Length 95th (ft)	37	21	17	#302	81
Internal Link Dist (ft)	578		441	1146	882
Turn Bay Length (ft)					
Base Capacity (vph)	309	163	233	799	946
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.36	0.15	0.08	0.82	0.38

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	13	70	20	12	4	88	443	19	5	273	20
Future Volume (vph)	11	13	70	20	12	4	88	443	19	5	273	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0			6.0			6.0	
Lane Util. Factor		1.00		1.00	1.00			1.00			1.00	
Frpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Flpb, ped/bikes		1.00		1.00	1.00			1.00			1.00	
Frt		0.90		1.00	0.96			1.00			0.99	
Flt Protected		0.99		0.95	1.00			0.99			1.00	
Satd. Flow (prot)		1329		1203	1217			1534			1624	
Flt Permitted		0.96		0.69	1.00			0.88			0.99	
Satd. Flow (perm)		1285		868	1217			1362			1609	
Peak-hour factor, PHF	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	13	15	83	24	14	5	105	527	23	6	325	24
RTOR Reduction (vph)	0	67	0	0	4	0	0	2	0	0	5	0
Lane Group Flow (vph)	0	44	0	24	15	0	0	653	0	0	350	0
Confl. Peds. (#/hr)							2		1	1		2
Confl. Bikes (#/hr)									3			
Heavy Vehicles (%)	9%	54%	26%	50%	50%	50%	24%	20%	63%	20%	16%	10%
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		6			2			4			8	
Permitted Phases	6			2			4			8		
Actuated Green, G (s)		10.0		10.0	10.0			31.0			31.0	
Effective Green, g (s)		10.0		10.0	10.0			31.0			31.0	
Actuated g/C Ratio		0.19		0.19	0.19			0.58			0.58	
Clearance Time (s)		6.0		6.0	6.0			6.0			6.0	
Lane Grp Cap (vph)		242		163	229			796			941	
v/s Ratio Prot					0.01							
v/s Ratio Perm		c0.03		0.03				c0.48			0.22	
v/c Ratio		0.18		0.15	0.07			0.82			0.37	
Uniform Delay, d1		18.1		17.9	17.7			8.8			5.8	
Progression Factor		1.00		1.00	1.00			1.00			1.00	
Incremental Delay, d2		1.6		1.9	0.5			9.2			1.1	
Delay (s)		19.7		19.8	18.2			18.0			7.0	
Level of Service		B		B	B			B			A	
Approach Delay (s)		19.7			19.1			18.0			7.0	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	53.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	72.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	71	42	488	315	21
Future Volume (Veh/h)	13	71	42	488	315	21
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	16	88	52	602	389	26
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1108	402	415			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1108	402	415			
tC, single (s)	6.6	6.5	4.4			
tC, 2 stage (s)						
tF (s)	3.7	3.6	2.5			
p0 queue free %	92	85	95			
cM capacity (veh/h)	201	592	1013			

Direction, Lane #	EB 1	NB 1	SB 1
Volume Total	104	654	415
Volume Left	16	52	0
Volume Right	88	0	26
cSH	455	1013	1700
Volume to Capacity	0.23	0.05	0.24
Queue Length 95th (ft)	22	4	0
Control Delay (s)	15.2	1.3	0.0
Lane LOS	C	A	
Approach Delay (s)	15.2	1.3	0.0
Approach LOS	C		

Intersection Summary			
Average Delay	2.1		
Intersection Capacity Utilization	61.0%	ICU Level of Service	B
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	539	21	5	382	0	27	0	14	0	0	0
Future Volume (Veh/h)	0	539	21	5	382	0	27	0	14	0	0	0
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)	0	665	26	6	472	0	33	0	17	0	0	0
Pedestrians								8			3	
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		None			None							
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	475			699			1170	1173	686	1182	1186	475
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	475			699			1170	1173	686	1182	1186	475
tC, single (s)	4.1			4.1			7.5	6.5	6.8	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.8	4.0	3.8	3.5	4.0	3.3
p0 queue free %	100			99			77	100	95	100	100	100
cM capacity (veh/h)	1094			900			142	190	363	158	187	592

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total	691	6	472	50	0
Volume Left	0	6	0	33	0
Volume Right	26	0	0	17	0
cSH	1094	900	1700	179	1700
Volume to Capacity	0.00	0.01	0.28	0.28	0.00
Queue Length 95th (ft)	0	1	0	27	0
Control Delay (s)	0.0	9.0	0.0	32.7	0.0
Lane LOS		A		D	A
Approach Delay (s)	0.0	0.1		32.7	0.0
Approach LOS				D	A

Intersection Summary				
Average Delay	1.4			
Intersection Capacity Utilization	39.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	324	23	53	356	27	236
Future Volume (Veh/h)	324	23	53	356	27	236
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	390	28	64	429	33	284
Pedestrians					7	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					1	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			425		968	411
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			425		968	411
tC, single (s)			4.3		6.7	6.4
tC, 2 stage (s)						
tF (s)			2.4		3.8	3.5
p0 queue free %			94		86	52
cM capacity (veh/h)			1024		231	596

Direction, Lane #	EB 1	WB 1	WB 2	NB 1
Volume Total	418	64	429	317
Volume Left	0	64	0	33
Volume Right	28	0	0	284
cSH	1700	1024	1700	512
Volume to Capacity	0.25	0.06	0.25	0.62
Queue Length 95th (ft)	0	5	0	104
Control Delay (s)	0.0	8.8	0.0	22.8
Lane LOS		A		C
Approach Delay (s)	0.0	1.1		22.8
Approach LOS				C

Intersection Summary			
Average Delay	6.3		
Intersection Capacity Utilization	47.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	347	20	7	409	61	28
Future Volume (Veh/h)	347	20	7	409	61	28
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.81	0.81	0.81	0.81	0.81	0.81
Hourly flow rate (vph)	428	25	9	505	75	35
Pedestrians					2	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					3.5	
Percent Blockage					0	
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			455		966	442
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			455		966	442
tC, single (s)			4.5		6.7	6.4
tC, 2 stage (s)						
tF (s)			2.6		3.8	3.5
p0 queue free %			99		69	94
cM capacity (veh/h)			919		245	576

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	453	514	110
Volume Left	0	9	75
Volume Right	25	0	35
cSH	1700	919	300
Volume to Capacity	0.27	0.01	0.37
Queue Length 95th (ft)	0	1	41
Control Delay (s)	0.0	0.3	23.8
Lane LOS		A	C
Approach Delay (s)	0.0	0.3	23.8
Approach LOS			C

Intersection Summary			
Average Delay	2.6		
Intersection Capacity Utilization	38.9%	ICU Level of Service	A
Analysis Period (min)	15		

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	141	218	233	416	132	1215	200	185	799	147
v/c Ratio	0.75	0.81	0.83	0.65	0.16	0.81	0.31	0.23	0.54	0.24
Control Delay	72.6	64.7	73.2	42.7	16.1	38.5	5.5	17.0	29.5	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	72.6	64.7	73.2	42.7	16.1	38.5	5.5	17.0	29.5	6.9
Queue Length 50th (ft)	106	152	174	257	50	448	0	73	243	5
Queue Length 95th (ft)	171	224	#286	347	99	#690	54	138	371	55
Internal Link Dist (ft)		1174		1250		3769			940	
Turn Bay Length (ft)	135		175		135		450	125		140
Base Capacity (vph)	250	369	313	775	908	1495	637	807	1479	617
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.59	0.74	0.54	0.15	0.81	0.31	0.23	0.54	0.24

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	134	147	60	221	172	223	125	1154	190	176	759	140
Future Volume (vph)	134	147	60	221	172	223	125	1154	190	176	759	140
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lane Util. Factor	1.00	1.00		1.00	1.00		1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99		1.00	1.00	0.97	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	1.00	1.00
Frt	1.00	0.96		1.00	0.92		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1397	1406		1833	2997		1655	3596	1252	1493	3426	1250
Flt Permitted	0.95	1.00		0.95	1.00		0.25	1.00	1.00	0.08	1.00	1.00
Satd. Flow (perm)	1397	1406		1833	2997		1655	3596	1252	1493	3426	1250
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	141	155	63	233	181	235	132	1215	200	185	799	147
RTOR Reduction (vph)	0	13	0	0	42	0	0	0	117	0	0	77
Lane Group Flow (vph)	141	205	0	233	374	0	132	1215	83	185	799	70
Confl. Peds. (#/hr)	3		17	17		3			4	4		
Heavy Vehicles (%)	19%	18%	18%	23%	23%	23%	12%	23%	15%	26%	26%	19%
Turn Type	Prot	NA		Prot	NA		pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases							2		2	6		6
Actuated Green, G (s)	16.2	22.0		18.4	24.2		59.6	49.8	49.8	63.6	51.8	51.8
Effective Green, g (s)	16.2	22.0		18.4	24.2		59.6	49.8	49.8	63.6	51.8	51.8
Actuated g/C Ratio	0.13	0.18		0.15	0.20		0.50	0.41	0.41	0.53	0.43	0.43
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Vehicle Extension (s)	2.3	2.3		2.3	2.3		2.3	4.1	4.1	2.3	4.1	4.1
Lane Grp Cap (vph)	188	257		281	604		821	1492	519	791	1478	539
v/s Ratio Prot	0.10	c0.15		c0.13	0.12		0.01	c0.34		c0.02	0.23	
v/s Ratio Perm							0.07		0.07	0.10		0.06
v/c Ratio	0.75	0.80		0.83	0.62		0.16	0.81	0.16	0.23	0.54	0.13
Uniform Delay, d1	50.0	46.9		49.3	43.7		17.4	31.0	22.0	20.8	25.3	20.5
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.4	15.0		17.4	1.6		0.1	5.0	0.7	0.1	1.4	0.5
Delay (s)	64.3	61.9		66.7	45.3		17.5	36.0	22.7	20.9	26.7	21.0
Level of Service	E	E		E	D		B	D	C	C	C	C
Approach Delay (s)		62.8			53.0			32.7			25.0	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	36.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	93.4%	ICU Level of Service	F
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	1	41	7	3	18	112	1552	13	23	1014	51
Future Volume (Veh/h)	5	1	41	7	3	18	112	1552	13	23	1014	51
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	5	1	44	7	3	19	119	1651	14	24	1079	54
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)			10			5						
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	2192	3030	540	2499	3016	826	1079			1665		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	2192	3030	540	2499	3016	826	1079			1665		
tC, single (s)	7.5	6.5	7.5	8.0	7.5	7.6	4.6			5.0		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.6	3.8	4.5	3.6	2.5			2.6		
p0 queue free %	32	89	90	0	25	93	77			90		
cM capacity (veh/h)	7	9	423	7	4	258	523			239		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	NB 4	SB 1	SB 2	SB 3	SB 4
Volume Total	50	29	119	826	826	14	24	540	540	54
Volume Left	5	7	119	0	0	0	24	0	0	0
Volume Right	44	19	0	0	0	14	0	0	0	54
cSH	64	17	523	1700	1700	1700	239	1700	1700	1700
Volume to Capacity	0.78	1.72	0.23	0.49	0.49	0.01	0.10	0.32	0.32	0.03
Queue Length 95th (ft)	88	104	22	0	0	0	8	0	0	0
Control Delay (s)	112.6	529.5	13.9	0.0	0.0	0.0	21.8	0.0	0.0	0.0
Lane LOS	F	F	B				C			
Approach Delay (s)	112.6	529.5	0.9				0.5			
Approach LOS	F	F								

Intersection Summary					
Average Delay	7.7				
Intersection Capacity Utilization	66.8%	ICU Level of Service		C	
Analysis Period (min)	15				

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	17	20	19	7	6	9
Future Volume (Veh/h)	17	20	19	7	6	9
Sign Control	Yield			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.62	0.62	0.62	0.62	0.62	0.62
Hourly flow rate (vph)	27	32	31	11	10	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type				None	None	
Median storage veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	83	10	25			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	83	10	25			
tC, single (s)	6.8	6.7	4.5			
tC, 2 stage (s)						
tF (s)	3.8	3.7	2.5			
p0 queue free %	97	97	98			
cM capacity (veh/h)	819	959	1390			

Direction, Lane #	EB 1	NB 1	SB 1	SB 2
Volume Total	59	42	10	15
Volume Left	27	31	0	0
Volume Right	32	0	0	15
cSH	889	1390	1700	1700
Volume to Capacity	0.07	0.02	0.01	0.01
Queue Length 95th (ft)	5	2	0	0
Control Delay (s)	9.3	5.7	0.0	0.0
Lane LOS	A	A		
Approach Delay (s)	9.3	5.7	0.0	
Approach LOS	A			

Intersection Summary			
Average Delay	6.3		
Intersection Capacity Utilization	18.1%	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)	0	0	22	1	2	0	18	241	2	0	58	1
Future Volume (Veh/h)	0	0	22	1	2	0	18	241	2	0	58	1
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	24	1	2	0	20	262	2	0	63	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	368	368	64	390	367	263	64			264		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	368	368	64	390	367	263	64			264		
tC, single (s)	7.1	6.5	6.6	7.1	7.0	6.2	4.4			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.7	3.5	4.5	3.3	2.5			2.2		
p0 queue free %	100	100	97	100	100	100	99			100		
cM capacity (veh/h)	584	556	902	551	486	781	1362			1312		

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total	24	3	284	64
Volume Left	0	1	20	0
Volume Right	24	0	2	1
cSH	902	506	1362	1312
Volume to Capacity	0.03	0.01	0.01	0.00
Queue Length 95th (ft)	2	0	1	0
Control Delay (s)	9.1	12.2	0.7	0.0
Lane LOS	A	B	A	
Approach Delay (s)	9.1	12.2	0.7	0.0
Approach LOS	A	B		

Intersection Summary				
Average Delay	1.2			
Intersection Capacity Utilization	30.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Appendix D PLTS Results

Table D-1: Detailed PLTS Analysis Results

Street	From	To	Side	Pedestrian LTS Criteria									
				Speed (MPH)	Total Number of Lanes	Bike Lane Width (feet)	Parking	Sidewalk Condition	Sidewalk Width (feet) [1]	Buffer	Illumination	Land Use	PLTS
Major Arterial													
US 30	Millard Road	Gable Road	West	45	5	6	No	Fair	8	Solid Surface (6 feet)	No	Auto-oriented commercial	3
	Millard Road	Gable Road	East	45	5	6	No	None	N/A	Solid Surface (6 feet)	No	Auto-oriented commercial	4
Minor Arterial													
Old Portland Road	S 1st Street	S 4th Street	Both	25	2	8	Yes (14 feet)	Poor	6	Solid Surface (22 feet)	No	Residential	3
	S 4th Street	S 8th Street	West	30	2	N/A	No	None	N/A	N/A	No	Residential	4
	S 4th Street	S 8th Street	East	30	2	N/A	No	Poor	4	Landscape (3 feet)	No	Residential	4
	S 8th Street	S 12th Street	West	30	2	N/A	No	None	N/A	N/A	No	Residential	4
	S 8th Street	S 12th Street	East	30	2	N/A	No	Poor	4	Landscape (3 feet)	No	Residential	4
	S 12th Street	Plymouth Street	West	30	2	N/A	No	None	N/A	N/A	No	Residential	4
	S 12th Street	Plymouth Street	East	30	2	N/A	No	Poor	4	Landscape (3 feet)	No	Residential	4
	Plymouth Street	S 15th Street	West	30	2	N/A	No	None	N/A	N/A	No	Residential	4
	Plymouth Street	S 15th Street	East	30	2	N/A	No	Poor	4	Landscape (3 feet)	No	Residential	4
	S 15th Street	S 18th Street/ Kaster Road	Both	30	2	N/A	No	None	N/A	N/A	No	Residential	4
	S 18th Street/ Kaster Road	Storage Pal Driveway	Both	40	2	6	No	None	N/A	Solid Surface (6 feet)	No	Park/Public Facility	4
	Storage Pal Driveway	Port Avenue	West	40	2	6	No	Fair	7	Solid Surface (6 feet)	No	Low Density Development	2
	Storage Pal Driveway	Port Avenue	East	40	2	6	No	None	N/A	Solid Surface (6 feet)	No	Low Density Development	4

	Port Avenue	Gable Road	Both	40	3	6	No	None	N/A	Solid Surface (6 feet)	No	Light Industrial	4
	Gable Road	Columbia Drainage Driveway	Both	45	2	N/A	No	None	N/A	N/A	No	Light Industrial	4
	Columbia Drainage Driveway	Millard Road	Both	45	2	N/A	No	None	N/A	N/A	No	Low Density Development	4
Gable Road	McNulty Way	US 30	Both	40	3	6	No	Fair	6	Solid Surface (6 feet)	**Yes**	Auto-oriented commercial	4
	Eastern Walmart Driveway	McNulty Way	Both	40	2	9	No	None	N/A	Solid Surface (9 feet)	**Yes**	Auto-oriented commercial	4
	Old Portland Road	Eastern Walmart Driveway	Both	40	2	7	No	None	N/A	Solid Surface (7 feet)	**Yes**	Auto-oriented commercial	4
Millard Road	Old Portland Road	McNulty Way	Both	30	2	N/A	No	None	N/A	N/A	No	Light Industrial	4
	McNulty Way	US 30	Both	25	3	N/A	No	None	N/A	N/A	No	Light Industrial	4
Collector													
Plymouth Street	Old Portland Road	S 6th Street	Both	25	2	N/A	No	None	N/A	N/A	No	Residential	4
McNulty Way	Millard Road	Residential Driveway	Both	25	2	N/A	No	None	N/A	N/A	No	Low Density Development	4
	Residential Driveway	PNWR Rail Crossing	Both	25	2	5	No	None	N/A	Solid Surface (5 feet)	No	Low Density Development	4
	PNWR Rail Crossing	Joint Maintenance Facility Driveway	West	25	2	5	No	None	N/A	Solid Surface (5 feet)	No	Light Industrial	4
	PNWR Rail Crossing	Joint Maintenance Facility Driveway	East	25	2	5	No	Good	7	Solid Surface (5 feet)	No	Light Industrial	3
	Joint Maintenance Facility Driveway	Industrial Way	West	25	2	5	No	Good	7	Solid Surface (5 feet)	No	Light Industrial	3
	Joint Maintenance Facility Driveway	Industrial Way	East	25	2	N/A	No	None	N/A	N/A	No	Light Industrial	4
	Industrial Way	Gable Road	Both	25	2	N/A	No	None	N/A	N/A	No	Light Industrial	4

[1] Sidewalk refers to sidewalks, shared-use paths, and pedestrian paths.

Appendix E ODOT Crash Data

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

1st St & St Helens St
January 1, 2011 through December 31, 2015

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2015														
TURNING MOVEMENTS	0	0	1	1	0	0	0	0	1	0	1	1	0	0
2015 TOTAL	0	0	1	1	0	0	0	0	1	0	1	1	0	0
YEAR: 2013														
ANGLE	0	1	0	1	0	1	0	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	1	0	1	0	1	0	1	0	1	0	1	0	0
2013 TOTAL	0	2	0	2	0	2	0	2	0	2	0	2	0	0
YEAR: 2011														
ANGLE	0	1	0	1	0	2	0	0	1	0	1	1	0	0
2011 TOTAL	0	1	0	1	0	2	0	0	1	0	1	1	0	0
FINAL TOTAL	0	3	1	4	0	4	0	2	2	2	2	4	0	0

Disclaimer: A higher number of crashes may be reported as of 2011 compared to prior years. This does not reflect an increase in annual crashes. The higher numbers result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics.

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

URBAN NON-SYSTEM CRASH LISTING

CITY OF ST. HELENS, COLUMBIA COUNTY — 1st St & St Helens St

January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPEED	ALC	DRUGS	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
00416	N	N	N			11/17/2013	16	ST HELENS ST	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	TURN-R											32,11
NO RPT						Sun 9A	0	1ST ST	SE		STOP SIGN	N	DRY	TURN		PRVTE	SW SE									000		11
No						*45 51 50.21 -122 47 54.42*		1	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	59	F	OR-Y OR<25		052,001,080	000		32
															02	NONE 0	STRGHT											
																PRVTE	SE NW									000		00
																PSNGR CAR		01	DRVR	NONE	65	M	OR-Y OR<25		000	000		00
00376	N	N	N	N	N	11/17/2011	16	ST HELENS ST	INTER	CROSS	N	N	RAIN	ANGL-OTH	01	NONE 0	STRGHT											03
CITY						Thu 6P	0	1ST ST	CN		STOP SIGN	N	WET	ANGL		PRVTE	SW NE									000		00
No						*45 51 50.22 -122 47 54.37*		1	04	0		N	DUSK	INJ		PSNGR CAR		01	DRVR	NONE	17	M	OR-Y OR<25		021	000		03
															02	NONE 0	STRGHT											
																PRVTE	NW SE									000		00
																PSNGR CAR		01	DRVR	INJC	49	F	OR-Y OR<25		000	000		00
																		02	PSNG	INJC	15	M			000	000		00
00243	N	N	N	N	N	07/11/2013	16	ST HELENS ST	INTER	CROSS	N	N	CLR	BIKE	01	NONE 0	STRGHT											03
CITY						Thu 5P	0	1ST ST	CN		STOP SIGN	N	DRY	ANGL		PRVTE	SE NW									000		00
No						*45 51 50.21 -122 47 54.42*		1	04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	41	F	OR-Y OR<25		000	000		00
																	STRGHT SW NE	01	BIKE	INJB	14	M		02	021	034		03
00468	N	N	N	N	N	12/12/2015	16	ST HELENS ST	INTER	CROSS	N	N	RAIN	ANGL-OTH	01	NONE 0	TURN-L											02
CITY						Sat 5P	0	1ST ST	CN		STOP SIGN	N	WET	TURN		PRVTE	SE SW									015		00
No						*45 51 50.21 -122 47 54.42*		1	04	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	48	M	OR-Y OR>25		028	000		02
															02	NONE 0	STRGHT											
																PRVTE	SW NE									000		00
																PSNGR CAR		01	DRVR	NONE	52	F	OR-Y OR<25		000	000		00

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Old Portland Rd & 8th St
January 1, 2011 through December 31, 2015

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR:														
TOTAL														
FINAL TOTAL														

Disclaimer: A higher number of crashes may be reported as of 2011 compared to prior years. This does not reflect an increase in annual crashes. The higher numbers result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics.

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Old Portland Rd & 12th St
January 1, 2011 through December 31, 2015

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2015														
SIDESWIPE - MEETING	0	0	1	1	0	0	0	0	1	0	1	1	0	1
2015 TOTAL	0	0	1	1	0	0	0	0	1	0	1	1	0	1
FINAL TOTAL	0	0	1	1	0	0	0	0	1	0	1	1	0	1

Disclaimer: A higher number of crashes may be reported as of 2011 compared to prior years. This does not reflect an increase in annual crashes. The higher numbers result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics.

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Old Portland Rd & 15th St
January 1, 2011 through December 31, 2015

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2011														
REAR-END	0	0	1	1	0	0	0	1	0	1	0	1	0	0
2011 TOTAL	0	0	1	1	0	0	0	1	0	1	0	1	0	0
FINAL TOTAL	0	0	1	1	0	0	0	1	0	1	0	1	0	0

Disclaimer: A higher number of crashes may be reported as of 2011 compared to prior years. This does not reflect an increase in annual crashes. The higher numbers result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics.

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

URBAN NON-SYSTEM CRASH LISTING

CITY OF ST. HELENS, COLUMBIA COUNTY

Old Portland Rd & 15th St

January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPEED	ALC	DRUGS	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
00230	N	N	N			07/15/2011	16	OLD PORTLAND RD	INTER	4-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										092	07,10
NONE						Fri 2P	0	15TH ST	CN		STOP SIGN	N	DRY	REAR		UNKN	NE SW									000		00
No						*45 51 14.15*		1	01	0		N	DAY	PDO		UNKNOWN		01	DRVR	NONE	00	M	OR-Y	026		000		07
						-122 48 36.79																	OR<25					
															02	NONE 0	STOP										092	
																PRVTE	NE SW									011		00
																PSNGR CAR		01	DRVR	NONE	47	M	OR-Y	000		000		00
																							OR<25					

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Old Portland Rd & 18th St / Kaster Rd

January 1, 2011 through December 31, 2015

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2015														
REAR-END	0	1	0	1	0	1	0	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	1	0	0
2015 TOTAL	0	1	1	2	0	1	0	2	0	2	0	2	0	0
YEAR: 2014														
ANGLE	0	0	1	1	0	0	0	1	0	1	0	1	0	0
REAR-END	0	1	1	2	0	1	0	2	0	2	0	2	0	0
2014 TOTAL	0	1	2	3	0	1	0	3	0	3	0	3	0	0
YEAR: 2013														
REAR-END	0	0	1	1	0	0	0	1	0	1	0	1	0	0
2013 TOTAL	0	0	1	1	0	0	0	1	0	1	0	1	0	0
YEAR: 2012														
FIXED / OTHER OBJECT	0	1	0	1	0	1	0	0	1	0	1	1	0	1
REAR-END	0	1	0	1	0	1	0	1	0	1	0	1	0	0
2012 TOTAL	0	2	0	2	0	2	0	1	1	1	1	2	0	1
YEAR: 2011														
FIXED / OTHER OBJECT	0	1	0	1	0	1	0	1	0	0	1	1	0	1
PEDESTRIAN	0	1	0	1	0	1	0	0	1	1	0	1	0	0
REAR-END	0	2	1	3	0	2	0	3	0	3	0	3	0	0
2011 TOTAL	0	4	1	5	0	4	0	4	1	4	1	5	0	1
FINAL TOTAL	0	8	5	13	0	8	0	11	2	11	2	13	0	2

Disclaimer: A higher number of crashes may be reported as of 2011 compared to prior years. This does not reflect an increase in annual crashes. The higher numbers result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics.

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

URBAN NON-SYSTEM CRASH LISTING

CITY OF ST. HELENS, COLUMBIA COUNTY

Old Portland Rd & 18th St / Kaster Rd

January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPED	ALC	DRUGS	SWORK	DATE / DAY/TIME / *LAT/LONG*	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
00357	N	N	N		10/28/2012	16	KASTER RD	INTER	CROSS	N	Y	CLD	FIX OBJ	01	NONE 0	STRGHT										053,010	16
CITY					Sun 11P	0	OLD PORTLAND RD	SW		TRF SIGNAL	N	WET	FIX		PRVTE	SW NE									000	053,010	00
No	*45 51 6.99*				*-122 48 45.82*		1	06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	INJC	69	F	OR-Y OR<25		016,080,081	025		16
00427	Y	Y	N	N	N	11/21/2015	16	KASTER RD	INTER	CROSS	N	N	CLR	S-STRGHT	01	NONE 0	STRGHT										079,010	33,01
CITY						Sat 1P	0	OLD PORTLAND RD	SW		TRF SIGNAL	N	DRY	REAR		PRVTE	SW NE									000	079,010	00
No	*45 51 6.99*				*-122 48 45.82*		1	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	53	M	OR-Y OR<25		051,047	088		33,01
														02	NONE 0	STRGHT											
															PRVTE	SW NE									000		00
															PSNGR CAR		01	DRVR	NONE	31	F	OR-Y OR<25		000	000		00
00084	N	N	N		03/07/2013	16	OLD PORTLAND RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NO RPT					Thu 9A	0	18TH ST	NE		TRF SIGNAL	N	DRY	REAR		PRVTE	NE SW									000		00
No	*45 51 6.99*				*-122 48 45.82*		1	06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	79	M	OR-Y OR<25		026	000		07
														02	NONE 0	STOP											
															PRVTE	NE SW									011		00
															PSNGR CAR		01	DRVR	NONE	25	F	OR-Y OR<25		000	000		00
																	02	PSNG	NO<5	01	M			000	000		00
00129	N	N	N		04/14/2014	16	OLD PORTLAND RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE					Mon 6P	0	18TH ST	NE		TRF SIGNAL	N	DRY	REAR		PRVTE	NE SW									000		00
No	*45 51 6.99*				*-122 48 45.82*		1	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	46	F	OR-Y OR<25		026	000		07
														02	NONE 0	STOP											
															PRVTE	NE SW									011		00
															PSNGR CAR		01	DRVR	NONE	00	M	UNK UNK		000	000		00
00302	N	N	N		09/22/2011	16	OLD PORTLAND RD	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE					Thu 11A	0	18TH ST	SW		TRF SIGNAL	N	DRY	REAR		PRVTE	SW NE									000		00
No	*45 51 7.02*				*-122 48 45.84*		1	06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	58	M	OR-Y OR<25		026	000		07
														02	NONE 0	STOP											
															PRVTE	SW NE									011		00
															PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK		000	000		00
00095	N	N	N	N	N	03/26/2012	16	OLD PORTLAND RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	32,27
CITY						Mon 10A	0	18TH ST	SW		TRF SIGNAL	N	DRY	REAR		PRVTE	SW NE									001		00
No	*45 51 6.99*				*-122 48 45.82*		1	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	32	F	OTH-Y OR<25		052,016	038		32,27
														02	NONE 0	STOP											
															PRVTE	SW NE									022	013	00
															PSNGR CAR		01	DRVR	INJB	81	F	OR-Y OR<25		000	000		00

CITY OF ST. HELENS, COLUMBIA COUNTY

Old Portland Rd & 18th St / Kaster Rd

January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPEED	ALC	DRUGS	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
															03	NONE 0 PRVTE PSNGR CAR	STOP SW NE									011 000		00 00
90409 CITY No	N	N	N	N	N	12/10/2011 Sat 5P *45 51 19.54*	17 0 *-122 48 51.28*	OLD PORTLAND RD 18TH ST 1	INTER NW 05	CROSS 0	N TRF SIGNAL	Y N N	CLR DRY DLIT	FIX OBJ FIX INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT SE NW	01	DRVR	INJB	74	M	OR-Y OR<25		052,080,081	028	059,089	32 00 32
00227 NO RPT No	N	N	N			07/27/2011 Wed 8A *45 51 7.02*	16 0 *-122 48 45.79*	OLD PORTLAND RD 18TH ST 1	INTER CN 01	CROSS 0	N TRF SIGNAL	N N N	CLR DRY DAY	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT NW SE	01	DRVR	NONE	24	M	OR-Y OR<25		016,026	000 038	092	26,07,27 00 07,27
															02	NONE 0 PRVTE PSNGR CAR	STOP NW SE	01	DRVR	INJC	51	F	OR-Y OR<25		000	011 000	092	26 00
00270 NONE No	N	N	N			08/27/2011 Sat 5P *45 51 7.02*	16 0 *-122 48 45.79*	OLD PORTLAND RD 18TH ST 1	INTER CN 01	CROSS 0	N TRF SIGNAL	N N N	CLR DRY DAY	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT NE SW	01	DRVR	NONE	38	F	OR-Y OR<25		026	000 000		07 00 07
															02	NONE 0 PRVTE PSNGR CAR	STOP NE SW	01	DRVR	INJC	39	M	OR-Y OR<25		000	011 000		00 00
00348 CITY No	N	N	N	N	N	10/28/2011 Fri 2P *45 51 7.02*	16 0 *-122 48 45.79*	OLD PORTLAND RD 18TH ST 1	INTER CN 01	CROSS 0	N TRF SIGNAL	N N N	RAIN WET DAY	PED PED INJ	01	NONE 0 PRVTE PSNGR CAR	TURN-L NW NE	01	DRVR	NONE	76	F	OR-Y OR<25		029	000 000		02 00 02
																	STRGHT SE NW	01	PED	INJC	60	M		01	000	035		00
00259 NONE No	N	N	N			07/31/2015 Fri 7P *45 51 6.99*	16 0 *-122 48 45.82*	OLD PORTLAND RD 18TH ST 1	INTER CN 01	CROSS 0	N TRF SIGNAL	N N N	CLR DRY DAY	ANGL-OTH TURN PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT NE SW	01	DRVR	NONE	00	M	UNK OR>25		020	000 000		04 00 04
															02	NONE 0 PRVTE PSNGR CAR	TURN-L NW NE	01	DRVR	NONE	36	M	OR-Y OR<25		000	000 000		00 00
00083 NO RPT No	N	N	N			01/27/2014 Mon 12P *45 51 6.99*	16 0 *-122 48 45.82*	OLD PORTLAND RD 18TH ST 1	INTER CN 04	CROSS 0	N TRF SIGNAL	N N N	CLR DRY DAY	ANGL-OTH ANGL PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT NW SE	01	DRVR	NONE	00	M	UNK OR<25		097	000 000		04 00 00
															02	NONE 0 PRVTE PSNGR CAR	STRGHT SW NE	01	DRVR	NONE	90	F	OR-Y OR<25		097	000 000		00 00

CITY OF ST. HELENS, COLUMBIA COUNTY

Old Portland Rd & 18th St / Kaster Rd

January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPEED	ALC	DRUGS	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
00115	N	N	N			03/31/2014	16	OLD PORTLAND RD	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										006,092	27
NONE						Mon 6P	0	18TH ST	CN		TRF SIGNAL	N	DRY	REAR		PRVTE	SW NE									000	006	00
No	*45*	*51*	*6.99*	*-122*	*48*	*45.82*	1		04	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	32	F	OR-Y OR<25		016	038		27
															02	NONE 0	STOP											
																PRVTE	SW NE									011	092	00
																PSNGR CAR		01	DRVR	NONE	24	F	OR-Y OR<25		000	000		00

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Old Portland Rd & Gable Rd
January 1, 2011 through December 31, 2015

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR:														
TOTAL														
FINAL TOTAL														

Disclaimer: A higher number of crashes may be reported as of 2011 compared to prior years. This does not reflect an increase in annual crashes. The higher numbers result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics.

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Old Portland Rd & Millard Rd
January 1, 2011 through December 31, 2015

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2014														
TURNING MOVEMENTS	0	1	0	1	0	1	0	1	0	1	0	1	0	0
2014 TOTAL	0	1	0	1	0	1	0	1	0	1	0	1	0	0
FINAL TOTAL	0	1	0	1	0	1	0	1	0	1	0	1	0	0

Disclaimer: A higher number of crashes may be reported as of 2011 compared to prior years. This does not reflect an increase in annual crashes. The higher numbers result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics.

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

COUNTY ROAD CRASH LISTING

COLUMBIA COUNTY

Old Portland Rd & Millard Rd

January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPED	ALC	DRUGS	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	MILEPNT / DIST FROM / INTERSECT	COUNTY ROADS FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
00246	N	N	N			7/20/2014	1.73	OLD PORTLAND RD	INTER	3-LEG	N	N	CLR	BIKE	01	NONE 0	STRGHT											
NO RPT						Sun 4P			CN		STOP SIGN	N	DRY	TURN		PRVTE	S N										031		00
No						*45 50 5.54 -122 50 5.60*			04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	17	F	OR-Y		034,027	000		06,02
																								OR<25				
																	TURN-L	01	BIKE	INJB	53	M		03	000	041		00
																	S W											

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Old Portland Rd & Plymouth St

January 1, 2011 through December 31, 2015

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2014														
TURNING MOVEMENTS	0	1	0	1	0	1	0	0	1	1	0	1	0	0
2014 TOTAL	0	1	0	1	0	1	0	0	1	1	0	1	0	0
FINAL TOTAL	0	1	0	1	0	1	0	0	1	1	0	1	0	0

Disclaimer: A higher number of crashes may be reported as of 2011 compared to prior years. This does not reflect an increase in annual crashes. The higher numbers result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics.

CITY OF ST. HELENS, COLUMBIA COUNTY

Old Portland Rd & Plymouth St

January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPEED	ALC	DRUGS	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
00457	N	N	N			12/22/2014	16	OLD PORTLAND RD	INTER	6-LEG	N	N	UNK	ANGL-OTH	01	NONE 0	STRGHT											02
NO RPT						Mon 1P	0	PLYMOUTH ST	CN		STOP SIGN	N	WET	TURN		PRVTE	NE SW									000		00
No						*45 51 19.50*		1	04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	21	F	OR-Y OR<25		000	000		00
															02	NONE 0	STRGHT											
																PRVTE	E W									015		00
																PSNGR CAR		01	DRVR	NONE	32	F	SUSP OR<25		028	000		02

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Old Portland Rd & Port Ave
January 1, 2011 through December 31, 2015

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2013														
FIXED / OTHER OBJECT	0	0	1	1	0	0	0	1	0	1	0	1	0	1
REAR-END	0	2	0	2	0	2	0	2	0	2	0	2	0	0
2013 TOTAL	0	2	1	3	0	2	0	3	0	3	0	3	0	1
YEAR: 2012														
FIXED / OTHER OBJECT	0	0	1	1	0	0	0	0	1	1	0	1	0	1
2012 TOTAL	0	0	1	1	0	0	0	0	1	1	0	1	0	1
FINAL TOTAL	0	2	2	4	0	2	0	3	1	4	0	4	0	2

Disclaimer: A higher number of crashes may be reported as of 2011 compared to prior years. This does not reflect an increase in annual crashes. The higher numbers result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics.

CITY OF ST. HELENS, COLUMBIA COUNTY

Old Portland Rd & Port Ave

January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPEED	ALC	DRUGS	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
00302	Y	N	N	N	N	09/04/2013	16	OLD PORTLAND RD	INTER	3-LEG	N	Y	CLR	FIX OBJ	01	NONE 0	STRGHT										092,053	01
CITY						Wed 12P	0	PORT AVE	SW		STOP SIGN	N	DRY	FIX		PRVTE	SW NE									007	092,053	00
No	*45 50 50.28*					*-122 49 7.68*		1	05	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	50	F	OR-Y OR<25		047,080	000		01
00328	Y	N	N	N	N	10/12/2012	16	OLD PORTLAND RD	INTER	3-LEG	N	Y	RAIN	FIX OBJ	01	NONE 1	TURN-L										124,040,054	01
CITY						Fri 10A	0	PORT AVE	NW		STOP SIGN	N	WET	FIX		PRVTE	SW NW									000	097,040,054	00
No	*45 50 50.28*					*-122 49 7.68*		1	05	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	40	M	OR-Y OR<25		047,080	017		01
00018	N	N	N			01/11/2013	16	OLD PORTLAND RD	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										004,092	07
NO RPT						Fri 3P	0	PORT AVE	CN		STOP SIGN	N	DRY	REAR		PRVTE	SW NE									000		00
No	*45 50 50.28*					*-122 49 7.68*		1	04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	21	F	OR-Y OR<25		026	000		07
															02	NONE 0	STOP											
																PRVTE	SW NE									012	004,092	00
																PSNGR CAR		01	DRVR	INJC	22	F	OR-Y OR<25		000	000		00
00193	N	N	N	N	N	06/04/2013	16	OLD PORTLAND RD	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											27
CITY						Tue 3P	0	PORT AVE	CN		STOP SIGN	N	DRY	REAR		PRVTE	SW NE									000		00
No	*45 50 50.28*					*-122 49 7.68*		1	04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	27	F	OR-Y OR<25		016	038		27
																		02	PSNG	NO<5	02	F			000	000		00
															02	NONE 0	STOP											
																PRVTE	SW NE									012		00
																PSNGR CAR		01	DRVR	INJC	54	M	OR-Y OR<25		000	000		00

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Railroad Ave & Old Portland Rd
January 1, 2011 through December 31, 2015

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR:														
TOTAL														
FINAL TOTAL														

Disclaimer: A higher number of crashes may be reported as of 2011 compared to prior years. This does not reflect an increase in annual crashes. The higher numbers result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics.

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

US 30 Lower Columbia River Hwy & Gable Rd

January 1, 2011 through December 31, 2015

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2015														
ANGLE	0	1	0	1	0	2	1	1	0	1	0	1	0	0
REAR-END	0	0	1	1	0	0	0	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	0	4	4	0	0	0	4	0	2	2	4	0	0
2015 TOTAL	0	1	5	6	0	2	1	6	0	4	2	6	0	0
YEAR: 2013														
REAR-END	0	3	1	4	0	5	0	3	1	3	1	4	0	0
TURNING MOVEMENTS	0	1	0	1	0	1	0	0	1	1	0	1	0	0
2013 TOTAL	0	4	1	5	0	6	0	3	2	4	1	5	0	0
YEAR: 2012														
ANGLE	0	1	0	1	0	1	0	1	0	0	1	1	0	0
PEDESTRIAN	0	1	0	1	0	1	0	0	1	1	0	1	0	0
REAR-END	0	2	1	3	0	2	0	1	2	1	2	3	0	0
TURNING MOVEMENTS	0	1	1	2	0	1	2	2	0	2	0	2	0	0
2012 TOTAL	0	5	2	7	0	5	2	4	3	4	3	7	0	0
YEAR: 2011														
ANGLE	0	1	0	1	0	1	0	1	0	1	0	1	0	0
REAR-END	0	1	1	2	0	1	0	1	1	2	0	2	0	0
TURNING MOVEMENTS	0	2	0	2	0	3	0	1	1	2	0	2	0	0
2011 TOTAL	0	4	1	5	0	5	0	3	2	5	0	5	0	0
FINAL TOTAL	0	14	9	23	0	18	3	16	7	17	6	23	0	0

Disclaimer: A higher number of crashes may be reported as of 2011 compared to prior years. This does not reflect an increase in annual crashes. The higher numbers result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics.

092 LOWER COLUMBIA RIVER

US 30 Lower Columbia River Hwy & Gable Rd
January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPEED	ALC	DRUGS	SCHL ZN	WORK	DATE / DAY/TIME / LAT/LONG	COUNTY / CITY / URBAN AREA	RD# / CMPT/MLG / MILEPNT / LRS	FC / CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF-CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
00340	N	N	N	N	N	10/17/2011	COLUMBIA	1 14		INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
CITY						Mon 4P	ST. HELENS	MN 0	LOWER COL RIVER HY	NE		TRF SIGNAL	N	DRY	REAR		PRVTE	NE SW									000		00
							ST HELEN UA	27.69	GABLE RD	06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	64	F	OR-Y		026	000		07
No						*45 50 55.23 -122 49 53.69*		009200100S00	1															OR<25					
																02	NONE 0	STOP											
																	PRVTE	NE SW									011		00
																	PSNGR CAR		01	DRVR	NONE	24	F	OR-Y		000	000		00
																								OR<25					
																			02	PSNG	NO<5	04	M			000	000		00
																			03	PSNG	NO<5	02	M			000	000		00
00102	N	N	N	N	N	03/29/2012	COLUMBIA	1 14		INTER	CROSS	N	N	RAIN	PED	01	NONE 0	STRGHT											082	18
CITY						Thu 2P	ST. HELENS	MN 0	LOWER COL RIVER HY	NE		TRF SIGNAL	N	WET	PED		PRVTE	NE SW									001		00
							ST HELEN UA	27.69	GABLE RD	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	18	F	OR-Y		000	000	082	00
No						*45 50 55.23 -122 49 53.69*		009200100S00	1															OR>25					
																		STRGHT	01	PED	INJC	28	F		01	055	035		18
																		SE NW											
00417	N	N	N			12/08/2012	COLUMBIA	1 14		INTER	CROSS	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT												07
NONE						Sat 6P	ST. HELENS	MN 0	LOWER COL RIVER HY	NE		TRF SIGNAL	N	WET	REAR		PRVTE	NE SW									000		00
							ST HELEN UA	27.69	GABLE RD	06	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	00	M	OR-Y		026	000		07
No						*45 50 55.23 -122 49 53.69*		009200100S00	1															UNK					
																02	NONE 0	STOP											
																	PRVTE	NE SW									011		00
																	PSNGR CAR		01	DRVR	NONE	45	F	OR-Y		000	000		00
																								OR<25					
00283	N	N	N	N	N	09/08/2011	COLUMBIA	1 14		INTER	CROSS	N	N	CLR	S-OTHER	01	NONE 0	TURN-L											015,013	27
CITY						Thu 4P	ST. HELENS	MN 0	LOWER COL RIVER HY	SE		BUS STPSGN	N	DRY	TURN		PRVTE	NE SE									000		00
							ST HELEN UA	27.69	GABLE RD	05	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	21	F	OR-Y		016	038		27
No						*45 50 55.23 -122 49 53.69*		009200100S00	1															OR<25					
																02	NONE 0	STOP											
																	PRVTE	NE SE									013	013	00
																	PSNGR CAR		01	DRVR	INJC	33	M	OR-Y		000	000		00
																								OR<25					
																			02	PSNG	INJC	44	M			000	000		00
																03	NONE 0	STOP											
																	PRVTE	NE SE									013		00
																	SCHL BUS		01	DRVR	NONE	42	F	OR-Y		000	000		00
																								OR<25					
00109	N	N	N			04/02/2011	COLUMBIA	1 14		INTER	CROSS	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT												07
NONE						Sat 10A	ST. HELENS	MN 0	LOWER COL RIVER HY	SW		R-GRN-SIG	N	WET	REAR		PRVTE	SW NE									000		00
							ST HELEN UA	27.69	GABLE RD	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	34	F	OR-Y		026	000		07
No						*45 50 55.23 -122 49 53.69*		009200100S00	1															OR<25					
																			02	PSNG	NO<5	02	F			000	000		00

092 LOWER COLUMBIA RIVER

US 30 Lower Columbia River Hwy & Gable Rd
January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPEED	ALCOHL	DRUGS	SCHL WORK	DATE / DAY/TIME / *LAT/LONG*	COUNTY / CITY / URBAN AREA	RD# / CMPT/MLG / MILEPNT / LRS	FC	CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
																02	NONE 0 PRVTE	STOP SW NE									011		00
																	PSNGR CAR		01	DRVR	INJC	56	F	OR-Y OR<25		000	000		00
00293	Y	N	N		09/12/2012 Wed 5P	COLUMBIA ST. HELENS ST HELEN UA	1 MN 0 27.69	14	 LOWER COL RIVER HY GABLE RD	INTER SW 06	CROSS (2) 0	N TRF SIGNAL	N N N	CLR DRY DAY	S-1STOP REAR INJ	01	NONE 0 PRVTE	STRGHT SW NE														01 00 01
NO RPT																	PSNGR CAR		01	DRVR	NONE	36	F	OR-Y OR<25		047,026	000		00
No					*45 50 55.23 -122 49 53.69*		009200100S00		1																					
																02	NONE 0 PRVTE	STOP SW NE									011		00
																	PSNGR CAR		01	DRVR	INJC	47	F	OR-Y OR<25		000	000		00
00022	N	N	N		01/16/2013 Wed 3P	COLUMBIA ST. HELENS ST HELEN UA	1 MN 0 27.69	14	 LOWER COL RIVER HY GABLE RD	INTER SW 06	CROSS (2) 0	N TRF SIGNAL	N N N	CLR DRY DAY	S-1STOP REAR INJ	01	NONE 0 PRVTE	STRGHT SW NE														013	07 00 07
NONE																	PSNGR CAR		01	DRVR	NONE	49	F	OR-Y OR<25		026	022 000		00
No					*45 50 55.23 -122 49 53.69*		009200100S00		1																					
																02	NONE 0 PRVTE	STOP SW NE									022	013	00
																	PSNGR CAR		01	DRVR	INJC	41	M	OR-Y OR<25		000	000		00
																			02	PSNG	INJC	42	M			000	000		00
																03	NONE 0 PRVTE	STOP SW NE									011		00
																	PSNGR CAR		01	DRVR	NONE	20	M	OR-Y OR<25		000	000		00
00125	N	N	N		04/15/2013 Mon 4P	COLUMBIA ST. HELENS ST HELEN UA	1 MN 0 27.69	14	 LOWER COL RIVER HY GABLE RD	INTER SW 06	CROSS (2) 0	N TRF SIGNAL	N N N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 0 PRVTE	STRGHT SW NE															07 00 07
NO RPT																	PSNGR CAR		01	DRVR	NONE	32	F	OR-Y OR<25		026	000		00
No					*45 50 55.23 -122 49 53.69*		009200100S00		1																					
																02	NONE 0 PRVTE	STOP SW NE									011		00
																	PSNGR CAR		01	DRVR	NONE	00	M	UNK OR<25		000	000		00
00145	N	N	N		05/04/2013 Sat 4P	COLUMBIA ST. HELENS ST HELEN UA	1 MN 0 27.69	14	 LOWER COL RIVER HY GABLE RD	INTER SW 06	CROSS (2) 0	N TRF SIGNAL	N N N	CLR DRY DAY	S-1STOP REAR INJ	01	NONE 0 PRVTE	STRGHT SW NE														013	27 00 27
CITY																	PSNGR CAR		01	DRVR	INJC	46	F	OR-Y OR<25		016	022 038		00
No					*45 50 55.23 -122 49 53.69*		009200100S00		1																					
																02	NONE 0 PRVTE	STOP SW NE									022	013	00
																	PSNGR CAR		01	DRVR	INJC	43	M	OR-Y OR<25		000	000		00

092 LOWER COLUMBIA RIVER

US 30 Lower Columbia River Hwy & Gable Rd
January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPEED	DRUG	ALC	SCH	WORK	DATE / DAY/TIME / *LAT/LONG*	COUNTY / CITY / URBAN AREA	RD# / CMPT/MLG / LRS	FC	CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
																	03	NONE 0 PRVTE	STOP SW NE									011		00
																		PSNGR CAR		01	DRVR	NONE	42	F	OR-Y OR<25		000	000		00
00445 NONE	N	N	N		12/07/2013 Sat 6P	COLUMBIA ST. HELENS ST HELEN UA	1 MN 0 27.69	14	GABLE RD	LOWER COL RIVER HY	INTER SW	CROSS 0	N TRF SIGNAL	N N	N SNOW N ICE N DLIT	S-1STOP REAR INJ	01	NONE 0 PRVTE	STRGHT SW NE										124	000		07 00 07
No	*45 50 55.23*			*-122 49 53.69*			009200100S00			1															OR<25					
																	02	NONE 0 PRVTE	STOP SW NE									011		00
																		PSNGR CAR		01	DRVR	NONE	45	M	OR-Y OR<25		000	000		00
00231 NONE	N	N	N		07/08/2015 Wed 9A	COLUMBIA ST. HELENS ST HELEN UA	1 MN 0 27.69	14	GABLE RD	LOWER COL RIVER HY	INTER SW 06	CROSS 0	N TRF SIGNAL	N N N	CLR DRY DAY	S-1STOP REAR PDO	01	NONE 0 PRVTE	STRGHT SW NE													29 00 29
No	*45 50 55.23*			*-122 49 53.69*			009200100S00			1															OR<25					
																	02	NONE 1 PRVTE	STOP SW NE									011		00
																		PSNGR CAR		01	DRVR	NONE	63	M	OR-Y OR<25		000	000		00
00484 CITY	N	N	N	N	N 12/21/2015 Mon 6P	COLUMBIA ST. HELENS ST HELEN UA	1 MN 0 27.69	14	GABLE RD	LOWER COL RIVER HY	INTER SW 06	CROSS 0	N TRF SIGNAL	N N N	CLR DRY DLIT	ANGL-STP TURN PDO	01	NONE 0 PRVTE	TURN-L SE SW													08 00 08
No	*45 50 55.23*			*-122 49 53.69*			009200100S00			1															OR<25					
																	02	NONE 0 PRVTE	STOP SW NE									012		00
																		PSNGR CAR		01	DRVR	NONE	57	M	OR-Y OR<25		000	000		00
00064 CITY	N	N	N	N	N 02/21/2011 Mon 4P	COLUMBIA ST. HELENS ST HELEN UA	1 MN 0 27.69	14	GABLE RD	LOWER COL RIVER HY	INTER CN 01	CROSS 0	N TRF SIGNAL	N N N	CLD DRY DAY	ANGL-OTH ANGL INJ	01	NONE 0 PRVTE	STRGHT SW NE										013			04,27 00 00
No	*45 50 55.23*			*-122 49 53.69*			009200100S00			1															OR<25					
																	02	NONE 0 PRVTE	STRGHT NW SE									022	013	00
																		PSNGR CAR		01	DRVR	NONE	29	F	OR-Y OR<25		020,016	038		04,27
																	03	NONE 0 PRVTE	STOP NE SW									012		00
																		PSNGR CAR		01	DRVR	INJC	25	F	OTH-Y OR>25		000	000		00

092 LOWER COLUMBIA RIVER

US 30 Lower Columbia River Hwy & Gable Rd
January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPEED	ALCOHOL	DRUGS	SCHL BUS	WORK ZONE	DATE / DAY/TIME / *LAT/LONG*	COUNTY / CITY / URBAN AREA	RD# / CMPT/MLG / MILEPNT / LRS	FC	CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT		CAUSE
00254	N	N	N			08/04/2012	COLUMBIA	1	14		INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT												04,27
CITY						Sat 8P	ST. HELENS	MN 0		LOWER COL RIVER HY	CN		TRF SIGNAL	N	DRY	ANGL		PRVTE	NE SW									000			00
							ST HELEN UA	27.69		GABLE RD	01	0		N	DUSK	INJ		PSNGR CAR		01	DRVR	NONE	61	F	OTH-Y		020,016	038			04,27
No						*45 50 55.23 -122 49 53.69*		009200100		S00 1																N-RES						
																	02	NONE 0	STRGHT												
																		PRVTE	SE NW									000			00
																		PSNGR CAR		01	DRVR	INJC	29	M	OR-Y		000	000			00
																									OR<25						
00218	N	N	N			06/27/2015	COLUMBIA	1	14		INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT												04
STATE						Sat 11P	ST. HELENS	MN 0		LOWER COL RIVER HY	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	NE SW									000			00
							ST HELEN UA	27.69		GABLE RD	01	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	36	F	OR-Y		020	000			04
No						*45 50 55.23 -122 49 53.69*		009200100		S00 1																OR>25						
																	02	NONE 0	TURN-L												
																		PRVTE	NW NE									000			00
																		PSNGR CAR		01	DRVR	NONE	42	M	OTH-Y		000	000			00
																									N-RES						
00500	N	N	N			12/30/2015	COLUMBIA	1	14		INTER	CROSS	N	N	CLR	ANGL-OTH	01	POLCE 0	STRGHT											092	14
CITY						Wed 2P	ST. HELENS	MN 0		LOWER COL RIVER HY	CN		OFCR/FLAG	N	DRY	TURN		PUBLC	NE SW									006	092		00
							ST HELEN UA	27.69		GABLE RD	01	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	62	M	OR-Y		000	000			00
No						*45 50 55.23 -122 49 53.69*		009200100		S00 1																OR<25						
																	02	NONE 0	TURN-L												
																		PRVTE	SE SW									000			00
																		PSNGR CAR		01	DRVR	NONE	57	F	OR-Y		024	000			14
																									OR<25						
00227	N	N	N			07/04/2015	COLUMBIA	1	14		INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT												04
CITY						Sat 8P	ST. HELENS	MN 0		LOWER COL RIVER HY	CN		TRF SIGNAL	N	DRY	ANGL		RENTL	NE SW									000			00
							ST HELEN UA	27.69		GABLE RD	02	0		N	DAY	INJ		TRUCK		01	DRVR	NONE	28	M	OTH-Y		020	000			04
No						*45 50 55.23 -122 49 53.69*		009200100		S00 1																N-RES						
																	02	NONE 0	STRGHT												
																		PRVTE	NW SE									000			00
																		PSNGR CAR		01	DRVR	INJB	20	M	OR-Y		000	000			00
																									OR<25						
																				02	PSNG	INJC	55	F			000	000			00
00123	N	N	N			04/18/2012	COLUMBIA	1	14		INTER	CROSS	N	N	CLR	S-OTHER	01	NONE 1	TURN-R												08
NONE						Wed 11A	ST. HELENS	MN 0		LOWER COL RIVER HY	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	SE NE									000			00
							ST HELEN UA	27.69		GABLE RD	03	0		N	DAY	PDO		SEMI TOW		01	DRVR	NONE	00	U	UNK		006	000			08
No						*45 50 55.23 -122 49 53.69*		009200100		S00 1																UNK						
																	02	NONE 0	TURN-R												
																		PRVTE	SE NE									000			00
																		PSNGR CAR		01	DRVR	NONE	50	F	OR-Y		000	000			00
																									OR<25						

092 LOWER COLUMBIA RIVER

US 30 Lower Columbia River Hwy & Gable Rd
January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPEED	ALCOHL	DRUGS	SCHL BUS	WORK ZONE	DATE / DAY/TIME / *LAT/LONG*	COUNTY / CITY / URBAN AREA	RD# CMPT/MLG MILEPNT / LRS	FC	CONN # / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
00102	N	N	N			03/26/2011	COLUMBIA	1	14		INTER	CROSS	N	N	RAIN	O-1 L-TURN	01	NONE 0	STRGHT											04
CITY						Sat 1P	ST. HELENS	MN 0		LOWER COL RIVER HY	CN		TRF SIGNAL	N	WET	TURN		PRVTE	SW NE									000		00
							ST HELEN UA	27.69		GABLE RD	04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	44	F	OR-Y		020	000		04
No						*45 50 55.23 -122 49 53.69*		009200100		S00 1																OR<25					
																	02	NONE 0	TURN-L											
																		PRVTE	SW NW									000		00
																		PSNGR CAR		01	DRVR	INJB	41	F	OR-Y		000	000		00
																									OR<25					
00426	N	N	N	N	N	12/17/2012	COLUMBIA	1	14		INTER	CROSS	N	N	CLD	ANGL-OTH	01	NONE 0	STRGHT											04
CITY						Mon 9A	ST. HELENS	MN 0		LOWER COL RIVER HY	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	SE NW									000		00
							ST HELEN UA	27.69		GABLE RD	04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	68	F	OR-Y		020	028		04
No						*45 50 55.23 -122 49 53.69*		009200100		S00 1																OR<25					
																	02	NONE 0	TURN-L											
																		PRVTE	NE SE									000		00
																		TRUCK		01	DRVR	NONE	64	M	OR-Y		000	000		00
																									OR<25					
00120	N	N	N	N	N	04/09/2013	COLUMBIA	1	14		INTER	CROSS	N	N	CLD	S-OTHER	01	NONE 0	TURN-L										015	27
CITY						Tue 5P	ST. HELENS	MN 0		LOWER COL RIVER HY	CN		L-GRN-SIG	N	WET	TURN		PRVTE	NE SE									000		00
							ST HELEN UA	27.69		GABLE RD	04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	25	F	OTH-Y		016	038		27
No						*45 50 55.23 -122 49 53.69*		009200100		S00 1																N-RES					
																	02	NONE 0	TURN-L											
																		PUBLC	NE SE									006		00
																		SCHL BUS		01	DRVR	INJC	31	F	OR-Y		000	000		00
																									OR<25					
00220	N	N	N	N	N	06/29/2015	COLUMBIA	1	14		INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT											04,32
UNK						Mon 10A	ST. HELENS	MN 0		LOWER COL RIVER HY	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	NW SE									000		00
							ST HELEN UA	27.69		GABLE RD	04	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	49	F	OR-Y		020,052	000		04,32
No						*45 50 55.23 -122 49 53.69*		009200100		S00 1																OR<25					
																	02	NONE 0	TURN-L											
																		PRVTE	SW NW									000		00
																		PSNGR CAR		01	DRVR	NONE	33	F	SUSP		000	000		00
																									OR<25					

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

URBAN NON-SYSTEM CRASH LISTING

CITY OF ST. HELENS, COLUMBIA COUNTY — US 30 Lower Columbia River Hwy & Gable Rd

January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPEED	ALC	DRUGS	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
00401	N	N	N			11/30/2012	17	LOWER COL RIVER HY	INTER	CROSS	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT											07
CITY						Fri 4P	0	GABLE RD	SE		TRF SIGNAL	N	WET	REAR		PRVTE	SE NW									000		00
No						*45 50 55.23*		1	06	0		N	DUSK	INJ		PSNGR CAR		01	DRVR	NONE	30	F	OR-Y		026	000		07
						-122 49 53.69																	OR<25					
															02	NONE 0	STOP											
																PRVTE	SE NW									011		00
																PSNGR CAR		01	DRVR	INJC	82	F	OR-Y		000	000		00
																							OR<25					

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

US 30 Lower Columbia River Hwy & Millard Rd

January 1, 2011 through December 31, 2015

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2015														
ANGLE	0	0	1	1	0	0	0	0	1	0	1	1	0	0
2015 TOTAL	0	0	1	1	0	0	0	0	1	0	1	1	0	0
YEAR: 2013														
REAR-END	0	0	1	1	0	0	0	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	1	1	2	0	1	0	2	0	2	0	2	0	0
2013 TOTAL	0	1	2	3	0	1	0	3	0	3	0	3	0	0
YEAR: 2012														
TURNING MOVEMENTS	0	1	1	2	0	1	0	1	1	2	0	2	0	0
2012 TOTAL	0	1	1	2	0	1	0	1	1	2	0	2	0	0
YEAR: 2011														
ANGLE	0	1	0	1	0	2	0	1	0	1	0	1	0	0
REAR-END	0	0	1	1	0	0	0	1	0	1	0	1	0	0
2011 TOTAL	0	1	1	2	0	2	0	2	0	2	0	2	0	0
FINAL TOTAL	0	3	5	8	0	4	0	6	2	7	1	8	0	0

Disclaimer: A higher number of crashes may be reported as of 2011 compared to prior years. This does not reflect an increase in annual crashes. The higher numbers result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics.

092 LOWER COLUMBIA RIVER

US 30 Lower Columbia River Hwy & Millard Rd
January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPEED	ALCHL	DRGHK	SCLR	SWRK	DATE / DAY/TIME / *LAT/LONG*	COUNTY / CITY / URBAN AREA	RD# CMPT/MLG MILEPNT LRS	FC	CONN # FIRST STREET SECOND STREET INTERSECTION SEQ#	RD CHAR DIRECT LOCTN	INT-TYP (MEDIAN) LEGS (#LANES)	INT-REL TRAF-CNTL	OFFRD RNDBT DRVWY	WTHR SURF LIGHT	CRASH TYP COLL TYP SVRTY	V#	SPCL USE TRLR QTY OWNER VEH TYPE	MOVE FROM TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
00316	Y	N	N	N	N	09/27/2011	COLUMBIA	1	14		INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										092	03,01
STATE						Tue 3P		MN 0			S		BUS STPSGN	N	DRY	REAR		PRVTE	E W									000		00
							ST HELEN UA	26.96			06	1		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	84	M	OR-Y		021,047	000		03,01
No						*45 50 20.27 -122 50 15.01*		009200100S00																		OR<25					
																	02	NONE 0	STOP											
																		PRVTE	E W									011	092	00
																		PSNGR CAR		01	DRVR	NONE	51	M	OR-Y		000	000		00
																									OR<25					
00058	N	N	N	N	N	02/18/2013	COLUMBIA	1	14		INTER	CROSS	N	N	CLD	S-1STOP	01	NONE 0	STRGHT										013	14,07
STATE						Mon 1P		MN 0			S		FLASHBCN-A	N	DRY	REAR		PRVTE	S N									022		00
							ST HELEN UA	26.96			06	1		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	19	M	OR-Y		026	000		07
No						*45 50 20.27 -122 50 15.01*		009200100S00																		OR<25					
																	02	NONE 0	STOP											
																		PRVTE	S N									022	013	00
																		PSNGR CAR		01	DRVR	NONE	40	F	OR-Y		000	000		00
																									OR<25					
																	03	NONE 0	STOP											
																		PRVTE	S N									011		00
																		PSNGR CAR		01	DRVR	NONE	47	M	OR-Y		009	000		14
																									OR>25					
00119	N	N	N	N	N	04/07/2013	COLUMBIA	1	14		INTER	CROSS	N	N	CLD	ANGL-OTH	01	NONE 0	STRGHT											02,08
STATE						Sun 5P		MN 0			CN		STOP SIGN	N	DRY	TURN		PRVTE	S N									000		00
							ST HELEN UA	26.96			02	1		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	19	M	OR-Y		000	000		00
No						*45 50 20.27 -122 50 15.01*		009200100S00																		OR<25					
																	02	NONE 0	TURN-R											
																		PRVTE	E N									015		00
																		PSNGR CAR		01	DRVR	NONE	79	M	OR-Y		028,007	000		02,08
																									OR<25					
00140	N	N	N	N	N	04/30/2013	COLUMBIA	1	14		INTER	CROSS	N	N	CLD	ANGL-OTH	01	NONE 0	TURN-R											02
COUNTY						Tue 7A		MN 0			CN		STOP SIGN	N	DRY	TURN		PRVTE	E N									015		00
							ST HELEN UA	26.96			02	1		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	29	F	OR-Y		028	000		02
No						*45 50 20.27 -122 50 15.01*		009200100S00																		OR<25					
																	02	NONE 0	STRGHT											
																		PRVTE	S N									000		00
																		PSNGR CAR		01	DRVR	NONE	61	F	OTH-Y		000	000		00
																									N-RES					
00482	N	N	N	N	N	12/21/2015	COLUMBIA	1	14		INTER	CROSS	N	N	RAIN	PRKD MV	01	NONE 0	STRGHT										089	32,14
CITY						Mon 10P		MN 0			CN		STOP SIGN	N	WET	ANGL		PRVTE	S N									000		00
							ST HELEN UA	26.96			02	1		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	78	M	OR-Y		052,023	088		32,14
No						*45 50 20.27 -122 50 15.01*		009200100S00																		OR<25					

092 LOWER COLUMBIA RIVER

US 30 Lower Columbia River Hwy & Millard Rd
January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPEED	DRUGS	ALCOHOL	SCHL ZN	WORK ZN	DATE / DAY/TIME / LAT/LONG	COUNTY / CITY / URBAN AREA	RD# / CMPT/MLG / LRS	FC / FIRST STREET / SECOND STREET / INTERSECTION SEQ#	CONN #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
																	02	POLCE 0 PUBLC	PRKD-P E W									008		00
																		PSNGR CAR											
00139	N	N	N	N	N	05/04/2012	COLUMBIA	1 14			INTER	CROSS	N	N	RAIN	ANGL-OTH	01	NONE 0	TURN-L											02
STATE						Fri 1P		MN 0			CN		STOP SIGN	N	WET	TURN		PRVTE	NW NE									015		00
							ST HELEN UA	26.96			03	1		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	22	M	OR-Y		028	000		02
No	*45 50 20.27*					*-122 50 15.01*		009200100S00																		OR<25					
																	02	NONE 1 PRVTE	TURN-L SW NW									000		00
																		PSNGR CAR		01	DRVR	NONE	38	M	OR-Y		000	000		00
																									OR<25					
00313	N	N	N	N	N	10/01/2012	COLUMBIA	1 14			INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	TURN-R											02
STATE						Mon 12P		MN 0			CN		STOP SIGN	N	DRY	TURN		PRVTE	W S									015		00
							ST HELEN UA	26.96			03	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	21	F	OR-Y		028	000		02
No	*45 50 20.27*					*-122 50 15.01*		009200100S00																		OR<25					
																	02	NONE 0 PRVTE	STRGHT N S									000		00
																		PSNGR CAR		01	DRVR	INJC	43	F	OR-Y		000	000		00
																									OR<25					
00416	N	N	N	N	N	12/14/2011	COLUMBIA	1 14			INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT										013	02
STATE						Wed 4P		MN 0			CN		STOP SIGN	N	DRY	ANGL		PRVTE	S N									000		00
							ST HELEN UA	26.96			04	1		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	48	M	OR-Y		000	000		00
No	*45 50 20.27*					*-122 50 15.01*		009200100S00																		OR<25					
																	02	NONE 0 PRVTE	STRGHT W E									022	013	00
																		PSNGR CAR		01	DRVR	INJC	64	M	OR-Y		028	000		02
																									OR<25					
																	03	NONE 0 PRVTE	STOP E W									011		00
																		PSNGR CAR		01	DRVR	NONE	42	F	OR-Y		000	000		00
																									OR>25					

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
000	NONE	NO ACTION OR NON-WARRANTED
001	SKIDDED	SKIDDED
002	ON/OFF V	GETTING ON OR OFF STOPPED OR PARKED VEHICLE
003	LOAD OVR	OVERHANGING LOAD STRUCK ANOTHER VEHICLE, ETC.
006	SLOW DN	SLOWED DOWN
007	AVOIDING	AVOIDING MANEUVER
008	PAR PARK	PARALLEL PARKING
009	ANG PARK	ANGLE PARKING
010	INTERFERE	PASSENGER INTERFERING WITH DRIVER
011	STOPPED	STOPPED IN TRAFFIC NOT WAITING TO MAKE A LEFT TURN
012	STP/L TRN	STOPPED BECAUSE OF LEFT TURN SIGNAL OR WAITING, ETC.
013	STP TURN	STOPPED WHILE EXECUTING A TURN
014	EMR V PKD	EMERGENCY VEHICLE LEGALLY PARKED IN THE ROADWAY
015	GO A/STOP	PROCEED AFTER STOPPING FOR A STOP SIGN/FLASHING RED.
016	TRN A/RED	TURNED ON RED AFTER STOPPING
017	LOSTCTRL	LOST CONTROL OF VEHICLE
018	EXIT DWY	ENTERING STREET OR HIGHWAY FROM ALLEY OR DRIVEWAY
019	ENTR DWY	ENTERING ALLEY OR DRIVEWAY FROM STREET OR HIGHWAY
020	STR ENTR	BEFORE ENTERING ROADWAY, STRUCK PEDESTRIAN, ETC. ON SIDEWALK OR SHOULDER
021	NO DRVR	CAR RAN AWAY - NO DRIVER
022	PREV COL	STRUCK, OR WAS STRUCK BY, VEHICLE OR PEDESTRIAN IN PRIOR COLLISION BEFORE ACC. STABILIZED
023	STALLED	VEHICLE STALLED OR DISABLED
024	DRVR DEAD	DEAD BY UNASSOCIATED CAUSE
025	FATIGUE	FATIGUED, SLEEPY, ASLEEP
026	SUN	DRIVER BLINDED BY SUN
027	HDLGHTS	DRIVER BLINDED BY HEADLIGHTS
028	ILLNESS	PHYSICALLY ILL
029	THRU MED	VEHICLE CROSSED, PLUNGED OVER, OR THROUGH MEDIAN BARRIER
030	PURSUIT	PURSUING OR ATTEMPTING TO STOP A VEHICLE
031	PASSING	PASSING SITUATION
032	PRKOFFRD	VEHICLE PARKED BEYOND CURB OR SHOULDER
033	CROS MED	VEHICLE CROSSED EARTH OR GRASS MEDIAN
034	X N/SGNL	CROSSING AT INTERSECTION - NO TRAFFIC SIGNAL PRESENT
035	X W/ SGNL	CROSSING AT INTERSECTION - TRAFFIC SIGNAL PRESENT
036	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
037	BTWN INT	CROSSING BETWEEN INTERSECTIONS
038	DISTRACT	DRIVER'S ATTENTION DISTRACTED
039	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
040	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
041	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
042	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
043	PLAYINRD	PLAYING IN STREET OR ROAD
044	PUSH MV	PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
045	WORK ON	WORKING IN ROADWAY OR ALONG SHOULDER
046	W/ TRAFIC	NON-MOTORIST WALKING, RUNNING, RIDING, ETC. WITH TRAFFIC
047	A/ TRAFIC	NON-MOTORIST WALKING, RUNNING, RIDING, ETC. FACING TRAFFIC
050	LAY ON RD	STANDING OR LYING IN ROADWAY
051	ENT OFFRD	ENTERING / STARTING IN TRAFFIC LANE FROM OFF ROAD
052	MERGING	MERGING
055	SPRAY	BLINDED BY WATER SPRAY

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
088	OTHER	OTHER ACTION
099	UNK	UNKNOWN ACTION

CAUSE CODE TRANSLATION LIST

CAUSE CODE	SHORT DESCRIPTION	LONG DESCRIPTION
00	NO CODE	NO CAUSE ASSOCIATED AT THIS LEVEL
01	TOO-FAST	TOO FAST FOR CONDITIONS (NOT EXCEED POSTED SPEED
02	NO-YIELD	DID NOT YIELD RIGHT-OF-WAY
03	PAS-STOP	PASSED STOP SIGN OR RED FLASHER
04	DIS SIG	DISREGARDED TRAFFIC SIGNAL
05	LEFT-CTR	DROVE LEFT OF CENTER ON TWO-WAY ROAD; STRADDLING
06	IMP-OVER	IMPROPER OVERTAKING
07	TOO-CLOS	FOLLOWED TOO CLOSELY
08	IMP-TURN	MADE IMPROPER TURN
09	DRINKING	ALCOHOL OR DRUG INVOLVED
10	OTHR-IMP	OTHER IMPROPER DRIVING
11	MECH-DEF	MECHANICAL DEFECT
12	OTHER	OTHER (NOT IMPROPER DRIVING)
13	IMP LN C	IMPROPER CHANGE OF TRAFFIC LANES
14	DIS TCD	DISREGARDED OTHER TRAFFIC CONTROL DEVICE
15	WRNG WAY	WRONG WAY ON ONE-WAY ROAD; WRONG SIDE DIVIDED RO
16	FATIGUE	DRIVER DROWSY/FATIGUED/SLEEPY
17	ILLNESS	PHYSICAL ILLNESS
18	IN RDWY	NON-MOTORIST ILLEGALLY IN ROADWAY
19	NT VISBL	NON-MOTORIST NOT VISIBLE; NON-REFLECTIVE CLOTHIN
20	IMP PKNG	VEHICLE IMPROPERLY PARKED
21	DEF STER	DEFECTIVE STEERING MECHANISM
22	DEF BRKE	INADEQUATE OR NO BRAKES
24	LOADSHFT	VEHICLE LOST LOAD OR LOAD SHIFTED
25	TIREFAIL	TIRE FAILURE
26	PHANTOM	PHANTOM / NON-CONTACT VEHICLE
27	INATTENT	INATTENTION
28	NM INATT	NON-MOTORIST INATTENTION
29	F AVOID	FAILED TO AVOID VEHICLE AHEAD
30	SPEED	DRIVING IN EXCESS OF POSTED SPEED
31	RACING	SPEED RACING (PER PAR)
32	CARELESS	CARELESS DRIVING (PER PAR)
33	RECKLESS	RECKLESS DRIVING (PER PAR)
34	AGGRESV	AGGRESSIVE DRIVING (PER PAR)
35	RD RAGE	ROAD RAGE (PER PAR)
40	VIEW OBS	VIEW OBSCURED
50	USED MDN	IMPROPER USE OF MEDIAN OR SHOULDER
51	FAIL LN	FAILED TO MAINTAIN LANE
52	OFF RD	RAN OFF ROAD

COLLISION TYPE CODE TRANSLATION LIST

COLL CODE	SHORT DESCRIPTION	LONG DESCRIPTION
&	OTH	MISCELLANEOUS
-	BACK	BACKING
0	PED	PEDESTRIAN
1	ANGL	ANGLE
2	HEAD	HEAD-ON
3	REAR	REAR-END
4	SS-M	SIDESWIPE - MEETING
5	SS-O	SIDESWIPE - OVERTAKING
6	TURN	TURNING MOVEMENT
7	PARK	PARKING MANEUVER
8	NCOL	NON-COLLISION
9	FIX	FIXED OBJECT OR OTHER OBJECT

CRASH TYPE CODE TRANSLATION LIST

CRASH TYPE	SHORT DESCRIPTION	LONG DESCRIPTION
&	OVERTURN	OVERTURNED
0	NON-COLL	OTHER NON-COLLISION
1	OTH RDWY	MOTOR VEHICLE ON OTHER ROADWAY
2	PRKD MV	PARKED MOTOR VEHICLE
3	PED	PEDESTRIAN
4	TRAIN	RAILWAY TRAIN
6	BIKE	PEDALCYCLIST
7	ANIMAL	ANIMAL
8	FIX OBJ	FIXED OBJECT
9	OTH OBJ	OTHER OBJECT
A	ANGL-STP	ENTERING AT ANGLE - ONE VEHICLE STOPPED
B	ANGL-OTH	ENTERING AT ANGLE - ALL OTHERS
C	S-STRGHT	FROM SAME DIRECTION - BOTH GOING STRAIGHT
D	S-1TURN	FROM SAME DIRECTION - ONE TURN, ONE STRAIGHT
E	S-1STOP	FROM SAME DIRECTION - ONE STOPPED
F	S-OTHER	FROM SAME DIRECTION-ALL OTHERS, INCLUDING PARKING
G	O-STRGHT	FROM OPPOSITE DIRECTION - BOTH GOING STRAIGHT
H	O-1 L-TURN	FROM OPPOSITE DIRECTION-ONE LEFT TURN,ONE STRAIGHT
I	O-1STOP	FROM OPPOSITE DIRECTION - ONE STOPPED
J	O-OTHER	FROM OPPOSITE DIRECTION-ALL OTHERS INCL. PARKING

DRIVER LICENSE CODE TRANSLATION LIST

LIC CODE	SHORT DESC	LONG DESCRIPTION
0	NONE	NOT LICENSED (HAD NEVER BEEN LICENSED)
1	OR-Y	VALID OREGON LICENSE
2	OTH-Y	VALID LICENSE, OTHER STATE OR COUNTRY
3	SUSP	SUSPENDED/REVOKED

DRIVER RESIDENCE CODE TRANSLATION LIST

RES CODE	SHORT DESC	LONG DESCRIPTION
1	OR<25	OREGON RESIDENT WITHIN 25 MILE OF HOME
2	OR>25	OREGON RESIDENT 25 OR MORE MILES FROM HOME
3	OR-?	OREGON RESIDENT - UNKNOWN DISTANCE FROM HOME
4	N-RES	NON-RESIDENT
9	UNK	UNKNOWN IF OREGON RESIDENT

ERROR CODE TRANSLATION LIST

ERROR CODE	SHORT DESCRIPTION	FULL DESCRIPTION
000	NONE	NO ERROR
001	WIDE TRN	WIDE TURN
002	CUT CORN	CUT CORNER ON TURN
003	FAIL TRN	FAILED TO OBEY MANDATORY TRAFFIC TURN SIGNAL, SIGN OR LANE MARKINGS
004	L IN TRF	LEFT TURN IN FRONT OF ONCOMING TRAFFIC
005	L PROHIB	LEFT TURN WHERE PROHIBITED
006	FRM WRNG	TURNED FROM WRONG LANE
007	TO WRONG	TURNED INTO WRONG LANE
008	ILLEG U	U-TURNED ILLEGALLY
009	IMP STOP	IMPROPERLY STOPPED IN TRAFFIC LANE
010	IMP SIG	IMPROPER SIGNAL OR FAILURE TO SIGNAL
011	IMP BACK	BACKING IMPROPERLY (NOT PARKING)
012	IMP PARK	IMPROPERLY PARKED
013	UNPARK	IMPROPER START LEAVING PARKED POSITION
014	IMP STRT	IMPROPER START FROM STOPPED POSITION
015	IMP LGHT	IMPROPER OR NO LIGHTS (VEHICLE IN TRAFFIC)
016	INATTENT	INATTENTION (FAILURE TO DIM LIGHTS PRIOR TO 4/1/97)
017	UNSF VEH	DRIVING UNSAFE VEHICLE (NO OTHER ERROR APPARENT)
018	OTH PARK	ENTERING/EXITING PARKED POSITION W/ INSUFFICIENT CLEARANCE; OTHER IMPROPER PARKING MANEUVER
019	DIS DRIV	DISREGARDED OTHER DRIVER'S SIGNAL
020	DIS SGNL	DISREGARDED TRAFFIC SIGNAL
021	RAN STOP	DISREGARDED STOP SIGN OR FLASHING RED
022	DIS SIGN	DISREGARDED WARNING SIGN, FLARES OR FLASHING AMBER
023	DIS OFCR	DISREGARDED POLICE OFFICER OR FLAGMAN
024	DIS EMER	DISREGARDED SIREN OR WARNING OF EMERGENCY VEHICLE
025	DIS RR	DISREGARDED RR SIGNAL, RR SIGN, OR RR FLAGMAN
026	REAR-END	FAILED TO AVOID STOPPED OR PARKED VEHICLE AHEAD OTHER THAN SCHOOL BUS
027	BIKE ROW	DID NOT HAVE RIGHT-OF-WAY OVER PEDALCYCLIST
028	NO ROW	DID NOT HAVE RIGHT-OF-WAY
029	PED ROW	FAILED TO YIELD RIGHT-OF-WAY TO PEDESTRIAN
030	PAS CURV	PASSING ON A CURVE
031	PAS WRNG	PASSING ON THE WRONG SIDE
032	PAS TANG	PASSING ON STRAIGHT ROAD UNDER UNSAFE CONDITIONS
033	PAS X-WK	PASSED VEHICLE STOPPED AT CROSSWALK FOR PEDESTRIAN
034	PAS INTR	PASSING AT INTERSECTION
035	PAS HILL	PASSING ON CREST OF HILL
036	N/PAS ZN	PASSING IN "NO PASSING" ZONE
037	PAS TRAF	PASSING IN FRONT OF ONCOMING TRAFFIC
038	CUT-IN	CUTTING IN (TWO LANES - TWO WAY ONLY)
039	WRNGSIDE	DRIVING ON WRONG SIDE OF THE ROAD (2-WAY UNDIVIDED ROADWAYS)
040	THRU MED	DRIVING THROUGH SAFETY ZONE OR OVER ISLAND
041	F/ST BUS	FAILED TO STOP FOR SCHOOL BUS

ERROR CODE TRANSLATION LIST

ERROR CODE	SHORT DESCRIPTION	FULL DESCRIPTION
042	F/SLO MV	FAILED TO DECREASE SPEED FOR SLOWER MOVING VEHICLE
043	TOO CLOSE	FOLLOWING TOO CLOSELY (MUST BE ON OFFICER'S REPORT)
044	STRDL LN	STRADDLING OR DRIVING ON WRONG LANES
045	IMP CHG	IMPROPER CHANGE OF TRAFFIC LANES
046	WRNG WAY	WRONG WAY ON ONE-WAY ROADWAY; WRONG SIDE DIVIDED ROAD
047	BASCRULE	DRIVING TOO FAST FOR CONDITIONS (NOT EXCEEDING POSTED SPEED)
048	OPN DOOR	OPENED DOOR INTO ADJACENT TRAFFIC LANE
049	IMPEDING	IMPEDING TRAFFIC
050	SPEED	DRIVING IN EXCESS OF POSTED SPEED
051	RECKLESS	RECKLESS DRIVING (PER PAR)
052	CARELESS	CARELESS DRIVING (PER PAR)
053	RACING	SPEED RACING (PER PAR)
054	X N/SGNL	CROSSING AT INTERSECTION, NO TRAFFIC SIGNAL PRESENT
055	X W/SGNL	CROSSING AT INTERSECTION, TRAFFIC SIGNAL PRESENT
056	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
057	BTWN INT	CROSSING BETWEEN INTERSECTIONS
059	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
060	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
061	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
062	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
063	PLAYINRD	PLAYING IN STREET OR ROAD
064	PUSH MV	PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
065	WORK IN RD	WORKING IN ROADWAY OR ALONG SHOULDER
070	LAY ON RD	STANDING OR LYING IN ROADWAY
071	NM IMP USE	IMPROPER USE OF TRAFFIC LANE BY NON-MOTORIST
073	ELUDING	ELUDING / ATTEMPT TO ELUDE
079	F NEG CURV	FAILED TO NEGOTIATE A CURVE
080	FAIL LN	FAILED TO MAINTAIN LANE
081	OFF RD	RAN OFF ROAD
082	NO CLEAR	DRIVER MISJUDGED CLEARANCE
083	OVRSTEER	OVER-CORRECTING
084	NOT USED	CODE NOT IN USE
085	OVRLOAD	OVERLOADING OR IMPROPER LOADING OF VEHICLE WITH CARGO OR PASSENGERS
097	UNA DIS TC	UNABLE TO DETERMINE WHICH DRIVER DISREGARDED TRAFFIC CONTROL DEVICE

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
001	FEL/JUMP	OCCUPANT FELL, JUMPED OR WAS EJECTED FROM MOVING VEHICLE
002	INTERFER	PASSENGER INTERFERED WITH DRIVER
003	BUG INTF	ANIMAL OR INSECT IN VEHICLE INTERFERED WITH DRIVER
004	INDRCT PED	PEDESTRIAN INDIRECTLY INVOLVED (NOT STRUCK)
005	SUB-PED	"SUB-PED": PEDESTRIAN INJURED SUBSEQUENT TO COLLISION, ETC.
006	INDRCT BIK	PEDALCYCLIST INDIRECTLY INVOLVED (NOT STRUCK)
007	HITCHIKR	HITCHHIKER (SOLICITING A RIDE)
008	PSNGR TOW	PASSENGER OR NON-MOTORIST BEING TOWED OR PUSHED ON CONVEYANCE
009	ON/OFF V	GETTING ON/OFF STOPPED/PARKED VEHICLE (OCCUPANTS ONLY; MUST HAVE PHYSICAL CONTACT W/ VEHIC
010	SUB OTRN	OVERTURNED AFTER FIRST HARMFUL EVENT
011	MV PUSHD	VEHICLE BEING PUSHED
012	MV TOWED	VEHICLE TOWED OR HAD BEEN TOWING ANOTHER VEHICLE
013	FORCED	VEHICLE FORCED BY IMPACT INTO ANOTHER VEHICLE, PEDALCYCLIST OR PEDESTRIAN
014	SET MOTN	VEHICLE SET IN MOTION BY NON-DRIVER (CHILD RELEASED BRAKES, ETC.)
015	RR ROW	AT OR ON RAILROAD RIGHT-OF-WAY (NOT LIGHT RAIL)
016	LT RL ROW	AT OR ON LIGHT-RAIL RIGHT-OF-WAY
017	RR HIT V	TRAIN STRUCK VEHICLE
018	V HIT RR	VEHICLE STRUCK TRAIN
019	HIT RR CAR	VEHICLE STRUCK RAILROAD CAR ON ROADWAY
020	JACKNIFE	JACKKNIFE; TRAILER OR TOWED VEHICLE STRUCK TOWING VEHICLE
021	TRL OTRN	TRAILER OR TOWED VEHICLE OVERTURNED
022	CN BROKE	TRAILER CONNECTION BROKE
023	DETACH TRL	DETACHED TRAILING OBJECT STRUCK OTHER VEHICLE, NON-MOTORIST, OR OBJECT
024	V DOOR OPN	VEHICLE DOOR OPENED INTO ADJACENT TRAFFIC LANE
025	WHEELOFF	WHEEL CAME OFF
026	HOOD UP	HOOD FLEW UP
028	LOAD SHIFT	LOST LOAD, LOAD MOVED OR SHIFTED
029	TIREFAIL	TIRE FAILURE
030	PET	PET: CAT, DOG AND SIMILAR
031	LVSTOCK	STOCK: COW, CALF, BULL, STEER, SHEEP, ETC.
032	HORSE	HORSE, MULE, OR DONKEY
033	HRSE&RID	HORSE AND RIDER
034	GAME	WILD ANIMAL, GAME (INCLUDES BIRDS; NOT DEER OR ELK)
035	DEER ELK	DEER OR ELK, WAPITI
036	ANML VEH	ANIMAL-DRAWN VEHICLE
037	CULVERT	CULVERT, OPEN LOW OR HIGH MANHOLE
038	ATENUATN	IMPACT ATTENUATOR
039	PK METER	PARKING METER
040	CURB	CURB (ALSO NARROW SIDEWALKS ON BRIDGES)
041	JIGGLE	JIGGLE BAR OR TRAFFIC SNAKE FOR CHANNELIZATION
042	GDRL END	LEADING EDGE OF GUARDRAIL
043	GARDRAIL	GUARD RAIL (NOT METAL MEDIAN BARRIER)
044	BARRIER	MEDIAN BARRIER (RAISED OR METAL)
045	WALL	RETAINING WALL OR TUNNEL WALL
046	BR RAIL	BRIDGE RAILING OR PARAPET (ON BRIDGE OR APPROACH)
047	BR ABUTMNT	BRIDGE ABUTMENT (INCLUDED "APPROACH END" THRU 2013)
048	BR COLMN	BRIDGE PILLAR OR COLUMN
049	BR GIRDR	BRIDGE GIRDER (HORIZONTAL BRIDGE STRUCTURE OVERHEAD)
050	ISLAND	TRAFFIC RAISED ISLAND
051	GORE	GORE
052	POLE UNK	POLE - TYPE UNKNOWN
053	POLE UTL	POLE - POWER OR TELEPHONE
054	ST LIGHT	POLE - STREET LIGHT ONLY
055	TRF SGNL	POLE - TRAFFIC SIGNAL AND PED SIGNAL ONLY
056	SGN BRDG	POLE - SIGN BRIDGE
057	STOPSIGN	STOP OR YIELD SIGN
058	OTH SIGN	OTHER SIGN, INCLUDING STREET SIGNS
059	HYDRANT	HYDRANT

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
060	MARKER	DELINEATOR OR MARKER (REFLECTOR POSTS)
061	MAILBOX	MAILBOX
062	TREE	TREE, STUMP OR SHRUBS
063	VEG OHED	TREE BRANCH OR OTHER VEGETATION OVERHEAD, ETC.
064	WIRE/CBL	WIRE OR CABLE ACROSS OR OVER THE ROAD
065	TEMP SGN	TEMPORARY SIGN OR BARRICADE IN ROAD, ETC.
066	PERM SGN	PERMANENT SIGN OR BARRICADE IN/OFF ROAD
067	SLIDE	SLIDES, FALLEN OR FALLING ROCKS
068	FRGN OBJ	FOREIGN OBSTRUCTION/DEBRIS IN ROAD (NOT GRAVEL)
069	EQP WORK	EQUIPMENT WORKING IN/OFF ROAD
070	OTH EQP	OTHER EQUIPMENT IN OR OFF ROAD (INCLUDES PARKED TRAILER, BOAT)
071	MAIN EQP	WRECKER, STREET SWEEPER, SNOW PLOW OR SANDING EQUIPMENT
072	OTHER WALL	ROCK, BRICK OR OTHER SOLID WALL
073	IRRGL PVMT	OTHER BUMP (NOT SPEED BUMP), POTHOLE OR PAVEMENT IRREGULARITY (PER PAR)
074	OVERHD OBJ	OTHER OVERHEAD OBJECT (HIGHWAY SIGN, SIGNAL HEAD, ETC.); NOT BRIDGE
075	CAVE IN	BRIDGE OR ROAD CAVE IN
076	HI WATER	HIGH WATER
077	SNO BANK	SNOW BANK
078	LO-HI EDGE	LOW OR HIGH SHOULDER AT PAVEMENT EDGE
079	DITCH	CUT SLOPE OR DITCH EMBANKMENT
080	OBJ FRM MV	STRUCK BY ROCK OR OTHER OBJECT SET IN MOTION BY OTHER VEHICLE (INCL. LOST LOADS)
081	FLY-OBJ	STRUCK BY ROCK OR OTHER MOVING OR FLYING OBJECT (NOT SET IN MOTION BY VEHICLE)
082	VEH HID	VEHICLE OBSCURED VIEW
083	VEG HID	VEGETATION OBSCURED VIEW
084	BLDG HID	VIEW OBSCURED BY FENCE, SIGN, PHONE BOOTH, ETC.
085	WIND GUST	WIND GUST
086	IMMERSED	VEHICLE IMMERSED IN BODY OF WATER
087	FIRE/EXP	FIRE OR EXPLOSION
088	FENC/BLD	FENCE OR BUILDING, ETC.
089	OTHR CRASH	CRASH RELATED TO ANOTHER SEPARATE CRASH
090	TO 1 SIDE	TWO-WAY TRAFFIC ON DIVIDED ROADWAY ALL ROUTED TO ONE SIDE
091	BUILDING	BUILDING OR OTHER STRUCTURE
092	PHANTOM	OTHER (PHANTOM) NON-CONTACT VEHICLE
093	CELL PHONE	CELL PHONE (ON PAR OR DRIVER IN USE)
094	VIOL GDL	TEENAGE DRIVER IN VIOLATION OF GRADUATED LICENSE PGM
095	GUY WIRE	GUY WIRE
096	BERM	BERM (EARTHEN OR GRAVEL MOUND)
097	GRAVEL	GRAVEL IN ROADWAY
098	ABR EDGE	ABRUPT EDGE
099	CELL WTNSD	CELL PHONE USE WITNESSED BY OTHER PARTICIPANT
100	UNK FIXD	FIXED OBJECT, UNKNOWN TYPE.
101	OTHER OBJ	NON-FIXED OBJECT, OTHER OR UNKNOWN TYPE
102	TEXTING	TEXTING
103	WZ WORKER	WORK ZONE WORKER
104	ON VEHICLE	PASSENGER RIDING ON VEHICLE EXTERIOR
105	PEDAL PSGR	PASSENGER RIDING ON PEDALCYCLE
106	MAN WHLCHR	PEDESTRIAN IN NON-MOTORIZED WHEELCHAIR
107	MTR WHLCHR	PEDESTRIAN IN MOTORIZED WHEELCHAIR
108	OFFICER	LAW ENFORCEMENT / POLICE OFFICER
109	SUB-BIKE	"SUB-BIKE": PEDALCYCLIST INJURED SUBSEQUENT TO COLLISION, ETC.
110	N-MTR	NON-MOTORIST STRUCK VEHICLE
111	S CAR VS V	STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM) STRUCK VEHICLE
112	V VS S CAR	VEHICLE STRUCK STREET CAR/TROLLEY (ON RAILS OR OVERHEAD WIRE SYSTEM)
113	S CAR ROW	AT OR ON STREET CAR OR TROLLEY RIGHT-OF-WAY
114	RR EQUIP	VEHICLE STRUCK RAILROAD EQUIPMENT (NOT TRAIN) ON TRACKS
115	DSTRCT GPS	DISTRACTED BY NAVIGATION SYSTEM OR GPS DEVICE
116	DSTRCT OTH	DISTRACTED BY OTHER ELECTRONIC DEVICE
117	RR GATE	RAIL CROSSING DROP-ARM GATE

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
118	EXPNSN JNT	EXPANSION JOINT
119	JERSEY BAR	JERSEY BARRIER
120	WIRE BAR	WIRE OR CABLE MEDIAN BARRIER
121	FENCE	FENCE
123	OBJ IN VEH	LOOSE OBJECT IN VEHICLE STRUCK OCCUPANT
124	SLIPPERY	SLIDING OR SWERVING DUE TO WET, ICY, SLIPPERY OR LOOSE SURFACE (NOT GRAVEL)
125	SHLDR	SHOULDER GAVE WAY
126	BOULDER	ROCK(S), BOULDER (NOT GRAVEL; NOT ROCK SLIDE)
127	LAND SLIDE	ROCK SLIDE OR LAND SLIDE
128	CURVE INV	CURVE PRESENT AT CRASH LOCATION
129	HILL INV	VERTICAL GRADE / HILL PRESENT AT CRASH LOCATION
130	CURVE HID	VIEW OBSCURED BY CURVE
131	HILL HID	VIEW OBSCURED BY VERTICAL GRADE / HILL
132	WINDOW HID	VIEW OBSCURED BY VEHICLE WINDOW CONDITIONS
133	SPRAY HID	VIEW OBSCURED BY WATER SPRAY

FUNCTIONAL CLASSIFICATION TRANSLATION LIST

FUNC CLASS	DESCRIPTION
01	RURAL PRINCIPAL ARTERIAL - INTERSTATE
02	RURAL PRINCIPAL ARTERIAL - OTHER
06	RURAL MINOR ARTERIAL
07	RURAL MAJOR COLLECTOR
08	RURAL MINOR COLLECTOR
09	RURAL LOCAL
11	URBAN PRINCIPAL ARTERIAL - INTERSTATE
12	URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXP
14	URBAN PRINCIPAL ARTERIAL - OTHER
16	URBAN MINOR ARTERIAL
17	URBAN MAJOR COLLECTOR
18	URBAN MINOR COLLECTOR
19	URBAN LOCAL
78	UNKNOWN RURAL SYSTEM
79	UNKNOWN RURAL NON-SYSTEM
98	UNKNOWN URBAN SYSTEM
99	UNKNOWN URBAN NON-SYSTEM

HIGHWAY COMPONENT TRANSLATION LIST

CODE	DESCRIPTION
0	MAINLINE STATE HIGHWAY
1	COUPLET
3	FRONTAGE ROAD
6	CONNECTION
8	HIGHWAY - OTHER

INJURY SEVERITY CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
1	KILL	FATAL INJURY
2	INJA	INCAPACITATING INJURY - BLEEDING, BROKEN BONES
3	INJB	NON-INCAPACITATING INJURY
4	INJC	POSSIBLE INJURY - COMPLAINT OF PAIN
5	PRI	DIED PRIOR TO CRASH
7	NO<5	NO INJURY - 0 TO 4 YEARS OF AGE

LIGHT CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	DAY	DAYLIGHT
2	DLIT	DARKNESS - WITH STREET LIGHTS
3	DARK	DARKNESS - NO STREET LIGHTS
4	DAWN	DAWN (TWILIGHT)
5	DUSK	DUSK (TWILIGHT)

MEDIAN TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	NONE	NO MEDIAN
1	RSDMD	SOLID MEDIAN BARRIER
2	DIVMD	EARTH, GRASS OR PAVED MEDIAN

MILEAGE TYPE CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
0	REGULAR MILEAGE
T	TEMPORARY
Y	SPUR
Z	OVERLAPPING

MOVEMENT TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	STRGHT	STRAIGHT AHEAD
2	TURN-R	TURNING RIGHT
3	TURN-L	TURNING LEFT
4	U-TURN	MAKING A U-TURN
5	BACK	BACKING
6	STOP	STOPPED IN TRAFFIC
7	PRKD-P	PARKED - PROPERLY
8	PRKD-I	PARKED - IMPROPERLY

PEDESTRIAN LOCATION CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
00	AT INTERSECTION - NOT IN ROADWAY
01	AT INTERSECTION - INSIDE CROSSWALK
02	AT INTERSECTION - IN ROADWAY, OUTSIDE CROSSWALK
03	AT INTERSECTION - IN ROADWAY, XWALK AVAIL UNKNWN
04	NOT AT INTERSECTION - IN ROADWAY
05	NOT AT INTERSECTION - ON SHOULDER
06	NOT AT INTERSECTION - ON MEDIAN
07	NOT AT INTERSECTION - WITHIN TRAFFIC RIGHT-OF-WAY
08	NOT AT INTERSECTION - IN BIKE PATH OR PARKING LANE
09	NOT-AT INTERSECTION - ON SIDEWALK
10	OUTSIDE TRAFFICWAY BOUNDARIES
13	AT INTERSECTION - IN BIKE LANE
14	NOT AT INTERSECTION - IN BIKE LANE
15	NOT AT INTERSECTION - INSIDE MID-BLOCK CROSSWALK
16	NOT AT INTERSECTION - IN PARKING LANE

ROAD CHARACTER CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	INTER	INTERSECTION
2	ALLEY	DRIVEWAY OR ALLEY
3	STRGHT	STRAIGHT ROADWAY
4	TRANS	TRANSITION
5	CURVE	CURVE (HORIZONTAL CURVE)
6	OPENAC	OPEN ACCESS OR TURNOUT
7	GRADE	GRADE (VERTICAL CURVE)
8	BRIDGE	BRIDGE STRUCTURE
9	TUNNEL	TUNNEL

PARTICIPANT TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	OCC	UNKNOWN OCCUPANT TYPE
1	DRVR	DRIVER
2	PSNG	PASSENGER
3	PED	PEDESTRIAN
4	CONV	PEDESTRIAN USING A PEDESTRIAN CONVEYA
5	PTOW	PEDESTRIAN TOWING OR TRAILERING AN OB
6	BIKE	PEDALCYCLIST
7	BTOW	PEDALCYCLIST TOWING OR TRAILERING AN
8	PRKD	OCCUPANT OF A PARKED MOTOR VEHICLE
9	UNK	UNKNOWN TYPE OF NON-MOTORIST

TRAFFIC CONTROL DEVICE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
000	NONE	NO CONTROL
001	TRF SIGNAL	TRAFFIC SIGNALS
002	FLASHBCN-R	FLASHING BEACON - RED (STOP)
003	FLASHBCN-A	FLASHING BEACON - AMBER (SLOW)
004	STOP SIGN	STOP SIGN
005	SLOW SIGN	SLOW SIGN
006	REG-SIGN	REGULATORY SIGN
007	YIELD	YIELD SIGN
008	WARNING	WARNING SIGN
009	CURVE	CURVE SIGN
010	SCHL X-ING	SCHOOL CROSSING SIGN OR SPECIAL SIGNAL
011	OFCR/FLAG	POLICE OFFICER, FLAGMAN - SCHOOL PATROL
012	BRDG-GATE	BRIDGE GATE - BARRIER
013	TEMP-BARR	TEMPORARY BARRIER
014	NO-PASS-ZN	NO PASSING ZONE
015	ONE-WAY	ONE-WAY STREET
016	CHANNEL	CHANNELIZATION
017	MEDIAN BAR	MEDIAN BARRIER
018	PILOT CAR	PILOT CAR
019	SP PED SIG	SPECIAL PEDESTRIAN SIGNAL
020	X-BUCK	CROSSBUCK
021	THR-GN-SIG	THROUGH GREEN ARROW OR SIGNAL
022	L-GRN-SIG	LEFT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
023	R-GRN-SIG	RIGHT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
024	WIGWAG	WIGWAG OR FLASHING LIGHTS W/O DROP-ARM GATE
025	X-BUCK WRN	CROSSBUCK AND ADVANCE WARNING
026	WW W/ GATE	FLASHING LIGHTS WITH DROP-ARM GATES
027	OVRHD SGNL	SUPPLEMENTAL OVERHEAD SIGNAL (RR XING ONLY)
028	SP RR STOP	SPECIAL RR STOP SIGN
029	ILUM GRD X	ILLUMINATED GRADE CROSSING
037	RAMP METER	METERED RAMPS
038	RUMBLE STR	RUMBLE STRIP
090	L-TURN REF	LEFT TURN REFUGE (WHEN REFUGE IS INVOLVED)
091	R-TURN ALL	RIGHT TURN AT ALL TIMES SIGN, ETC.
092	EMR SGN/FL	EMERGENCY SIGNS OR FLARES
093	ACCEL LANE	ACCELERATION OR DECELERATION LANES
094	R-TURN PRO	RIGHT TURN PROHIBITED ON RED AFTER STOPPING

095	BUS STPSGN	BUS STOP SIGN AND RED LIGHTS
099	UNKNOWN	UNKNOWN OR NOT DEFINITE

VEHICLE TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
00	PDO	NOT COLLECTED FOR PDO CRASHES
01	PSNGR CAR	PASSENGER CAR, PICKUP, LIGHT DELIVERY, ETC.
02	BOBTAIL	TRUCK TRACTOR WITH NO TRAILERS (BOBTAIL)
03	FARM TRCTR	FARM TRACTOR OR SELF-PROPELLED FARM EQUIPMENT
04	SEMI TOW	TRUCK TRACTOR WITH TRAILER/MOBILE HOME IN TOW
05	TRUCK	TRUCK WITH NON-DETACHABLE BED, PANEL, ETC.
06	MOPED	MOPED, MINIBIKE, SEATED MOTOR SCOOTER, MOTOR BIKE
07	SCHL BUS	SCHOOL BUS (INCLUDES VAN)
08	OTH BUS	OTHER BUS
09	MTRCYCLE	MOTORCYCLE, DIRT BIKE
10	OTHER	OTHER: FORKLIFT, BACKHOE, ETC.
11	MOTRHOME	MOTORHOME
12	TROLLEY	MOTORIZED STREET CAR/TROLLEY (NO RAILS/WIRES)
13	ATV	ATV
14	MTRSCTR	MOTORIZED SCOOTER (STANDING)
15	SNOWMOBILE	SNOWMOBILE
99	UNKNOWN	UNKNOWN VEHICLE TYPE

WEATHER CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	CLR	CLEAR
2	CLD	CLOUDY
3	RAIN	RAIN
4	SLT	SLEET
5	FOG	FOG
6	SNOW	SNOW
7	DUST	DUST
8	SMOK	SMOKE
9	ASH	ASH