Planning & Community Dev.
117 N Molalla Avenue
PO Box 248
Molalla, Oregon 97038
Phone: (503) 759-0219
communityplanner@cityofmolalla.com

Staff Report-Proposed Partition

Date of Review:	*April 24, 2018*
File No.:	*P30-2018*
Parcel or Taxlot:	*52E09CD01406*
Address:	*31176 S Hwy 213, Molalla, 97038*
Applicant:	*Hix Snedeker Development, LLC*
Owner:	*HSC Molalla, LLC (Lindsay Gadd)*
Proposal:	*Partition – 2 lot*
Current Use:	*Legal Non-Conforming Residence*

1. Overview & Background

Planning & Land Use Application P30-2018 proposes a 2-parcel partition located at 31176 S Hwy 213 in the City of Molalla. This application is submitted concurrently with a proposed development and zone change/comprehensive plan amendment. The proposed development and zone change/comprehensive plan amendment will be reviewed at the next scheduled planning commission meeting. The subject parcel is 8.75 +/- acres in size, and adequate infrastructure exists nearby to facilitate the proposed development. The parcel currently contains two buildings, and four accessory structures. The property is in the light Industrial zone and the property abuts General Commercial retail stores to the South and the North parcel abuts an Industrial zone. The access to the parcel will be located off Hwy. 213. The proposed zone change/comprehensive plan amendment will affect parcel 1. The proposed zone change/comprehensive plan amendment will change parcel 1 to General Commercial to accommodate the proposed commercial development.

2. Public Notice

Notice was sent April 12, 2018 to all landowners within 300 feet of the parcel.

Notice was placed on the City of Molalla Website on April 16, 2018 under the general news feed.

3. Attachments & Exhibits

Exhibit A: ODOT Recommendations
Attachment A: Applicants Submittal

4. Findings & Conclusions

The application will be reviewed based on criteria set forth by the Molalla Municipal Code, section **17-4.3.020 General Requirements** —Approval criteria (in bold and italics), and Staff findings, are as follow

17-4.3.020 General Requirements

A. ***Subdivision and Partition Approval Through Two-Step Process.*** *Applications for subdivision or partition approval shall be processed by means of a preliminary plat evaluation and a final plat evaluation, according to the following two steps:*

1. The preliminary plat must be approved before the final plat can be submitted for approval consideration; and

2. The final plat must demonstrate compliance with all conditions of approval of the preliminary plat.

Note: Property line adjustments and lot consolidation requests (i.e., no new lot is created) are subject to Section 17-4.3.120; they are not subject to Sections 17-4.3.020 through 17-4.3.110.

Staff Findings: the applicant has submitted the preliminary plat for review. Criteria met.

B. ***Compliance With Oregon Revised Statutes (ORS) Chapter 92.*** *All subdivision and partition proposals shall conform to state regulations in ORS Chapter 92 Subdivisions and Partitions.*

Staff Findings: the applicant addresses (ORSC) Chapter 92 in narrative. Criteria met.

C. ***Future Re-Division Plan.*** *When subdividing or partitioning tracts into large lots (i.e., greater than three times or 300 percent the minimum lot size allowed by the underlying land use district), the lots shall be of such size, shape, and orientation as to facilitate future re-division and extension of streets and utilities. The applicant shall submit a future re-division plan, or shadow plan, indicating how re-division of oversized lots and extension of planned public facilities to adjacent parcels can occur in the future. (See also Section 17-4.3.040 Pre-Planning for Large Sites.)*

Staff Findings: There is no minimum lot size for Industrial or Commercial. At the time of submission, no future expansion was proposed for this development. Criteria met.

*D. **Adequate Utilities.** All lots created through land division shall have adequate public utilities and facilities such as streets, water, sewer, gas, and electrical systems, pursuant to Chapter 17-3.6. These systems shall be located and constructed underground where feasible.*

Staff Findings: The location of the parcel can attain adequate infrastructure/public utilities to its proposed development. The applicant shall extend utilities to service the proposed development. Criteria Met.

*E. **Adequate Drainage.** All subdivision and partition proposals shall have adequate surface water drainage facilities that reduce exposure to flood damage and improve water quality. Water quality or quantity control improvements may be required, pursuant to Chapter 17-3.6.*

Staff Findings: The current parcel has adequate drainage. When the proposed development is reviewed it will be conditioned to mitigate the surface water through quality treatment improvements.

*F. **Adequate Access.** All lots created or reconfigured shall have adequate vehicle access and parking, as may be required, pursuant to Chapter 17-3.3. (Ord. 2017-08 §1)*

Staff Findings: The proposed partition has adequate access via Hwy 213. Parking requirements will be condition with the proposed development.

17-4.3.030 Preliminary Plat Approval Process

*A. **Review of Preliminary Plat.** Preliminary plats shall be processed using the Type III procedure under Section 17-4.1.040. All preliminary plats, including partitions and subdivisions, are subject to the approval criteria in Section 17-4.3.070.*

*B. **Preliminary Plat Approval Period.** Preliminary plat approval shall be effective for a period of two years from the date of approval. The preliminary plat shall lapse if a final plat has not been submitted or other assurance provided, pursuant to Section 17-4.3.090, within the two-year period. The Planning Commission may approve phased subdivisions, pursuant to subsection D, with an overall time frame of more than two years between preliminary and final plat approvals.*

*C. **Modifications and Extensions.** The applicant may request changes to the approved preliminary plat or conditions of approval following the procedures and criteria provided in Chapter 17-4.5. The Planning Commission may, upon written request by the applicant and payment of the required fee, grant written extensions of the approval period not to exceed one year per extension, provided that all of the following criteria are met:*

1. Any changes to the preliminary plat follow the procedures in Chapter 17-4.5;

2. The applicant has submitted written intent to file a final plat within the one-year extension period;

3. An extension of time will not prevent the lawful development of abutting properties;

4. There have been no changes to the applicable Code provisions on which the approval was based. If such changes have occurred, a new preliminary plat application shall be required; and

5. The extension request is made before expiration of the original approved plan.

*D. **Phased Subdivision.** The Planning Commission may approve plans for phasing a subdivision, and changes to approved phasing plans, provided the applicant's proposal meets all of the following criteria:*

1. In no case shall the construction time period (i.e., for required public improvements, utilities, streets) for the first subdivision phase be more than one year;

2. Public facilities shall be constructed in conjunction with or prior to each phase;

3. The phased development shall not result in requiring the City or a third party (e.g., owners of lots) to construct public facilities that are required as part of the approved development proposal; and

4. The proposed phasing schedule shall be reviewed with the preliminary subdivision plat application. (Ord. 2017-08 §1)

Staff Findings: The application has no future phases proposed. Criteria Met.

17-4.3.040 Pre-Planning for Large Sites

Staff Findings: This section is not applicable since the property is already in the City Limits and is not being annexed.

17-4.3.050 Lot Size Averaging, Flag Lots, and Infill Development

Staff Findings: Applicant is not requesting any modifications.

***D. Emergency Vehicle Access.** A drive serving more than one lot shall have a reciprocal access and maintenance easement recorded for all lots it serves. No fence, structure, or other obstacle shall be placed within the drive area. Where required, emergency vehicle apparatus lanes, including any required turn-around, shall conform to applicable building and fire code requirements. Fire sprinklers may also be required for buildings that cannot be fully served by fire hydrants (i.e., due to distance from hydrant or insufficient fire flow).*

Staff Findings: The access will be a shared access; therefore, the applicant shall be conditioned to have a reciprocal access and maintenance easement recorded for all lots it serves.

17-4.3.070 Preliminary Plat Approval Criteria

A. Approval Criteria. The Planning Commission may approve, approve with conditions, or deny a preliminary plat. The Planning Commission decision shall be based on findings of compliance with all of the following approval criteria:

1. The land division application shall conform to the requirements of Chapter 17-4.3;

Staff Findings: If the application meets the required approval criteria, then this condition shall be met.

2. All proposed lots, blocks, and proposed land uses shall conform to the applicable provisions of Division II Zoning Regulations, except as modified by the provisions of Chapter 17-4.3 (e.g., lot size averaging);

Staff Findings: All proposed lots, blocks and proposed land uses conform to the applicable provision of Division II Zoning regulations. Commercial or Industrial does not have minimum lot sizes. Criteria Met.

3. Access to individual lots, and public improvements necessary to serve the development, including, but not limited to, water, sewer, and streets, shall conform to Division III Community Design Standards;

Staff Findings: The public facilities will be reviewed and applied at the time of proposed commercial development is reviewed. The applicant shall be required to record the necessary utility easements for the development. Criteria Met

4. The proposed plat name is not already recorded for another subdivision, and satisfies the provisions of ORS Chapter 92;

Staff Findings: There is no other partition with the same name on record to the reviewer's knowledge. Criteria Met.

5. The proposed streets, utilities, and surface water drainage facilities conform to City of Molalla adopted master plans and applicable engineering standards, and allow for transitions to existing and potential future development on adjacent lands. The preliminary plat shall identify all proposed public improvements and dedications;

Staff Findings: The proposed partition shall to identify the utility easements/dedications. The public improvements are not proposed and will be addressed when the proposed commercial development is submitted. Criteria Met.

6. All proposed private common areas and improvements, if any, are identified on the

preliminary plat and maintenance of such areas is assured through appropriate legal instrument;

Staff Findings: No private common areas are proposed. Criteria Met.

7. Evidence that any required state and federal permits, as applicable, have been obtained or can reasonably be obtained prior to development;

Staff Findings: State and Federal permits can be reasonably met prior to development. Criteria Met.

8. Evidence that improvements or conditions required by the City, road authority, Clackamas County, special districts, utilities, and/or other service providers, as applicable to the project, have been or can be met; and

Staff Findings: Hwy. 213 is under Oregon Department of Transportation jurisdiction. ODOT requirements shall be met. Criteria Met.

9. The architectural standards of Section 17-3.2.030.D are met.

Staff Findings: The application does not contain a proposed building. This section will be review and met at the time of development. Criteria Met.

5. Recommendation

Based on the submitted material and the findings of this report, the Community Planning Staff recommends the Planning Commission take the following actions:

Approve planning permit P30-2018 subject to conditions. The following are a sample of potential conditions that may be placed on the development approval:

1. Applicant shall meet all applicable criteria pursuant to section 17-4.3
2. The applicant shall be required to acquire any State or Federal permits prior to the approval of the Final Plat.
3. The applicant shall follow the Final Plat Submission Requirements and Approval Criteria in section 17-4.3.090.
4. A reciprocal access easement and join maintenance agreement for the shared driveway shall be recorded with the deeds for the proposed lots.
5. The owner shall obtain valid access permits from the Oregon Department of Transportation related to all subsequent development of the newly created property.
6. The easements shall be clearly show on Plat.
7. Partition approval shall be effective for a period of 1 year from the date of approval. The partition shall lapse if a final plat has not been submitted within the 1-year period.

8. The applicant shall abide to the conditions recommended by Oregon Department of Transportation (see Exhibit A.)

Public Works Specific Requirements to This Site:

A. Street:

1. The partition plat proposal is separate from a development approval and will not require a traffic impact analysis update.
2. Hwy 213: Hwy 213 an arterial street under ODOT jurisdiction. Current right-of-way width is 60 feet and approximate pavement width is 28 feet. At the time of development application, applicant will be required under a separate condition of approval to construct frontage improvements in conformance with the Molalla Municipal Code and to the current Transportation System Plan standards at the time of application. Applicant will be required to dedicate right of way and a public utility easement along property frontage.
3. Right-of-way Dedications/Donations: On ODOT rights of way, applicant will be required to donate sufficient right-of-way along variable width improvements and construct sidewalk widening to ODOT standards. ODOT requires donations of right-of-way to follow the requirements of Chapter 5.322. Developer Mitigation Donation in the ODOT Right-of-Way Manual. Applicant is advised that donation must be completed and recorded prior to submission of final subdivision plat or final partition plat in order for Public Works to process plat documents.
4. Access to public streets shall be limited to the locations approved by ODOT and the City of Molalla and all accesses shall be constructed in such a manner as to eliminate turning conflicts. Access spacing shall conform to the Transportation Systems Plan. The proposed width of accesses shall meet ODOT requirements and the Molalla Standard Specifications for Public Works Construction.

B. Storm:

1. Future public storm sewer easements may be submitted under separate legal description and exhibit map with City adopted easement forms at the completion of public improvement construction. Future improvements shall meet the Molalla Standard Specifications for Public Works Construction.

C. Sanitary:

1. Future public sanitary sewer easements may be submitted under separate legal description and exhibit map with City adopted easement forms at the completion of public improvement construction. Future improvements shall meet the Molalla Standard Specifications for Public Works Construction.

D. Water:

1. Future public waterline easements may be submitted under separate legal description and exhibit map with City adopted easement forms at the completion of public improvement

construction. Future improvements shall meet the Molalla Standard Specifications for Public Works Construction.

E. Franchise Utility Services:

1. Future utilities to the project shall be served underground services. No overhead crossings of public right of way shall be approved by the city.

Exhibit A

Oregon
Kate Brown, Governor

Department of Transportation
Region 1 Headquarters
123 NW Flanders Street
Portland, Oregon 97209
(503) 731.8200
FAX (503) 731.8259

April 10th, 2018 ODOT #8025

ODOT Response

Project Name: Molalla Farm Store	**Applicant:** Jade Consulting Group
Jurisdiction: City of Molalla	**Jurisdiction Case #:** P30-2018
Site Address: No Situs - S Cascade Hwy (OR 213) @ Toliver Rd, Molalla, OR 97038	**Legal Description:** 05S 02E 07A **Tax Lot(s):** 00700
State Highway: OR 213	

The site of this proposed land use action is adjacent to OR 213. ODOT has permitting authority for this facility and an interest in ensuring that this proposed land use is compatible with its safe and efficient operation.

ODOT RECOMMENDED PATITION LOCAL CONDITIONS OF APPROVAL

☒ The applicant shall record cross-over access easements between the properties resulting from the partitioned with state highway frontage with the County Assessor to facilitate future shared access. Shared access will improve highway safety by reducing potential conflicts between vehicles and between vehicles and pedestrians and bicyclists at closely spaced driveways and will implement ODOT Access Management Program goals.

Please send a copy of the Notice of Decision including conditions of approval to:

ODOT Region 1 Planning
Development Review
123 NW Flanders St
Portland, OR 97209

Region1_DEVREV_Applications@odot.state.or.us

Development Review Planner: Marah Danielson	503.731.8258, marah.b.danielson@odot.state.or.us
Traffic Contact: Avi Tayar, P.E.	503.731.8221
District Contact: Aref Bozorgnia	971.673.1268

Attachment A

Partition Plat Application

For

Tractor Supply Company
Molalla, OR 97038

March 9, 2018

Applicant:

Hix Snedeker Oregon, LLC
P.O. Box 130
Daphne, AL 36526
PHONE: (251) 751-4311

Prepared by:

Post Office Box 1929
Fairhope, AL 36533
PHONE: (251) 928-3443

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List of Appendices

Introduction/Summary

This narrative is provided in support of the proposed Tractor Supply Company, ~19,097 square foot commercial retail store pursuant to City of Molalla, Ordinance No. 2017-08, Molalla Development Code (MDC). In support of this development, all of the following approvals are being sought. The remaining parcel will remain under the ownership of Craig and Kathleen Yaw.

Approval Type	Review	Applicable Regulation	Summary
Partition or Re-plat (2 lots)	Type III	17-4.3, ORS 92, 17-3.6, 17-3.3, 17-4.1.040, 17-4.5, 17-3.6.020.A(4)	The developer is requesting a two lot partition that will create Lot 1 that will be used for the development of a single tenant retail facility. The remaining parcel will be retained by the current owner
Site Design Review	Type III	17-4.2, 17-4.1, 17-3.6.020.A(4), 17-4.2.050, 17-3	An application for Site Design Review is being submitted for a new development.
Zoning District Map Change and Comprehensive Plan Amendment	Type IV	17-4.6, 17-4.1.050, Oregon Administrative Rules: Statewide Planning Goals, 17-4.6.050	The proposed development is in a zone designated M-1. The developer is applying for a zoning change to C-2. The proposed parcel has a current land use designation of Light Industrial and is requesting a land use change to General C*ommercial*.

This submittal is provided in support of the Partition Plat Application to partition an existing lot into two lots in Molalla, Oregon. The applicant's proposal includes a plan to plat the existing 8.75 AC lot into two lots of 3.95 AC and 4.73 AC lots, with 0.07 AC dedicated to ODOT for Right-of-way expansion along Hwy 213.

The applicant is seeking Partition Plat Approval pursuant to MMC 17-4.3, utilizing the City's Type III process.

Site Description

The project is proposed on a portion of an 8.75 acre parcel on state Hwy 213 just south of the intersection of Toliver Road (address to be determined), within the city limits of Molalla.

Structures – Currently there are several buildings on the property. A residence, barn, shop, chicken coop, well house and smaller outbuildings (sheds) will be demolished upon approval.

Property Background – The property is located in Section 07A of Township 5 South, Range 2 East of the Willamette Meridian. The site includes the northern 4 acres of one tax lot identified as Tax Lot 700 of the Clackamas County Assessor's map and is located in Molalla, Oregon. The site is generally level and surrounding areas slope to the northwest. The site is outside both the one hundred and five hundred year flood plains according to the Federal Emergency Management Agency. The subject site is currently used

residentially with some livestock grazing in the eastern and northern area. Surrounding properties are commercial, industrial and rural residential in use.

Existing Conditions/Structures and Property Background

The property currently has a single family structure that also operates a small farm with associated structures. The property is predominately a pasture with a stream that cuts across the South West corner of the site.

Project Team and Contact Information

Developer/Buyer:	Hix Snedeker Oregon, LLC (Hix Snedeker Companies) P.O. Box 130 Daphne, AL 36526 (251) 751-4311 H. Ray Hix, Jr., Managing Member Ray@hixsnedeker.com Lindsay Gadd, Project Manager Lindsay@hixsnedeker.com
Owner/Seller:	Craig and Kathleen Yaw P.O. Box 4 Joseph, OR 97845
Civil Engineer:	JADE Consulting, LLC Post Office Box 1929 Fairhope, AL 36533 (251) 928-3443 Perry C. Jinright III, P.E., LEED AP tjinright@jadengineers.com Lee Rambo, Graduate Engineer lrambo@jadengineers.com
Surveyor:	Ag Geospatial NW, LLC Molalla, OR (503) 329-8008 Tony Brooks, PLS, President, Land Surveyor & GIS Tech Tony.Brooks@aggeonw.com
Wetland Consultant:	Turnstone Environmental Consultants 18000 NW Lucy Reader Road Portland, OR 97231 (503) 283-5338, Ext. 7 Jeff Reams, CEO jeff@turnstoneenvironmental.com

17-4.3 Land Divisions and Property Line Adjustments

17-4.3.010 Purpose

The purpose of this chapter is to implement the objectives in subsections A-E, below:

A. Provide rules, regulations, and standards governing the approval of subdivisions, partitions, and property line adjustments as follows:

1. Subdivisions are the creation of four or more lots from one parent lot, parcel, or tract, within one calendar year.

2. Partitions are the creation of three or fewer lots from one parent lot, parcel, or tract within one calendar year.

3. Property line adjustments are modifications to lot lines or parcel boundaries that do not result in the creation of new lots (includes consolidation of lots).

B. Carry out the City's development pattern, as envisioned by the City's comprehensive plan.

C. Encourage efficient use of land resources and public services, and to provide transportation options.

D. Promote the public health, safety, and general welfare through orderly and efficient urbanization.

E. Provide adequate light and air, and provide for adequate transportation, water supply, sewage, fire protection, pollution control, surface water management, and protection against natural hazards.

Response: The proposed partition will create 2 lots from the larger 8.75 acre lot as defined under Section A Part 2. The City of Molalla's development pattern along Highway 213 is consistent with the retail commercial development that our proposed project will include as defined in Section B. The proposed development aligns with Sections C-E. The proposed development will provide goods and services to the surrounding agricultural and farming communities. The proposed development promotes the public health, safety and general welfare of the community through a thorough compliance with all codes and regulations.

17-4.3.020 General Requirements

A. Subdivision and Partition Approval through Two-Step Process. Applications for subdivision or partition approval shall be processed by means of a preliminary plat evaluation and a final plat evaluation, according to the following two steps:

1. The preliminary plat must be approved before the final plat can be submitted for approval consideration; and

2. The final plat must demonstrate compliance with all conditions of approval of the preliminary plat. Note: Property line adjustments and lot consolidation requests (i.e., no new lot is created) are subject to Section 17-4.3.120; they are not subject to 17-4.3.020 through 17-4.3.110.

Response: A two lot preliminary plat will be prepared by the projects licensed surveyor. Final plat will be provided once preliminary plat is approved.

B. Compliance With Oregon Revised Statutes (ORS) Chapter 92. All subdivision and partition proposals shall conform to state regulations in ORS Chapter 92 Subdivisions and Partitions.

Response: This narrative contains Subsection "ORS 92" which explains compliance with Oregon Regulatory Statute 92.

C. Future Re-division Plan. When subdividing or partitioning tracts into large lots (i.e., greater than three times or 300 percent the minimum lot size allowed by the underlying land use district), the lots shall be of such size, shape, and orientation as to facilitate future re-division and extension of streets and utilities. The applicant shall submit a future re-division plan, or shadow plan, indicating how re-division of oversized lots and extension of planned public facilities to adjacent parcels can occur in the future. (See also, Section 17- 4.3.040 Pre-Planning for Large Sites.)

Response: The requested Commercial zoning has no minimum lot area or lot width/depth requirements. As such there any future re-division would be limited to the construction of access and utility. The site will not be restricted by the current two lot partition.

D. Adequate Utilities. All lots created through land division shall have adequate public utilities and facilities such as streets, water, sewer, gas, and electrical systems, pursuant to Chapter 17-3.6. These systems shall be located and constructed underground where feasible.

Response: The proposed development is currently served by water, sewer and electric services. Water and sewer are provided through the City of Molalla. The sewer line will be extended from Highway 213 to the proposed development. Water and storm water are located across Highway 213 and will be extended across Highway 213 with necessary approvals and permits from City and ODOT. Electric service is provided by Portland General Electric Company and is currently available and in use at the site.

E. Adequate Drainage. All subdivision and partition proposals shall have adequate surface water drainage facilities that reduce exposure to flood damage and improve water quality. Water quality or quantity control improvements may be required, pursuant to Chapter 17-3.6.

Response: The property currently has positive drainage along Hwy 213 to the west and Bear Creek to the south.

F. Adequate Access. All lots created or reconfigured shall have adequate vehicle access and parking, as may be required, pursuant to Chapter 17-3.3.

Response: The two lot partition will have shared access as designated in the enclosed sketch plan.

17-4.3.030 Preliminary Plat Approval Process

A. Review of Preliminary Plat. Preliminary plats shall be processed using the Type III procedure under Section 17-4.1.040. All preliminary plats, including partitions and subdivisions, are subject to the approval criteria in Section 17-4.3.070.

B. Preliminary Plat Approval Period. Preliminary plat approval shall be effective for a period of two years from the date of approval. The preliminary plat shall lapse if a final plat has not been submitted or other assurance provided, pursuant to Section 17-4.3.090, within the two-year period. The Planning Commission may approve phased

subdivisions, pursuant to subsection 17-4.3.030.D, with an overall time frame of more than two years between preliminary and final plat approvals.

C. Modifications and Extensions. The applicant may request changes to the approved preliminary plat or conditions of approval following the procedures and criteria provided in Chapter 17-4.5. The Planning Commission may, upon written request by the applicant and payment of the required fee, grant written extensions of the approval period not to exceed one year per extension, provided that all of the following criteria are met:

1. Any changes to the preliminary plat follow the procedures in Chapter 17-4.5;

2. The applicant has submitted written intent to file a final plat within the one-year extension period;

3. An extension of time will not prevent the lawful development of abutting properties;

4. There have been no changes to the applicable Code provisions on which the approval was based. If such changes have occurred, a new preliminary plat application shall be required; and

5. The extension request is made before expiration of the original approved plan.

D. Phased Subdivision. The Planning Commission may approve plans for phasing a subdivision, and changes to approved phasing plans, provided the applicant's proposal meets all of the following criteria:

1. In no case shall the construction time period (i.e., for required public improvements, utilities, streets) for the first subdivision phase be more than one year;

2. Public facilities shall be constructed in conjunction with or prior to each phase;

3. The phased development shall not result in requiring the City or a third party (e.g., owners of lots) to construct public facilities that are required as part of the approved development proposal; and

4. The proposed phasing schedule shall be reviewed with the preliminary subdivision plat application.

Response: This will be a single phase, two lot partition. No future phases are currently planned.

17-4.3.040 Pre-planning for Large Sites

Response: Not Applicable.

17-4.3.050 Lot Size Averaging, Flag Lots, and Infill Development

A. Lot Size Averaging. To allow flexibility in subdivision design and to address physical constraints, such as topography, existing development, significant trees, and other natural and built features, the approval body may grant a 20 percent modification to the lot area and/or lot dimension (width/depth) standards in Chapter 17-2.2, provided that the overall density of the subdivision does not exceed the allowable density of the district and the approval body finds that all of the following are met:

1. Granting the modification is necessary to achieve planned housing densities, as allowed by the underlying zone, or to improve development compatibility with natural features or adjacent land uses;

2. The Planning Official may require screening, buffering, or other transitions in site design where substandard lots are proposed to abut standard-, or larger-, sized lots.

Response: No modification to lot sizing is being requested.

B. Flag Lots. Flag lots may be created only when a through street cannot be extended to serve abutting uses or future development. A flag lot driveway ("flag pole") shall serve not more than two dwelling units, including accessory dwellings and dwellings on individual lots. The City Engineer may approve additional units. The layout of flag lots, the placement of buildings on such lots, and the alignment of shared drives shall be designed so that future street connections can be made as adjacent properties develop, to the extent practicable, and in accordance with the standards of subsection 17-3.6.020.D.

Response: Not Applicable.

C. Infill Development and Mid-Block Lanes. Where consecutive flag lot developments or other infill development could have the effect of precluding local street extensions through a long block, the Planning Official and City Engineer may require the improvement of a mid-block lanes through the block. Mid-block lanes are a private drives serving more than two dwelling units with reciprocal access easements; such lanes are an alternative to requiring public right-of-way street improvements where physical site constraints preclude the development of a standard street. Mid-block lanes, at a minimum, shall be paved, have adequate storm drainage (surface retention, where feasible, is preferred), meet the construction standards for alleys, and conform to the standards of subsections D and E.

Response: Not Applicable.

D. Emergency Vehicle Access. A drive serving more than one lot shall have a reciprocal access and maintenance easement recorded for all lots it serves. No fence, structure, or other obstacle shall be placed within the drive area. Where required, emergency vehicle apparatus lanes, including any required turnaround, shall conform to applicable building and fire code requirements. Fire sprinklers may also be required for buildings that cannot be fully served by fire hydrants (i.e., due to distance from hydrant or insufficient fire flow).

Response: The shared access will have reciprocal access to lots, a necessary maintenance easement, and provide emergency access to both lots.

E. Maximum Drive Lane Length. The maximum length of a drive serving more than one dwelling is subject to requirements of the Uniform Fire Code.

Response: Not Applicable.

17-4.3.060 Preliminary Plat Submission Requirements

Applications for Preliminary Plat approval shall contain all of the following information:

A. General Submission Requirements.

1. Information required for a Type III review (see Section 17-4.1.040); and

2. Public Facilities and Services Impact Study. The impact study shall quantify and assess the effect of the development on public facilities and services. The City shall advise as to the scope of the study, which shall address,

at a minimum, the transportation system, including required improvements for motorized and non-motorized vehicles and pedestrians; the drainage system; the parks system (for subdivisions and planned unit developments of 20 or more dwelling units); water system; and sewer system. For each system and type of impact, the study shall propose improvements necessary to meet City standards under adopted ordinances and facility master plans. The City may require a Traffic Impact Analysis pursuant to Section 17-3.6.020.A(4).

Response: Appendix C contains a traffic study prepared for proposed single tenant retail facility.

B. Preliminary Plat Information. In addition to the general information described in subsection A, above, the preliminary plat application shall consist of drawings and supplementary written material (i.e., on forms and/or in a written narrative) adequate to provide all of the following information, in quantities determined by Planning Official:

1. General information:

a. Name of subdivision (partitions are named by year and file number), which shall not duplicate the name of another land division in Clackamas County (check with County Surveyor);

b. Date, north arrow, and scale of drawing;

c. Location of the development sufficient to define its location in the city, boundaries, and a legal description of the site;

d. Zoning district of parcel to be divided, including any overlay zones;

e. A title block including the names, addresses, and telephone numbers of the owners of the subject property and, as applicable, the name of the engineer and surveyor, and the date of the survey; and

f. Identification of the drawing as a "preliminary plat."

Response: A Preliminary Plat has been prepared in accordance with above requirements and is enclosed with this submittal.

2. Existing Conditions. Except where the Planning Official deems certain information is not relevant, applications for Preliminary Plat approval shall contain all of the following information on existing conditions of the site:

a. Streets: Location, name, and present width of all streets, alleys, and rights-of-way on and abutting the site;

b. Easements: Width, location and purpose of all existing easements of record on and abutting the site;

c. Utilities: Location and identity of all utilities on and abutting the site. If water mains and sewers are not on or abutting the site, indicate the direction and distance to the nearest one and show how utilities will be brought to standards;

d. Ground elevations shown by contour lines at two-foot vertical intervals. Such ground elevations shall be related to some established benchmark or other datum approved by the County Surveyor; the Planning Commission may waive this standard for partitions when grades, on average, are less than six percent;

e. The location and elevation of the closest benchmark(s) within or adjacent to the site (i.e., for surveying purposes);

f. The Base Flood Elevation, per FEMA Flood Insurance Rate Maps, as applicable;

g. North arrow and scale; and

h. Other information, as deemed necessary by the Planning Official for review of the application. The City may require studies or exhibits prepared by qualified professionals to address specific site features and code requirements.

Response: An ALTA survey of the parent lot has been enclosed with this submittal in accordance with the above requirements.

3. Proposed Development. Except where the Planning Official deems certain information is not relevant, applications for Preliminary Plat approval shall contain all of the following information on the proposed development:

a. Proposed lots, streets, tracts, open space, and park land (if any); location, names, right-of-way dimensions, approximate radius of street curves; and approximate finished street center line grades. All streets and tracts that are being held for private use and all reservations and restrictions relating to such private tracts shall be identified;

b. Easements: location, width, and purpose of all proposed easements;

c. Lots and private tracts (e.g., private open space, common area, or street): approximate dimensions, area calculation (e.g., in square feet), and identification numbers for all proposed lots and tracts;

d. Proposed uses of the property, including all areas proposed to be dedicated as public right-of-way or reserved as open space for the purpose of surface water management, recreation, or other use;

e. Proposed public street improvements, pursuant to Chapter 17-3.6;

f. On slopes exceeding an average grade of 10 percent, as determined by the City Engineer, the preliminary location of development on lots (e.g., building envelopes), demonstrating that future development can meet minimum required setbacks and applicable engineering design standards;

g. Preliminary design for extending City water and sewer service to each lot, per Chapter 17-3.6;

h. Proposed method of storm water drainage and treatment, if required, pursuant to Chapter 17-3.6;

i. The approximate location and identity of other utilities, including the locations of street lighting fixtures, as applicable;

j. Evidence of compliance with applicable overlay zones; and

k. Evidence of contact with the applicable road authority for proposed new street connections.

Response: The two lot partition does not propose any improvements. All required utilities are within the right of way of Hwy 213.

17-4.3.070 Preliminary Plat Approval Criteria

A. Approval Criteria. The Planning Commission may approve, approve with conditions, or deny a preliminary plat. The Planning Commission decision shall be based on findings of compliance with all of the following approval criteria:

1. The land division application shall conform to the requirements of Chapter 17-4.3;

2. All proposed lots, blocks, and proposed land uses shall conform to the applicable provisions of Article 17-2 Zoning Regulations, except as modified by the provisions of Chapter 17-4.3 (e.g., lot size averaging);

3. Access to individual lots, and public improvements necessary to serve the development, including but not limited to water, sewer, and streets, shall conform to Article 17-3 Community Design Standards;

4. The proposed plat name is not already recorded for another subdivision, and satisfies the provisions of ORS Chapter 92;

5. The proposed streets, utilities, and surface water drainage facilities conform to City of Molalla adopted master plans and applicable engineering standards, and allow for transitions to existing and potential future development on adjacent lands. The preliminary plat shall identify all proposed public improvements and dedications;

6. All proposed private common areas and improvements, if any, are identified on the preliminary plat and maintenance of such areas is assured through appropriate legal instrument;

7. Evidence that any required state and federal permits, as applicable, have been obtained or can reasonably be obtained prior to development;

8. Evidence that improvements or conditions required by the City, road authority, Clackamas County, special districts, utilities, and/or other service providers, as applicable to the project, have been or can be met; and

9. The architectural standards of subsection 17-3.2.030.D are met.

B. Conditions of Approval. The Planning Commission may attach such conditions as are necessary to carry out provisions of this Code, and other applicable ordinances and regulations.

Response: Partition complies with Section 17-4.3.070.

17-4.3.080 Land Division-Related Variances

Variances shall be processed in accordance with Chapter 17-4.7. Applications for variances shall be submitted at the same time an application for land division or lot line adjustment is submitted; when practical, the applications shall be reviewed concurrently.

Response: No variances are requested at this time.

17-4.3.090 Final Plat Submission Requirements and Approval Criteria

Final plats require review and approval by the Planning Official prior to recording with Clackamas County. The final plat submission requirements, approval criteria, and procedure are as follows:

A. Submission Requirements. The applicant shall submit the final plat within two years of the approval of the preliminary plat as provided by Section 17-4.3.070. The format of the plat shall conform to ORS Chapter 92.

Response: We plan to submit the final plat as soon as the preliminary plat has been approved.

B. Approval Process and Criteria. By means of a Type I Review, the Planning Official shall review and approve or deny the final plat application based on findings of compliance or noncompliance with the all of the following criteria:

1. The final plat is consistent in design (e.g., number, area, dimensions of lots, easements, tracts, rights-of-way) with the approved preliminary plat, and all conditions of approval have been satisfied;

2. All public improvements required by the preliminary plat have been installed and approved by the City or applicable service provider if different than the City of Molalla (e.g., road authority), or otherwise bonded in conformance with Section 17-3.6.090;

3. The streets and roads for public use are dedicated without reservation or restriction other than reversionary rights upon vacation of any such street or road and easements for public utilities;

4. All required streets, access ways, roads, easements, and other dedications or reservations are shown on the plat;

5. The plat and deed contain a dedication to the public of all public improvements, including, but not limited to, streets, public pathways and trails, access reserve strips, parks, and water and sewer facilities, as applicable;

6. As applicable, the applicant has furnished acceptable copies of Covenants, Conditions, and Restrictions (CC&R's); easements; maintenance agreements (e.g., for access, common areas, parking, etc.); and other documents pertaining to common improvements recorded and referenced on the plat;

7. Verification by the City that water and sanitary sewer service is available to every lot depicted on the plat; and

8. The plat contains an affidavit by the surveyor who surveyed the land, represented on the plat to the effect the land was correctly surveyed and marked with proper monuments as provided by ORS Chapter 92, indicating the initial point of the survey, and giving the dimensions and kind of each monument and its reference to some corner approved by the Clackamas County Surveyor for purposes of identifying its location.

Response: A final plat will be submitted in accordance with requirements.

17-4.3.100 Filing and Recording

A new lot is not a legal lot for purposes of ownership (title), sale, lease, or development/land use until a final plat is recorded for the subdivision or partition containing the lot is recorded. Requests to validate an existing lot created through means other than a final plat ("lot of record") shall follow the procedures set forth in ORS 92.010 to 92.190. The final plat filing and recording requirements are as follows:

A. Filing Plat with County. Within 60 days of City approval of the final plat, the applicant shall submit the final plat to Clackamas County for signatures of County officials, as required by ORS Chapter 92.

B. Proof of Recording. Upon final recording with the County, the applicant shall submit to the City a mylar copy and three paper copies of all sheets of the recorded final plat. This shall occur prior to the issuance of building permits for the newly created lots.

C. Prerequisites to Recording the Plat.

1. No plat shall be recorded unless all ad valorem taxes and all special assessments, fees, or other charges required by law to be placed on the tax roll have been paid in the manner provided by ORS Chapter 92.

2. No plat shall be recorded until the County Surveyor approves it in the manner provided by ORS Chapter 92.

Response: The Partition will be recoded as indicted.

ORS 92

92.012

Compliance with ORS 92.010 to 92.192 required. No land may be subdivided or partitioned except in accordance with ORS 92.010 to 92.192. [1973 c.696 §2; 1975 c.643 §24]

Response: Application and proposed partition shall comply with ORS 92 requirements.

17-3.3 Access and Circulation

17-3.3.010 Purpose

Chapter 17-3.3 contains standards for vehicular and pedestrian access, circulation, and connectivity. The standards promote safe, reasonably direct, and convenient options for walking and bicycling, while accommodating vehicle access to individual properties, as needed.

17-3.3.020 Applicability

Chapter 17-3.3 applies to new development and changes in land use necessitating a new or modified street or highway connection. Except where the standards of a roadway authority other than the City supersede City standards, Chapter 17-3.3 applies to all connections to a street or highway, and to driveways and walkways. The Planning Official, through a Type II procedure, may grant adjustments to Chapter 17-3.3, pursuant to the criteria of Chapter 17-4.7 Adjustments and Variances. For street improvement requirements, refer to Section 17- 3.6.020.

Response: This section is applicable to this site plan. Refer to responses below.

17-3.3.030 Vehicular Access and Circulation

A. Purpose and Intent. Section 17-3.3.030 implements the street access policies of the City of Molalla Transportation System Plan. It is intended to promote safe vehicle access and egress to properties, while maintaining traffic operations in conformance with adopted standards. "Safety," for the purposes of this chapter, extends to all modes of transportation.

B. Permit Required. Vehicular access to a public street (e.g., a new or modified driveway connection to a street or highway) requires an approach permit approved by the applicable roadway authority.

Response: An ODOT permit will be applied for during the development phase of Lot 1.

C. Traffic Study Requirements. The City, in reviewing a development proposal or other action requiring an approach permit, may require a traffic impact analysis, pursuant to Section 17-3.6.020, to determine compliance with this code.

Response: Appendix C contains Traffic Study prepared for the development of Lot 1.

D. Approach and Driveway Development Standards. Approaches and driveways shall conform to all of the following development standards:

1. The number of approaches on higher classification streets (e.g., collector and arterial streets) shall be minimized; where practicable, access shall be taken first from a lower classification street.

2. Approaches shall conform to the spacing standards of subsections E and F, below, and shall conform to minimum sight distance and channelization standards of the roadway authority.

3. Driveways shall be paved and meet applicable construction standards. Where permeable paving surfaces are allowed or required, such surfaces shall conform to applicable Public Works Design Standards.

Response: Both lots of this requested partition will share a common access onto Hwy 213.

4. The City Engineer may limit the number or location of connections to a street, or limit directional travel at an approach to one-way, right-turn only, or other restrictions, where the roadway authority requires mitigation to alleviate safety or traffic operations concerns.

Response: Only one shared access is being provided for the two lots indicated within this partition request.

17. Where a new approach onto a state highway or a change of use adjacent to a state highway requires ODOT approval, the applicant is responsible for obtaining ODOT approval. The City Engineer may approve a development conditionally, requiring the applicant first obtain required ODOT permit(s) before commencing development, in which case the City will work cooperatively with the applicant and ODOT to avoid unnecessary delays.

Response: An ODOT permit will be applied for as part of the site plan approval process for Lot 1.

18. Where an approach or driveway crosses a drainage ditch, canal, railroad, or other feature that is under the jurisdiction of another agency, the applicant is responsible for obtaining all required approvals and permits from that agency prior to commencing development.

Response: An ODOT permit will be applied for as part of the site plan approval process for Lot 1.

19. Where a proposed driveway crosses a culvert or drainage ditch, the City Engineer may require the developer to install a culvert extending under and beyond the edges of the driveway on both sides of it, pursuant to applicable Public Works design standards.

Response: No improvements are proposed for the two lot partition. ½ of Hwy 213 will be widened as part of the development for Lot 1. This will include all necessary drainage improvements.

21. Development that increases impervious surface area shall conform to the storm drainage and surface water management requirements of Section 17-3.6.050.

Response: The two lot partition will not have any proposed improvements. The development of the proposed lots will be required to handle their respective storm water management.

E. Approach Separation from Street Intersections. Except as provided by Section 17-3.3.030.H, minimum distances shall be maintained between approaches and street intersections consistent with the current version of the Public Works Design Standards and Transportation System Plan.

Response: Only one shared access is being provided for the two lots indicated within this partition request. The single access point is approximately 550 feet south of Toliver Road and approximately 350 feet North of the neighboring driveway. They both are in excess of the required 100' minimum.

F. Approach Spacing. Except as provided by Section 17-3.3.030.H or as required to maintain street operations and safety, the following minimum distances shall be maintained between approaches consistent with the current version of the Public Works Design Standards and Transportation System Plan.

Response: Only one shared access is being provided for the two lots indicated within this partition request.

G. Vision Clearance. No visual obstruction (e.g., sign, structure, solid fence, or shrub vegetation) greater than 2.5 feet in height shall be placed in "vision clearance areas" at street intersections. The minimum vision clearance area may be modified by the Planning Official through a Type I procedure, upon finding that more or less sight distance is required (i.e., due to traffic speeds, roadway alignment, etc.). Placement of light poles, utility poles, and tree trunks should be avoided within vision clearance areas.

Response: Site triangles will be added to the development plans for Lot 1.

H. Exceptions and Adjustments. The City Engineer may approve adjustments to the spacing standards of subsections E and F, above, where an existing connection to a City street does not meet the standards of the roadway authority and the proposed development moves in the direction of code compliance. The Planning Official through a Type II procedure may also approve a deviation to the spacing standards on City streets where it finds that mitigation measures, such as consolidated access (removal of one access), joint use driveways (more than one property uses same access), directional limitations (e.g., one-way), turning restrictions (e.g., right-in/right-out only), or other mitigation alleviate all traffic operations and safety concerns.

I. Joint Use Access Easement and Maintenance Agreement. Where the City approves a joint use driveway, the property owners shall record an easement with the deed allowing joint use of and cross access between adjacent properties. The owners of the properties agreeing to joint use of the driveway shall record a joint maintenance agreement with the deed, defining maintenance responsibilities of property owners. The applicant shall provide a fully executed copy of the agreement to the City for its records, but the City is not responsible for maintaining the driveway or resolving any dispute between property owners.

Response: An access easement for the shared access point will be recorded under a separate document. The Access Easement and Maintenance Agreement will define the maintenance responsibilities of the property owners.

17-3.3.040 Pedestrian Access and Circulation

A. Purpose and Intent. Section 17-3.3.040 implements the pedestrian access and connectivity policies of City of Molalla Transportation System. It is intended to provide for safe, reasonably direct, and convenient pedestrian access and circulation.

B. Standards. Developments shall conform to all of the following standards for pedestrian access and circulation as generally illustrated in Figure 17-3.3-3:

1. Continuous Walkway System. A pedestrian walkway system shall extend throughout the development site and connect to adjacent sidewalks, if any, and to all future phases of the development, as applicable.

2. Safe, Direct, and Convenient. Walkways within developments shall provide safe, reasonably direct, and convenient connections between primary building entrances and all adjacent parking areas, recreational areas, playgrounds, and public rights-of-way conforming to the following standards:

a. The walkway is reasonably direct when it follows a route that does not deviate unnecessarily from a straight line or it does not involve a significant amount of out-of-direction travel.

b. The walkway is designed primarily for pedestrian safety and convenience, meaning it is reasonably free from hazards and provides a reasonably smooth and consistent surface and direct route of travel between destinations. The Planning Official may require landscape buffering between walkways and adjacent parking lots or driveways to mitigate safety concerns.
c. The walkway network connects to all primary building entrances, consistent with the building design standards of Chapter 17-3.2 and, where required, Americans with Disabilities Act (ADA) requirements.

3. Vehicle/Walkway Separation. Except as required for crosswalks, per subsection 4, below, where a walkway abuts a driveway or street it shall be raised six inches and curbed along the edge of the driveway or street. Alternatively, the Planning Official may approve a walkway abutting a driveway at the same grade as the driveway if the walkway is physically separated from all vehicle-maneuvering areas. An example of such separation is a row of bollards (designed for use in parking areas) with adequate minimum spacing between them to prevent vehicles from entering the walkway.

4. Crosswalks. Where a walkway crosses a parking area or driveway ("crosswalk"), it shall be clearly marked with contrasting paving materials (*e.g.,* pavers, light-color concrete inlay between asphalt, or similar contrasting material). The crosswalk may be part of a speed table to improve driver-visibility of pedestrians. Painted or thermo-plastic striping and similar types of non-permanent applications are discouraged, but may

5. Walkway Width and Surface. Walkways, including access ways required for subdivisions pursuant to Chapter 17-4.3, shall be constructed of concrete, asphalt, brick or masonry pavers, or other durable surface, as approved by the City Engineer, and not less than six feet wide. Multi-use paths (i.e., designed for shared use by bicyclists and pedestrians) shall be concrete or asphalt and shall conform to the current version of the Public Works Design Standards and Transportation System Plan.

6. Walkway Construction (Private). Walkway surfaces may be concrete, asphalt, brick or masonry pavers, or other City-approved durable surface meeting ADA requirements. Walkways shall be not less than six feet in width in commercial and mixed use developments and where access ways are required for subdivisions under Article 17-4.

Response: The two lot partition does not propose any improvements. ½ of Hwy 213 will be widened as part of the development for Lot 1. This will include a sidewalk along the lots frontage. The site development will include pedestrian walkways that connect to the street sidewalk.

7. Multi-Use Pathways. Multi-use pathways, where approved, shall be a minimum width and constructed of materials consistent with the current version of the Public Works Design Standards and Transportation System Plan.

Response: Not Applicable.

17-3.6 Public Facilities

17-3.6.010 Purpose and Applicability

A. Purpose. The standards of Chapter 17-3.6 implement the public facility policies of the City of Molalla Comprehensive Plan and adopted City plans.

B. Applicability. Chapter 17-3.6 applies to all new development, including projects subject to Land Division (Subdivision or Partition) approval and developments subject to Site Design Review where public facility improvements are required. All public facility improvements within the city shall occur in accordance with the standards and procedures of this chapter. When a question arises as to the intent or application of any standard, the City Engineer shall interpret the Code pursuant to Chapter 17-1.5.

C. Public Works Design Standards. All public facility improvements, including, but not limited to, sanitary sewer, water, transportation, surface water and storm drainage and parks projects, whether required as a condition of development or provided voluntarily, shall conform to the City of Molalla Public Works Design Standards. Where a conflict occurs between this Code and the Public Works Design Standards, the provisions of the Public Works Design Standards shall govern.

D. Public Improvement Requirement. No building permit may be issued until all required public facility improvements are in place and approved by the City Engineer, or otherwise bonded, in conformance with the provisions of this Code and the Public Works Design Standards. Improvements required as a condition of development approval, when not voluntarily provided by the applicant, shall be roughly proportional to the impact of the development on public facilities. Findings in the development approval shall indicate how the required improvements directly relate to and are roughly proportional to the impact of development.

Response: The two lot partition does not propose any improvements. ½ of Hwy 213 will be widened as part of the development for Lot 1. These improvements will be bonded as a condition of the building permit and will be constructed as part of the development of Lot 1.

17-3.6.020 Transportation Standards

C. Rights-of-Way and Street Section Widths.

1. Street rights-of-way and section widths shall comply with the current version of the Public Works Design Standards and Transportation System Plan. The standards are intended: to provide for streets of suitable location, width, and design to accommodate expected vehicle, pedestrian, and bicycle traffic; to afford satisfactory access to law enforcement, fire protection, sanitation, and road maintenance equipment; and to provide a convenient and accessible network of streets, avoiding undue hardships to adjoining properties.

Response: The two lot partition does not propose any improvements. ½ of Hwy 213 will be widened as part of the development for Lot 1. This two lot partition will dedicate the required 4.5 feet of right of way to Hwy 213 so that the necessary right of way will be available for the proposed roadway improvements.

17-3.6.040 Sanitary Sewer and Water Service Improvements.

A. Sewers and Water Mains Required. All new development is required to connect to City water and sanitary sewer systems. Sanitary sewer and water system improvements shall be installed to serve each new development and to connect developments to existing mains in accordance with the adopted facility master plans and applicable Public Works Design Standards. Where streets are required to be stubbed to the edge of the subdivision, sewer and water system improvements and other utilities shall also be stubbed with the streets, except as may be waived by the City Engineer where alternate alignment(s) are provided.

Response: Both lots requested within this partition will have sufficient frontage on Hwy 213 to allow for connection to the water and sewer services within its rights of way. No additional improvements are required at this time.

17-3.6.050 Storm Drainage and Surface Water Management Facilities

A. General Provisions. The City shall issue a development permit only where adequate provisions for storm water runoff have been made in conformance with the requirements of the current version of the Public Works Design Standards and Stormwater Master Plan.

Response: The two lot partition will not have any proposed improvements. The development of the proposed lots will be required to handled their respective storm water management.

B. Accommodation of Upstream Drainage. Culverts and other drainage facilities shall be large enough to accommodate existing and potential future runoff from the entire upstream drainage area, whether inside or outside the development. Such facilities shall be subject to review and approval by the City Engineer.

Response: The two lot partition will not have any proposed improvements. The development of the proposed lots will be required to handled their respective storm water management.

C. Effect on Downstream Drainage. Where it is anticipated by the City Engineer that the additional runoff resulting from the development will overload an existing drainage facility, the City shall withhold approval of the development until provisions have been made for improvement of the potential condition or until provisions have been made for storage of additional runoff caused by the development in accordance with City standards.

Response: The two lot partition will not have any proposed improvements. The development of the proposed lots will be required to handled their respective storm water management.

D. Over-Sizing. The City may require as a condition of development approval that sewer, water, or storm drainage systems serving new development be sized to accommodate future development within the area as projected by the applicable facility master plan, provided that the City may grant the developer credit toward any required system development charge for the same pursuant to the System Development Charge.

Response: Not anticipated for this Partition.

E. Existing Watercourse. Where a proposed development is traversed by a watercourse, drainage way, channel, or stream, the City may require a storm water easement or drainage right-of-way conforming substantially with the lines

of such watercourse and such further width as will be adequate for conveyance and maintenance to protect the public health and safety.

Response: There is a stream that runs diagonally through Lot 2 of the proposed partition. A storm water easement has been added to the proposed plat.

17-3.6.060 Utilities

The following standards apply to new development where extension of electric power, gas, or communication lines is required:

A. General Provision. The developer of a property is responsible for coordinating the development plan with the applicable utility providers and paying for the extension and installation of utilities not otherwise available to the subject property.

Response: The two lot partition will not have any proposed improvements. The development of the proposed lots will be required to handle their respective utility extensions.

B. Underground Utilities.

1. General Requirement. The requirements of the utility service provider shall be met. All utility lines in new subdivisions, including, but not limited to, those required for electric, communication, and lighting, and related facilities, shall be placed underground, except where the City Engineer determines that placing utilities underground would adversely impact adjacent land uses. The Planning Official may require screening and buffering of above ground facilities to protect the public health, safety, or welfare.

Response: The two lot partition will not have any proposed improvements. The development of the proposed lots will be required to handle their respective storm water management.

2. Subdivisions. In order to facilitate underground placement of utilities, the following additional standards apply to all new subdivisions:

a. The developer shall make all necessary arrangements with the serving utility to provide the underground services. Care shall be taken to ensure that no above ground equipment obstructs vision clearance areas for vehicular traffic, per Chapter 17-3.3 Access and Circulation.
b. The City Engineer reserves the right to approve the location of all surface-mounted facilities.
c. All underground utilities installed in streets must be constructed and approved by the applicable utility provider prior to the surfacing of the streets.
d. Stubs for service connections shall be long enough to avoid disturbing the street improvements when service connections are made.

Response: The two lot partition will not have any proposed improvements. The development of the proposed lots will be required to handle their respective storm water management.

C. Exception to Undergrounding Requirement. The City Engineer may grant exceptions to the undergrounding standard where existing physical constraints, such as geologic conditions, streams, or existing development conditions make underground placement impractical.

Response: Not Anticipated

17-3.6.070 Easements

A. Provision. The developer shall make arrangements with the City and applicable utility providers for each utility franchise for the provision and dedication of utility easements necessary to provide full services to the development.

Response: The two lot partition will dedicate a 10 foot utility easement along Hwy 213.

B. Standard. Utility easements shall conform to the requirements of the utility service provider. All other easements shall conform to the City of Molalla Public Works Design Standards.

Response: The two lot partition will dedicate a 10 foot utility easement along Hwy 213.

C. Recordation. All easements for sewers, storm drainage and water quality facilities, water mains, electric lines, or other utilities shall be recorded and referenced on a survey or final plat, as applicable. See Chapter 17-4.2 Site Design Review, and Chapter 17-4.3 Land Divisions and Property Line Adjustments.

Response: Easements will be referenced on the final plat.

17-3.6.080 Construction Plan Approval

No development, including sanitary sewers, water, streets, parking areas, buildings, or other development, shall commence without plans having been approved by the City of Molalla Public Works Department and permits issued. Permit fees are required to defray the cost and expenses incurred by the City for construction and other services in connection with the improvement. Permit fees are as set by City Council resolution.

Response: Not anticipated for the two lot partition.

17-4.1.040 Type III Procedure (Quasi-Judicial Review – Public Hearing)

Type III decisions are made by the Planning Commission after a public hearing, with an opportunity for appeal to the City Council.

A. Application Requirements.

1. Application Forms. Applications requiring Quasi-Judicial Review shall be made on forms provided by the Planning Official.

Response: Appendix A contains the necessary completed application forms.

2. Submittal Information. The Planning Official shall advise the applicant on application submittal requirements. At a minimum, the application shall include all of the following information:

a. The information requested on the application form;

Response: Appendix A contains the necessary completed application forms.

b. Plans and exhibits required for the specific approval(s) being sought;

Response: Appendix B contains the necessary plans and exhibits for Type III review.

c. A written statement or letter explaining how the application satisfies each and all of the relevant criteria and standards in sufficient detail;

Response: This narrative serves as an explanation of how the application satisfies the relevant criteria and standards for this type of review.

d. Information demonstrating compliance with prior decision(s) and conditions of approval for the subject site, as applicable; and

Response: Not Applicable.

e. The required fee.

Response: We have included a check in the amount of $5,300.00 for the following applications: Comprehensive Plan Amendment fee $2,600.00, Major Zone Change fee $1,700.00 & Partition Plat fee $1,000.00.

a. Comments, if obtained from neighborhood contact per 17-4.1.070.

Response: Neighborhood contact comments are addressed in Section 17-4.1.070 of this narrative.

17-4.1.070 Neighborhood Contact

A. Purpose and Applicability. Applicants for master planned development, subdivision, or site design review on projects involving parcels or lots larger than one acre and located adjacent to any residential zone, and property owner-applicants for zone changes, are recommended to contact neighboring property owners and offer to a hold meeting with them prior to submitting an application. This is to ensure that affected property owners are given an opportunity to preview a proposal and offer input to the applicant before a plan is formally submitted to the City, thereby raising any concerns about the project and the project's compatibility with surrounding uses early in the design process when changes can be made relatively inexpensively.

Response: Neighborhood meeting will be held on March 12, 2018.

B. Notice. Notice of the meeting should be given in writing and delivered in person, or by certified mail, to all of the property owners whose property is located within 300 feet of the site, at their addresses of record at the Clackamas County Assessor's office, at least 14 days before the meeting and at least 21 days before submitting the application to the City. The notice should state the time, place, and purpose of the meeting, including a description of the proposed development.

Response: List of property owners was received from Aldo Rodriguez and Certified letters were mailed out on February 26, 2018.

C. Meeting place, date, and time. The meeting should be held within the City limits at a location obtained or provided by the applicant with sufficient room for the expected attendance. The meeting place should be accessible to persons with disabilities. It should be scheduled at a date and time reasonably calculated to allow maximum participation by interested property owners.

Response: The meeting will be held at The Prairie House Inn located at 524 E. Main St., Molalla.

D. Conduct of meeting. At the meeting, the applicant, or the applicant's agent, should present sufficient information about the proposed development to inform the property owners in attendance of the nature of the proposal and impacts it may have on neighboring properties, including transportation impacts. Persons attending should be allowed to ask questions and make comments. The applicant, or the applicant's agent, should make a sound or video recording or keep written minutes of the meeting that give a true reflection of the matters discussed at the meeting and the views of the participants. The applicant should also make a list of names of persons attending the meeting.

Response: Site plan boards will be provided for viewing. Sign-in and comment sheet will be provided for attendees, as well as open forum for any questions. Minutes will be taken during meeting and provided.

E. Filing requirements. Proof of having held the meeting, even if no affected property owners attend, is required and should be submitted to the City with a land use application. Copies of the following information should accompany the land use application: a copy of the notice mailed, certified mail receipts, all addresses to which notice was mailed (e.g., copy of mailing labels), a certificate of personal service for those persons who were provided notice by personal service (including the date of service and the name of the person who provided service), a record or minutes of the meeting with a list of attendees, and copies of the meeting notice and all other written materials provided prior to or distributed at the meeting.

Response: Appendices D-I contain letter, certified mail receipts, and list of property owners. We will provide a Sign In Sheet at meeting, comment sheet and will provide to City after meeting.

Appendix A

Application Forms

City of Molalla
Site Plan Review Application
Worksheet No. _____

Check All That Apply:

- ☐ New Construction
- ☐ Demolition
- ☐ Manufactured Home
- ☐ Manufactured Home in Park
- ☐ Sign Permit
- ☑ Other Partition Plat
- ☐ Remodel

Date Stamp

Step 1 - Information Provided By Applicant:

Please Print or Type:

Business License # 922D821E4

Property Owner HSC Molalla, LLC (Lindsay Gadd) Phone 251-243-0708

Mailing Address 805 Trione Ave.

City Daphne State AL Zip 36526

Contractor's Name Fulcrum Construction Group CCB No. 217254 Phone 251-380-8375

Mailing Address 810 Manci Ave.

City Daphne State AL Zip 36526

Address of Building Site 31176 South Hwy 213 Parcel Size 8.75

Tax Account Number(s) 01088637 T 5S R 2E S 7 Tax Lot # 00700

Proposed Improvement Two lot partition. Lot 1-3.95 acres +/-, Lot 2-4.73 acres +/-, with .07 acres +/- dedicated to ODOT ROW.

Intended Use Commercial Retail

Describe all buildings or structures currently on property (number and type) Existing building onsite include 1-residental building, 1-barn, 1-well pump house, 4-storage sheds of various sizes

Distance of building site from river, creek or stream bank Drive connection to Hwy 213 105' form Bear Creek

City Utilities Required: ☐ Water ☐ Sewer ☐ None

This application represents: ☑ New Development ☐ Re-development ☐ Change of Use

Other _____

Applicant's Signature _____ ***Date:*** 3/08/2018

For Official Use Only

City File #	Date Received	Received By	Receipt #	Date App Complete	SDC's Paid

City Approval _____ Title _____ Date _____

City of Molalla
Site Plan Review: Checklist
Worksheet No. _____

Construction Type:

- ☐ Commercial
- ☐ Industrial
- ☐ Single Family
- ☐ Duplex
- ☐ Multifamily (Number _____)
- ☐ Manufactured Home
- ☐ Remodel
- ☐ Demolition
- ☐ Accessory structure (see Zone for regulations)
- ☑ Other Partition Plat

Attach Site Plan With All of the Following:

- ☑ Lot area
- ☐ Building area
- ☐ Total impervious surface area (driveways, patios, buildings, etc.)
- ☐ Building height
- ☐ Parking area
- ☑ All easements
- ☐ Streets
- ☐ Erosion Control plan
- ☐ Stormwater drainage plans
- ☑ Setbacks/show building footprint
- ☐ Lot Coverage
- ☐ Existing & proposed screening/fencing
- ☐ Existing & proposed lighting
- ☐ Existing & proposed landscaping
- ☐ Elevation Plans and/or narrative showing conformance with Chapter(s):
  17.08.090 for Residential Proposals
  17.12.070 for Commercial Proposals
  17.16.040 for Industrial Proposals

Please provide (If Applicable):

- ☐ Planning File #(s): _____
- ☐ Subdivision name/date approved: Shavers Place
- ☐ Special Planning Permits: ☐Condition Use ☐Variance ☐Other: _____
- ☐ Planning Conditions of Approval: _____

City of Molalla
Building Location Plan
Worksheet No. _____

Applicant's Name HSC Molalla, LLC Phone 251-243-0708

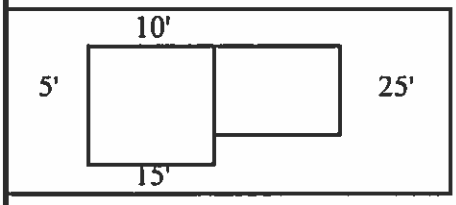
Address 805 Trione Ave, Daphne, AL 36526 Tax Acct R# 01088637

WAIVER: I understand that approval of this Pre-application Worksheet and Plot Plan does not release me from compliance with private covenants, restrictions or easements affecting this property. _____

Initials

⇧
North

EXAMPLE



NAME OF STREET OR ROAD

INFORMATION NEEDED

1. ASSESSOR'S MAP T 5S R 2E SECT 7 TAX LOT 37
2. PROPERTY LINES.
3. PERMANENT LAND MARKS (ROADS, STREAMS AND RIVERS)
4. DISTANCE FROM LANDMARKS AND PROPERTY LINES TO BUILDING SITES.
5. LOCATION AND IDENTIFICATION OF OTHER STRUCTURES ON PROPERTY.
6. LOCATION OF ACCESS.

NOTARIZED AUTHORIZATION OF OWNER

I/We, Craig Yaw and Kathleen Yaw as the sole or joint fee simple title holder(s) of the property described as 4 acres on Highway 213, in the City of Molalla, County of Clackamas, State of Oregon, authorize HSC Molalla, LLC and/or their consultants to act as our agent to seek site plan/development plan approval, DOT approvals, and/or all regulatory approvals in connection therewith, on the above referenced property.

Craig Yaw
Kathleen Yaw

By:
As Its: Seller

Address:

Phone: 541-398-8302 Fax:

Email: groomingbarn@yahoo.com

STATE OF OREGON
COUNTY OF WALLOWA

The forgoing instrument was acknowledged before me this 11th day of December, 2017 by Craig Yaw Kathleen Yaw as its Seller, who is personally known to me or who has produced Oregon drivers licenses (type of ID) as identification and who did not take an oath.

Jodie Brandt
NOTARY PUBLIC – STATE OF OREGON

OFFICIAL STAMP
JODIE LORRAINE BRANDT
NOTARY PUBLIC-OREGON
COMMISSION NO. 968353
MY COMMISSION EXPIRES NOVEMBER 01, 2021

Jodie Brandt
NAME OF NOTARY – TYPED OR PRINTED

COMMISSION NO: 968353

PURCHASE AND SALE AGREEMENT

This Purchase and Sale Agreement ("Agreement") is made and entered into by and between **CRAIG YAW and KATHLEEN YAW,** individually and joint and severally (hereinafter referred to collectively as "Seller"), and **HIX SNEDEKER COMPANIES, LLC,** an Alabama limited liability company (hereinafter referred to as "Buyer").

W I T N E S S E T H:

1. **Property.** Seller hereby agrees to sell and convey to Buyer, and Buyer hereby agrees to purchase and take from Seller, under and subject to the terms, conditions and provisions hereof, that certain real property located in the City of Molalla, Clackamas County, Oregon, and identified generally as 4.0 acres, more or less, located along Highway 213, as shown on the map attached hereto and made a part hereof as Exhibit "A", together with all appurtenances, rights of way, privileges, leases, easements and other rights benefiting or pertaining thereto, any and all improvements located thereon, and all right, title and interest of the Seller in and to any land lying in any right-of-way adjoining such property to the centerline thereof (the "Property").

2. **Purchase Price.** The purchase price for the Property shall be , (the "Purchase Price"), payable to Seller at Closing subject to prorations, credits and other adjustments provided herein.

(a) The sum of) payable herewith as "Earnest Money" in the form of a check to be held in escrow by Ticor Title, Attn: Candice Weischedel, Escrow Officer, 111 SW Columbia Street, Suite 1000, Portland, Oregon 97201, candice.weischedel@ticortitle.com (the "Escrow Agent"). The Earnest Money shall be made available to the Escrow Agent within three (3) business days from the Effective Date. The Earnest Money shall be applicable towards the Purchase Price. Notwithstanding the foregoing or any provision of this Agreement to the contrary, the rights and obligations of the parties with respect to the Earnest Money shall be governed by separate instructions similar in form to the Escrow Agreement attached as Exhibit "B" (the "Escrow Agreement"); provided, however, that in the event of a conflict between the terms of the Escrow Agreement and the terms of this Agreement, the Escrow Agreement shall control.

(b) The balance of payable to Seller at Closing subject to prorations, credits and other adjustments provided herein.

3. **Delivery by Seller.** Within seven (7) business days after the Effective Date of this Agreement, Seller will furnish to Buyer a copy of all of the following pertaining to the Property which are in Seller's possession: any lease, survey, soils report, environmental report, zoning entitlements, environmental permits, title report or policy, any and all other documents or instruments pertaining to the physical condition of the Property, and any and all information relative to the Property's economic viability.

4. **Governmental Approvals**. Buyer is hereby authorized at Buyer's sole expense to seek and obtain any and all permits, licenses, site and redevelopment plan approvals, permits and authorizations, zoning approvals, and any and all other approvals or consents, if any, as Buyer may deem necessary in connection with its proposed acquisition and use of the Property and Seller agrees to cooperate with Buyer in such endeavor. Notwithstanding this right of the Buyer, Buyer shall notify the Seller, in writing, of any application(s), approval(s), permit(s), development plans that are submitted to any controlling/approving agency prior to the Closing Date (as hereinafter defined). If any such applications, approvals or permits are required to be sought in Seller's name, Seller shall upon Buyer's request seek same without cost to Seller. Buyer agrees that it shall bear all costs and expenses incurred by it in filing for any applications, approvals and permits sought by Buyer hereunder. Buyer shall indemnify and hold Seller harmless from any associated costs for governmental approvals. As part of the consideration of Buyer's payment of the Purchase Price, Seller shall assign, transfer and convey to Buyer at Closing all permits, approvals, licenses, site and development plans affecting the Property issued in Seller's name which Buyer requests Seller to assign to Buyer. Buyer shall retain this right to seek and obtain Governmental approval until the Closing Date (as hereinafter defined). If, as a condition of approving Buyer's proposed development of the Property, the City of Molalla or other appropriate governmental or administrative body or authority requires the construction of a pedestrian and/or bicycle trail along the west side of the Property adjacent/parallel to Highway 213 and Buyer purchases the Property, Buyer assumes full responsibility for same at Buyer's sole expense.

5. **Entry Upon Property**. Seller and Buyer agree to the following:

(a) For a period of one hundred fifty (150) days from and after the Effective Date, as hereinafter defined (the "Initial Feasibility Period"), Buyer, its agents, employees, contractors, and all other persons authorized by it, or any of them, at Buyer's sole expense, are permitted to enter upon the Property and to obtain and perform such tests, studies, examinations and audits as Buyer may deem necessary or advisable including, but not limited to, drainage, soils, hazardous waste, environmental, topographical, geological tests and studies and any such related engineering studies and tests as Buyer deems necessary with regard to Buyer's proposed use of the Property. Buyer, at Buyer's sole expense, shall be responsible for, and shall indemnify and hold Seller harmless from any associated costs for, restoration of any damage to the Property resulting from any inspections/tests performed by Buyer or on Buyer's behalf. In the event that approvals are required by co-owners of the Property, the Initial Feasibility Period shall not commence until such time that all approvals are obtained from the co-owners.

(b) If, prior to the end of the Initial Feasibility Period, Buyer shall determine that additional time is needed for reasons beyond Buyer's control, Buyer shall have the option to extend the Initial Feasibility Period for up to two (2) periods of thirty (30) days each ("Additional Feasibility Period"). In order to exercise an option to extend the Initial Feasibility Period as aforesaid, Buyer shall notify Seller and Escrow Agent in writing prior to the expiration of the Initial Feasibility Period. In the event Buyer timely exercises its option to extend the Initial Feasibility Period for an Additional Feasibility Period, Escrow Agent shall release one-half of the Earnest Money (i.e.,

$5,000.00) to Seller within three (3) business days after Escrow Agent's receipt of Buyer's notice of each such exercise. The Initial Feasibility Period and any Additional Feasibility Period so exercised are herein collectively referred to as "Feasibility Period".

(c) In the event that Buyer, in its reasonable determination, is not satisfied with any aspect of the Property, due diligence investigation, availability of acceptable financing, availability of governmental approvals, availability of a suitable tenant, or any reason beyond Buyer's control, then Buyer shall have the right, at its sole option, to terminate this Agreement by written notice to Seller and Escrow Agent on or before the expiration of the Feasibility Period. Such notice shall identify Buyer's reason for terminating the Agreement and, upon such termination, the Earnest Money shall be delivered by the Escrow Agent (and Seller, to the extent that any portion of the Earnest Money has been released to Seller pursuant to Paragraph 5(b) above) to Buyer, and Buyer shall have no further obligations hereunder.

(d) Upon the expiration of the Feasibility Period, the Earnest Money deposited with the Escrow Agent shall be converted to non-refundable funds and immediately released by Escrow Agent to Seller. Buyer and Seller agree to fully cooperate with Escrow Agent to ensure prompt release of funds. Seller agrees to refund the Earnest Money to Buyer in the event: (i) the contingencies set forth in this Agreement cannot be satisfied by the parties notwithstanding the respective good faith diligent efforts of each party to achieve the satisfaction of such contingencies, (ii) Seller's inability to deliver merchantable title, (iii) the institution of condemnation proceedings which effect a termination of this Agreement, (iv) Seller defaults under the terms or conditions of this Agreement, or (v) ascertainment of the existence of environmental conditions which adversely affect in a material manner the Buyer's ability to operate the Property for Buyer's intended use and Seller has declined to effect the remediation of such conditions.

6. **Conditions To Closing.** Seller acknowledges that Buyer has informed Seller that it intends to utilize the Property for commercial development. In the event that Buyer is unable to obtain approval of Buyer's development plan by all applicable governmental and administrative bodies and authorities prior to the expiration of the Feasibility Period, then Buyer shall be entitled to terminate this Agreement upon notice to Seller and the parties hereto shall have no further liability or obligation hereunder. Buyer's obligation to consummate the purchase of the Property shall also be subject to Buyer's obtaining an environmental report of the Property prepared by a reputable environmental firm prior to the expiration of the Feasibility Period and such report being acceptable to Buyer at Buyer's cost. In the event the results of such report are not acceptable to Buyer, in Buyer's sole and absolute determination, then Buyer may terminate this Agreement and the parties shall have no further obligation or liability hereunder.

7. **Survey.** Prior to the expiration of the Feasibility Period, Buyer may, at Buyer's option, cause a survey ("Survey") of the Property to be made by a registered engineer and/or land surveyor in the State of Oregon. Should Buyer elect to obtain the Survey, the same shall be ordered by and through the Buyer, and shall be at the sole cost and expense of Buyer. In such case, the Survey shall be certified to Buyer, any lender of Buyer and the Title Company (as hereinafter defined) for the purpose of the Title Company to find the certified Survey sufficient to delete the

standard preprinted exceptions relating thereto. The Buyer, the surveyor and all persons authorized by either of them shall have the right to enter upon the Property for purposes related to the Survey and any desired engineering tests. Buyer shall require the surveyor to locate any and all easements set forth in the title binder obtained by Buyer as affecting or benefiting the Property and to identify same by reference to appropriate recording information.

8. **Title to Real Property.** Prior to the expiration of the Feasibility Period, Buyer may, at Buyer's option, obtain a current title commitment for an ALTA Form 2006 Owner's Policy, together with copies of the underlying documents referenced in the exceptions set forth in Schedule B- Section 2 thereof, written by a title insurance company of Buyer's choosing ("Title Company") and proposing to insure Buyer for the full amount of the Purchase Price (the "Title Commitment"), subject only to the following permitted exceptions (all of which are hereinafter sometimes collectively referred to as the "Permitted Exceptions"): (i) the lien of current ad valorem taxes and municipal assessments not then delinquent; (ii) applicable zoning ordinances; (iii) any and all covenants, restrictions, reservations, easements and rights of way affecting said Property or which appear of record in the real estate records of the County in which said Property is situated, and do not in Buyer's sole opinion, adversely affect Buyer's intended development of the Property. An existing mortgage shall not be considered an encumbrance if it is to be paid at Closing. Should the Title Commitment reflect defects in title to the Property or other than the Permitted Exceptions or should any such Permitted Exception prohibit the Buyer's intended use of the Property, then Buyer shall notify Seller of same prior to the expiration of the Feasibility Period and in such event the Seller shall have a period of sixty (60) days from receipt of notice thereof from Buyer within which to cure any such defects. Should said defects not be cured within the sixty (60) day period granted to Seller for curing of the same, Buyer, at its election and as its sole remedy shall have the right to either (a) waive the defects and purchase the Property subject to said defects for the Purchase Price and upon and subject to the terms and conditions set forth in this Agreement, or (b) cancel this Agreement by written notice delivered to Seller within ten (10) days after expiration of said sixty (60) day period, and Buyer shall have no further obligations hereunder and the Earnest Money shall be returned to Buyer. Seller represents that it presently owns fee simple title to the Property, except for any existing mortgages which Seller covenants to have released with respect to the Property at the time of Closing, and Seller covenants that it will not permit any change in the status of the title to the Property until this Agreement has been consummated or otherwise terminated in accordance with the terms hereof.

9. **Closing.**

(a) Subject to the satisfaction of all of the conditions hereof or the waiver in writing thereof by Buyer, the date of Closing ("Closing Date") shall be the date that is on or before thirty (30) days following the expiration of the Feasibility Period, unless such date is a Saturday, Sunday or legal holiday, in which event the date shall be extended to the next business day, or in the event Seller is unable to remove objectionable easements or other matters affecting title to the Property then the Closing shall take place no later than thirty (30) days following the removal of said objectionable title matters. Buyer and Seller may cause the Closing Date to occur at such earlier date as the parties may mutually agree. The sale shall be closed through escrow established with the

Escrow Agent, using overnight courier and wire transfer of funds.

(b) At Closing, Seller shall deliver to Buyer a statutory warranty deed in form and substance reasonably acceptable to Buyer and sufficient to vest in Buyer title to the Property in accordance with this Agreement subject only to the Permitted Exceptions (the "Deed"). Such Deed shall describe the Property in accordance with the Survey. If any buildings, improvements, equipment or other personal property is situated on the Property, Seller, if required by Buyer, shall execute a warranty Bill of Sale conveying all of Seller's rights, title and interest in such additional property. Seller shall deliver such Owner's or Seller's Affidavits as may be required by the Title Company. Seller shall also execute and deliver at Closing such affidavits of title, lien and possession as may be required by Buyer, a FIRPTA Affidavit, and appropriate 1099 forms.

(c) Further, Seller shall grant to Buyer at Closing a non-exclusive, perpetual access easement to be shared by Buyer and Seller across a portion of Seller's remaining property and adjacent to the south property line of the Property, pursuant to the terms of an easement agreement (the "Easement Agreement") the terms of which are subject to Buyer's and Seller's approval and the form of which shall be prepared by Buyer's attorney and agreed upon by Buyer, Seller and any and all other interested parties prior to the expiration of the Feasibility Period or else Buyer shall be entitled to terminate this Agreement, receive a refund of the Earnest Money and have no further obligations hereunder.

(d) Seller shall pay at Closing, by deduction from the Purchase Price, one-half of any escrow closing fees, the cost of preparing the Deed, the cost of the Title Commitment, and the cost of Buyer's owner's title insurance policy. Buyer shall pay at Closing one-half of any escrow closing fees, the cost of recording the Deed, the Easement Agreement and any other documents that Buyer may choose to record, including but not limited to a mortgage, any fees charged by any lender of Buyer, including the cost of any title insurance policy issued in favor of Buyer's lender, the cost of any title endorsements obtained by Buyer or Buyer's lender in connection with their respective title insurance policies, and any and all expenses herein provided to be paid by Buyer. Ad valorem taxes for the current tax year shall be prorated as of Closing; provided, however, that Seller shall be solely responsible for any rollback or recapture taxes which may now or hereafter be levied or assessed against the Property on account of the current or past assessment of the Property on a "current use" basis. Any assessments of public record incurred prior to Closing, whether due or not, levied against the Property shall be paid in full by Seller at Closing. The provisions of this paragraph shall expressly survive Closing.

(e) At Closing, Buyer shall pay the balance of the Purchase Price, subject to adjustments, prorations and credits as herein provided.

(f) In the event the transaction contemplated by this Agreement is subject to any laws providing for the withholding of funds from the sale proceeds for tax liability, Seller agrees that Seller shall be subject to having such funds withheld in accordance with applicable laws unless (i) Seller qualifies for an exemption from any such withholding requirements, and (ii) executes all such documents required by law to qualify for such exemption and necessary to release the person or entity

responsible for collection of the funds from liability for failure to do so.

(g) Each party shall bear its own attorney's fees.

10. Representations of Seller. Seller represents to Buyer that:

(a) (i) The execution, delivery and performance of this Agreement will not require approval or consent of any third party and will not contravene any statute, regulation or other law or order binding on Seller; (ii) Seller has obtained all necessary approvals to execute this Agreement; (iii) Seller is fully authorized to enter into this Agreement and to perform its obligations under this Agreement; (iv) the person(s) executing this Agreement on behalf of Seller are duly authorized by Seller to enter into, execute, deliver, perform, and consummate this Agreement on behalf of Seller; and (v) this Agreement when executed shall constitute the valid and binding obligation of Seller, enforceable in accordance with its terms.

(b) Seller has not granted any undisclosed leases or licenses affecting the Property and there are no other parties in possession of or holding any right to use or possess portions of the Property. Seller shall terminate any and all existing leases or licenses affecting the Property at or prior to Closing. Seller has no knowledge of any uncured violations of any statute, regulation or other law affecting any portion of the Property to the best knowledge of the Seller, and Seller shall give to Buyer prompt notice of any such violation to the best knowledge of the Seller prior to the Closing, including without limitation, any environmental or land use statute, regulation or other law applicable to the Property.

(c) To Seller's knowledge, there are no wetlands located on the Property for which mitigation in accordance with applicable federal and state law will be necessary to allow Buyer's intended development and use of the Property. In the event it is determined prior to Closing that any such wetlands are located on the Property, Buyer shall have the right, but not the obligation, to cause such wetlands to be mitigated prior to Closing. Seller and Buyer shall share equally the cost of the first Ni) cost of any such mitigation, and Buyer shall receive a credit at Closing for Seller's share of such cost. Buyer shall be solely responsible for any cost of such mitigation in excess of .

(d) Seller is not a "foreign person," as such term is defined under Section 1445(f)(3) of the Internal Revenue Code.

(e) Seller owns good and clear record and marketable fee simple title to the Property, subject only to the Permitted Exceptions and the Property has legal and physical access to an abutting dedicated public road to the best knowledge of the Seller.

(f) Seller has not filed for bankruptcy or reorganization or made a general assignment for the benefit of creditors, and Seller is not insolvent or otherwise unable to pay its debts

as they become due and no party has any unsatisfied judgment against Seller to the best knowledge of the Seller.

(g) To the best of Seller's knowledge, (i) all information regarding the Property furnished by Seller to Buyer is true and correct in all material respects, (ii) Seller has not failed to furnish to Buyer any information which would be material to the ownership, operation or development by Buyer of the Property as it exists presently or on the Closing Date, or which would be material or an impediment to the development or use of the Property to the best knowledge of the Seller, and (iii) Seller has disclosed to Buyer in writing all material adverse information of which Seller is aware, if any, concerning the physical condition of the Property.

(h) Seller has not received any notification from any lawful authority regarding any assessments, pending public improvements, repairs, replacement, or alterations to the Property that have not been satisfactorily made.

(i) Seller represents that a septic tank exists on the Property and the Property is not currently served by public water or public sewer. To the best of Seller's knowledge, the nearest connection to public water is along Highway 213 approximately fourteen (14) feet from the Property and the nearest connection to public sewer is along Highway 213 approximately forty-seven (47) feet from the Property.

(j) All of the foregoing representations of Seller are true, accurate and complete as of the date hereof and shall be true, accurate and complete as of the Closing Date and shall, to the extent of Seller's actual knowledge with respect to such representations, expressly survive Closing for a period of six (6) months thereafter.

11. Default; Remedies. If Seller has complied with all of its obligations herein contained and all of Seller's representations and warranties are true and correct, and all of the conditions herein have been met to Buyer's satisfaction or waived in writing by Buyer and Buyer has become obligated to proceed to close, but Buyer fails to proceed with the purchase of the Property, then Seller may (i) declare the Earnest Money forfeited to Seller and this Agreement shall be terminated, and (ii) Seller shall have any other rights or remedies available under Oregon law on account of default by Buyer. If Seller defaults, violates or breaches any of its covenants, obligations, representations and warranties herein or refuses to close, then Buyer may (a) declare this Agreement cancelled and of no further force and effect and promptly receive a return of the Earnest Money, or (b) Buyer shall have the right of specific performance and (c) any other rights or remedies available under Oregon law on account of default by Seller.

12. Assignment. This Agreement may be assigned by Buyer to any entity owned or controlled by Buyer or the members of Buyer and all powers, rights and privileges herein reserved and given to Buyer by the Seller shall inure to the benefit of and be held by the respective successors and assigns of Buyer, and all liabilities or obligations imposed on each shall be binding upon the respective heirs, successors and assigns of the parties.

13. **Environmental Concerns.** Notwithstanding anything contained in this Agreement to the contrary, in the event that, as a result of Buyer's investigation "hazardous substance(s)", "hazardous waste(s)" or "hazardous material(s)", as defined under applicable federal or state law, or both, are found on the Property, then Buyer shall have the right at any time to terminate this Agreement and to receive a return of the Earnest Money; it being a condition precedent to Buyer's obligation to purchase the Property that the results of Buyer's environmental studies reveal that the Property is free from any and all "hazardous substance(s)", "hazardous waste(s)", or "hazardous material(s)", as defined under applicable federal or state law, or both. Buyer, its agents and representatives, are hereby authorized to perform any and all studies, tests and inquiries as it may deem appropriate or necessary in furtherance of the foregoing, including entry upon the Property and the performance of tests and studies thereon. Buyer, at Buyer's sole expense, shall be responsible for restoration of the Property following the performance of tests and studies thereon, but not for the remediation of any hazardous substance(s), hazardous waste(s) or hazardous material(s) discovered by such tests and studies unless such matters were introduced to the Property by Buyer or its agents. Seller agrees that Buyer may make inquiry of pertinent governmental and administrative bodies and agencies concerning environmental violations or citations regarding the Property. Seller warrants, to the best of its knowledge, that the Property contains no hazardous substances, wastes, or materials. In the event Seller is notified by EPA, or other similar agency with regard to the Property, pending the Closing, Seller agrees to immediately notify Buyer regarding such notice.

14. **Condemnation.** Seller covenants and agrees that there is no pending or threatened condemnation or similar proceeding affecting the Property or any portion thereof, nor has Seller any knowledge that any such action is presently contemplated. Should any entity having the power of eminent domain or condemnation decide, prior to the time of Closing, to acquire any portion of or interest in the Property, Buyer, at Buyer's sole option, may elect to (a) terminate Buyer's obligation to purchase the Property by giving written notice to Seller at any time prior to the time of Closing and receive a prompt refund of all sums paid hereunder, or (b) complete the purchase of the Property with Seller immediately appointing Buyer its attorney in fact to negotiate with said condemning entity and assigning to Buyer all sums to be awarded.

15. **Notices.** Any notice permitted or required hereunder shall be made in writing and sent to the receiving party at the address set forth below by (a) hand delivery; (b) e-mail transmission (followed by hard copy delivered in accordance with Paragraph 15(a), (c) or (d)); (c) nationally recognized overnight courier; or (d) Certified Mail, return receipt requested. Any notice shall be deemed given by either party to the other: (w) on the day the notice is hand delivered; (x) on the date the notice is sent via email; (y) one (1) business day after the same is deposited with a nationally recognized overnight courier whether or not the receiving party receives the same, (z) within two (2) business days after the same is deposited in the United States Mail as Certified, return receipt requested, with postage prepaid sufficient to deliver to its addressed destination whether or not the receiving party receives the same. The addresses of the parties are as follows:

Seller:

Craig Yaw and Kathleen Yaw

Kathleen Yaw

Copies to:

Mike Kaufman

Keller Williams Realty Portland Premiere

P.O. Box 4
Joseph, OR 97846
Email: Craigyaufarrie@yahoo.com
groomingbarn@yahoo.com and

16365 Boones Ferry Road
Lake Oswego, OR 97035
Email: mkauffman@kwcommercial.com

Lane Mueller, Esq.
3109 NE Sandy Boulevard
Portland, Oregon 97232
Email: lane@hevanet.com

Buyer:

Hix Snedeker Companies, LLC
P.O. Box 130
805 Trione Avenue
Daphne, Alabama 36526
Email: ray@hixsnedeker.com

Copy to:

James R. Dickens. Jr., Esq.
Rushton Stakely Johnston & Garrett, P.A.
184 Commerce Street
Montgomery, Alabama 36104
Email: JRD@rushtonstakely.com

16. **Condition of Property.** Seller agrees to maintain the Property in its current condition as of the Effective Date of this Agreement.

17. **Risk of Loss.** If any portion of the Property is destroyed or damaged by any casualty between the date hereof and the Closing, and Seller is unable or unwilling to restore it to its previous condition prior to Closing, Buyer shall have the option of canceling this Agreement and receiving a refund of the Earnest Money or accepting the Property in its then condition.

18. **Possession.** Seller agrees to deliver possession of the Property to Buyer at the Closing free and clear of all tenancies and parties in possession.

19. **Agency Disclosure and Brokers.** Each of the parties agree that, except for KW Commercial, as agent for Seller, and Kidder Matthews, as agent for Buyer, they have not dealt with any broker or agent in connection with the negotiation or execution of this Agreement, and the parties agree to indemnify and hold the other harmless from and against any and all claims or demands with respect to any brokerage fees or agents' commissions or other compensation asserted by any person, firm or corporation in connection with the negotiation or execution of this Agreement or the Closing, insofar as any such claim is based upon any conversation, contact or contract with Seller or Buyer, respectively, relating to either the proposed purchase or purchase, or both, of the Property by Buyer. In the event this transaction proceeds to Closing, Seller shall be responsible for paying a real estate commission out of Seller's gross proceeds at Closing in the amount of five percent (5%) of the Purchase Price to be split equally (50/50) between KW Commercial and Kidder Matthews.

20. **Effective Date.** The Effective Date of this Agreement shall be the day after the date of the last party executing this Agreement.

21. **Arbitration.** Both parties to this Agreement agree that any dispute arising from, or, in connection with this Agreement, or, negotiations associated with this Agreement, and/or the purchase of this Property shall be resolved solely through binding arbitration. The rules promulgated by the American Arbitration Association shall govern any arbitration proceedings and the arbitration award shall be final and binding on all parties and any judgment shall be entered into the court of record in the controlling jurisdiction. The arbitrability of any claim and/or issue arising from this transaction shall be decided by an arbitrator. The controlling jurisdiction and venue shall be Oregon and the venue of any dispute shall be in the City of Molalla, Clackamas County, Oregon.

22. **Miscellaneous.**

(a) "Business day" shall mean any day other than a Saturday, a Sunday, or a federal holiday recognized by the Federal Reserve Bank of New York. Any day calculated pursuant to the terms and conditions of this Agreement that falls on a day other than a Business day shall automatically be extended to the next Business day.

(b) In the event it becomes necessary for either Seller or Buyer to employ the services of an attorney to enforce any term, covenant or provision of this Agreement by any legal proceeding, then each party agrees that the non-prevailing party shall pay the reasonable attorney's fees incurred by the prevailing party in enforcing this Agreement.

(c) This Agreement constitutes the entire and complete agreement between the parties hereto and supersedes any prior oral or written agreements between the parties with respect to the Property. It is expressly agreed that there are no verbal understandings or agreements which in any way change the terms, covenants and conditions herein set forth, and that no modification of this Agreement and no waiver of any of its terms and conditions shall be effective unless made in writing and duly executed by the parties hereto.

(d) Each party hereto has been represented, or had the opportunity to be represented, by separate counsel in connection with the negotiation and drafting of this Agreement. Accordingly, no ambiguity herein shall be resolved against either party based upon principles of draftsmanship.

(e) All personal pronouns used in this Agreement whether used in masculine, feminine or neuter gender, shall include all other genders, the singular shall include the plural, and vice versa.

(f) Any provision of this Agreement or any paragraph, sentence, clause, phrase or wording appearing herein which shall prove to be invalid, void or illegal for any reason shall in no way affect, impair or invalidate any other provision herein, and the remaining provisions, paragraphs, sentences, clauses, phrases and words herein shall nevertheless remain in full force and effect.

(g) This Agreement shall be construed and enforced in accordance with the laws of the State of Oregon.

(h) Time is of the essence with respect to the performance of each and every term, condition and obligation of this Agreement.

(i) In order to expedite the action contemplated herein, this Agreement may be executed in any number of counterparts, each of which shall be deemed an original, and all of which shall be taken to be one and the same Agreement, for the same effect as if all parties hereto had signed the same signature page, and a facsimile copy or electronic mail copy of an executed counterpart shall constitute the same as delivery of the original of such executed counterpart. Any signature page of this Agreement (whether original, facsimile or electronic mail) may be detached from any counterpart of this Agreement (whether original, facsimile or electronic mail) without impairing the legal effect of any signatures thereof and may be attached to another counterpart of this Agreement (whether original, facsimile or electronic mail) identical in form hereto but having attached to it one or more additional signature pages (whether original, facsimile or electronic mail). The parties intend to be bound by the signatures on the facsimile or electronic mail document, are aware that the other parties will rely on the facsimile or electronic mail signatures, and hereby waive any defenses to the enforcement of the terms of this Agreement based on such form of signature.

(j) If requested by Buyer, Seller agrees to participate with Buyer in a like-kind exchange under the provisions of § 1031 of the Internal Revenue Code and take any reasonable actions necessary, including the execution of appropriate documents, to assist Buyer provided that the same can be accomplished at no cost, expense, liability or delay to Seller. Likewise, if requested by Seller, Buyer agrees to participate with Seller in a like-kind exchange under the provisions of § 1031 of the Internal Revenue Code and take any reasonable actions necessary, including the execution of appropriate documents, to assist Seller provided that the same can be accomplished at no cost, expense, liability or delay to Buyer.

[EXECUTION ON FOLLOWING PAGE]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the respective dates set forth below.

SELLER:

Date: 1-22-18

Craig Yaw (L.S.)

Date: 1-23-18

Kathleen Yaw (L.S.)

BUYER:

Date: 1/24/18

HIX SNEDEKER COMPANIES, LLC

By: _____

Its: Member

EXHIBIT "A"
PROPERTY DESCRIPTION

[See Attached]

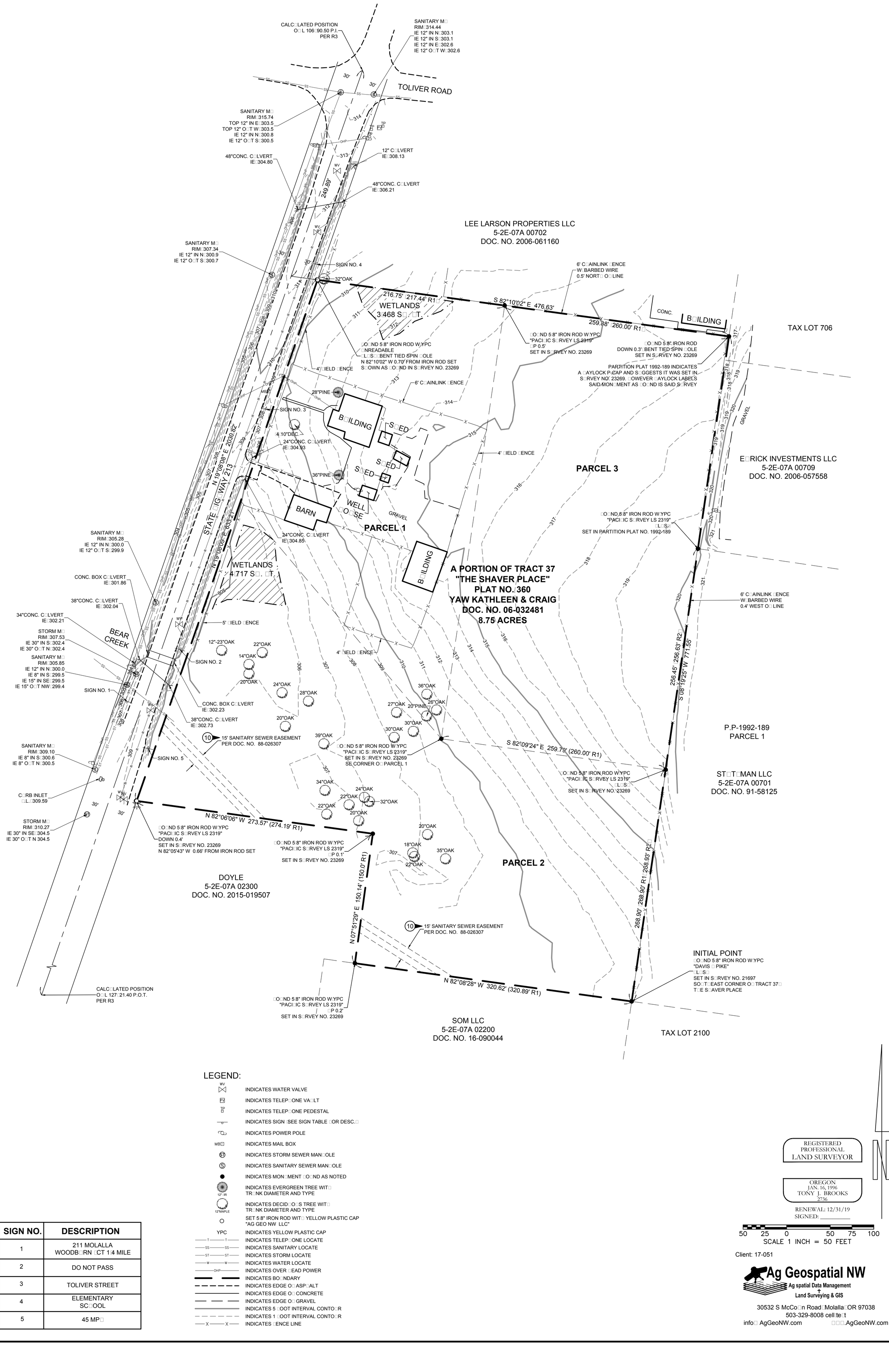
Exhibit A

Appendix B

ALTA Survey

ALTA□NSPS LAND TITLE S□RVEY

O□ A PORTION O□ TRACT 37 O□ T□E
S□AVER PLACE PLAT NO. 360
IN T□E □□G□ GORDON D.L.C. NO. 40
IN T□E NE 1□4 O□ SECTION 7
T. 5 S.□R. 2 E.□W.M.
CITY O□ MOLALLA□
CLACKAMAS CO□NTY□OREGON
S□EET 2 O□ 2



SIGN NO.	DESCRIPTION
1	211 MOLALLA WOODB□RN □CT 1□4 MILE
2	DO NOT PASS
3	TOLIVER STREET
4	ELEMENTARY SC□OOL
5	45 MP□

LEGEND:

- WV — INDICATES WATER VALVE
- PV — INDICATES TELEP□ONE VA□LT
- TP — INDICATES TELEP□ONE PEDESTAL
- INDICATES SIGN □SEE SIGN TABLE □OR DESC.□
- INDICATES POWER POLE
- MB — INDICATES MAIL BOX
- ST — INDICATES STORM SEWER MAN□OLE
- S — INDICATES SANITARY SEWER MAN□OLE
- INDICATES MON□MENT □O□ND AS NOTED
- 12"□IR — INDICATES EVERGREEN TREE WIT□ TR□NK DIAMETER AND TYPE
- 12"MAPLE — INDICATES DECID□O□S TREE WIT□ TR□NK DIAMETER AND TYPE
- INDICATES SET 5/8" IRON ROD WIT□ YELLOW PLASTIC CAP "AG GEO NW LLC"
- YPC — INDICATES YELLOW PLASTIC CAP
- T — T — INDICATES TELEP□ONE LOCATE
- SS — SS — INDICATES SANITARY LOCATE
- ST — ST — INDICATES STORM LOCATE
- W — W — INDICATES WATER LOCATE
- OHP — INDICATES OVER □EAD POWER
- INDICATES BO□NDARY
- INDICATES EDGE O□ ASP□ALT
- INDICATES EDGE O□ CONCRETE
- INDICATES EDGE O□ GRAVEL
- INDICATES 5 □OOT INTERVAL CONTO□R
- INDICATES 1 □OOT INTERVAL CONTO□R
- X — X — INDICATES □ENCE LINE

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JAN. 16, 1996
TONY J. BROOKS
2736

RENEWAL: 12/31/19
SIGNED: _____

50 25 0 50 75 100
SCALE 1 INCH = 50 FEET

Client: 17-051

Ag Geospatial NW
Ag spatial Data Management
+
Land Surveying & GIS
30532 S McCo□n Road□Molalla□OR 97038
503-329-8008 cell□te□t
info□ AgGeoNW.com □□□.AgGeoNW.com

Appendix C

Preliminary Plat

PARTITION PLAT No. 2018 - □□□□□□□□□□

O□ A PORTION O□ TRACT 37 O□
T□E S□AVER PLACE PLAT NO. 360
IN T□E □□G□ GORDON D.L.C. NO. 40
IN T□E NE 1□4 O□ SECTION 7
T. 5 S.□R. 2 E.□W.M.
CITY O□ MOLALLA□
CLACKAMAS CO□NTY□OREGON

LEE LARSON PROPERTIES LLC
5-2E-07A 00702
DOC. NO. 2006-061160

CALC□LATED POSITION
O□ L 106□90.50 P.I.
PER S□RVEY NO. 2016-039

249.89'

30'

30'

212.16'

216.75' □217.44' R1□

S 82°10'02" E 476.63'

259.88' □260.00' R1□

6' C□AINLINK □ENCE
W□BARBED WIRE
0.5' NORT□ O□ LINE

□O□ND AND □ELD □OR LINE
5/8" IRON ROD W□YPC
□NREADABLE
□L□S□□BENT TIED SPIN □OLE
N 82°10'02" W 0.70' FROM IRON ROD SET
S□OWN AS □O□ND IN S□RVEY NO. 23269

□O□ND AND □ELD 5/8" IRON ROD W□YPC
"PACI□IC S□RVEY LS 2319"
□P 0.5'
SET IN S□RVEY NO. 23269

□O□ND AND □ELD 5/8" IRON ROD
DOWN 0.3'□BENT TIED SPIN □OLE
SET IN S□RVEY NO. 23269

PARTITION PLAT 1992-189 INDICATES
A □AYLOCK P-CAP AND S□GGESTS IT WAS SET IN
S□RVEY NO. 23269. □OWEVER □AYLOCK LABELS
SAID MON□MENT AS □O□ND IS SAID S□RVEY

4.50' RIG□T O□ WAY DEDICATION

STATE □IG□WAY 213

N 19°08'08" E 2030.82'

N 19°08'09" E 633.21'

PROPOSED
PARCEL 1
3.95 ACRES

E□RICK
INVESTMENTS LLC
5-2E-07A 00709
DOC. NO. 2006-057558

344.35'

□O□ND AND □ELD 5/8" IRON ROD W□YPC
"PACI□IC S□RVEY LS 2319"
□L□S□
SET IN PARTITION PLAT NO. 1992-189

A PORTION OF TRACT 37
"THE SHAVER PLACE"
PLAT NO. 360
YAW KATHLEEN & CRAIG
DOC. NO. 06-032481
8.75 ACRES

S 37°10'02" E
79.52'
74.12'

S 82°10'02" E 475.03'

6' C□AINLINK □ENCE
W□BARBED WIRE
0.4' WEST O□ LINE

256.45' □256.63' R2□
S 08°19'25" W 771.55'

PROPOSED 10' □TILITY EASEMENT
RECORDED BY SEPERATE INSTR□MENT

PROPOSED 40' ACCESS EASEMENT
RECORDED BY SEPERATE INSTR□MENT

P.P-1992-189
PARCEL 1

15' SANITARY SEWER EASEMENT
PER DOC. NO. 88-026307

PROPOSED
PARCEL 2
4.73 ACRES

ST□T□MAN LLC
5-2E-07A 00701
DOC. NO. 91-58125

□O□ND AND □ELD 5/8" IRON ROD W□YPC
"PACI□IC S□RVEY LS 2319"
□L□S□
SET IN S□RVEY NO. 23269

30'

30'

N 82°06'06" W 273.57' (274.19' R1)

268.99'

□O□ND AND □ELD 5/8" IRON ROD W□YPC
"PACI□IC S□RVEY LS 2319"
□P 0.1'
SET IN S□RVEY NO. 23269

□O□ND AND □ELD □OR LINE
5/8" IRON ROD W□YPC
"PACI□IC S□RVEY LS 2319"
DOWN 0.4'
SET IN S□RVEY NO. 23269
N 82°05'43" W 0.66' FROM IRON ROD SET

N 07°51'29" E 150.14' (150.0' R1)

268.90' 268.90' R1 268.93' R2□

DOYLE
5-2E-07A 02300
DOC. NO. 2015-019507

15' SANITARY SEWER EASEMENT
PER DOC. NO. 88-026307

INITIAL POINT
□O□ND AND □ELD 5/8" IRON ROD W□YPC
"DAVIS □ PIKE"
□L□S□
SET IN S□RVEY NO. 21697
SO□T□EAST CORNER O□ TRACT 37□
T□E S□AVER PLACE

CALC□LATED POSITION
O□ L 127□21.40 P.O.T.
PER S□RVEY NO. 2016-039

□O□ND AND □ELD 5/8" IRON ROD W□YPC
"PACI□IC S□RVEY LS 2319"
□P 0.2'
SET IN S□RVEY NO. 23269

N 82°08'28" W 320.62' (320.89' R1)

SOM LLC
5-2E-07A 02200
DOC. NO. 16-090044

LEGEND:

●	MON□MENT □O□ND AS NOTED
O	SET 5/8" IRON ROD W□YPC "AG GEO NW LLC" SET MARC□□2017
IR	IRON ROD
YPC	YELLOW PLASTIC CAP
SN	S□RVEY N□MBER
P.P.	PARTITION PLAT
□□	RECORD DATA
R1	S□RVEY RE□ERENCE
DOC. NO.	DOC□MENT N□MBER
——X——X——	□ENCE
——— – ———	CENTERLINE

S□RVEY RE□ERECES:

R1. PACI□IC S□RVEYS SN 23269 BY C□ARLES □. □AYLOCK
R2. PARTITION PLAT NO. 1992-189 BY C□ARLES □. □AYLOCK
R3. ODOT S□RVEY SN 2016-039

REGISTERED
PROFESSIONAL
LAND SURVEYOR

OREGON
JAN. 16, 1996
TONY J. BROOKS
2736

RENEWAL: 12/31/17
SIGNED: _____

60 30 0 60 90 120

SCALE 1 INCH = 60 FEET

Ag Geospatial NW
Ag spatial Data Management + Land Surveying & GIS
30532 S McCo□n Road□Molalla□OR 97038
503-329-8008 cell□te□t
info□ AgGeoNW.com □□□.AgGeoNW.com

Appendix D

Traffic Impact Analysis

Molalla Farm Store

Molalla, Oregon

Date:
February 20, 2018

Prepared for:
Amy Thomas
Jade Consulting, LLC

Prepared by:
William Farley, PE
Kaitlin Littleford, EIT

LANCASTER
ENGINEERING

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

Table of Contents

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Executive Summary

1. A four-acre property in Molalla, Oregon, has been proposed for a Comprehensive Plan amendment and zone change from Light Industrial (M-1) to General Commercial (C-2). The development of a 19,091 square-foot farm store is to follow the zone change on the subject site.

2. Under the reasonable worst-case development scenarios for existing and proposed zoning designations of the subject property, there could be an increase of 69 trips during the morning peak hour and 130 trips during the evening peak hour.

3. The proposed farm store is projected to generate 27 trips during the morning peak hour and 27 trips during the evening peak hour.

4. Based on the detailed analysis, the intersection of Highway 213 at Highway 211 is projected to operate acceptably through the year 2038, with or without zone change and subsequent development.

5. The intersection of Highway 213 at the site access is projected to exceed capacity in the year 2038 under proposed zoning. If the site is developed at an intensity near the level of the reasonable worst-case development scenario, a center two-way left-turn lane would reduce the v/c ratio to an acceptable level.

6. The intersection of Highway 213 at Toliver Road is projected to exceed capacity by year 2020, regardless of the proposed zone change or development of the farm store. The Oregon Department of Transportation's Statewide Transportation Improvement Plan and the City of Molalla's 2001 Transportation System Plan both outline near-term improvements for this intersection.

7. Traffic signal warrants are not projected to be met for the unsignalized study intersections. No new traffic signals are recommended. Left-turn lane warrants are met for the intersection of Highway 213 at the site access as soon as ten southbound left-turns are added to the system.

8. A detailed examination of the crash history at the study intersection shows no significant safety hazards and no trends that are indicative of design deficiencies.

Introduction

The property located at 31176 S Highway 213 in western Molalla, Oregon, has been proposed for a Comprehensive Plan amendment, zone change, and subsequent development. The project site consists of a portion of Parcel 01088637 and comprises approximately four acres. The project includes rezoning the property from Light Industrial (M-1) to General Commercial (C-2) and the development of a 19,091 square-foot farm store.

This report examines the traffic impacts of the proposed development on the transportation system in the vicinity of the project site. The purpose of this report is to ensure safe and efficient performance of the transportation facilities that will be impacted by the proposed map amendment, zone change, and development.

All supporting data and calculations are included in the appendix to this report.

Location Description

The project site is located east of Highway 213 in Molalla, Oregon. The lot is bordered to the north by a school bus service, the east by an industrial supply company, the south and southeast by undeveloped land, and the west by Highway 213. The project site currently contains a home and various outbuildings.

Based on the location of the subject property and preliminary calculations of trip generation for the reasonable worst-case development scenarios for both the existing and proposed zoning designations, the following intersections have been identitifed for analysis:

- Highway 213 at Highway 211
- Highway 213 at site access
- Highway 213 at Toliver Road

Vicinity Streets

Oregon Highway 213, otherwise known as Cascade Highway South, is under the jurisdiction of the Oregon Department of Transportation (ODOT) and is classified as a District Highway and an Urban Minor Arterial.[1] It carries one lane in each direction, expanding to include a two-way left turn lane (TWLTL) south of the project site and exclusive left turn lanes at the intersection with Highway 211. The posted speed limit is 40 mph. There are marked bike lanes and sidewalks near the intersection with Highway 211, but none near the project site.

[1] *Functional Classification*, Oregon Department of Transportation, 2012. http://www.oregon.gov/ODOT/Engineering/Documents_RoadwayEng/HDM_A-Functional-Classification.pdf.

Oregon Highway 211, otherwise known as Woodburn Estacada Highway, is under the jurisdiction of ODOT and is classified as Distict Highway and an Urban Minor Arterial. It carries one lane in each direction, with exclusive turn lanes at the intersection with Highway 213. East of Highway 213, it includes a TWLTL. There are marked bike lanes and sidewalks in the vicinity of the intersection with Highway 213. The posted speed limit is 40 mph.

Toliver Road is under the jurisdiction of the City of Molalla and is classified by the City as a Major Collector.[2] It carries one lane in each direction. There are no bike or pedestrian facilities at the intersection of Highway 213 at Toliver Road. The posted speed limit is 35 mph east of Highway 213 and 45 mph west of Highway 213.

Study Intersections

The intersection of Highway 213 at Highway 211 is a four-legged signalized intersection. The northbound and westbound approaches have separate lanes for left-turn, through, and right-turn movements. The southbound and eastbound approaches each have a dedicated left-turn lane and a shared lane for through and right-turn movements. Left turns on all approaches are served by protected/permitted phasing. There are bike lanes and crosswalks on all four approaches.

The intersection of Highway 213 at Toliver Road is a four-legged intersection with stop control on the eastbound and westbound approaches of Toliver Road. Each approach has one lane for all turning movements. There are no bike lanes or marked crosswalks.

A vicinity map showing the project site, vicinity streets, and intersection configurations is shown in Figure 1 on page 4.

Traffic Counts

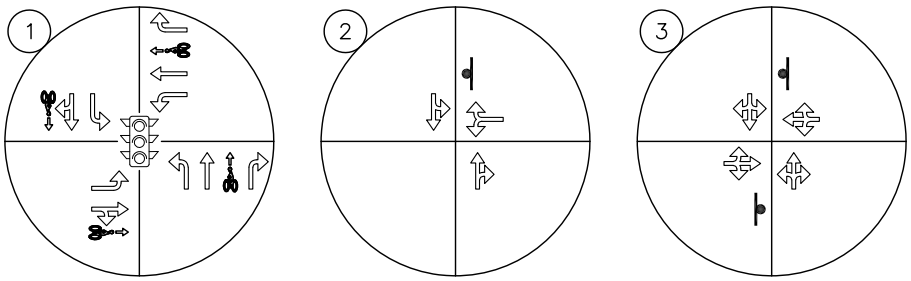
Traffic counts were conducted at the intersections of Highway 213 at Highway 211 and Highway 213 at Toliver Road from 4:00 to 6:00 p.m. on Tuesday, January 16th, 2018, and 7:00 a.m. to 9:00 a.m. on Wednesday, January 17th, 2018. Turning movement volumes corresponding to each intersection's individual peak hour were used for analysis. Through volumes at the location of the site access were interpolated using counts at Highway 213 at Toliver Road.

Figure 2 on page 5 shown the existing traffic volumes for the study intersection during the morning and evening peak hours. Detailed count data is provided in the appendix to this report.

[2] *City of Molalla Draft Transportation System Plan*, Kittelson & Associates, 2001. http://www.cityofmolalla.com/sites/default/files/fileattachments/planning/page/1603/molalla_transportation_system_plan_tsp.pdf

LEGEND

- STUDY INTERSECTION
- STOP SIGN
- TRAFFIC SIGNAL
- BIKE LANE
- PROJECT SITE
- ARTERIAL ROADWAY
- COLLECTOR ROADWAY
- LOCAL ROADWAY

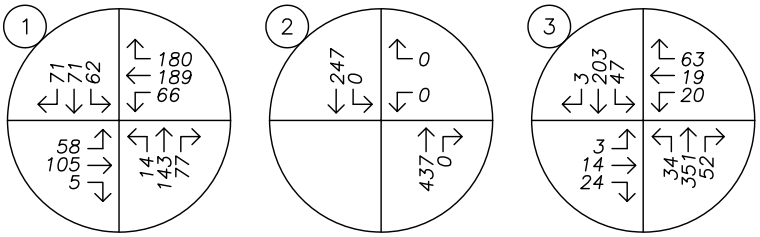


VICINITY MAP

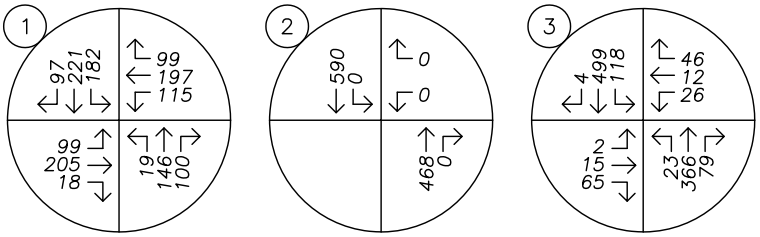
no scale

FIGURE 1

AM PEAK HOUR



PM PEAK HOUR



TRAFFIC VOLUMES
Existing Conditions
AM & PM Peak Hours

no scale

FIGURE 2

Trip Generation & Distribution

Trip Generation

The four-acre subject property is proposed for a Comprehensive Plan amendment and zone change from Light Industrial (M-1) to General Commercial (C-2). Subsequently, a 19,097 square-foot farm store is to be developed. To estimate the number of trips generated by the proposed map amendment, zone change, and subsequent development, trip rates from the *Trip Generation Manual*[3] were used.

To evaluate the impacts of the proposed zone change, the reasonable worst-case development scenarios under existing and proposed designations were examined. Under the current M-1 zoning, the reasonable worst-case development scenario that the property could accommodate is a 149,000 square-foot, three-story office building. Using land-use code 710, *General Office Building*, in the *Trip Generation Manual*, this development would be projected to generate 173 trips during the morning peak hour, 171 trips during the evening peak hour, and 1,452 total weekday trips.

Under the proposed C-2 zoning, the reasonable worst-case development scenario that the property could accommodate an 87,000 square-foot medical-dental office building. Using land-use code 720, *Medical-Dental Office Building*, this development would generate 242 morning peak hour trips, 301 evening peak hour trips, and 3,028 total daily trips.

To estimate the number of trips that could be generated by the proposed development of the farm store, trip rates for land-use code 810, *Tractor Supply Store*, were used. Since no morning peak hour data is provided for land-use code 810 in the *Trip Generation Manual*, it was assumed that the trip rate provided for the evening peak hour would apply to the morning peak hour as well. The portion of traffic entering and exiting the site during the evening peak hour were reversed for the morning peak hour. Data for weekday trips was not provided.

The trip generation calculations show that the proposed development of a 19,097 square-foot farm store is projected to generate a total of 27 trips during the morning peak hour, with 14 trips entering the site and 13 exiting. During the evening peak hour, 27 trips are projected to be generated, with 13 entering the site and 14 exiting.

Trip generation estimates are summarized in Table 1 on the following page. Detailed trip generation calculations are included in the appendix to this report.

[3] Institute of Transportation Engineers (ITE), *Trip Generation Manual*, *10th Edition*, 2017.

Table 1 – Trip Generation Summary

	Code	Size	Morning Peak Hour			Evening Peak Hour			Weekday Total
			In	Out	Total	In	Out	Total	
Current Zoning									
Office Building	710	149,000 s.f.	149	24	173	27	144	171	1,452
Proposed Zoning									
Medical-Dental Office Building	720	87,000 s.f.	189	53	242	84	217	301	3,028
Net Difference			**40**	**29**	**69**	**57**	**73**	**130**	**1,576**
Proposed Development									
Farm Store	**810**	**19,097 s.f.**	**14**	**13**	**27**	**13**	**14**	**27**	**--**

Trip Distribution

The directional distribution of site trips to and from the proposed development was estimated based on locations of likely trip destinations, locations of major transportation facilities in the site vicinity, and existing travel patterns at the study area intersections.

The following trip distribution was estimated and used for analysis:

- 30 percent of trips will travel to/from the north along Highway 213
- 25 percent of trips will travel to/from the south along Highway 213
- 20 percent of trips will travel to/from the east along Highway 211
- 10 percent of trips will travel to/from the west along Highway 211
- 15 percent of trips will travel to/from the east along Toliver Road

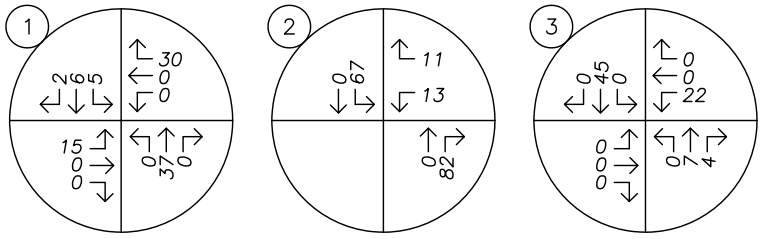
The trip distribution and assignment for the worst-case build-out scenario under existing and proposed zoning are shown in Figure 3 on page 8 and Figure 4 on page 9, respectively. Trip distribution and assignment for the proposed development are shown in Figure 5 on page 10.

LEGEND

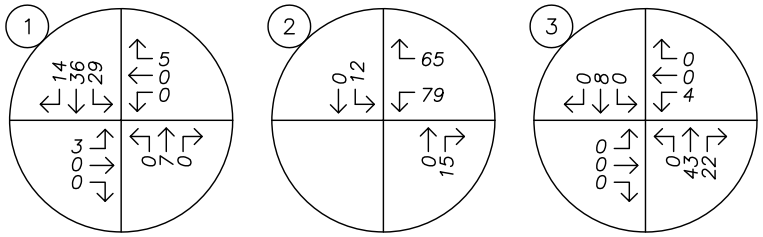
XX% PERCENT OF PROJECT TRIPS

TRIP GENERATION			
	IN	OUT	TOTAL
AM	149	24	173
PM	27	144	171

AM PEAK HOUR



PM PEAK HOUR



TRIP DISTRIBUTION AND ASSIGNMENT
Existing Zoning Worst Case – Site Trips
AM & PM Peak Hours

no scale

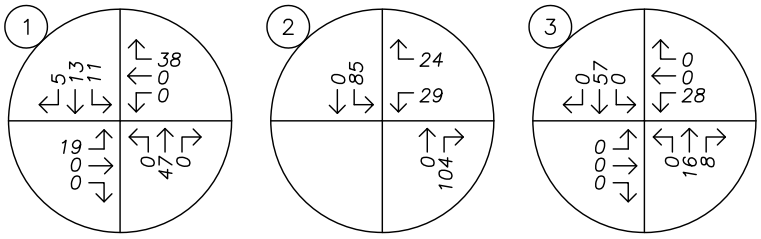
FIGURE 3

LEGEND

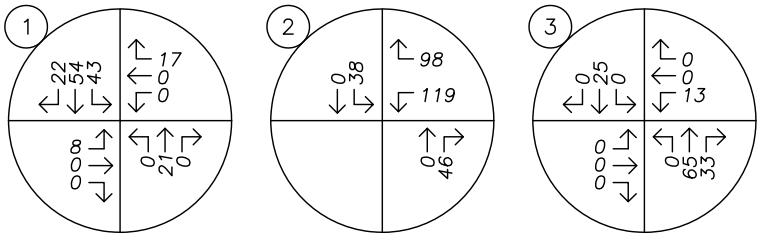
XX% PERCENT OF PROJECT TRIPS

TRIP GENERATION			
	IN	OUT	TOTAL
AM	189	53	242
PM	84	217	301

AM PEAK HOUR



PM PEAK HOUR



TRIP DISTRIBUTION AND ASSIGNMENT
Proposed Zoning Worst Case – Site Trips
AM & PM Peak Hours

no scale

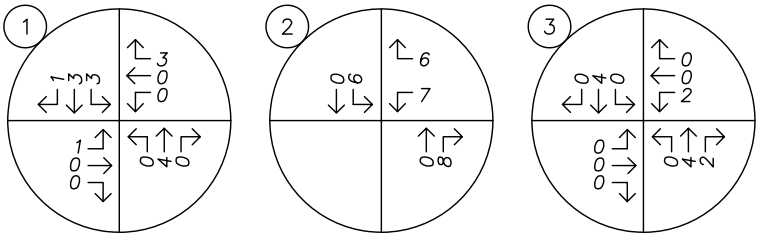
FIGURE 4

LEGEND

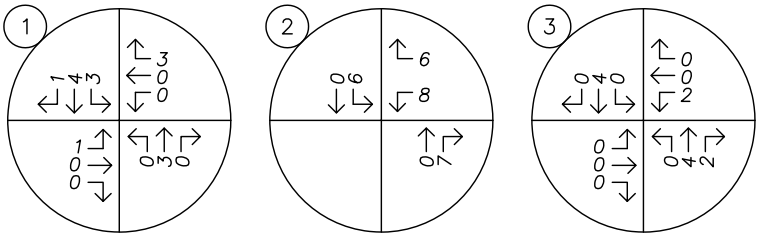
XX% PERCENT OF PROJECT TRIPS

TRIP GENERATION			
	IN	OUT	TOTAL
AM	14	13	27
PM	13	14	27

AM PEAK HOUR



PM PEAK HOUR



TRIP DISTRIBUTION AND ASSIGNMENT
Proposed Project – Site Trips
AM & PM Peak Hours

no scale

FIGURE 5

Future Traffic Volumes

To provide analysis of the impact of the proposed Comprehensive Plan map amendment, zone change, and subsequent development on the existing transportation facilities, an estimation of future traffic volumes is required. In order to calculate future traffic volumes, a growth rate must be applied to the collected traffic volumes.

Since Highway 213 and Highway 211 are under the jurisdiction of ODOT, traffic volumes were seasonally adjusted to reflect the 30th highest hour of traffic, as per procedures described in ODOT's Analysis Procedures Manual. Using a map of seasonal trends at nearby Automatic Traffic Recorders, the portions of Highway 213 and Highway 211 in the project vicinity were determined to show a commuter seasonal trend.[4] An adjustment factor of 1.06 was applied to through volumes on Highway 213 at its intersections with the site access and Toliver Road, and all turning movement volumes at the intersection of Highway 213 at Highway 211.

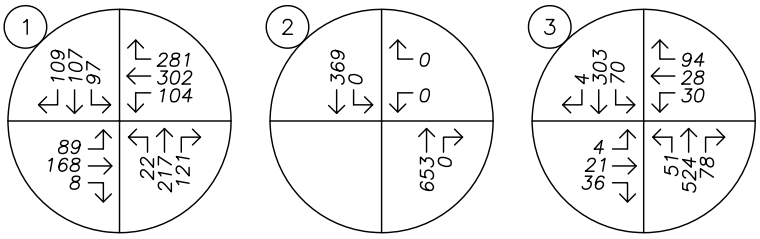
Growth rates for traffic traveling through the intersection of Highway 213 at Highway 211 were derived using ODOT's 2036 Future Volume Table, in accordance with ODOT's Analysis Procedures Manual. Using data corresponding to milepost 16.12 of ODOT highway number 160, linear growth factors of 1.04 for the 2-year build-out scenario and 1.45 for the 20-year planning horizon was calculated for Highway 213. For Highway 211, linear growth factors of 1.05 for the 2-year build-out scenario and 1.49 for the 20-year planning horizon were calculated using data corresponding to milepost 11.36 of ODOT highway number 161.

Growth rates for the traffic along Highway 213 near the intersections with the site access and Toliver Road were derived in the same manner, using data corresponding to milepost 15.69 of ODOT highway number 160. Linear growth factors of 1.04 for the 2-year build-out scenario and 1.41 for the 20-year planning horizon were calculated.

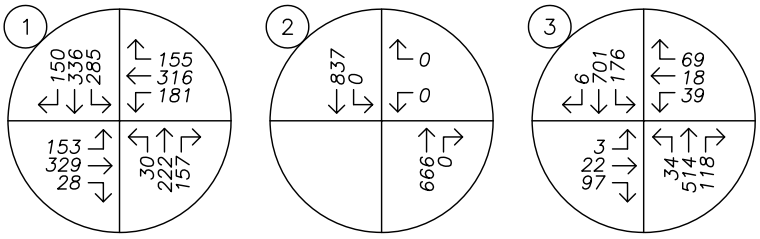
The growth factors were applied to the study intersections to determine year 2020 and year 2038 traffic volumes. Figure 6 on page 12 shows the projected year 2038 background traffic volumes during the morning and evening peak hours, with no development assumed on the subject site. Figure 7 on page 13 and Figure 8 on page 14 show 2038 background traffic volumes plus trips generated by reasonable worst-case development of the subject property under existing and proposed zoning respectively. Figure 9 on page 15 shows 2020 background traffic volumes during the morning and evening peak hours. Figure 10 on page 16 shows year 2020 background traffic volumes plus trips generated by development of the proposed farm store, as described in the Trip Generation section.

[4] http://geo.maps.arcgis.com/home/webmap/viewer.html?webmap=4609ba4912c44b118fe8353a798c86bb

AM PEAK HOUR



PM PEAK HOUR

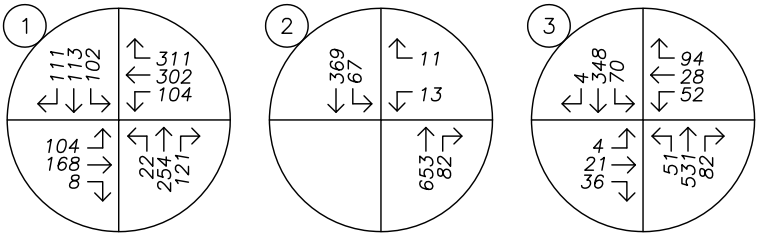


TRAFFIC VOLUMES
2038 Background – Seasonally Adjusted
AM & PM Peak Hours

no scale

FIGURE 6

AM PEAK HOUR



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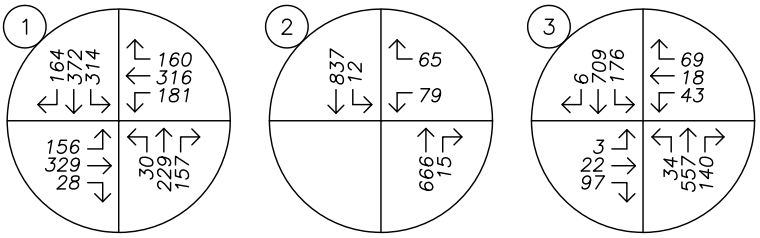
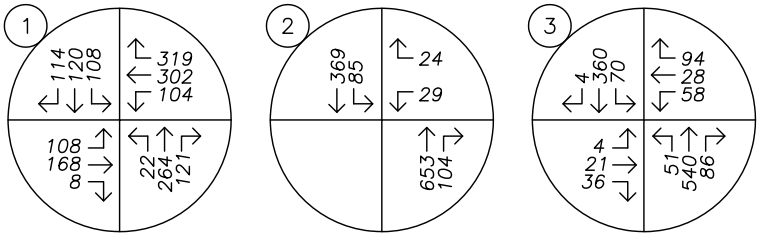


TRAFFIC VOLUMES
2038 Background Plus Site Trips – Existing Zoning Worst Case
AM & PM Peak Hours

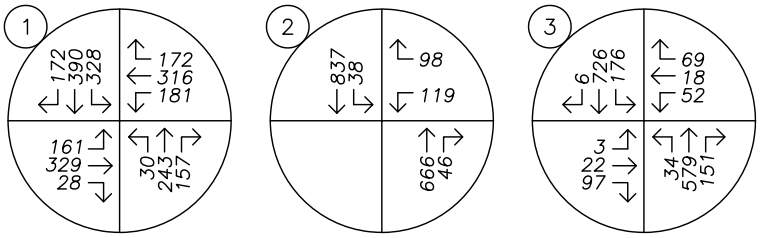
no scale

FIGURE 7

AM PEAK HOUR



PM PEAK HOUR

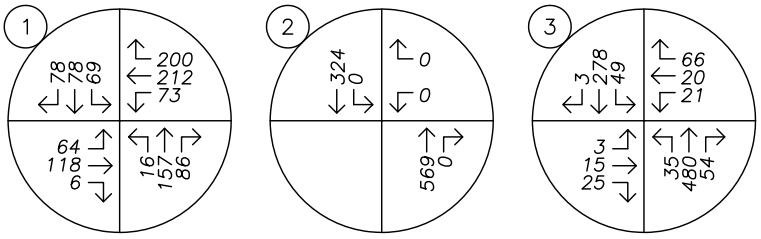


TRAFFIC VOLUMES
2038 Background Plus Site Trips – Proposed Zoning Worst Case
AM & PM Peak Hours

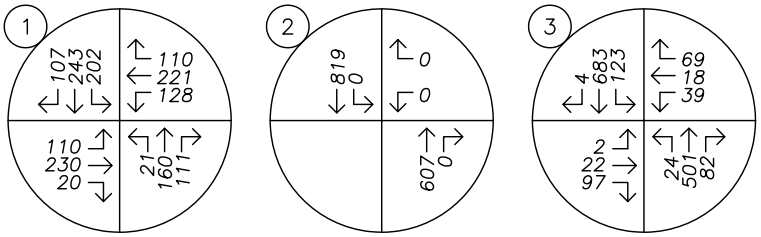
no scale

FIGURE 8

AM PEAK HOUR



PM PEAK HOUR



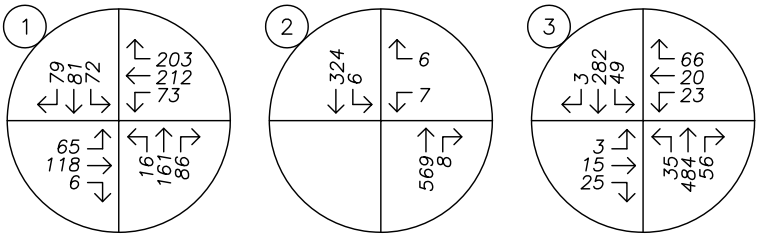
TRAFFIC VOLUMES
2020 Background – Seasonally Adjusted
AM & PM Peak Hours

no scale

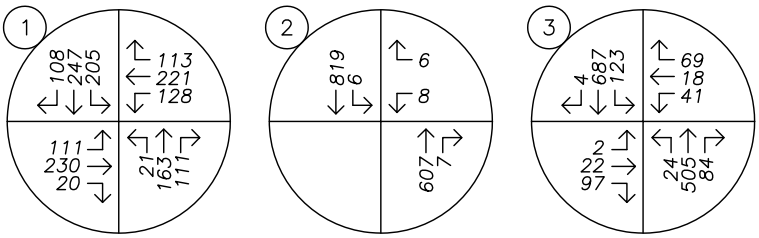
FIGURE 9

PAGE 15

AM PEAK HOUR



PM PEAK HOUR



TRAFFIC VOLUMES
2020 Background Plus Project Site Trips
AM & PM Peak Hours

no scale

FIGURE 10

Operational Analysis

To determine the performance of the study intersections, a capacity analysis was conducted for the morning and evening peak hours. The analysis was conducted according to the intersection analysis methodology given in the *Highway Capacity Manual* (HCM), published by the Transportation Research Board. An intersection's level of service (LOS) can range from LOS A, which indicates very little or no delay, to LOS F, which indicates a high degree of congestion and delay.

Since the study intersections are under the jurisdiction of the Oregon Department of Transportation, the applicable minimum operational standards for these facilities are established under the Oregon Highway Plan and are based on the volume-to-capacity (v/c) ratio of the intersection. The v/c ratio compares the actual traffic demand to the potential capacity of the intersection to determine the proportion that is utilized by traffic. Since Highway 213 and Highway 211 are District Highways located in the City's Urban Growth Boundary with speed limits between 35 and 45 mph, the Oregon Highway Plan requires the highway intersections have a maximum allowable v/c ratio of 0.90.[5] Results of the analysis are shown in Table 2. Detailed reports are provided in the appendix.

Table 2 – Capacity Analysis Summary

	Morning Peak Hour			Evening Peak Hour		
	v/c	LOS	Delay (s)	v/c	LOS	Delay (s)
Highway 213 at Highway 211						
2018 Existing Conditions	0.33	C	25	0.51	C	27
2020 Background Conditions	0.37	C	25	0.57	C	29
2020 Background Plus Project	0.37	C	26	0.57	C	29
2038 With Current Zoning	0.55	C	29	0.85	D	39
2038 With Proposed Zoning	0.57	C	30	0.87	D	40
Highway 213 at Site Access						
2020 Background Plus Project	0.05	C	17	0.07	C	25
2038 With Current Zoning	0.13	D	25	0.85	F	86
2038 With Proposed Zoning	0.32	D	33	1.46	F	>120
With TWLTL on Hwy 213	0.20	C	20	0.79	F	53
Highway 213 at Toliver Road						
2018 Existing Conditions	0.30	C	18	0.42	D	35
2020 Background Conditions	0.43	D	27	1.37	F	>120
2020 Background Plus Project	0.45	D	29	1.45	F	>120
With Single-Lane Roundabout	0.60	B	12	0.80	C	20
2038 With Current Zoning	1.19	F	>120	2.98	F	>120
2038 With Proposed Zoning	1.32	F	>120	4.22	F	>120
With Single-Lane Roundabout	0.72	C	18	0.88	D	33

[5] Oregon Department of Transportation, *1999 Oregon Highway Plan, Including amendments November 1999 through May 2015*, 1999.

The intersection of Highway 213 at Highway 211 is expected to operate acceptably in all analysis scenarios, regardless of the proposed zone change or subsequent development.

The site access of the property to Highway 213 is projected to operate within ODOT's performance standards under all analysis scenarios except the evening peak hour of the 2038 proposed zoning worst-case scenario build-out case. If the proposed property is to be developed at an intensity assumed under the reasonable worst-case development scenario, it is recommended that the roadway be widened to accommodate a center two-way left-turn lane. Providing a TWLTL on Highway 213 will allow vehicles turning left from the site access onto southbound Highway 213 to make a two-stage left turn, reducing the v/c ratio at this intersection to 0.77, an acceptable level.

It should be noted that the proposed development of the farm store is projected to generate significantly less trips than the reasonable worst-case development scenario under the existing zoning of the property. It is not anticipated that traffic leaving the farm store will require the use of a center refuge in order for the intersection to operate acceptably.

The intersection of Highway 213 at Toliver Road is projected to exceed the maximum v/c ratio under all future scenarios, regardless of the property's zoning designation or any development. The City of Molalla's current Transportation System Plan, adopted in 2001, has identified this intersection as requiring improvements, notably a traffic signal or roundabout. ODOT's 2018-2021 Statewide Transportation Improvement Program lists this intersection as one under consideration for design and construction of a roundabout.[6]

The construction of a single-lane roundabout at the intersection of Highway 213 at Toliver Road would improve the intersection's v/c ratio to 0.80 or better under year 2020 traffic conditions, regardless of trips from the proposed development. The roundabout would be projected to operate with a v/c ratio of 0.88 or better under year 2038 traffic conditions with the roundabout, regardless of the zoning designation of the subject site.

With the construction of a roundabout at Highway 213 at Toliver Road, all intersections are projected to operate within the performance standards established by ODOT through year 2020 traffic conditions, including with trips resulting from the proposed development. It is recommended that the applicant work with the City and ODOT to determine appropriate proportionate contributions towards the near-term mitigation of the intersection.

With the construction of a roundabout at Highway 213 at Toliver Road and a TWLT for vehicles to conduct two-stage left-turns at the site access to Highway 213, all intersections are projected to operate within the performance standards established by ODOT through year 2038 traffic conditions, with or without the

[6] *Active 2018-2021 STIP*, ODOT, 2018. http://www.oregon.gov/ODOT/STIP/Documents/OnlineSTIP_Public.pdf.

proposed zone change of the subject property. No other operational mitigations are recommended or required.

Safety Analysis

Warrant Analysis

Traffic signal warrants were examined for the intersection of Highway 213 at Toliver Road. Using 70 percent of standard traffic signal warrants due to the location of the intersection in a community with a population less than 10,000, and after reducing right-turn volumes on the minor-street approach by 85 percent of the capacity, traffic signal warrants were not found to be met at the intersection under any analysis scenario. No new traffic signals are recommended.

Left-turn lane warrants were examined for southbound traffic at the intersection of Highway 213 at the site access. A left-turn refuge is primarily a safety consideration for the major street, removing left-turning vehicles from the through traffic stream. The warrants examined implement the design curves developed by the Texas Transportation Institute (TTI), as adopted by ODOT in its Analysis Procedures Manual. These warrants are evaluated based on the number of left-turning vehicles, the number of advancing and opposing vehicles, the number of lanes, and the roadway travel speed.

Left-turn lane warrants are met under existing conditions for the intersection of Highway 213 at Toliver Road.

Based on the approaching and opposing volumes during the evening peak hour under existing conditions, any development that contributes ten or more trips to a southbound left-turn movement will trigger the warrant for a refuge. If development is ever at the intensity examined under the proposed zoning's reasonable worst-case development scenario, it is recommended that the left-turn lane be provided in the form of a center TWLTL.

Detailed warrant calculations are provided in the appendix.

Crash Data Analysis

Using data obtained from ODOT, a review was performed of the most recent five years of available crash data (January 2011 through December 2015). Crash rates were calculated under the common assumption that traffic counted during the evening peak hour represents ten percent of annual average daily traffic (AADT) at each intersection. Crash rates for each intersection were reported as crashes per million entering vehicles (CMEV) and were compared against the average and 90th percentile crash rates for intersections with similar approach configurations and traffic control types in order to determine whether safety mitigation is necessary or appropriate. Detailed crash data is provided in the appendix.

The intersection of Highway 213 at Highway 211, which has an AADT of approximately 14,980 vehicles, had 16 collisions during the analysis period. The crashes included three rear-end collisions, four angle collisions, and nine turning movement collisions; and resulted in 12 possible injuries and one non-incapacitating injury. The crash rate for the intersection was calculated to be 0.59 CMEV. The average crash rate for urban four-legged intersections operating under signal control in Oregon was 0.477 CMEV with a 90th percentile crash rate of 0.860 CMEV.

The intersection of Highway 213 at Toliver Road, which has an AADT of approximately 12,550 vehicles, had 12 collisions during the analysis period. The crashes included four rear-end collisions, four angle collisions, and four turning movement collisions; and resulted in nine possible injuries, eight non-incapacitating injuries, and one incapacitating injury. The crash rate for the intersection was calculated to be 0.52 CMEV. The average crash rate for urban four-leg intersections operating under stop control is 0.198 CMEV with a 90th percentile crash rate of 0.408 CMEV.

The crash that resulted in an incapacitating injury occurred when a westbound vehicle disregarded the stop sign and failed to yield right-of-way to a northbound semi-truck. The driver of the westbound vehicle suffered the incapacitating injury.

Although the intersection of Highway 213 at Toliver Road has a crash rate higher than the 90th percentile crash rate for four-legged urban intersections under stop control, both the City and ODOT have identified the need for improvements. The construction of a roundabout, as being considered by both jurisdictions, will improve the safety of the intersection and no further mitigation is recommended.

Based on the detailed review of the crash data, no significant patterns and no contributing design concerns were identified at the study intersections. No other safety improvements are recommended in conjunction with the proposed zone change or development of a farm store.

Transportation Planning Rule

Oregon's Transportation Planning Rule (TPR) is contained in Section 660-012-0060 of the Oregon Administrative Rules. The TPR is in place to ensure that when an adopted plan or land use regulation is amended, provisions are made to ensure that the transportation system is capable of supporting any potential increase in trip intensity resulting from the amendment. The applicable portions of the TPR are quoted in italics below, with responses directly following.

660-012-0060 Plan and Land Use Regulation Amendments

(1) If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:

(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

Response:

The proposed change in zoning will not change any standards to the functional classification of existing or planned transportation facilities. Accordingly, this section is not triggered.

(b) Change standards implementing a functional classification system; or

Response:

No changes are proposed to any standards implementing the functional classification system. Accordingly, this section is also not triggered.

(c) Result in any of the effects listed in paragraphs (A) through (C) of this subsection based on projected conditions measured at the end of the planning period identified in the adopted TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.

(A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or

(C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.

Response:

Based on the operational analysis, the intersection of Highway 213 at Highway 211 is projected to operate acceptably per ODOT's standards under year 2038 conditions, regardless of the proposed Comprehensive Plan map amendment or zone change. The intersection of Highway 213 at Toliver Road, however, is projected to exceed allowable operational standards under 2038 conditions, regardless of the proposed Comprehensive Plan map amendment and zone change.

As discussed previously, near term improvements for the intersection of Highway 213 at Toliver Road are outlined in ODOT's 2018-2021 Statewide Transportation Improvement Plan and the City of Molalla's 2001 Transportation System Plan. Accordingly, it is expected that intersection improvements are likely to be constructed within the planning horizon. With the construction of a single-lane roundabout, the intersection is projected to operate acceptably with the proposed zone change and subsection (C) is satisfied..

Based on the detailed analysis, the proposed Comprehensive Map amendment and zone change of the subject property from Light Industrial (M-1) to General Commercial (C-2) will not degrade the performance of any existing or planned transportation facility. Accordingly, the Transportation Planning Rule is satisfied.

Conclusions

The proposed Comprehensive Plan amendment and zone change from Light Industrial (M-1) to General Commercial (C-2) will not significantly affect the existing or planned transportation facilities as defined under Oregon's Transportation Planning Rule.

Based on the detailed review of the crash data, no significant patterns and no contributing design concerns were identified at the study intersections.

Left-turn lanes are projected to be met for the site access as soon as any development contributes ten southbound left-turns. Left-turn lane warrants are met under existing conditions for the intersection of Highway 213 at Toliver Road.

Traffic signal warrants are not projected to be met at the intersection of Highway 213 at Toliver Road through year 2038 traffic conditions.

With the planned improvement to the intersection of Highway 213 at Toliver Road, and a center two-way left-turn lane at the site access to Highway 213, each of the study intersections are projected to operate within the Oregon Department of Transportation's performance standards through year 2038, even with full development under the proposed zoning.

With the planned improvement to the intersection of Highway 213 at Toliver Road, each of the study intersections are projected to operate acceptably through year 2020, regardless of trips resulting from the proposed development of a farm store.

Appendix

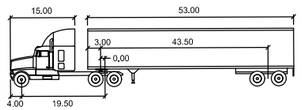
JADE CONSULTING, LLC
Jinright & Associates Development Engineers
208 Greeno Road North Fairhope, Alabama 36532
P.O. Box 1929 Fairhope, Alabama 36533
251.928.3443(tel) 251.928.3665(fax)
jadengineers.com

DATE: 11/03/17

GRAPHIC SCALE
100 0 100
(IN FEET)
1 inch = 100 ft.

SITE DATA TABLE

STATE OF OREGON COUNTY OF CLACKAMAS CITY OF MOLALLA	
EXIST. TAX PARCEL ID:	01088637
ZONING:	M-1; LIGHT INDUSTRIAL
YARD SETBACKS:	
FRONT:	20'
SIDE:	10'
REAR:	10'
PARKING REQUIRED:	1 SPACE / 500 SF
	19097 SF / 500 SF = 38 SPACES
PARKING PROVIDED:	75 SPACES (INC. 4 H/C)



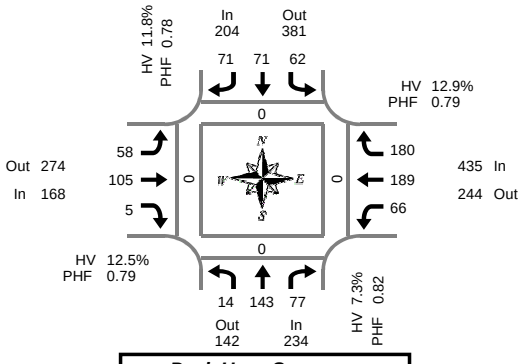
WB-65 feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.00
Trailer Width	: 8.50	Steering Angle	: 28.40
Tractor Track	: 8.00	Articulating Angle	: 70.00
Trailer Track	: 8.50		

APPROX. 4.00 ACRES
PROPOSED COMMERCIAL DEVELOPMENT
CASCADE HWY (HWY 213)
MOLALLA, OR

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
7:00 AM to 8:00 AM

Hwy 213 & Hwy 211

Wednesday, January 17, 2018
7:00 AM to 9:00 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Hwy 211				Westbound Hwy 211				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	2	18	5	0	4	2	6	0	5	10	0	0	1	19	11	0	83	0	0	0	0
7:05 AM	1	8	13	0	8	5	8	0	6	9	0	0	2	19	11	0	90	0	0	0	0
7:10 AM	0	9	3	0	5	5	5	0	1	10	0	0	8	13	25	0	84	0	0	0	0
7:15 AM	2	16	5	0	0	3	5	0	2	14	2	0	7	12	19	0	87	0	0	0	0
7:20 AM	0	16	9	0	2	6	3	0	6	13	1	0	10	24	19	0	109	0	0	0	0
7:25 AM	2	19	2	0	8	6	5	0	7	8	0	0	6	16	19	0	98	0	0	0	0
7:30 AM	0	3	4	0	4	9	8	0	5	9	1	0	6	10	18	0	77	0	0	0	0
7:35 AM	0	14	7	0	7	5	6	0	5	5	0	0	3	23	9	0	84	0	0	0	0
7:40 AM	1	8	8	0	7	13	6	0	5	6	1	0	6	20	16	0	97	0	0	0	0
7:45 AM	3	10	10	0	3	4	10	0	6	5	0	0	7	13	11	0	82	0	0	0	0
7:50 AM	2	10	7	0	6	4	7	0	2	11	0	0	5	10	11	0	75	0	0	0	0
7:55 AM	1	12	4	0	8	9	2	0	8	5	0	0	5	10	11	0	75	0	0	0	0
8:00 AM	1	11	11	0	5	4	3	0	2	7	0	0	5	13	5	0	67	0	0	0	0
8:05 AM	1	7	6	0	3	5	3	0	6	7	0	0	2	10	9	0	59	0	0	0	0
8:10 AM	0	9	5	0	5	2	4	0	4	2	0	0	7	4	11	0	53	0	0	0	0
8:15 AM	0	9	5	0	6	17	9	0	12	18	0	0	6	14	7	0	103	0	0	0	0
8:20 AM	1	12	2	0	4	5	3	0	8	9	0	0	5	10	8	0	67	0	0	0	0
8:25 AM	1	11	3	0	4	7	6	0	5	4	0	0	4	9	13	0	67	0	0	0	0
8:30 AM	1	13	0	0	9	4	4	0	6	10	0	0	6	12	9	0	74	0	0	0	0
8:35 AM	0	8	4	0	7	2	3	0	4	5	0	0	2	18	7	0	60	0	0	0	0
8:40 AM	1	16	3	0	5	8	10	0	11	5	0	0	9	12	9	0	89	0	0	0	0
8:45 AM	0	10	6	0	3	10	14	0	5	10	0	0	3	9	7	0	77	0	0	0	0
8:50 AM	0	6	3	0	8	3	11	0	15	10	0	0	3	14	15	0	88	0	0	0	0
8:55 AM	1	5	2	0	4	4	10	0	7	13	2	0	6	14	7	0	75	0	0	0	0
Total Survey	21	260	127	0	125	142	151	0	143	205	7	0	124	328	287	0	1,920	0	0	0	0

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Hwy 211				Westbound Hwy 211				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	3	35	21	0	17	12	19	0	12	29	0	0	11	51	47	0	257	0	0	0	0
7:15 AM	4	51	16	0	10	15	13	0	15	35	3	0	23	52	57	0	294	0	0	0	0
7:30 AM	1	25	19	0	18	27	20	0	15	20	2	0	15	53	43	0	258	0	0	0	0
7:45 AM	6	32	21	0	17	17	19	0	16	21	0	0	17	33	33	0	232	0	0	0	0
8:00 AM	2	27	22	0	13	11	10	0	12	16	0	0	14	27	25	0	179	0	0	0	0
8:15 AM	2	32	10	0	14	29	18	0	25	31	0	0	15	33	28	0	237	0	0	0	0
8:30 AM	2	37	7	0	21	14	17	0	21	20	0	0	17	42	25	0	223	0	0	0	0
8:45 AM	1	21	11	0	15	17	35	0	27	33	2	0	12	37	29	0	240	0	0	0	0
Total Survey	21	260	127	0	125	142	151	0	143	205	7	0	124	328	287	0	1,920	0	0	0	0

Peak Hour Summary
7:00 AM to 8:00 AM

By Approach	Northbound Hwy 213				Southbound Hwy 213				Eastbound Hwy 211				Westbound Hwy 211				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	234	142	376	0	204	381	585	0	168	274	442	0	435	244	679	0	1,041	0	0	0	0
%HV	7.3%				11.8%				12.5%				12.9%				11.3%				
PHF	0.82				0.78				0.79				0.79				0.89				

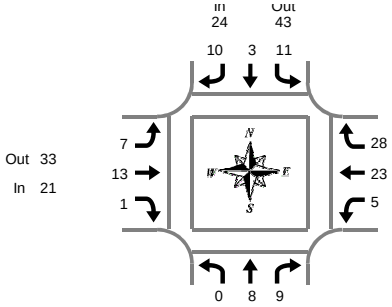
By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Hwy 211				Westbound Hwy 211				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	14	143	77	234	62	71	71	204	58	105	5	168	66	189	180	435	1,041
%HV	0.0%	5.6%	11.7%	7.3%	17.7%	4.2%	14.1%	11.8%	12.1%	12.4%	20.0%	12.5%	7.6%	12.2%	15.6%	12.9%	11.3%
PHF	0.58	0.70	0.77	0.82	0.82	0.66	0.77	0.78	0.81	0.71	0.42	0.79	0.66	0.84	0.71	0.79	0.89

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Hwy 211				Westbound Hwy 211				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	14	143	77	0	62	71	71	0	58	105	5	0	66	189	180	0	1,041	0	0	0	0
7:15 AM	13	135	78	0	58	70	62	0	58	92	5	0	69	165	158	0	963	0	0	0	0
7:30 AM	11	116	72	0	62	84	67	0	68	88	2	0	61	146	129	0	906	0	0	0	0
7:45 AM	12	128	60	0	65	71	64	0	74	88	0	0	63	135	111	0	871	0	0	0	0
8:00 AM	7	117	50	0	63	71	80	0	85	100	2	0	58	139	107	0	879	0	0	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Peak Hour Summary
7:00 AM to 8:00 AM

Hwy 213 & Hwy 211

Wednesday, January 17, 2018
7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Hwy 211				Westbound Hwy 211				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	0	0	0	1	0	0	1	0	2	0	2	1	3	2	6	9
7:05 AM	0	2	3	5	1	0	1	2	1	2	0	3	0	2	1	3	13
7:10 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	5	5	10	11
7:15 AM	0	0	1	1	0	0	0	0	0	1	0	1	1	2	5	8	10
7:20 AM	0	2	2	4	0	0	2	2	3	1	1	5	0	2	4	6	17
7:25 AM	0	0	0	0	0	0	1	1	0	0	0	0	0	1	4	5	6
7:30 AM	0	0	1	1	1	1	1	3	0	0	0	0	2	2	2	6	10
7:35 AM	0	1	2	3	0	0	0	0	1	1	0	2	0	2	0	2	7
7:40 AM	0	1	0	1	1	1	1	3	1	3	0	4	0	2	1	3	11
7:45 AM	0	0	0	0	2	0	2	4	0	0	0	0	0	0	2	2	6
7:50 AM	0	2	0	2	3	0	1	4	0	1	0	1	0	0	1	1	8
7:55 AM	0	0	0	0	2	1	0	3	1	2	0	3	1	2	1	4	10
8:00 AM	0	0	0	0	2	0	0	2	0	2	0	2	2	1	0	3	7
8:05 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	2	0	2	3
8:10 AM	0	0	0	0	3	0	0	3	1	0	0	1	1	0	1	2	6
8:15 AM	0	0	0	0	2	4	3	9	3	5	0	8	2	1	1	4	21
8:20 AM	1	1	0	2	1	0	1	2	3	1	0	4	0	2	0	2	10
8:25 AM	1	0	0	1	3	0	2	5	1	0	0	1	0	1	3	4	11
8:30 AM	0	0	0	0	2	1	3	6	2	0	0	2	0	2	1	3	11
8:35 AM	0	0	1	1	1	1	0	2	1	1	0	2	0	4	1	5	10
8:40 AM	1	1	1	3	2	0	3	5	5	0	0	5	1	0	0	1	14
8:45 AM	0	0	0	0	0	1	4	5	0	2	0	2	0	3	2	5	12
8:50 AM	0	0	0	0	1	0	1	2	2	0	0	2	1	1	5	7	11
8:55 AM	0	0	1	1	0	1	0	1	3	2	0	5	1	1	1	3	10
Total Survey	3	10	12	25	28	11	27	66	29	26	1	56	13	41	43	97	244

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Hwy 211				Westbound Hwy 211				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	2	3	5	2	0	2	4	1	4	0	5	1	10	8	19	33
7:15 AM	0	2	3	5	0	0	3	3	3	2	1	6	1	5	13	19	33
7:30 AM	0	2	3	5	2	2	2	6	2	4	0	6	2	6	3	11	28
7:45 AM	0	2	0	2	7	1	3	11	1	3	0	4	1	2	4	7	24
8:00 AM	0	0	0	0	5	0	0	5	2	2	0	4	3	3	1	7	16
8:15 AM	2	1	0	3	6	4	6	16	7	6	0	13	2	4	4	10	42
8:30 AM	1	1	2	4	5	2	6	13	8	1	0	9	1	6	2	9	35
8:45 AM	0	0	1	1	1	2	5	8	5	4	0	9	2	5	8	15	33
Total Survey	3	10	12	25	28	11	27	66	29	26	1	56	13	41	43	97	244

Heavy Vehicle Peak Hour Summary
7:00 AM to 8:00 AM

By Approach	Northbound Hwy 213			Southbound Hwy 213			Eastbound Hwy 211			Westbound Hwy 211			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	17	9	26	24	43	67	21	33	54	56	33	89	118
PHF	0.71			0.55			0.88			0.58			0.78

By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Hwy 211				Westbound Hwy 211				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	8	9	17	11	3	10	24	7	13	1	21	5	23	28	56	118
PHF	0.00	0.67	0.56	0.71	0.39	0.38	0.63	0.55	0.58	0.81	0.25	0.88	0.63	0.58	0.50	0.58	0.78

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

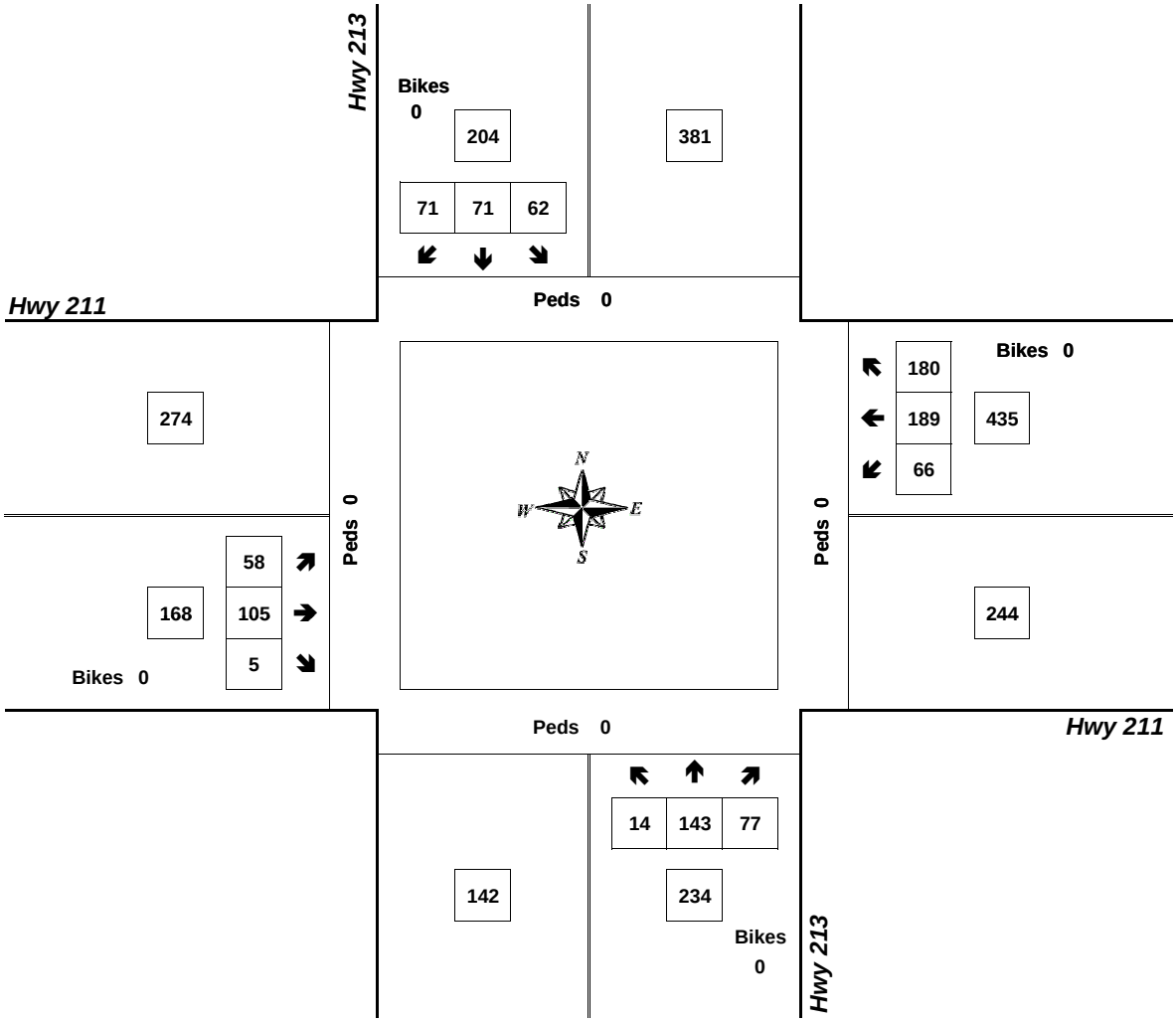
Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Hwy 211				Westbound Hwy 211				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	8	9	17	11	3	10	24	7	13	1	21	5	23	28	56	118
7:15 AM	0	6	6	12	14	3	8	25	8	11	1	20	7	16	21	44	101
7:30 AM	2	5	3	10	20	7	11	38	12	15	0	27	8	15	12	35	110
7:45 AM	3	4	2	9	23	7	15	45	18	12	0	30	7	15	11	33	117
8:00 AM	3	2	3	8	17	8	17	42	22	13	0	35	8	18	15	41	126

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

Hwy 213 & Hwy 211

7:00 AM to 8:00 AM
Wednesday, January 17, 2018

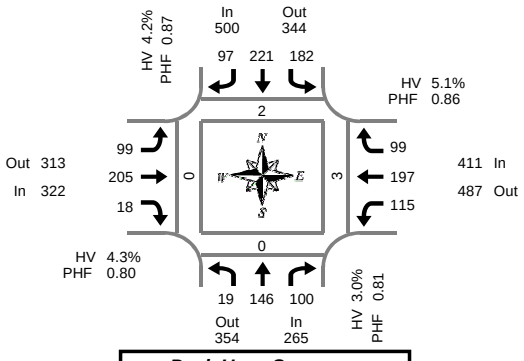


Approach	PHF	HV%	Volume
EB	0.79	12.5%	168
WB	0.79	12.9%	435
NB	0.82	7.3%	234
SB	0.78	11.8%	204
Intersection	0.89	11.3%	1,041

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
4:05 PM to 5:05 PM

Hwy 213 & Hwy 211

Tuesday, January 16, 2018
4:00 PM to 6:00 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Hwy 211				Westbound Hwy 211				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	3	11	2	0	17	25	8	0	7	14	3	0	12	6	6	0	114	1	0	0	0
4:05 PM	2	7	10	0	6	18	12	0	8	17	2	0	6	15	9	0	112	0	0	0	0
4:10 PM	2	8	3	0	14	27	10	0	7	11	0	0	7	12	11	0	112	0	0	2	0
4:15 PM	1	11	7	0	23	14	10	0	8	13	0	0	11	15	10	0	123	1	0	0	0
4:20 PM	1	23	10	0	14	21	11	0	7	15	4	0	10	19	7	0	142	0	0	0	0
4:25 PM	1	12	6	0	16	21	9	0	6	17	0	0	10	19	3	0	120	0	0	0	0
4:30 PM	3	7	8	0	20	14	3	0	6	18	1	0	5	18	10	0	113	0	0	0	0
4:35 PM	1	13	8	0	12	14	6	0	9	29	2	0	10	17	8	0	129	1	0	0	0
4:40 PM	0	10	11	0	17	19	8	0	7	11	3	0	9	13	10	0	118	0	0	1	0
4:45 PM	3	11	12	0	15	22	6	0	8	16	0	0	8	13	8	0	122	0	0	0	0
4:50 PM	2	19	8	0	13	18	10	0	13	24	2	0	11	13	11	0	144	0	0	0	0
4:55 PM	1	15	11	0	10	15	3	0	13	23	2	0	17	32	6	0	148	0	0	0	0
5:00 PM	2	10	6	0	22	18	9	0	7	11	2	0	11	11	6	0	115	0	0	0	0
5:05 PM	2	9	10	0	20	19	1	0	5	9	2	0	3	8	10	0	98	0	0	0	0
5:10 PM	1	15	11	0	14	14	6	0	4	18	2	0	6	18	15	0	124	0	0	0	0
5:15 PM	2	5	8	0	24	18	4	0	5	15	2	0	10	8	14	0	115	0	0	0	0
5:20 PM	1	13	4	0	13	19	5	0	10	10	1	0	7	14	13	0	110	0	0	0	0
5:25 PM	0	10	7	0	12	22	5	0	5	25	0	0	8	20	9	0	123	0	0	0	0
5:30 PM	1	16	4	0	16	15	9	0	3	13	0	0	10	9	9	0	105	0	0	0	0
5:35 PM	0	3	9	0	19	20	5	0	12	27	0	0	8	8	9	0	120	0	0	0	0
5:40 PM	0	13	5	0	20	10	6	0	9	12	0	0	10	9	7	0	101	0	0	0	0
5:45 PM	1	11	11	0	16	11	5	0	9	17	2	0	7	10	7	0	107	0	0	0	0
5:50 PM	0	9	6	0	13	15	1	0	5	25	2	0	7	14	7	0	104	0	0	0	0
5:55 PM	3	11	3	0	12	11	6	0	7	20	1	0	5	4	3	0	86	0	0	0	0
Total Survey	33	272	180	0	378	420	158	0	180	410	33	0	208	325	208	0	2,805	3	0	3	0

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Hwy 211				Westbound Hwy 211				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	7	26	15	0	37	70	30	0	22	42	5	0	25	33	26	0	338	1	0	2	0
4:15 PM	3	46	23	0	53	56	30	0	21	45	4	0	31	53	20	0	385	1	0	0	0
4:30 PM	4	30	27	0	49	47	17	0	22	58	6	0	24	48	28	0	360	1	0	1	0
4:45 PM	6	45	31	0	38	55	19	0	34	63	4	0	36	58	25	0	414	0	0	0	0
5:00 PM	5	34	27	0	56	51	16	0	16	38	6	0	20	37	31	0	337	0	0	0	0
5:15 PM	3	28	19	0	49	59	14	0	20	50	3	0	25	42	36	0	348	0	0	0	0
5:30 PM	1	32	18	0	55	45	20	0	24	52	0	0	28	26	25	0	326	0	0	0	0
5:45 PM	4	31	20	0	41	37	12	0	21	62	5	0	19	28	17	0	297	0	0	0	0
Total Survey	33	272	180	0	378	420	158	0	180	410	33	0	208	325	208	0	2,805	3	0	3	0

Peak Hour Summary
4:05 PM to 5:05 PM

By Approach	Northbound Hwy 213				Southbound Hwy 213				Eastbound Hwy 211				Westbound Hwy 211				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	265	354	619	0	500	344	844	0	322	313	635	0	411	487	898	0	1,498	2	0	3	0
%HV	3.0%				4.2%				4.3%				5.1%				4.3%				
PHF	0.81				0.87				0.80				0.86				0.90				

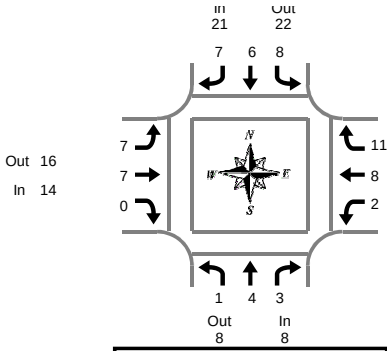
By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Hwy 211				Westbound Hwy 211				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	19	146	100	265	182	221	97	500	99	205	18	322	115	197	99	411	1,498
%HV	5.3%	2.7%	3.0%	3.0%	4.4%	2.7%	7.2%	4.2%	7.1%	3.4%	0.0%	4.3%	1.7%	4.1%	11.1%	5.1%	4.3%
PHF	0.79	0.79	0.81	0.81	0.86	0.89	0.76	0.87	0.73	0.80	0.75	0.80	0.74	0.85	0.83	0.86	0.90

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Hwy 211				Westbound Hwy 211				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	20	147	96	0	177	228	96	0	99	208	19	0	116	192	99	0	1,497	3	0	3	0
4:15 PM	18	155	108	0	196	209	82	0	93	204	20	0	111	196	104	0	1,496	2	0	1	0
4:30 PM	18	137	104	0	192	212	66	0	92	209	19	0	105	185	120	0	1,459	1	0	1	0
4:45 PM	15	139	95	0	198	210	69	0	94	203	13	0	109	163	117	0	1,425	0	0	0	0
5:00 PM	13	125	84	0	201	192	62	0	81	202	14	0	92	133	109	0	1,308	0	0	0	0

Heavy Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Hwy 213 & Hwy 211

Tuesday, January 16, 2018
4:00 PM to 6:00 PM

Peak Hour Summary
4:05 PM to 5:05 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Hwy 211				Westbound Hwy 211				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	1	0	1	3	0	1	4	2	1	0	3	2	0	0	2	10
4:05 PM	0	0	1	1	0	0	0	0	1	0	0	1	0	3	2	5	7
4:10 PM	0	1	0	1	2	1	2	5	1	0	0	1	0	1	1	2	9
4:15 PM	0	0	1	1	0	0	1	1	0	0	0	0	1	1	0	2	4
4:20 PM	0	1	0	1	1	1	1	3	0	1	0	1	0	1	1	2	7
4:25 PM	0	1	0	1	1	3	1	5	0	0	0	0	0	1	1	2	8
4:30 PM	0	0	0	0	0	0	0	0	1	3	0	4	0	0	3	3	7
4:35 PM	0	0	0	0	1	1	1	3	2	1	0	3	0	0	2	2	8
4:40 PM	0	0	0	0	1	0	0	1	1	1	0	2	0	0	0	0	3
4:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
4:50 PM	1	1	0	2	0	0	0	0	1	1	0	2	1	0	0	1	5
4:55 PM	0	0	1	1	1	0	1	2	0	0	0	0	0	1	1	2	5
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5:05 PM	0	0	0	0	2	1	0	3	0	0	0	0	0	0	3	3	6
5:10 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	1	1	2	3
5:15 PM	0	1	0	1	1	0	1	2	0	1	0	1	1	1	0	2	6
5:20 PM	0	0	0	0	1	0	2	3	1	1	0	2	0	0	1	1	6
5:25 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0	1	2
5:30 PM	0	0	1	1	1	0	1	2	0	0	0	0	0	1	2	3	6
5:35 PM	0	0	0	0	0	0	1	1	1	0	0	1	0	0	0	0	2
5:40 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	1	2
5:45 PM	0	1	0	1	0	0	1	1	0	0	0	0	0	0	1	1	3
5:50 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
5:55 PM	0	0	0	0	1	1	0	2	0	0	0	0	0	0	1	1	3
Total Survey	1	7	4	12	19	9	14	42	11	11	0	22	5	12	21	38	114

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Hwy 211				Westbound Hwy 211				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	2	1	3	5	1	3	9	4	1	0	5	2	4	3	9	26
4:15 PM	0	2	1	3	2	4	3	9	0	1	0	1	1	3	2	6	19
4:30 PM	0	0	0	0	2	1	1	4	4	5	0	9	0	0	5	5	18
4:45 PM	1	1	1	3	2	0	1	3	1	1	0	2	1	1	1	3	11
5:00 PM	0	0	0	0	3	1	0	4	0	0	0	0	0	1	4	5	9
5:15 PM	0	1	0	1	2	1	3	6	1	2	0	3	1	2	1	4	14
5:30 PM	0	0	1	1	2	0	2	4	1	0	0	1	0	1	3	4	10
5:45 PM	0	1	0	1	1	1	1	3	0	1	0	1	0	0	2	2	7
Total Survey	1	7	4	12	19	9	14	42	11	11	0	22	5	12	21	38	114

Heavy Vehicle Peak Hour Summary
4:05 PM to 5:05 PM

By Approach	Northbound Hwy 213			Southbound Hwy 213			Eastbound Hwy 211			Westbound Hwy 211			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	8	8	16	21	22	43	14	16	30	21	18	39	64
PHF	0.67			0.58			0.39			0.58			0.70

By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Hwy 211				Westbound Hwy 211				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	1	4	3	8	8	6	7	21	7	7	0	14	2	8	11	21	64
PHF	0.25	0.50	0.38	0.67	0.67	0.38	0.44	0.58	0.44	0.35	0.00	0.39	0.50	0.40	0.46	0.58	0.70

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

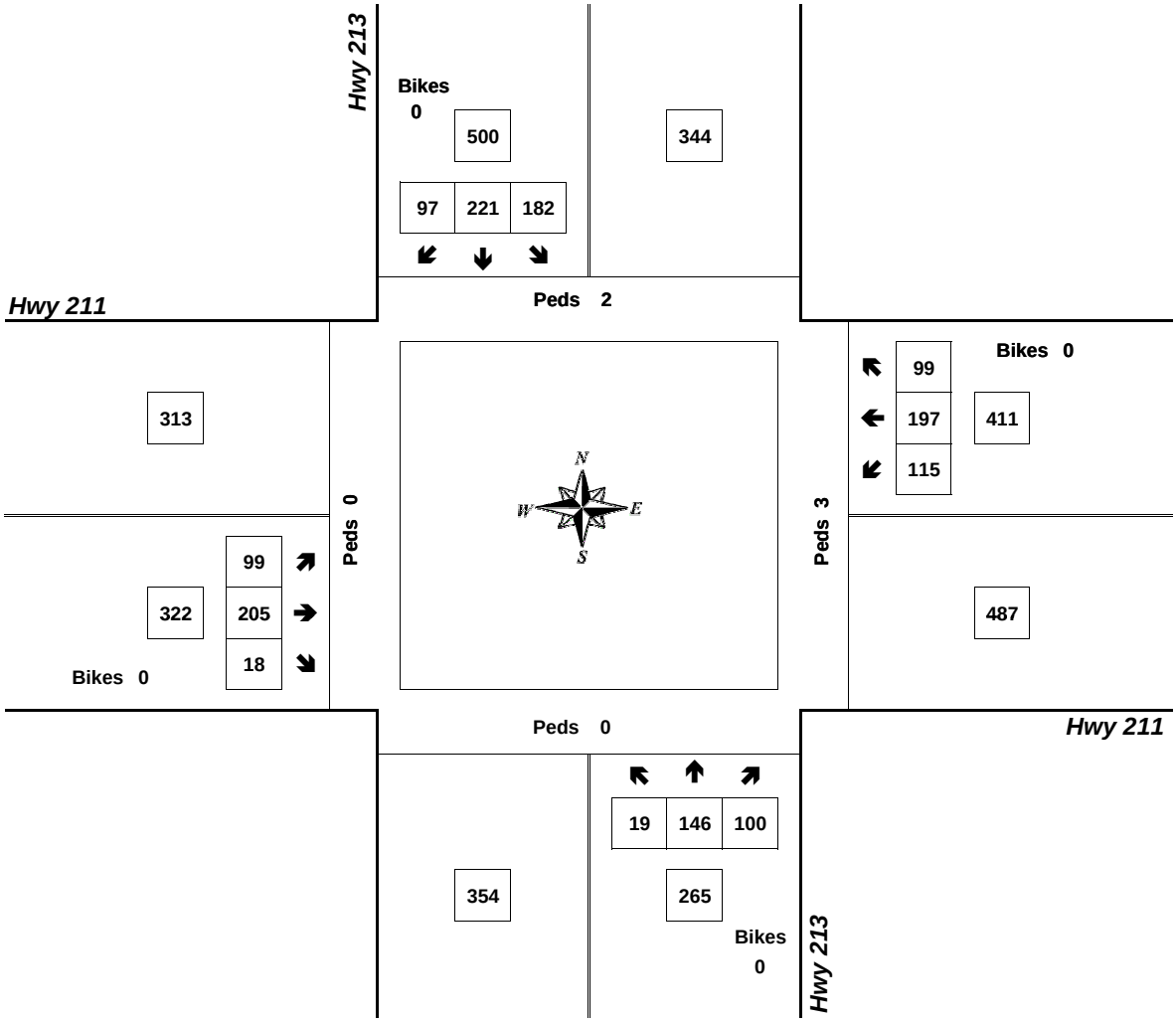
Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Hwy 211				Westbound Hwy 211				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	5	3	9	11	6	8	25	9	8	0	17	4	8	11	23	74
4:15 PM	1	3	2	6	9	6	5	20	5	7	0	12	2	5	12	19	57
4:30 PM	1	2	1	4	9	3	5	17	6	8	0	14	2	4	11	17	52
4:45 PM	1	2	2	5	9	2	6	17	3	3	0	6	2	5	9	16	44
5:00 PM	0	2	1	3	8	3	6	17	2	3	0	5	1	4	10	15	40

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

Hwy 213 & Hwy 211

4:05 PM to 5:05 PM
Tuesday, January 16, 2018

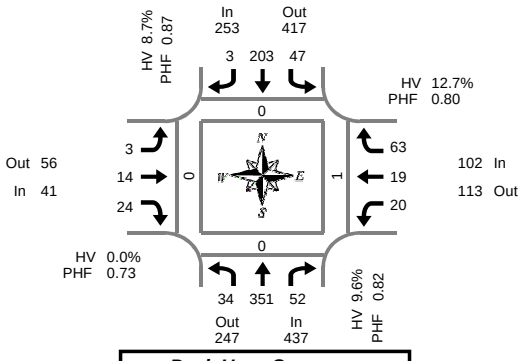


Approach	PHF	HV%	Volume
EB	0.80	4.3%	322
WB	0.86	5.1%	411
NB	0.81	3.0%	265
SB	0.87	4.2%	500
Intersection	0.90	4.3%	1,498

Count Period: 4:00 PM to 6:00 PM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
7:00 AM to 8:00 AM

Hwy 213 & Toliver Rd

Wednesday, January 17, 2018
7:00 AM to 9:00 AM

5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Toliver Rd				Westbound Toliver Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	2	33	5	0	7	17	0	0	0	0	3	0	1	5	9	0	82	0	0	0	0
7:05 AM	2	21	1	0	1	16	1	0	1	0	3	0	1	1	5	0	53	0	0	0	0
7:10 AM	4	33	5	0	2	13	0	0	0	2	1	0	2	0	8	0	70	0	0	0	0
7:15 AM	5	33	2	0	4	11	0	0	0	2	2	0	2	1	7	0	69	0	0	0	0
7:20 AM	5	35	9	0	5	18	0	0	1	0	2	0	1	4	5	0	85	0	0	0	0
7:25 AM	4	36	5	0	6	17	0	0	1	2	0	0	2	2	4	0	79	0	0	0	0
7:30 AM	1	23	4	0	4	14	0	0	0	0	0	0	4	1	3	0	54	0	0	0	0
7:35 AM	2	27	2	0	4	15	0	0	0	0	4	0	1	2	2	0	59	0	0	0	0
7:40 AM	0	27	5	0	2	28	1	0	0	1	5	0	1	0	4	0	74	0	0	0	0
7:45 AM	2	30	8	0	6	16	0	0	0	2	2	0	1	2	5	0	74	0	0	0	0
7:50 AM	3	25	4	0	4	15	1	0	0	3	1	0	1	0	4	0	61	0	0	0	0
7:55 AM	4	28	2	0	2	23	0	0	0	2	1	0	3	1	7	0	73	0	0	1	0
8:00 AM	0	17	3	0	4	18	0	0	0	1	0	0	1	1	3	0	48	0	0	0	0
8:05 AM	2	20	4	0	0	14	0	0	0	0	1	0	0	0	5	0	46	0	0	0	0
8:10 AM	1	23	2	0	2	21	0	0	0	1	0	0	3	0	3	0	56	0	0	0	0
8:15 AM	3	25	1	0	3	19	0	0	1	0	1	0	1	3	6	0	63	0	0	0	0
8:20 AM	1	28	4	0	2	18	1	0	0	0	0	0	1	2	4	0	61	0	0	0	0
8:25 AM	3	24	2	0	1	19	1	0	0	0	1	0	2	1	4	0	58	0	0	0	0
8:30 AM	1	28	5	1	5	15	0	0	0	0	2	0	0	1	3	0	60	0	0	0	0
8:35 AM	3	18	2	0	3	14	0	0	0	0	2	0	2	1	4	0	49	0	0	0	0
8:40 AM	3	18	8	2	5	24	1	0	0	0	1	0	3	1	6	0	70	0	0	0	0
8:45 AM	0	21	1	0	4	21	0	0	1	0	4	0	6	1	6	0	65	0	0	0	0
8:50 AM	2	35	3	0	3	24	2	0	0	4	1	0	2	3	9	0	88	0	0	0	0
8:55 AM	1	20	3	0	1	16	1	0	1	1	0	0	5	1	5	0	55	0	0	0	0
Total Survey	54	628	90	3	80	426	9	0	6	21	37	0	46	34	121	0	1,552	0	0	1	0

15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Toliver Rd				Westbound Toliver Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	8	87	11	0	10	46	1	0	1	2	7	0	4	6	22	0	205	0	0	0	0
7:15 AM	14	104	16	0	15	46	0	0	2	4	4	0	5	7	16	0	233	0	0	0	0
7:30 AM	3	77	11	0	10	57	1	0	0	1	9	0	6	3	9	0	187	0	0	0	0
7:45 AM	9	83	14	0	12	54	1	0	0	7	4	0	5	3	16	0	208	0	0	1	0
8:00 AM	3	60	9	0	6	53	0	0	0	2	1	0	4	1	11	0	150	0	0	0	0
8:15 AM	7	77	7	0	6	56	2	0	1	0	2	0	4	6	14	0	182	0	0	0	0
8:30 AM	7	64	15	3	13	53	1	0	0	0	5	0	5	3	13	0	179	0	0	0	0
8:45 AM	3	76	7	0	8	61	3	0	2	5	5	0	13	5	20	0	208	0	0	0	0
Total Survey	54	628	90	3	80	426	9	0	6	21	37	0	46	34	121	0	1,552	0	0	1	0

Peak Hour Summary
7:00 AM to 8:00 AM

By Approach	Northbound Hwy 213				Southbound Hwy 213				Eastbound Toliver Rd				Westbound Toliver Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	437	247	684	0	253	417	670	0	41	56	97	0	102	113	215	0	833	0	0	1	0
%HV	9.6%				8.7%				0.0%				12.7%				9.2%				
PHF	0.82				0.87				0.73				0.80				0.89				

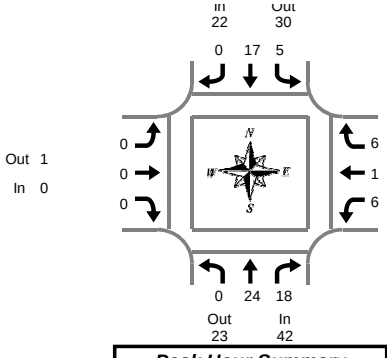
By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Toliver Rd				Westbound Toliver Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	34	351	52	437	47	203	3	253	3	14	24	41	20	19	63	102	833
%HV	0.0%	6.8%	34.6%	9.6%	10.6%	8.4%	0.0%	8.7%	0.0%	0.0%	0.0%	0.0%	30.0%	5.3%	9.5%	12.7%	9.2%
PHF	0.61	0.84	0.72	0.82	0.78	0.86	0.38	0.87	0.38	0.50	0.55	0.73	0.71	0.68	0.72	0.80	0.89

Rolling Hour Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Toliver Rd				Westbound Toliver Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
7:00 AM	34	351	52	0	47	203	3	0	3	14	24	0	20	19	63	0	833	0	0	1	0
7:15 AM	29	324	50	0	43	210	2	0	2	14	18	0	20	14	52	0	778	0	0	1	0
7:30 AM	22	297	41	0	34	220	4	0	1	10	16	0	19	13	50	0	727	0	0	1	0
7:45 AM	26	284	45	3	37	216	4	0	1	9	12	0	18	13	54	0	719	0	0	1	0
8:00 AM	20	277	38	3	33	223	6	0	3	7	13	0	26	15	58	0	719	0	0	0	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Peak Hour Summary
7:00 AM to 8:00 AM

Hwy 213 & Toliver Rd

Wednesday, January 17, 2018
7:00 AM to 9:00 AM

Heavy Vehicle 5-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Toliver Rd				Westbound Toliver Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	2	0	2	2	1	0	3	0	0	0	0	1	0	0	1	6
7:05 AM	0	1	0	1	0	2	0	2	0	0	0	0	0	0	0	0	3
7:10 AM	0	2	4	6	0	0	0	0	0	0	0	0	0	0	1	1	7
7:15 AM	0	2	1	3	0	1	0	1	0	0	0	0	0	0	0	0	4
7:20 AM	0	6	3	9	0	2	0	2	0	0	0	0	0	0	0	0	11
7:25 AM	0	1	4	5	0	1	0	1	0	0	0	0	1	1	0	2	8
7:30 AM	0	0	3	3	1	1	0	2	0	0	0	0	0	0	0	0	5
7:35 AM	0	2	0	2	0	1	0	1	0	0	0	0	1	0	0	1	4
7:40 AM	0	1	1	2	0	4	0	4	0	0	0	0	1	0	0	1	7
7:45 AM	0	4	1	5	1	2	0	3	0	0	0	0	0	0	1	1	9
7:50 AM	0	1	1	2	1	1	0	2	0	0	0	0	1	0	1	2	6
7:55 AM	0	2	0	2	0	1	0	1	0	0	0	0	1	0	3	4	7
8:00 AM	0	0	1	1	0	3	0	3	0	0	0	0	1	0	2	3	7
8:05 AM	0	1	0	1	0	2	0	2	0	0	0	0	0	0	1	1	4
8:10 AM	0	1	1	2	1	6	0	7	0	1	0	1	1	0	0	1	11
8:15 AM	0	2	0	2	0	2	0	2	0	0	0	0	1	0	0	1	5
8:20 AM	0	3	0	3	0	3	1	4	0	0	0	0	0	0	2	2	9
8:25 AM	1	3	0	4	0	6	0	6	0	0	0	0	2	0	0	2	12
8:30 AM	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	4
8:35 AM	0	2	0	2	1	2	0	3	0	0	1	1	0	1	0	1	7
8:40 AM	0	2	1	3	0	5	0	5	0	0	0	0	0	0	0	0	8
8:45 AM	0	2	0	2	0	4	0	4	0	0	0	0	0	0	0	0	6
8:50 AM	0	9	0	9	0	2	0	2	0	0	0	0	0	0	0	0	11
8:55 AM	0	3	3	6	0	2	0	2	0	0	0	0	0	0	0	0	8
Total Survey	1	54	24	79	7	56	1	64	0	1	1	2	11	2	11	24	169

Heavy Vehicle 15-Minute Interval Summary
7:00 AM to 9:00 AM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Toliver Rd				Westbound Toliver Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	5	4	9	2	3	0	5	0	0	0	0	1	0	1	2	16
7:15 AM	0	9	8	17	0	4	0	4	0	0	0	0	1	1	0	2	23
7:30 AM	0	3	4	7	1	6	0	7	0	0	0	0	2	0	0	2	16
7:45 AM	0	7	2	9	2	4	0	6	0	0	0	0	2	0	5	7	22
8:00 AM	0	2	2	4	1	11	0	12	0	1	0	1	2	0	3	5	22
8:15 AM	1	8	0	9	0	11	1	12	0	0	0	0	3	0	2	5	26
8:30 AM	0	6	1	7	1	9	0	10	0	0	1	1	0	1	0	1	19
8:45 AM	0	14	3	17	0	8	0	8	0	0	0	0	0	0	0	0	25
Total Survey	1	54	24	79	7	56	1	64	0	1	1	2	11	2	11	24	169

Heavy Vehicle Peak Hour Summary
7:00 AM to 8:00 AM

By Approach	Northbound Hwy 213			Southbound Hwy 213			Eastbound Toliver Rd			Westbound Toliver Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	42	23	65	22	30	52	0	1	1	13	23	36	77
PHF	0.58			0.61			0.00			0.46			0.80

By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Toliver Rd				Westbound Toliver Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	24	18	42	5	17	0	22	0	0	0	0	6	1	6	13	77
PHF	0.00	0.60	0.45	0.58	0.63	0.61	0.00	0.61	0.00	0.00	0.00	0.00	0.75	0.25	0.30	0.46	0.80

Heavy Vehicle Rolling Hour Summary
7:00 AM to 9:00 AM

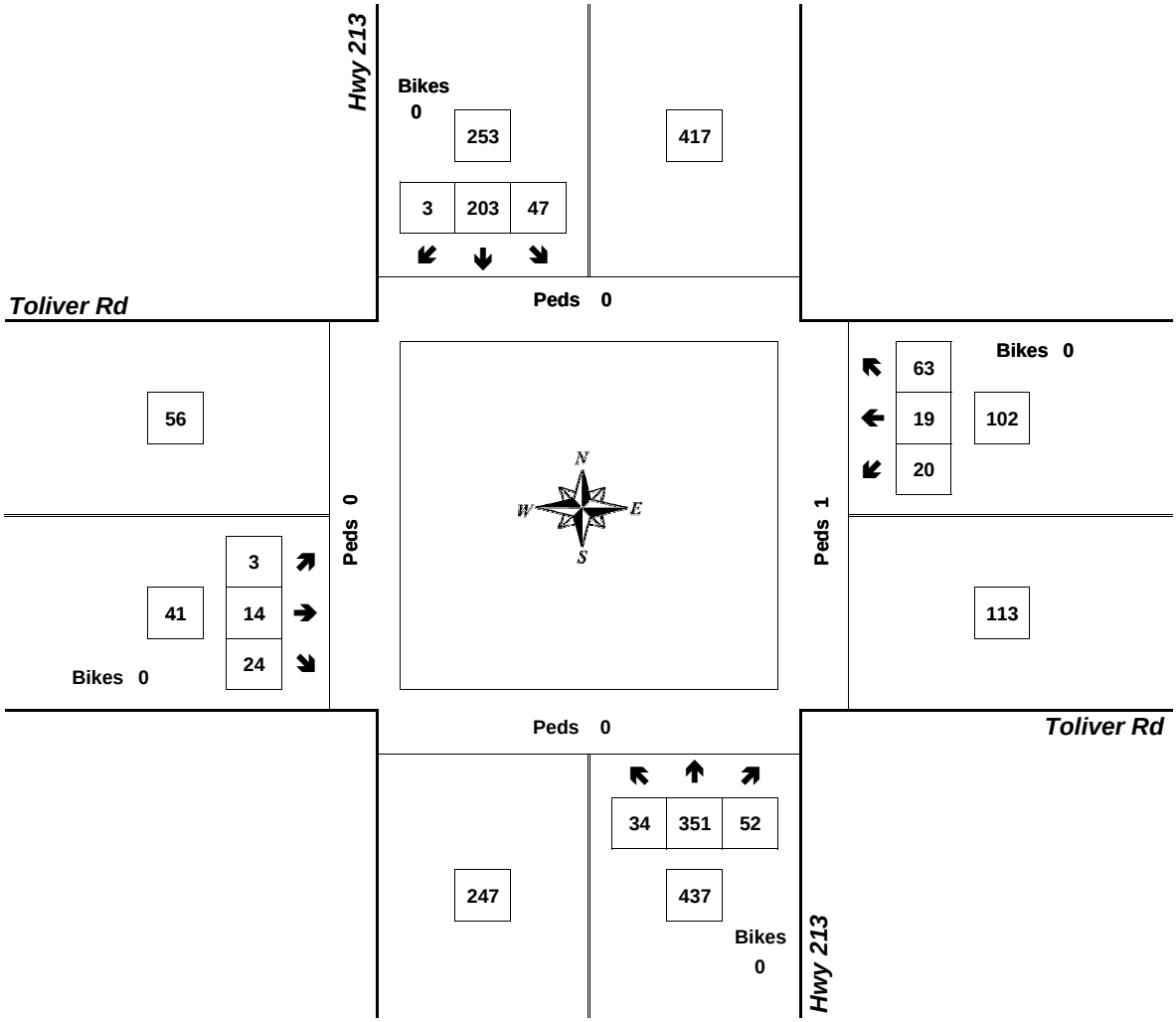
Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Toliver Rd				Westbound Toliver Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
7:00 AM	0	24	18	42	5	17	0	22	0	0	0	0	6	1	6	13	77
7:15 AM	0	21	16	37	4	25	0	29	0	1	0	1	7	1	8	16	83
7:30 AM	1	20	8	29	4	32	1	37	0	1	0	1	9	0	10	19	86
7:45 AM	1	23	5	29	4	35	1	40	0	1	1	2	7	1	10	18	89
8:00 AM	1	30	6	37	2	39	1	42	0	1	1	2	5	1	5	11	92

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

Hwy 213 & Toliver Rd

7:00 AM to 8:00 AM
Wednesday, January 17, 2018

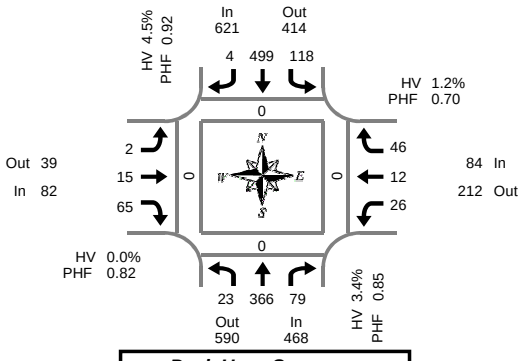


Approach	PHF	HV%	Volume
EB	0.73	0.0%	41
WB	0.80	12.7%	102
NB	0.82	9.6%	437
SB	0.87	8.7%	253
Intersection	0.89	9.2%	833

Count Period: 7:00 AM to 9:00 AM

Total Vehicle Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740



Peak Hour Summary
4:40 PM to 5:40 PM

Hwy 213 & Toliver Rd

Tuesday, January 16, 2018
4:00 PM to 6:00 PM

5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Toliver Rd				Westbound Toliver Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	2	18	4	0	9	41	0	0	0	0	9	0	7	2	4	0	96	0	0	0	0
4:05 PM	1	22	8	0	8	39	0	0	1	1	3	0	8	2	4	0	97	0	0	1	0
4:10 PM	1	21	8	0	8	51	0	0	0	0	6	0	4	0	6	0	105	0	0	0	0
4:15 PM	1	27	7	0	5	36	0	0	0	2	4	0	3	1	6	0	92	0	0	0	0
4:20 PM	1	33	10	0	9	42	0	0	0	3	3	0	2	1	5	0	109	0	0	0	0
4:25 PM	3	21	4	0	9	40	0	0	0	6	11	0	4	2	2	0	102	0	0	0	0
4:30 PM	0	22	14	0	7	32	1	0	0	2	10	0	6	2	2	0	98	0	0	0	0
4:35 PM	2	27	11	0	1	41	0	0	0	3	6	0	3	2	3	0	99	0	0	0	0
4:40 PM	0	35	8	0	10	48	1	0	0	1	4	0	4	0	1	0	112	0	0	0	0
4:45 PM	1	25	9	0	8	30	0	0	0	1	7	0	2	2	4	0	89	0	0	0	0
4:50 PM	2	38	11	0	5	47	0	0	0	0	5	0	1	0	9	0	118	0	0	0	0
4:55 PM	8	31	7	0	9	39	0	0	0	1	5	0	1	1	6	0	108	0	0	0	0
5:00 PM	1	36	3	0	9	30	0	0	0	1	7	0	4	3	5	0	99	0	0	0	0
5:05 PM	1	21	11	0	9	45	0	0	0	1	8	0	3	1	3	0	103	0	0	0	0
5:10 PM	2	33	4	0	8	45	2	0	0	1	6	0	1	1	2	0	105	0	0	0	0
5:15 PM	2	23	8	0	12	38	0	0	1	2	6	0	4	0	4	0	100	0	0	0	0
5:20 PM	2	36	6	0	13	46	0	0	1	1	4	0	2	1	2	0	114	0	0	0	0
5:25 PM	4	26	2	0	10	44	1	0	0	1	2	0	2	0	6	0	98	0	0	0	0
5:30 PM	0	29	4	0	13	42	0	0	0	2	3	0	2	2	3	0	100	0	0	0	0
5:35 PM	0	33	6	0	12	45	0	0	0	3	8	0	0	1	1	0	109	0	0	0	0
5:40 PM	1	30	5	0	4	30	1	0	0	1	5	0	0	1	1	0	79	0	0	0	0
5:45 PM	1	34	8	0	11	42	0	0	0	1	5	0	1	0	5	0	108	0	0	0	0
5:50 PM	0	17	8	0	7	25	0	0	0	1	5	0	1	0	3	0	67	0	0	0	0
5:55 PM	1	22	4	0	9	35	0	0	0	3	4	0	0	1	4	0	83	0	0	1	0
Total Survey	37	660	170	0	205	953	6	0	3	38	136	0	65	26	91	0	2,390	0	0	2	0

15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Toliver Rd				Westbound Toliver Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	4	61	20	0	25	131	0	0	1	1	18	0	19	4	14	0	298	0	0	1	0
4:15 PM	5	81	21	0	23	118	0	0	0	11	18	0	9	4	13	0	303	0	0	0	0
4:30 PM	2	84	33	0	18	121	2	0	0	6	20	0	13	4	6	0	309	0	0	0	0
4:45 PM	11	94	27	0	22	116	0	0	0	2	17	0	4	3	19	0	315	0	0	0	0
5:00 PM	4	90	18	0	26	120	2	0	0	3	21	0	8	5	10	0	307	0	0	0	0
5:15 PM	8	85	16	0	35	128	1	0	2	4	12	0	8	1	12	0	312	0	0	0	0
5:30 PM	1	92	15	0	29	117	1	0	0	6	16	0	2	4	5	0	288	0	0	0	0
5:45 PM	2	73	20	0	27	102	0	0	0	5	14	0	2	1	12	0	258	0	0	1	0
Total Survey	37	660	170	0	205	953	6	0	3	38	136	0	65	26	91	0	2,390	0	0	2	0

Peak Hour Summary
4:40 PM to 5:40 PM

By Approach	Northbound Hwy 213				Southbound Hwy 213				Eastbound Toliver Rd				Westbound Toliver Rd				Total	Pedestrians Crosswalk			
	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes	In	Out	Total	Bikes		North	South	East	West
Volume	468	590	1,058	0	621	414	1,035	0	82	39	121	0	84	212	296	0	1,255	0	0	0	0
%HV	3.4%				4.5%				0.0%				1.2%				3.6%				
PHF	0.85				0.92				0.82				0.70				0.97				

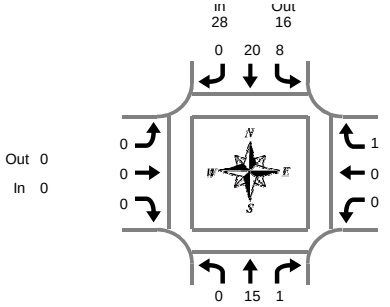
By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Toliver Rd				Westbound Toliver Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	23	366	79	468	118	499	4	621	2	15	65	82	26	12	46	84	1,255
%HV	0.0%	4.1%	1.3%	3.4%	6.8%	4.0%	0.0%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	1.2%	3.6%
PHF	0.52	0.87	0.71	0.85	0.82	0.95	0.50	0.92	0.25	0.63	0.77	0.82	0.81	0.60	0.58	0.70	0.97

Rolling Hour Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Toliver Rd				Westbound Toliver Rd				Interval Total	Pedestrians Crosswalk			
	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes	L	T	R	Bikes		North	South	East	West
4:00 PM	22	320	101	0	88	486	2	0	1	20	73	0	45	15	52	0	1,225	0	0	1	0
4:15 PM	22	349	99	0	89	475	4	0	0	22	76	0	34	16	48	0	1,234	0	0	0	0
4:30 PM	25	353	94	0	101	485	5	0	2	15	70	0	33	13	47	0	1,243	0	0	0	0
4:45 PM	24	361	76	0	112	481	4	0	2	15	66	0	22	13	46	0	1,222	0	0	0	0
5:00 PM	15	340	69	0	117	467	4	0	2	18	63	0	20	11	39	0	1,165	0	0	1	0

Heavy Vehicle Summary

Clay Carney
(503) 833-2740



Hwy 213 & Toliver Rd

Tuesday, January 16, 2018
4:00 PM to 6:00 PM

Peak Hour Summary
4:40 PM to 5:40 PM

Heavy Vehicle 5-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Toliver Rd				Westbound Toliver Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	2	1	3	0	3	0	3	0	0	0	0	0	0	0	0	6
4:05 PM	0	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	3
4:10 PM	0	1	3	4	1	5	0	6	0	0	0	0	0	0	0	0	10
4:15 PM	0	1	0	1	1	1	0	2	0	0	0	0	0	0	0	0	3
4:20 PM	1	2	0	3	0	4	0	4	0	0	0	0	0	0	0	0	7
4:25 PM	0	2	0	2	0	2	0	2	0	1	0	1	0	0	0	0	5
4:30 PM	0	1	4	5	1	1	0	2	0	0	0	0	0	0	0	0	7
4:35 PM	0	2	1	3	1	4	0	5	0	0	0	0	0	0	0	0	8
4:40 PM	0	1	0	1	1	1	0	2	0	0	0	0	0	0	0	0	3
4:45 PM	0	0	0	0	2	1	0	3	0	0	0	0	0	0	0	0	3
4:50 PM	0	2	0	2	1	0	0	1	0	0	0	0	0	0	0	0	3
4:55 PM	0	2	0	2	0	2	0	2	0	0	0	0	0	0	0	0	4
5:00 PM	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	1
5:05 PM	0	2	1	3	0	3	0	3	0	0	0	0	0	0	0	0	6
5:10 PM	0	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	3	0	3	0	0	0	0	0	0	1	1	4
5:20 PM	0	3	0	3	1	4	0	5	0	0	0	0	0	0	0	0	8
5:25 PM	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	1
5:30 PM	0	3	0	3	1	2	0	3	0	0	0	0	0	0	0	0	6
5:35 PM	0	1	0	1	0	3	0	3	0	0	0	0	0	0	0	0	4
5:40 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
5:45 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
5:50 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
5:55 PM	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0	2
Total Survey	1	32	11	44	12	43	0	55	0	1	0	1	0	0	1	1	101

Heavy Vehicle 15-Minute Interval Summary
4:00 PM to 6:00 PM

Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Toliver Rd				Westbound Toliver Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	0	5	5	10	1	8	0	9	0	0	0	0	0	0	0	0	19
4:15 PM	1	5	0	6	1	7	0	8	0	1	0	1	0	0	0	0	15
4:30 PM	0	4	5	9	3	6	0	9	0	0	0	0	0	0	0	0	18
4:45 PM	0	4	0	4	3	3	0	6	0	0	0	0	0	0	0	0	10
5:00 PM	0	3	1	4	1	4	0	5	0	0	0	0	0	0	0	0	9
5:15 PM	0	3	0	3	2	7	0	9	0	0	0	0	0	0	1	1	13
5:30 PM	0	5	0	5	1	6	0	7	0	0	0	0	0	0	0	0	12
5:45 PM	0	3	0	3	0	2	0	2	0	0	0	0	0	0	0	0	5
Total Survey	1	32	11	44	12	43	0	55	0	1	0	1	0	0	1	1	101

Heavy Vehicle Peak Hour Summary
4:40 PM to 5:40 PM

By Approach	Northbound Hwy 213			Southbound Hwy 213			Eastbound Toliver Rd			Westbound Toliver Rd			Total
	In	Out	Total	In	Out	Total	In	Out	Total	In	Out	Total	
Volume	16	20	36	28	16	44	0	0	0	1	9	10	45
PHF	0.67			0.78			0.00			0.25			0.75

By Movement	Northbound Hwy 213				Southbound Hwy 213				Eastbound Toliver Rd				Westbound Toliver Rd				Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
Volume	0	15	1	16	8	20	0	28	0	0	0	0	0	0	1	1	45
PHF	0.00	0.63	0.25	0.67	0.50	0.71	0.00	0.78	0.00	0.00	0.00	0.00	0.00	0.00	0.25	0.25	0.75

Heavy Vehicle Rolling Hour Summary
4:00 PM to 6:00 PM

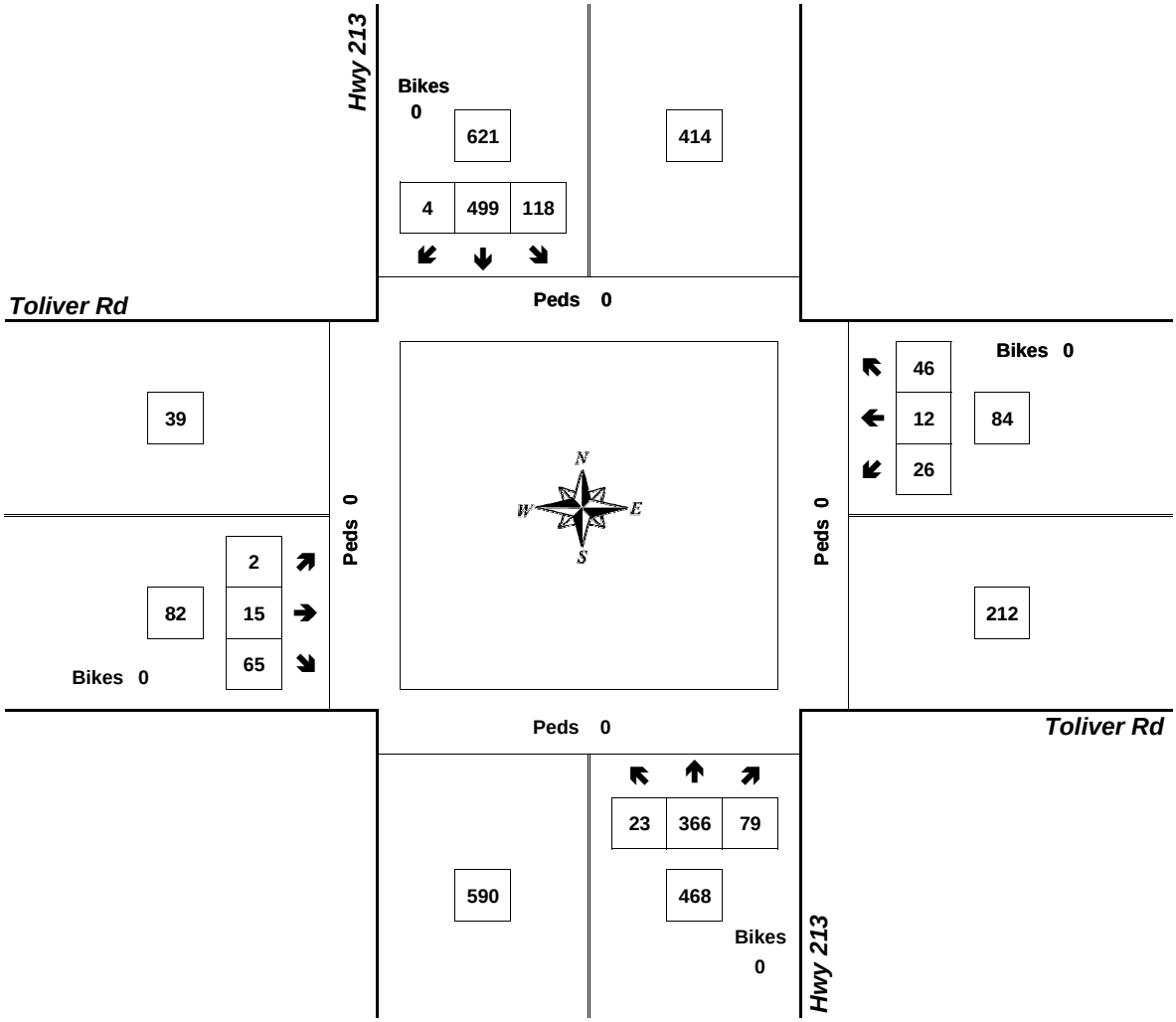
Interval Start Time	Northbound Hwy 213				Southbound Hwy 213				Eastbound Toliver Rd				Westbound Toliver Rd				Interval Total
	L	T	R	Total	L	T	R	Total	L	T	R	Total	L	T	R	Total	
4:00 PM	1	18	10	29	8	24	0	32	0	1	0	1	0	0	0	0	62
4:15 PM	1	16	6	23	8	20	0	28	0	1	0	1	0	0	0	0	52
4:30 PM	0	14	6	20	9	20	0	29	0	0	0	0	0	0	1	1	50
4:45 PM	0	15	1	16	7	20	0	27	0	0	0	0	0	0	1	1	44
5:00 PM	0	14	1	15	4	19	0	23	0	0	0	0	0	0	1	1	39

Peak Hour Summary

All Traffic Data Services Inc.
Clay Carney
(503) 833-2740

Hwy 213 & Toliver Rd

4:40 PM to 5:40 PM
Tuesday, January 16, 2018



Approach	PHF	HV%	Volume
EB	0.82	0.0%	82
WB	0.70	1.2%	84
NB	0.85	3.4%	468
SB	0.92	4.5%	621
Intersection	0.97	3.6%	1,255

Count Period: 4:00 PM to 6:00 PM

TRIP GENERATION CALCULATIONS

Land Use: General Office Building
Land Use Code: 710
Variable: 1000 Sq Ft Gross Floor Area
Variable Value: 149.0

AM PEAK HOUR

Trip Rate: 1.16

	Enter	Exit	Total
Directional Distribution	86%	14%	
Trip Ends	149	24	173

PM PEAK HOUR

Trip Rate: 1.15

	Enter	Exit	Total
Directional Distribution	16%	84%	
Trip Ends	27	144	171

WEEKDAY

Trip Rate: 9.74

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	726	726	1,452

SATURDAY

Trip Rate: 2.21

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	165	165	330

Source: TRIP GENERATION, Tenth Edition

TRIP GENERATION CALCULATIONS

Land Use: Medical-Dental Office Building
Land Use Code: 720
Variable: 1,000 Sq Ft Gross Floor Area
Variable Quantity: 87.0

AM PEAK HOUR

Trip Rate: 2.78

	Enter	Exit	Total
Directional Distribution	78%	22%	
Trip Ends	189	53	242

PM PEAK HOUR

Trip Rate: 3.46

	Enter	Exit	Total
Directional Distribution	28%	72%	
Trip Ends	84	217	301

WEEKDAY

Trip Rate: 34.8

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	1,514	1,514	3,028

SATURDAY

Trip Rate: 8.57

	Enter	Exit	Total
Directional Distribution	50%	50%	
Trip Ends	373	373	746

Source: TRIP GENERATION, Tenth Edition

1e

TRIP GENERATION CALCULATIONS

Land Use: Tractor Supply Store
Land Use Code: 810
Setting/Location General Urban/Suburban
Variable: 1000 Sq. Ft. GFA
Variable Value: 19

AM PEAK HOUR

Trip Rate: 1.40

	Enter	Exit	Total
Directional Distribution	53%	47%	
Trip Ends	14	13	27

Note: AM peak hour rate assumed to be the same as PM peak hour. Enter/Exit splits are assumed as inverse to the PM peak hour.

PM PEAK HOUR

Trip Rate: 1.40

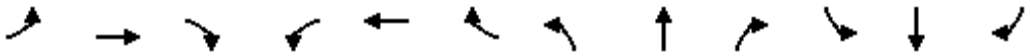
	Enter	Exit	Total
Directional Distribution	47%	53%	
Trip Ends	13	14	27

SATURDAY

Trip Rate: 3.17

	Enter	Exit	Total
Directional Distribution	49%	51%	
Trip Ends	29	31	60

Source: TRIP GENERATION, Tenth Edition



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	58	105	5	66	189	180	14	143	77	62	71	71
Future Volume (vph)	58	105	5	66	189	180	14	143	77	62	71	71
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	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1484	1551		1471	1549	1316	1554	1636	1390	1484	1445	
Flt Permitted	0.44	1.00		0.64	1.00	1.00	0.66	1.00	1.00	0.60	1.00	
Satd. Flow (perm)	689	1551		991	1549	1316	1072	1636	1390	935	1445	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	65	118	6	74	212	202	16	161	87	70	80	80
RTOR Reduction (vph)	0	2	0	0	0	163	0	0	47	0	22	0
Lane Group Flow (vph)	65	122	0	74	212	39	16	161	40	70	138	0
Heavy Vehicles (%)	12%	12%	12%	13%	13%	13%	7%	7%	7%	12%	12%	12%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	23.9	17.1		24.1	17.2	17.2	43.7	41.4	41.4	51.1	45.1	
Effective Green, g (s)	23.9	17.1		24.1	17.2	17.2	43.7	41.4	41.4	51.1	45.1	
Actuated g/C Ratio	0.27	0.19		0.27	0.19	0.19	0.49	0.46	0.46	0.57	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)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	244	296		304	298	253	536	757	643	571	728	
v/s Ratio Prot	c0.02	0.08		0.02	c0.14		0.00	c0.10		c0.01	0.10	
v/s Ratio Perm	0.05			0.05		0.03	0.01		0.03	0.06		
v/c Ratio	0.27	0.41		0.24	0.71	0.15	0.03	0.21	0.06	0.12	0.19	
Uniform Delay, d1	25.2	31.7		25.1	33.8	30.0	11.8	14.3	13.3	8.7	12.1	
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	0.6	0.9		0.4	7.8	0.3	0.0	0.6	0.2	0.1	0.6	
Delay (s)	25.8	32.7		25.5	41.6	30.3	11.8	14.9	13.5	8.8	12.7	
Level of Service	C	C		C	D	C	B	B	B	A	B	
Approach Delay (s)		30.3			34.5			14.3			11.5	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	89.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	42.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	437	0	0	237
Future Vol, veh/h	0	0	437	0	0	237
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	10	10	9	9
Mvmt Flow	0	0	491	0	0	266

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	757	491	0	0	491	0
Stage 1	491	-	-	-	-	-
Stage 2	266	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.19	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.281	-
Pot Cap-1 Maneuver	375	578	-	-	1037	-
Stage 1	615	-	-	-	-	-
Stage 2	779	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	375	578	-	-	1037	-
Mov Cap-2 Maneuver	375	-	-	-	-	-
Stage 1	615	-	-	-	-	-
Stage 2	779	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1037	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

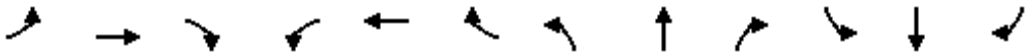
Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	14	24	20	19	63	34	351	52	47	203	3
Future Vol, veh/h	3	14	24	20	19	63	34	351	52	47	203	3
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	13	13	13	10	10	10	9	9	9
Mvmt Flow	3	16	27	22	21	71	38	394	58	53	228	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	882	865	230	858	838	426	231	0	0	454	0	0
Stage 1	335	335	-	501	501	-	-	-	-	-	-	-
Stage 2	547	530	-	357	337	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.23	6.63	6.33	4.2	-	-	4.19	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.23	5.63	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.23	5.63	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.617	4.117	3.417	2.29	-	-	2.281	-	-
Pot Cap-1 Maneuver	269	294	814	265	290	606	1291	-	-	1071	-	-
Stage 1	683	646	-	532	525	-	-	-	-	-	-	-
Stage 2	525	530	-	639	622	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	207	266	814	227	262	605	1291	-	-	1070	-	-
Mov Cap-2 Maneuver	207	266	-	227	262	-	-	-	-	-	-	-
Stage 1	656	609	-	510	504	-	-	-	-	-	-	-
Stage 2	426	508	-	568	587	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.5	18.3	0.6	1.6
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1291	-	-	424	385	1070	-	-
HCM Lane V/C Ratio	0.03	-	-	0.109	0.298	0.049	-	-
HCM Control Delay (s)	7.9	0	-	14.5	18.3	8.5	0	-
HCM Lane LOS	A	A	-	B	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	1.2	0.2	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	205	18	115	197	99	19	146	100	182	221	97
Future Volume (vph)	99	205	18	115	197	99	19	146	100	182	221	97
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	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97	1.00	0.99	
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	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1596	1662		1583	1667	1369	1614	1699	1403	1594	1593	
Flt Permitted	0.49	1.00		0.31	1.00	1.00	0.55	1.00	1.00	0.57	1.00	
Satd. Flow (perm)	817	1662		510	1667	1369	933	1699	1403	958	1593	
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)	110	228	20	128	219	110	21	162	111	202	246	108
RTOR Reduction (vph)	0	3	0	0	0	86	0	0	65	0	11	0
Lane Group Flow (vph)	110	245	0	128	219	24	21	162	46	202	343	0
Confl. Peds. (#/hr)	2					5			3	3		2
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	28.2	20.0		32.8	22.3	22.3	44.4	42.4	42.4	58.8	52.3	
Effective Green, g (s)	28.2	20.0		32.8	22.3	22.3	44.4	42.4	42.4	58.8	52.3	
Actuated g/C Ratio	0.27	0.19		0.32	0.22	0.22	0.43	0.41	0.41	0.57	0.51	
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)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	286	323		272	361	296	416	700	578	621	810	
v/s Ratio Prot	0.03	c0.15		c0.05	0.13		0.00	0.10		c0.04	c0.22	
v/s Ratio Perm	0.07			0.10		0.02	0.02		0.03	0.15		
v/c Ratio	0.38	0.76		0.47	0.61	0.08	0.05	0.23	0.08	0.33	0.42	
Uniform Delay, d1	29.2	39.1		26.6	36.3	32.1	16.8	19.6	18.3	11.0	15.8	
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	0.9	9.8		1.3	2.9	0.1	0.1	0.8	0.3	0.3	1.6	
Delay (s)	30.0	48.9		27.9	39.2	32.2	16.9	20.4	18.6	11.3	17.4	
Level of Service	C	D		C	D	C	B	C	B	B	B	
Approach Delay (s)		43.1			34.3			19.5			15.2	
Approach LOS		D			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	27.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	102.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	60.8%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	468	0	0	590
Future Vol, veh/h	0	0	468	0	0	590
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	3	3	4	4
Mvmt Flow	0	0	482	0	0	608

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1090	482	0	0	482	0
Stage 1	482	-	-	-	-	-
Stage 2	608	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	238	584	-	-	1070	-
Stage 1	621	-	-	-	-	-
Stage 2	543	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	238	584	-	-	1070	-
Mov Cap-2 Maneuver	238	-	-	-	-	-
Stage 1	621	-	-	-	-	-
Stage 2	543	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1070	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

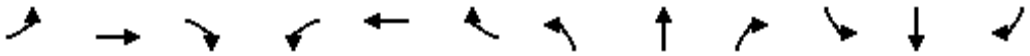
Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	15	65	26	12	46	23	366	79	118	499	4
Future Vol, veh/h	2	15	65	26	12	46	23	366	79	118	499	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	1	1	1	3	3	3	4	4	4
Mvmt Flow	2	15	67	27	12	47	24	377	81	122	514	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1255	1266	516	1266	1227	418	519	0	0	459	0	0
Stage 1	760	760	-	465	465	-	-	-	-	-	-	-
Stage 2	495	506	-	801	762	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.11	6.51	6.21	4.13	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4.009	3.309	2.227	-	-	2.236	-	-
Pot Cap-1 Maneuver	150	171	563	147	179	637	1042	-	-	1092	-	-
Stage 1	401	417	-	580	565	-	-	-	-	-	-	-
Stage 2	560	543	-	380	415	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	112	140	563	102	146	637	1042	-	-	1092	-	-
Mov Cap-2 Maneuver	112	140	-	102	146	-	-	-	-	-	-	-
Stage 1	389	352	-	562	547	-	-	-	-	-	-	-
Stage 2	491	526	-	270	350	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19	34.8	0.4	1.7
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1042	-	-	341	205	1092	-	-
HCM Lane V/C Ratio	0.023	-	-	0.248	0.422	0.111	-	-
HCM Control Delay (s)	8.5	0	-	19	34.8	8.7	0	-
HCM Lane LOS	A	A	-	C	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1	1.9	0.4	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	64	118	6	73	212	200	16	157	86	69	78	78
Future Volume (vph)	64	118	6	73	212	200	16	157	86	69	78	78
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	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1484	1551		1471	1549	1316	1554	1636	1390	1484	1445	
Flt Permitted	0.40	1.00		0.61	1.00	1.00	0.65	1.00	1.00	0.57	1.00	
Satd. Flow (perm)	631	1551		950	1549	1316	1057	1636	1390	894	1445	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	72	133	7	82	238	225	18	176	97	78	88	88
RTOR Reduction (vph)	0	2	0	0	0	178	0	0	54	0	23	0
Lane Group Flow (vph)	72	138	0	82	238	47	18	176	43	78	153	0
Heavy Vehicles (%)	12%	12%	12%	13%	13%	13%	7%	7%	7%	12%	12%	12%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	25.9	18.9		25.9	18.9	18.9	42.5	40.2	40.2	50.7	44.3	
Effective Green, g (s)	25.9	18.9		25.9	18.9	18.9	42.5	40.2	40.2	50.7	44.3	
Actuated g/C Ratio	0.29	0.21		0.29	0.21	0.21	0.47	0.44	0.44	0.56	0.49	
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)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	246	323		312	323	274	509	726	617	542	707	
v/s Ratio Prot	c0.02	0.09		0.02	c0.15		0.00	c0.11		c0.01	0.11	
v/s Ratio Perm	0.06			0.05		0.04	0.02		0.03	0.07		
v/c Ratio	0.29	0.43		0.26	0.74	0.17	0.04	0.24	0.07	0.14	0.22	
Uniform Delay, d1	24.5	31.1		24.4	33.5	29.4	12.9	15.7	14.4	9.4	13.2	
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	0.7	0.9		0.5	8.5	0.3	0.0	0.8	0.2	0.1	0.7	
Delay (s)	25.1	32.0		24.9	41.9	29.7	12.9	16.5	14.6	9.5	13.9	
Level of Service	C	C		C	D	C	B	B	B	A	B	
Approach Delay (s)		29.7			34.3			15.6			12.5	
Approach LOS		C			C			B			B	

Intersection Summary			
HCM 2000 Control Delay	25.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	90.5	Sum of lost time (s)	18.0
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	569	0	0	324
Future Vol, veh/h	0	0	569	0	0	324
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	10	10	9	9
Mvmt Flow	0	0	639	0	0	364

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1003	639	0	0	639	0
Stage 1	639	-	-	-	-	-
Stage 2	364	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.19	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.281	-
Pot Cap-1 Maneuver	268	476	-	-	912	-
Stage 1	526	-	-	-	-	-
Stage 2	703	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	268	476	-	-	912	-
Mov Cap-2 Maneuver	268	-	-	-	-	-
Stage 1	526	-	-	-	-	-
Stage 2	703	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	912	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	15	25	21	20	66	35	480	54	49	278	3
Future Vol, veh/h	3	15	25	21	20	66	35	480	54	49	278	3
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	13	13	13	10	10	10	9	9	9
Mvmt Flow	3	17	28	24	22	74	39	539	61	55	312	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1122	1104	314	1096	1075	572	316	0	0	601	0	0
Stage 1	424	424	-	649	649	-	-	-	-	-	-	-
Stage 2	698	680	-	447	426	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.23	6.63	6.33	4.2	-	-	4.19	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.23	5.63	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.23	5.63	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.617	4.117	3.417	2.29	-	-	2.281	-	-
Pot Cap-1 Maneuver	185	213	731	182	210	499	1200	-	-	943	-	-
Stage 1	612	590	-	441	449	-	-	-	-	-	-	-
Stage 2	434	454	-	570	567	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	130	188	731	149	185	498	1200	-	-	942	-	-
Mov Cap-2 Maneuver	130	188	-	149	185	-	-	-	-	-	-	-
Stage 1	582	548	-	419	427	-	-	-	-	-	-	-
Stage 2	332	431	-	494	527	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.5	27.2	0.5	1.3
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1200	-	-	314	280	942	-	-
HCM Lane V/C Ratio	0.033	-	-	0.154	0.429	0.058	-	-
HCM Control Delay (s)	8.1	0	-	18.5	27.2	9.1	0	-
HCM Lane LOS	A	A	-	C	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	2	0.2	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	110	230	20	128	221	110	21	160	111	202	243	107
Future Volume (vph)	110	230	20	128	221	110	21	160	111	202	243	107
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	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97	1.00	0.99	
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	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1597	1663		1583	1667	1368	1614	1699	1403	1594	1593	
Flt Permitted	0.41	1.00		0.29	1.00	1.00	0.53	1.00	1.00	0.55	1.00	
Satd. Flow (perm)	687	1663		485	1667	1368	904	1699	1403	916	1593	
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)	122	256	22	142	246	122	23	178	123	224	270	119
RTOR Reduction (vph)	0	3	0	0	0	95	0	0	75	0	12	0
Lane Group Flow (vph)	122	275	0	142	246	27	23	178	48	224	377	0
Confl. Peds. (#/hr)	2					5			3	3		2
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	31.9	22.3		34.3	23.5	23.5	43.3	41.3	41.3	58.8	52.3	
Effective Green, g (s)	31.9	22.3		34.3	23.5	23.5	43.3	41.3	41.3	58.8	52.3	
Actuated g/C Ratio	0.30	0.21		0.33	0.22	0.22	0.41	0.39	0.39	0.56	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)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	290	351		270	371	305	384	665	549	594	790	
v/s Ratio Prot	0.04	c0.17		c0.05	0.15		0.00	0.10		c0.05	c0.24	
v/s Ratio Perm	0.09			0.12		0.02	0.02		0.03	0.16		
v/c Ratio	0.42	0.78		0.53	0.66	0.09	0.06	0.27	0.09	0.38	0.48	
Uniform Delay, d1	28.0	39.3		27.1	37.3	32.5	18.6	21.8	20.2	12.3	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	1.0	10.9		1.8	4.4	0.1	0.1	1.0	0.3	0.4	2.1	
Delay (s)	29.0	50.1		29.0	41.8	32.6	18.6	22.8	20.5	12.7	19.6	
Level of Service	C	D		C	D	C	B	C	C	B	B	
Approach Delay (s)		43.7			36.0			21.6			17.1	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	28.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	105.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	607	0	0	819
Future Vol, veh/h	0	0	607	0	0	819
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	3	3	4	4
Mvmt Flow	0	0	626	0	0	844

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1470	626	0	0	626	0
Stage 1	626	-	-	-	-	-
Stage 2	844	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	140	484	-	-	946	-
Stage 1	533	-	-	-	-	-
Stage 2	422	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	140	484	-	-	946	-
Mov Cap-2 Maneuver	140	-	-	-	-	-
Stage 1	533	-	-	-	-	-
Stage 2	422	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	946	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	-	-	0	0	-
HCM Lane LOS	-	-	A	A	-
HCM 95th %tile Q(veh)	-	-	-	0	-

Intersection	
Int Delay, s/veh	26.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	22	97	39	18	69	24	501	82	123	683	4
Future Vol, veh/h	2	22	97	39	18	69	24	501	82	123	683	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	1	1	1	3	3	3	4	4	4
Mvmt Flow	2	23	100	40	19	71	25	516	85	127	704	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1613	1611	706	1629	1570	559	708	0	0	601	0	0
Stage 1	960	960	-	608	608	-	-	-	-	-	-	-
Stage 2	653	651	-	1021	962	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.11	6.51	6.21	4.13	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4.009	3.309	2.227	-	-	2.236	-	-
Pot Cap-1 Maneuver	85	105	439	82	111	530	886	-	-	967	-	-
Stage 1	311	338	-	485	487	-	-	-	-	-	-	-
Stage 2	460	468	-	286	336	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	50	79	439	~ 40	83	530	886	-	-	967	-	-
Mov Cap-2 Maneuver	50	79	-	~ 40	83	-	-	-	-	-	-	-
Stage 1	298	265	-	464	466	-	-	-	-	-	-	-
Stage 2	366	448	-	158	263	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	39.6	299.2	0.4	1.4
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	886	-	-	224	95	967	-	-
HCM Lane V/C Ratio	0.028	-	-	0.557	1.367	0.131	-	-
HCM Control Delay (s)	9.2	0	-	39.6	299.2	9.3	0	-
HCM Lane LOS	A	A	-	E	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	3	9.5	0.5	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	118	6	73	212	203	16	161	86	72	81	79
Future Volume (vph)	65	118	6	73	212	203	16	161	86	72	81	79
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	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1484	1551		1471	1549	1316	1554	1636	1390	1484	1447	
Flt Permitted	0.40	1.00		0.61	1.00	1.00	0.64	1.00	1.00	0.57	1.00	
Satd. Flow (perm)	621	1551		942	1549	1316	1053	1636	1390	889	1447	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	73	133	7	82	238	228	18	181	97	81	91	89
RTOR Reduction (vph)	0	2	0	0	0	181	0	0	53	0	23	0
Lane Group Flow (vph)	73	138	0	82	238	47	18	181	44	81	157	0
Heavy Vehicles (%)	12%	12%	12%	13%	13%	13%	7%	7%	7%	12%	12%	12%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	26.1	19.2		26.1	19.2	19.2	44.4	42.1	42.1	52.8	46.3	
Effective Green, g (s)	26.1	19.2		26.1	19.2	19.2	44.4	42.1	42.1	52.8	46.3	
Actuated g/C Ratio	0.28	0.21		0.28	0.21	0.21	0.48	0.45	0.45	0.57	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)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	239	321		304	320	272	516	742	631	548	722	
v/s Ratio Prot	c0.02	0.09		0.02	c0.15		0.00	c0.11		c0.01	0.11	
v/s Ratio Perm	0.06			0.06		0.04	0.02		0.03	0.07		
v/c Ratio	0.31	0.43		0.27	0.74	0.17	0.03	0.24	0.07	0.15	0.22	
Uniform Delay, d1	25.4	32.0		25.4	34.4	30.2	12.7	15.5	14.3	9.3	13.0	
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	0.7	0.9		0.5	9.0	0.3	0.0	0.8	0.2	0.1	0.7	
Delay (s)	26.2	32.9		25.8	43.5	30.5	12.8	16.3	14.5	9.4	13.7	
Level of Service	C	C		C	D	C	B	B	B	A	B	
Approach Delay (s)		30.6			35.4			15.5			12.4	
Approach LOS		C			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	25.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	92.7	Sum of lost time (s)	18.0
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	7	6	569	8	6	324
Future Vol, veh/h	7	6	569	8	6	324
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	10	10	9	9
Mvmt Flow	8	7	639	9	7	364

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1022	644	0	0	648	0
Stage 1	644	-	-	-	-	-
Stage 2	378	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.19	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.281	-
Pot Cap-1 Maneuver	261	473	-	-	905	-
Stage 1	523	-	-	-	-	-
Stage 2	693	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	258	473	-	-	905	-
Mov Cap-2 Maneuver	258	-	-	-	-	-
Stage 1	518	-	-	-	-	-
Stage 2	693	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	16.6	0	0.2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	326	905	-
HCM Lane V/C Ratio	-	-	0.045	0.007	-
HCM Control Delay (s)	-	-	16.6	9	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	15	25	23	20	66	35	484	56	49	282	3
Future Vol, veh/h	3	15	25	23	20	66	35	484	56	49	282	3
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	13	13	13	10	10	10	9	9	9
Mvmt Flow	3	17	28	26	22	74	39	544	63	55	317	3

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1132	1115	319	1106	1085	578	320	0	0	608	0	0
Stage 1	429	429	-	655	655	-	-	-	-	-	-	-
Stage 2	703	686	-	451	430	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.23	6.63	6.33	4.2	-	-	4.19	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.23	5.63	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.23	5.63	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.617	4.117	3.417	2.29	-	-	2.281	-	-
Pot Cap-1 Maneuver	182	210	726	179	207	495	1196	-	-	937	-	-
Stage 1	608	587	-	437	446	-	-	-	-	-	-	-
Stage 2	431	451	-	567	565	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	127	185	726	146	182	494	1196	-	-	936	-	-
Mov Cap-2 Maneuver	127	185	-	146	182	-	-	-	-	-	-	-
Stage 1	578	545	-	415	423	-	-	-	-	-	-	-
Stage 2	329	428	-	490	524	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.8	28.6	0.5	1.3
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1196	-	-	309	272	936	-	-
HCM Lane V/C Ratio	0.033	-	-	0.156	0.45	0.059	-	-
HCM Control Delay (s)	8.1	0	-	18.8	28.6	9.1	0	-
HCM Lane LOS	A	A	-	C	D	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	2.2	0.2	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	111	230	20	128	221	113	21	163	111	205	247	108
Future Volume (vph)	111	230	20	128	221	113	21	163	111	205	247	108
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	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.97	1.00	1.00	0.97	1.00	0.99	
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	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1597	1663		1583	1667	1368	1614	1699	1403	1594	1593	
Flt Permitted	0.41	1.00		0.29	1.00	1.00	0.53	1.00	1.00	0.54	1.00	
Satd. Flow (perm)	681	1663		480	1667	1368	899	1699	1403	913	1593	
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)	123	256	22	142	246	126	23	181	123	228	274	120
RTOR Reduction (vph)	0	3	0	0	0	98	0	0	74	0	12	0
Lane Group Flow (vph)	123	275	0	142	246	28	23	181	49	228	383	0
Confl. Peds. (#/hr)	2					5			3	3		2
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	32.2	22.5		34.6	23.7	23.7	44.3	42.3	42.3	59.9	53.4	
Effective Green, g (s)	32.2	22.5		34.6	23.7	23.7	44.3	42.3	42.3	59.9	53.4	
Actuated g/C Ratio	0.30	0.21		0.32	0.22	0.22	0.41	0.40	0.40	0.56	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)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	288	350		268	369	303	386	672	555	595	796	
v/s Ratio Prot	0.04	c0.17		c0.05	0.15		0.00	0.11		c0.05	c0.24	
v/s Ratio Perm	0.09			0.12		0.02	0.02		0.03	0.17		
v/c Ratio	0.43	0.79		0.53	0.67	0.09	0.06	0.27	0.09	0.38	0.48	
Uniform Delay, d1	28.5	39.9		27.6	37.9	33.0	18.6	21.8	20.2	12.3	17.6	
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	1.0	11.0		1.9	4.5	0.1	0.1	1.0	0.3	0.4	2.1	
Delay (s)	29.5	50.9		29.5	42.5	33.1	18.6	22.8	20.5	12.7	19.6	
Level of Service	C	D		C	D	C	B	C	C	B	B	
Approach Delay (s)		44.3			36.6			21.6			17.1	
Approach LOS		D			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	29.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	106.8	Sum of lost time (s)	18.0
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	6	607	7	6	819
Future Vol, veh/h	8	6	607	7	6	819
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	3	3	4	4
Mvmt Flow	8	6	626	7	6	844

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1486	630	0	0	633	0
Stage 1	630	-	-	-	-	-
Stage 2	856	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	137	482	-	-	940	-
Stage 1	531	-	-	-	-	-
Stage 2	416	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	135	482	-	-	940	-
Mov Cap-2 Maneuver	135	-	-	-	-	-
Stage 1	525	-	-	-	-	-
Stage 2	416	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.9	0	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	195	940	-
HCM Lane V/C Ratio	-	-	0.074	0.007	-
HCM Control Delay (s)	-	-	24.9	8.9	0
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	0.2	0	-

Intersection	
Int Delay, s/veh	29.4

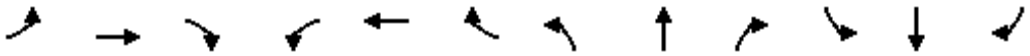
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	2	22	97	41	18	69	24	505	84	123	687	4
Future Vol, veh/h	2	22	97	41	18	69	24	505	84	123	687	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	1	1	1	3	3	3	4	4	4
Mvmt Flow	2	23	100	42	19	71	25	521	87	127	708	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1624	1622	710	1641	1581	565	712	0	0	608	0	0
Stage 1	964	964	-	615	615	-	-	-	-	-	-	-
Stage 2	660	658	-	1026	966	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.11	6.51	6.21	4.13	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4.009	3.309	2.227	-	-	2.236	-	-
Pot Cap-1 Maneuver	83	104	437	80	109	526	883	-	-	961	-	-
Stage 1	309	336	-	480	484	-	-	-	-	-	-	-
Stage 2	455	464	-	284	334	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	48	78	437	~ 39	81	526	883	-	-	961	-	-
Mov Cap-2 Maneuver	48	78	-	~ 39	81	-	-	-	-	-	-	-
Stage 1	296	262	-	459	463	-	-	-	-	-	-	-
Stage 2	361	444	-	156	261	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	40.2	$ 335.8	0.4	1.4
HCM LOS	E	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	883	-	-	222	91	961	-	-
HCM Lane V/C Ratio	0.028	-	-	0.562	1.45	0.132	-	-
HCM Control Delay (s)	9.2	0	-	40.2	$ 335.8	9.3	0	-
HCM Lane LOS	A	A	-	E	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	3.1	10	0.5	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	104	168	8	104	302	311	22	254	121	102	113	111
Future Volume (vph)	104	168	8	104	302	311	22	254	121	102	113	111
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	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1484	1552		1471	1549	1316	1554	1636	1390	1484	1446	
Flt Permitted	0.29	1.00		0.54	1.00	1.00	0.60	1.00	1.00	0.43	1.00	
Satd. Flow (perm)	450	1552		838	1549	1316	986	1636	1390	675	1446	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	117	189	9	117	339	349	25	285	136	115	127	125
RTOR Reduction (vph)	0	1	0	0	0	255	0	0	82	0	26	0
Lane Group Flow (vph)	117	197	0	117	339	94	25	285	54	115	226	0
Heavy Vehicles (%)	12%	12%	12%	13%	13%	13%	7%	7%	7%	12%	12%	12%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	38.7	29.6		37.1	28.8	28.8	45.0	41.9	41.9	55.0	47.4	
Effective Green, g (s)	38.7	29.6		37.1	28.8	28.8	45.0	41.9	41.9	55.0	47.4	
Actuated g/C Ratio	0.36	0.28		0.35	0.27	0.27	0.42	0.39	0.39	0.52	0.45	
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)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	252	431		341	419	356	433	644	547	414	644	
v/s Ratio Prot	c0.04	0.13		0.03	c0.22		0.00	c0.17		c0.02	0.16	
v/s Ratio Perm	0.13			0.09		0.07	0.02		0.04	0.12		
v/c Ratio	0.46	0.46		0.34	0.81	0.27	0.06	0.44	0.10	0.28	0.35	
Uniform Delay, d1	24.5	31.7		24.6	36.2	30.5	18.0	23.7	20.3	14.2	19.4	
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	1.4	0.8		0.6	11.0	0.4	0.1	2.2	0.4	0.4	1.5	
Delay (s)	25.8	32.5		25.2	47.2	30.9	18.1	25.9	20.7	14.6	20.9	
Level of Service	C	C		C	D	C	B	C	C	B	C	
Approach Delay (s)		30.0			36.9			23.9			18.9	
Approach LOS		C			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	29.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	106.4	Sum of lost time (s)	18.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	13	11	653	82	67	369
Future Vol, veh/h	13	11	653	82	67	369
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	10	10	9	9
Mvmt Flow	15	12	734	92	75	415

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1345	780	0	0	826	0
Stage 1	780	-	-	-	-	-
Stage 2	565	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.19	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.281	-
Pot Cap-1 Maneuver	167	395	-	-	775	-
Stage 1	452	-	-	-	-	-
Stage 2	569	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	146	395	-	-	775	-
Mov Cap-2 Maneuver	146	-	-	-	-	-
Stage 1	452	-	-	-	-	-
Stage 2	497	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.2	0	1.6
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	205	775	-
HCM Lane V/C Ratio	-	-	0.132	0.097	-
HCM Control Delay (s)	-	-	25.2	10.1	0
HCM Lane LOS	-	-	D	B	A
HCM 95th %tile Q(veh)	-	-	0.4	0.3	-

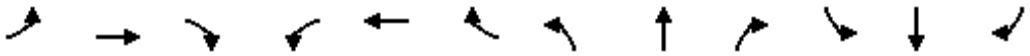
Intersection	
Int Delay, s/veh	26.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	21	36	52	28	94	51	531	82	70	348	4
Future Vol, veh/h	4	21	36	52	28	94	51	531	82	70	348	4
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	13	13	13	10	10	10	9	9	9
Mvmt Flow	4	24	40	58	31	106	57	597	92	79	391	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1378	1355	393	1341	1311	645	396	0	0	690	0	0
Stage 1	551	551	-	758	758	-	-	-	-	-	-	-
Stage 2	827	804	-	583	553	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.23	6.63	6.33	4.2	-	-	4.19	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.23	5.63	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.23	5.63	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.617	4.117	3.417	2.29	-	-	2.281	-	-
Pot Cap-1 Maneuver	123	151	660	123	151	453	1120	-	-	873	-	-
Stage 1	522	519	-	383	400	-	-	-	-	-	-	-
Stage 2	369	398	-	480	497	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	65	122	660	84	122	452	1120	-	-	872	-	-
Mov Cap-2 Maneuver	65	122	-	84	122	-	-	-	-	-	-	-
Stage 1	478	459	-	350	366	-	-	-	-	-	-	-
Stage 2	237	364	-	378	439	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	29.9	184	0.6	1.6
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1120	-	-	212	165	872	-	-
HCM Lane V/C Ratio	0.051	-	-	0.323	1.185	0.09	-	-
HCM Control Delay (s)	8.4	0	-	29.9	184	9.5	0	-
HCM Lane LOS	A	A	-	D	F	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	1.3	10.7	0.3	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	156	329	28	181	316	160	30	229	157	314	372	164
Future Volume (vph)	156	329	28	181	316	160	30	229	157	314	372	164
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	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97	1.00	0.99	
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	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1597	1663		1583	1667	1366	1614	1699	1402	1596	1593	
Flt Permitted	0.31	1.00		0.17	1.00	1.00	0.32	1.00	1.00	0.40	1.00	
Satd. Flow (perm)	525	1663		277	1667	1366	544	1699	1402	678	1593	
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)	173	366	31	201	351	178	33	254	174	349	413	182
RTOR Reduction (vph)	0	3	0	0	0	128	0	0	121	0	13	0
Lane Group Flow (vph)	173	394	0	201	351	50	33	254	53	349	582	0
Confl. Peds. (#/hr)	2					5			3	3		2
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	39.3	29.8		44.5	32.4	32.4	38.2	35.3	35.3	59.6	52.2	
Effective Green, g (s)	39.3	29.8		44.5	32.4	32.4	38.2	35.3	35.3	59.6	52.2	
Actuated g/C Ratio	0.34	0.26		0.39	0.28	0.28	0.33	0.31	0.31	0.52	0.45	
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)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	267	430		244	469	384	207	521	430	509	723	
v/s Ratio Prot	0.05	c0.24		c0.09	0.21		0.00	0.15		c0.12	c0.37	
v/s Ratio Perm	0.17			0.23		0.04	0.05		0.04	0.24		
v/c Ratio	0.65	0.92		0.82	0.75	0.13	0.16	0.49	0.12	0.69	0.81	
Uniform Delay, d1	28.8	41.4		27.5	37.6	30.8	26.6	32.5	28.7	18.2	27.0	
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	5.3	24.0		19.7	6.4	0.2	0.4	3.2	0.6	3.8	9.3	
Delay (s)	34.2	65.4		47.2	44.0	31.0	27.0	35.7	29.3	22.0	36.4	
Level of Service	C	E		D	D	C	C	D	C	C	D	
Approach Delay (s)		55.9			41.7			32.7			31.1	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	39.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	115.0	Sum of lost time (s)	18.0
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	7.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	79	65	666	15	12	837
Future Vol, veh/h	79	65	666	15	12	837
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	3	3	4	4
Mvmt Flow	81	67	687	15	12	863

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1582	694	0	0	702	0
Stage 1	694	-	-	-	-	-
Stage 2	888	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	120	443	-	-	886	-
Stage 1	496	-	-	-	-	-
Stage 2	402	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	117	443	-	-	886	-
Mov Cap-2 Maneuver	117	-	-	-	-	-
Stage 1	496	-	-	-	-	-
Stage 2	392	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	86.4	0	0.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	175	886	-
HCM Lane V/C Ratio	-	-	0.848	0.014	-
HCM Control Delay (s)	-	-	86.4	9.1	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	6	0	-

Intersection	
Int Delay, s/veh	83.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	22	97	43	18	69	34	557	140	176	709	6
Future Vol, veh/h	3	22	97	43	18	69	34	557	140	176	709	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	1	1	1	3	3	3	4	4	4
Mvmt Flow	3	23	100	44	19	71	35	574	144	181	731	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1858	1886	734	1874	1816	646	737	0	0	719	0	0
Stage 1	1097	1097	-	716	716	-	-	-	-	-	-	-
Stage 2	761	789	-	1158	1100	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.11	6.51	6.21	4.13	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4.009	3.309	2.227	-	-	2.236	-	-
Pot Cap-1 Maneuver	57	71	423	55	78	473	864	-	-	873	-	-
Stage 1	261	291	-	423	436	-	-	-	-	-	-	-
Stage 2	401	405	-	240	289	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	24	43	423	~ 18	47	473	864	-	-	873	-	-
Mov Cap-2 Maneuver	24	43	-	~ 18	47	-	-	-	-	-	-	-
Stage 1	243	189	-	394	406	-	-	-	-	-	-	-
Stage 2	303	377	-	105	187	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	110.3	$ 1082.7	0.4	2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	864	-	-	141	45	873	-	-
HCM Lane V/C Ratio	0.041	-	-	0.892	2.978	0.208	-	-
HCM Control Delay (s)	9.3	0	-	110.3	$ 1082.7	10.2	0	-
HCM Lane LOS	A	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	6	14.6	0.8	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	108	168	8	104	302	319	22	264	121	108	120	114
Future Volume (vph)	108	168	8	104	302	319	22	264	121	108	120	114
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	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1484	1552		1471	1549	1316	1554	1636	1390	1484	1448	
Flt Permitted	0.27	1.00		0.57	1.00	1.00	0.60	1.00	1.00	0.42	1.00	
Satd. Flow (perm)	420	1552		890	1549	1316	976	1636	1390	651	1448	
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	121	189	9	117	339	358	25	297	136	121	135	128
RTOR Reduction (vph)	0	1	0	0	0	262	0	0	83	0	25	0
Lane Group Flow (vph)	121	197	0	117	339	96	25	297	53	121	238	0
Heavy Vehicles (%)	12%	12%	12%	13%	13%	13%	7%	7%	7%	12%	12%	12%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	41.0	31.2		36.4	28.9	28.9	44.8	42.0	42.0	55.7	48.4	
Effective Green, g (s)	41.0	31.2		36.4	28.9	28.9	44.8	42.0	42.0	55.7	48.4	
Actuated g/C Ratio	0.38	0.29		0.34	0.27	0.27	0.42	0.39	0.39	0.52	0.45	
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)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	256	448		340	414	352	420	636	541	407	649	
v/s Ratio Prot	c0.04	0.13		0.02	c0.22		0.00	c0.18		c0.03	0.16	
v/s Ratio Perm	0.14			0.09		0.07	0.02		0.04	0.13		
v/c Ratio	0.47	0.44		0.34	0.82	0.27	0.06	0.47	0.10	0.30	0.37	
Uniform Delay, d1	24.0	31.2		25.8	37.0	31.2	18.8	24.6	20.9	14.7	19.6	
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	1.4	0.7		0.6	11.9	0.4	0.1	2.5	0.4	0.4	1.6	
Delay (s)	25.4	31.9		26.4	49.0	31.6	18.8	27.0	21.3	15.1	21.2	
Level of Service	C	C		C	D	C	B	C	C	B	C	
Approach Delay (s)		29.4			38.1			24.9			19.3	
Approach LOS		C			D			C			B	

Intersection Summary			
HCM 2000 Control Delay	30.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	107.9	Sum of lost time (s)	18.0
Intersection Capacity Utilization	60.3%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	2.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	24	653	104	85	369
Future Vol, veh/h	29	24	653	104	85	369
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	10	10	9	9
Mvmt Flow	33	27	734	117	96	415

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1398	792	0	0	851	0
Stage 1	792	-	-	-	-	-
Stage 2	606	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.19	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.281	-
Pot Cap-1 Maneuver	155	389	-	-	758	-
Stage 1	446	-	-	-	-	-
Stage 2	545	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	129	389	-	-	758	-
Mov Cap-2 Maneuver	129	-	-	-	-	-
Stage 1	446	-	-	-	-	-
Stage 2	455	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	33.4	0	2
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	185	758	-
HCM Lane V/C Ratio	-	-	0.322	0.126	-
HCM Control Delay (s)	-	-	33.4	10.4	0
HCM Lane LOS	-	-	D	B	A
HCM 95th %tile Q(veh)	-	-	1.3	0.4	-

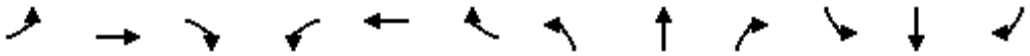
Intersection	
Int Delay, s/veh	34.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	4	21	36	58	28	94	51	540	86	70	360	4
Future Vol, veh/h	4	21	36	58	28	94	51	540	86	70	360	4
Conflicting Peds, #/hr	0	0	0	0	0	1	0	0	1	1	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	0	0	0	13	13	13	10	10	10	9	9	9
Mvmt Flow	4	24	40	65	31	106	57	607	97	79	404	4

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1403	1383	407	1367	1337	657	409	0	0	704	0	0
Stage 1	564	564	-	771	771	-	-	-	-	-	-	-
Stage 2	839	819	-	596	566	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.23	6.63	6.33	4.2	-	-	4.19	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.23	5.63	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.23	5.63	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.617	4.117	3.417	2.29	-	-	2.281	-	-
Pot Cap-1 Maneuver	118	145	648	118	146	446	1108	-	-	862	-	-
Stage 1	514	512	-	377	394	-	-	-	-	-	-	-
Stage 2	363	392	-	472	490	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	61	117	648	80	117	445	1108	-	-	861	-	-
Mov Cap-2 Maneuver	61	117	-	80	117	-	-	-	-	-	-	-
Stage 1	470	451	-	344	360	-	-	-	-	-	-	-
Stage 2	231	358	-	369	432	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	31.5	239.7	0.6	1.5
HCM LOS	D	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1108	-	-	203	153	861	-	-
HCM Lane V/C Ratio	0.052	-	-	0.338	1.322	0.091	-	-
HCM Control Delay (s)	8.4	0	-	31.5	239.7	9.6	0	-
HCM Lane LOS	A	A	-	D	F	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	1.4	12.3	0.3	-	-



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	161	329	28	181	316	172	30	243	157	328	390	172
Future Volume (vph)	161	329	28	181	316	172	30	243	157	328	390	172
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	1.00	1.00	1.00	1.00	1.00	
Frpb, ped/bikes	1.00	1.00		1.00	1.00	0.96	1.00	1.00	0.97	1.00	0.99	
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	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1597	1663		1583	1667	1366	1614	1699	1402	1596	1593	
Flt Permitted	0.31	1.00		0.17	1.00	1.00	0.29	1.00	1.00	0.38	1.00	
Satd. Flow (perm)	525	1663		278	1667	1366	488	1699	1402	638	1593	
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)	179	366	31	201	351	191	33	270	174	364	433	191
RTOR Reduction (vph)	0	3	0	0	0	137	0	0	121	0	13	0
Lane Group Flow (vph)	179	394	0	201	351	54	33	270	53	364	611	0
Confl. Peds. (#/hr)	2					5			3	3		2
Heavy Vehicles (%)	4%	4%	4%	5%	5%	5%	3%	3%	3%	4%	4%	4%
Turn Type	pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8		8	2		2	6		
Actuated Green, G (s)	39.4	29.9		44.6	32.5	32.5	37.8	34.9	34.9	59.7	52.3	
Effective Green, g (s)	39.4	29.9		44.6	32.5	32.5	37.8	34.9	34.9	59.7	52.3	
Actuated g/C Ratio	0.34	0.26		0.39	0.28	0.28	0.33	0.30	0.30	0.52	0.45	
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)	3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	267	431		244	470	385	188	514	424	499	723	
v/s Ratio Prot	0.06	c0.24		c0.09	0.21		0.00	0.16		c0.13	c0.38	
v/s Ratio Perm	0.17			0.23		0.04	0.05		0.04	0.25		
v/c Ratio	0.67	0.91		0.82	0.75	0.14	0.18	0.53	0.12	0.73	0.85	
Uniform Delay, d1	29.1	41.4		27.6	37.6	30.9	27.1	33.3	29.1	18.7	27.9	
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	6.5	23.6		19.7	6.4	0.2	0.4	3.8	0.6	5.3	11.7	
Delay (s)	35.5	65.0		47.2	44.0	31.1	27.6	37.1	29.7	24.0	39.6	
Level of Service	D	E		D	D	C	C	D	C	C	D	
Approach Delay (s)		55.9			41.5			33.7			33.8	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	40.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	115.2	Sum of lost time (s)	18.0
Intersection Capacity Utilization	84.4%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	35.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	119	98	666	46	38	837
Future Vol, veh/h	119	98	666	46	38	837
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	3	3	4	4
Mvmt Flow	123	101	687	47	39	863

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1651	710	0	0	734	0
Stage 1	710	-	-	-	-	-
Stage 2	941	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	~ 109	434	-	-	862	-
Stage 1	487	-	-	-	-	-
Stage 2	380	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 100	434	-	-	862	-
Mov Cap-2 Maneuver	~ 100	-	-	-	-	-
Stage 1	487	-	-	-	-	-
Stage 2	347	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	294.7	0	0.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	153	862	-
HCM Lane V/C Ratio	-	-	1.462	0.045	-
HCM Control Delay (s)	-	-	294.7	9.4	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	14.6	0.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	130.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	3	22	97	52	18	69	34	579	151	176	726	6
Future Vol, veh/h	3	22	97	52	18	69	34	579	151	176	726	6
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	0	0	0	1	1	1	3	3	3	4	4	4
Mvmt Flow	3	23	100	54	19	71	35	597	156	181	748	6

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1904	1937	752	1921	1863	675	755	0	0	753	0	0
Stage 1	1114	1114	-	745	745	-	-	-	-	-	-	-
Stage 2	790	823	-	1176	1118	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.11	6.51	6.21	4.13	-	-	4.14	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.11	5.51	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.509	4.009	3.309	2.227	-	-	2.236	-	-
Pot Cap-1 Maneuver	53	66	413	~ 51	73	456	851	-	-	848	-	-
Stage 1	255	286	-	408	422	-	-	-	-	-	-	-
Stage 2	386	391	-	234	284	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	21	39	413	~ 15	43	456	851	-	-	848	-	-
Mov Cap-2 Maneuver	21	39	-	~ 15	43	-	-	-	-	-	-	-
Stage 1	236	181	-	378	391	-	-	-	-	-	-	-
Stage 2	288	362	-	98	179	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	135.4	$ 1685.1	0.4	2
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	851	-	-	130	34	848	-	-
HCM Lane V/C Ratio	0.041	-	-	0.967	4.215	0.214	-	-
HCM Control Delay (s)	9.4	0	-	135.4	$ 1685.1	10.4	0	-
HCM Lane LOS	A	A	-	F	F	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	6.6	16.9	0.8	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	29	24	653	104	85	369
Future Vol, veh/h	29	24	653	104	85	369
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	10	10	9	9
Mvmt Flow	33	27	734	117	96	415

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1400	793	0	0	851	0
Stage 1	793	-	-	-	-	-
Stage 2	607	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.19	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.281	-
Pot Cap-1 Maneuver	155	389	-	-	758	-
Stage 1	446	-	-	-	-	-
Stage 2	544	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	129	389	-	-	758	-
Mov Cap-2 Maneuver	244	-	-	-	-	-
Stage 1	372	-	-	-	-	-
Stage 2	544	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	20.3	0	2
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	294	758	-
HCM Lane V/C Ratio	-	-	0.203	0.126	-
HCM Control Delay (s)	-	-	20.3	10.4	0
HCM Lane LOS	-	-	C	B	A
HCM 95th %tile Q(veh)	-	-	0.7	0.4	-

Intersection	
Int Delay, s/veh	6.5

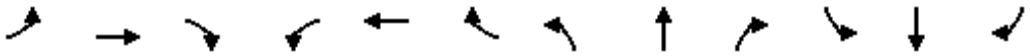
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	119	98	666	46	38	837
Future Vol, veh/h	119	98	666	46	38	837
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	97	97	97	97	97	97
Heavy Vehicles, %	2	2	3	3	4	4
Mvmt Flow	123	101	687	47	39	863

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1652	711	0	0	734	0
Stage 1	711	-	-	-	-	-
Stage 2	941	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.14	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.236	-
Pot Cap-1 Maneuver	~ 108	433	-	-	862	-
Stage 1	487	-	-	-	-	-
Stage 2	380	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 99	433	-	-	862	-
Mov Cap-2 Maneuver	220	-	-	-	-	-
Stage 1	445	-	-	-	-	-
Stage 2	380	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	52.7	0	0.4
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	283	862	-
HCM Lane V/C Ratio	-	-	0.79	0.045	-
HCM Control Delay (s)	-	-	52.7	9.4	0
HCM Lane LOS	-	-	F	A	A
HCM 95th %tile Q(veh)	-	-	6.2	0.1	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon



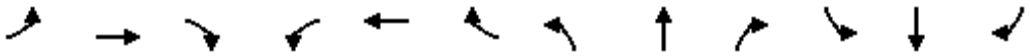
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Traffic Volume (veh/h)	3	15	25	25	20	66	35	487	57	49	285	3
Future Volume (veh/h)	3	15	25	25	20	66	35	487	57	49	285	3
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	3	17	28	28	22	74	39	547	64	55	320	3
Approach Volume (veh/h)		48			124			650			378	
Crossing Volume (veh/h)		403			589			75			89	
High Capacity (veh/h)		1008			869			1306			1292	
High v/c (veh/h)		0.05			0.14			0.50			0.29	
Low Capacity (veh/h)		821			698			1090			1077	
Low v/c (veh/h)		0.06			0.18			0.60			0.35	

Intersection Summary				
Maximum v/c High	0.50			
Maximum v/c Low	0.60			
Intersection Capacity Utilization	58.3%	ICU Level of Service	B	

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	48	124	650	378
Demand Flow Rate, veh/h	48	141	715	412
Vehicles Circulating, veh/h	441	648	80	100
Vehicles Exiting, veh/h	71	147	409	689
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	1	0	1
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.6	10.3	15.1	8.4
Approach LOS	A	B	C	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	48	141	715	412
Cap Entry Lane, veh/h	727	591	1043	1022
Entry HV Adj Factor	1.000	0.880	0.909	0.918
Flow Entry, veh/h	48	124	650	378
Cap Entry, veh/h	727	520	949	938
V/C Ratio	0.066	0.239	0.685	0.403
Control Delay, s/veh	5.6	10.3	15.1	8.4
LOS	A	B	C	A
95th %tile Queue, veh	0	1	6	2



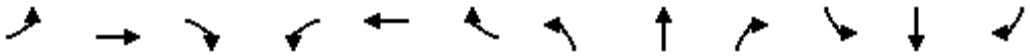
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Traffic Volume (veh/h)	3	22	97	52	18	69	34	579	151	176	726	6
Future Volume (veh/h)	3	22	97	52	18	69	34	579	151	176	726	6
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	3	23	100	54	19	71	35	597	156	181	748	6
Approach Volume (veh/h)		126			144			788			935	
Crossing Volume (veh/h)		983			635			207			108	
High Capacity (veh/h)		631			838			1178			1273	
High v/c (veh/h)		0.20			0.17			0.67			0.73	
Low Capacity (veh/h)		490			670			973			1059	
Low v/c (veh/h)		0.26			0.22			0.81			0.88	

Intersection Summary				
Maximum v/c High	0.73			
Maximum v/c Low	0.88			
Intersection Capacity Utilization	122.9%	ICU Level of Service		H

Intersection	
Intersection Delay, s/veh	32.9
Intersection LOS	D

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	126	144	788	935
Demand Flow Rate, veh/h	126	146	812	972
Vehicles Circulating, veh/h	1021	654	214	110
Vehicles Exiting, veh/h	61	372	933	690
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	14.3	9.5	31.1	40.5
Approach LOS	B	A	D	E

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	126	146	812	972
Cap Entry Lane, veh/h	407	588	912	1012
Entry HV Adj Factor	1.000	0.985	0.971	0.962
Flow Entry, veh/h	126	144	788	935
Cap Entry, veh/h	407	579	885	974
V/C Ratio	0.310	0.248	0.890	0.960
Control Delay, s/veh	14.3	9.5	31.1	40.5
LOS	B	A	D	E
95th %tile Queue, veh	1	1	12	16



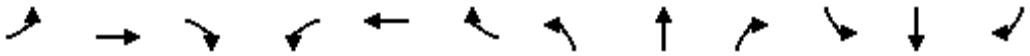
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Traffic Volume (veh/h)	2	22	97	48	18	69	24	522	92	123	703	4
Future Volume (veh/h)	2	22	97	48	18	69	24	522	92	123	703	4
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	2	23	100	49	19	71	25	538	95	127	725	4
Approach Volume (veh/h)		125			139			658			856	
Crossing Volume (veh/h)		901			565			152			93	
High Capacity (veh/h)		675			886			1230			1288	
High v/c (veh/h)		0.19			0.16			0.54			0.66	
Low Capacity (veh/h)		528			712			1020			1073	
Low v/c (veh/h)		0.24			0.20			0.64			0.80	

Intersection Summary					
Maximum v/c High	0.66				
Maximum v/c Low	0.80				
Intersection Capacity Utilization	110.3%	ICU Level of Service		H	

Intersection	
Intersection Delay, s/veh	19.9
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	125	139	658	856
Demand Flow Rate, veh/h	125	140	678	890
Vehicles Circulating, veh/h	935	582	157	94
Vehicles Exiting, veh/h	49	253	903	628
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	12.7	8.5	15.9	26.0
Approach LOS	B	A	C	D

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	125	140	678	890
Cap Entry Lane, veh/h	444	631	966	1029
Entry HV Adj Factor	1.000	0.992	0.970	0.962
Flow Entry, veh/h	125	139	658	856
Cap Entry, veh/h	444	626	937	989
V/C Ratio	0.282	0.222	0.702	0.865
Control Delay, s/veh	12.7	8.5	15.9	26.0
LOS	B	A	C	D
95th %tile Queue, veh	1	1	6	11



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Right Turn Channelized												
Traffic Volume (veh/h)	4	21	36	58	28	94	51	540	86	70	360	4
Future Volume (veh/h)	4	21	36	58	28	94	51	540	86	70	360	4
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Hourly flow rate (vph)	4	24	40	65	31	106	57	607	97	79	404	4
Approach Volume (veh/h)		68			202			761			487	
Crossing Volume (veh/h)		548			668			107			153	
High Capacity (veh/h)		898			816			1274			1229	
High v/c (veh/h)		0.08			0.25			0.60			0.40	
Low Capacity (veh/h)		723			650			1060			1019	
Low v/c (veh/h)		0.09			0.31			0.72			0.48	

Intersection Summary				
Maximum v/c High	0.60			
Maximum v/c Low	0.72			
Intersection Capacity Utilization	69.8%	ICU Level of Service	C	

Intersection	
Intersection Delay, s/veh	18.2
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	68	202	761	487
Demand Flow Rate, veh/h	68	228	838	530
Vehicles Circulating, veh/h	599	735	114	171
Vehicles Exiting, veh/h	102	217	553	792
Follow-Up Headway, s	3.186	3.186	3.186	3.186
Ped Vol Crossing Leg, #/h	0	1	0	1
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.1	14.9	24.1	11.9
Approach LOS	A	B	C	B

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Critical Headway, s	5.193	5.193	5.193	5.193
Entry Flow, veh/h	68	228	838	530
Cap Entry Lane, veh/h	621	542	1008	952
Entry HV Adj Factor	1.000	0.886	0.908	0.918
Flow Entry, veh/h	68	202	761	487
Cap Entry, veh/h	621	480	916	874
V/C Ratio	0.110	0.421	0.831	0.557
Control Delay, s/veh	7.1	14.9	24.1	11.9
LOS	A	B	C	B
95th %tile Queue, veh	0	2	10	4

Traffic Signal Warrant Analysis

Project: 31176 S Highway 213
Date: 2/20/2018
Scenario: 2038 Background Plus Proposed Zoning, PM

Major Street:	Highway 213	Minor Street:	Toliver Road
Number of Lanes:	1	Number of Lanes:	1
PM Peak Hour Volumes:	1672	PM Peak Hour Volumes:	70

Warrant Used:

	100 percent of standard warrants used
X	70 percent of standard warrants used due to 85th percentile speed in excess of 40 mph or isolated community with population less than 10,000.

Number of Lanes for Moving Traffic on Each Approach:		ADT on Major St. (total of both approaches)		ADT on Minor St. (higher-volume approach)	
WARRANT 1, CONDITION A		100%	70%	100%	70%
Major St.	Minor St.	Warrants	Warrants	Warrants	Warrants
1	1	8,850	6,200	2,650	1,850
2 or more	1	10,600	7,400	2,650	1,850
2 or more	2 or more	10,600	7,400	3,550	2,500
1	2 or more	8,850	6,200	3,550	2,500
WARRANT 1, CONDITION B					
1	1	13,300	9,300	1,350	950
2 or more	1	15,900	11,100	1,350	950
2 or more	2 or more	15,900	11,100	1,750	1,250
1	2 or more	13,300	9,300	1,750	1,250

Note: ADT volumes assume 8th highest hour is 5.6% of the daily volume

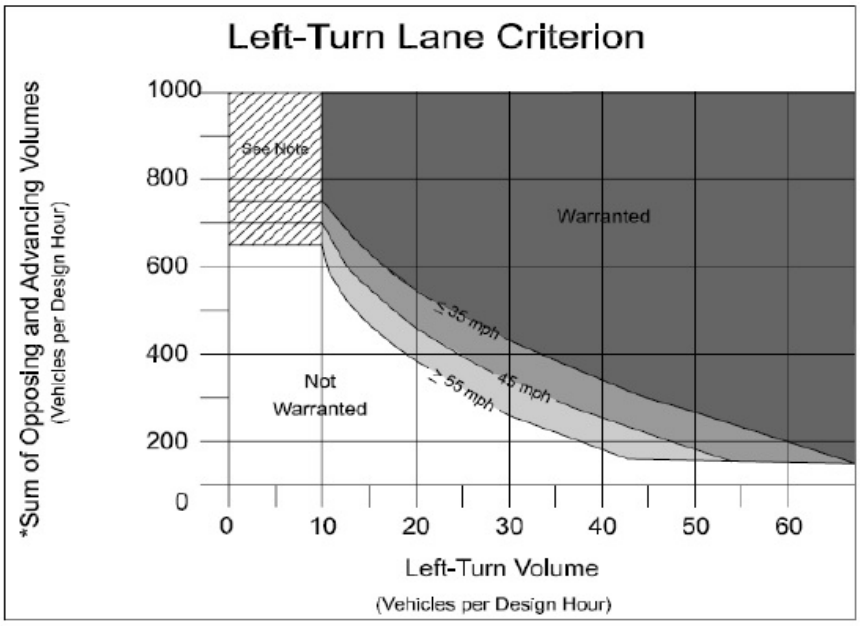
	Approach Volumes	Minimum Volumes	Is Signal Warrant Met?
Warrant 1			
Condition A: Minimum Vehicular Volume			
Major Street	16,720	6,200	
Minor Street*	700	2,500	**No**
Condition B: Interruption of Continuous Traffic			
Major Street	16,720	9,300	
Minor Street*	700	1,250	**No**
Combination Warrant			
Major Street	16,720	7,440	
Minor Street*	700	2,000	**No**

* Minor street right-turning traffic volumes reduced by 85% of shared lane capacity

Project: 17216 - 31176 S Hwy 213
Intersection: Hwy 213 at Site Access
Date: 2/20/2018
Scenario: 2020 Background Plus 10 Left-Turns

Speed? 40 mph

AM Peak Hour		**PM Peak Hour**	
Left-Turn Volume	10	Left-Turn Volume	10
Approaching DHV	334	Approaching DHV	829
# of Advancing Through Lanes	1	# of Advancing Through Lanes	1
Opposing DHV	569	Opposing DHV	607
# of Opposing Through Lanes	1	# of Opposing Through Lanes	1
O+A DHV	**903**	**O+A DHV**	**1436**
Lane Needed?	**Yes**	Lane Needed?	**Yes**



Source: Oregon DOT Analysis Procedures Manual 2008

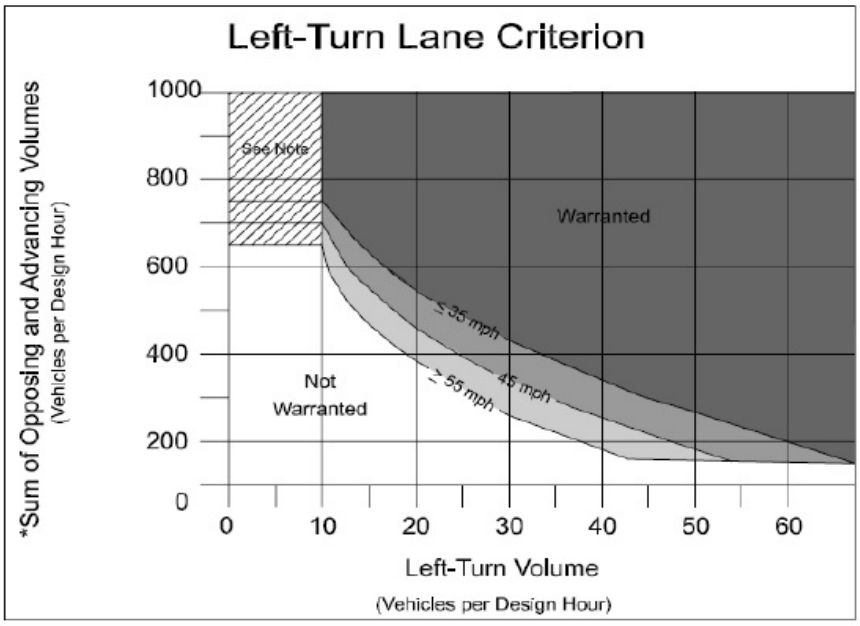
*(Advancing Vol/ # of Advancing Through Lanes)+
(Opposing Vol/ # of Opposing Through Lanes)

Note: The criterion is not met from zero to ten left turn vehicles per hour, but careful consideration should be given to installing a left turn lane due to the increased potential for accidents in the through lanes. While the turn volumes are low, the adverse safety and operational impacts may require installation of a left turn. The final determination will be based on a field study.

Project: 17216 - 31176 S Hwy 213
Intersection: Hwy 213 at Toliver Rd
Date: 2/20/2018
Scenario: 2018 Existing Conditions

Speed? 40 mph

AM Peak Hour		**PM Peak Hour**	
Left-Turn Volume	47	Left-Turn Volume	118
Approaching DHV	253	Approaching DHV	621
# of Advancing Through Lanes	1	# of Advancing Through Lanes	1
Opposing DHV	403	Opposing DHV	445
# of Opposing Through Lanes	1	# of Opposing Through Lanes	1
O+A DHV	**656**	**O+A DHV**	**1066**
Lane Needed?	**Yes**	Lane Needed?	**Yes**



Source: Oregon DOT Analysis Procedures Manual 2008

*(Advancing Vol/ # of Advancing Through Lanes)+
(Opposing Vol/ # of Opposing Through Lanes)

Note: The criterion is not met from zero to ten left turn vehicles per hour, but careful consideration should be given to installing a left turn lane due to the increased potential for accidents in the through lanes. While the turn volumes are low, the adverse safety and operational impacts may require installation of a left turn. The final determination will be based on a field study.

160 CASCADE HWY SOUTH OR 213 Cascade Highway and OR 211 Woodburn-Estacada Highway (intersection)
January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPEED	ALC	DRUG	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	COUNTY / CITY / URBAN AREA	RD# / CMPT/MILEPNT / LRS	FC / MLG / 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
02061	N	N	N	N	N	06/11/2013	CLACKAMAS	1	16	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE	0	STRGHT											07
COUNTY						Tue 11A		MN	0	N		L-GRN-SIG	N	DRY	REAR		PRVTE		N S										000	00
							MOLALLA UA	16.10		06	0		N	DAY	INJ		PSNGR CAR			01	DRVR	NONE	23	M	OR-Y		043,026	000		07
No	*45*	*9*	*2.53*	*-122*	*36 22.92*			016000100S00																	OR<25					
																02	NONE	0	STOP											
																	PRVTE		N S										012	00
																	PSNGR CAR			01	DRVR	INJC	61	F	OR-Y		000	000		00
																									OR<25					
05335	N	N	N			12/31/2014	CLACKAMAS	1	16	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE	0	STRGHT											29
NONE						Wed 5P		MN	0	N		TRF SIGNAL	N	DRY	REAR		PRVTE		N S										000	00
							MOLALLA UA	16.10		06	0		N	DLIT	PDO		PSNGR CAR			01	DRVR	NONE	51	F	OR-Y		026	000		29
No	*45*	*9*	*2.53*	*-122*	*36 22.92*			016000100S00																	OR<25					
																02	NONE	0	STOP											
																	UNKN		N S										011	00
																	PSNGR CAR			01	DRVR	NONE	00	M	UNK		000	000		00
																									UNK					
02845	N	N	N			08/03/2012	CLACKAMAS	1	16	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE	0	STRGHT											07
NONE						Fri 7A		MN	0	E		TRF SIGNAL	N	DRY	REAR		UNKN		E W										000	00
							MOLALLA UA	16.10		06	0		N	DAY	INJ		PSNGR CAR			01	DRVR	NONE	00	M	OR-Y		026	000		07
No	*45*	*9*	*2.53*	*-122*	*36 22.92*			016000100S00																	UNK					
																02	NONE	0	STOP											
																	PRVTE		E W										011	00
																	PSNGR CAR			01	DRVR	INJC	38	F	OR-Y		000	000		00
																									OR<25					
02891	N	N	N			08/06/2012	CLACKAMAS	1	16	INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE	0	STRGHT											02
NONE						Mon 6P		MN	0	CN		TRF SIGNAL	N	DRY	TURN		PRVTE		N S										000	00
							MOLALLA UA	16.10		01	0		N	DAY	INJ		PSNGR CAR			01	DRVR	NONE	52	M	OR-Y		000	000		00
No	*45*	*9*	*2.53*	*-122*	*36 22.92*			016000100S00																	OR<25					
																02	NONE	0	TURN-L											
																	PRVTE		S W										000	00
																	PSNGR CAR			01	DRVR	INJC	26	F	OR-Y		028,004	000		02
																									OR<25					
																				02	PSNG	INJC	13	F			000	000		00
																				03	PSNG	NO<5	04	M			000	000		00
																				04	PSNG	NO<5	02	M			000	000		00
02238	N	N	N	N	N	06/11/2014	CLACKAMAS	1	16	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE	0	STRGHT											04
CITY						Wed 1P		MN	0	CN		TRF SIGNAL	N	DRY	ANGL		PRVTE		E W										000	00
							MOLALLA UA	16.10		01	9		N	DAY	PDO		PSNGR CAR			01	DRVR	NONE	63	M	OR-Y		097	000		00
No	*45*	*9*	*2.53*	*-122*	*36 22.92*			016000100S00																	OR<25					
																02	NONE	0	STRGHT											
																	PRVTE		N S										000	00
																	PSNGR CAR			01	DRVR	NONE	53	M	OTH-Y		097	000		00
																									N-RES					

160 CASCADE HWY SOUTH — OR 213 Cascade Highway and OR 211 Woodburn-Estacada Highway (intersection)
January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPEED	ALC	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
04924	N	N	N	N	N	12/05/2014	CLACKAMAS	1	16		INTER	CROSS	N	N	FOG	O-1 L-TURN	01	NONE 0	STRGHT										02,08
CITY						Fri 5P		MN 0			CN		TRF SIGNAL	N	WET	TURN		PRVTE	N S									000	00
							MOLALLA UA	16.10			01	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	29	M	OR-Y		000	000	00
No	*45*	*9*	*2.53*	*-122*	*36 22.92*			016000100S00																	OR<25				
																	02	NONE 0	TURN-L										
																		PRVTE	S W									000	00
																		PSNGR CAR		01	DRVR	INJC	24	F	OR-Y		028,004	000	02,08
																									OR<25				
																				02	PSNG	INJC	07	M			000	000	00
04937	N	N	N			12/05/2014	CLACKAMAS	1	16		INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 0	STRGHT										02
NONE						Fri 5P		MN 0			CN		TRF SIGNAL	N	DRY	TURN		PRVTE	N S									000	00
							MOLALLA UA	16.10			01	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	24	M	UNK		000	000	00
No	*45*	*9*	*2.53*	*-122*	*36 22.92*			016000100S00																	OR<25				
																	02	NONE 0	TURN-L										
																		PRVTE	S W									000	00
																		PSNGR CAR		01	DRVR	NONE	21	F	OR-Y		028,004	000	02
																									OR<25				
02898	N	N	N			08/12/2011	CLACKAMAS	1	16		INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT										04
NO RPT						Fri 8P		MN 0			CN		TRF SIGNAL	N	DRY	ANGL		PRVTE	N S									000	00
							MOLALLA UA	16.10			03	0		N	DUSK	PDO		PSNGR CAR		01	DRVR	NONE	79	M	OR-Y		097	000	00
No	*45*	*9*	*2.53*	*-122*	*36 22.92*			016000100S00																	OR<25				
																	02	NONE 1	STRGHT										
																		PRVTE	W E									000	00
																		PSNGR CAR		01	DRVR	NONE	43	M	OR-Y		097	000	00
																									OR<25				
84282	N	N	N			08/12/2011	CLACKAMAS	1	16		INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 0	TURN-L										02
NO RPT						Fri 8P		MN 0			CN		TRF SIGNAL	N	DRY	TURN		PRVTE	E S									000	00
							MOLALLA UA	16.10			03	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	79	M	OR-Y		028	000	02
No	*45*	*9*	*2.53*	*-122*	*36 22.92*			016000100S00																	OR<25				
																	02	NONE 1	STRGHT										
																		PRVTE	W E									000	00
																		PSNGR CAR		01	DRVR	NONE	48	M	OR-Y		000	000	00
																									OR<25				
02424	N	N	N			07/06/2012	CLACKAMAS	1	16		INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 0	TURN-L										02
CITY						Fri 8P		MN 0			CN		TRF SIGNAL	N	DRY	TURN		PRVTE	E S									000	00
							MOLALLA UA	16.10			03	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	19	M	OR-Y		028,004	000	02
No	*45*	*9*	*2.53*	*-122*	*36 22.92*			016000100S00																	OR<25				
																	02	NONE 0	STRGHT										
																		PRVTE	W E									000	00
																		PSNGR CAR		01	DRVR	NONE	18	M	OR-Y		000	000	00
																									OR<25				

160 CASCADE HWY SOUTH — OR 213 Cascade Highway and OR 211 Woodburn-Estacada Highway (intersection)
January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPEED	ALC	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
04026	N	N	N	N	N	10/27/2012	CLACKAMAS	1	16		INTER	CROSS	N	N	RAIN	O-1 L-TURN	01	NONE 0	STRGHT										02
CITY						Sat 7A		MN 0			CN		TRF SIGNAL	N	WET	TURN		PRVTE	W E								000	00
							MOLALLA UA	16.10			03	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	29	M	SUSP		000	000	00
No	*45*	*9*	*2.53*	*-122*	*36 22.92*			016000100S00																	OR<25				
																	02	NONE 0	TURN-L										
																		PRVTE	E S									000	00
																		PSNGR CAR		01	DRVR	INJC	31	M	OR-Y		028,004	000	02
																									OR<25				
																				02	PSNG	INJB	11	U			000	000	00
00851	N	N	N			02/28/2014	CLACKAMAS	1	16		INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 0	STRGHT										02
NONE						Fri 3P		MN 0			CN		TRF SIGNAL	N	DRY	TURN		PRVTE	W E								000	00
							MOLALLA UA	16.10			03	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	25	M	OR-Y		000	000	00
No	*45*	*9*	*2.53*	*-122*	*36 22.92*			016000100S00																	OR<25				
																	02	NONE 0	TURN-L										
																		PRVTE	E S									000	00
																		PSNGR CAR		01	DRVR	NONE	72	M	OR-Y		028,004	000	02
																									OR<25				
02542	N	N	N			06/30/2014	CLACKAMAS	1	16		INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT										04
CITY						Mon 2P		MN 0			CN		TRF SIGNAL	N	DRY	ANGL		PRVTE	N S								000	00
							MOLALLA UA	16.10			03	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	17	M	OR-Y		020	000	04
No	*45*	*9*	*2.53*	*-122*	*36 22.92*			016000100S00																	OR<25				
																				02	PSNG	INJC	36	F			000	000	00
																				03	PSNG	NONE	05	M			000	000	00
																	02	NONE 0	STRGHT										
																		PRVTE	W E									000	00
																		PSNGR CAR		01	DRVR	NONE	24	M	OR-Y		000	000	00
																									OR>25				
05191	N	N	N	N	N	12/06/2015	CLACKAMAS	1	16		INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT										04
CITY						Sun 10A		MN 0			CN		TRF SIGNAL	N	DRY	ANGL		PRVTE	W E								000	00
							MOLALLA UA	16.10			03	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	39	F	OR-Y		020	000	04
No	*45*	*9*	*2.53*	*-122*	*36 22.92*			016000100S00																	OR<25				
																	02	NONE 0	STRGHT										
																		PRVTE	N S									000	00
																		PSNGR CAR		01	DRVR	NONE	62	F	OR-Y		000	000	00
																									OR<25				
03207	N	N	N	N	N	08/30/2011	CLACKAMAS	1	16		INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 0	STRGHT										02
STATE						Tue 9P		MN 0			CN		TRF SIGNAL	N	DRY	TURN		PRVTE	W E								000	00
							MOLALLA UA	16.10			04	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	INJC	20	F	OR-Y		000	000	00
No	*45*	*9*	*2.53*	*-122*	*36 22.92*			016000100S00																	OR<25				
																				02	PSNG	INJC	20	M			000	000	00
																				03	PSNG	INJC	20	F			000	000	00

160 CASCADE HWY SOUTH OR 213 Cascade Highway and OR 211 Woodburn-Estacada Highway (intersection)
January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPEED	ALCHL	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	TURN-L E S										000	00
																	PSNGR CAR		01	DRVR	NONE	19	M	UNK N-RES		004,028	000		02
03307 NONE	N	N	N		09/07/2011 Wed 5A	CLACKAMAS	1 MN 0	16		INTER CN	CROSS	N TRF SIGNAL	N	CLR DRY	O-1 L-TURN TURN	01	NONE 0 PRVTE	TURN-L N E										000	00
							MOLALLA UA	16.10		04	0		N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	17	F	UNK OR<25		004,028	000		02
No	*45*	*9*	*2.53*	*-122*	*36 22.92*			016000100S00																					
																02	NONE 0 PRVTE	STRGHT S N										000	00
																	PSNGR CAR		01	DRVR	NONE	37	M	OR-Y OR>25		000	000		00

160 CASCADE HWY SOUTH

OR 213 Cascade Highway and Toliver Rd
January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPEED	ALCOHOL	DRUGS	SCHL ZN	WORK ZN	DATE / DAY / TIME	COUNTY / CITY / URBAN AREA	RD# / CMPT/MILEPNT / LRS	FC / MLG / 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
04086	N	N	N	N	N	10/25/2013	CLACKAMAS	1 16		INTER	CROSS	N	N	FOG	S-1STOP	01	NONE 0	STRGHT											07
CITY						Fri 7A	MOLALLA	MN 0	CASCADE HY SOUTH	N		FLASHBCN-A	N	WET	REAR		PRVTE	NE SW									000		00
							MOLALLA UA	15.71	TOLIVER RD	06	0		N	DARK	INJ		PSNGR CAR		01	DRVR	INJB	23	F	OTH-Y		043,026	000		07
No	*45 9 21.32*					*-122 36 13.41*		016000100S00	1															OR<25					
																02	NONE 0	STOP											
																	PRVTE	NE SW									012		00
																	PSNGR CAR		01	DRVR	INJB	28	F	OR-Y		000	000		00
																								OR<25					
04841	N	N	N	N	N	12/14/2013	CLACKAMAS	1 16		INTER	CROSS	N	N	FOG	S-1STOP	01	NONE 0	STRGHT											07
CITY						Sat 11A	MOLALLA	MN 0	CASCADE HY SOUTH	NE		NONE	N	WET	REAR		PRVTE	NE SW									000		00
							MOLALLA UA	15.71	TOLIVER RD	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	20	F	OR-Y		026	000		07
No	*45 9 21.32*					*-122 36 13.41*		016000100S00	1															OR<25					
																02	NONE 0	STOP											
																	PRVTE	NE SW									012		00
																	PSNGR CAR		01	DRVR	INJC	56	F	OR-Y		000	000		00
																								OR<25					
01222	N	N	N	N	N	03/28/2014	CLACKAMAS	1 16		INTER	CROSS	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT											07
NONE						Fri 3P	MOLALLA	MN 0	CASCADE HY SOUTH	NE		STOP SIGN	N	WET	REAR		PRVTE	NE SW									000		00
							MOLALLA UA	15.71	TOLIVER RD	06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	20	M	OR-Y		043,026	000		07
No	*45 9 21.32*					*-122 36 13.41*		016000100S00	1															OR<25					
																02	NONE 0	STOP											
																	PRVTE	NE SW									012		00
																	PSNGR CAR		01	DRVR	NONE	21	F	OR-Y		000	000		00
																								OR<25					
03575	N	N	N	N	N	09/12/2014	CLACKAMAS	1 16		INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	07
CITY						Fri 11A	MOLALLA	MN 0	CASCADE HY SOUTH	SW		NONE	N	DRY	REAR		PRVTE	SW NE									000		00
							MOLALLA UA	15.71	TOLIVER RD	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	20	M	OR-Y		043,026	000		07
No	*45 9 21.32*					*-122 36 13.41*		016000100S00	1															OR<25					
																02	NONE 0	STOP											
																	PRVTE	SW NE									012	013	00
																	PSNGR CAR		01	DRVR	NONE	80	F	OR-Y		000	000		00
																								OR<25					
																03	NONE 0	STRGHT											
																	PRVTE	NE SW									022		00
																	PSNGR CAR		01	DRVR	NONE	78	F	OR-Y		000	000		00
																								OR<25					
																			02	PSNG	INJC	87	F			000	000		00
04546	N	N	N			11/10/2014	CLACKAMAS	1 16		INTER	CROSS	N	N	CLR	ANGL-STP	01	NONE 0	TURN-L											08
NONE						Mon 8P	MOLALLA	MN 0	CASCADE HY SOUTH	NW		STOP SIGN	N	DRY	TURN		PRVTE	SW NW									000		00
							MOLALLA UA	15.71	TOLIVER RD	06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	00	F	OR-Y		002	000		08
No	*45 9 21.32*					*-122 36 13.41*		016000100S00	1															OR<25					

160 CASCADE HWY SOUTH

OR 213 Cascade Highway and Toliver Rd
January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPEED	ALCHL	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 NW SE									011		00
																	PSNGR CAR		01	DRVR	INJC	18	F	OR-Y OR<25		000	000		00
04062	N	N	N	N	N	10/13/2014	CLACKAMAS	1 16		INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT										082	02
CITY						Mon 7A	MOLALLA	MN 0	CASCADE HY SOUTH	CN		FLASHBCN-R	N	DRY	ANGL		PRVTE	SE NW									015		00
							MOLALLA UA	15.71	TOLIVER RD	01	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	25	M	OR-Y OR<25		028	000	082	02
No	*45 9 21.32*					*-122 36 13.41*		016000100S00	1																				
																02	NONE 0 PRVTE	STRGHT NE SW									000		00
																	PSNGR CAR		01	DRVR	INJC	54	F	OR-Y OR<25		000	000		00
00663	N	N	N	N	N	02/20/2015	CLACKAMAS	1 16		INTER	3-LEG	N	N	CLR	ANGL-OTH	01	NONE 0	STRGHT											03
CITY						Fri 1P	MOLALLA	MN 0	CASCADE HY SOUTH	CN		STOP SIGN	N	DRY	ANGL		PRVTE	SE NW									000		00
							MOLALLA UA	15.71	TOLIVER RD	01	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	35	M	OR-Y UNK		021	000		03
No	*45 9 21.32*					*-122 36 13.41*		016000100S00	1										02	PSNG	INJC	27	F			000	000		00
																02	NONE 0 PRVTE	STRGHT NE SW									000		00
																	PSNGR CAR		01	DRVR	INJC	23	F	OR-Y OR<25		000	000		00
01566	N	N	N	N	N	04/28/2015	CLACKAMAS	1 16		INTER	CROSS	N	N	RAIN	ANGL-OTH	01	NONE 0	STRGHT											02
COUNTY						Tue 7P	MOLALLA	MN 0	CASCADE HY SOUTH	CN		STOP SIGN	N	WET	ANGL		PRVTE	NE SW									000		00
							MOLALLA UA	15.71	TOLIVER RD	01	0		N	DUSK	INJ		PSNGR CAR		01	DRVR	INJB	21	M	OR-Y OR<25		000	000		00
No	*45 9 21.32*					*-122 36 13.41*		016000100S00	1										02	PSNG	INJB	20	F			000	000		00
																02	NONE 0 PRVTE	STRGHT SE NW									015		00
																	PSNGR CAR		01	DRVR	NONE	17	F	OR-Y OR<25		028	000		02
01169	N	N	N			04/06/2013	CLACKAMAS	1 16		INTER	CROSS	N	N	RAIN	ANGL-OTH	01	NONE 0	TURN-L											02
NONE						Sat 3P	MOLALLA	MN 0	CASCADE HY SOUTH	CN		STOP SIGN	N	WET	TURN		PRVTE	SE SW									015		00
							MOLALLA UA	15.71	TOLIVER RD	02	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	63	M	OR-Y OR<25		028	000		02
No	*45 9 21.32*					*-122 36 13.41*		016000100S00	1																				
																02	NONE 0 PRVTE	TURN-L NE SE									000		00
																	PSNGR CAR		01	DRVR	NONE	48	F	OR-Y OR<25		000	000		00
02513	N	N	N			07/13/2013	CLACKAMAS	1 16		INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 1	STRGHT											02
NONE						Sat 7P	MOLALLA	MN 0	CASCADE HY SOUTH	CN		STOP SIGN	N	DRY	ANGL		PRVTE	S N									000		00
							MOLALLA UA	15.71	TOLIVER RD	02	0		N	DAY	INJ		SEMI TOW		01	DRVR	NONE	29	M	OTH-Y N-RES		000	000		00
No	*45 9 21.32*					*-122 36 13.41*		016000100S00	1																				

160 CASCADE HWY SOUTH

OR 213 Cascade Highway and Toliver Rd
January 1, 2011 through December 31, 2015

SER# / INVEST / UNLOC?	SPEED	ALCHL	DRUGS	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	COUNTY / CITY / URBAN AREA	RD# / CMPT/MLG / MILEPNT / 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	NONE 0 / PRVTE	STRGHT / E W									015	00
																		PSNGR CAR		01	DRVR	INJA	18	F	OR-Y / OR<25		028	000	02
																				02	PSNG	INJB	16	F			000	000	00
02199	N	N	N	N	N	06/21/2011	CLACKAMAS	1 16			INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 0	STRGHT										02
CITY						Tue 1P	MOLALLA	MN 0	CASCADE HY SOUTH		CN		FLASHBCN-R	N	DRY	TURN		PRVTE	SW NE									000	00
							MOLALLA UA	15.71	TOLIVER RD		04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	27	F	OR-Y / OR<25		000	000	00
No	*45 9 21.32*					*-122 36 13.41*		016000100S00		1																			
																	02	NONE 0 / PRVTE	TURN-L / NE SE									000	00
																		PSNGR CAR		01	DRVR	INJB	29	M	OR-Y / OR<25		028,004	026	02
02773	N	N	N	N	N	07/29/2012	CLACKAMAS	1 16			INTER	CROSS	N	N	CLR	O-1 L-TURN	01	NONE 0	STRGHT										02
NONE						Sun 7P	MOLALLA	MN 0	CASCADE HY SOUTH		CN		FLASHBCN-A	N	DRY	TURN		PRVTE	SW NE									000	00
							MOLALLA UA	15.71	TOLIVER RD		04	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	17	M	OR-Y / OR<25		000	000	00
No	*45 9 21.32*					*-122 36 13.41*		016000100S00		1																			
																				02	PSNG	INJC	15	M			000	000	00
																				03	PSNG	INJC	15	M			000	000	00
																	02	NONE 0 / PRVTE	TURN-L / NE SE									000	00
																		PSNGR CAR		01	DRVR	INJB	59	M	OR-Y / OR<25		028,004	000	02

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
134	TORRENTIAL	TORRENTIAL RAIN (EXCEPTIONALLY HEAVY RAIN)

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

Appendix E

Neighborhood Meeting Notice

JINRIGHT & ASSOCIATES DEVELOPMENT ENGINEERS
CONSULTING, LLC

NOTICE OF NEIGHBORHOOD MEETING

February 26, 2018

To Whom it may concern:

In conformance with Section 17-4.1.070 of the City of Molalla, OR Code of Ordinances, notice is hereby given advising that there will be a neighborhood meeting/open house for the purpose of discussing a proposed commercial development located at State Hwy 213 and Toliver Rd, Molalla, OR. We have enclosed a concept plan for your review which is subject to change.

The neighborhood meeting will be held at the Prairie House Inn, 524 East Main St, Molalla, OR 97038, on Monday, March 12, 2018 at 6:00 PM.

If you have any questions or comments, please contact our office at:

JADE Consulting, LLC
P.O. Box 1929
Fairhope, AL 36533
sruth@jadengineers.com
(251) 928-3443

Respectfully,

JADE CONSULTING, LLC

Sherry Ruth

Enclosure

\sr

JADE CONSULTING, LLC
Jinright & Associates Development Engineers
208 Greeno Road North Fairhope, Alabama 36532
P.O. Box 1929 Fairhope, Alabama 36533
251.928.3443(tel) 251.928.3665(fax)
jadengineers.com

"TIER 1 SITE PLAN" - DATE: 2/9/18

GRAPHIC SCALE
30 0 30
(IN FEET)
1 inch = 30 ft.

SITE DATA TABLE

STATE OF OREGON COUNTY OF CLACKAMAS CITY OF MOLALLA	
EXIST. TAX PARCEL ID:	01088637
ZONING (PROPOSED):	C-2, COMMERCIAL
YARD SETBACKS:	
FRONT:	0'
SIDE:	0'
REAR:	0'
PARKING REQUIRED:	1 SPACE / 400 SF
	19097 SF / = 48 SPACES
PARKING PROVIDED:	75 SPACES (INC. 4 H/C)

CASCADE HWY (HWY 213)
BEAR CREEK
PROPOSED 69' R.O.W. EAST BOUNDARY
PROPOSED 10' UTILITY EASEMENT
PROPOSED 40' ACCESS EASEMENT
10' BUILDING SETBACK
PYLON SIGN
MAIN ENTRANCE
RECEIVING DOORS
RAMP
OVERHANG
PROPOSED 19,097 SQ FT BUILDING
150'-4"
126'
15,000 SQ FT FENCED OUTDOOR DISPLAY AREA
FORAGE SHED
PERMANENT TRAILER & EQUIPMENT DISPLAY AREA (3,000 S.F.)
P.S.D.A. 980 SF
P.S.D.A. 900 SF
P.S.D.A. 550 SF
8 SPACES
3 SPACES
4 SPACES
7 SPACES
6 SPACES
5 SPACES
EX. BUILDING
N 10°08'00" E 633.71'
N 07°51'29" E 150.14'
268.90'
S 08°19'25" W 771.55'
256.45'
219.75'
DOYLE
5-2E-07A CD300
DOC. NO. 2015-019607
SOM LLC
5-2E-07A 02200
DOC. NO. 16-090044
TAX LOT 2100
TRACT 37
"THE SHAVER PLACE"
PLAT NO. 360
YAW KATHLEEN & CRAIG
DOC. NO. 06-032481
STUTZMAN LLC
5-2E-07A 00701
DOC. NO. 91-58125
LEE LARSON PROPERTIES LLC
5-2E-07A 00702
DOC. NO. 2006-061160
EURICK IN
5-2E-
DOC. NC

LEGEND
- DEMISED PROPERTY
- PROPOSED LIGHT DUTY ASPHALT
- PROPOSED HEAVY DUTY ASPHALT
- PROPOSED LIGHT DUTY CONCRETE (BROOM FINISH)
- PROPOSED HEAVY DUTY CONCRETE (BROOM FINISH)
- FENCED OUTDOOR DISPLAY AREA
- PERMANENT SIDEWALK DISPLAY AREA
- PERMANENT TRAILER AND EQUIPMENT DISPLAY AREA
- EASEMENT/SHARED/OTHER PROTECTED AREAS
- PYLON SIGN

APPROX. 4 ACRES
PROPOSED COMMERCIAL DEVELOPMENT
STATE HWY 213
MOLALLA, OR

Appendix F

Neighborhood Meeting Address List

Line 1	Line 2	Line 3
ALFRED & CHERYL BORROMEO	33217 S ADAMS RD	MOLALLA, OR 97038
CHARLES FAMMATRE	12786 S TOLIVER RD	MOLALLA, OR 97038
CLIFFORD & LOIS RIGGS	1490 BOARDWALK AVE	MOLALLA, OR 97038
DALE NEWCOMB	PO BOX 2579	LEBANON, OR 97355
EURICK INVESTMENTS LLC	PO BOX 311	MOLALLA, OR 97038
HELEN DOYLE	PO BOX 831	MULINO, OR 97042
JOYCE RYAN	504 N WATER ST	SILVERTON, OR 97381
KTE PROPERTY INVESTMENTS LLC	PO BOX 311	MOLALLA, OR 97038
LEE LARSON PROPERTIES LLC	PO BOX 1696	BEAVERTON, OR 97075
LES SCHWAB TIRE CTRS OF OR	PO BOX 5350	BEND, OR 97708
LESLIE HOUGH	1440 BOARDWALK AVE	MOLALLA, OR 97038
LMRK GROUP LLC	PO BOX 601	WOODBURN, OR 97071
LOREN MCLEOD	1208 TOLIVER RD	MOLALLA, OR 97038
MOLALLA MC INVESTORS LLC	915 W 11TH ST	VANCOUVER, WA 98660
NIKKI DAVIS	1480 BOARDWALK AVE	MOLALLA, OR 97038
NW ISLAND PROPERTIES LLC	1515 W MAIN ST STE Q	MOLALLA, OR 97038
RICHARD & JOANNE BLACKMAN	1470 BOARDWALK AVE	MOLALLA, OR 97038
STUTZMAN LLC	PO BOX 307	CANBY, OR 97013
TRACY COX	PO BOX 986	MULINO, OR 97042
WALLACE RODGERS	11650 SW HILLSBORO HWY	HILLSBORO, OR 97123

Appendix G

Copy of Neighborhood Meeting Certified Mail Receipts

7017 0660 0000 2485 7753

U.S. Postal Service™
CERTIFIED MAIL® RECEIPT
Domestic Mail Only

For delivery information, visit our website at *www.usps.com®*.

OFFICIAL USE

Certified Mail Fee
$

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ ____
- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$

Total Postage
$

Postmark Here

Sent To CHARLES FAMMATRE
Street and Apt. No. 12786 S TOLIVER RD
City, State, ZIP+4 MOLALLA, OR 97038

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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7017 0660 0000 2485 7746

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Certified Mail Fee
$ 3.45

Extra Services & Fees *(check box, add fee as appropriate)*
- ☐ Return Receipt (hardcopy) $ ____
- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$ .47

Total Postage and Fees
$ $3.92

8/8/18
Postmark Here
2/26

Sent To ALFRED & CHERYL BORROMEO
Street and Apt. No. 33217 S ADAMS RD
City, State, ZIP+4 MOLALLA, OR 97038

PS Form 3800, A

7017 0660 0000 2485 7777

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- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$

Total Postage a
$

Postmark Here

Sent To DALE NEWCOMB
Street and Apt. N PO BOX 2579
City, State, ZIP+ LEBANON, OR 97355

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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7017 0660 0000 2485 7760

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- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
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Total Postage a
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Postmark Here

Sent To CLIFFORD & LOIS RIGGS
Street and Apt. 1490 BOARDWALK AVE
City, State, ZIP MOLALLA, OR 97038

PS Form 3800,

7017 0660 0000 2485 7791

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- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$

Total Postage a
$

Postmark Here

Sent To HELEN DOYLE
Street and Apt. 7 PO BOX 831
City, State, ZIP+ MULINO, OR 97042

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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- ☐ Return Receipt (electronic) $ ____
- ☐ Certified Mail Restricted Delivery $ ____
- ☐ Adult Signature Required $ ____
- ☐ Adult Signature Restricted Delivery $ ____

Postage
$

Total Postage an
$

Postmark Here

Sent To EURICK INVESTMENTS LLC
Street and Apt. N PO BOX 311
City, State, ZIP+4 MOLALLA, OR 97038

PS Form 3800,

7015 1520 0000 2069 6365

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- Return Receipt (electronic) $
- Certified Mail Restricted Delivery $
- Adult Signature Required $
- Adult Signature Restricted Delivery $

Postage
$

Total Postage ar
$

Postmark Here

Sent To KTE PROPERTY INVESTMENTS LLC
Street and Apt. N PO BOX 311
City, State, ZIP+ MOLALLA, OR 97038

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7017 0660 0000 2485 7807

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- Return Receipt (hardcopy) $
- Return Receipt (electronic) $
- Certified Mail Restricted Delivery $
- Adult Signature Required $
- Adult Signature Restricted Delivery $

Postage
$

Total Postage a
$

Postmark Here

Sent To JOYCE RYAN
Street and Apt. 504 N WATER ST
City, State, ZIP SILVERTON, OR 97381

PS Form 3800, April 2015 PSN 7530-02-000-9047

7015 1520 0000 2069 6624

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- Return Receipt (hardcopy) $
- Return Receipt (electronic) $
- Certified Mail Restricted Delivery $
- Adult Signature Required $
- Adult Signature Restricted Delivery $

Postage
$

Total Postage a
$

Postmark Here

Sent To LES SCHWAB TIRE CTRS OF OR
Street and Apt. PO BOX 5350
City, State, ZIP BEND, OR 97708

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7015 1520 0000 2069 6631

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Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $
- Return Receipt (electronic) $
- Certified Mail Restricted Delivery $
- Adult Signature Required $
- Adult Signature Restricted Delivery $

Postage
$

Total Postage an
$

Postmark Here

Sent To LEE LARSON PROPERTIES LLC
Street and Apt. N PO BOX 1696
City, State, ZIP+4 BEAVERTON, OR 97075

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7015 1520 0000 2069 6600

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Extra Services & Fees (check box, add fee as appropriate)
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- Return Receipt (electronic) $
- Certified Mail Restricted Delivery $
- Adult Signature Required $
- Adult Signature Restricted Delivery $

Postage
$

Total Postage
$

Postmark Here

Sent To LMRK GROUP LLC
Street and Apt. PO BOX 601
City, State, ZIP WOODBURN, OR 97071

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7015 1520 0000 2069 6617

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Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $
- Return Receipt (electronic) $
- Certified Mail Restricted Delivery $
- Adult Signature Required $
- Adult Signature Restricted Delivery $

Postage
$

Total Postage a
$

Postmark Here

Sent To LESLIE HOUGH
Street and Apt. 1440 BOARDWALK AVE
City, State, ZIP MOLALLA, OR 97038

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

7015 1520 0000 2069 6587

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Certified Mail Fee
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Extra Services & Fees (check box, add fee as appropriate)
- Return Receipt (hardcopy) $
- Return Receipt (electronic) $
- Certified Mail Restricted Delivery $
- Adult Signature Required $
- Adult Signature Restricted Delivery $

Postage
$

Total Postage a

Postmark Here

$
Sent To MOLALLA MC INVESTORS LLC
Street and Apt. N 915 W 11TH ST
City, State, ZIP+ VANCOUVER, WA 98660

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Sent To LOREN MCLEOD
Street and Apt. N 1208 TOLIVER RD
City, State, ZIP+4 MOLALLA, OR 97038

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Sent To NIKKI DAVIS
Street and Apt. N 1480 BOARDWALK AVE
City, State, ZIP+ MOLALLA, OR 97038

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Street and Apt. 1 PO BOX 307
City, State, ZIP+ CANBY, OR 97013

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Sent To RICHARD & JOANNE BLACKMAN
Street and Apt. 1470 BOARDWALK AVE
City, State, ZIP MOLALLA, OR 97038

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Sent To WALLACE RODGERS

Street and Apt 11650 SW HILLSBORO HWY

City, State, Zi HILLSBORO, OR 97123

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Sent To TRACY COX

Street and Apt. PO BOX 986

City, State, ZIP MULINO, OR 97042

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Appendix H

Neighborhood Meeting Sign In Sheet

(Will be provided after March 12, 2018 meeting)

Appendix I

Neighborhood Meeting Contact Comments

(Will be provided after March 12, 2018 meeting)