KEIZER PLANNING COMMISSION MEETING AGENDA
Wednesday, April 12, 2017 @ 6:00 p.m.
Keizer Civic Center Council Chambers

1. **CALL TO ORDER**
2. **VOLUNTEER APPRECIATION**
3. **APPROVAL OF MINUTES**
   - March 15, 2017
4. **APPEARANCE OF INTERESTED CITIZENS**
   This time is made available for those who wish to speak about an issue that is not on the agenda.
5. **CONTINUATION OF PUBLIC HEARING: Text Amendment: Section 2.110 Commercial Mixed Use**
6. **NEW-OLD BUSINESS/STAFF REPORT**
7. **COUNCIL LIAISON REPORT**
8. **COUNCIL REPRESENTATIVE:** Michael DeBlasi – April 17
9. **ADJOURN**

Next Meeting ~ May 10, 2017

2016-7 Work Plan

~~1. Sections 2.102.02.C and 2.102.04.D (RS); 2.103.02.E and 2.103.04.D (RL); 2.104.02.E and 2.104.04.C (RM); and 2.105.02.C (RH) Child Care Standards~~
~~2. Various Sections: Lot Line Adjustments and Pre-Application Conference~~
~~3. Section 2.311 - Planned Unit Development Design Standards~~
4. Future Planning – Growth Management
   a. Urban Transition (UT) Zone
   b. Downtown Plan
   ~~c. Section 2.102.06.J (RS)~~
   d. Section 2.118 (UT)
   e. Policy choices (UGB amendment)
~~5. Food Cart Allowance~~
6. Section 2.315 - Design Review
7. Clarification regarding corporations being represented by attorneys
8. Transportation Planning
9. Section 2.306 – Storm Drainage
10. Section 2.126 Resource Conservation Overlay Zone
11. Section 2.110.05.C Overlay Zone
12. Master Plan

KEIZER PLANNING COMMISSION
MEETING MINUTES
Wednesday, March 15, 2017 @ 6:00 pm
Keizer Civic Center

CALL TO ORDER
Chair Hersch Sangster called the meeting to order at 6:00 pm.

ROLL CALL:

Present:
Hersch Sangster, Chair
Kyle Juran, Vice Chair
Garry Whalen
Josh Eggleston
Michael DeBlasi
Jim Jacks

Absent:
Jerry Crane

Council Liaison:
Marlene Parsons

Staff Present:
Nate Brown, Community Development Director
Shane Witham, Associate Planner
Shannon Johnson, City Attorney

APPROVAL OF MINUTES: Commissioner Whalen moved for approval of the February 2017 Regular Session Minutes. Commissioner Eggleston seconded. Motion passed as follows: Sangster, Juran, Whalen and Eggleston in favor with Jacks and DeBlasi abstaining and Crane absent.

APPEARANCE OF INTERESTED CITIZENS: None

PUBLIC HEARING: Section 2.110 – Commercial Mixed Use

Chair Sangster opened the Public Hearing.

Senior Planner Shane Witham explained that on February 6 Council had directed staff to initiate the process to amend the Commercial Mixed Use Zone specific to the Chemawa/River area. This area overlay zone prohibits gas/service stations. Safeway has asked the City to consider amending the Code to allow for a fueling station. He noted there are 4 options to consider:

1. No change to the Development Code (not recommended by staff)
2. Eliminate Chemewa/River restrictions completely (not recommended)
3. Approve the text amendment proposed by Safeway (Staff feels this is a good base point but is uncomfortable with it because it is a permitted use and specialized concerns could not be addressed).
4. Allow as a Conditional Use (Staff recommends this because it would require additional staff review and land use process and place conditions on the project to deal with traffic, design, aesthetics, etc.)

Mr. Witham also shared information regarding the traffic study and noted that mitigation measures represent a good compromise that will assure that city/neighborhood/transportation concerns can be addressed. He pointed out that the proposed structure could easily be viewed as an accessory use.

Jeff Cowan, Keizer Fire Chief, voiced support for Option #1 based on concerns about the proposed fueling station increasing traffic and ingress/egress issues. He cited traffic failings at the intersection and pedestrian dangers noting that a fueling station will exacerbate existing failings and affect the Fire District response times. He concluded that the Fire District responds to 15 calls a day and has to deal with high traffic already and a fueling station will make it worse.

Adam Wittenberg, Keizer, urged approval of the amendment noting that this would be a stimulus for future businesses and allow them to prosper.

Seth King, Land Use Attorney from Perkins Coie, LLP, Portland, representing Albertsons/Safeway, explained that a general need is being served by this amendment. Fuel stations in conjunction with grocery stores allow for efficient use of land and fill a public need to allow businesses to grow in existing locations. He noted that this would be strictly a fueling station, not a full service gas station, but added that he could not support the prohibition of sales of other merchandise at the fuel center. He noted the proposal is not for a full service convenience store but simply some ancillary sales that are expected by customers and that are necessary as part of the business model. He asked that, if the amendment is approved, the prohibition on sales of other merchandise be deleted or the hearing be continued for a month to allow for an alternate proposal.

Chris Miles, Project Manager for the fuel centers, explained that the primary reason for this request is in response to customer demand. Patrons of Safeway earn fuel points but cannot redeem them in Keizer, they must drive to Salem. It makes sense to locate the fuel center here because there is room and it meets customer needs. The proposed fuel center would be 6 islands with a total of 12 pumps because this moves traffic most efficiently.

Henry Basit, Construction Director for Albertsons/Safeway displayed photos showing the actual site with driveways, the existing site survey and the proposed area of the fuel center with a kiosk selling ‘rapid consumables’ or quick service items such as coffee and sodas. He showed drawings of options to address ingress and egress which included islands to avoid stacking at the entrances and additional pedestrian and handicap access.

Chris Bremmer, Kittelson & Associates, noted that the site plans being displayed were not final. He explained that this development would be a chance to improve the current narrow driveways that have bumps and site restrictions and that the fuel station has been moved away from the Fire District to alleviate backup traffic. He noted that fire responses were recorded in the traffic study; they are in the appendices at the back. He indicated that cueing in front of the Fire Station needs to be addressed and that there are potential opportunities to control the signal near the station and a number of variations possible to address traffic concerns. He expressed a willingness to work with staff and the Fire District on this.

Pedro DeGuzman, Terraforma Design Group, Seattle, reviewed the site plan specifically related to traffic/access, site distance obstructions, and removal of stalls close to the entrance. He reiterated that having a fuel station at a grocery store reduces trips and increases overall safety in the area and indicated that he was in favor of reconfiguring the signal to work with the Fire District.

Pam Rushing, Caldwell Banker, Salem, voiced support for the amendment noting that it has been hard to attract tenants to the River Road area and this would help.

Peter Thom, Eugene, voiced support for changing the overlay zone noting that he represents a business looking at property in the overlay zone and is opposed to the restrictions.

Discussion then took place regarding Oregon State University Credit Union, the validity of the traffic study, inclusion of cycling facilities, the proposed layout of the parking lot and possible options, bringing traffic in behind the back of the store in the loading areas, re-orienting the parking arrangement, reconstruction of all four driveways, location of the post office drop box, Transit District input, and the importance of having rapid consumables available at the fueling station. Community Development Director Nate Brown pointed out that the drawings of ingress and egress presented were different than what was given to the City Engineer so he has not reviewed them. He noted that issues that still need to be addressed are:

- Traffic Engineer review of the new drawings
- More information and dialog with the Fire District
- Communication with the Transit District
- Provision of a map showing the exact location and boundaries of the overlay zone

Commission agreed by consensus to continue the Public Hearing to April 12, 2017.

NEW/OLD BUSINESS/STAFF REPORT: Mr. Brown explained that the grants are moving forward. There is a Transportation open house on April 25 for the revised Regional Transportation System Plan.

COUNCIL LIAISON REPORT: Councilor Parsons reported that Council approved the Boy Scout Camporee, passed the Planned Unit Development amendments, did long range planning and now has a Youth Councilor on Council and a Youth Liaison on the Parks Board. She added that the Parks survey ends tonight.

COUNCIL REPRESENTATIVE: Commissioner Sangster will report to Council.

ADJOURN: The meeting adjourned at 8:19 pm.

Next Meeting: April 12, 2017

Minutes approved:_____

TO: **PLANNING COMMISSION**
THRU: **NATE BROWN, COMMUNITY DEVELOPMENT DIRECTOR**
FROM: **SHANE WITHAM, SENIOR PLANNER**

DATE: **April 4, 2017**

SUBJECT: **Continuance of March 15, 2017 Hearing regarding proposed text amendment relating to the allowance of gasoline service stations within the Chemawa/River Road restriction area.**

ATTACHMENTS:

- **Planning Commission Packet from March 15th meeting.**
- **Map showing restriction area boundary**

DISCUSSION:

At the March 15, 2017 Planning Commission meeting, testimony was received regarding a proposed text amendment to Section 2.110 to allow a gasoline service station as a conditional use within the Chemawa/River Road restriction area, subject to specific requirements. At the request of the Safeway team, the hearing was continued to allow for additional testimony regarding their desire to allow a "convenience store" in conjunction with a gasoline service station. Their testimony at the March 15th meeting indicated they agreed with the proposed text amendment with the exception of **Section 2.110.04.C.1** – which limits retail sales to only "fuel related products such as gasoline and oil" and prohibits "accessory sales of other merchandise."

Staff feels the provision to limit convenience retail is necessary to ensure the gasoline service station truly functions as another department of the grocery store, and is only accessory to the main use of the property as Safeway's initial letter (dated January 31, 2017) to Council asserted. Their letter made a compelling argument that an *"accessory fuel station is treated like another department of the supermarket…"* and that an accessory fuel station results in vehicle trip consolidation and combined shopping opportunities. The letter also pointed out that a proposed amendment would not be inconsistent with the original intent to prohibit gasoline service stations in the CM zone because, *"Gasoline service stations typically offer an array of vehicle repair and maintenance services, plus the incidental sale of batteries, tires and other automobile accessories, all of which create a greater destination use and more potential for additional traffic and noise than a fuel station that only sells fuel related products such as gasoline and oil."* Staff found Safeway's logic to be sound and therefore proposed the language found in Section 2.110.04.C.1 which proposes limiting sales to "fuel related products such as gasoline and oil." This language was directly quoted from Safeway's initial request to Council and was intended to ensure that any proposed gasoline service station be limited to fueling and be developed accessory to a Food Store use in order to maximize opportunities for consolidating trips and to limit the greater destination use of a stand-alone gasoline service station. This limited aspect, coupled with mitigations as proposed are primarily why staff believes the proposed recommendation can be supported.

Staff is concerned that if allowances are made for a convenience store to be developed in conjunction with the gasoline service station, it would cease to be accessory to the main grocery store use. Items proposed to be sold in the convenience store would also be sold in the grocery

store, so while it would clearly be convenient for a customer who had come primarily to purchase gasoline to grab an impulse item or "rapid consumable", the existence of the convenience store would not benefit the customer who was consolidating shopping trips by purchasing fuel as an accessory function of a planned trip to the grocery store. The end result would be another gasoline service station developed similarly to the other stations in Keizer which all (but one) have convenience stores associated with them.

Safeway's original request stated the grocery industry has evolved and many grocery supermarkets are now developed with fuel stations. Staff has reviewed the other grocery/fuel store combinations in the Salem/Keizer area and has found that none of them have convenience stores associated with them. Costco has no outside sales, while Fred Meyer on Market Street and Safeway on S. Commercial both have small kiosks that are located under the existing canopy, and sell a very limited variety of merchandise. So to assert that a convenience store is necessary to be successful in the marketplace is not currently demonstrated here in our region.

Testimony was received from Chief Cowan of the Keizer Fire District who urged Planning Commission to take no action. He cited concerns regarding traffic safety impacts and specifically the impact to the Keizer Fire District. Staff had proposed language regarding traffic impacts with the intent to address any concerns, but based on Chief Cowan's testimony, Planning Commission may wish to modify or strengthen the existing proposed language addressing transportation concerns.

Testimony was received from Adam Wittenberg, Pam Rushing, and Peter Thomas who all voiced support for the proposal, and requested that Planning Commission lift the restrictions on drive thru windows associated with eating and drinking establishments as well. Their testimony generally cited economic development factors as a reason to eliminate or modify the restriction area altogether, and felt that lifting the restrictions would be good for business. While staff acknowledges the validity of their testimony (and agrees economic development goals should help shape policy discussions), it is premature to make a broad policy decision at this time, a mere few months before the commencement of a process to take a bigger look at the restriction area as a whole. This look at the bigger context is precisely what the City is undertaking with the TGM grant project, which will have a robust public involvement process to engage stakeholders.

CONCLUSION:
Ultimately, staff felt that because of the limited "accessory" nature of this proposal, together with the other mitigating factors, the proposed text amendment could be warranted. If the gasoline service station use was to be allowed outright, or if additional modifications to the restriction area were to be proposed, at that point staff would feel it would be most appropriate to hold off on the proposal altogether. Staff is recommending that any proposal for a gasoline service station within the Chemawa/River Rd restriction area be subject to Conditional Use Permit approval, and be allowed only as an accessory use to a Food Store, with no convenience store allowance.

RECOMMENDATION:
Staff recommends the Planning Commission consider the proposal and forward a recommendation to the City Council to adopt the proposed text language.

2.110 COMMERCIAL MIXED USE (CM)

2.110.01 Purpose

The Commercial Mixed Use (CM) zone is the primary commercial zone within the City. The zone is specifically designed to promote development that combines commercial and residential uses. This zone will support transit use, provide new housing opportunities while allowing a full range of commercial retail, service and office uses. Development is intended to be pedestrian-oriented with buildings close to and oriented to the sidewalk. Parking may be shared between residential and commercial uses. Clusters of residential and commercial uses around landscaping features or parking areas can occur and are encouraged. The Commercial Mixed Use zone is suitable for the Commercial Plan designation. (5/98)

2.110.02 Permitted Uses

The following uses, when developed under the applicable development standards in the Zoning Ordinance, are permitted in the CM zone:

A. **One or more buildings with one or more dwelling units** or guest rooms, and/or, one or more other uses allowed in this section on a lot. (5/98)

B. **Residential homes** and facilities. (5/98)

C. **Day care facility** for 17 or more children consistent with state regulations, including Family day care provider for 16 or fewer children consistent with state regulations. (4/16)

D. **Public parks, playgrounds, community clubs** including swimming, tennis and similar recreational facilities, and other public and semi-public uses. (5/98)

E. **Landscape** counseling and planning (0781). (5/98)

F. **Offices** for any use listed in SIC Division C - Construction. (5/98)

G. **Commercial printing** (275). (5/98)

H. **Transportation, Communication and Utilities**. (5/98)

1. **Public utility** structures and buildings. (5/98)

2. **Post office** (43). (5/98)

3. **Travel agency** (4722). (5/98)

4. **Communications** (48). (5/98)

I. **Retail Trade**. (5/98)

1. **Building materials, hardware, retail nurseries, and garden supply** (52), BUT EXCLUDING mobile home dealers (527). (5/98)

2. **General merchandise stores** (53). (5/98)

3. **Food stores** (54). (5/98)

4. **Automobile, recreational vehicle or trailer sales** (55), BUT EXCLUDING gasoline service stations (554). (5/98)

5. **Apparel and accessory** stores (56). (5/98)

7. **Furniture, home furnishings, and equipment** stores (57). (5/98)

8. **Eating and drinking places** (58) except as provided in Section 2.110.05, below. (5/98)

9. **Miscellaneous retail** (59), BUT EXCLUDING fuel and ice dealers (598). (5/98)

10. **Electrical and lighting shops and office machines and equipment** stores. (5/98)

J. **Business, Professional and Social Services**. (5/98)

1. **Finance, insurance and real estate** (60, 61, 62, 63, 64, 65, 67). (5/98)

2. **Hotels, motels and tourist courts** (701). (5/98)

3. **Organization hotels and lodging houses** on membership basis (704). (5/98)

4. **Personal services** (72) BUT EXCLUDING industrial launderers (7218). (5/98)

5. **Business services** (73) BUT EXCLUDING disinfecting and exterminating services (7342). (5/98)

6. **Parking lots** (7523) except as provided in Section 2.110.05, below. (5/98)

7. **Miscellaneous repair services** (76). (5/98)

8. **Motion pictures** (78), BUT EXCLUDING drive-ins (7838). (5/98)

9. **Amusement and recreation** (79), BUT EXCLUDING golf courses (7992) and amusement parks (7996). (5/98)

10. **Health services** (80), BUT EXCLUDING hospitals (806). (5/98)

11. **Legal services** (81). (5/98)

12. **Elementary and secondary schools** (8211). (5/98)

13. **Correspondence schools and vocational schools** (824). (5/98)

14. **Schools and educational services** not elsewhere classified (829). (5/98)

15. **Social services** (83). (5/98)

16. **Museums, art galleries, botanical and zoological gardens** (84). (5/98)

17. **Membership organizations** (86). (5/98)

18. **Miscellaneous services** (89). (5/98)

19. **Pet Grooming** (6/01)

K. **Public Administration** (91 - 97). (5/98)

L. **Child foster home** for five or fewer children as a secondary use.(6/99)

2.110.03 Special Permitted Uses

The following uses, when developed under the applicable development standards in the Ordinance and special development requirements, are permitted in the CM zone:

A. **Partitions**, subject to the provisions in Section 2.310. (5/98)

B. **Subdivision**, subject to the provisions in Section 2.310. (5/98)

C. **Planned unit development**, subject to the provisions in Section 2.311. (5/98)

D. **Accessory structures and uses** prescribed in Section 2.203. (5/98)

E. Transit Facilities (Section 2.305). (05/09)

F The following **special uses** subject to the applicable standards in Section 2.4:

1. **Shared housing facilities** (Section 2.403). (5/98)

2. **Zero side yard dwelling units** (Section 2.404). (5/98)

3. **Home occupations** (Section 2.407). (5/98)

4. **Bed and breakfast establishments** (Section 2.408). (5/98)

5. **Residential sales offices** (Section 2.409). (5/98)

6. **Public golf course** (7992) or membership recreation club having golf course (7997) (Section 2.410). (5/98)

7. **Boat and RV storage area** (Section 2.411) except as provided in Section 2.110.05, below. (5/98)

8. **House of Worship** (Section 2.423). (5/98)

9. **Recreational vehicle storage space** (Section 2.413) except as provided in Section 2.110.05, below. (5/98)

10. **Veterinary services** (074) (Section 2.414). (5/98)

11. **Funeral service and crematories** (726) (Section 2.415). (5/98)

12. **Used Merchandise Store** (Section 2.417)

13. **Adult entertainment business** (Section 2.418). (5/98)

14. **Service stations** (554) (Section 2.419) except as provided in Section 2.110.05, below. (5/98)

15. **Recreational vehicle parks** (7033) (Section 2.412) except as provided in Section 2.110.05, below. (5/98)

16. **Automobile services** (75) (Section 2.420) except as provided in Section 2.110.05, below. (5/98)

17. **Manufacturing and Assembly Facilities** (Section 2.421). (5/98)

18. **Wireless Telecommunications Facilities** (Section 2.427). (5/98)

19. **Medical Marijuana Facilities** (Section 2.433) (10/14)

20. **Marijuana Retailer** (Section 2.433) (1/16)

21. **Mobile Food Vendor** (Section 2.434) (9/16)

2.110.04 Conditional Uses

The following uses may be permitted subject to obtaining a conditional use permit:

A. **Craft Industries**, subject to the provisions in Section 2.421. (5/98)

B. Transit Station (Section 2.429). (05/09)

C. Gasoline service stations (554) located in the Chemawa/River Rd restriction area described in Section 2.110.05.C. subject to the following requirements:

1. May only sell fuel related products such as gasoline and oil. No service, repair functions, or accessory sales of other merchandise is allowed.
2. Subject to the provisions in Section 2.419.
3. Must be accessory to a **Food store(54)** use. The primary Food Store use must be a minimum of 15,000 square feet in area.
4. Must be setback more than 100 feet from adjacent public streets, and must provide pedestrian oriented amenities on the entire site.
5. Must provide screening and buffering to adjacent residential uses, and must mitigate the aesthetic impacts of on-site stacking and queuing visible from any public right of way or adjacent properties.
6. Employ access management and control standards as appropriate to eliminate and/or reduce conflicts.
7. Comply with all applicable requirements and standards, including, but not limited KDC 2.301.04 (Traffic Impact Analysis) and any all mitigations required by such section.

2.110.05 Use Restrictions

No permitted or special permitted use shall in any way involve any of the following:

A. Farm Use. (5/98)

B. The rendering, processing, or cleaning of animals, fish, seafoods, fowl, poultry, fruits, vegetables, or dairy products for wholesale use. (5/98)

C. The following uses are prohibited from any property fronting on River Road or Chemawa Road in the following area: the west side of River Road between 5119 River Road on the north and Janet Avenue extended on the south; the east side of River Road between Claggett Street on the north and James Avenue on the south; and either side of Chemawa Road between Elizabeth Street on the west and Bailey Road on the east; and (2) Any property contained within the Area B as described in the Keizer Station Plan. This prohibition does not apply to any business facility, legally established as

of the date of the adoption of this Ordinance, which as of that date has drive-through window facilities. (12/03)

1. Gasoline service stations (554). (5/98) except as provided in Section 2.110.04.C

2. Drive-Through windows or car service associated with eating and drinking places (58). (5/98)

3. Vehicle sales and secondary repair. (5/98)

4. Public utility structures and buildings. (5/98)

5. Recreational vehicle parks (7033). (5/98)

6. Automobile parking not associated with an allowed use (752). (5/98)

7. Automotive Dealers (55). (5/98)

8. Automotive rental and leasing, without drivers (751). (5/98)

9. Automotive repair shops (753). (5/98)

10. Automotive services, except repair (754). (5/98)

11. Utilities - secondary truck parking and material storage yard. (5/98)

D. A limitation of the total floor area of specified uses applies to all of Area B – Retail Service Center of the Keizer Station Plan. A maximum total floor area shall apply to the uses identified in Sections 2.110.02 (I) and 2.110.03 (E)(12) – (14). This maximum floor area is set forth in the Keizer Station Plan, however this maximum floor area may change as part of an approved master plan or amended master plan. (06/10)

2.110.06 Dimensional Standards

A. Minimum Lot Dimension and Height Requirements

DIMENSION	Single Family	Duplex or Multi-Family	Commercial	Mixed Use
Lot Size	4,000 sq. ft. (1)	6,000 sq. ft. (2)	None (3)	None (3)
Average Width	40 feet	50 feet	None	None
Average Depth	70 feet	80 feet	None	None
Maximum Height	35 feet	50 feet	50 feet	50 feet

(1) A single family dwelling attached on one side has a minimum lot area of 3500 square feet, and a single family dwelling attached on both sides has a minimum lot area of 3000 square feet. (5/98)

(2) Multi-family development must comply with the density standard in Section 2.110.07. (5/98)

(3) Parcel size shall be adequate to contain all structures within the required yard setbacks and, where applicable, comply with residential density standards in Section 2.110.07. (5/98)

B. Minimum Yard Setback Requirements

SETBACKS	Single Family or Duplex	Multi-Family	Commercial	Mixed Use
Front	10 feet	10 feet	10 feet	10 feet
Side	5 feet (1)	(3)	(3)	(3)
Rear	(2)	(3)	(3)	(3)
Street-side (4)	10 feet	10 feet	10 feet	10 feet
Garage entrance (5)	20 feet (5)	20 feet (5)	20 feet (5)	20 feet (5)

(1) Zero side yard dwelling units are subject to the setback provisions in Section 2.404. (5/98)

(2) The rear yard setback shall be as follows: 14 feet for a 1-story home, 20 feet for a 2-story home. (5/98)

(3) The setback shall be no less than the minimum rear yard setback of the zone on the adjacent property. For the CM zone, the rear yard setback is 0 feet. (5/98)

(4) Setbacks are measured from property lines, not easement lines. However, no structure shall be placed any closer than five feet from

the edge of an access easement or 20 feet from the right-of-way of an arterial or collector street. (5/98)

(5) The garage entrance setback shall be measured from the property line or edge of private access easement to the entrance of the garage. The centerline of the driveway shall be measured if the driveway to the garage entrance is not perpendicular to the property line or private access easement. In no case shall a garage be set back less than the minimum front, side, and rear setbacks. (5/98)

2.110.07 Development Standards

All development in the CM Zone shall comply with the applicable provisions of this Ordinance. The following includes referenced items as well as additional development requirements. If a conflict exists with a specific standard found in this section and a standard found elsewhere in this Ordinance, the standard in this section shall govern. (5/98)

A. Off-street parking:

1. Parking shall be as specified in Section 2.303. In the event that on-street parking is provided, on-street parking that abuts the property can be used to meet the standard. (5/98)

2. No off-street parking is required for uses above the ground floor. (5/98)

3. The off-street parking requirement for residential uses is one space per unit. (5/98)

4. If mixed uses on the ground floor exhibit peak parking demand at different times, the resulting parking requirement is limited to the number of spaces generated at the highest combined peak demand at any one particular time. (For example, if there is a movie theater exhibiting peak parking demand between 7:00 and 10:00 PM with a total requirement of 100 spaces, and a pet store exhibiting peak demand between 1:00 and 5:00 PM with a requirement of 50 spaces, the total requirement for the building would be 100 spaces.)

B. Subdivisions and Partitions. Land divisions shall be reviewed in accordance with the provisions of Section 2.310. (5/98)

C. Yards and Lots. Yards and lots shall conform to the standards of Section 2.312. (5/98)

D. Signs. Signs shall conform to the requirements of Section 2.308. (5/98)

E. Accessory Structures: Accessory structures shall conform to requirements in Section 2.313. (5/98)

F. Storage, Trash, and Service Functions: Storage areas, trash, recycling, utilities and other service functions shall be located within the main structure if possible. If any of the above functions are located outside the main structure, the area containing the function must be screened with a solid, durable structure that is architecturally related to the building. (5/98)

D. Landscaping-General: All required yards shall be landscaped. Landscaped areas shall be landscaped as provided in Section 2.309.

1. The minimum landscaped area requirements shall be as follows:

Commercial development:	10%
Mixed commercial and residential development:	15%
Residential development:	20%

2. Properties located within Area B as defined in the Keizer Station Plan shall have a 20-foot landscape buffer along all property lines adjacent to any residential zone. Landscape and buffer requirements shall be met as defined in the Keizer Station Plan. (12/03)

H. Landscaping-Parking Lots: One tree shall be provided for every eight parking spaces in parking lots. The trees shall be dispersed throughout the parking lot in minimum four by four foot planters located between parking spaces. (5/98)

I. Lot Coverage: The maximum coverage allowed for buildings, accessory structures and paved parking shall be as follows: (5/98)

	Max.	Min
Commercial development:	90%	50%
Mixed commercial and residential development:	85%	50%
Residential development:	80%	50%

J. Density: The maximum residential density shall be 24 units per acre and minimum residential density shall be 8 units per acre. Developments limited exclusively to residential uses and containing less than 8 dwelling units per acre are allowed if they comply with the following: (5/98)

1. No more than 50% of the property shall be occupied. The occupied area shall include all buildings, accessory structures, driveways, parking and required landscaping. (5/98)

2. The remaining undeveloped portion of the property shall be in one contiguous piece. Access to a public street, in conformance with Ordinance requirements, shall be available. The undeveloped portion shall have sufficient width and depth to be developed for additional residential, or commercial, uses. (5/98)

2.110.08 Design Standards

All development in the CM Zone shall comply with the applicable design standards described below:

A. Building Design Standards. Primary buildings shall comply with the following design standards: (5/98)

1. Design Standards - Unless specifically modified by provisions in this Section, buildings located within the CM zone shall comply with the following standards: (5/98)

a. Single family homes shall comply with the design standards in Section 2.314. (5/98)

b. Multi-family buildings and non-residential structures shall comply with the provisions in Section 2.315 – Development Standards. (4/12)

CITY COUNCIL MEETING: February 6, 2017

AGENDA ITEM NUMBER:_____

TO: **MAYOR CLARK AND COUNCIL MEMBERS**

FROM: **NATE BROWN, COMMUNITY DEVELOPMENT DIRECTOR**

THROUGH: **CHRISTOPHER C. EPPLEY, CITY MANAGER**

SUBJECT: **INITIATION OF TEXT AMMENDMENT PROCESS TO CONSIDER ALLOWING GASOLINE SERVICE STATIONS IN THE CHEMAWA USE RESTRICTION AREA.**

BACKGROUND:

Safeway has submitted a request (attachment A) to the City Council to initiate a Text Amendment process to allow "Gasoline Service Station" as an allowed use under certain circumstances in the use restrictions of the Commercial Mixed-use (CM) zone in the Keizer Development Code (KDC). The request suggests a specific avenue of how to accomplish this, namely, to add an allowance that gasoline could be established only as an accessory use to existing "grocery supermarkets". They have also provided a suggested development plan and a traffic analysis for Council's consideration.

The use restrictions in the KDC were specifically established even before their establishment in the KDC by ordinance (Ord# 95-333). These restrictions have a very long history and importance in the City of Keizer. The originally stated purpose of these restrictions was "…to create a thriving economic center based on eliminating the negative design elements characteristic of strip commercial areas. The uniqueness of a shopping area based on attracting pedestrian traffic and not catering to automobile oriented uses is anticipated to encourage economic development." Further, the aesthetic improvements of eliminating the relative unsightly nature of service stations was also reportedly a consideration.

Rather than discuss specific site plan development and the most effective manner in which to change the specific language of the KDC, the basic policy question of the allowance of the use and the fundamental nature of the appropriateness of the use restrictions in today's economic environment should be addressed. The property owner maintains that the nature of the grocery business has changed, and has committed to city staff that the purpose and intent of the KDC can still be maintained through specific limitations and mitigations that they are willing to construct.

Staff feels that by initiating the Text Amendment process, the Council can have a full discussion about all of the issues surrounding the policy decision. The text amendment process would be the vehicle to examine the specific policy issues. By initiating the process, Council does not make any commitment or promise as to the outcome. The Council may choose to not adopt the amendment and that decision cannot be appealed.

If the Council chooses to initiate, staff would examine the specific proposal, make a recommendation on the merits of the proposal to the Planning Commission, which in turn would make a recommendation to the City Council. At that point, Council itself would evaluate the proposal and then make their policy decision.

The proponents are more than willing to appear before the Council to advocate their position. Staff, however, feels that to initiate the process, to ask does the Council even wish to discuss the matter—should be more appropriately based on the overall policy questions rather than the specifics of the Safeway plan. Consequently, staff requested that Safeway not appear at tonight's meeting.

RECOMMENDATION.

Staff recommends the Keizer City Council adopt the attached Resolution initiating the Text Amendment Process to examine the merits and or restrictions of whether or not to allow Gasoline Service Stations under certain circumstances in the CM zone of the KDC.

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January 31, 2017

Keizer City Council
c/o Nate Brown, Planning Director
Community Development Department
City of Keizer
PO Box 21000
Keizer, OR 97307-1000

Re: Petition for Initiation of Legislative Amendments to Development Code Amendment of Commercial Mixed Use (CM) Zone

Dear Nate:

This office represents Safeway Inc. ("Safeway"), the owner of the existing Safeway grocery supermarket (termed "Food Store" in the Keizer Development Code) at the intersection of Chemawa and River Road in Keizer, Oregon. The site is zoned Commercial Mixed Use (CM) in an area which prohibits gasoline service stations, but Safeway would like to investigate the potential to develop a fuel station in conjunction with the existing grocery supermarket. As discussed in more detail below, there is a market need for this type of one-stop shopping and a transportation need to combine and consolidate vehicle trips to buy groceries and fuel. There is also a public need to promote economic development and support local businesses seeking to grow and expand in line with the operational profile of other supermarkets in the industry. This petition represents an opportunity to meet these various needs for the benefit of the community.

Request

Safeway hereby petitions the City Council pursuant to Keizer Development Code ("KDC") 3.111 to request the initiation of a text amendment to amend the CM zone standards to find a limited way to allow fuel stations in conjunction with grocery supermarkets as an exception to the prohibition against gasoline service stations in the zone. Safeway also proposes to work with staff to develop a desirable site plan for the fuel station's use and development to ensure that the size and scale of the fuel station complements the site and the adjacent areas. A proposed site plan is attached.

Benefits

There are many benefits associated with this request. Initiation of the proposed legislative text amendments will allow the City's development code standards to better reflect the changing

conditions of the grocery industry and of customer shopping patterns. The grocery industry has evolved since the time that the KDC was adopted. Many grocery supermarkets are now developed with fuel stations that allow those supermarkets to sell gasoline to supermarket customers while they are on the supermarket site buying groceries. The accessory fuel station is treated like another department of the supermarket, except that it is outside the store, but still linked with the store's cash register for cross-over purchasing discounts. Safeway employees will operate the fuel station.

There is both a market need and a transportation need to allow the vehicle trip consolidation opportunity presented by major grocery supermarkets offering accessory fuel stations. The combination of trips to buy groceries and fuel captures customers on site for cross-shopping opportunities of the most frequently shopped for items. That maximizes the efficient utilization of land by getting more shopping needs satisfied in one trip at one location. The combined shopping opportunity does not significantly increase traffic, but, rather, gets more use out of existing traffic. A current traffic study is attached.

There is also a public need to support existing businesses and allow their expansion and growth without having to relocate to a new location. The support of local businesses is a central component of the economic development policies of Keizer's Comprehensive Plan. See Keizer Comprehensive Plan Section III.C.4. The proposed amendment would allow grocery supermarkets in the CM zone to also add fuel, in keeping with the operational profile of other grocery supermarkets in the industry. Further, the addition of fuel to the Safeway site would prompt the related upgrade of the site's access and internal circulation, as an additional benefit.

The proposed amendment is not inconsistent with the original intent to prohibit gasoline service stations in the CM zone. Gasoline service stations typically offer an array of vehicle repair and maintenance services, plus the incidental sale of batteries, tires and other automobile accessories, all of which create a greater destination use and more potential for additional traffic and noise than a fuel station that only sells fuel related products such as gasoline and oil.

In summary, the proposed legislative amendment allows economic growth, increased shopping opportunities in a single trip, and a more efficient utilization of land, without a significant increase in traffic.

Legislative Process

Once staff, the Planning Commission or City Council initiates this legislative text amendment to the KDC, Safeway will prepare a narrative statement setting forth the specific language of the proposed text amendment and addressing the criteria for approval of a text amendment pursuant to KDC Section 3.111.04. In accordance with KDC Section 3.111.02, this proposed text amendment will be reviewed under Type IV procedures as specified in KDC Section 3.203,

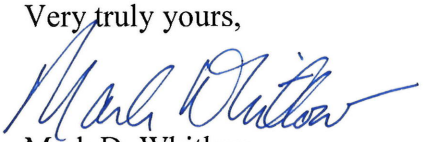
which include hearings before the Planning Commission and City Council. We understand there are several specific legislative issues that would need to be addressed and we are fully prepared to work with staff, the Planning Commission and the City Council to find the ideal solution.

Post Amendment Design Review

Assuming that the City Council approves a legislative amendment to allow the addition of fuel stations to existing grocery supermarkets in the CM zone, Safeway or any other existing supermarket operator in the CM zone would then need to apply for and satisfy the site plan review criteria in order to develop a fuel station in the zone. The legislative text amendment will only remove the use prohibition in the zone, with any proposed fuel stations then needing to apply for site plan approval to develop.

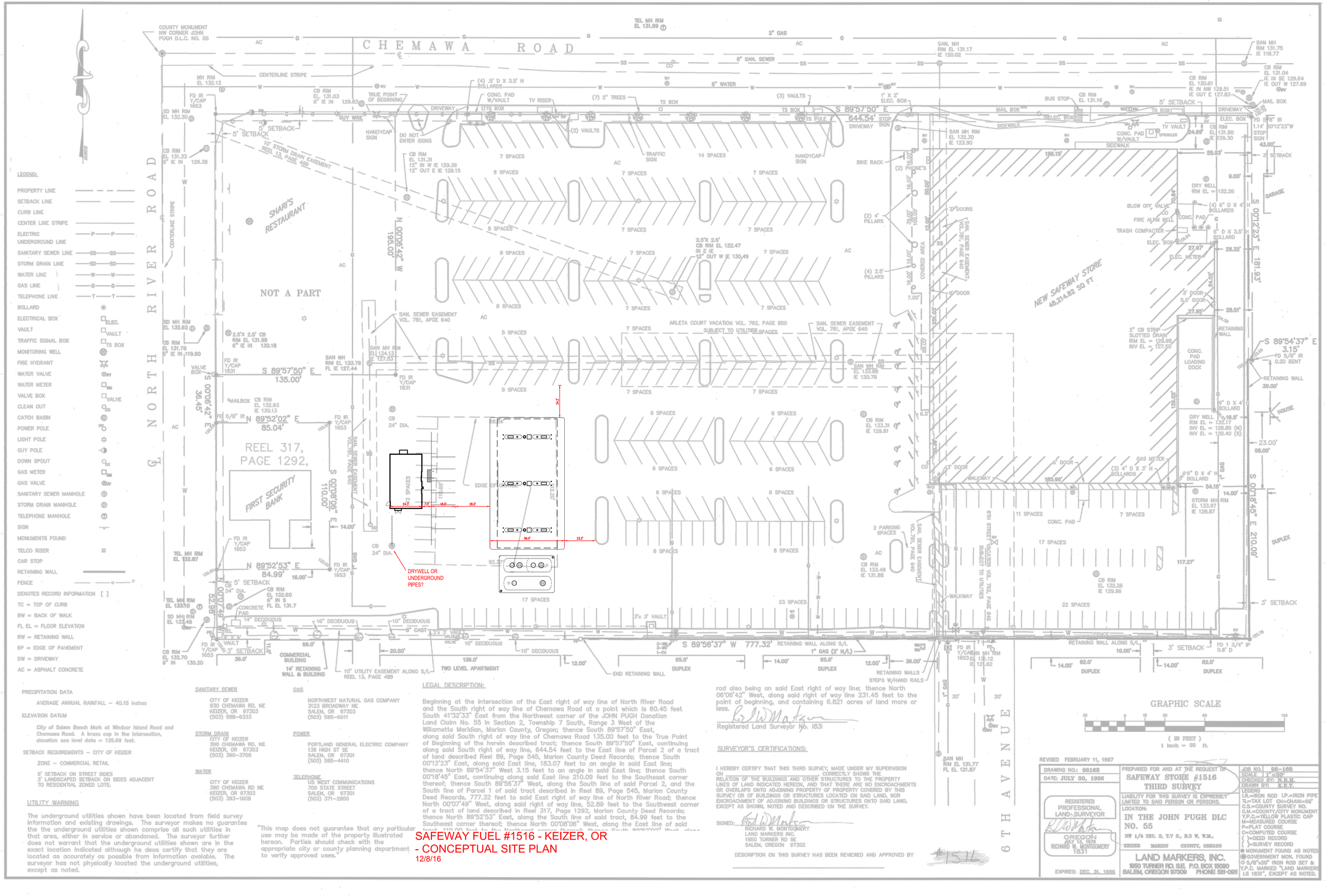
Thank you for your consideration of this proposal. Please feel free to contact me with any questions or if you require additional information.

Very truly yours,



Mark D. Whitlow

MDW:sv
Enclosure
cc: Shannon Johnson
Chris Miles, Safeway Inc.



SAFEWAY FUEL #1516 - KEIZER, OR
- CONCEPTUAL SITE PLAN
12/8/16

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING
610 SW Alder Street, Suite 700, Portland, OR 97205 P 503.228.5230 F 503.273.8169

March 26, 2013 Project #: 13343

Diane Phillips
Safeway, Inc.
PO Box 523
Clackamas, OR 97015

RE: #1516 Keizer Fueling Station Preliminary Transportation Impact Assessment

Dear Diane,

This letter documents the initial findings and recommendations of a preliminary transportation impact assessment prepared for the proposed development of a fueling station located within the Safeway site at the River Road N and Chemawa Road NE intersection in Keizer, Oregon. This study was prepared for Safeway's internal due-diligence assessment purposes. Additional study intersections and analysis may be required in conjunction with the site plan application process and the City of Keizer's development review process.

Based on our preliminary analysis, the primary findings and recommendations are as follows:

- The study intersections operate acceptably under 2013 weekday AM and PM peak hour traffic conditions.
- The study intersections are forecast to continue to operate acceptably under 2015 future AM and PM peak hour traffic conditions.
- The proposed fueling facility is estimated to generate 340 daily trips, including 20 total AM peak hour trips and 30 total PM peak hour trips.
- With the addition of peak hour site-generated traffic, the study intersections continue to operate acceptably.
- Queuing along Chemawa Road NE blocks the western right-in/right-out only site driveway and is expected to continue to do so in the future. The main site driveway in front of the store is not blocked by queues and is not expected to be.
- Queuing along River Road N routinely blocks the northern left-in/right-in/right-out only site driveway and sporadically blocks the southern full movement driveway. The southern full movement driveway is expected to continue to accommodate left-turns in and out but will be blocked during portions of the peak 15 minutes of the weekday PM peak hour by 95th percentile queues.
- Operations at the south driveway on River Road N could be enhanced by reconstructing the driveway to improve the entry grade (the existing driveway has a relatively steep entry,

causing most drivers to slow entering and exiting and causing some vehicle undersides to contact and scrape the driveway pavement).

In addition to addressing the items above, this letter highlights some of the opportunities and constraints associated with two potential fuel pad locations on the Safeway site. Information is provided in the following order:

- Safeway Fuel Trip Generation Estimate
- Intersection Operations (existing, background without fuel, and total traffic with fuel)
- Queuing analysis
- Crash data review
- Fuel pad location opportunities and constraints

SAFEWAY FUEL TRIP GENERATION

Trip generation estimates were developed based on trip rates found in the standard reference manual *Trip Generation, Ninth Edition* published by the Institute of Transportation Engineers (ITE) (ITE, Reference 1). The internal and pass-by trip rates applied were determined based on information provided in ITE's *Trip Generation Manual* (ITE, Reference 2). Table 1 summarizes the daily, weekday AM, and weekday PM peak hour trips.

Table 1: Trip Generation Estimate

Land Use	ITE Code	# Fueling Stations	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total	In	Out	Total	In	Out
Gasoline/Service Station w/Conv. Market	945	8	1,300	80	40	40	110	55	55
*Internal Trips (36%)**			*(470)*	*(30)*	*(15)*	*(15)*	*(40)*	*(20)*	*(20)*
Pass-By Trips (62% a.m., 56% p.m.)			*(490)*	*(30)*	*(15)*	*(15)*	*(40)*	*(20)*	*(20)*
Net New Trips			**340**	**20**	**10**	**10**	**30**	**15**	**15**

*Reflects 36% internal trip reduction measured at other Safeway fuel sites.

INTERSECTION OPERATIONS

Operations of each of the five site driveways and the signalized River Road N/Chemawa Road NE intersection were reviewed as documented below.

Analysis Methodology and Operating Standards

The level of service (LOS) and queuing analysis described in this report was performed in accordance with the procedures stated in the *2000 Highway Capacity Manual* (HCM, Reference 3). To ensure that the analyses were based on a reasonable worst-case scenario, the peak 15-minute flow rates were used in the LOS evaluation of the study intersection. Thus, the LOS analysis reflects conditions that are likely to occur for only 15 minutes out of each average peak hour. Traffic conditions during typical weekday hours are expected to operate under better conditions than those described in this report.

The City of Keizer's operational standards govern the intersection in this analysis. For signalized intersections and unsignalized intersections in the City of Keizer, LOS "D" and LOS "E" are considered to be the minimum acceptable levels, respectively (Keizer, Reference 4).

Figure 1 illustrates the existing lane configurations and traffic control devices. Figures 2, 3, 4, and 5 summarize existing traffic conditions, forecast year 2015 background, and 2015 total traffic conditions at the study intersections during the weekday AM and PM peak hours, respectively.

Existing Conditions

Weekday AM and PM peak hour turn movement counts were conducted at the study intersections on February 20, 2013 between 7:00 and 9:00 a.m. and 4:00 and 6:00 p.m.

All intersections were found to operate acceptably as shown in Figure 2.

Background Conditions

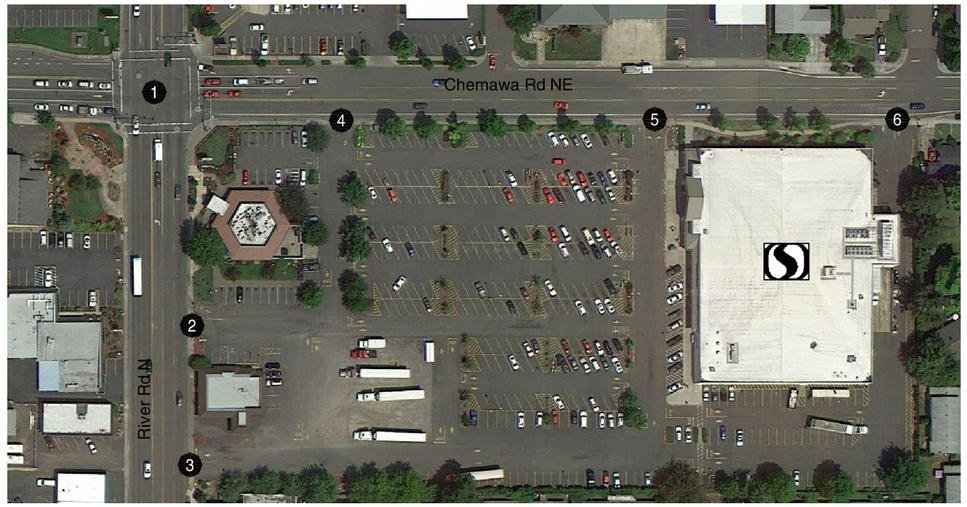
A preliminary 2015 future conditions assessment was prepared assuming two percent annual growth in the study area based on historical growth patterns. Note that the City may identify additional in-process development in conjunction with the formal site plan application.

All of the study intersections were found to operate acceptably as shown in Figure 3.

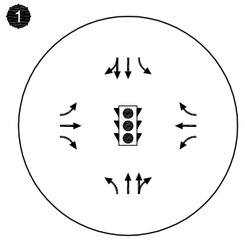
Total Traffic Conditions

Future conditions assuming development of the fuel pad site were prepared by assigning the anticipated site-generated traffic to the study intersections following existing turn movement patterns in the site vicinity. The year 2015 background traffic volumes for the weekday AM and PM peak hours were added to the site-generated traffic to arrive at the total traffic volumes.

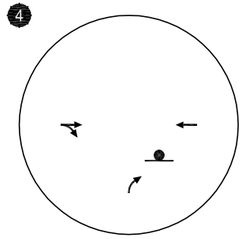
All of the study intersections were found to operate acceptably as shown in Figures 4 and 5.



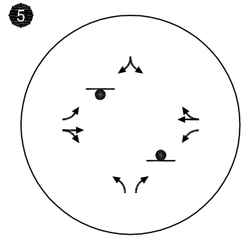
CHEMAWA RD NE/
RIVER RD N



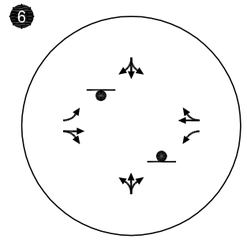
CHEMAWA RD NE/
W DRIVEWAY



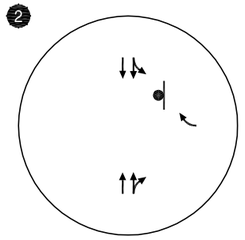
CHEMAWA RD NE/
MAIN DRIVEWAY



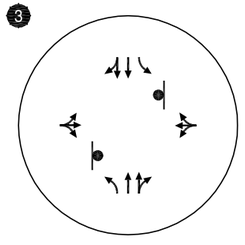
CHEMAWA RD NE/
E DRIVEWAY



RIVER RD N//
N DRIVEWAY



RIVER RD N/
S DRIVEWAY

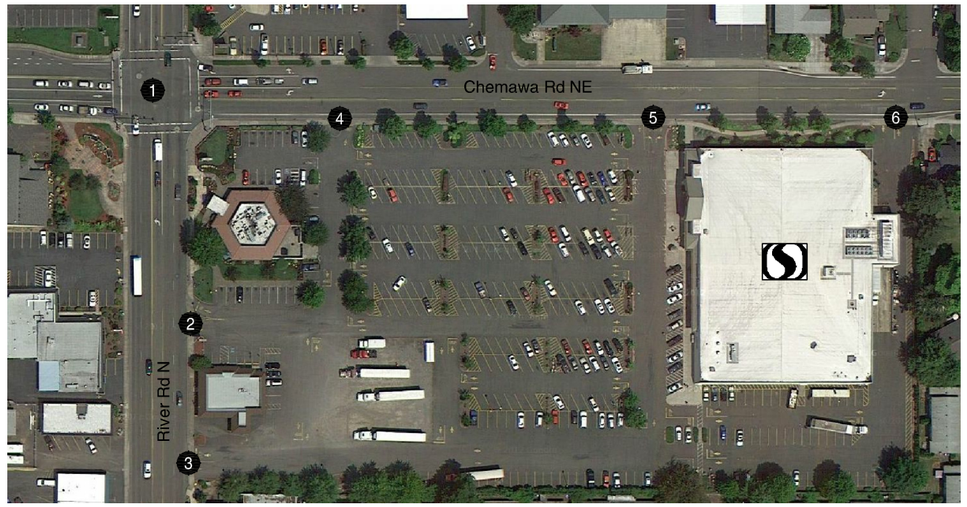


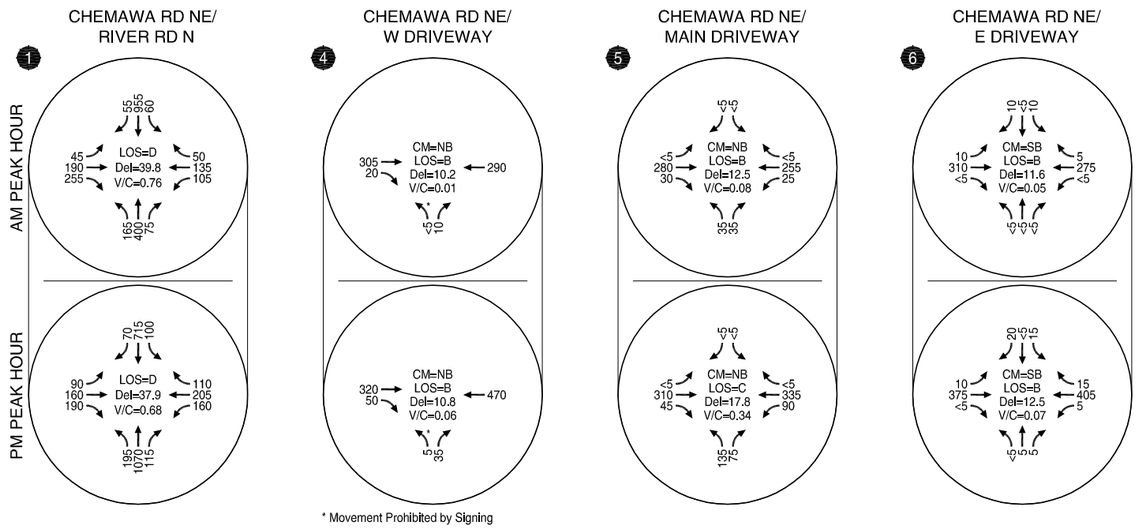
LEGEND

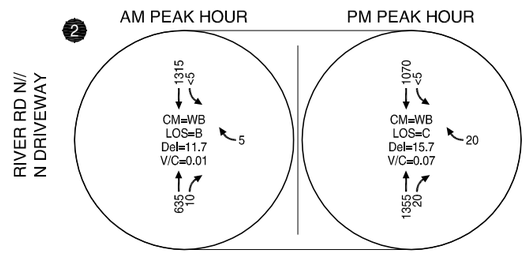
- STOP SIGN
- TRAFFIC SIGNAL

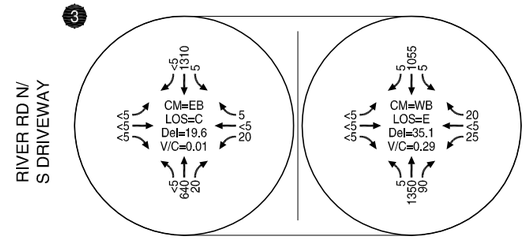
EXISTING LANE CONFIGURATIONS AND TRAFFIC CONTROL DEVICES
KEIZER, OREGON

FIGURE
1









LEGEND

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V/C = CRITICAL VOLUME-TO-CAPACITY RATIO

EXISTING TRAFFIC CONDITIONS, WEEKDAY AM & PM PEAK HOURS
KEIZER, OREGON

FIGURE **2**

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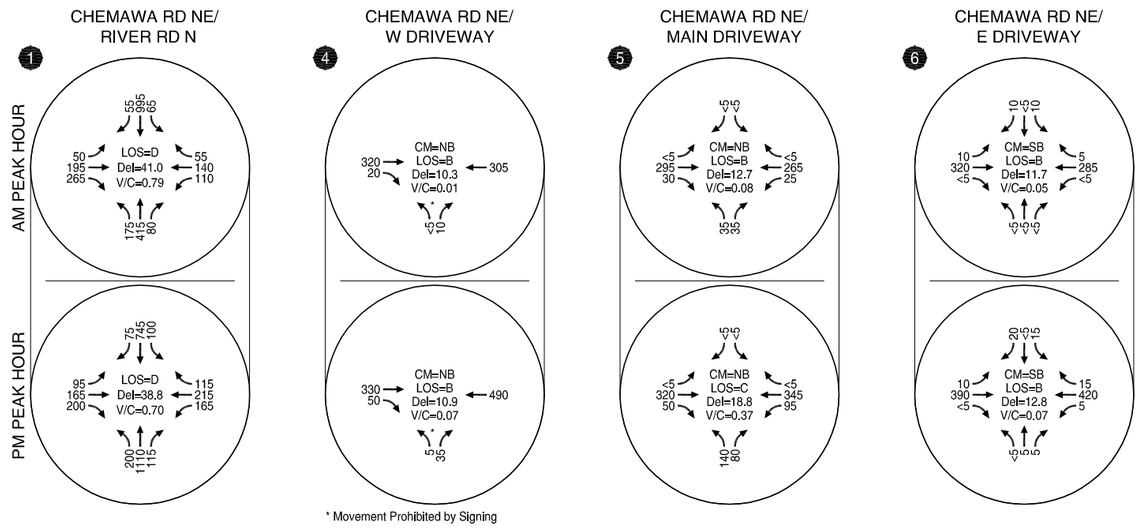

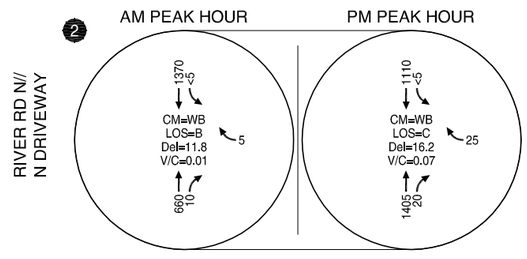

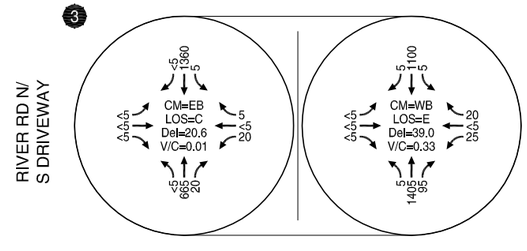

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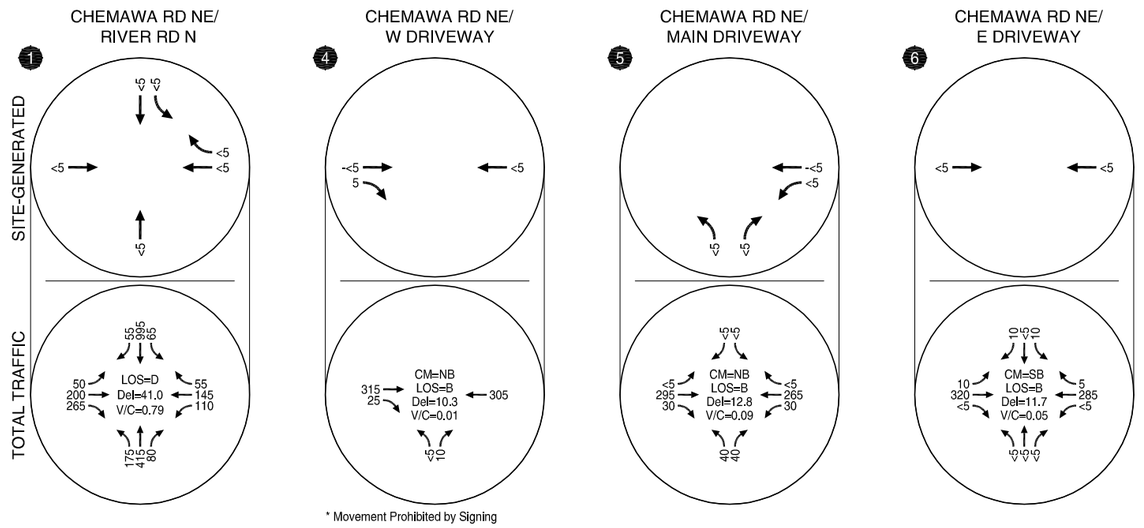
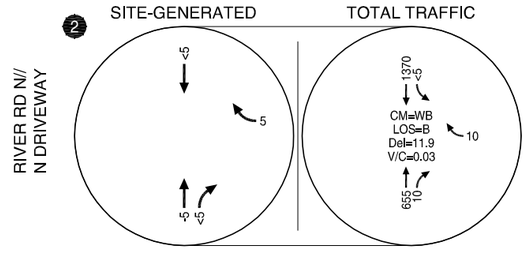
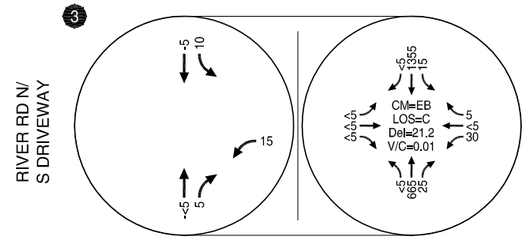
2015 BACKGROUND TRAFFIC CONDITIONS, WEEKDAY AM & PM PEAK HOURS
KEIZER, OREGON

FIGURE
3



* Movement Prohibited by Signing





Note: Negative Volume Reflect Pass-By Trips.

LEGEND

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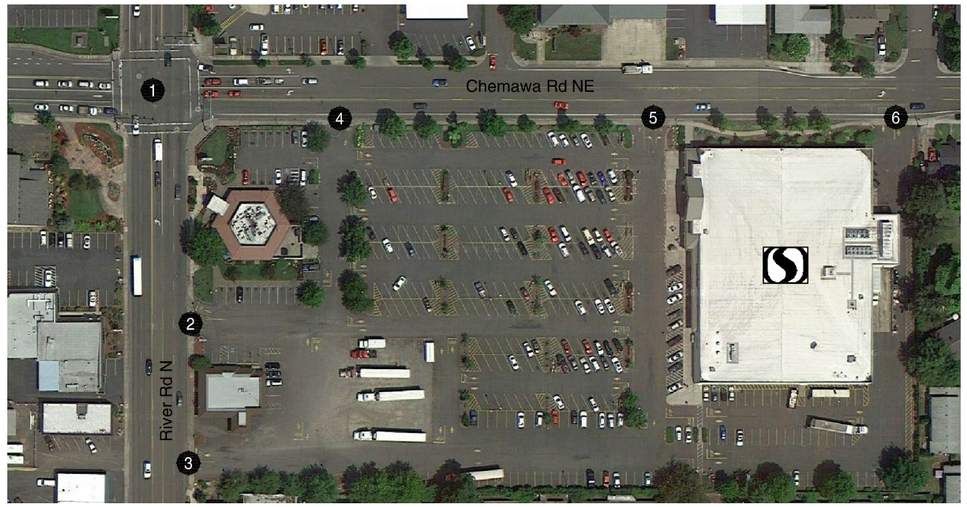
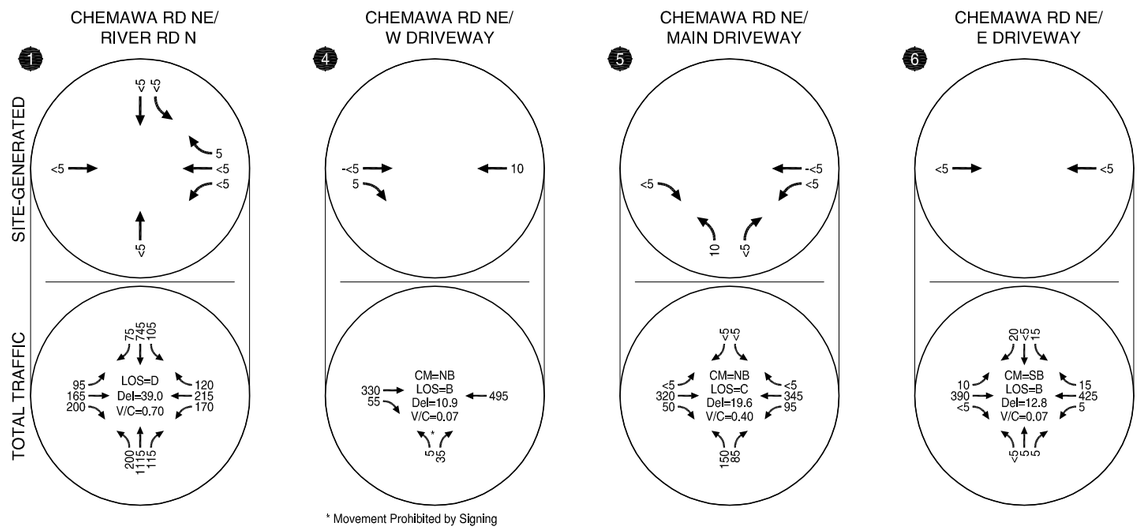
SITE-GENERATED AND 2015 TOTAL TRAFFIC CONDITIONS, WEEKDAY AM PEAK HOUR
KEIZER, OREGON

FIGURE **4**

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING





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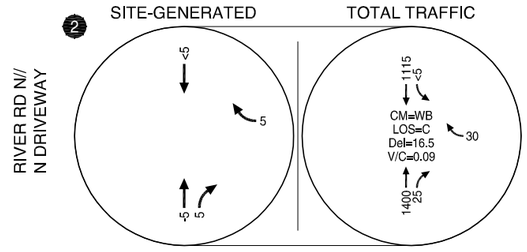

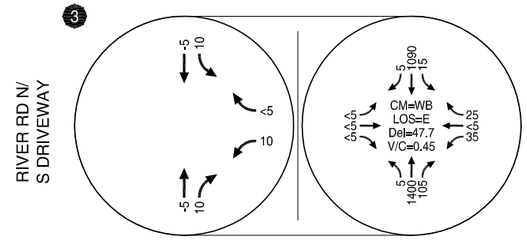

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SITE-GENERATED AND 2015 TOTAL TRAFFIC CONDITIONS, WEEKDAY PM PEAK HOUR
KEIZER, OREGON

FIGURE **5**

QUEUING ANALYSIS

Existing and forecast future 95th percentile queues were estimated along the site frontage to assess their potential impact on site driveway operations. Specifically, a Synchro analysis was conducted to identify projected queue lengths at the Chemawa Road NE and River Road N intersection, and the subsequent impact to site driveway access and operations.

Figure 6 illustrates the existing and 2015 estimated 95th percentile queue lengths, rounded to the nearest 25 feet, relative to the location of the site driveways. As shown, the estimated queues for both the existing and 2015 estimated conditions extend beyond the west driveway on Chemawa Road NE and the north driveway on River Road N during the AM peak, and beyond the south driveway on River Road N and west driveway on Chemawa Road NE during the PM peak. Note that the west driveway on Chemawa Road NE is currently signed to prohibit left-turns in or out of the driveway. Some vehicles were observed to make left-turns in and out despite the signing prohibiting the left-turn movement.

The queuing results indicate that the two site driveways on River Road N will be blocked intermittently during the PM peak hour. The condition is consistent with other driveways on the corridor. The City of Keizer may choose to implement raised median treatments at the west site driveway on Chemawa Road NE or the north site driveway on River Road N to enforce the existing driveway turn movement restrictions. While feasible, raised median treatments could impact neighboring properties pending their location and design.

AM PEAK HOUR

PM PEAK HOUR

LEGEND

- SITE DRIVEWAYS
- EXISTING QUEUES
- 2015 ESTIMATED QUEUES WITH SAFEWAY FUEL

EXISTING & 2015 ESTIMATED 95TH PERCENTILE QUEUES
KEIZER, OREGON

FIGURE 6

CRASH DATA REVIEW

The crash histories of the study intersection and site driveways were reviewed in an effort to identify potential intersection safety issues. Collision records were obtained from the Oregon Department of Transportation (ODOT) for the most recent five-year period from January 2007 through December 2011. A summary of the collision data is provided in Table 2.

Table 2: Intersection Collision Histories

Intersection	Number of Crashes	Crash Type				Crash Severity	
		Rear-End	Turning	Angle	Other	PDO[1]	Injury
River Road N/ Chemawa Road NE	20	14	3	1	2	11	9
River Road N/ S Driveway	3	0	3	0	0	1	2
River Road N/ N Driveway	3	1	2	0	0	3	0
Chemawa Road NE/ W Driveway	6	1	5	0	0	5	0
Chemawa Road NE/ Main Driveway	0	-	-	-	-	-	-
Chemawa Road NE/ E Driveway	0	-	-	-	-	-	-

[1]PDO: Property Damage Only

Based on the collision review, the collisions that occurred at the site driveways were generally a result of illegal turning movements or were attributed to reckless driving rather than site driveway design. Per the ODOT crash reports, the following documents the causes for the collisions reported in the five-year period:

- Two of the three reported collisions at the south driveway on River Road N occurred at the site driveway, and were caused by left-turning vehicles that did not yield right-of-way to northbound through vehicles.
- The two reported turning collisions at the north driveway on River Road N were attributed to illegal turn movements from the driveway, including left-turn and through movements.
- Three of the six collisions reported at the west driveway on Chemawa Road NE occurred at the site driveway. Two of these were collisions between a bicycle and a vehicle, and one of which the bicycle was traveling in the wrong direction. The other collision was due to an illegal left-turning movement from the site driveway.

FUEL PAD LOCATION OPPORTUNITIES AND CONSTRAINTS

We understand that Safeway is considering two potential locations on-site for the fuel station; the existing vacant pad site in the south central portion of the site and within the parking field along the Chemawa Road NE frontage site. Attachment "A" illustrates the multimodal access paths depending on the fueling station placement, and also shows the potential queuing patterns of vehicles waiting for fueling pumps. Table 3 below summarizes key opportunities and constraints associated with the two potential locations from a transportation perspective.

Table 3: Benefits and Considerations to Pad Site Location

Consideration	Chemawa Road NE Frontage Site	Vacant Pad Site
Impact to Safeway Store Parking	Relative to vacant pad site, this site would displace the most existing Safeway customer parking. Queues waiting to fuel would also potentially block customer parking spaces.	Least impact to existing Safeway customer parking – engages an area currently being used for non-Safeway truck parking.
Impact to Safeway Store Entry Operations	Location would add fuel related vehicular traffic directly in front of Safeway store entry, increasing interaction with Safeway customers pushing shopping carts to and from the store.	Least impact for interactions store shoppers/customer vehicles destined to/from Safeway fuel.
Impact to Safeway Main Chemawa Road NE Driveway Operations	Relative to the vacant pad site, this location results in more vehicles and queuing at the Chemawa Road NE site driveway.	This location results in less impact to the Main Chemawa Road NE driveway relative to the Chemawa Road NE frontage site.
Fuel Delivery Truck Access Implications	Allows for truck entry on Chemawa Road NE or River Road N, requires exit to Chemawa Road NE with left-turn internal to Safeway parking lot and left-turn exit to Chemawa Road NE. Requires fuel truck navigation through customer parking areas and truck passing across main store front through pedestrian area.	Allows for truck entry on Chemawa Road NE, exit to River Road N with all right-turns. Minimal navigation through customer parking areas required.
Queue Storage for Vehicles Waiting to Fuel	Allows limited storage space for vehicle in queue waiting to fuel. As a result, vehicles anticipated to queue in the parking aisle may cause additional friction and interaction between vehicles in queue and other vehicles and pedestrians.	Allows adequate queue storage for vehicles waiting to fuel. In addition, the vacant pad site is located away from the Safeway main entrance, thus minimizing possible interactions between Safeway-only customers and fueling customers.

Site Access

Based on our review, the following potential improvements and recommendations to site access were identified:

- The City may require the west access be further modified to enforce existing turn movement restrictions through provision of a raised median treatment on Chemawa Road NE.
- The City will likely require Safeway to restrict existing movements at the north driveway on River Road N to right-in/right out (eliminate left-in). The existing queues from the intersection prohibit southbound left-in movements during the peak hours.

- The south driveway on River Road N has potential sight distance issues associated with on-site vegetation. In addition, the driveway grading results in entering and exiting vehicles slowing abnormally and turning wide. Exhibit 1 illustrates the potential sight distance and grading issues with the driveway. This condition could be improved by trimming and maintaining the existing vegetation to improve sight distance, and by reconstructing the driveway to minimize the grade differential between the roadway and the parking aisle.

Exhibit 1: Sight Distance and Grading Issues at South Driveway on River Road N

We trust this letter adequately assesses the preliminary transportation impacts associated with the proposed development of a fueling station at the Safeway site in Keizer, OR. Please contact us if you have any questions or comments regarding the contents of this letter or of the analysis completed.

Sincerely,
KITTELSON & ASSOCIATES, INC.

Chris Brehmer, P.E.
Principal Engineer

Anais Malinge
Transportation Analyst

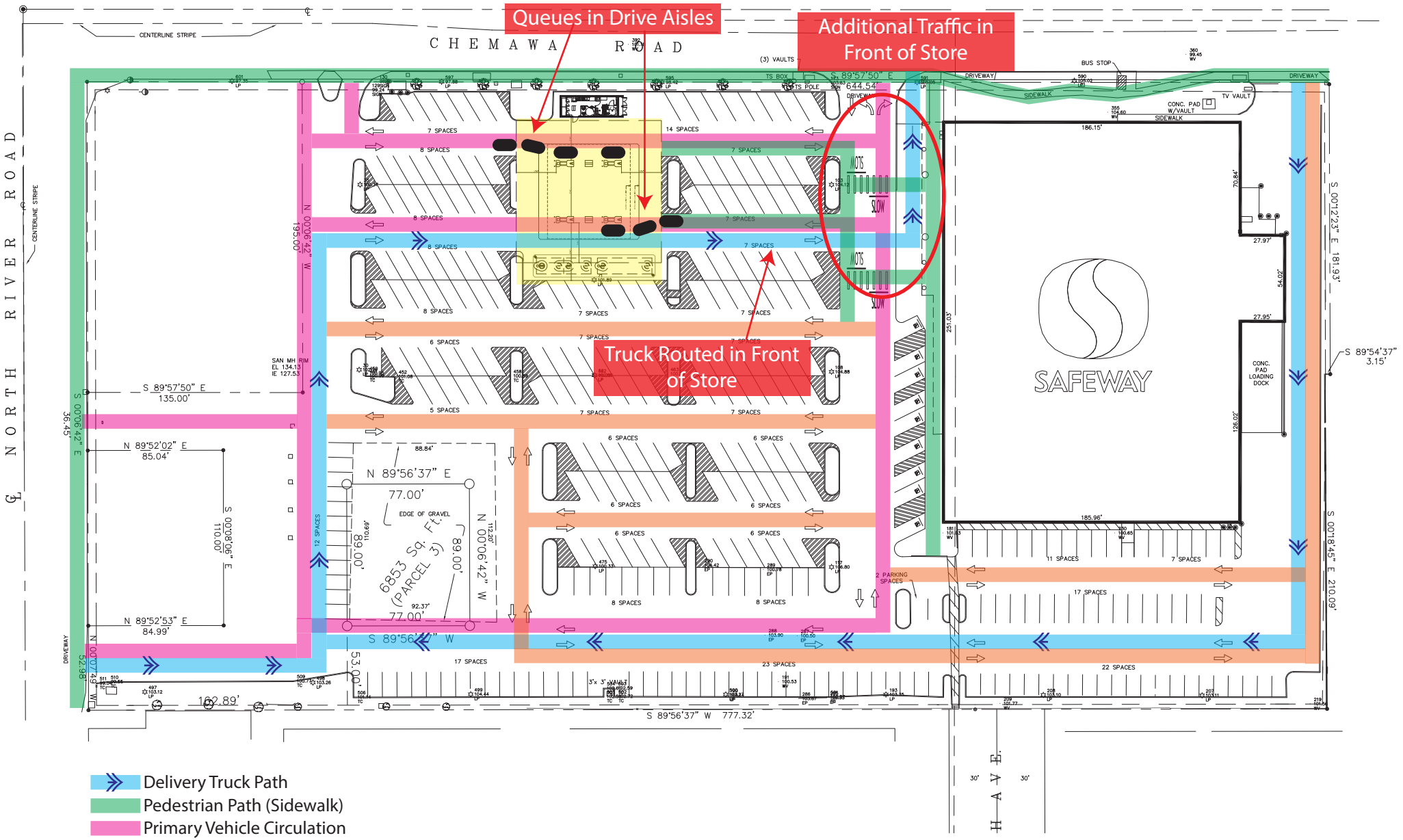
REFERENCES

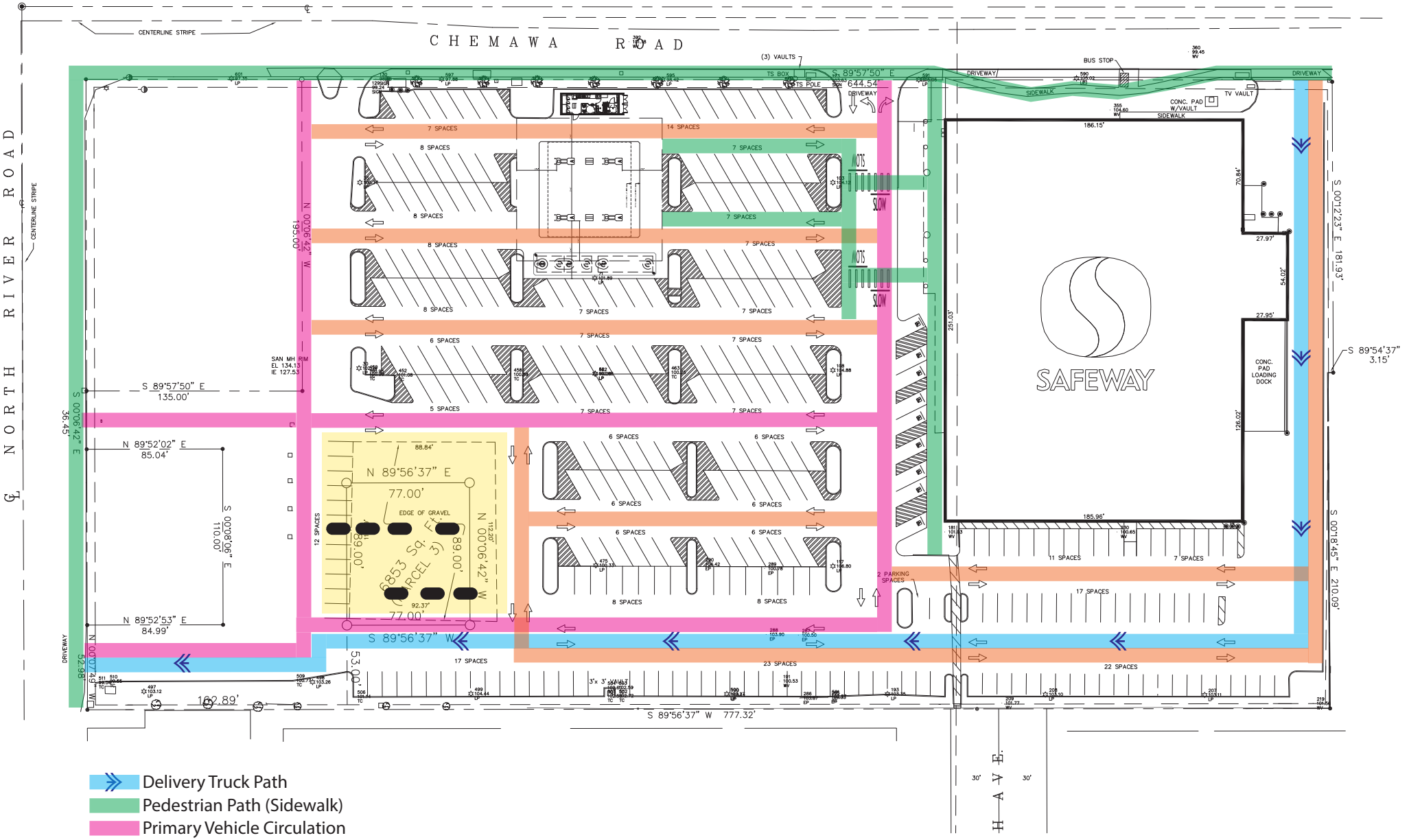
1. Institute of Transportation Engineers. *Trip Generation, Ninth Edition*. 2012.
2. Institute of Transportation Engineers. *Trip Generation Handbook, Second Edition*. 2012
3. Transportation Research Board 2000. *Highway Capacity Manual*. 2000.
4. City of Keizer. *Transportation System Plan*. 2007.

ATTACHMENTS

Attachment A: Fueling Station Pad Site Circulation Analysis

Attachment A Fueling Station Pad Site Circulation Analysis


Queues in Drive Aisles
Additional Traffic in Front of Store
Truck Routed in Front of Store
CHEMAWA ROAD
NORTH RIVER ROAD
SAFEWAY
HAYDEN
Delivery Truck Path
Pedestrian Path (Sidewalk)
Primary Vehicle Circulation
Secondary Vehicle Circulation
Fueling Vehicle in Queue



Delivery Truck Path
Pedestrian Path (Sidewalk)
Primary Vehicle Circulation
Secondary Vehicle Circulation
Fueling Vehicle in Queue

CITY COUNCIL, CITY OF KEIZER, STATE OF OREGON

Resolution R2017-2748

INITIATING LEGISLATIVE AMENDMENTS TO THE KEIZER DEVELOPMENT CODE TO CONSIDER AMENDING SECTIONS TO ALLOW FUELING STATIONS OR GASOLINE SERVICE STATIONS IN THE RIVER ROAD/CHEMAWA ROAD AREA

WHEREAS, Safeway Inc. has petitioned the City Council to initiate a text amendment to amend the CM zone standards to allow fueling stations in conjunction with existing grocery supermarkets;

WHEREAS, the City Council of the City of Keizer considers it necessary and appropriate to initiate the legislative amendment process to review and possibly revise certain portions of the Keizer Development Code in connection with such petition;

NOW, THEREFORE,

BE IT RESOLVED that pursuant to KDC 3.111.02 and 3.203.01, the City Council of the City of Keizer hereby initiates the legislative amendment process to review the Keizer Development Code and determine possible amendments to allow gasoline service station or fueling station with certain conditions or restrictions in the River Road/Chemawa Road area. Other amendments may be reviewed and adopted as well.

BE IT FURTHER RESOLVED that planning staff is directed to send appropriate notice to the Department of Land Conservation and Development and any other affected agencies and jurisdictions in a manner appropriate and necessary under state law.

Keizer City Attorney
930 Chemawa Road NE
PO Box 21000
Keizer, Oregon 97307
503-856-3433

Planning staff is delegated the authority to draft proposed text amendments for notice purposes.

BE IT FURTHER RESOLVED that staff is directed to schedule the matter for public hearings before the Planning Commission and City Council as provided in state and local law.

BE IT FURTHER RESOLVED that this Resolution shall take effect immediately upon the date of its passage.

PASSED this 6th day of February, 2017.

SIGNED this 6th day of February, 2017.

Cathy Clark
Mayor

City Recorder

Keizer City Attorney
930 Chemawa Road NE
PO Box 21000
Keizer, Oregon 97307
503-856-3433

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING
610 SW Alder Street, Suite 700, Portland, OR 97205 P 503.228.5230 F 503.273.8169

February 28, 2017 Project #: 21098

Nate Brown
City of Keizer
Community Development
PO Box 21000
Keizer, OR 97307

RE: Keizer Safeway Fuel Center Transportation Impact Assessment

Dear Nate,

This letter documents the findings and recommendations of a transportation impact assessment prepared for the proposed fueling station within the existing Safeway site southwest of the River Road N/ Chemawa Road NE intersection in Keizer.

Based on our analysis, the primary study findings are as follows:

- From a regulatory perspective, the River Road N/Chemawa Road intersection and the site driveways satisfy City operating standards under 2017 weekday AM and PM peak hour traffic conditions.
    - While operating standards are met, field observations found that:
        - Traffic queuing along the site frontage (particularly northbound along River Road N) results in lengthy delays leaving the site during peak periods;
        - On-site circulation at the main Chemawa Road site driveway could be improved for vehicles and pedestrians by reconstructing the driveway to provide a wider entry, reducing the vertical "bump" at the curb, and re-configuring the first parking lot drive aisle and pedestrian crossing area within the site; and
        - While the west driveway on Chemawa Road NE and the north driveway on River Road N are currently signed to prohibit left-turns entering or exiting the Safeway site, vehicles were observed to turn left at both locations. Measures to address these issues are recommended within this report.
- The member-based cost savings realized by customers at a Safeway Fuel station results in fewer site trips than a stand-alone fuel station.
    - Based on studies of other Safeway sites, 36 percent of the peak hour trips to and from the fuel site will be made by customers already shopping at the Safeway store.

  - In addition to these "internal" trips, roughly 50 percent of the 64 percent remaining vehicle trips will be made by drivers who visit the fuel site as part of their regular commute and simply "pass-by" to purchase fuel as a function of convenience.

- After accounting for pass-by and diverted trips, the proposed fuel facility is estimated to generate 626 net new daily trips, including 40 AM net new peak hour trips (20 vehicles entering and exiting the site) and 52 net new PM peak hour trips (26 vehicles entering and exiting the site).
- With the addition of peak hour site-generated traffic, the study intersections are forecast to continue to satisfy City operating standards under 2019 future weekday AM and PM peak hour traffic conditions.
  - The main site driveway in front of the store is not blocked by east-west queues along Chemawa Road NE today and is not expected to be in the future.
  - Queuing along River Road N routinely blocks the northern right-in/right-out only site driveway and sporadically blocks the southern full movement driveway.
  - The southern full movement driveway along River Road N is expected to continue to accommodate left-turns in and out but is expected to be blocked during portions of the peak 15 minutes of the weekday PM peak hour by 95th percentile queues.

Our analysis led to the following recommendations:

- Widen and reconstruct the main site access to improve driveway operations and reduce the potential for westbound left-turns at the west (right-in/right-out) site driveway on Chemawa Road NE. These improvements would include:
  - Regrading the driveway to reduce the vertical dip that results in a "bump" entering the driveway;
  - Restrict turn movements to the existing on-site parking aisle closest to the site entry (improving operations at the main access);
  - Add width to the inbound travel lane to improve the ingress movement;
  - Add vehicle storage to the left- and right-turn lanes leaving the site;
  - Reconstruct the pedestrian crossing and ramps; and
  - Improve pedestrian circulation at both the driveway and in the paved area connecting the parking lot with the store entry.
- Reconstruct the north right-in/right-out driveway on River Road N to:
  - Provide an improved raised median design and new signage to better restrict left turns into and out of the access;
  - Improve the pedestrian crossing of the driveway; and

  - Reduce the vertical dip that results in a "bump" entering the driveway.

- Reconstruct the southern site driveway on River Road N to:
  - Improve the pedestrian crossing of the driveway; and
  - Reduce the vertical dip that results in a "bump" entering the driveway.

To the extent practical, we recommend reconstruction of each driveway be completed in a manner that incorporates special pavement or ornamental treatments furthering site compliance with the aspirations of the *Keizer River Road Renaissance Implementation Report*.

- It is further recommended that above-ground utilities, monuments, fencing, and vegetation be appropriately located and maintained to preserve adequate intersection sight lines at the site driveways and at new internal site intersections.

SCOPE OF THE REPORT

This analysis determines the transportation-related impacts associated with the proposed Safeway Fuel. The study intersections were determined based on a review of existing travel patterns, *Keizer Development Code* Section 2.301.04 and direction provided by City staff. As such, the report addresses the following transportation issues:

- Trip generation estimates for the proposed development;
- Intersection operations under existing conditions as well as under future year 2019 conditions without and with the proposed fuel center;
- Suggested driveway improvements;
- Study intersection crash history review;
- Intersection sight distance review; and,
- Conclusions and recommendations.

Study Intersections

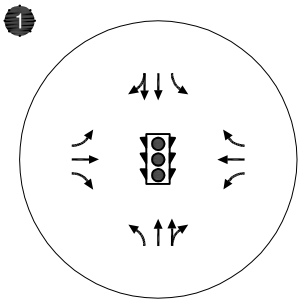
The signalized Chemawa Road NE/River Road N and five existing site driveways illustrated in Figure 1 were studied.

Analysis Periods

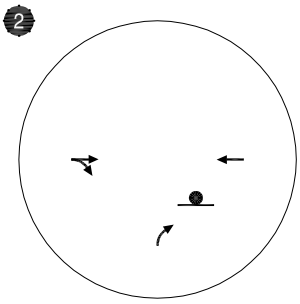
Weekday AM and PM peak hour traffic conditions were modeled at the study intersections under existing and year 2019 conditions.

N

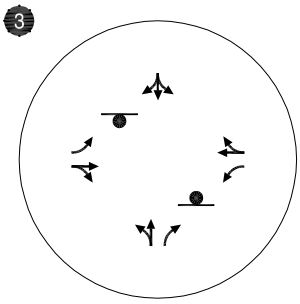
CHEMAWA RD NE/
RIVER RD N



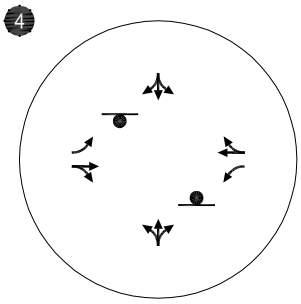
CHEMAWA RD NE/
W DRIVEWAY



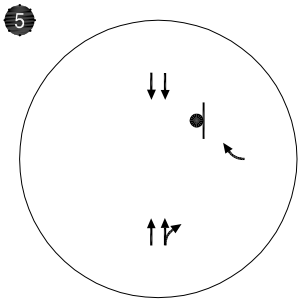
CHEMAWA RD NE/
MAIN DRIVEWAY



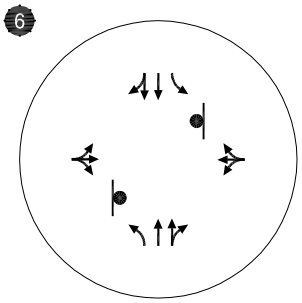
CHEMAWA RD NE/
E DRIVEWAY / 7TH ST NE



RIVER RD N/
N DRIVEWAY



RIVER RD N/
S DRIVEWAY



- STOP SIGN
- TRAFFIC SIGNAL

Existing Lane Configurations
and Traffic Control Devices
Keizer, Oregon

Figure
1

SAFEWAY FUEL TRIP GENERATION

Trip generation estimates for the proposed fueling facility were developed based on trip rates found in the standard reference manual *Trip Generation, 9th Edition* published by the Institute of Transportation Engineers (ITE, Reference 1).

Safeway Club members (a no-cost membership opportunity offered to all Safeway customers) are able to receive cost savings on fuel purchases. As a result, many Safeway customers shop at the Safeway store and also purchase fuel while on-site. Based on studies of other Safeway sites[1], 36 percent of the peak hour trips to and from the fuel site are made by customers already shopping at the Safeway store (these trips are referred to as internal trips). Consequently, fewer off-site trips are generated by a typical Safeway fuel compared to a stand-alone gas station.

In addition to the internal trips, roughly 50 percent of the remaining vehicle trips will be made by drivers who visit the fuel site as part of their regular commute and simply "pass-by" to purchase fuel as a function of convenience. Table 1 summarizes the daily, weekday AM, and weekday PM peak hour trips.

Table 1: Trip Generation Estimate

Land Use	ITE Code	# Fueling Stations	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
				Total	In	Out	Total	In	Out
Gasoline/Service Station w/Conv. Market	945	12	1,954	122	61	61	162	81	81
*Internal Trips (36%)**			*(702)*	*(44)*	*(22)*	*(22)*	*(58)*	*(29)*	*(29)*
Pass-By Trips (50%)			*(626)*	*(38)*	*(19)*	*(19)*	*(52)*	*(26)*	*(26)*
Net New Trips			**626**	**40**	**20**	**20**	**52**	**26**	**26**

*Reflects 36% internal trip reduction measured at other Safeway fuel sites.

INTERSECTION CAPACITY & QUEUING ANALYSIS

Operations of each of the five site driveways and the signalized River Road N/Chemawa Road NE intersection were reviewed as documented below. Attachment A includes the analysis worksheets.

Analysis Methodology and Operating Standards

The level of service (LOS) and queuing analysis described in this report was performed in accordance with the procedures stated in the *2000 Highway Capacity Manual* (HCM, Reference 2). To ensure that the analyses were based on a reasonable worst-case scenario, the peak 15-minute flow rates were

[1] *Safeway Gas Station – Internalization and Pass-by Survey Results* prepared by Heffron Transportation, Inc., April 2001.

used in the LOS evaluation of the study intersection. Thus, the LOS analysis reflects conditions that are likely to occur for only 15 minutes out of each average peak hour. Traffic conditions during typical weekday hours are expected to operate under better conditions than those described in this report.

The City of Keizer's operational standards govern the intersections in this analysis. For signalized intersections and unsignalized intersections in the City of Keizer, LOS "D" and LOS "E" are considered to be the minimum acceptable levels, respectively (Reference 3).

Figure 1 illustrates the existing lane configurations and traffic control devices at the study intersections. Note that the west driveway on Chemawa Road NE and the north driveway on River Road N are currently signed to prohibit left-turns into or out of the driveway. Some vehicles were observed to make left-turns in and out of these two driveways despite the signing prohibiting the left-turn movements.

Existing Conditions

Weekday AM and PM peak hour turn movement counts were conducted at the study intersections on Wednesday, February 15, 2017 between 7:00 and 9:00 AM and 4:00 and 6:00 PM while school was in-session. Attachment B includes the traffic counts. All intersections were found to operate acceptably during the weekday AM and PM peak hours, as shown in Figure 2 and Figure 3, respectively.

Background Conditions

A 2019 future conditions assessment was prepared assuming two percent annual growth in the study area based on historical growth patterns, as well as in-process traffic from the proposed Herber Family Apartments located on the west side of Verda Lane between Chemawa Road NE and Dearborn Avenue.

All of the study intersections are projected to continue operating acceptably during the weekday AM and PM peak hours, as shown in Figure 4 and Figure 5, respectively. Note that the existing left-turn movements recorded at the two right-in/right-out only site driveways were assumed to re-route to the next closest site driveway allowing left-turns.

Total Traffic Conditions

Future conditions, assuming development of the Safeway fuel site, were prepared by assigning the anticipated site-generated traffic to the study intersections following existing turn movement patterns in the site vicinity. The assignment of site-generated and pass-by trips during the weekday AM and PM peak hours is shown in Figure 6 and Figure 7, respectively.

The year 2019 background traffic volumes for the weekday AM and PM peak hours were added to the site-generated traffic to arrive at the year 2019 total traffic volumes. These total traffic volumes also reflect the assumed re-routing of illegal left-turn movements from the two right-in/right-out driveways to the nearest full-access driveways on Chemawa Road NE and River Road N.

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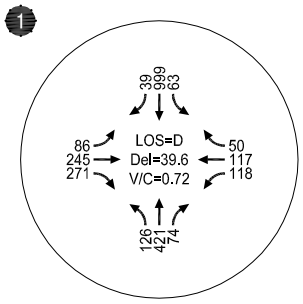
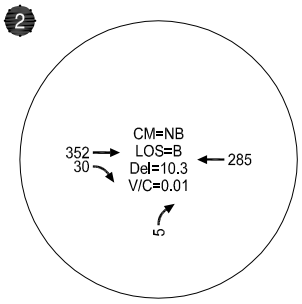
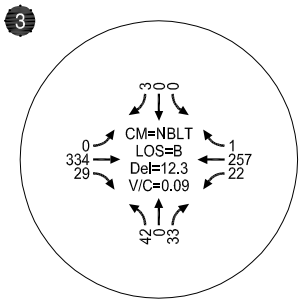
CHEMAWA RD NE/
RIVER RD N



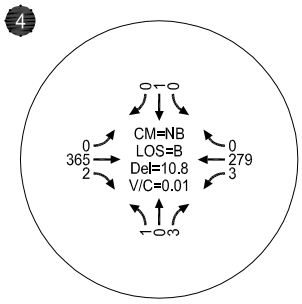
CHEMAWA RD NE/
W DRIVEWAY



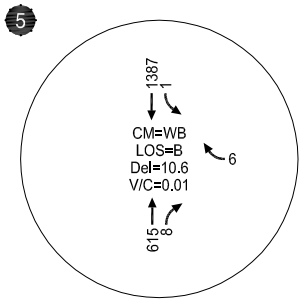
CHEMAWA RD NE/
MAIN DRIVEWAY



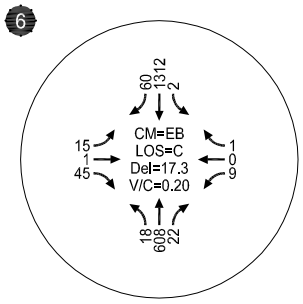
CHEMAWA RD NE/
E DRIVEWAY / 7TH ST NE



RIVER RD N/
N DRIVEWAY



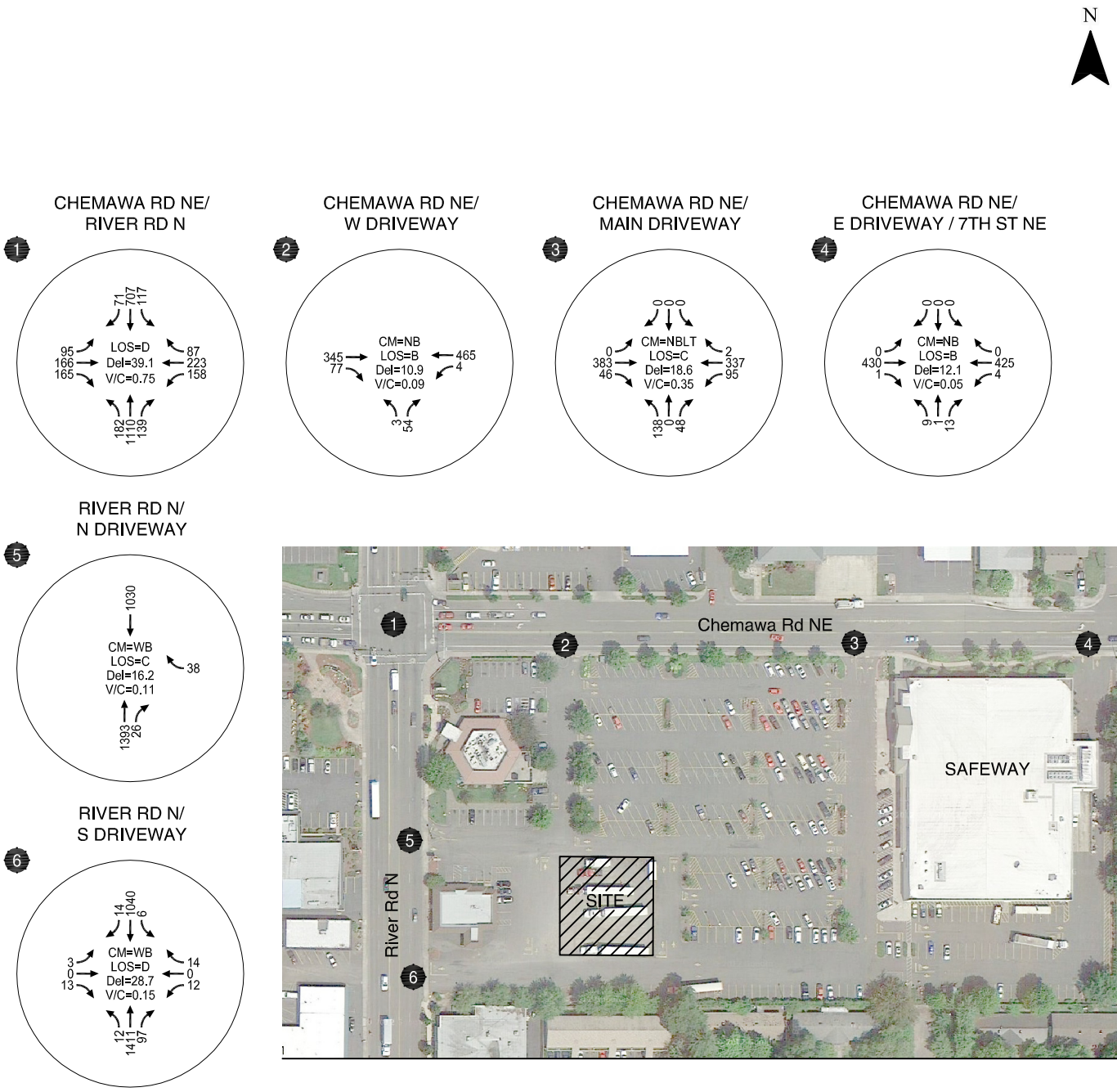
RIVER RD N/
S DRIVEWAY



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

Existing Traffic Conditions
Weekday AM Peak Hour
Keizer, Oregon

Figure
2



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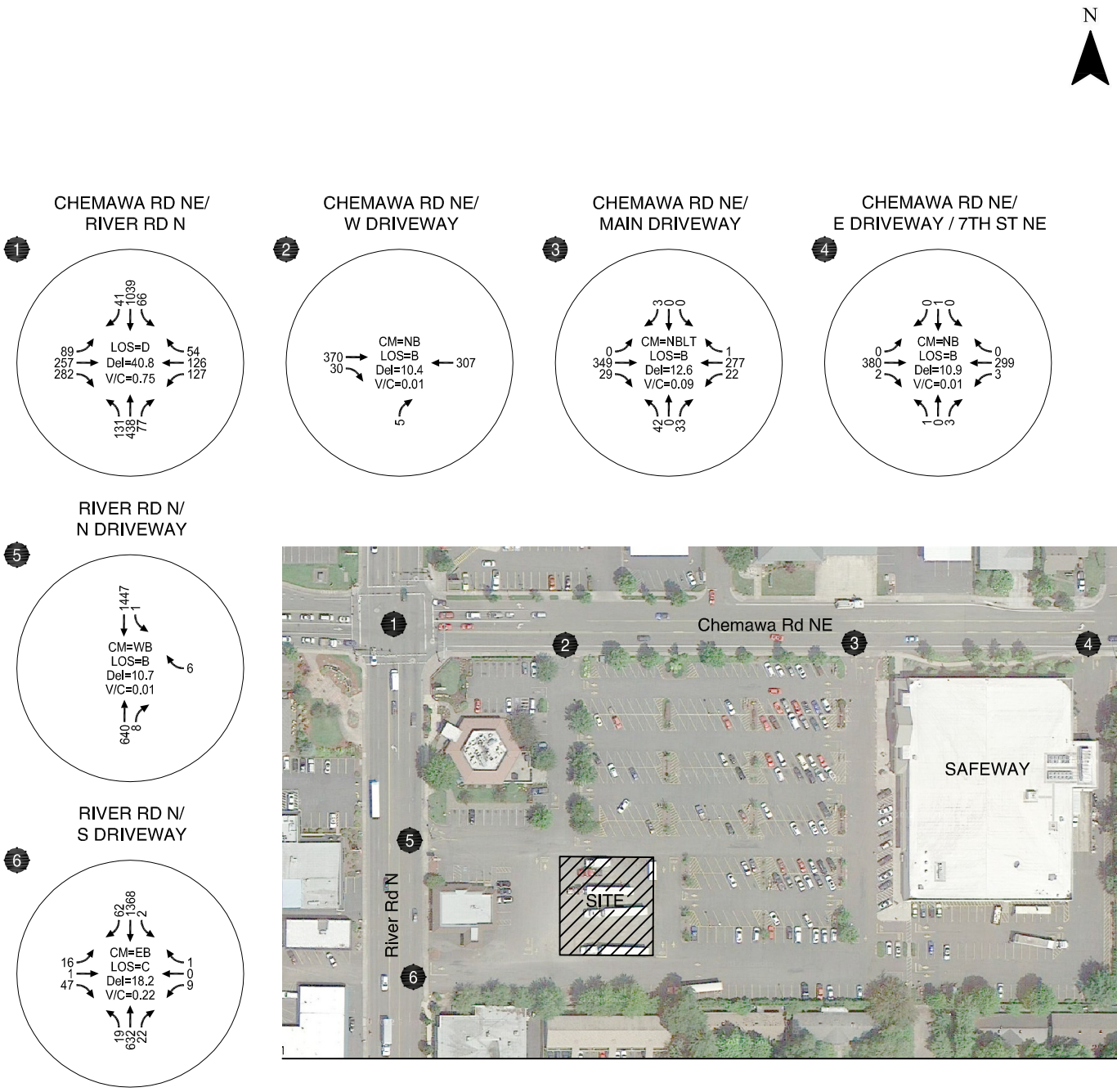
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO

Existing Traffic Conditions
Weekday PM Peak Hour
Keizer, Oregon

Figure 3



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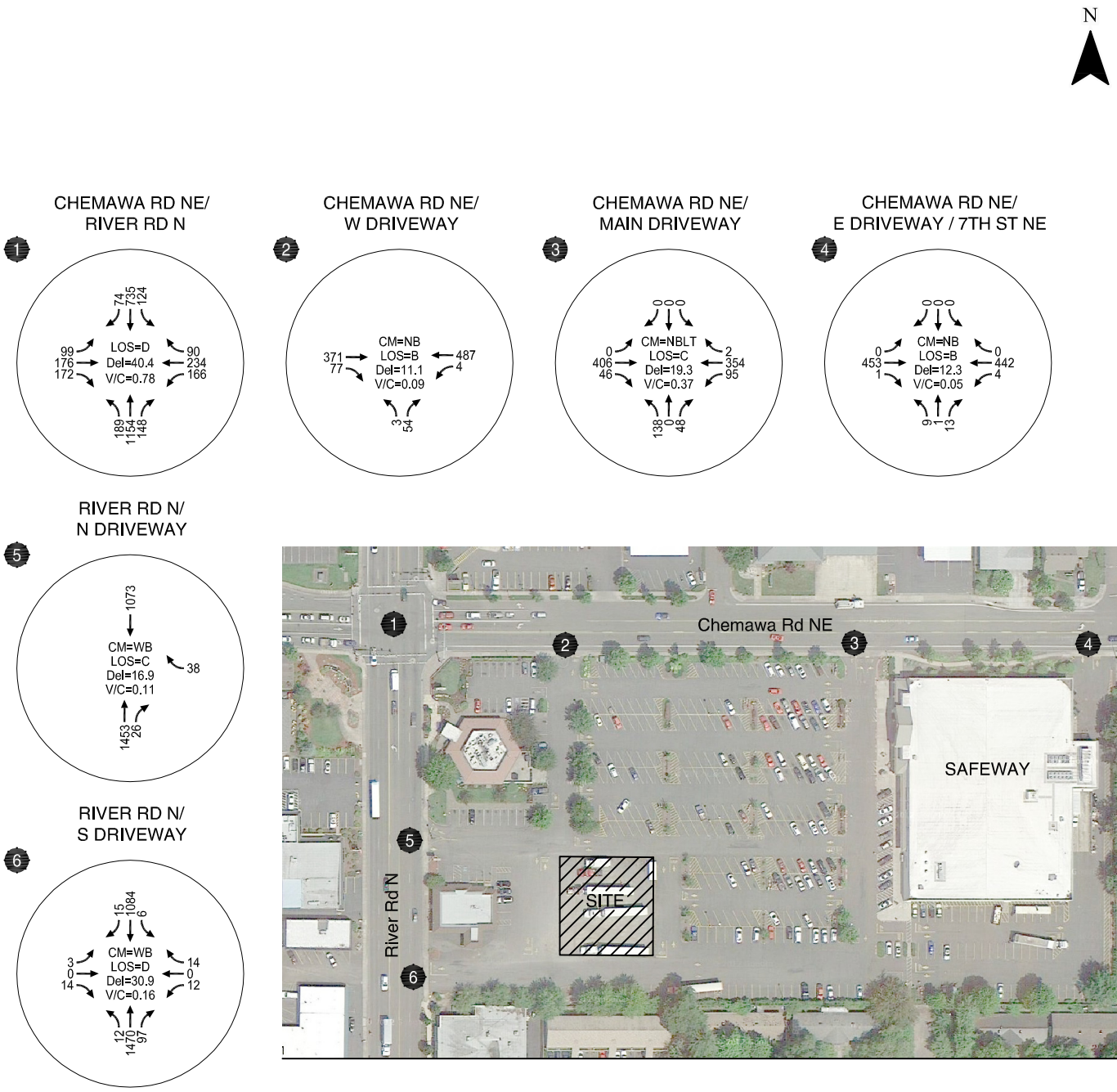
Year 2019 Background Traffic Conditions
Weekday AM Peak Hour
Keizer, Oregon

Figure 4



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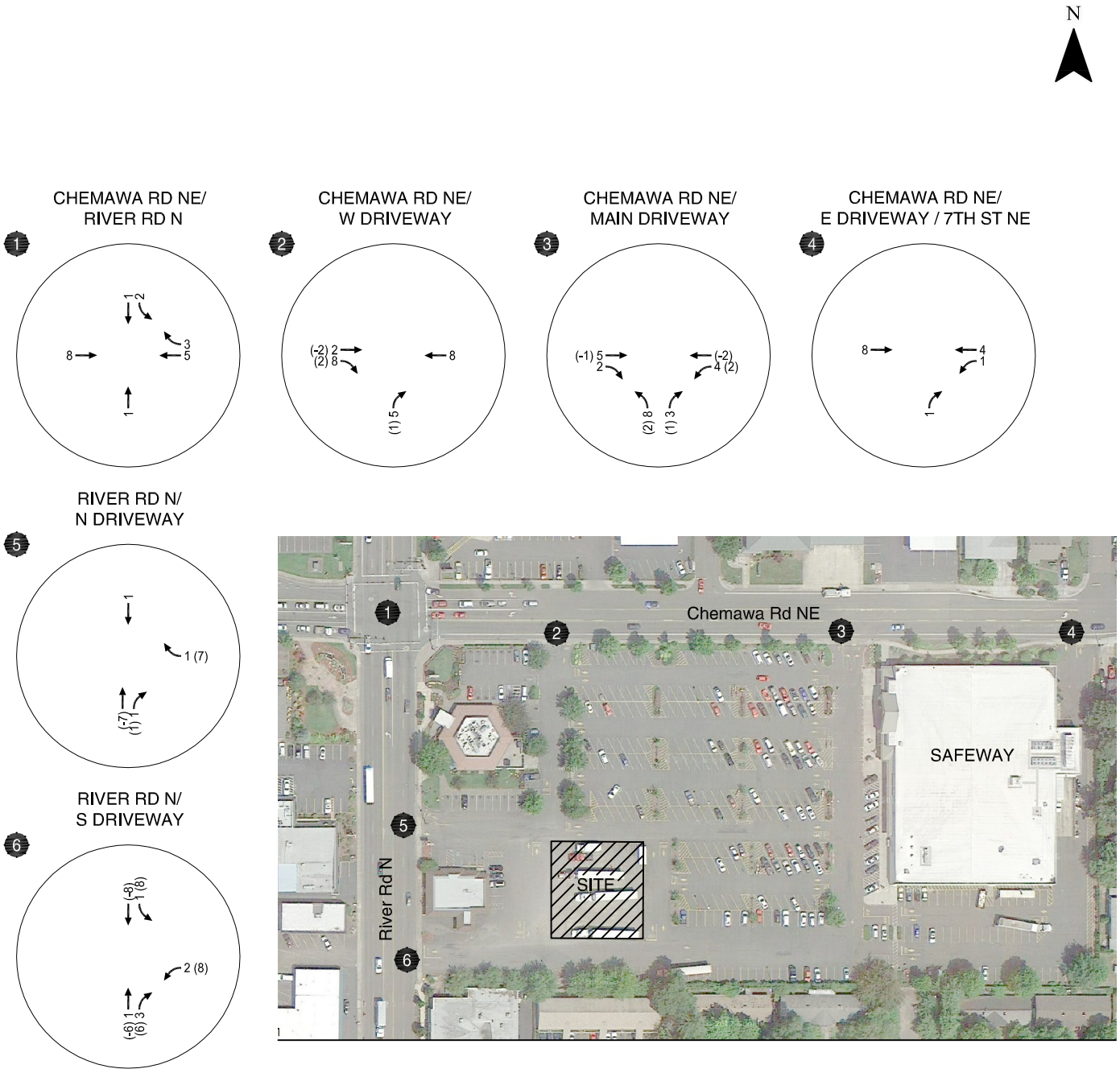
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO

Year 2019 Background Traffic Conditions
Weekday PM Peak Hour
Keizer, Oregon

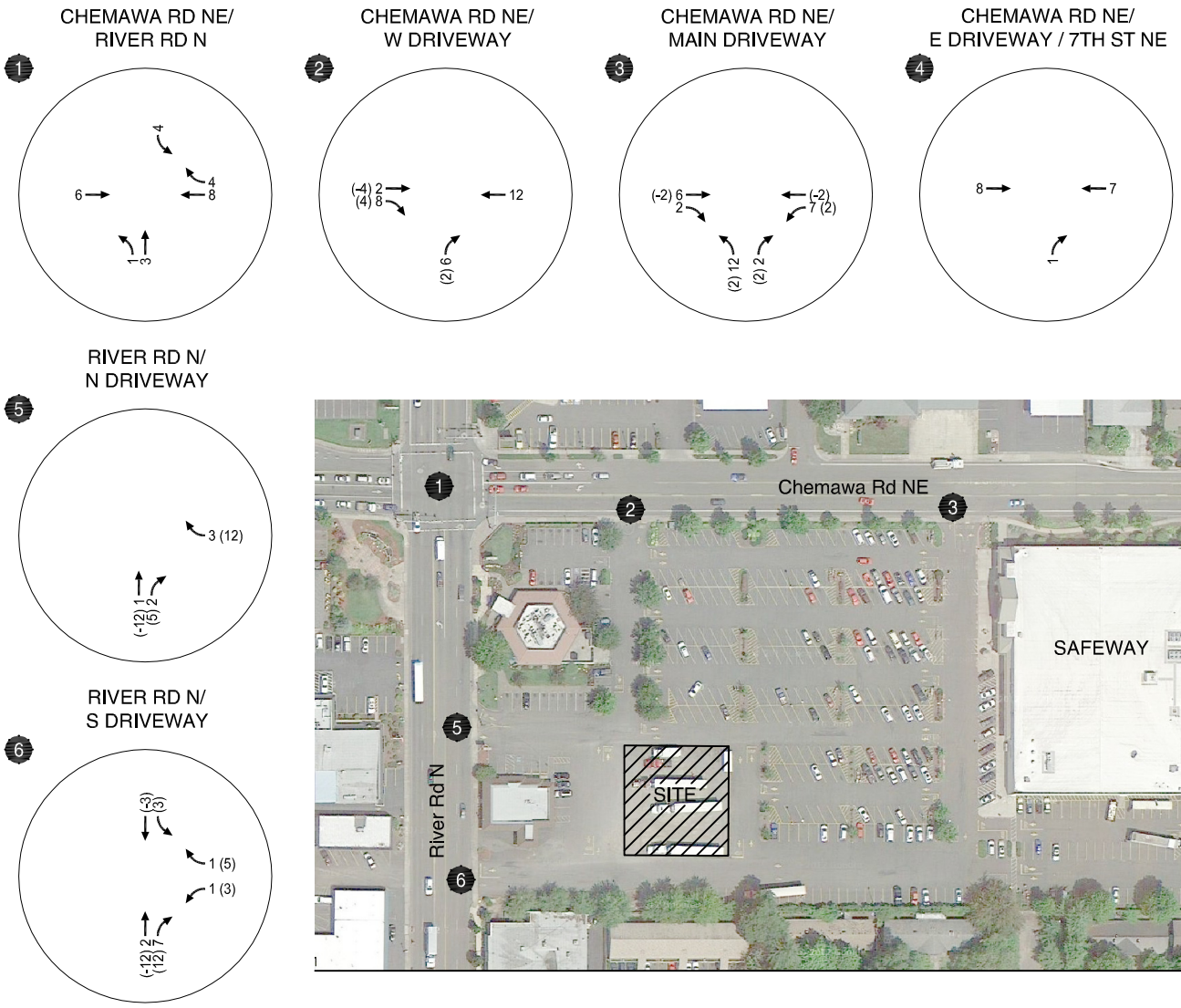
Figure 5



XX = SITE-GENERATED TRIPS
(XX) = PASS-BY TRIPS

Site-Generated Trips
Weekday AM Peak Hour
Keizer, Oregon

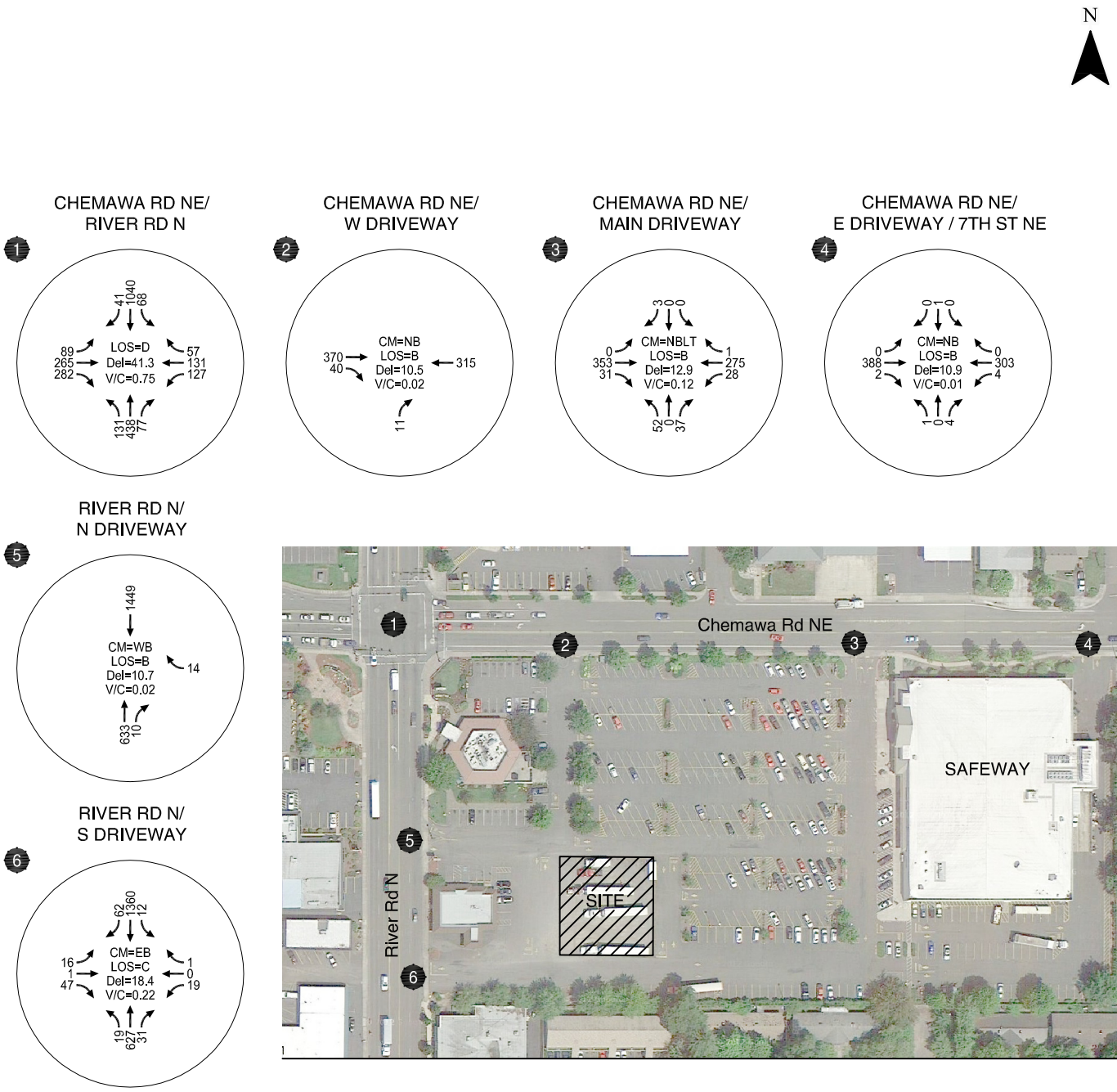
Figure
6



XX = SITE-GENERATED TRIPS
(XX) = PASS-BY TRIPS

Site-Generated Trips
Weekday PM Peak Hour
Keizer, Oregon

Figure
7



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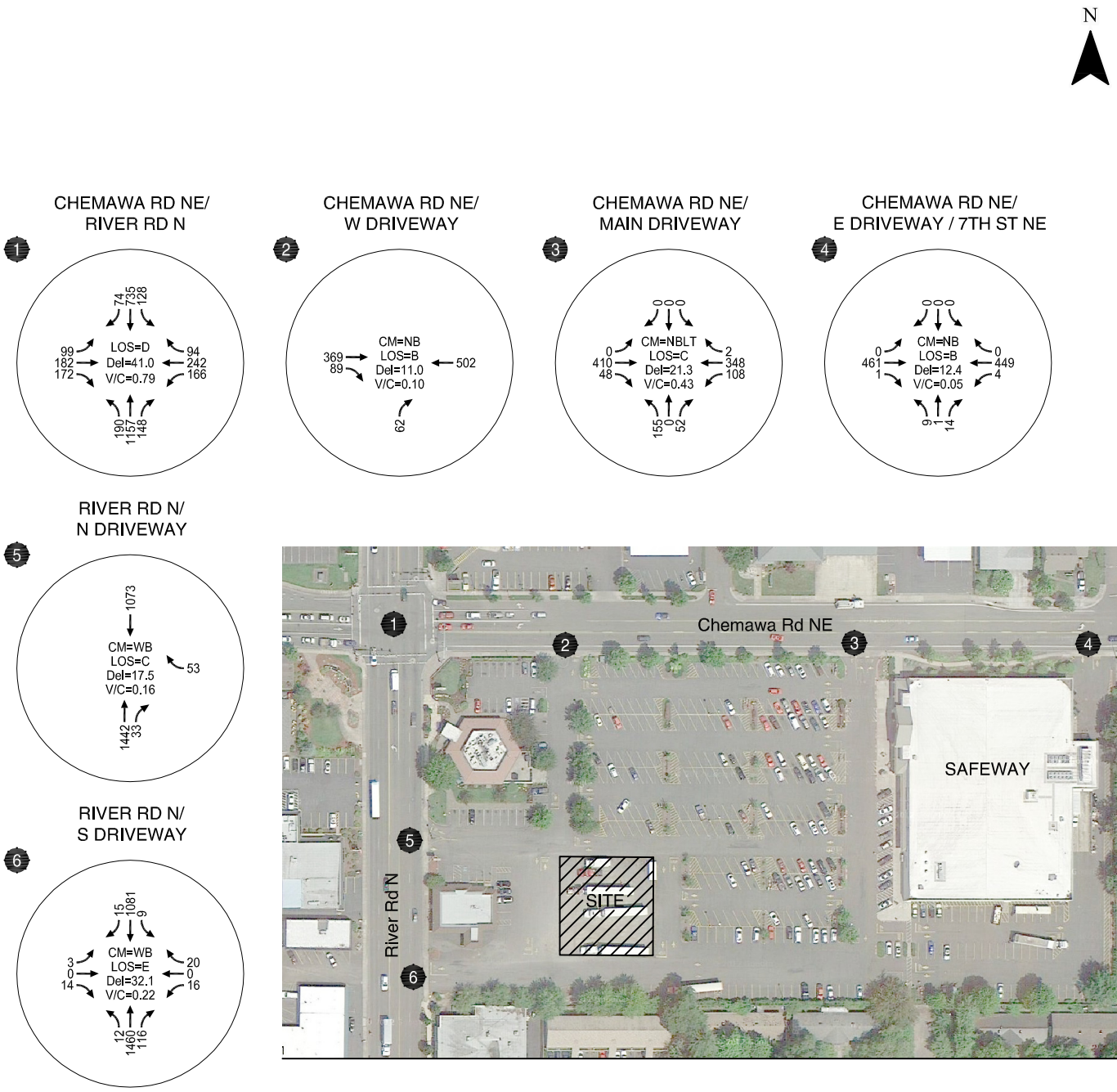
LOS = CRITICAL MOVEMENT LEVEL OF SERVICE (SIGNALIZED)/CRITICAL MOVEMENT LEVEL OF SERVICE (UNSIGNALIZED)
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED)/CRITICAL MOVEMENT CONTROL DELAY (UNSIGNALIZED)
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO

Year 2019 Total Traffic Conditions
Weekday AM Peak Hour
Keizer, Oregon

Figure
8



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

Year 2019 Total Traffic Conditions
Weekday PM Peak Hour
Keizer, Oregon

Figure 9

All of the study intersections are projected to continue operating acceptably during the weekday AM and PM peak hours, as shown in Figure 8 and Figure 9, respectively.

Queuing Analysis

Projected queue lengths were reviewed at the signalized Chemawa Road NE/River Road N intersection and their impact to site driveway access and operations was considered. Figure 10 illustrates the existing 95th-percentile queue lengths, and Figure 11 illustrates the estimated 95th percentile queue lengths under 2019 total traffic conditions, rounded to the nearest 25 feet, relative to the location of the site driveways. The figures show the left-turn and through-movement queues on the northbound and westbound approaches of the Chemawa Road NE/River Road N intersection.

As shown, the existing and projected westbound queues for the 2019 total traffic conditions extend beyond the west driveway on Chemawa Road NE during the weekday AM peak hour, and the northbound queues extend beyond the both driveways on River Road N and west driveway on Chemawa Road NE during the weekday PM peak hour.

Field observations confirmed that the River Road N driveways are routinely blocked by northbound queues under existing peak hour conditions. Drivers exiting the site to turn left onto River Road N were observed to routinely wait for northbound queues on River Road N to clear and many drivers were observed to use the center left-turn lane on River Road N to complete their turns. The proposed fuel center will result in additional vehicles entering and leaving the site, resulting in an incremental increase in delay and on-site queuing. We also reviewed projected future on-site 95th percentile queues at each of the site driveways, as shown in Table 2.

Table 2: Year 2019 Site Driveway Projected 95th Percentile Queues

ID	Intersection	Movement	95th Percentile Queue (feet)		
			AM Peak Hour	PM Peak Hour	Available Storage
2	Chemawa Road NE West Site Access	Northbound right	25	25	25[1]
3	Chemawa Road NE Center Access	Northbound left	25	75	25[1]
		Northbound right	25	25	25[1]
4	Chemawa Road NE East (Loading) Access	Northbound left/right	25	25	50
5	River Road N North Access	Westbound right	25	25	50[2]
6	River Road N South Access	Westbound left/right	25	25	15[2]

[1] Distance shown to first internal drive aisle, additional storage available on-site
[2] Distance shown to first parking stall on-site, additional storage available on-site

As shown in Table 2, queues departing the main (center) site driveway on Chemawa Drive NE are expected to continue to back past the first internal parking lot drive aisle, especially during the

N

AM PEAK HOUR

PM PEAK HOUR

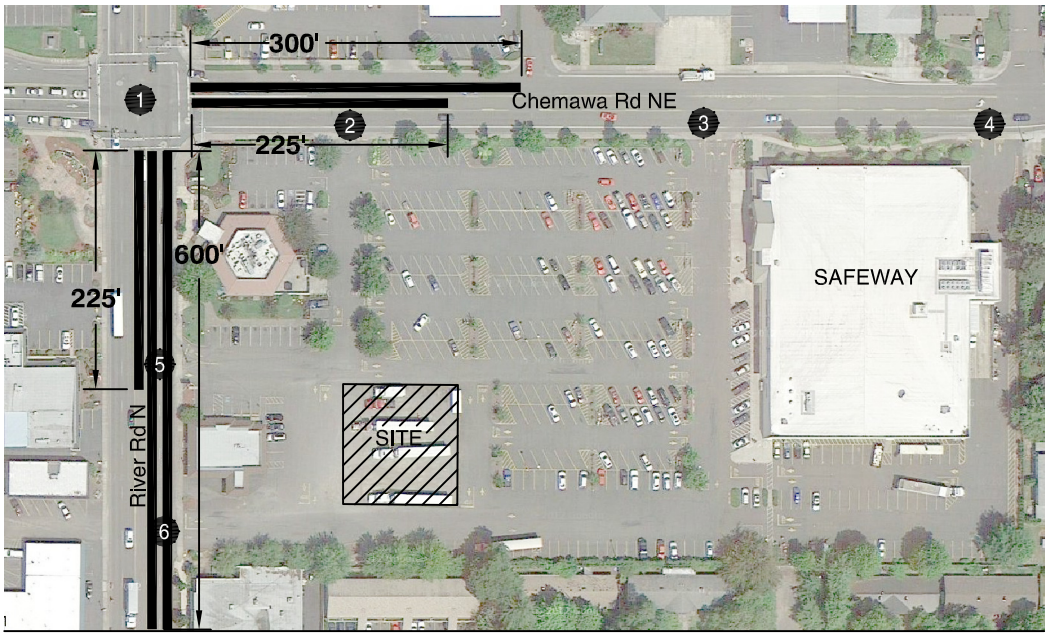
Existing Traffic 95th-percentile Queues
Weekday AM and PM Peak Hours
Keizer, Oregon

Figure
10

N

AM PEAK HOUR

PM PEAK HOUR



Year 2019 Total Traffic 95th-percentile Queues
Weekday AM and PM Peak Hours
Keizer, Oregon

Figure
11

K:\H_Portland\proj\file\21098 - Keizer Safeway Fuel\dwgs\figs\21098_Fig1.dwg Feb 27, 2017 - 1:16pm - zbugg Layout Tab: Fig11

weekday PM peak hour. The queuing results in congestion at the site driveway that can delay inbound vehicle turns and complicate on-site circulation. As a result, changes are recommended at the driveway to address queuing and other operational considerations described later in this report.

CRASH DATA REVIEW

The crash history of the signalized Chemawa Road NE/River Road N intersection and the site driveways was reviewed in an effort to identify potential intersection safety issues. Collision records were obtained from the Oregon Department of Transportation (ODOT) for the most recent five-year period from January 2010 through December 2014. A summary of the collision data is provided in Table 3.

Table 3: Crash Data Summary, January 1, 2010 to December 31, 2014

Intersection	Crash Severity		Crash Type					Total Crashes
	Injury	PDO*	Rear End	Turning	Angle	Sideswipe	Pedestrian	
Chemawa Road NE/River Road N	13	11	17	5	0	1	1	24
Chemawa Road NE/West Safeway Driveway	1	1	1	1	0	0	0	2
Chemawa Road NE/Center Safeway Driveway	1	5	1	5	0	0	0	6
Chemawa Road NE/East Safeway Driveway	0	0	0	0	0	0	0	0
River Road N/North Safeway Driveway	0	1	0	1	0	0	0	1
River Road N/South Safeway Driveway	0	1	0	0	1	0	0	1

*Property Damage Only

Crash Rate expressed per million entering vehicles

Per the ODOT crash reports, none of the reported driveway collisions appeared to be related to illegal left turns into or out of the site driveways with restricted turn movements. Four of the six crashes that occurred at the central (full access) driveway on Chemawa Road NE occurred when a car pulled out of the driveway in front of a car going eastbound or westbound on Chemawa Road NE.

Critical Crash Rate

Critical crash rates were calculated for each of the study intersections following the analysis methodology presented in ODOT's *SPR 667 Assessment of Statewide Intersection Safety Performance* (Reference 4). SPR 667 provided average crash rates at a variety of intersection configurations in Oregon based on the number of approaches and traffic control types. The average crash rate represents the approximate number of crashes that are "expected" at a study intersection. This average crash rate is used to calculate the critical crash rate for each study intersection, based on the *Highway Safety Manual* methodology (Reference 5). The critical crash rate serves as a threshold for further analysis.

Table 4 summarizes the critical crash rate for each intersection and compares those values to the observed crash rate.

Table 4: Intersection Crash Rate Assessment

Location	Total Crashes	Critical Crash Rate by Intersection	Critical Crash Rate by Volume	Observed Crash Rate at Intersection	Observed Crash Rate>Critical Crash Rate[1]?
Chemawa Road NE/River Road N	24	0.49	0.41	0.41	No
Chemawa Road NE/West Safeway Driveway	2	0.16	0.23	0.12	No
Chemawa Road NE/Center Safeway Driveway	6	0.22	0.23	0.31	**Yes**
Chemawa Road NE/East Safeway Driveway	0	0.16	0.24	0.00	No
River Road N/North Safeway Driveway	2	0.14	0.41	0.02	No
River Road N/South Safeway Driveway	1	0.21	0.41	0.02	No

[1]Critical crash rate by intersection type or volume

Crash Rates expressed per million entering vehicles

As shown in Table 4, the observed crash rate at the center Safeway driveway on Chemawa Road NE exceeds the critical crash rate and suggests that additional review is appropriate. Potential improvements at the Safeway driveway identified through this subsequent review are discussed in the next section. Attachment C includes the crash data from ODOT.

SITE DRIVEWAY IMPROVEMENTS

Several potential driveway modifications have been identified based on the driveway capacity and queuing analysis described above and field observations made in February 2017. Based on our review, we recommend the improvements described below be made at the existing site driveways in conjunction with the proposed fuel station development. Reconstruction of the driveways should be completed in a manner that incorporates special pavement or ornamental treatments furthering site compliance with the aspirations of the *Keizer River Road Renaissance Implementation Report*. Current pedestrian accessibility standards should also be met with the reconstructed driveways.

Chemawa Road NE Main Site Access

The existing main site driveway on Chemawa Road NE offers a relatively short queuing distance on-site before reaching the first internal parking drive aisle. As a result, two vehicles queued leaving the site can routinely block the drive aisle. This is shown in Photo 1. Further, the main store entry door is located relatively close to Chemawa Road NE and results in pedestrians crossing the main drive aisle relatively close to Chemawa Road NE. There is also a vertical drop at the driveway entry that causes a bump that drivers slow for when entering. With the “bump” and a narrow inbound travel lane, drivers routinely make slow turning maneuvers to and from the entry.

Photo 1. Chemawa Road NE Main Drive Aisle Facing into Safeway Site

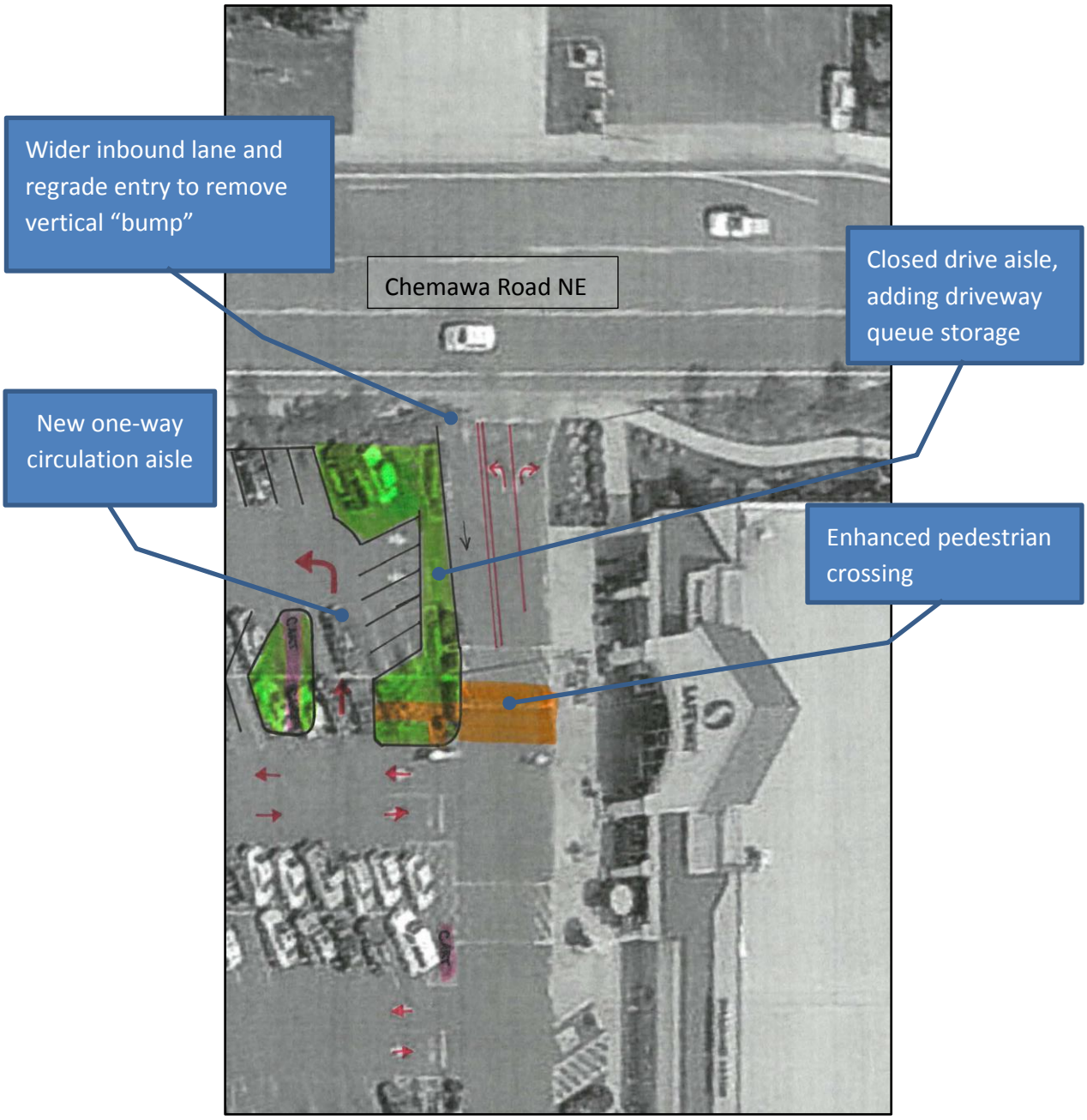
Given the above considerations, we recommend widening and reconstructing the main site access on Chemawa Road NE to:

- Regrade the driveway to reduce the "bump" entering the driveway;
- Restrict turn movements to the existing on-site northern-most east-west parking aisle closest to the site entry (improving operations at the main access);
- Add width to the inbound travel lane to improve the ingress movement;
- Add vehicle storage to the left- and right-turn lanes leaving the site;
- Reconstruct the pedestrian crossing and ramps; and
- Improve pedestrian circulation at both the driveway and in the paved area connecting the parking lot with the store entry.

Improving the main site access is expected to result in improved driveway operations and may result in fewer westbound left-turns at the right-in/right-out site driveway on Chemawa Road NE.

Exhibit 1 illustrates the driveway widening and reconstruction concept.

Exhibit 1. Chemawa Road Widening and Reconfiguration Concept



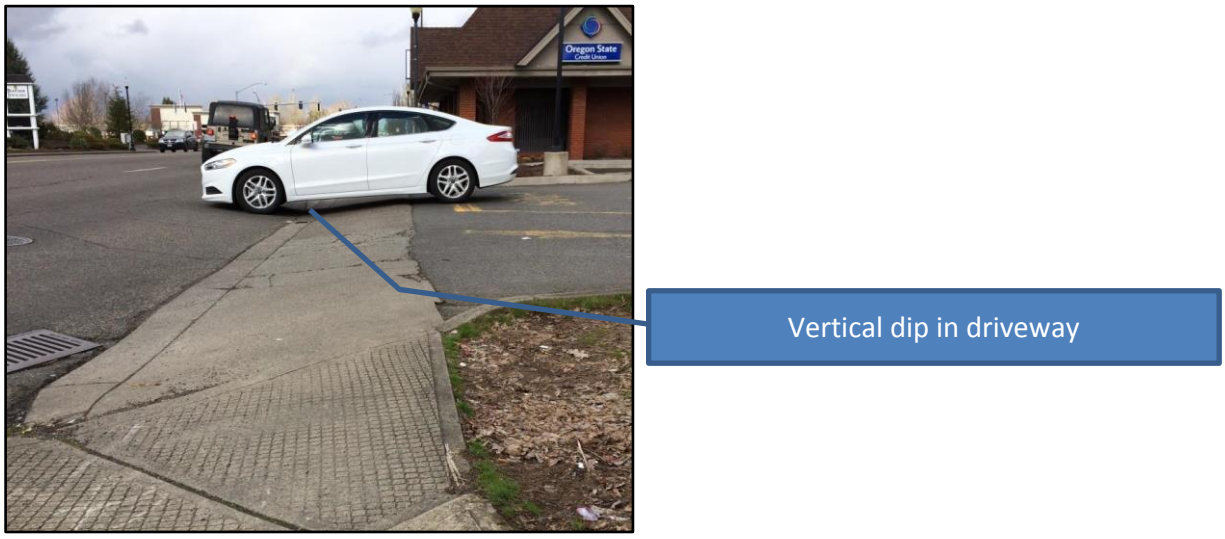
River Road N North Site Access

As previously described, some drivers were observed to complete southbound left-turns into the River Road N north site access. This access driveway is shared with other tenants on the site and the southbound left-turn drivers were not necessarily traveling to Safeway. Given the anticipated increase in site trip generation, we recommend reconstructing and resigning the driveway to better communicate to drivers that left-turns are not allowed. A new raised island could be provided at the intersection along with new no left-turn/right-turn only signage. The reconstructed driveway should provide appropriate pedestrian accessibility.

River Road N South Site Access

The existing southern site driveway is shared also with other tenants on the site and currently has a vertical drop at the driveway entry (some vehicles scrape the pavement) as shown in Photo 2. The vertical dip causes both entering and exiting drivers to slow and the driveway design is not desirable for pedestrian crossing/accessibility. We recommend the driveway approach be reconstructed to reduce the vertical dip and to provide appropriate pedestrian accessibility.

Photo 2. Vehicle Departing Southern Site Access (facing north along River Road N)



INTERSECTION SIGHT DISTANCE

It is recommended that above-ground utilities, monuments, fencing, and vegetation be appropriately located and maintained to preserve adequate intersection sight lines at the site driveways and at new internal site intersections.

SUMMARY

Based on our analysis, the Chemawa Road NE/River Road N intersection and the site driveways are expected to continue to satisfy City of Keizer intersection operating standards after construction of the proposed Safety Fuel Center.

Based on the analysis and findings presented in this report, we recommend the following improvements be provided in conjunction with development of the proposed Safeway Fuel Center.

- Widen and reconstruct the main site access to improve driveway operations and reduce the potential for westbound left-turns at the west (right-in/right-out) site driveway on Chemawa Road NE. These improvements would include:
  - Regrading the driveway to reduce the vertical dip that results in a "bump" entering the driveway;
  - Restrict turn movements to the existing on-site parking aisle closest to the site entry (improving operations at the main access);
  - Add width to the inbound travel lane to improve the ingress movement;
  - Add vehicle storage to the left- and right-turn lanes leaving the site;
  - Reconstruct the pedestrian crossing and ramps; and
  - Improve pedestrian circulation at both the driveway and in the paved area connecting the parking lot with the store entry.
- Reconstruct the north right-in/right-out driveway on River Road N to:
  - Provide an improved raised median design and new signage to better restrict left turns into and out of the access;
  - Improve the pedestrian crossing of the driveway; and
  - Reduce the vertical dip that results in a "bump" entering the driveway.
- Reconstruct the southern site driveway on River Road N to:
  - Improve the pedestrian crossing of the driveway; and
  - Reduce the vertical dip that results in a "bump" entering the driveway.

To the extent practical, we recommend reconstruction of each driveway be completed in a manner that incorporates special pavement or ornamental treatments furthering site compliance with the aspirations of the *Keizer River Road Renaissance Implementation Report*.

- It is further recommended that above-ground utilities, monuments, fencing, and vegetation be appropriately located and maintained to preserve adequate intersection sight lines at the site driveways and at new internal site intersections.

We trust this letter adequately assesses the transportation impacts associated with the proposed Keizer Safeway Fuel Center. Please contact us if you have any questions or comments regarding the contents of this letter or of the analysis completed.

Sincerely,
KITTELSON & ASSOCIATES, INC.

Chris Brehmer, P.E.
Principal Engineer

Zachary Bugg
Engineer

REFERENCES

1. Institute of Transportation Engineers. *Trip Generation, Ninth Edition*. 2012.
2. Transportation Research Board 2000. *Highway Capacity Manual*. 2000.
3. City of Keizer. *Transportation System Plan*. 2007.
4. Oregon Department of Transportation*. SPR 667 Assessment of Statewide Intersection Safety Performance.* June 2011.
5. American Association of State Highway and Transportation Officials. *Highway Safety Manual.* 2010.

ATTACHMENTS

Attachment A: Traffic Analysis Worksheets

Attachment B: Turning Movement Counts

Attachment C: Crash Data

Attachment A Traffic Analysis Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	86	245	271	118	117	50	126	421	74	63	999	39
Future Volume (vph)	86	245	271	118	117	50	126	421	74	63	999	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5		4.0	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.97	1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1845	1537	1752	1845	1508	1736	3271		1752	3482	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1719	1845	1537	1752	1845	1508	1736	3271		1752	3482	
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)	96	272	301	131	130	56	140	468	82	70	1110	43
RTOR Reduction (vph)	0	0	243	0	0	45	0	9	0	0	2	0
Lane Group Flow (vph)	96	272	58	131	130	11	140	541	0	70	1151	0
Confl. Peds. (#/hr)	8		14	14		8	2		6	6		2
Confl. Bikes (#/hr)						2			1			
Heavy Vehicles (%)	5%	3%	1%	3%	3%	4%	4%	8%	3%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	10.2	22.0	22.0	12.7	24.5	24.5	13.4	71.9		6.9	65.4	
Effective Green, g (s)	10.2	22.0	22.0	12.7	24.5	24.5	13.4	71.9		6.9	65.4	
Actuated g/C Ratio	0.08	0.17	0.17	0.10	0.19	0.19	0.10	0.55		0.05	0.50	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5		4.0	4.5	
Vehicle Extension (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	
Lane Grp Cap (vph)	134	312	260	171	347	284	178	1809		92	1751	
v/s Ratio Prot	0.06	c0.15		c0.07	0.07		c0.08	0.17		0.04	c0.33	
v/s Ratio Perm			0.04			0.01						
v/c Ratio	0.72	0.87	0.22	0.77	0.37	0.04	0.79	0.30		0.76	0.66	
Uniform Delay, d1	58.5	52.6	46.6	57.2	46.1	43.1	56.9	15.6		60.7	24.0	
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	14.1	21.8	0.2	16.7	0.2	0.0	18.7	0.4		27.7	1.9	
Delay (s)	72.5	74.4	46.8	73.9	46.3	43.1	75.6	16.0		88.5	25.9	
Level of Service	E	E	D	E	D	D	E	B		F	C	
Approach Delay (s)		61.7			57.1			28.1			29.5	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	39.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	70.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	352	30	0	285	0	5
Future Volume (Veh/h)	352	30	0	285	0	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	391	33	0	317	0	6
Pedestrians					9	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					1	
Right turn flare (veh)						
Median type	None			TWLTL		
Median storage veh)				2		
Upstream signal (ft)	216					
pX, platoon unblocked			0.86		0.86	0.86
vC, conflicting volume			433		734	416
vC1, stage 1 conf vol					416	
vC2, stage 2 conf vol					317	
vCu, unblocked vol			254		605	235
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			1124		592	688

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	424	317	6
Volume Left	0	0	0
Volume Right	33	0	6
cSH	1700	1700	688
Volume to Capacity	0.25	0.19	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.0	10.3
Lane LOS			B
Approach Delay (s)	0.0	0.0	10.3
Approach LOS			B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	30.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	334	29	22	257	1	42	0	33	0	0	3
Future Volume (Veh/h)	0	334	29	22	257	1	42	0	33	0	0	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	380	33	25	292	1	48	0	38	0	0	3
Pedestrians								6			7	
Lane Width (ft)								12.0			16.0	
Walking Speed (ft/s)								4.0			4.0	
Percent Blockage								1			1	
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		603										
pX, platoon unblocked				0.86			0.86	0.86	0.86	0.86	0.86	
vC, conflicting volume	300			419			748	752	402	768	768	300
vC1, stage 1 conf vol							402	402		350	350	
vC2, stage 2 conf vol							345	350		418	419	
vCu, unblocked vol	300			250			630	635	231	653	654	300
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	7.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	4.2
p0 queue free %	100			98			91	100	95	100	100	99
cM capacity (veh/h)	1263			1142			539	510	700	503	494	554

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	0	413	25	293	48	38	3
Volume Left	0	0	25	0	48	0	0
Volume Right	0	33	0	1	0	38	3
cSH	1700	1700	1142	1700	539	700	554
Volume to Capacity	0.00	0.24	0.02	0.17	0.09	0.05	0.01
Queue Length 95th (ft)	0	0	2	0	7	4	0
Control Delay (s)	0.0	0.0	8.2	0.0	12.3	10.4	11.5
Lane LOS			A		B	B	B
Approach Delay (s)	0.0		0.6		11.5		11.5
Approach LOS					B		B

Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	36.1%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	365	2	3	279	0	1	0	3	0	1	0
Future Volume (Veh/h)	0	365	2	3	279	0	1	0	3	0	1	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	415	2	3	317	0	1	0	3	0	1	0
Pedestrians					6			6				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					1			1				
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		915										
pX, platoon unblocked				0.88			0.88	0.88	0.88	0.88	0.88	
vC, conflicting volume	317			423			746	745	428	747	746	317
vC1, stage 1 conf vol							422	422		323	323	
vC2, stage 2 conf vol							324	323		424	423	
vCu, unblocked vol	317			280			646	645	286	647	646	317
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1255			1137			542	518	662	539	516	728

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	0	417	3	317	4	1
Volume Left	0	0	3	0	1	0
Volume Right	0	2	0	0	3	0
cSH	1700	1700	1137	1700	628	516
Volume to Capacity	0.00	0.25	0.00	0.19	0.01	0.00
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	8.2	0.0	10.8	12.0
Lane LOS			A		B	B
Approach Delay (s)	0.0		0.1		10.8	12.0
Approach LOS					B	B

Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	31.1%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	6	615	8	1	1387
Future Volume (Veh/h)	0	6	615	8	1	1387
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	7	683	9	1	1541
Pedestrians	2					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (ft)						202
pX, platoon unblocked	0.75					
vC, conflicting volume	1462	348			694	
vC1, stage 1 conf vol	690					
vC2, stage 2 conf vol	772					
vCu, unblocked vol	959	348			694	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	416	653			909	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	7	455	237	515	1027
Volume Left	0	0	0	1	0
Volume Right	7	0	9	0	0
cSH	653	1700	1700	909	1700
Volume to Capacity	0.01	0.27	0.14	0.00	0.60
Queue Length 95th (ft)	1	0	0	0	0
Control Delay (s)	10.6	0.0	0.0	0.0	0.0
Lane LOS	B			A	
Approach Delay (s)	10.6	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	42.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	1	45	9	0	1	18	608	22	2	1312	60
Future Volume (Veh/h)	15	1	45	9	0	1	18	608	22	2	1312	60
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	18	1	54	11	0	1	21	724	26	2	1562	71
Pedestrians		1			2						1	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		0			0						0	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)											315	
pX, platoon unblocked	0.75	0.75	0.75	0.75	0.75		0.75					
vC, conflicting volume	2008	2396	818	1620	2419	378	1634			752		
vC1, stage 1 conf vol	1602	1602		781	781							
vC2, stage 2 conf vol	406	794		840	1638							
vCu, unblocked vol	1684	2199	104	1170	2229	378	1188			752		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	88	99	92	96	100	100	95			100		
cM capacity (veh/h)	154	178	705	299	157	624	448			865		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	73	12	21	483	267	2	1041	592
Volume Left	18	11	21	0	0	2	0	0
Volume Right	54	1	0	0	26	0	0	71
cSH	366	312	448	1700	1700	865	1700	1700
Volume to Capacity	0.20	0.04	0.05	0.28	0.16	0.00	0.61	0.35
Queue Length 95th (ft)	18	3	4	0	0	0	0	0
Control Delay (s)	17.3	17.0	13.4	0.0	0.0	9.2	0.0	0.0
Lane LOS	C	C	B			A		
Approach Delay (s)	17.3	17.0	0.4			0.0		
Approach LOS	C	C						

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	48.5%	ICU Level of Service	A	
Analysis Period (min)	15			

Queues
1: River Road N & Chemawa Rd NE

02/24/2017

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	96	272	301	131	130	56	140	550	70	1153
v/c Ratio	0.72	0.87	0.60	0.77	0.37	0.15	0.78	0.30	0.68	0.66
Control Delay	85.2	79.0	11.1	84.1	48.6	0.8	84.1	17.0	90.3	28.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.2	79.0	11.1	84.1	48.6	0.8	84.1	17.0	90.3	28.5
Queue Length 50th (ft)	80	222	6	109	95	0	117	127	59	380
Queue Length 95th (ft)	136	#367	91	172	158	0	181	187	109	541
Internal Link Dist (ft)		397			136			122		318
Turn Bay Length (ft)	300			200			100		180	
Base Capacity (vph)	257	333	517	262	359	384	267	1839	134	1751
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.82	0.58	0.50	0.36	0.15	0.52	0.30	0.52	0.66

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
1: River Road N & Chemawa Rd NE

02/24/2017

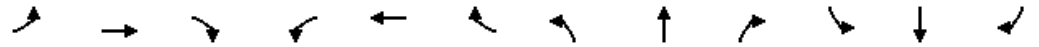
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	166	165	158	223	87	182	1110	139	117	707	71
Future Volume (vph)	95	166	165	158	223	87	182	1110	139	117	707	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5		4.0	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	1863	1528	1805	1900	1572	1770	3500		1805	3475	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1787	1863	1528	1805	1900	1572	1770	3500		1805	3475	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	98	171	170	163	230	90	188	1144	143	121	729	73
RTOR Reduction (vph)	0	0	151	0	0	77	0	6	0	0	4	0
Lane Group Flow (vph)	98	171	19	163	230	13	188	1281	0	121	798	0
Confl. Peds. (#/hr)	8		17	17		8	6		5	5		6
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	1%	2%	1%	0%	0%	0%	2%	1%	1%	0%	2%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	10.1	14.7	14.7	14.2	18.8	18.8	16.9	73.3		11.3	67.7	
Effective Green, g (s)	10.1	14.7	14.7	14.2	18.8	18.8	16.9	73.3		11.3	67.7	
Actuated g/C Ratio	0.08	0.11	0.11	0.11	0.14	0.14	0.13	0.56		0.09	0.52	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5		4.0	4.5	
Vehicle Extension (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	
Lane Grp Cap (vph)	138	210	172	197	274	227	230	1973		156	1809	
v/s Ratio Prot	0.05	0.09		c0.09	c0.12		c0.11	c0.37		0.07	0.23	
v/s Ratio Perm			0.01			0.01						
v/c Ratio	0.71	0.81	0.11	0.83	0.84	0.06	0.82	0.65		0.78	0.44	
Uniform Delay, d1	58.5	56.3	51.8	56.7	54.1	48.0	55.0	19.5		58.1	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	13.3	20.0	0.1	22.9	18.9	0.0	18.8	1.7		19.4	0.8	
Delay (s)	71.9	76.3	51.9	79.6	73.0	48.0	73.8	21.2		77.5	20.2	
Level of Service	E	E	D	E	E	D	E	C		E	C	
Approach Delay (s)		65.8			70.6			27.9			27.7	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	39.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	345	77	4	465	3	54
Future Volume (Veh/h)	345	77	4	465	3	54
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	356	79	4	479	3	56
Pedestrians					8	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					1	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	216					
pX, platoon unblocked			0.91		0.91	0.91
vC, conflicting volume			443		890	404
vC1, stage 1 conf vol					404	
vC2, stage 2 conf vol					487	
vCu, unblocked vol			340		831	297
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	92
cM capacity (veh/h)			1114		523	677

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	435	483	59
Volume Left	0	4	3
Volume Right	79	0	56
cSH	1700	1114	667
Volume to Capacity	0.26	0.00	0.09
Queue Length 95th (ft)	0	0	7
Control Delay (s)	0.0	0.1	10.9
Lane LOS		A	B
Approach Delay (s)	0.0	0.1	10.9
Approach LOS			B

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	383	46	95	337	2	138	0	48	0	0	0
Future Volume (Veh/h)	0	383	46	95	337	2	138	0	48	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	403	48	100	355	2	145	0	51	0	0	0
Pedestrians		3			3			2			3	
Lane Width (ft)		12.0			12.0			12.0			16.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		603										
pX, platoon unblocked				0.93			0.93	0.93	0.93	0.93	0.93	
vC, conflicting volume	360			453			987	989	432	1016	1012	362
vC1, stage 1 conf vol							429	429		559	559	
vC2, stage 2 conf vol							558	560		457	453	
vCu, unblocked vol	360			378			950	952	355	981	977	362
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			91			65	100	92	100	100	100
cM capacity (veh/h)	1206			1110			409	405	644	359	376	683

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	0	451	100	357	145	51	0
Volume Left	0	0	100	0	145	0	0
Volume Right	0	48	0	2	0	51	0
cSH	1700	1700	1110	1700	409	644	1700
Volume to Capacity	0.00	0.27	0.09	0.21	0.35	0.08	0.00
Queue Length 95th (ft)	0	0	7	0	39	6	0
Control Delay (s)	0.0	0.0	8.6	0.0	18.6	11.1	0.0
Lane LOS			A		C	B	A
Approach Delay (s)	0.0		1.9		16.6		0.0
Approach LOS					C		A

Intersection Summary				
Average Delay	3.7			
Intersection Capacity Utilization	51.7%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	430	1	4	425	0	9	1	13	0	0	0
Future Volume (Veh/h)	0	430	1	4	425	0	9	1	13	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	453	1	4	447	0	9	1	14	0	0	0
Pedestrians					9			9				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					1			1				
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		915										
pX, platoon unblocked				0.97			0.97	0.97	0.97	0.97	0.97	
vC, conflicting volume	447			463			918	918	472	932	918	447
vC1, stage 1 conf vol							462	462		455	455	
vC2, stage 2 conf vol							455	455		476	463	
vCu, unblocked vol	447			429			899	899	438	913	899	447
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			98	100	98	100	100	100
cM capacity (veh/h)	1124			1097			462	457	594	449	455	616

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	0	454	4	447	24	0
Volume Left	0	0	4	0	9	0
Volume Right	0	1	0	0	14	0
cSH	1700	1700	1097	1700	531	1700
Volume to Capacity	0.00	0.27	0.00	0.26	0.05	0.00
Queue Length 95th (ft)	0	0	0	0	4	0
Control Delay (s)	0.0	0.0	8.3	0.0	12.1	0.0
Lane LOS			A		B	A
Approach Delay (s)	0.0		0.1		12.1	0.0
Approach LOS					B	A

Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	35.3%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	38	1393	26	0	1030
Future Volume (Veh/h)	0	38	1393	26	0	1030
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	39	1436	27	0	1062
Pedestrians	11					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (ft)						202
pX, platoon unblocked	0.86					
vC, conflicting volume	1992	742			1474	
vC1, stage 1 conf vol	1460					
vC2, stage 2 conf vol	531					
vCu, unblocked vol	1827	742			1474	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	89			100	
cM capacity (veh/h)	174	359			459	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	39	957	506	531	531
Volume Left	0	0	0	0	0
Volume Right	39	0	27	0	0
cSH	359	1700	1700	1700	1700
Volume to Capacity	0.11	0.56	0.30	0.31	0.31
Queue Length 95th (ft)	9	0	0	0	0
Control Delay (s)	16.2	0.0	0.0	0.0	0.0
Lane LOS	C				
Approach Delay (s)	16.2	0.0		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	49.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	0	13	12	0	14	12	1411	97	6	1040	14
Future Volume (Veh/h)	3	0	13	12	0	14	12	1411	97	6	1040	14
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	3	0	13	12	0	14	12	1455	100	6	1072	14
Pedestrians		7			8			2				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		1			1			0				
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)											315	
pX, platoon unblocked	0.86	0.86	0.86	0.86	0.86		0.86					
vC, conflicting volume	1864	2685	552	2100	2642	786	1093			1563		
vC1, stage 1 conf vol	1098	1098		1537	1537							
vC2, stage 2 conf vol	766	1587		563	1105							
vCu, unblocked vol	1682	2635	160	1956	2585	786	788			1563		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	7.0	4.1			4.4		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.4	2.2			2.4		
p0 queue free %	99	100	98	90	100	96	98			98		
cM capacity (veh/h)	221	140	738	116	149	323	720			351		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	16	26	12	970	585	6	715	371
Volume Left	3	12	12	0	0	6	0	0
Volume Right	13	14	0	0	100	0	0	14
cSH	514	177	720	1700	1700	351	1700	1700
Volume to Capacity	0.03	0.15	0.02	0.57	0.34	0.02	0.42	0.22
Queue Length 95th (ft)	2	13	1	0	0	1	0	0
Control Delay (s)	12.2	28.7	10.1	0.0	0.0	15.4	0.0	0.0
Lane LOS	B	D	B			C		
Approach Delay (s)	12.2	28.7	0.1			0.1		
Approach LOS	B	D						

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	52.8%	ICU Level of Service	A	
Analysis Period (min)	15			

Queues
1: River Road N & Chemawa Rd NE

02/24/2017

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	98	171	170	163	230	90	188	1287	121	802
v/c Ratio	0.71	0.81	0.53	0.83	0.84	0.28	0.82	0.65	0.78	0.44
Control Delay	84.6	83.9	13.3	87.4	78.5	6.5	81.0	23.3	88.4	22.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.6	83.9	13.3	87.4	78.5	6.5	81.0	23.3	88.4	22.4
Queue Length 50th (ft)	82	143	0	136	190	0	156	381	101	214
Queue Length 95th (ft)	139	215	65	210	273	30	228	565	165	340
Internal Link Dist (ft)		397			136			122		318
Turn Bay Length (ft)	300			100			50		180	
Base Capacity (vph)	213	286	378	256	338	372	408	1980	208	1813
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.60	0.45	0.64	0.68	0.24	0.46	0.65	0.58	0.44

Intersection Summary

HCM Signalized Intersection Capacity Analysis
1: River Road N & Chemawa Rd NE

02/24/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	257	282	127	126	54	131	438	77	66	1039	41
Future Volume (vph)	89	257	282	127	126	54	131	438	77	66	1039	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.97	1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1845	1537	1752	1845	1508	1736	3271		1752	3481	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1719	1845	1537	1752	1845	1508	1736	3271		1752	3481	
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)	99	286	313	141	140	60	146	487	86	73	1154	46
RTOR Reduction (vph)	0	0	234	0	0	48	0	10	0	0	2	0
Lane Group Flow (vph)	99	286	79	141	140	12	146	563	0	73	1198	0
Confl. Peds. (#/hr)	8		14	14		8	2		6	6		2
Confl. Bikes (#/hr)						2			1			
Heavy Vehicles (%)	5%	3%	1%	3%	3%	4%	4%	8%	3%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	10.4	22.8	22.8	13.4	25.8	25.8	13.9	70.3		7.0	63.4	
Effective Green, g (s)	10.4	22.8	22.8	13.4	25.8	25.8	13.9	70.8		7.0	63.9	
Actuated g/C Ratio	0.08	0.18	0.18	0.10	0.20	0.20	0.11	0.54		0.05	0.49	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5		4.0	4.5	
Vehicle Extension (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	
Lane Grp Cap (vph)	137	323	269	180	366	299	185	1781		94	1711	
v/s Ratio Prot	0.06	c0.16		c0.08	c0.08		c0.08	0.17		0.04	c0.34	
v/s Ratio Perm			0.05			0.01						
v/c Ratio	0.72	0.89	0.29	0.78	0.38	0.04	0.79	0.32		0.78	0.70	
Uniform Delay, d1	58.4	52.3	46.6	56.9	45.2	42.1	56.6	16.3		60.7	25.6	
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	14.7	23.3	0.2	18.3	0.2	0.0	18.3	0.5		29.8	2.4	
Delay (s)	73.1	75.6	46.8	75.2	45.4	42.1	74.9	16.8		90.5	28.0	
Level of Service	E	E	D	E	D	D	E	B		F	C	
Approach Delay (s)		62.3			57.1			28.6			31.6	
Approach LOS		E			E			C			C	

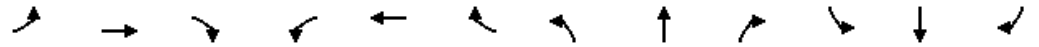
Intersection Summary			
HCM 2000 Control Delay	40.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	370	30	0	307	0	5
Future Volume (Veh/h)	370	30	0	307	0	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	411	33	0	341	0	6
Pedestrians					9	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					1	
Right turn flare (veh)						
Median type	None			TWLTL		
Median storage veh)				2		
Upstream signal (ft)	216					
pX, platoon unblocked			0.85		0.85	0.85
vC, conflicting volume			453		778	436
vC1, stage 1 conf vol					436	
vC2, stage 2 conf vol					341	
vCu, unblocked vol			267		649	247
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			1103		573	671

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	444	341	6
Volume Left	0	0	0
Volume Right	33	0	6
cSH	1700	1700	671
Volume to Capacity	0.26	0.20	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.0	10.4
Lane LOS			B
Approach Delay (s)	0.0	0.0	10.4
Approach LOS			B

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	31.4%	ICU Level of Service	A
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	349	29	22	277	1	42	0	33	0	0	3
Future Volume (Veh/h)	0	349	29	22	277	1	42	0	33	0	0	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	397	33	25	315	1	48	0	38	0	0	3
Pedestrians								6			7	
Lane Width (ft)								12.0			16.0	
Walking Speed (ft/s)								4.0			4.0	
Percent Blockage								1			1	
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		603										
pX, platoon unblocked				0.86			0.86	0.86	0.86	0.86	0.86	
vC, conflicting volume	323			436			788	792	420	808	808	322
vC1, stage 1 conf vol							420	420		372	372	
vC2, stage 2 conf vol							368	373		435	436	
vCu, unblocked vol	323			258			668	674	238	691	693	322
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	7.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	4.2
p0 queue free %	100			98			91	100	94	100	100	99
cM capacity (veh/h)	1238			1124			521	496	686	486	480	535

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	0	430	25	316	48	38	3
Volume Left	0	0	25	0	48	0	0
Volume Right	0	33	0	1	0	38	3
cSH	1700	1700	1124	1700	521	686	535
Volume to Capacity	0.00	0.25	0.02	0.19	0.09	0.06	0.01
Queue Length 95th (ft)	0	0	2	0	8	4	0
Control Delay (s)	0.0	0.0	8.3	0.0	12.6	10.6	11.8
Lane LOS			A		B	B	B
Approach Delay (s)	0.0		0.6		11.7		11.8
Approach LOS					B		B

Intersection Summary				
Average Delay	1.5			
Intersection Capacity Utilization	36.8%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	380	2	3	299	0	1	0	3	0	1	0
Future Volume (Veh/h)	0	380	2	3	299	0	1	0	3	0	1	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	432	2	3	340	0	1	0	3	0	1	0
Pedestrians					6			6				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					1			1				
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		915										
pX, platoon unblocked				0.87			0.87	0.87	0.87	0.87	0.87	
vC, conflicting volume	340			440			786	785	445	787	786	340
vC1, stage 1 conf vol							439	439		346	346	
vC2, stage 2 conf vol							346	346		441	440	
vCu, unblocked vol	340			287			683	682	293	684	683	340
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	100	100	100	100
cM capacity (veh/h)	1230			1119			525	504	650	522	502	707

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	0	434	3	340	4	1
Volume Left	0	0	3	0	1	0
Volume Right	0	2	0	0	3	0
cSH	1700	1700	1119	1700	614	502
Volume to Capacity	0.00	0.26	0.00	0.20	0.01	0.00
Queue Length 95th (ft)	0	0	0	0	0	0
Control Delay (s)	0.0	0.0	8.2	0.0	10.9	12.2
Lane LOS			A		B	B
Approach Delay (s)	0.0		0.1		10.9	12.2
Approach LOS					B	B

Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	31.9%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	6	640	8	1	1447
Future Volume (Veh/h)	0	6	640	8	1	1447
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	7	711	9	1	1608
Pedestrians	2					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (ft)						202
pX, platoon unblocked	0.73					
vC, conflicting volume	1524	362			722	
vC1, stage 1 conf vol	718					
vC2, stage 2 conf vol	806					
vCu, unblocked vol	983	362			722	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	99			100	
cM capacity (veh/h)	404	639			888	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	7	474	246	537	1072
Volume Left	0	0	0	1	0
Volume Right	7	0	9	0	0
cSH	639	1700	1700	888	1700
Volume to Capacity	0.01	0.28	0.14	0.00	0.63
Queue Length 95th (ft)	1	0	0	0	0
Control Delay (s)	10.7	0.0	0.0	0.0	0.0
Lane LOS	B			A	
Approach Delay (s)	10.7	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.0		
Intersection Capacity Utilization	44.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	1	47	9	0	1	19	632	22	2	1368	62
Future Volume (Veh/h)	16	1	47	9	0	1	19	632	22	2	1368	62
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	19	1	56	11	0	1	23	752	26	2	1629	74
Pedestrians		1			2						1	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		0			0						0	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)											315	
pX, platoon unblocked	0.73	0.73	0.73	0.73	0.73		0.73					
vC, conflicting volume	2095	2497	852	1688	2521	392	1704			780		
vC1, stage 1 conf vol	1671	1671		813	813							
vC2, stage 2 conf vol	424	826		875	1708							
vCu, unblocked vol	1763	2313	65	1207	2345	392	1229			780		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	87	99	92	96	100	100	95			100		
cM capacity (veh/h)	141	166	725	286	143	611	420			845		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	76	12	23	501	277	2	1086	617
Volume Left	19	11	23	0	0	2	0	0
Volume Right	56	1	0	0	26	0	0	74
cSH	349	299	420	1700	1700	845	1700	1700
Volume to Capacity	0.22	0.04	0.05	0.29	0.16	0.00	0.64	0.36
Queue Length 95th (ft)	20	3	4	0	0	0	0	0
Control Delay (s)	18.2	17.5	14.1	0.0	0.0	9.3	0.0	0.0
Lane LOS	C	C	B			A		
Approach Delay (s)	18.2	17.5	0.4			0.0		
Approach LOS	C	C						

Intersection Summary				
Average Delay	0.7			
Intersection Capacity Utilization	50.1%	ICU Level of Service	A	
Analysis Period (min)	15			

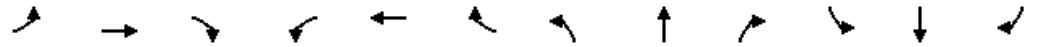
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	176	172	166	234	90	189	1154	148	124	735	74
Future Volume (vph)	99	176	172	166	234	90	189	1154	148	124	735	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5		4.0	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	1863	1528	1805	1900	1572	1770	3499		1805	3475	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1787	1863	1528	1805	1900	1572	1770	3499		1805	3475	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	102	181	177	171	241	93	195	1190	153	128	758	76
RTOR Reduction (vph)	0	0	156	0	0	79	0	6	0	0	4	0
Lane Group Flow (vph)	102	181	21	171	241	14	195	1337	0	128	830	0
Confl. Peds. (#/hr)	8		17	17		8	6		5	5		6
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	1%	2%	1%	0%	0%	0%	2%	1%	1%	0%	2%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	10.4	15.2	15.2	14.7	19.5	19.5	17.4	72.0		11.6	66.2	
Effective Green, g (s)	10.4	15.2	15.2	14.7	19.5	19.5	17.4	72.0		11.6	66.2	
Actuated g/C Ratio	0.08	0.12	0.12	0.11	0.15	0.15	0.13	0.55		0.09	0.51	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5		4.0	4.5	
Vehicle Extension (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	
Lane Grp Cap (vph)	142	217	178	204	285	235	236	1937		161	1769	
v/s Ratio Prot	0.06	0.10		c0.09	c0.13		c0.11	c0.38		0.07	0.24	
v/s Ratio Perm			0.01			0.01						
v/c Ratio	0.72	0.83	0.12	0.84	0.85	0.06	0.83	0.69		0.80	0.47	
Uniform Delay, d1	58.4	56.2	51.4	56.5	53.8	47.4	54.8	20.9		58.0	20.6	
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	13.4	22.3	0.1	23.9	19.3	0.0	19.6	2.0		21.8	0.9	
Delay (s)	71.8	78.5	51.5	80.4	73.1	47.4	74.4	23.0		79.8	21.5	
Level of Service	E	E	D	F	E	D	E	C		E	C	
Approach Delay (s)		66.6			70.8			29.5			29.2	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	40.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	371	77	4	487	3	54
Future Volume (Veh/h)	371	77	4	487	3	54
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	382	79	4	502	3	56
Pedestrians					8	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					1	
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	216					
pX, platoon unblocked			0.91		0.91	0.91
vC, conflicting volume			469		940	430
vC1, stage 1 conf vol					430	
vC2, stage 2 conf vol					510	
vCu, unblocked vol			362		881	318
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	91
cM capacity (veh/h)			1087		505	654

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	461	506	59
Volume Left	0	4	3
Volume Right	79	0	56
cSH	1700	1087	645
Volume to Capacity	0.27	0.00	0.09
Queue Length 95th (ft)	0	0	8
Control Delay (s)	0.0	0.1	11.1
Lane LOS		A	B
Approach Delay (s)	0.0	0.1	11.1
Approach LOS			B

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	Err%	ICU Level of Service	H
Analysis Period (min)	15		



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	406	46	95	354	2	138	0	48	0	0	0
Future Volume (Veh/h)	0	406	46	95	354	2	138	0	48	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	427	48	100	373	2	145	0	51	0	0	0
Pedestrians		3			3			2			3	
Lane Width (ft)		12.0			12.0			12.0			16.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		603										
pX, platoon unblocked				0.93			0.93	0.93	0.93	0.93	0.93	
vC, conflicting volume	378			477			1029	1031	456	1058	1054	380
vC1, stage 1 conf vol							453	453		577	577	
vC2, stage 2 conf vol							576	578		481	477	
vCu, unblocked vol	378			395			991	994	373	1023	1018	380
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			91			63	100	92	100	100	100
cM capacity (veh/h)	1188			1086			396	394	625	345	364	668

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	0	475	100	375	145	51	0
Volume Left	0	0	100	0	145	0	0
Volume Right	0	48	0	2	0	51	0
cSH	1700	1700	1086	1700	396	625	1700
Volume to Capacity	0.00	0.28	0.09	0.22	0.37	0.08	0.00
Queue Length 95th (ft)	0	0	8	0	41	7	0
Control Delay (s)	0.0	0.0	8.7	0.0	19.3	11.3	0.0
Lane LOS			A		C	B	A
Approach Delay (s)	0.0		1.8		17.2		0.0
Approach LOS					C		A

Intersection Summary				
Average Delay	3.7			
Intersection Capacity Utilization	52.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	453	1	4	442	0	9	1	13	0	0	0
Future Volume (Veh/h)	0	453	1	4	442	0	9	1	13	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	477	1	4	465	0	9	1	14	0	0	0
Pedestrians					9			9				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					1			1				
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		915										
pX, platoon unblocked				0.96			0.96	0.96	0.96	0.96	0.96	
vC, conflicting volume	465			487			960	960	496	974	960	465
vC1, stage 1 conf vol							486	486		473	473	
vC2, stage 2 conf vol							473	473		500	487	
vCu, unblocked vol	465			444			936	936	452	951	937	465
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			98	100	98	100	100	100
cM capacity (veh/h)	1107			1073			448	444	578	434	442	602

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	0	478	4	465	24	0
Volume Left	0	0	4	0	9	0
Volume Right	0	1	0	0	14	0
cSH	1700	1700	1073	1700	515	1700
Volume to Capacity	0.00	0.28	0.00	0.27	0.05	0.00
Queue Length 95th (ft)	0	0	0	0	4	0
Control Delay (s)	0.0	0.0	8.4	0.0	12.3	0.0
Lane LOS			A		B	A
Approach Delay (s)	0.0		0.1		12.3	0.0
Approach LOS					B	A

Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	36.5%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	38	1453	26	0	1073
Future Volume (Veh/h)	0	38	1453	26	0	1073
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	39	1498	27	0	1106
Pedestrians	11					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (ft)						202
pX, platoon unblocked	0.85					
vC, conflicting volume	2076	774			1536	
vC1, stage 1 conf vol	1522					
vC2, stage 2 conf vol	553					
vCu, unblocked vol	1911	774			1536	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	89			100	
cM capacity (veh/h)	162	343			435	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	39	999	526	553	553
Volume Left	0	0	0	0	0
Volume Right	39	0	27	0	0
cSH	343	1700	1700	1700	1700
Volume to Capacity	0.11	0.59	0.31	0.33	0.33
Queue Length 95th (ft)	10	0	0	0	0
Control Delay (s)	16.9	0.0	0.0	0.0	0.0
Lane LOS	C				
Approach Delay (s)	16.9	0.0		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	51.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	0	14	12	0	14	12	1470	97	6	1084	15
Future Volume (Veh/h)	3	0	14	12	0	14	12	1470	97	6	1084	15
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	3	0	14	12	0	14	12	1515	100	6	1118	15
Pedestrians		7			8			2				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		1			1			0				
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)											315	
pX, platoon unblocked	0.85	0.85	0.85	0.85	0.85		0.85					
vC, conflicting volume	1940	2792	576	2184	2749	816	1140			1623		
vC1, stage 1 conf vol	1144	1144		1597	1597							
vC2, stage 2 conf vol	796	1647		587	1152							
vCu, unblocked vol	1754	2755	150	2041	2705	816	813			1623		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	7.0	4.1			4.4		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.4	2.2			2.4		
p0 queue free %	99	100	98	89	100	95	98			98		
cM capacity (veh/h)	210	130	740	107	139	308	695			332		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	17	26	12	1010	605	6	745	388
Volume Left	3	12	12	0	0	6	0	0
Volume Right	14	14	0	0	100	0	0	15
cSH	512	165	695	1700	1700	332	1700	1700
Volume to Capacity	0.03	0.16	0.02	0.59	0.36	0.02	0.44	0.23
Queue Length 95th (ft)	3	14	1	0	0	1	0	0
Control Delay (s)	12.3	30.9	10.3	0.0	0.0	16.0	0.0	0.0
Lane LOS	B	D	B			C		
Approach Delay (s)	12.3	30.9	0.1			0.1		
Approach LOS	B	D						

Intersection Summary				
Average Delay	0.4			
Intersection Capacity Utilization	54.4%	ICU Level of Service	A	
Analysis Period (min)	15			

HCM Signalized Intersection Capacity Analysis
1: River Road N & Chemawa Rd NE

02/27/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	89	265	282	127	131	57	131	438	77	68	1040	41
Future Volume (vph)	89	265	282	127	131	57	131	438	77	68	1040	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.97	1.00	0.99		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1719	1845	1537	1752	1845	1508	1736	3271		1752	3481	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1719	1845	1537	1752	1845	1508	1736	3271		1752	3481	
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)	99	294	313	141	146	63	146	487	86	76	1156	46
RTOR Reduction (vph)	0	0	233	0	0	50	0	10	0	0	2	0
Lane Group Flow (vph)	99	294	80	141	146	13	146	563	0	76	1200	0
Confl. Peds. (#/hr)	8		14	14		8	2		6	6		2
Confl. Bikes (#/hr)						2			1			
Heavy Vehicles (%)	5%	3%	1%	3%	3%	4%	4%	8%	3%	3%	3%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	10.4	23.5	23.5	13.4	26.5	26.5	13.9	69.5		7.1	62.7	
Effective Green, g (s)	10.4	23.5	23.5	13.4	26.5	26.5	13.9	70.0		7.1	63.2	
Actuated g/C Ratio	0.08	0.18	0.18	0.10	0.20	0.20	0.11	0.54		0.05	0.49	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5		4.0	4.5	
Vehicle Extension (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	
Lane Grp Cap (vph)	137	333	277	180	376	307	185	1761		95	1692	
v/s Ratio Prot	0.06	c0.16		c0.08	c0.08		c0.08	0.17		0.04	c0.34	
v/s Ratio Perm			0.05			0.01						
v/c Ratio	0.72	0.88	0.29	0.78	0.39	0.04	0.79	0.32		0.80	0.71	
Uniform Delay, d1	58.4	51.9	46.0	56.9	44.7	41.6	56.6	16.7		60.7	26.2	
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	14.7	22.4	0.2	18.3	0.2	0.0	18.3	0.5		34.9	2.5	
Delay (s)	73.1	74.3	46.2	75.2	45.0	41.6	74.9	17.2		95.7	28.7	
Level of Service	E	E	D	E	D	D	E	B		F	C	
Approach Delay (s)		61.7			56.5			28.9			32.7	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	41.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.0
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	370	40	0	315	0	11
Future Volume (Veh/h)	370	40	0	315	0	11
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	411	44	0	350	0	12
Pedestrians					9	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					1	
Right turn flare (veh)						
Median type	None			TWLTL		
Median storage veh)				2		
Upstream signal (ft)	216					
pX, platoon unblocked			0.84		0.84	0.84
vC, conflicting volume			464		792	442
vC1, stage 1 conf vol					442	
vC2, stage 2 conf vol					350	
vCu, unblocked vol			274		662	247
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	98
cM capacity (veh/h)			1091		567	667

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	455	350	12
Volume Left	0	0	0
Volume Right	44	0	12
cSH	1700	1700	667
Volume to Capacity	0.27	0.21	0.02
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.0	10.5
Lane LOS			B
Approach Delay (s)	0.0	0.0	10.5
Approach LOS			B

Intersection Summary			
Average Delay	0.2		
Intersection Capacity Utilization	32.0%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	353	31	28	275	1	52	0	37	0	0	3
Future Volume (Veh/h)	0	353	31	28	275	1	52	0	37	0	0	3
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	401	35	32	313	1	59	0	42	0	0	3
Pedestrians								6			7	
Lane Width (ft)								12.0			16.0	
Walking Speed (ft/s)								4.0			4.0	
Percent Blockage								1			1	
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		603										
pX, platoon unblocked				0.85			0.85	0.85	0.85	0.85	0.85	
vC, conflicting volume	321			442			804	810	424	828	826	320
vC1, stage 1 conf vol							424	424		384	384	
vC2, stage 2 conf vol							380	385		443	442	
vCu, unblocked vol	321			262			686	692	241	713	712	320
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	7.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	4.2
p0 queue free %	100			97			88	100	94	100	100	99
cM capacity (veh/h)	1241			1117			512	488	682	472	470	537

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	0	436	32	314	59	42	3
Volume Left	0	0	32	0	59	0	0
Volume Right	0	35	0	1	0	42	3
cSH	1700	1700	1117	1700	512	682	537
Volume to Capacity	0.00	0.26	0.03	0.18	0.12	0.06	0.01
Queue Length 95th (ft)	0	0	2	0	10	5	0
Control Delay (s)	0.0	0.0	8.3	0.0	12.9	10.6	11.7
Lane LOS			A		B	B	B
Approach Delay (s)	0.0		0.8		12.0		11.7
Approach LOS					B		B

Intersection Summary				
Average Delay	1.7			
Intersection Capacity Utilization	39.5%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	388	2	4	303	0	1	0	4	0	1	0
Future Volume (Veh/h)	0	388	2	4	303	0	1	0	4	0	1	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Hourly flow rate (vph)	0	441	2	5	344	0	1	0	5	0	1	0
Pedestrians					6			6				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					1			1				
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		915										
pX, platoon unblocked				0.87			0.87	0.87	0.87	0.87	0.87	
vC, conflicting volume	344			449			802	802	454	806	803	344
vC1, stage 1 conf vol							448	448		354	354	
vC2, stage 2 conf vol							354	354		452	449	
vCu, unblocked vol	344			297			702	701	303	706	702	344
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			100	100	99	100	100	100
cM capacity (veh/h)	1226			1109			517	497	642	511	494	703

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	0	443	5	344	6	1
Volume Left	0	0	5	0	1	0
Volume Right	0	2	0	0	5	0
cSH	1700	1700	1109	1700	617	494
Volume to Capacity	0.00	0.26	0.00	0.20	0.01	0.00
Queue Length 95th (ft)	0	0	0	0	1	0
Control Delay (s)	0.0	0.0	8.3	0.0	10.9	12.3
Lane LOS			A		B	B
Approach Delay (s)	0.0		0.1		10.9	12.3
Approach LOS					B	B

Intersection Summary				
Average Delay	0.1			
Intersection Capacity Utilization	32.4%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	14	633	10	0	1449
Future Volume (Veh/h)	0	14	633	10	0	1449
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	0	16	703	11	0	1610
Pedestrians	2					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (ft)						202
pX, platoon unblocked	0.73					
vC, conflicting volume	1516	359			716	
vC1, stage 1 conf vol	710					
vC2, stage 2 conf vol	805					
vCu, unblocked vol	962	359			716	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	98			100	
cM capacity (veh/h)	408	642			892	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	16	469	245	805	805
Volume Left	0	0	0	0	0
Volume Right	16	0	11	0	0
cSH	642	1700	1700	1700	1700
Volume to Capacity	0.02	0.28	0.14	0.47	0.47
Queue Length 95th (ft)	2	0	0	0	0
Control Delay (s)	10.7	0.0	0.0	0.0	0.0
Lane LOS	B				
Approach Delay (s)	10.7	0.0		0.0	
Approach LOS	B				

Intersection Summary			
Average Delay	0.1		
Intersection Capacity Utilization	43.4%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	1	47	19	0	1	19	627	31	12	1360	62
Future Volume (Veh/h)	16	1	47	19	0	1	19	627	31	12	1360	62
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	19	1	56	23	0	1	23	746	37	14	1619	74
Pedestrians		1			2						1	
Lane Width (ft)		12.0			12.0						12.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		0			0						0	
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)											315	
pX, platoon unblocked	0.73	0.73	0.73	0.73	0.73		0.73					
vC, conflicting volume	2106	2516	848	1706	2534	394	1694			785		
vC1, stage 1 conf vol	1685	1685		812	812							
vC2, stage 2 conf vol	421	831		894	1722							
vCu, unblocked vol	1773	2336	46	1225	2361	394	1208			785		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	86	99	92	92	100	100	95			98		
cM capacity (veh/h)	137	161	743	283	139	609	426			841		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	76	24	23	497	286	14	1079	614
Volume Left	19	23	23	0	0	14	0	0
Volume Right	56	1	0	0	37	0	0	74
cSH	344	290	426	1700	1700	841	1700	1700
Volume to Capacity	0.22	0.08	0.05	0.29	0.17	0.02	0.63	0.36
Queue Length 95th (ft)	21	7	4	0	0	1	0	0
Control Delay (s)	18.4	18.5	13.9	0.0	0.0	9.4	0.0	0.0
Lane LOS	C	C	B			A		
Approach Delay (s)	18.4	18.5	0.4			0.1		
Approach LOS	C	C						

Intersection Summary				
Average Delay	0.9			
Intersection Capacity Utilization	49.9%	ICU Level of Service	A	
Analysis Period (min)	15			

Queues
1: River Road N & Chemawa Rd NE

02/27/2017

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	99	294	313	141	146	63	146	573	76	1202
v/c Ratio	0.72	0.88	0.61	0.78	0.39	0.16	0.79	0.32	0.72	0.71
Control Delay	85.1	78.6	13.2	83.8	47.8	1.4	83.9	17.9	93.5	31.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.1	78.6	13.2	83.8	47.8	1.4	83.9	17.9	93.5	31.0
Queue Length 50th (ft)	83	237	20	118	104	0	122	142	64	426
Queue Length 95th (ft)	139	#421	115	183	175	4	188	194	#118	576
Internal Link Dist (ft)		397			136			122		318
Turn Bay Length (ft)	300			200			100		180	
Base Capacity (vph)	257	341	515	262	377	398	267	1789	134	1693
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.86	0.61	0.54	0.39	0.16	0.55	0.32	0.57	0.71

Intersection Summary

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

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	99	182	172	166	242	94	190	1157	148	128	735	74
Future Volume (vph)	99	182	172	166	242	94	190	1157	148	128	735	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5		4.0	4.5	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95		1.00	0.95	
Frpb, ped/bikes	1.00	1.00	0.96	1.00	1.00	0.97	1.00	1.00		1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1787	1863	1528	1805	1900	1572	1770	3499		1805	3475	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1787	1863	1528	1805	1900	1572	1770	3499		1805	3475	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	102	188	177	171	249	97	196	1193	153	132	758	76
RTOR Reduction (vph)	0	0	156	0	0	82	0	6	0	0	4	0
Lane Group Flow (vph)	102	188	21	171	249	15	196	1340	0	132	830	0
Confl. Peds. (#/hr)	8		17	17		8	6		5	5		6
Confl. Bikes (#/hr)									1			
Heavy Vehicles (%)	1%	2%	1%	0%	0%	0%	2%	1%	1%	0%	2%	3%
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	10.4	15.6	15.6	14.7	19.9	19.9	17.5	71.3		11.9	65.7	
Effective Green, g (s)	10.4	15.6	15.6	14.7	19.9	19.9	17.5	71.3		11.9	65.7	
Actuated g/C Ratio	0.08	0.12	0.12	0.11	0.15	0.15	0.13	0.55		0.09	0.51	
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.5		4.0	4.5	
Vehicle Extension (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	
Lane Grp Cap (vph)	142	223	183	204	290	240	238	1919		165	1756	
v/s Ratio Prot	0.06	0.10		c0.09	c0.13		c0.11	c0.38		0.07	0.24	
v/s Ratio Perm			0.01			0.01						
v/c Ratio	0.72	0.84	0.12	0.84	0.86	0.06	0.82	0.70		0.80	0.47	
Uniform Delay, d1	58.4	56.0	51.0	56.5	53.7	47.1	54.7	21.5		57.9	20.9	
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	13.4	23.2	0.1	23.9	20.8	0.0	19.2	2.1		22.4	0.9	
Delay (s)	71.8	79.2	51.2	80.4	74.4	47.1	74.0	23.6		80.3	21.8	
Level of Service	E	E	D	F	E	D	E	C		F	C	
Approach Delay (s)		67.0			71.3			30.0			29.8	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	41.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	369	89	0	502	0	62
Future Volume (Veh/h)	369	89	0	502	0	62
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	380	92	0	518	0	64
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLTL			TWLTL		
Median storage veh)	2			2		
Upstream signal (ft)	216					
pX, platoon unblocked			0.90		0.90	0.90
vC, conflicting volume			472		944	426
vC1, stage 1 conf vol					426	
vC2, stage 2 conf vol					518	
vCu, unblocked vol			360		884	309
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)					5.4	
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	90
cM capacity (veh/h)			1091		506	663

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	472	518	64
Volume Left	0	0	0
Volume Right	92	0	64
cSH	1700	1700	663
Volume to Capacity	0.28	0.30	0.10
Queue Length 95th (ft)	0	0	8
Control Delay (s)	0.0	0.0	11.0
Lane LOS			B
Approach Delay (s)	0.0	0.0	11.0
Approach LOS			B

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	35.3%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	410	48	108	348	2	155	0	52	0	0	0
Future Volume (Veh/h)	0	410	48	108	348	2	155	0	52	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	432	51	114	366	2	163	0	55	0	0	0
Pedestrians		3			3			2			3	
Lane Width (ft)		12.0			12.0			12.0			16.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		603										
pX, platoon unblocked				0.93			0.93	0.93	0.93	0.93	0.93	
vC, conflicting volume	371			485			1056	1058	462	1088	1083	373
vC1, stage 1 conf vol							460	460		598	598	
vC2, stage 2 conf vol							597	599		490	485	
vCu, unblocked vol	371			403			1021	1023	378	1055	1049	373
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			89			57	100	91	100	100	100
cM capacity (veh/h)	1195			1078			382	381	620	327	349	674

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2	SB 1
Volume Total	0	483	114	368	163	55	0
Volume Left	0	0	114	0	163	0	0
Volume Right	0	51	0	2	0	55	0
cSH	1700	1700	1078	1700	382	620	1700
Volume to Capacity	0.00	0.28	0.11	0.22	0.43	0.09	0.00
Queue Length 95th (ft)	0	0	9	0	52	7	0
Control Delay (s)	0.0	0.0	8.7	0.0	21.3	11.4	0.0
Lane LOS			A		C	B	A
Approach Delay (s)	0.0		2.1		18.8		0.0
Approach LOS					C		A

Intersection Summary				
Average Delay	4.3			
Intersection Capacity Utilization	55.7%	ICU Level of Service	B	
Analysis Period (min)	15			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	461	1	4	449	0	9	1	14	0	0	0
Future Volume (Veh/h)	0	461	1	4	449	0	9	1	14	0	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	485	1	4	473	0	9	1	15	0	0	0
Pedestrians					9			9				
Lane Width (ft)					12.0			12.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					1			1				
Right turn flare (veh)												
Median type		TWLTL			TWLTL							
Median storage veh)		2			2							
Upstream signal (ft)		915										
pX, platoon unblocked				0.96			0.96	0.96	0.96	0.96	0.96	
vC, conflicting volume	473			495			976	976	504	990	976	473
vC1, stage 1 conf vol							494	494		481	481	
vC2, stage 2 conf vol							481	481		510	495	
vCu, unblocked vol	473			455			954	954	463	970	955	473
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			98	100	97	100	100	100
cM capacity (veh/h)	1099			1066			442	439	571	427	437	595

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	0	486	4	473	25	0
Volume Left	0	0	4	0	9	0
Volume Right	0	1	0	0	15	0
cSH	1700	1700	1066	1700	511	1700
Volume to Capacity	0.00	0.29	0.00	0.28	0.05	0.00
Queue Length 95th (ft)	0	0	0	0	4	0
Control Delay (s)	0.0	0.0	8.4	0.0	12.4	0.0
Lane LOS			A		B	A
Approach Delay (s)	0.0		0.1		12.4	0.0
Approach LOS					B	A

Intersection Summary				
Average Delay	0.3			
Intersection Capacity Utilization	36.9%	ICU Level of Service		A
Analysis Period (min)	15			

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	53	1442	33	0	1073
Future Volume (Veh/h)	0	53	1442	33	0	1073
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	0	55	1487	34	0	1106
Pedestrians	11					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	1					
Right turn flare (veh)						
Median type			TWLTL			TWLTL
Median storage veh)			2			2
Upstream signal (ft)						202
pX, platoon unblocked	0.85					
vC, conflicting volume	2068	772			1532	
vC1, stage 1 conf vol	1515					
vC2, stage 2 conf vol	553					
vCu, unblocked vol	1900	772			1532	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)	5.8					
tF (s)	3.5	3.3			2.2	
p0 queue free %	100	84			100	
cM capacity (veh/h)	163	344			436	

Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2
Volume Total	55	991	530	553	553
Volume Left	0	0	0	0	0
Volume Right	55	0	34	0	0
cSH	344	1700	1700	1700	1700
Volume to Capacity	0.16	0.58	0.31	0.33	0.33
Queue Length 95th (ft)	14	0	0	0	0
Control Delay (s)	17.5	0.0	0.0	0.0	0.0
Lane LOS	C				
Approach Delay (s)	17.5	0.0		0.0	
Approach LOS	C				

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	50.9%	ICU Level of Service	A
Analysis Period (min)	15		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	0	14	16	0	20	12	1460	116	9	1081	15
Future Volume (Veh/h)	3	0	14	16	0	20	12	1460	116	9	1081	15
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Hourly flow rate (vph)	3	0	14	16	0	21	12	1505	120	9	1114	15
Pedestrians		7			8			2				
Lane Width (ft)		12.0			12.0			12.0				
Walking Speed (ft/s)		4.0			4.0			4.0				
Percent Blockage		1			1			0				
Right turn flare (veh)												
Median type								TWLTL			TWLTL	
Median storage veh)								2			2	
Upstream signal (ft)											315	
pX, platoon unblocked	0.85	0.85	0.85	0.85	0.85		0.85					
vC, conflicting volume	1944	2804	574	2188	2751	820	1136			1633		
vC1, stage 1 conf vol	1146	1146		1597	1597							
vC2, stage 2 conf vol	798	1657		591	1154							
vCu, unblocked vol	1757	2769	144	2044	2707	820	806			1633		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	7.0	4.1			4.4		
tC, 2 stage (s)	6.5	5.5		6.5	5.5							
tF (s)	3.5	4.0	3.3	3.5	4.0	3.4	2.2			2.4		
p0 queue free %	99	100	98	85	100	93	98			97		
cM capacity (veh/h)	205	127	745	107	139	306	699			329		

Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	17	37	12	1003	622	9	743	386
Volume Left	3	16	12	0	0	9	0	0
Volume Right	14	21	0	0	120	0	0	15
cSH	509	169	699	1700	1700	329	1700	1700
Volume to Capacity	0.03	0.22	0.02	0.59	0.37	0.03	0.44	0.23
Queue Length 95th (ft)	3	20	1	0	0	2	0	0
Control Delay (s)	12.3	32.1	10.2	0.0	0.0	16.3	0.0	0.0
Lane LOS	B	D	B			C		
Approach Delay (s)	12.3	32.1	0.1			0.1		
Approach LOS	B	D						

Intersection Summary				
Average Delay	0.6			
Intersection Capacity Utilization	55.3%	ICU Level of Service	B	
Analysis Period (min)	15			

Queues
1: River Road N & Chemawa Rd NE

02/27/2017

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	102	188	177	171	249	97	196	1346	132	834
v/c Ratio	0.72	0.85	0.52	0.84	0.86	0.29	0.83	0.70	0.80	0.47
Control Delay	84.3	86.2	12.8	88.4	79.8	7.8	80.7	25.7	90.1	24.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.3	86.2	12.8	88.4	79.8	7.8	80.7	25.7	90.1	24.0
Queue Length 50th (ft)	85	157	0	143	205	0	163	430	110	235
Queue Length 95th (ft)	142	234	66	219	#311	37	235	606	178	360
Internal Link Dist (ft)		397			136			122		318
Turn Bay Length (ft)	300			100			50		180	
Base Capacity (vph)	213	286	384	256	340	374	408	1927	208	1761
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.48	0.66	0.46	0.67	0.73	0.26	0.48	0.70	0.63	0.47

Intersection Summary

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

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Attachment B Turning Movement Counts

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Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

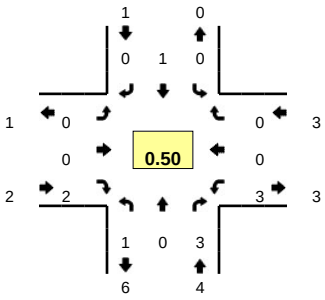
LOCATION: 7th Ave NE/Safeway East Dwy -- Chemawa Rd

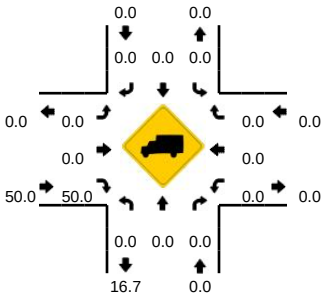
QC JOB #: 14224701

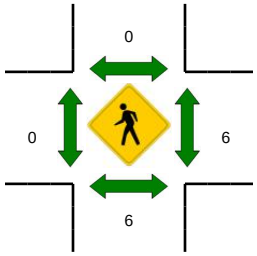
CITY/STATE: Keizer, OR

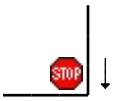
DATE: Wed, Feb 15 2017

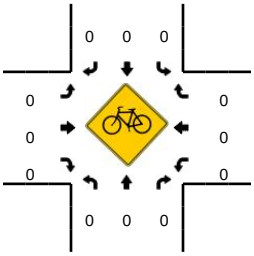
Peak-Hour: 7:05 AM -- 8:05 AM
Peak 15-Min: 7:25 AM -- 7:40 AM

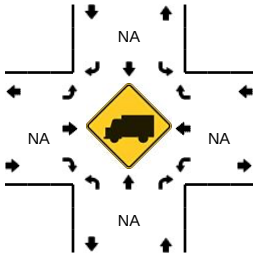


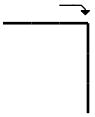


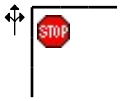


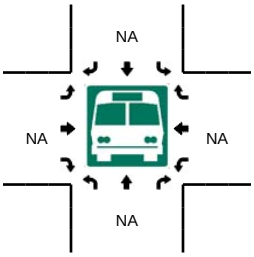












5-Min Count Period Beginning At	7th Ave NE/Safeway East Dwy (Northbound)				7th Ave NE/Safeway East Dwy (Southbound)				Chemawa Rd (Eastbound)				Chemawa Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:25 AM	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	3	
7:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
7:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
7:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:55 AM	1	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3	9
8:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	10
8:05 AM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	2	12
8:10 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
8:20 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
8:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
8:30 AM	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	2	10
8:35 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	10
8:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	10
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
8:50 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	11
8:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	8	0	0	0	0	0	0	0	4	0	8	0	0	0	20
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Pedestrians		20				0				0				20			40
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/24/2017 11:44 AM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

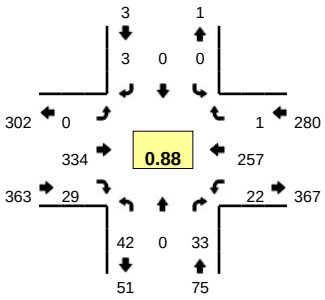
LOCATION: Safeway Center Dwy -- Chemawa Rd NE

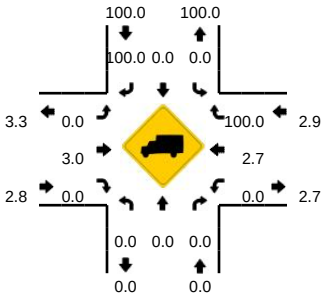
QC JOB #: 14224703

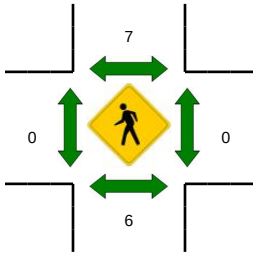
CITY/STATE: Keizer, OR

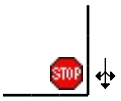
DATE: Wed, Feb 15 2017

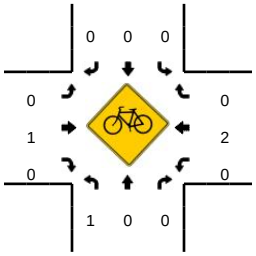
Peak-Hour: 7:05 AM -- 8:05 AM
Peak 15-Min: 7:05 AM -- 7:20 AM

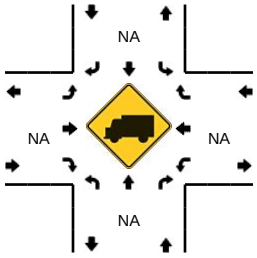


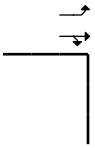


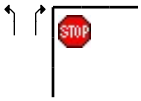


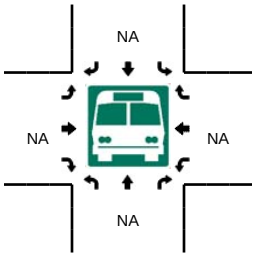












5-Min Count Period Beginning At	Safeway Center Dwy (Northbound)				Safeway Center Dwy (Southbound)				Chemawa Rd NE (Eastbound)				Chemawa Rd NE (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	2	0	0	0	0	0	0	12	0	0	2	32	0	0	48	
7:05 AM	4	0	5	0	0	0	1	0	0	38	0	0	4	30	0	0	82	
7:10 AM	1	0	0	0	0	0	0	0	0	20	1	0	0	36	0	0	58	
7:15 AM	1	0	5	0	0	0	2	0	0	34	1	0	2	19	0	0	64	
7:20 AM	0	0	2	0	0	0	0	0	0	38	2	0	2	24	0	0	68	
7:25 AM	4	0	1	0	0	0	0	0	0	31	2	0	1	14	0	0	53	
7:30 AM	7	0	1	0	0	0	0	0	0	24	7	0	5	25	0	0	69	
7:35 AM	2	0	3	0	0	0	0	0	0	25	4	0	1	17	0	0	52	
7:40 AM	6	0	1	0	0	0	0	0	0	32	2	0	0	25	0	0	66	
7:45 AM	4	0	2	0	0	0	0	0	0	23	0	0	2	20	0	0	51	
7:50 AM	6	0	3	0	0	0	0	0	0	23	4	0	1	15	0	0	52	
7:55 AM	0	0	7	0	0	0	0	0	0	22	2	0	2	19	1	0	53	716
8:00 AM	7	0	3	0	0	0	0	0	0	24	4	0	2	13	0	0	53	721
8:05 AM	4	0	2	0	0	0	0	0	0	21	2	0	1	20	0	0	50	689
8:10 AM	4	0	3	0	0	0	0	0	0	13	2	0	2	20	0	0	44	675
8:15 AM	4	0	3	0	0	0	0	0	0	19	1	0	1	13	0	0	41	652
8:20 AM	2	0	1	0	0	0	0	0	0	24	0	0	2	18	0	0	47	631
8:25 AM	4	0	2	0	0	0	0	0	0	24	2	0	1	23	1	0	57	635
8:30 AM	3	0	2	0	0	0	0	0	0	16	0	0	1	10	0	0	32	598
8:35 AM	4	0	2	0	0	0	0	0	0	19	2	0	1	15	0	0	43	589
8:40 AM	3	0	0	0	0	0	0	0	0	14	2	0	3	16	0	0	38	561
8:45 AM	2	0	1	0	0	0	0	0	0	10	1	0	2	18	0	0	34	544
8:50 AM	3	0	2	0	0	0	0	0	0	27	1	0	7	31	0	0	71	563
8:55 AM	4	0	2	0	0	0	0	0	0	26	1	0	1	27	0	0	61	571

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	24	0	40	0	0	0	12	0	0	368	8	0	24	340	0	0	816
Heavy Trucks	0	0	0		0	0	12		0	8	0		0	0	0		20
Pedestrians		4				20				0				0			24
Bicycles	1	0	0		0	0	0		0	0	0		0	1	0		2
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/24/2017 11:44 AM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

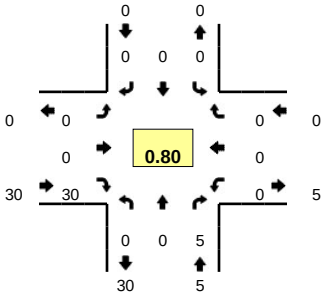
LOCATION: Safeway West Dwy -- Chemawa Rd

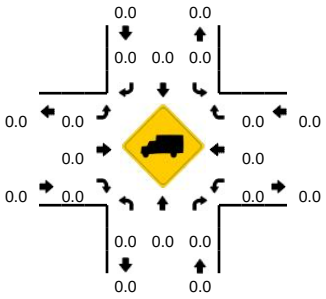
QC JOB #: 14224705

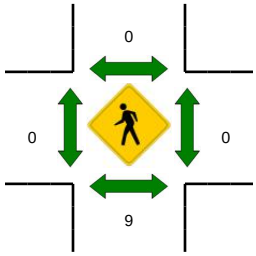
CITY/STATE: Keizer, OR

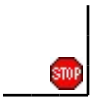
DATE: Wed, Feb 15 2017

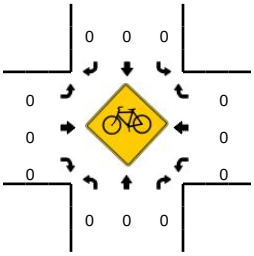
Peak-Hour: 7:05 AM -- 8:05 AM
Peak 15-Min: 7:10 AM -- 7:25 AM

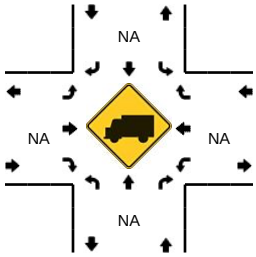


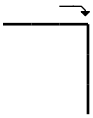


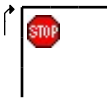


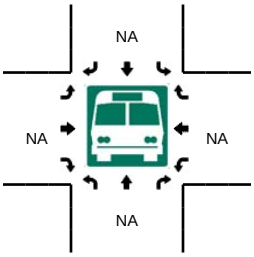












5-Min Count Period Beginning At	Safeway West Dwy (Northbound)				Safeway West Dwy (Southbound)				Chemawa Rd (Eastbound)				Chemawa Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	
7:05 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	
7:10 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	
7:15 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	
7:20 AM	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	4	
7:25 AM	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	3	
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:35 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
7:40 AM	0	0	2	0	0	0	0	0	0	0	4	0	0	0	0	0	6	
7:45 AM	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	
7:50 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	
7:55 AM	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4	32
8:00 AM	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5	35
8:05 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	36
8:10 AM	0	0	0	0	0	1	0	0	0	0	3	0	0	0	0	0	4	35
8:15 AM	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3	36
8:20 AM	0	1	1	0	0	0	0	0	0	0	2	0	0	0	0	0	4	36
8:25 AM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	34
8:30 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	35
8:35 AM	0	0	1	0	0	0	0	0	0	0	2	0	0	0	0	0	3	37
8:40 AM	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	4	35
8:45 AM	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6	39
8:50 AM	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	4	42
8:55 AM	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	4	42

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	4	0	0	0	0	0	0	0	40	0	0	0	0	0	44
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Pedestrians		4				0				0				0			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/24/2017 11:44 AM

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

Type of peak hour being reported: User-Defined

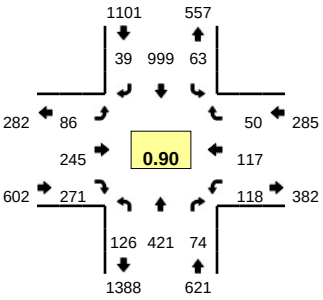
Method for determining peak hour: Total Entering Volume

LOCATION: River Rd N -- Chemawa Rd N

QC JOB #: 14224707

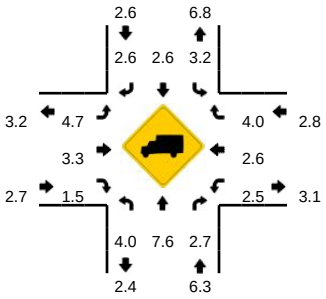
CITY/STATE: Keizer, OR

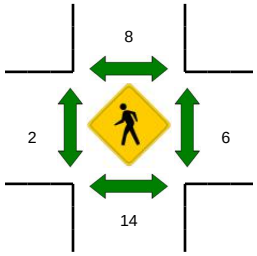
DATE: Wed, Feb 15 2017

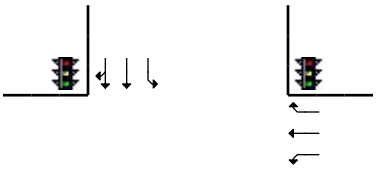


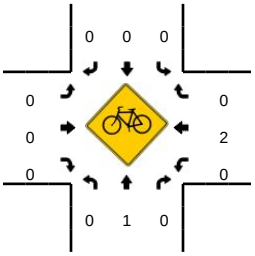
Peak-Hour: 7:05 AM -- 8:05 AM

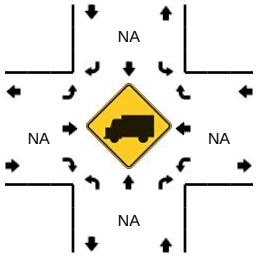
Peak 15-Min: 7:40 AM -- 7:55 AM

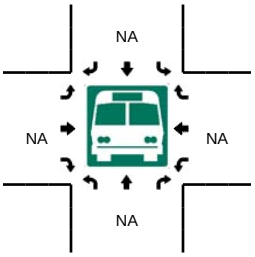












5-Min Count Period Beginning At	River Rd N (Northbound)				River Rd N (Southbound)				Chemawa Rd N (Eastbound)				Chemawa Rd N (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	12	27	2	0	2	59	7	0	8	10	18	0	7	17	4	0	173	
7:05 AM	14	27	5	0	5	57	9	0	4	31	26	0	12	23	4	0	217	
7:10 AM	23	28	6	0	3	64	7	0	10	14	24	0	7	24	4	0	214	
7:15 AM	12	31	7	0	4	69	7	0	9	25	21	0	4	9	6	0	204	
7:20 AM	4	23	6	0	4	80	1	0	14	32	33	0	8	12	3	0	220	
7:25 AM	6	44	7	0	5	88	2	0	9	20	28	0	8	7	3	0	227	
7:30 AM	5	36	6	0	4	96	3	0	7	21	22	0	10	2	7	0	219	
7:35 AM	8	18	4	0	6	85	2	0	7	20	21	0	14	11	2	0	198	
7:40 AM	12	40	4	0	6	112	0	0	6	25	25	0	11	11	5	0	257	
7:45 AM	9	49	5	0	3	113	5	0	3	17	18	0	13	4	3	0	242	
7:50 AM	8	48	9	0	5	84	0	0	8	16	22	0	16	5	6	0	227	
7:55 AM	14	34	6	0	7	77	2	0	6	13	13	0	9	5	2	0	188	2586
8:00 AM	11	43	9	0	11	74	1	0	3	11	18	0	6	4	5	0	196	2609
8:05 AM	8	42	7	0	4	69	1	0	0	15	10	0	6	13	6	0	181	2573
8:10 AM	4	38	2	0	7	61	1	0	1	9	14	0	5	8	8	0	158	2517
8:15 AM	9	52	6	0	9	53	2	0	6	6	8	0	6	6	3	0	166	2479
8:20 AM	5	50	9	0	6	49	2	0	4	9	11	0	8	6	2	0	161	2420
8:25 AM	7	38	8	0	5	50	2	0	8	9	10	0	6	12	3	0	158	2351
8:30 AM	8	40	9	0	2	59	4	0	5	5	10	0	6	5	5	0	158	2290
8:35 AM	7	29	5	0	6	68	5	0	2	9	7	0	7	9	6	0	160	2252
8:40 AM	11	41	5	0	5	65	2	0	4	9	17	0	9	5	5	0	178	2173
8:45 AM	7	45	5	0	3	70	2	0	10	8	18	0	5	4	7	0	184	2115
8:50 AM	6	29	11	0	5	47	5	0	4	12	12	0	10	19	6	0	166	2054
8:55 AM	7	60	8	0	4	67	8	0	5	9	17	0	3	14	5	0	207	2073

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	116	548	72	0	56	1236	20	0	68	232	260	0	160	80	56	0	2904
Heavy Trucks	0	48	4		0	24	4		4	12	4		8	8	0		116
Pedestrians		4				4				0				4			12
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/24/2017 11:44 AM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

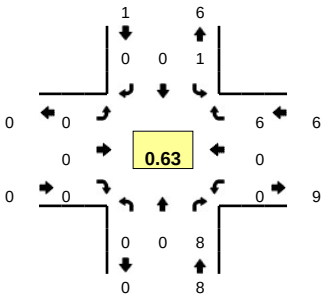
LOCATION: River Rd N -- Safeway North Dwy

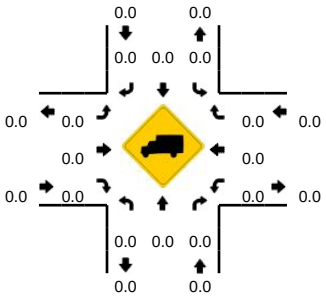
QC JOB #: 14224709

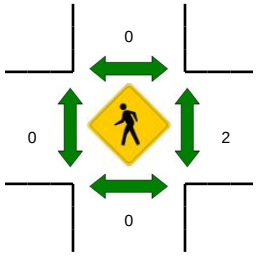
CITY/STATE: Keizer, OR

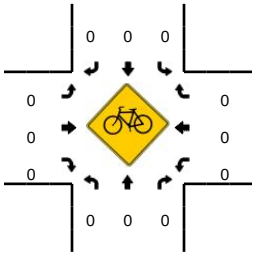
DATE: Wed, Feb 15 2017

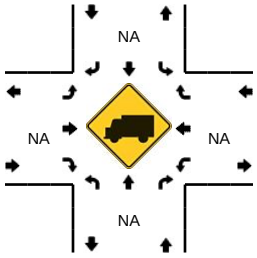
Peak-Hour: 7:05 AM -- 8:05 AM
Peak 15-Min: 7:20 AM -- 7:35 AM

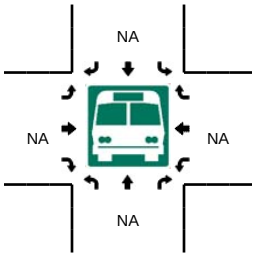












5-Min Count Period Beginning At	River Rd N (Northbound)				River Rd N (Southbound)				Safeway North Dwy (Eastbound)				Safeway North Dwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:10 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
7:20 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
7:25 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
7:30 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	0	4	
7:35 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
7:40 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
7:45 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	2	
7:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	
7:55 AM	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	14
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	15
8:05 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15
8:10 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	15
8:15 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	3	17
8:20 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	0	4	20
8:25 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
8:30 AM	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	17
8:35 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	17
8:40 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	17
8:45 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	17
8:50 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	2	18
8:55 AM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	20

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	20	0	0	0	0	0	0	0	0	0	0	0	4	0	24
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Pedestrians		0				0				0				4			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/24/2017 11:44 AM

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

Type of peak hour being reported: User-Defined

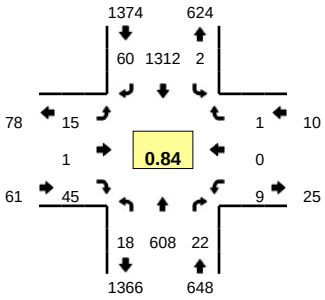
Method for determining peak hour: Total Entering Volume

LOCATION: River Rd N -- Safeway South Dwy

QC JOB #: 14224711

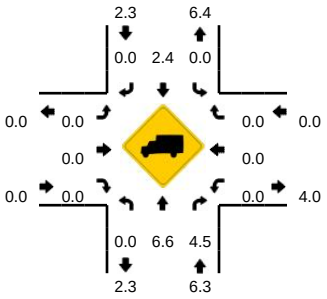
CITY/STATE: Keizer, OR

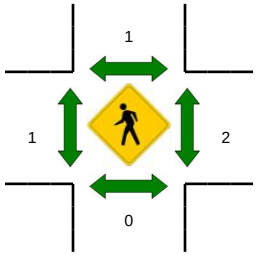
DATE: Wed, Feb 15 2017

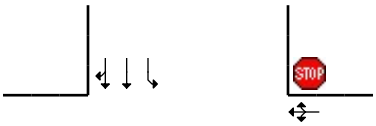


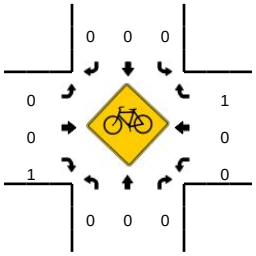
Peak-Hour: 7:05 AM -- 8:05 AM

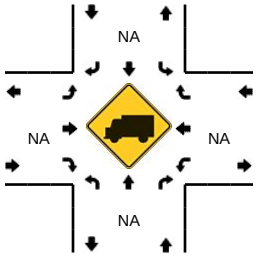
Peak 15-Min: 7:40 AM -- 7:55 AM

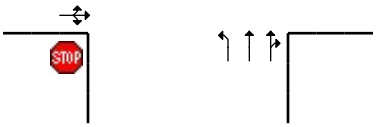


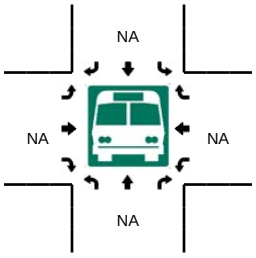












5-Min Count Period Beginning At	River Rd N (Northbound)				River Rd N (Southbound)				Safeway South Dwy (Eastbound)				Safeway South Dwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	5	41	2	0	0	84	5	0	3	0	5	0	2	0	0	0	147	
7:05 AM	2	57	4	0	0	92	2	0	1	0	7	0	0	0	0	0	165	
7:10 AM	1	46	2	0	0	85	5	0	0	0	4	0	0	0	0	0	143	
7:15 AM	1	45	0	0	0	94	4	0	3	0	2	0	1	0	0	0	150	
7:20 AM	4	38	0	0	0	114	6	0	2	0	0	0	0	0	1	0	165	
7:25 AM	2	54	2	0	0	116	7	0	1	1	3	0	1	0	0	0	187	
7:30 AM	2	48	1	0	0	113	10	0	0	0	6	0	0	0	0	0	180	
7:35 AM	0	47	2	0	0	121	6	0	1	0	8	0	0	0	0	0	185	
7:40 AM	1	44	3	0	0	138	6	0	1	0	5	0	2	0	0	0	200	
7:45 AM	2	57	4	0	1	134	7	0	0	0	4	0	2	0	0	0	211	
7:50 AM	2	69	2	0	0	128	3	0	4	0	3	0	0	0	0	0	211	
7:55 AM	1	56	1	0	1	91	4	0	2	0	0	0	1	0	0	0	157	2101
8:00 AM	0	47	1	0	0	86	0	0	0	0	3	0	2	0	0	0	139	2093
8:05 AM	3	56	4	0	1	83	8	0	2	0	1	0	1	0	0	0	159	2087
8:10 AM	4	46	3	0	0	81	4	0	1	0	3	0	1	1	0	0	144	2088
8:15 AM	0	69	1	0	0	66	1	0	3	1	2	0	1	0	1	0	145	2083
8:20 AM	1	57	0	0	0	60	7	0	2	0	4	0	0	0	0	0	131	2049
8:25 AM	1	58	2	0	0	61	0	0	2	0	5	0	1	0	0	0	130	1992
8:30 AM	2	49	1	0	0	73	4	0	2	0	0	0	0	0	0	0	131	1943
8:35 AM	0	41	0	0	0	73	4	0	2	0	2	0	2	0	0	0	124	1882
8:40 AM	0	57	4	0	1	90	4	0	0	0	3	0	0	0	0	0	159	1841
8:45 AM	2	62	1	0	0	84	4	0	2	0	4	0	2	0	0	0	161	1791
8:50 AM	1	48	4	0	0	70	3	0	1	0	1	0	1	0	1	0	130	1710
8:55 AM	1	75	2	0	2	78	3	0	0	0	4	0	0	0	0	0	165	1718

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	20	680	36	0	4	1600	64	0	20	0	48	0	16	0	0	0	2488
Heavy Trucks	0	48	4		0	40	0		0	0	0		0	0	0		92
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/24/2017 11:44 AM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

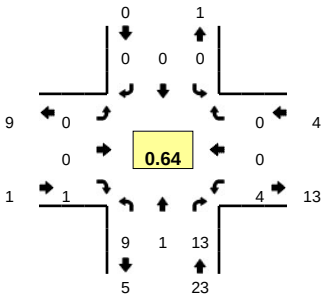
LOCATION: 7th Ave NE/Safeway East Dwy -- Chemawa Rd

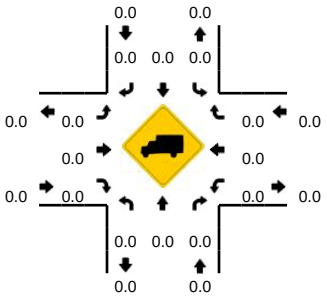
QC JOB #: 14224702

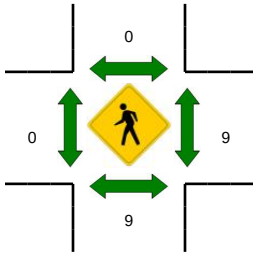
CITY/STATE: Keizer, OR

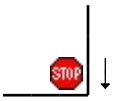
DATE: Wed, Feb 15 2017

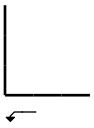
Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 4:40 PM -- 4:55 PM

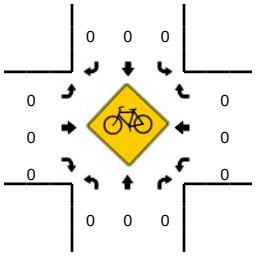


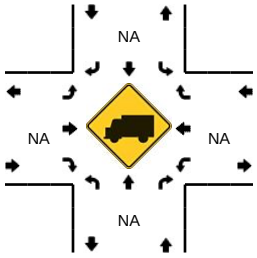


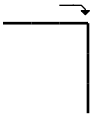


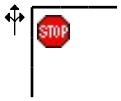


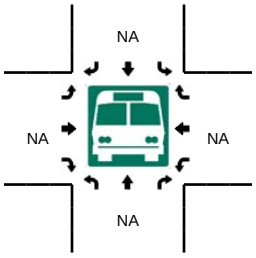












5-Min Count Period Beginning At	7th Ave NE/Safeway East Dwy (Northbound)				7th Ave NE/Safeway East Dwy (Southbound)				Chemawa Rd (Eastbound)				Chemawa Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
4:05 PM	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
4:10 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	
4:15 PM	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	3	
4:20 PM	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
4:25 PM	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	2	
4:30 PM	1	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	3	
4:35 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
4:40 PM	2	0	3	0	0	0	0	0	0	0	0	0	2	0	0	0	7	
4:45 PM	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	2	
4:50 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
4:55 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	2	32
5:00 PM	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	30
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
5:10 PM	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	29
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	26
5:20 PM	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	26
5:25 PM	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	27
5:30 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2	26
5:35 PM	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	28
5:40 PM	0	0	4	0	0	0	0	0	0	0	0	0	1	0	0	0	5	26
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
5:50 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	23
5:55 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	22

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	8	0	20	0	0	0	0	0	0	0	4	0	12	0	0	0	44
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Pedestrians		12				0				0				12			24
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/24/2017 11:46 AM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

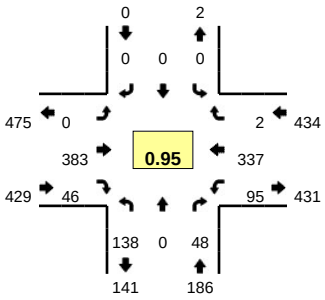
LOCATION: Safeway Center Dwy -- Chemawa Rd NE

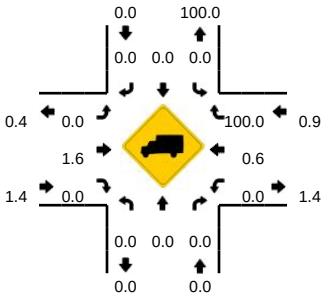
QC JOB #: 14224704

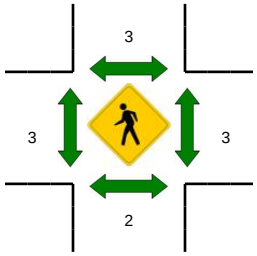
CITY/STATE: Keizer, OR

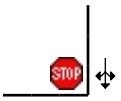
DATE: Wed, Feb 15 2017

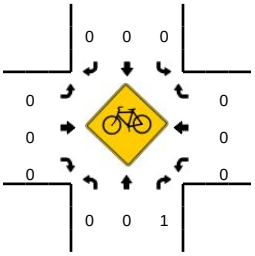
Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 4:45 PM -- 5:00 PM

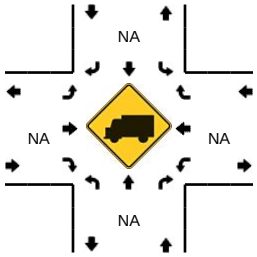


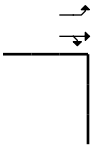


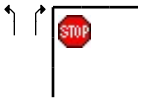


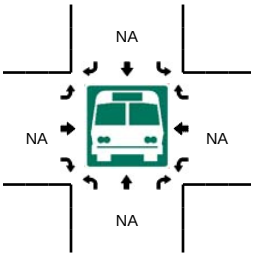












5-Min Count Period Beginning At	Safeway Center Dwy (Northbound)				Safeway Center Dwy (Southbound)				Chemawa Rd NE (Eastbound)				Chemawa Rd NE (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	11	0	3	0	0	0	0	0	0	26	7	0	10	27	0	0	84	
4:05 PM	17	0	7	0	0	0	0	0	0	29	5	0	3	16	0	0	77	
4:10 PM	18	0	3	0	0	0	0	0	0	25	4	0	5	28	0	0	83	
4:15 PM	8	0	3	0	0	0	0	0	0	31	9	0	7	33	0	0	91	
4:20 PM	10	0	5	0	0	0	0	0	0	18	2	0	5	28	0	0	68	
4:25 PM	12	0	7	0	0	0	0	0	0	26	4	0	5	27	0	0	81	
4:30 PM	11	0	7	0	0	0	0	0	0	24	3	0	10	32	0	0	87	
4:35 PM	12	0	4	0	0	0	0	0	0	24	6	0	3	37	0	0	86	
4:40 PM	5	0	4	0	0	0	0	0	0	29	2	0	9	31	0	0	80	
4:45 PM	14	0	4	0	0	0	0	0	0	32	1	0	7	35	0	0	93	
4:50 PM	15	0	4	0	0	0	0	0	0	39	7	0	2	26	0	0	93	
4:55 PM	9	0	3	0	0	0	0	0	0	36	4	0	11	27	0	0	90	1013
5:00 PM	13	0	7	0	0	0	0	0	0	27	4	0	1	30	1	0	83	1012
5:05 PM	12	0	7	0	0	0	0	0	0	27	2	0	8	15	0	0	71	1006
5:10 PM	7	0	4	0	0	0	0	0	0	33	4	0	8	32	1	0	89	1012
5:15 PM	14	0	3	0	0	0	0	0	0	26	7	0	9	28	0	0	87	1008
5:20 PM	10	0	2	0	0	0	0	0	0	40	5	0	9	29	0	0	95	1035
5:25 PM	12	0	4	0	0	0	0	0	0	29	4	0	10	30	0	0	89	1043
5:30 PM	10	0	2	0	0	0	0	0	0	30	3	0	15	26	0	0	86	1042
5:35 PM	17	0	4	0	0	0	0	0	0	35	3	0	6	28	0	0	93	1049
5:40 PM	18	0	6	0	0	0	0	0	0	37	8	0	8	20	0	0	97	1066
5:45 PM	15	0	7	0	0	0	0	0	0	15	3	0	5	37	0	0	82	1055
5:50 PM	12	0	9	0	0	0	2	0	0	33	3	0	9	23	0	0	91	1053
5:55 PM	12	0	8	0	0	0	0	0	0	26	8	0	3	23	0	0	80	1043

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	152	0	44	0	0	0	0	0	0	428	48	0	80	352	0	0	1104
Heavy Trucks	0	0	0		0	0	0		0	16	0		0	4	0		20
Pedestrians		0				0				0				0			0
Bicycles	0	0	1		0	0	0		0	0	0		0	0	0		1
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/24/2017 11:46 AM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

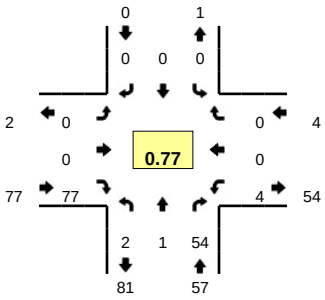
LOCATION: Safeway West Dwy -- Chemawa Rd

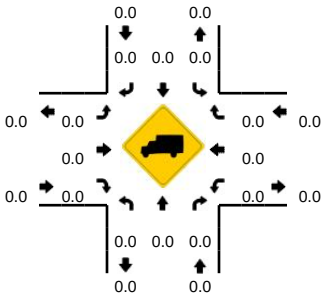
QC JOB #: 14224706

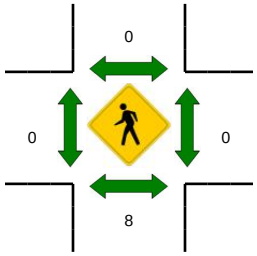
CITY/STATE: Keizer, OR

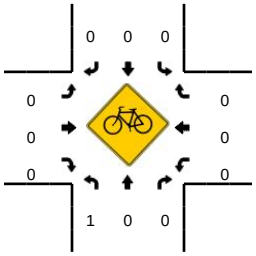
DATE: Wed, Feb 15 2017

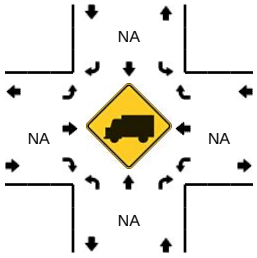
Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 5:15 PM -- 5:30 PM

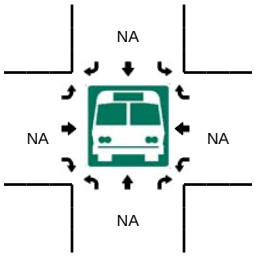












5-Min Count Period Beginning At	Safeway West Dwy (Northbound)				Safeway West Dwy (Southbound)				Chemawa Rd (Eastbound)				Chemawa Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	1	5	0	0	0	0	0	0	0	8	0	0	0	0	0	14	
4:05 PM	0	0	1	0	0	0	0	0	0	0	4	0	0	0	0	0	5	
4:10 PM	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	4	
4:15 PM	0	0	7	0	0	0	0	0	0	0	2	0	1	0	0	0	10	
4:20 PM	0	0	2	0	0	0	0	0	0	0	4	0	1	0	0	0	7	
4:25 PM	1	0	4	0	0	0	0	0	0	0	5	0	0	0	0	0	10	
4:30 PM	0	0	7	0	0	0	0	0	0	0	4	0	0	0	0	0	11	
4:35 PM	0	0	8	0	0	0	0	0	0	0	3	0	0	0	0	0	11	
4:40 PM	0	0	9	0	0	0	0	0	0	0	5	0	0	0	0	0	14	
4:45 PM	0	0	1	0	0	0	0	0	0	0	3	0	0	0	0	0	4	
4:50 PM	0	1	4	0	0	0	0	0	0	0	2	0	0	0	0	0	7	
4:55 PM	0	0	2	0	0	0	0	0	0	0	6	0	0	0	0	0	8	105
5:00 PM	0	0	3	0	0	0	0	0	0	0	5	0	0	0	0	0	8	99
5:05 PM	0	0	3	0	0	0	0	0	0	0	9	0	0	0	0	0	12	106
5:10 PM	1	0	5	0	0	0	0	0	0	0	4	0	0	0	0	0	10	112
5:15 PM	1	0	4	0	0	0	0	0	0	0	11	0	1	0	0	0	17	119
5:20 PM	0	0	7	0	0	0	0	0	0	0	5	0	1	0	0	0	13	125
5:25 PM	0	0	6	0	0	0	0	0	0	0	9	0	0	0	0	0	15	130
5:30 PM	0	0	4	0	0	0	0	0	0	0	10	0	2	0	0	0	16	135
5:35 PM	0	0	6	0	0	0	0	0	0	0	8	0	0	0	0	0	14	138
5:40 PM	1	0	7	0	0	0	0	0	0	0	3	0	0	0	0	0	11	135
5:45 PM	0	0	3	0	0	0	0	0	0	0	7	0	1	0	0	0	11	142
5:50 PM	0	0	8	0	0	0	0	0	0	0	10	0	0	0	0	0	18	153
5:55 PM	0	0	1	0	0	0	0	0	0	0	8	0	0	0	0	0	9	154

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	4	0	68	0	0	0	0	0	0	0	100	0	8	0	0	0	180
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/24/2017 11:46 AM

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

Type of peak hour being reported: User-Defined

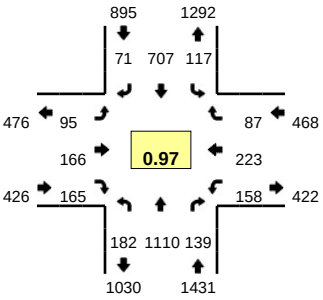
Method for determining peak hour: Total Entering Volume

LOCATION: River Rd N -- Chemawa Rd N

QC JOB #: 14224708

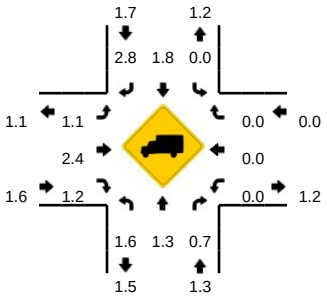
CITY/STATE: Keizer, OR

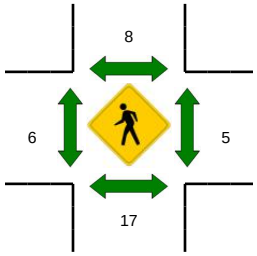
DATE: Wed, Feb 15 2017

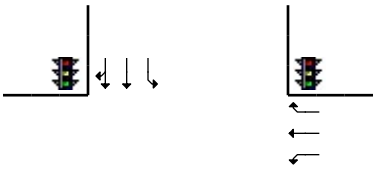


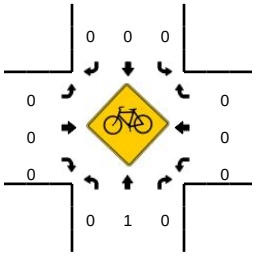
Peak-Hour: 4:40 PM -- 5:40 PM

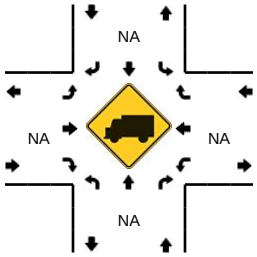
Peak 15-Min: 5:25 PM -- 5:40 PM

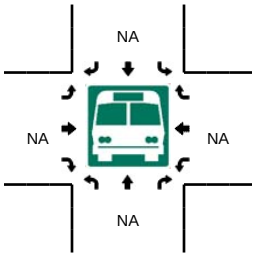












5-Min Count Period Beginning At	River Rd N (Northbound)				River Rd N (Southbound)				Chemawa Rd N (Eastbound)				Chemawa Rd N (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	17	69	12	0	13	61	7	0	8	12	18	0	17	21	12	0	267	
4:05 PM	9	83	16	0	8	76	5	0	11	9	14	0	7	14	5	0	257	
4:10 PM	15	96	10	0	9	57	4	0	4	8	11	0	14	13	9	0	250	
4:15 PM	14	79	9	0	11	46	12	0	8	17	20	0	20	23	5	0	264	
4:20 PM	12	104	8	0	8	55	4	0	8	11	13	0	15	14	6	0	258	
4:25 PM	12	84	10	0	12	50	5	0	8	3	6	0	9	14	6	0	219	
4:30 PM	16	60	5	0	8	55	4	0	10	11	12	0	14	17	15	0	227	
4:35 PM	25	76	5	0	5	61	4	0	6	13	20	0	15	19	9	0	258	
4:40 PM	13	95	14	0	5	85	5	0	8	10	17	0	11	19	2	0	284	
4:45 PM	20	77	11	0	7	47	5	0	11	16	13	0	15	15	9	0	246	
4:50 PM	12	70	15	0	8	60	6	0	6	16	16	0	11	31	12	0	263	
4:55 PM	15	108	11	0	14	81	3	0	4	11	11	0	10	15	5	0	288	3081
5:00 PM	16	78	7	0	6	38	7	0	8	17	8	0	22	16	9	0	232	3046
5:05 PM	13	83	6	0	11	59	4	0	9	20	22	0	11	17	9	0	264	3053
5:10 PM	21	108	12	0	9	67	5	0	7	10	18	0	8	12	8	0	285	3088
5:15 PM	14	110	11	0	11	48	2	0	8	17	8	0	12	13	11	0	265	3089
5:20 PM	13	88	10	0	8	47	11	0	8	16	13	0	15	26	6	0	261	3092
5:25 PM	17	108	13	0	13	59	4	0	6	9	12	0	12	24	3	0	280	3153
5:30 PM	15	98	14	0	13	65	9	0	4	11	7	0	11	13	6	0	266	3192
5:35 PM	13	87	15	0	12	51	10	0	16	13	20	0	20	22	7	0	286	3220
5:40 PM	17	78	15	0	11	35	6	0	7	15	9	0	13	11	7	0	224	3160
5:45 PM	21	98	9	0	4	74	5	0	11	10	10	0	9	17	10	0	278	3192
5:50 PM	8	69	13	0	13	54	2	0	9	14	14	0	14	12	7	0	229	3158
5:55 PM	18	79	8	0	11	44	8	0	10	17	16	0	6	30	10	0	257	3127

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	180	1172	168	0	152	700	92	0	104	132	156	0	172	236	64	0	3328
Heavy Trucks	4	16	0		0	16	8		0	0	0		0	0	0		44
Pedestrians		20				8				4				4			36
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/24/2017 11:46 AM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

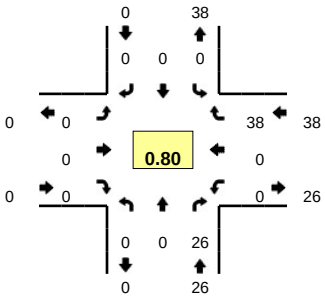
LOCATION: River Rd N -- Safeway North Dwy

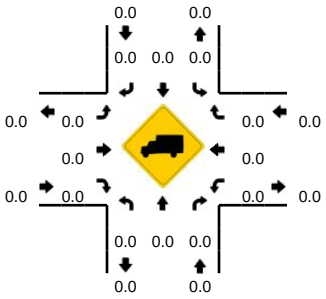
QC JOB #: 14224710

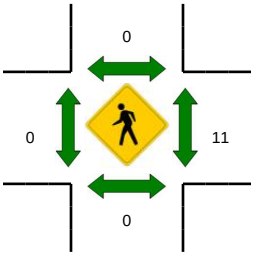
CITY/STATE: Keizer, OR

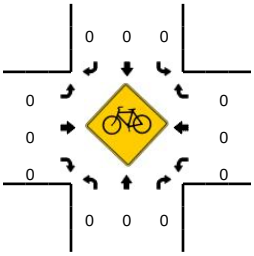
DATE: Wed, Feb 15 2017

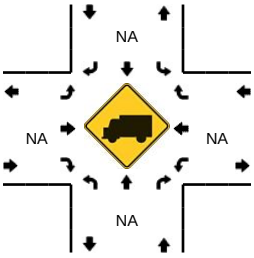
Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

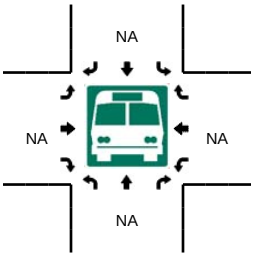












5-Min Count Period Beginning At	River Rd N (Northbound)				River Rd N (Southbound)				Safeway North Dwy (Eastbound)				Safeway North Dwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	3	0	7	
4:05 PM	0	0	5	0	0	0	0	0	0	0	0	0	0	0	1	0	6	
4:10 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	3	0	7	
4:15 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	2	
4:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	
4:25 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4	0	5	
4:30 PM	0	0	7	0	1	0	0	0	0	0	0	0	0	0	5	0	13	
4:35 PM	0	0	2	0	1	0	0	0	0	0	0	0	0	0	5	0	8	
4:40 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	2	0	6	
4:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	3	
4:50 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	0	3	
4:55 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0	6	68
5:00 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	1	0	3	64
5:05 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4	0	5	63
5:10 PM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	4	0	6	62
5:15 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	5	0	9	69
5:20 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	71
5:25 PM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	4	0	5	71
5:30 PM	0	0	4	0	0	0	0	0	0	0	0	0	0	0	3	0	7	65
5:35 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	4	0	7	64
5:40 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	61
5:45 PM	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0	6	64
5:50 PM	0	0	3	0	1	0	0	0	0	0	0	0	0	0	4	0	8	69
5:55 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	69

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	0	0	28	0	0	0	0	0	0	0	0	0	0	0	52	0	80
Heavy Trucks	0	0	0		0	0	0		0	0	0		0	0	0		0
Pedestrians		0				0				0				4			4
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/24/2017 11:46 AM

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

Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

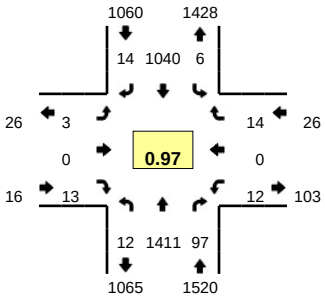
LOCATION: River Rd N -- Safeway South Dwy

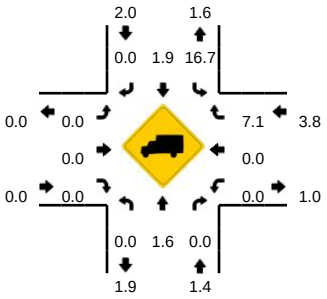
QC JOB #: 14224712

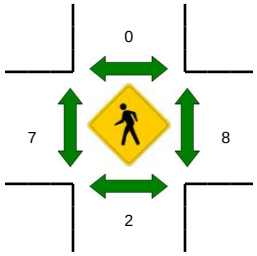
CITY/STATE: Keizer, OR

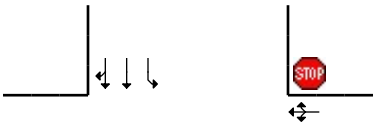
DATE: Wed, Feb 15 2017

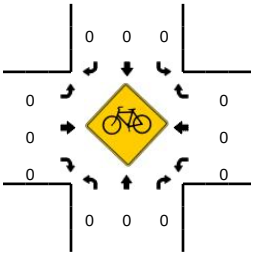
Peak-Hour: 4:40 PM -- 5:40 PM
Peak 15-Min: 5:05 PM -- 5:20 PM

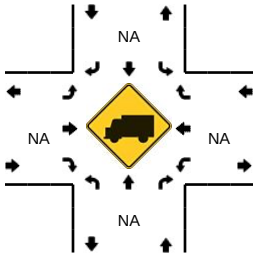


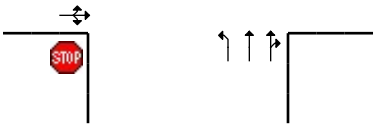


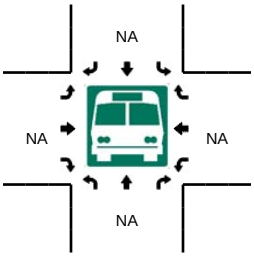












5-Min Count Period Beginning At	River Rd N (Northbound)				River Rd N (Southbound)				Safeway South Dwy (Eastbound)				Safeway South Dwy (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	1	100	10	0	0	105	1	0	2	0	1	0	1	0	3	0	224	
4:05 PM	1	101	7	1	0	100	0	0	1	0	0	0	0	0	0	0	211	
4:10 PM	2	128	9	0	0	83	2	0	2	0	3	0	2	0	2	0	233	
4:15 PM	2	109	11	0	1	86	2	0	1	0	1	0	0	0	4	0	217	
4:20 PM	0	107	9	0	1	80	1	0	0	0	0	0	0	0	1	0	199	
4:25 PM	0	103	11	0	0	67	1	0	1	0	0	0	0	0	2	0	185	
4:30 PM	1	91	6	0	2	80	1	0	0	0	0	0	0	0	1	0	182	
4:35 PM	2	109	9	0	0	95	1	0	0	0	1	0	0	0	2	0	219	
4:40 PM	1	114	8	0	1	109	2	0	0	0	1	0	1	0	1	0	238	
4:45 PM	2	113	8	0	1	78	2	0	0	0	3	0	0	0	5	0	212	
4:50 PM	1	96	5	0	0	89	1	0	2	0	0	0	2	0	0	0	196	
4:55 PM	1	131	6	0	0	91	2	0	0	0	1	0	1	0	0	0	233	2549
5:00 PM	0	108	7	0	0	69	1	0	0	0	4	0	1	0	0	0	190	2515
5:05 PM	3	113	10	0	1	97	0	0	0	0	0	0	1	0	1	0	226	2530
5:10 PM	2	118	11	0	1	92	2	0	0	0	1	0	2	0	2	0	231	2528
5:15 PM	0	139	7	0	1	70	1	0	1	0	0	0	0	0	0	0	219	2530
5:20 PM	0	120	11	0	0	81	1	0	0	0	2	0	0	0	4	0	219	2550
5:25 PM	0	113	8	0	1	83	0	0	0	0	0	0	2	0	0	0	207	2572
5:30 PM	0	134	5	0	0	88	1	0	0	0	0	0	0	0	1	0	229	2619
5:35 PM	2	112	11	0	0	93	1	0	0	0	1	0	2	0	0	0	222	2622
5:40 PM	1	108	10	0	1	67	0	0	0	0	2	0	3	0	2	0	194	2578
5:45 PM	0	123	6	0	1	86	0	0	0	0	2	0	0	0	5	0	223	2589
5:50 PM	0	108	5	0	1	84	2	0	0	0	0	0	0	0	1	0	201	2594
5:55 PM	0	89	5	0	1	68	1	0	0	0	0	0	3	0	1	0	168	2529

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	20	1480	112	0	12	1036	12	0	4	0	4	0	12	0	12	0	2704
Heavy Trucks	0	20	0		0	20	0		0	0	0		0	0	0		40
Pedestrians		8				0				12				12			32
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 2/24/2017 11:46 AM

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

Attachment C Crash Data

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

N Chemawa Rd & N River Rd
January 1, 2010 through December 31, 2014

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2014														
REAR-END	0	4	0	4	0	5	0	4	0	3	1	4	0	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	1	0	0
2014 TOTAL	0	4	1	5	0	5	0	5	0	4	1	5	0	0
YEAR: 2013														
REAR-END	0	0	1	1	0	0	0	1	0	1	0	1	0	0
2013 TOTAL	0	0	1	1	0	0	0	1	0	1	0	1	0	0
YEAR: 2012														
REAR-END	0	2	2	4	0	3	0	3	1	4	0	4	0	0
TURNING MOVEMENTS	0	2	0	2	0	3	0	1	1	1	1	2	0	0
2012 TOTAL	0	4	2	6	0	6	0	4	2	5	1	6	0	0
YEAR: 2011														
REAR-END	0	1	4	5	0	3	1	5	0	5	0	5	0	0
TURNING MOVEMENTS	0	1	1	2	0	3	0	1	1	2	0	2	0	0
2011 TOTAL	0	2	5	7	0	6	1	6	1	7	0	7	0	0
YEAR: 2010														
PEDESTRIAN	0	1	0	1	0	1	0	0	1	1	0	1	0	0
REAR-END	0	2	1	3	0	4	0	3	0	3	0	3	0	0
SIDESWIPE - OVERTAKING	0	0	1	1	0	0	0	1	0	1	0	1	0	0
2010 TOTAL	0	3	2	5	0	5	0	4	1	5	0	5	0	0
FINAL TOTAL	0	13	11	24	0	22	1	20	4	22	2	24	0	0

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

CITY OF KEIZER, MARION COUNTY

N Chemawa Rd & N River Rd

January 1, 2010 through December 31, 2014

SER# / INVEST / UNLOC?	SPEED	ALCHL	DRUGS	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
00460	N	N	N	N	N	02/11/2010	14	CHEMAWA RD N	INTER	CROSS	N	N	CLD	S-1STOP	01	NONE 0	STRGHT										013	32,27
CITY						Thu 12P	0	RIVER RD N	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N S									000		00
No	*44 59 48.89*		*-123*	*1 35.92*		1		1	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	22	M	OR-Y OR<25		052,016,026	000		32,27
																		02	PSNG	INJC	21	M			000	000		00
															02	NONE 0	STOP											
																PRVTE	N S									011	013	00
																PSNGR CAR		01	DRVR	INJC	29	F	OR-Y OR<25		000	000		00
															03	NONE 0	STOP											
																PRVTE	N S									022		00
																PSNGR CAR		01	DRVR	INJC	38	M	OR-Y OR<25		000	000		00
03291	N	N	N			10/01/2010	14	CHEMAWA RD N	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										004,013	32
CITY						Fri 1P	0	RIVER RD N	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N S									000		00
No	*44 59 48.89*		*-123*	*1 35.92*		1		1	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	23	F	OR-Y OR<25		052,026	000		32
															02	NONE 0	STOP											
																PRVTE	N S									011	013	00
																PSNGR CAR		01	DRVR	INJC	26	F	OR-Y OR<25		000	000		00
															03	NONE 0	STOP											
																PRVTE	N S									022	004	00
																PSNGR CAR		01	DRVR	NONE	46	M	OR-Y OR<25		000	000		00
02847	N	N	N			08/29/2011	14	CHEMAWA RD N	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE						Mon 1P	0	RIVER RD N	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N S									000		00
No	*44 59 48.91*		*-123*	*1 35.92*		1		1	06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	42	F	OR-Y OR<25		026	000		07
															02	NONE 0	STOP											
																PRVTE	N S									011		00
																PSNGR CAR		01	DRVR	NONE	26	F	OR-Y OR>25		000	000		00
03227	N	N	N			09/25/2012	14	CHEMAWA RD N	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										004,013	32
CITY						Tue 1P	0	RIVER RD N	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N S									000	013	00
No	*44 59 48.89*		*-123*	*1 35.92*		1		1	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	37	F	OR-Y OR<25		052,026	000		32
															02	NONE 0	STOP											
																PRVTE	N S									022	004	00
																PSNGR CAR		01	DRVR	INJC	65	F	OR-Y OR<25		000	000		00
															03	NONE 0	STRGHT											
																PRVTE	N S									000		00
																PSNGR CAR		01	DRVR	NONE	95	M	OR-Y OR<25		052,026	000		32

CITY OF KEIZER, MARION COUNTY

N Chemawa Rd & N River Rd

January 1, 2010 through December 31, 2014

SER# / INVEST / UNLOC?	SPEED	ALCHL	DRUGS	SCHL	WORK	DATE / DAY/TIME / LAT/LONG	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
00379	N	N	N			01/31/2013	14	CHEMAWA RD N	INTER	CROSS	N	N	CLD	S-1STOP	01	NONE 0	STRGHT										32,07
CITY						Thu 2P	0	RIVER RD N	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N S									000		00
No						*44 59 48.89 -123 1 35.92*		1	06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	21	F	SUSP OR<25		052,026	000		32,07
															02	NONE 0	STOP											
																PRVTE	N S									011		00
																PSNGR CAR		01	DRVR	NONE	57	M	OR-Y OR<25		000	000		00
03685	N	N	N			10/21/2014	14	CHEMAWA RD N	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										22
NONE						Tue 10A	0	RIVER RD N	N		TRF SIGNAL	N	DRY	REAR		PRVTE	N S									000		00
No						*44 59 48.89 -123 1 35.92*		1	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	71	F	OR-Y OR<25		017	000		00
															02	NONE 0	STOP											
																PRVTE	N S									011		22
																PSNGR CAR		01	DRVR	INJC	48	F	OR-Y OR<25		000	000		00
00459	N	N	N	N	N	02/11/2010	14	CHEMAWA RD N	INTER	CROSS	N	N	CLD	PED	01	NONE 0	TURN-R										02
CITY						Thu 4P	0	RIVER RD N	S		TRF SIGNAL	N	WET	PED		PRVTE	W S									016		00
No						*44 59 48.89 -123 1 35.92*		1	05	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	36	F	SUSP OR<25		029	000		02
																	STRGHT S N	01	PED	INJC	42	F		01	000	035		00
03166	N	N	N			09/19/2012	14	CHEMAWA RD N	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	TURN-L										013	32,05,04
CITY						Wed 2P	0	RIVER RD N	S		L-GRN-SIG	N	DRY	TURN		PRVTE	E S									000	013	00
No						*44 59 48.89 -123 1 35.92*		1	05	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	47	M	OR-Y OR<25		000	000		00
															02	NONE 0	STRGHT											
																PRVTE	S N									000	013	00
																PSNGR CAR		01	DRVR	INJC	72	F	OR-Y OR<25		052,039,020	000		32,05,04
															03	NONE 0	TURN-L											
																PRVTE	E S									000		00
																PSNGR CAR		01	DRVR	NONE	36	F	OR-Y OR<25		000	000		00
															04	NONE 0	STOP											
																PRVTE	S N									012		00
																PSNGR CAR		01	DRVR	NONE	49	M	OR-Y OR<25		000	000		00
01110	N	N	N			04/12/2010	14	CHEMAWA RD N	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										07
NONE						Mon 5P	0	RIVER RD N	S		L-GRN-SIG	N	DRY	REAR		PRVTE	S N									000		00
No						*44 59 48.89 -123 1 35.92*		1	06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	23	F	OR-Y OR<25		026	000		07
															02	TAXI 0	STOP											
																PRVTE	S N									011		00
																PSNGR CAR		01	DRVR	NONE	50	M	OR-Y OR<25		000	000		00

CITY OF KEIZER, MARION COUNTY

N Chemawa Rd & N River Rd

January 1, 2010 through December 31, 2014

SER# / INVEST / UNLOC?	SPEED	ALCHL	DRUGS	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
02401	N	N	N	N	N	07/25/2010	14	CHEMAWA RD N	INTER	CROSS	N	N	CLR	S-STRGHT	01	NONE 0	STRGHT											27
CITY						Sun 6P 0		RIVER RD N	S		L-GRN-SIG	N	DRY	SS-O		PRVTE	S N									000		00
No						*44 59 48.89 -123 1 35.92*		1	06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	49	F	OR-Y OR<25		016,080	017		27
															02	NONE 1	STOP											
																PRVTE	S N									012		00
																PSNGR CAR		01	DRVR	NONE	27	M	OR-Y OR<25		000	000		00
00349	N	N	N			02/05/2011	14	CHEMAWA RD N	INTER	CROSS	N	N	CLD	S-1STOP	01	NONE 0	STRGHT											27
NONE						Sat 4P 0		RIVER RD N	S		TRF SIGNAL	N	DRY	REAR		PRVTE	S N									000		00
No						*44 59 48.91 -123 1 35.92*		1	06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	34	F	OR-Y OR<25		016,026	000		27
															02	NONE 0	STOP											
																PRVTE	S N									011		00
																PSNGR CAR		01	DRVR	NONE	32	M	OR-Y OR<25		000	000		00
00973	N	N	N			03/04/2011	14	CHEMAWA RD N	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE						Fri 3P 0		RIVER RD N	S		TRF SIGNAL	N	DRY	REAR		RENTL	S N									000		00
No						*44 59 48.91 -123 1 35.92*		1	06	0		N	DAY	PDO		TRUCK		01	DRVR	NONE	00	U	UNK UNK		026	000		07
															02	NONE 0	STOP											
																PRVTE	S N									011		00
																PSNGR CAR		01	DRVR	NONE	41	M	OR-Y OR<25		000	000		00
02894	N	N	N	N	N	09/03/2011	14	CHEMAWA RD N	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT										013	32
CITY						Sat 3P 0		RIVER RD N	S		TRF SIGNAL	N	DRY	REAR		PRVTE	S N									000		00
No						*44 59 48.91 -123 1 35.92*		1	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	49	M	OR-Y OR<25		052,026	000		32
															02	NONE 0	STOP											
																PRVTE	S N									011	013	00
																PSNGR CAR		01	DRVR	INJC	20	M	OR-Y OR<25		000	000		00
																		02	PSNG	INJC	19	F			000	000		00
															03	NONE 0	STOP											
																PRVTE	S N									022	013	00
																PSNGR CAR		01	DRVR	NONE	69	F	OR-Y OR<25		000	000		00
															04	NONE 0	STOP											
																PRVTE	S N									022		00
																PSNGR CAR		01	DRVR	INJC	34	F	OR-Y OR<25		000	000		00
00497	N	N	N			02/11/2012	14	CHEMAWA RD N	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NO RPT						Sat 3P 0		RIVER RD N	S		TRF SIGNAL	N	DRY	REAR		PRVTE	S N									000		00
No						*44 59 48.89 -123 1 35.92*		1	06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	18	F	OR-Y OR<25		026	000		07

CITY OF KEIZER, MARION COUNTY — N Chemawa Rd & N River Rd

January 1, 2010 through December 31, 2014

SER# / INVEST / UNLOC?	SPEED	ALC	DRUGS	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
															02	NONE 0 / PRVTE / PSNGR CAR	STOP / S N	01	DRVR	NONE	00	M	OR-Y OR<25		000	011 / 000		00 / 00
02219	N	N	N			07/07/2012 / Sat 8P 0 / *44 59 48.89 -123 1 35.92*	14 / 0 / 1	CHEMAWA RD N / RIVER RD N / INTERSECTION SEQ #	INTER / S / 06	CROSS / TRF SIGNAL / 0	N / N / N	N / N / N	CLR / DRY / DAY	S-1STOP / REAR / PDO	01	NONE 0 / PRVTE / PSNGR CAR	STRGHT / S N	01	DRVR	NONE	00	F	OR-Y UNK		026	000		07 / 00 / 07
NONE																												
No																												
															02	NONE 0 / PRVTE / PSNGR CAR	STOP / S N	01	DRVR	NONE	61	M	OR-Y OR<25		000	012 / 000		00 / 00
02863	N	N	N	N	N	08/26/2012 / Sun 7P 0 / *44 59 48.89 -123 1 35.92*	14 / 0 / 1	CHEMAWA RD N / RIVER RD N / INTERSECTION SEQ #	INTER / S / 06	CROSS / TRF SIGNAL / 0	N / N / N	N / N / N	RAIN / WET / DAY	S-1STOP / REAR / INJ	01	NONE 0 / PRVTE / PSNGR CAR	STRGHT / S N	01	DRVR	NONE	30	M	OR-Y OR<25		043,026	000		07 / 00 / 07
CITY																												
No																												
															02	NONE 0 / PRVTE / PSNGR CAR	STOP / S N	01	DRVR	NONE	20	M	OR-Y OR<25		000	011 013 / 000		00 / 00
																		02	PSNG	INJC	17	F			000	000		00
																		03	PSNG	INJC	16	F			000	000		00
															03	NONE 0 / PRVTE / PSNGR CAR	STOP / S N	01	DRVR	NONE	50	M	OR-Y OR<25		000	022 / 000		00 / 00
02386	N	N	N			07/18/2014 / Fri 1P 0 / *44 59 48.89 -123 1 35.92*	14 / 0 / 1	CHEMAWA RD N / RIVER RD N / INTERSECTION SEQ #	INTER / S / 06	CROSS / TRF SIGNAL / 0	N / N / N	N / N / N	CLR / DRY / DAY	S-1STOP / REAR / INJ	01	NONE 0 / PRVTE / PSNGR CAR	STRGHT / S N	01	DRVR	NONE	24	F	OR-Y OR<25		026	000	004	07 / 00 / 07
NONE																												
No																												
															02	NONE 0 / PRVTE / PSNGR CAR	STOP / S N	01	DRVR	INJC	16	M	OR-Y OR<25		000	011 004 / 000		00 / 00
04101	N	N	N			12/02/2011 / Fri 3P 0 / *44 59 48.91 -123 1 35.92*	16 / 0 / 1	CHEMAWA RD N / RIVER RD N / INTERSECTION SEQ #	INTER / W / 06	CROSS / R-GRN-SIG / 0	N / N / N	N / N / N	CLR / DRY / DAY	S-1STOP / REAR / PDO	01	NONE 0 / PRVTE / PSNGR CAR	STRGHT / W E	01	DRVR	NONE	00	M	OR-Y OR<25		026	000		07 / 00 / 07
NONE																												
No																												
															02	NONE 0 / PRVTE / PSNGR CAR	STOP / W E	01	DRVR	NONE	44	F	OR-Y OR<25		000	011 / 000		00 / 00
01673	N	N	N			05/20/2014 / Tue 2P 0 / *44 59 48.89 -123 1 35.92*	16 / 0 / 1	CHEMAWA RD N / RIVER RD N / INTERSECTION SEQ #	INTER / W / 06	CROSS / TRF SIGNAL / 0	N / N / N	N / N / N	CLR / DRY / DAY	S-1STOP / REAR / INJ	01	NONE 0 / PRVTE / PSNGR CAR	STRGHT / E W	01	DRVR	NONE	18	M	OR-Y OR<25		026,014	000		29 / 00 / 29
NONE																												
No																												

CITY OF KEIZER, MARION COUNTY — N Chemawa Rd & N River Rd

January 1, 2010 through December 31, 2014

SER# / INVEST / UNLOC?	SPEED	ALCHL	DRUGS	SCHL	WORK	DATE / DAY/TIME / LAT/LONG	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
															02	NONE 0 / PRVTE / PSNGR CAR	STOP / E W	01	DRVR	NONE	38	F	OR-Y OR>25			011		00
																		02	PSNG	NO<5	02	M			000	000		00
																		03	PSNG	INJC	16	F			000	000		00
03312	N	N	N			09/25/2014	16	CHEMAWA RD N	INTER	CROSS	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE						Thu 8P	0	RIVER RD N	W		TRF SIGNAL	N	DRY	REAR		PRVTE	W E									000		00
No						*44 59 48.89 -123 1 35.92*		1	06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	00	M	UNK OR<25		026	000		07
															02	NONE 0 / PRVTE / PSNGR CAR	STOP / W E	01	DRVR	INJC	44	F	OR-Y OR<25		000	011		00
																		02	PSNG	INJC	06	M			000	000		00
01324	N	N	N	N	N	04/25/2011	14	CHEMAWA RD N	INTER	CROSS	N	N	CLD	O-1 L-TURN	01	NONE 0	STRGHT										013	04
CITY						Mon 7A	0	RIVER RD N	CN		TRF SIGNAL	N	WET	TURN		PRVTE	S N									000		00
No						*44 59 48.91 -123 1 35.92*		1	02	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	78	M	OR-Y OR<25		020	000		04
															02	NONE 0 / PRVTE / PSNGR CAR	TURN-L / N E	01	DRVR	INJC	40	F	OR-Y OR<25		000	000	013	00
															03	NONE 0 / PRVTE / PSNGR CAR	STOP / N S	01	DRVR	INJC	32	M	OR-Y OR<25		000	013		00
02807	N	N	N			08/19/2014	14	CHEMAWA RD N	INTER	CROSS	N	N	CLR	ANGL-OTH	01	NONE 0	TURN-R											02
NONE						Tue 5P	0	RIVER RD N	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	W S									000		00
No						*44 59 48.89 -123 1 35.92*		1	03	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	28	F	OR-Y OR<25		028	000		02
															02	NONE 0 / PRVTE / PSNGR CAR	STRGHT / N S	01	DRVR	NONE	48	M	OR-Y OR<25		000	000		00
03012	N	N	N	N	N	09/11/2011	14	CHEMAWA RD N	INTER	CROSS	N	N	CLR	S-1TURN	01	NONE 0	STRGHT											06
CITY						Sun 9A	0	RIVER RD N	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	S N									031		00
No						*44 59 48.91 -123 1 35.92*		1	04	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	28	M	OR-Y OR<25		031,034,044	000		06
															02	NONE 0 / PRVTE / PSNGR CAR	TURN-R / S E	01	DRVR	NONE	60	M	OR-Y OR<25		000	000		00

CITY OF KEIZER, MARION COUNTY

N Chemawa Rd & N River Rd

January 1, 2010 through December 31, 2014

SER# / INVEST / UNLOC?	SPEED	ALC	DRUGS	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
01704	N	N	N	N	N	05/22/2012	14	CHEMAWA RD N	INTER	CROSS	N	N	CLD	O-1 L-TURN	01	NONE 0	STRGHT											04
CITY						Tue 9P	0	RIVER RD N	CN		L-GRN-SIG	N	WET	TURN		PRVTE	S N										000		00
No	*44 59 48.89*					*-123 1 35.92*		1	04	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	44	F	OR-Y OR<25		097	000		00
															02	NONE 0	TURN-L											
																PRVTE	N E										000		00
																PSNGR CAR		01	DRVR	INJC	18	M	OR-Y OR<25		097	000		00

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

N Chemawa Rd from N River Rd to 7th Ave

January 1, 2010 through December 31, 2014

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2014														
TURNING MOVEMENTS	0	1	1	2	0	1	0	0	2	1	1	0	0	0
2014 TOTAL	0	1	1	2	0	1	0	0	2	1	1	0	0	0
YEAR: 2013														
REAR-END	0	1	0	1	0	1	0	0	0	1	0	0	1	0
TURNING MOVEMENTS	0	0	3	3	0	0	0	1	2	3	0	0	0	1
2013 TOTAL	0	1	3	4	0	1	0	1	2	4	0	0	1	1
YEAR: 2012														
REAR-END	0	1	0	1	0	3	0	1	0	1	0	0	0	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	0	1	1	0	0	0	0
2012 TOTAL	0	1	1	2	0	3	0	1	1	2	0	0	0	0
YEAR: 2011														
REAR-END	0	1	0	1	0	3	0	1	0	1	0	0	0	0
2011 TOTAL	0	1	0	1	0	3	0	1	0	1	0	0	0	0
YEAR: 2010														
REAR-END	0	1	0	1	0	1	0	0	1	1	0	1	0	0
SIDESWIPE - OVERTAKING	0	0	1	1	0	0	0	1	0	1	0	0	0	0
TURNING MOVEMENTS	0	0	3	3	0	0	0	1	2	2	1	1	0	1
2010 TOTAL	0	1	4	5	0	1	0	2	3	4	1	2	0	1
FINAL TOTAL	0	5	9	14	0	9	0	5	8	12	2	2	1	2

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

CITY OF KEIZER, MARION COUNTY

N Chemawa Rd from N River Rd to 7th Ave
January 1, 2010 through December 31, 2014

SER# / INVEST / UNLOC?	SPEED	ALCHL	DRUGS	SCHL	WORK	DATE / DAY/TIME / LAT/LONG	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
00355	N	N	N			02/05/2013	16	CHEMAWA RD N	STRGHT		Y	N	UNK	S-1STOP	01	NONE 0	STRGHT											07
NONE						Tue 3P	20	RIVER RD N	E	(NONE)	UNKNOWN	N	UNK	REAR		PRVTE	E W											00
No	*44 59 48.88*		*-123*	*1 35.00*			1		06			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	00	F	OR-Y		026	000		07
										(04)													OR<25					
															02	NONE 0	STOP											
																PRVTE	E W									011		00
																PSNGR CAR		01	DRVR	INJC	51	F	OR-Y		000	000		00
																							OR<25					
01969	N	N	N			06/20/2011	16	CHEMAWA RD N	ALLEY		N	N	CLR	S-OTHER	01	NONE 0	STRGHT											07
NONE						Mon 1P	60	RIVER RD N	E	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	W E									000		00
No	*44 59 48.88*		*-123*	*1 35.08*			1		07			N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	37	F	OR-Y		042	000		07
										(02)													OR>25					
																		02	PSNG	INJC	16	F			000	000		00
															02	NONE 0	TURN-R											
																PRVTE	W S									019		00
																PSNGR CAR		01	DRVR	INJC	56	M	OR-Y		000	000		00
																							OR<25					
02948	N	N	N			09/05/2010	16	CHEMAWA RD N	ALLEY		N	Y	CLR	BIKE															02
NO RPT						Sun 4P	150	RIVER RD N	E	(NONE)	UNKNOWN	N	DRY	TURN															
No	*44 59 48.84*		*-123*	*1 28.67*			1		07			N	DAY	PDO			STRGHT	01	BIKE	NONE	21	M		08	000	039		00
										(02)							W E											
															01	NONE 0	TURN-R											
																PRVTE	W S									019		00
																PSNGR CAR		01	DRVR	NONE	39	F	OR-Y		027	000		02
																							OR<25					
																		02	PSNG	NO<5	04	M			000	000		00
00561	N	N	N			02/18/2014	16	CHEMAWA RD N	ALLEY		N	N	CLD	O-1 L-TURN	01	NONE 0	STRGHT											06
NONE						Tue 7A	158	RIVER RD N	E	(NONE)	L-TURN REF	N	WET	TURN		PRVTE	E W									031		00
No	*44 59 48.87*		*-123*	*1 33.29*			1		07			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	19	M	OR-Y		031,032	000		06
										(03)													OR<25					
															02	NONE 0	TURN-L											
																PRVTE	W N									019		00
																PSNGR CAR		01	DRVR	INJC	19	F	OR-Y		000	000		00
																							OR<25					
02386	N	N	N			07/22/2010	16	CHEMAWA RD N	STRGHT		N	N	CLR	S-STRGHT	01	NONE 0	STRGHT											13
NONE						Thu 1P	100	RIVER RD N	E	(NONE)	R-TURN ALL	N	DRY	SS-O		PRVTE	E W									000		00
No	*44 59 48.88*		*-123*	*1 34.50*			1		08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	F	UNK		045	000		13
										(04)													OR<25					
															02	NONE 0	STRGHT											
																PRVTE	E W									000		00
																PSNGR CAR		01	DRVR	NONE	39	M	OR-Y		000	000		00
																							OR<25					
04620	N	N	N	N	N	12/23/2013	16	CHEMAWA RD N	ALLEY		N	Y	CLD	S-1TURN	01	NONE 0	TURN-R											08
CITY						Mon 1P	530	RIVER RD N	E	(NONE)	STOP SIGN	N	WET	TURN		PRVTE	S E									018		00
No	*44 59 48.84*		*-123*	*1 28.52*			1		08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	65	F	OR-Y		006	000		08
										(02)													OR<25					

CITY OF KEIZER, MARION COUNTY

N Chemawa Rd from N River Rd to 7th Ave
January 1, 2010 through December 31, 2014

SER# / INVEST / UNLOC?	SPEED	ALC	DRUGS	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
															02	NONE 0	STOP											
																PRVTE	S N										011		00
																PSNGR CAR		01	DRVR	NONE	75	F	OR-Y		000	000		00
																							OR<25					
01586	N	N	N	N	N	05/17/2010	16	CHEMAWA RD N	INTER	3-LEG	N	N	CLD	S-1STOP	01	NONE 0	STRGHT											32
CITY						Mon 4P	0	WITTENBURG LN	N		STOP SIGN	N	WET	REAR		RENTL	N S									000		00
No	*44*	*59*	*48.85*	*-123*	*1*	*30.77*		1	06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	73	M	OR-Y		052	000		32
																							OR<25					
															02	NONE 0	STOP											
																PRVTE	N S										013		00
																PSNGR CAR		01	DRVR	INJC	41	F	OR-Y		000	000		00
																							OR>25					
03736	N	N	N			11/05/2012	16	CHEMAWA RD N	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
CITY						Mon 12P	114	WITTENBURG LN	E	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	W E									000		00
No	*44*	*59*	*48.84*	*-123*	*1*	*29.03*		1	07			Y	DAY	INJ		PSNGR CAR		01	DRVR	NONE	65	F	OTH-Y		026	000		07
										(02)													OR>25					
															02	NONE 0	STOP											
																PRVTE	W E										011		00
																PSNGR CAR		01	DRVR	INJC	34	F	OR-Y		000	000		00
																							OR<25					
																		02	PSNG	INJC	03	M			000	000		00
																		03	PSNG	INJC	02	F			000	000		00
01520	N	N	N	N	N	05/03/2014	16	CHEMAWA RD N	ALLEY		N	N	RAIN	ANGL-OTH	01	NONE 0	TURN-L											02
CITY						Sat 9P	140	WITTENBURG LN	E	(NONE)	STOP SIGN	N	WET	TURN		PRVTE	S W									018		00
No	*44*	*59*	*48.84*	*-123*	*1*	*28.70*		1	07			N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	80	M	OR-Y		028	000		02
										(02)													OR<25					
															02	NONE 0	STRGHT											
																PRVTE	W E										000		00
																PSNGR CAR		01	DRVR	NONE	33	M	OR-Y		000	000		00
																							OR<25					
04044	N	N	N	N	N	11/22/2010	16	CHEMAWA RD N	ALLEY		N	N	RAIN	ANGL-OTH	01	NONE 0	TURN-L											02
CITY						Mon 5P	100	WITTENBURG LN	E	(NONE)	UNKNOWN	N	WET	TURN		PRVTE	S W									018		00
No	*44*	*59*	*48.84*	*-123*	*1*	*29.35*		1	08			N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	51	F	OR-Y		028	000		02
										(03)													OR<25					
															02	NONE 0	STRGHT											
																PRVTE	E W										000		00
																PSNGR CAR		01	DRVR	NONE	40	M	OR-Y		000	000		00
																							OR<25					
03609	N	N	N	N	N	10/22/2012	16	CHEMAWA RD N	ALLEY		N	N	CLD	ANGL-OTH	01	NONE 0	TURN-L											02
CITY						Mon 3P	128	WITTENBURG LN	E	(NONE)	STOP SIGN	N	WET	TURN		PRVTE	S W									018		00
No	*44*	*59*	*48.84*	*-123*	*1*	*28.83*		1	08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	92	F	OR-Y		028	000		02
										(03)													OR<25					
															02	NONE 0	TURN-L											
																PRVTE	E S										019		00
																PSNGR CAR		01	DRVR	NONE	27	F	OR-Y		000	000		00
																							OR<25					

CITY OF KEIZER, MARION COUNTY

N Chemawa Rd from N River Rd to 7th Ave
January 1, 2010 through December 31, 2014

SER# / INVEST / UNLOC?	SPEED	ALC	DRUGS	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
																		02	PSNG	NO<5	01	F			000	000		00
01853	N	N	N			06/07/2013	16	CHEMAWA RD N	ALLEY		N	N	CLR	ANGL-OTH	01	NONE 0	TURN-L											02
NONE						Fri 4P	148	WITTENBURG LN	E	(NONE)	L-TURN REF	N	DRY	TURN		PRVTE	S W										018		00
No						*44 59 48.84 -123 1 28.54*		1	08	(03)		N	DAY	PDO		MTRCYCLE		01	DRVR	NONE	00	M	OR-Y UNK		028	000		02
															02	NONE 0	TURN-L										019		00
																PRVTE	E S												
																PSNGR CAR		01	DRVR	NONE	39	F	OR-Y OR<25		000	000		00
00313	N	N	N			01/28/2013	16	CHEMAWA RD N	ALLEY		N	N	CLR	ANGL-OTH	01	NONE 0	TURN-L											02
NONE						Mon 4P	106	WITTENBURG LN	W	(NONE)	L-TURN REF	N	WET	TURN		PRVTE	N E										018		00
No						*44 59 48.87 -123 1 32.57*		1	08	(03)		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	42	F	OR-Y OR<25		028	000		02
															02	NONE 0	STRGHT										000		00
																PRVTE	W E												
																PSNGR CAR		01	DRVR	NONE	37	F	OR-Y OR<25		000	000		00
01551	N	N	N			05/19/2010	16	CHEMAWA RD N	INTER	3-LEG	N	N	CLD	O-1 L-TURN	01	NONE 0	STRGHT											02
NONE						Wed 3P	0	WITTENBURG LN	CN		STOP SIGN	N	WET	TURN		PRVTE	E W										000		00
No						*44 59 48.85 -123 1 30.77*		1	02	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	52	M	OR-Y OR<25		000	000		00
															02	NONE 0	TURN-L										000		00
																PRVTE	W N												
																PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK		004,028	000		02

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

N River Rd from N Chemawa Rd to N Churchdale Ave / NE James St
January 1, 2010 through December 31, 2014

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2014														
REAR-END	0	2	4	6	0	6	0	5	0	6	0	0	1	0
SIDESWIPE - OVERTAKING	0	0	1	1	0	0	0	1	0	1	0	0	0	0
TURNING MOVEMENTS	0	2	0	2	0	2	0	0	2	2	0	0	0	0
2014 TOTAL	0	4	5	9	0	8	0	6	2	9	0	0	1	0
YEAR: 2013														
ANGLE	0	0	1	1	0	0	0	0	1	1	0	0	0	0
REAR-END	0	1	2	3	0	1	0	1	2	3	0	0	2	0
2013 TOTAL	0	1	3	4	0	1	0	1	3	4	0	0	2	0
YEAR: 2012														
REAR-END	0	1	0	1	0	1	0	1	0	1	0	0	1	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	0	0	0
2012 TOTAL	0	1	1	2	0	1	0	2	0	2	0	0	1	0
YEAR: 2011														
REAR-END	0	1	1	2	0	1	0	1	1	2	0	0	1	0
2011 TOTAL	0	1	1	2	0	1	0	1	1	2	0	0	1	0
YEAR: 2010														
ANGLE	0	0	1	1	0	0	0	1	0	1	0	0	0	0
REAR-END	0	1	5	6	0	1	1	2	4	4	2	0	4	0
2010 TOTAL	0	1	6	7	0	1	1	3	4	5	2	0	4	0
FINAL TOTAL	0	8	16	24	0	12	1	13	10	22	2	0	9	0

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

CITY OF KEIZER, MARION COUNTY

N River Rd from N Chemawa Rd to N Churchdale Ave / NE James St

January 1, 2010 through December 31, 2014

SER# / INVEST / UNLOC?	SPEED	ALCHL	DRUGS	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
01568	N	N	N	N	N	05/16/2013	14	RIVER RD N	STRGHT		N	N	RAIN	S-1STOP	01	NONE 0	STRGHT										013	32,07
CITY						Thu 7A	40	CHEMAWA RD N	S	(NONE)	BUS STPSGN	N	WET	REAR		PRVTE	N S									022		00
No	*44 59 48.00*		*-123*	*1 35.91*		1			05			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	33	M	OR-Y		052,026	000		32
										(04)							OR<25											
															02	NONE 0	STOP											
																PRVTE	N S									011	013	00
																PSNGR CAR		01	DRVR	NONE	55	M	SUSP		000	000		00
																	OR<25											
															03	NONE 0	STOP											
																PRVTE	N S									011		00
																PSNGR CAR		01	DRVR	NONE	23	F	OR-Y		000	000		00
																	OR<25											
															04	NONE 0	STRGHT											
																PRVTE	N S									022		00
																PSNGR CAR		01	DRVR	NONE	23	F	OR-Y		052,042	000		32,07
																	OR<25											
01143	N	N	N			02/24/2011	14	RIVER RD N	STRGHT		Y	N	RAIN	S-1STOP	01	NONE 0	BACK											07
NONE						Thu 3P	20	CHEMAWA RD N	S	(NONE)	UNKNOWN	N	WET	REAR		PRVTE	S N									000		00
No	*44 59 48.70*		*-123*	*1 35.92*		1			06			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	39	F	OR-Y		026	000		07
										(04)							OR<25											
															02	NONE 0	STOP											
																PRVTE	S N									011		00
																PSNGR CAR		01	DRVR	INJC	34	F	OR-Y		000	000		00
																	OR<25											
04193	Y	N	N			11/30/2010	14	RIVER RD N	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT											27,01
NO RPT						Tue 2P	40	CHEMAWA RD N	S	(NONE)	UNKNOWN	N	DRY	REAR		PRVTE	S N									000		00
No	*44 59 48.52*		*-123*	*1 35.92*		1			06			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	M	UNK		016,047,026	000		27,01
										(04)							OR<25											
															02	NONE 0	STOP											
																PRVTE	S N									011		00
																PSNGR CAR		01	DRVR	NONE	25	F	OR-Y		000	000		00
																	OR<25											
00375	N	N	N			02/05/2014	14	RIVER RD N	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE						Wed 3P	42	CHEMAWA RD N	S	(NONE)	UNKNOWN	N	UNK	REAR		PRVTE	S N									000		00
No	*44 59 48.13*		*-123*	*1 35.92*		1			06			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	U	OR-Y		026	000		07
										(04)							UNK											
															02	NONE 0	STOP											
																PRVTE	S N									011		00
																PSNGR CAR		01	DRVR	NONE	65	F	OR-Y		000	000		00
																	OR<25											
02669	N	N	N	N	N	08/08/2014	14	RIVER RD N	STRGHT		N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
CITY						Fri 12P	144	CHEMAWA RD N	S	(NONE)	NONE	N	DRY	REAR		PRVTE	N S									000		00
No	*44 59 47.14*		*-123*	*1 35.92*		1			07			Y	DAY	PDO		PSNGR CAR		01	DRVR	NONE	16	M	OR-Y		043,026	000		07
										(04)							OR<25											

CITY OF KEIZER, MARION COUNTY

N River Rd from N Chemawa Rd to N Churchdale Ave / NE James St

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SER# / INVEST / UNLOC?	SPEED	ALCHL	DRUGS	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
															02	NONE 0 / PRVTE / PSNGR CAR	STOP / N S	01	DRVR	NONE	36	F	OR-Y / OR<25			011 / 000		00 / 00
00235	N	N	N			01/24/2011 / Mon 8A / *44 59 47.36 -123 1 35.91*	14 / 155	RIVER RD N / CHEMAWA RD N / 1	STRGHT / S / 07	(NONE) / (04)	N / UNKNOWN	N	CLR / DRY / DAY	S-1STOP / REAR / PDO	01	NONE 0 / PRVTE / PSNGR CAR	STRGHT / N S	01	DRVR	NONE	35	F	UNK / OR>25		026	000		07 / 00 / 07
NONE / CITY / No																												
															02	NONE 0 / PRVTE / PSNGR CAR	STOP / N S	01	DRVR	NONE	00	F	UNK / UNK		000	011 / 000		00 / 00
04428	N	N	N	N	N	12/11/2014 / Thu 10A / *44 59 47.01 -123 1 35.92*	14 / 163	RIVER RD N / CHEMAWA RD N / 1	ALLEY / S / 07	(NONE) / (04)	N / UNKNOWN	N	CLD / WET / DAY	ANGL-OTH / TURN / INJ	01	NONE 0 / PRVTE / PSNGR CAR	TURN-L / W N	01	DRVR	INJB	63	F	OR-Y / OR<25		001,007	018 / 000		08 / 00 / 08
CITY / No																												
															02	NONE 0 / PRVTE / PSNGR CAR	STRGHT / N S	01	DRVR	NONE	76	F	OR-Y / OR<25		000	000		00 / 00
01841	N	N	N	N	N	06/14/2010 / Mon 12P / *44 59 46.90 -123 1 35.90*	14 / 200	RIVER RD N / CHEMAWA RD N / 1	ALLEY / S / 07	(NONE) / (04)	N / NONE	N	CLR / DRY / DAY	ANGL-OTH / ANGL / PDO	01	NONE 0 / PRVTE / PSNGR CAR	STRGHT / E W	01	DRVR	NONE	43	M	OR-Y / OR>25		028	018 / 000		02 / 00 / 02
CITY / No																												
															02	NONE 0 / PRVTE / PSNGR CAR	STRGHT / S N	01	DRVR	NONE	33	F	OR-Y / OR<25		000	000		00 / 00
01882	N	N	N	N	N	06/08/2014 / Sun 1P / *44 59 46.55 -123 1 35.92*	14 / 200	RIVER RD N / CHEMAWA RD N / 1	STRGHT / S / 07	(NONE) / (04)	N / NONE	N	CLR / DRY / DAY	S-1STOP / REAR / INJ	01	NONE 0 / PRVTE / PSNGR CAR	STRGHT / N S	01	DRVR	NONE	93	F	OR-Y / OR<25		043,026	000		07 / 00 / 07
CITY / No																												
															02	NONE 0 / PRVTE / PSNGR CAR	STOP / N S	01	DRVR	INJC	33	M	OR-Y / OR<25		000	011 / 000		00 / 00
																		02	PSNG	INJC	32	F			000	000		00
																		03	PSNG	INJC	08	M			000	000		00
																		04	PSNG	INJC	06	F			000	000		00
																		05	PSNG	INJC	13	F			000	000		00
02426	N	N	N			07/21/2014 / Mon 11A / *44 59 46.11 -123 1 35.91*	14 / 250	RIVER RD N / CHEMAWA RD N / 1	STRGHT / S / 07	(NONE) / (04)	N / NONE	N	CLR / DRY / DAY	S-STRGHT / SS-O / PDO	01	NONE 0 / PRVTE / PSNGR CAR	STRGHT / N S	01	DRVR	NONE	77	M	OR-Y / OR<25		045	000		13 / 00 / 13
CITY / No																												

CITY OF KEIZER, MARION COUNTY

N River Rd from N Chemawa Rd to N Churchdale Ave / NE James St
January 1, 2010 through December 31, 2014

SER# / INVEST / UNLOC?	SPEED	ALCHL	DRUGS	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
															02	NONE 0 PRVTE	STRGHT N S								000		00
																PSNGR CAR		01	DRVR	NONE	54	M	OR-Y OR<25		000	000		00
01452	N	N	N			05/06/2013	14	RIVER RD N	STRGHT		Y	N	CLR	S-1STOP	01	NONE 0 PRVTE	STRGHT S N											07
NONE						Mon 4P	88	CHEMAWA RD N	S	(NONE)	UNKNOWN	N	DRY	REAR												000		00
No	*44 59 47.54*		*-123*	*1 35.91*			1		08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	40	F	OTH-Y OR>25	026	000			07
										(04)																		
															02	NONE 0 PRVTE	STOP S N								011		00
																PSNGR CAR		01	DRVR	NONE	32	F	OR-Y OR<25	000	000			00
																		02	PSNG	NO<5	03	F		000	000			00
																		03	PSNG	NO<5	01	F		000	000			00
00061	N	N	N	N	N	01/08/2010	14	RIVER RD N	STRGHT		Y	N	RAIN	S-1STOP	01	NONE 1 PRVTE	STRGHT S N											22
CITY						Fri 4P	100	CHEMAWA RD N	S	(NONE)	NONE	N	WET	REAR												000		22
No	*44 59 47.87*		*-123*	*1 35.91*			1		08			N	DLIT	INJ		TRUCK		01	DRVR	NONE	17	F	OR-Y OR<25	026,017	000			00
										(04)																		
															02	NONE 0 PRVTE	STOP S N								011		00
																PSNGR CAR		01	DRVR	INJC	50	M	OR-Y OR<25	000	000			00
03858	N	N	N	N	N	11/09/2010	14	RIVER RD N	STRGHT		Y	N	RAIN	S-1STOP	01	NONE 0 PRVTE	STRGHT S N										013	32
CITY						Tue 3P	100	CHEMAWA RD N	S	(NONE)	UNKNOWN	N	WET	REAR												000		00
No	*44 59 47.90*		*-123*	*1 35.91*			1		08			N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	81	M	OR-Y OR<25	052,026	000			32
										(04)																		
															02	NONE 0 PRVTE	STOP S N								011	013	00
																PSNGR CAR		01	DRVR	NONE	57	M	OR-Y OR<25	000	000			00
															03	NONE 0 PRVTE	STOP S N								022		00
																PSNGR CAR		01	DRVR	NONE	54	M	OR-Y OR<25	000	000			00
04412	N	N	N			12/15/2010	14	RIVER RD N	STRGHT		N	N	RAIN	S-1STOP	01	NONE 0 PRVTE	STRGHT S N											07
NONE						Wed 6P	100	CHEMAWA RD N	S	(NONE)	L-GRN-SIG	N	WET	REAR												000		00
No	*44 59 47.90*		*-123*	*1 35.91*			1		08			N	DLIT	PDO		PSNGR CAR		01	DRVR	NONE	53	M	OR-Y OR<25	026	000			07
										(05)																		
															02	NONE 0 PRVTE	STOP S N								012		00
																PSNGR CAR		01	DRVR	NONE	57	M	OR-Y OR<25	000	000			00
01494	N	N	N			05/06/2014	14	RIVER RD N	STRGHT		Y	N	CLR	S-1STOP	01	NONE 0 PRVTE	STRGHT S N											07
NO RPT						Tue 3P	100	CHEMAWA RD N	S	(NONE)	UNKNOWN	N	DRY	REAR												000		00
No	*44 59 47.58*		*-123*	*1 35.92*			1		08			N	DAY	INJ		PSNGR CAR		01	DRVR	NONE	18	F	OR-Y OR<25	026	000			07
										(04)																		

CITY OF KEIZER, MARION COUNTY

N River Rd from N Chemawa Rd to N Churchdale Ave / NE James St
January 1, 2010 through December 31, 2014

SER# / INVEST / UNLOC?	SPEED	ALCHL	DRUGS	SCHL	WORK	DATE / DAY/TIME / *LAT/LONG*	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS / (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
															02	NONE 0 PRVTE PSNGR CAR	STOP S N						OR-Y OR<25			011 000		00 00
00690 NONE No	N	N	N			03/06/2013 Wed 5P *44 59 47.06 -123 1 35.91*	14 152	RIVER RD N CHEMAWA RD N 1	STRGHT S 08	(NONE) (04)	Y UNKNOWN	N N	CLD WET DAY	S-1STOP REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT S N	01	DRVR	NONE	16	M	OR-Y OR<25		016,026	000	013	27,07 00 27,07
															02	NONE 0 PRVTE PSNGR CAR	STOP S N	01	DRVR	NONE	56	M	OR-Y OR<25		000	011 000	013	00 00
															03	NONE 0 PRVTE PSNGR CAR	STOP S N	01	DRVR	INJC	34	F	OR-Y OR<25		000	011 000		00 00
02470 NONE No	N	N	N			07/26/2012 Thu 5P *44 59 46.62 -123 1 35.90*	16 180	RIVER RD N CHEMAWA RD N 1	ALLEY S 08	(NONE) (04)	N STOP SIGN	N N	CLR DRY DAY	ANGL-OTH TURN PDO	01	NONE 0 PRVTE PSNGR CAR	TURN-R E N	01	DRVR	NONE	72	F	OR-Y OR<25		028	018 000		02 00 02
															02	NONE 0 PRVTE PSNGR CAR	STRGHT S N	01	DRVR	NONE	00	M	UNK OR<25		000	000 000		00 00
00937 NONE No	N	N	N			03/29/2010 Mon 5P *44 59 46.89 -123 1 35.90*	14 200	RIVER RD N CHEMAWA RD N 1	STRGHT S 08	(NONE) (04)	Y UNKNOWN	N N	RAIN WET DAY	S-1STOP REAR PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT S N	01	DRVR	NONE	00	M	OR-Y OR<25		026	000		07 00 07
															02	NONE 0 PRVTE PSNGR CAR	STOP S N	01	DRVR	NONE	37	F	OR-Y OR<25		000	011 000		00 00
00029 CITY No	Y	N	N	N	N	01/03/2012 Tue 4P *44 59 46.93 -123 1 35.90*	14 200	RIVER RD N CHEMAWA RD N 1	STRGHT S 08	(NONE) (04)	Y UNKNOWN	N N	CLD DRY DAY	S-OTHER REAR INJ	01	NONE 0 PRVTE PSNGR CAR	STRGHT S N	01	DRVR	NONE	16	M	OR-Y OR<25		052,042	000		32,01 00 32,01
															02	NONE 0 PRVTE PSNGR CAR	STRGHT S N	01	DRVR	INJC	47	F	OR-Y OR<25		000	006 000		00 00
00565 CITY No	N	N	N	N	N	02/22/2013 Fri 11A *44 59 44.98 -123 1 35.89*	14 346	RIVER RD N CHEMAWA RD N 1	ALLEY S 08	(NONE) (04)	N NONE	N N	RAIN WET DAY	ANGL-OTH ANGL PDO	01	NONE 0 PRVTE PSNGR CAR	STRGHT E W	01	DRVR	NONE	17	F	OR-Y OR<25		028	018 000		02 00 02

CITY OF KEIZER, MARION COUNTY — N River Rd from N Chemawa Rd to N Churchdale Ave / NE James St

January 1, 2010 through December 31, 2014

SER# / INVEST / UNLOC?	SPEED	ALCOHOL	DRUGS	SCHL BUS	WORK ZONE	DATE / DAY/TIME / LAT/LONG	FC / DISTNC	CITY STREET / FIRST STREET / SECOND STREET / INTERSECTION SEQ #	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
															02	NONE 0 / PRVTE / PSNGR CAR	STRGHT / S N	01	DRVR	NONE	75	F	OR-Y OR<25		000	007 / 000		00 / 00
03345	N	N	N			10/06/2010 Wed 3P	14 200	RIVER RD N / CHURCHDALE AVE NE / 1	STRGHT / N / 08	(NONE) (04)	Y / UNKNOWN	N / N	CLR / DRY / DAY	S-1STOP / REAR / PDO	01	NONE 0 / PRVTE / PSNGR CAR	STRGHT / S N	01	DRVR	NONE	44	M	OR-Y OR<25		052,026	000 / 000		32 / 00 / 32
CITY																												
No						*44 59 42.68 -123 1 35.87*																						
															02	NONE 0 / PRVTE / PSNGR CAR	STOP / S N	01	DRVR	NONE	36	M	OR-Y OR<25		000	011 / 000		00 / 00
04373	N	N	N			12/05/2014 Fri 12P	14 207	RIVER RD N / CHURCHDALE AVE NE / 1	STRGHT / N / 08	(NONE) (04)	N / UNKNOWN	N / N	CLD / WET / DAY	ANGL-OTH / TURN / INJ	01	NONE 0 / PRVTE / PSNGR CAR	TURN-L / W N	01	DRVR	INJB	29	F	OR-Y OR<25		028	018 / 000		02 / 00 / 02
CITY																												
No						*44 59 43.15 -123 1 35.90*																						
															02	NONE 0 / PRVTE / PSNGR CAR	STRGHT / N S	01	DRVR	NONE	50	F	OR-Y OR<25		000	000		00 / 00
04697	N	N	N			12/28/2014 Sun 11A	14 211	RIVER RD N / CHURCHDALE AVE NE / 1	ALLEY / N / 08	(NONE) (04)	N / UNKNOWN	N / N	CLR / DRY / DAY	S-1TURN / REAR / PDO	01	NONE 0 / PRVTE / PSNGR CAR	STRGHT / N S	01	DRVR	NONE	00	M	UNK OR<25		042	000	040	07 / 00 / 07
NONE																												
No						*44 59 43.18 -123 1 35.90*																						
															02	NONE 0 / PRVTE / PSNGR CAR	TURN-R / N W	01	DRVR	NONE	36	F	OR-Y OR<25		000	019 / 000	040	00 / 00
01503	N	N	N			05/07/2014 Wed 5P	14 200	RIVER RD N / JAMES ST NE / 1	STRGHT / N / 07	(NONE) (04)	N / UNKNOWN	N / N	CLR / DRY / DAY	S-1STOP / REAR / PDO	01	NONE 0 / PRVTE / PSNGR CAR	STRGHT / S N	01	DRVR	NONE	27	F	OR-Y OR<25		026	000 / 000		07 / 00 / 07
NONE																												
No						*44 59 42.79 -123 1 35.90*																						
															02	NONE 0 / PRVTE / PSNGR CAR	STOP / S N	01	DRVR	NONE	56	F	OR-Y OR<25		000	011 / 000		00 / 00

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
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
088	OTHER	OTHER ACTION

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
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

COLLISION TYPE CODE TRANSLATION LIST

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

CRASH TYPE CODE TRANSLATION LIST

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

DRIVER LICENSE CODE TRANSLATION LIST

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

DRIVER RESIDENCE CODE TRANSLATION LIST

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

ERROR CODE TRANSLATION LIST

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

ERROR CODE TRANSLATION LIST

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

EVENT CODE TRANSLATION LIST

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

EVENT CODE TRANSLATION LIST

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

EVENT CODE TRANSLATION LIST

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

FUNCTIONAL CLASSIFICATION TRANSLATION LIST

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

HIGHWAY COMPONENT TRANSLATION LIST

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

INJURY SEVERITY CODE TRANSLATION LIST

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

LIGHT CONDITION CODE TRANSLATION LIST

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

MEDIAN TYPE CODE TRANSLATION LIST

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

MILEAGE TYPE CODE TRANSLATION LIST

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

MOVEMENT TYPE CODE TRANSLATION LIST

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

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

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

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

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

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

KEIZER SAFEWAY FUEL CENTER TRANSP0RTATION IMPACT ASSESSMENT FOR TEXT AMMENDMENT CASE NO. 2017-04

PUBLIC WORKS DEPARTMENT REVIEW

The Fuel Center Transportation Impact Assessment has been prepared for a proposed fueling station within the existing Safeway site southwest of the River Road N/Chemawa Road NE/N intersection in Keizer. The assessment is a summary of existing traffic and pedestrian activities at the site and estimates of future traffic impacts after the development of a fueling station. The assessment analyses 5 separate driveways to and from the site. Two of the driveways are “right in, right out” and the other three driveways allow full left and right turns.

EXISTING CONDITIONS

The Assessment provides a detailed analysis of the existing conditions, including driveway construction that does not allow for a smooth flow of traffic into or out of the site. The two right in, right out driveways are not constructed adequately to control the movement as designed and a few vehicles make left turns where left turns are prohibited. The main entrance to the Safeway building does not have adequate lanes for the stacking that occurs during peak traffic periods. Some interior drive aisles are designed in such a way that traffic backs up in the drive aisles due to vehicles stacking waiting to make a left turn onto Chemawa Road. New traffic counts at the five intersections have been provided for periods of peak traffic flows.

RECOMMENDATIONS

The Assessment contains recommendations to solve current traffic issues at the site as well as mitigate for increased traffic from the proposed fueling station. New construction for the two right in, right out driveways has been recommended to improve drivability as well as to discourage left turns. New construction is proposed for the southerly driveway on River Road to improve drivability and the pedestrian crossing.

Major changes at the main entrance to the Safeway building have been recommended that include reconstruction of the driveway to provide a wider entry, reduce the vertical “bump” at the curb and reconfiguring the first parking lot drive aisle and pedestrian crossing area within the site.

PUBLIC WORKS DEPARTMENT FINDINGS

The Public Works Department finds that the Transportation Impact Assessment adequately studies the existing conditions and makes recommendations that will mitigate the increased traffic in and through the site from the proposed fueling station.

The existing main entrance driveway width exceeds the standard width for a commercial driveway as specified in the City of Keizer Design Standards. The proposed modification of the driveway will require a small increase in the current width which is acceptable to the Public Works Department.

All plans for the proposed improvements shall be reviewed by the Public Works Department for compliance with the City of Keizer Design Standards.

Storm water detention and treatment for all additional impervious surfaces shall be required.

Additional pedestrian and traffic control devices, storm water control and other design criteria that may be required will be reviewed for adequacy when preliminary engineering plans have been submitted as part of a Development Permit or Land Use Application.

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TO: **PLANNING COMMISSION**
THRU: **NATE BROWN, COMMUNITY DEVELOPMENT DIRECTOR**
FROM: **SHANE WITHAM, SENIOR PLANNER**

DATE: **March 7, 2017**

SUBJECT: **Proposed text amendments relating to the allowance of gasoline service stations within the Chemawa/River Road restriction area.**

Attachments:

- **Section 2.110 (Commercial Mixed Use) – draft**
- **Staff Report and attachments from February 6, 2017 Council Meeting**
- **Council Resolution #R2017-2748**
- **Updated Transportation Impact Assessment (dated Feb 28, 2017)**

DISCUSSION:

At the February 6, 2017 City Council meeting, Safeway submitted a request to initiate the Text Amendment process to allow a "Gasoline Service Station" as an accessory use to a "grocery supermarket" in the Commercial Mixed Use (CM) zone. Currently, this use is prohibited in the Chemawa/River Road restriction area, as described in Section 2.110.05 *Use Restrictions* of the Keizer Development Code (KDC). The staff report from the February 6, 2017 City Council meeting, Safeway's request and supporting information, as well as the resultant council adopted Resolution (R2017-2748) initiating the Text Amendment process, are attached for your reference (attachment A).

As was addressed in the February 6, 2017 staff report, it is the opinion of staff that it is most appropriate to look at the broader, overall policy questions surrounding the Chemawa/River Rd use restriction area and list of prohibited uses to determine what, if any action should be taken, as opposed to taking only a finite look at a use-specific proposal for Safeway. Staff feels this broad view approach would ensure the greatest equity throughout the restriction area and by answering the relevant policy related questions at the onset; it would determine what standards and allowances are appropriate within the restriction area and City as a whole. This approach would ultimately guide whether amendments to the KDC are appropriate and whether additional considerations should be made.

However, as staff began crafting an appropriate recommendation for Planning Commission to consider based upon these broader policy questions, it became clear this larger discussion cannot adequately be addressed without additional information and work being done, including extensive public involvement. As you know, the City is currently embarking upon a TGM grant process for the development of revitalization area plans that will directly affect the Chemawa/River Rd area. This process will be ongoing over the course of the next year or more and will include public outreach, as well as considerations of the overall projected growth patterns and transportation and infrastructure impacts that are expected. With these considerations in mind, staff has come to the conclusion it would be premature to consider broad policy changes at this time, and feels it is most appropriate to delay the larger

discussion until after completion of the grant process, or that most likely, they will be considered as a part of the revitalization area plan process. Therefore, the proposal for your consideration is not necessarily what staff would consider as the ideal approach, but due to the City's commitment to consider Safeway's proposal, along with the ability to appropriately mitigate and process the future development of a gasoline service station on the site, staff feels the recommended text amendment represents an acceptable option, and demonstrates consistency with the goals for development within the restriction area.

Staff has identified the following four options for Planning Commission to consider in response to Safeway's request and Council Resolution (R2017-2748). Staff is recommending that Planning Commission move a recommendation of Option 4 forward for Council consideration. Listed below are the four identified options along with a brief discussion of each, for your consideration:

1. **Make no change to the KDC/take no action:**

   Discussion: This would allow the revitalization area grant process to fully guide the discussion and determine appropriate changes to the restriction area. It would retain any and all options for redevelopment, without encumbering the site with improvements that could impede future pedestrian oriented development. However, taking no action clearly impacts Safeway's desire to provide additional services to shoppers and impedes economic development to a certain extent. It also would delay any possible change to address Safeway's request for a significant amount of time, since the grant process is just getting underway, and it is not expected to be completed for at least a year or more. Most compelling is the fact that taking no action does not address the specific request, or consider the merits of the Safeway proposal. Staff feels that while taking no action is an option, it is not the most responsive approach.

2. **Eliminate Chemawa/River restriction area completely:**

   Discussion: This approach would simply lift the existing prohibitions within the restriction area. The argument can be made the restriction area is mostly built out or has been re-developed since the creation of the prohibited use areas, and therefore the restriction has served its purpose over the past 20 years of existence. It may be an advantage with the revitalization area grant process to have a clean slate with no pre-conceived notions or barriers encumbering the dialogue that is to happen. Some point to the recently allowed interpretation at Schoolhouse Square allowing a drive thru coffee shop to be moved from elsewhere on the site as an example the restriction area is no longer necessary. Wider sidewalks and pedestrian oriented amenities are being provided along the frontage of the property, as well as creation of storefront windows which are consistent with a downtown feel. Eliminating the restriction area would provide the greatest equity city wide, since there would be no special prohibitions on uses based solely on a geographic area, and instead would be tied to the underlying zone.

This approach, however, would only be advisable if the decision were predicated on the greater policy discussion of why the restrictions were established in the first place. The restriction area was created to address issues relating to transportation impacts and safety, aesthetics, pedestrian orientation, and economic development goals. Since the revitalization area grant process will specifically look at growth and transportation impacts, it would be premature to simply eliminate the restriction area prior to going through the grant process and public engagement activities associated with it. If the restriction area is eliminated carte blanche, there is a likely possibility of lost opportunities. It is envisioned the grant process may result in greater restrictions, revisions to existing area plans, possible different zoning designations or overlay districts, or even performance based standards that will govern future redevelopment.

3. **Text Amendment as proposed by Safeway:**

   Discussion: Safeway's request to Council proposes to amend the KDC to allow a gasoline service station as an accessory use to a grocery supermarket. This approach represents a streamlined and simple process that is very specific to one or possibly two properties within the restriction area. This proposal does not fully address the policy issues established with the restricted area or provide equity city/area wide. It would rely on non-binding commitments for providing appropriate mitigations needed to address the identified goals and objectives of adopted plans since no additional process would be required outside of the building permit approval process. Though Safeway is a good community partner, a more binding and reliable process to require mitigations would be necessary.

4. **Text amendment as proposed by Staff:**

   Discussion: Staff is proposing a text amendment similar to the Safeway proposal, with the major exception being the accessory use is only to be allowed subject to Conditional Use Permit approval. The CUP process provides a vehicle to ensure appropriate mitigation measures be required. It requires additional land use approval process with an appeal period which ensures transparency and full review of concerns and issues associated with the proposed development plan. It allows for Safeway's economic development goals to be pursued without greater lost opportunities for pedestrian/non-automobile oriented development throughout the restriction area. It requires policy considerations of the restriction area as applied to the specific request, which we feel is appropriate considering the site and goals and policies of the restriction area.

CONCLUSION:

Staff is recommending that any proposal for a gasoline service station within the Chemawa/River Rd restriction area be subject to Conditional Use Permit approval. This process is to be heard by staff. The specific draft text amendment language to Section 2.110 (attachment B) is included for your consideration.

This proposed language will allow Safeway to move forward with their proposal, but not in an outright permitted manner while still keeping the general intent of the use restrictions. Through the CUP process, appropriate mitigation measures will be required to ensure the intent and purpose of the goals and policies within the restriction area can be met. The following mitigation measures and conditions have been identified by staff, in conjunction with the Public Works Department, Keizer Fire District, and Police Department to ensure development of a gasoline service station addresses the issues of transportation impacts and safety, aesthetics and pedestrian orientation:

- Provide 6' wide, separated sidewalks and stamped concrete crosswalks along River Rd and Chemawa Rd frontage.
- Provide enhanced parking lot landscaping in order to provide additional screening and buffering of the gas station development.
- Provide traffic control improvements on site to help guide vehicles efficiently and safely, and to avoid stacking/queuing onto public streets.
- Require greater setbacks to keep auto uses away from street frontages and retain ability for future pedestrian oriented development. Proposed setback of 100 feet or more.
- Requirement of TIA and implement mitigation measures as appropriate. Safeway has provided a revised traffic study which will be analyzed by the City's Traffic Engineer to ensure traffic impacts and safety concerns are adequately addressed.

RECOMMENDATION:
That the Planning Commission consider the proposal and forward a recommendation to the City Council it be adopted.

From: moirsden@aol.com
To: Brown, Nate; Witham, Shane
Subject: PC Meeting
Date: Friday, March 24, 2017 5:14:26 PM

Nate & Shane
I watched PC meeting regarding Safeway and the gas station issue. PC members wanted to know about the old old gas station that
was where Keizer Corner is----well they had leaky tanks and DEQ shut area after the station as gone. Next to where Bouchers is we had a Contaminated dirt pile for years until DEQ finally authorized the dirt pile removed. The gas station went away as I recall when river road was originally widened. Under the County's watch, long before K was incorporated. I would be happy to discuss with you or Shane my memory where the gas station & safeway are concerned. It is scary when I hear you all say none of you were here when things happened. The other source I would recommend would be Jim Keller or Jerry McGee. If you want me to tell you what I remember or know just let me know.
I can also tell you some of the Council's thinking when I was active. Guess that is why I have gray hair!!!!

Jacque

Keizer Planning Commission Report
Proposed Gas Station in Keizer Safeway

March 15, 2017

Introduction: Jeff Cowan Keizer Fire Chief Friday begins my 10th year here. St Patrick's Day is a great commemoration for my 36 year career.

I am here tonight to provide our concerns about a proposed addition of a gas station at the Keizer Safeway.

- It's important to note that we have not spent 10 minutes officially talking about this and I have not seen a plan for the proposal.
- River Road Traffic and the Chemawa Intersection has me concerned about exceeding safety and traffic flow abilities all the time. The memorial on the corner of Chemawa and River is a sad reminder that all you have to do is step off a curb to get one in your honor. The Safeway entrance on Chemawa on Chemawa road is dangerous just ask one of our Keizer Police officers… It has not been a year since his accident last summer in front of our station.
- A proposed fueling station in the parking lot is a dismay to me as just this Monday, the parking lot was full at 4:30 pm with people dashing in amongst moving vehicles, I don't know how a gas station will make that better.

Traffic Impact Analysis: Kittelson & Associates Transportation Engineers

- Feb 28, 2017 Report evaluation of the current and proposed addition of the fueling station has a serious glaring omission: It is silent to the fire station across the street. The evaluation only reviews the parking lot to the perimeter of the parking lot and stops there.
- The methodology is a 2000 standard based on a 2007 transportation plan.
- Table 4, Page 19, shows that the entrances on to River Road exceed Critical Crash Rate safety.
- Peak Traffic is greater than the ninety fifth percentile (>95%) at the entrances onto River Road.

- The parking lot photos from elevated views are not realistic and are deceiving in the parking lot size, depth, and occupancy of vehicles. They do not show real time or peak time views. They are simply illustrations.

Keizer Fire District Response Data:

- Keizer Fire District responds out of our station about 15 times a day… some days more… some less. Entering the intersection onto River Road, the three lanes facing west, in emergency response mode, the lanes are typically full and our emergency vehicles face traffic in the on-coming lane as it is the only method that allows it. The intersection is at maximum to allow emergency response vehicles through.
- For every response out… There is a return trip to the station which requires our vehicles to sit in the peak traffic back up which we have already identified is at the ninety fifth percentile. (>95%) during peak hours.
- Safeway itself generates 20 calls a year on average and Shari's adds another 6. (26 calls per year, 5 year average). Emergency Response in an already full parking lot is a problem for responders.

Summary:

In summary, I have not spent 10 minutes talking with the city or anyone regarding this project. I have not seen a plan or proposal. The discussion was brought to our attention by the activity of the planning commission. I asked for a copy of the traffic survey and reviewed it. Our primary concern is emergency response and the safety to our Keizer citizens.

From: Jeff Cowan
To: Brown, Nate
Subject: RE: Safeway supplemental staff report
Date: Thursday, March 23, 2017 11:03:14 AM
Attachments: Keizer Planning Commission Report March 15, 2017.docx

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Hi Nate,

Simply put…

- There is not a sufficient traffic impact study.
- There is not a sufficient traffic engineering remedy.
- There is not enough scientific data to evaluate the impacts to egress, and in fact shows failing intersections.
- The information is silent to the impact to emergency response for the Fire Station.
- There has not been a sufficient staff review and discussion.
- The Fire District is a separate public safety entity whose only concern is emergency response and public safety.
- The Fire District has not seen a plan or proposal at this time. We are working conceptually only.

Chief Cowan

From: Brown, Nate [mailto:brownn@keizer.org]
Sent: Wednesday, March 22, 2017 4:10 PM
To: Jeff Cowan
Subject: Safeway supplemental staff report

Chief,
As we are working on the supplemental staff report we would like to address the District's concerns specifically. Right now I'm not exactly sure what your concerns are other than the fact that they didn't provide any analysis specific to the potential conflict with the Fire apparatus for any additional trips in their report. Could you help me out by giving me an email that expresses the specifics of your concerns if this doesn't capture what your testimony was directed at? It seemed like you were reading from some written material, if so this would be helpful to include. I could then reference this in my information.

Thanks.

Chemawa/River Rd Restriction Area

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April 4, 2017

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VIA EMAIL ONLY

Mr. Hersch Sangster, Chair
City of Keizer Planning Commission
Keizer Civic Center
930 Chemawa Rd NE
Keizer, OR 97303

Re: City of Keizer Proposed Text Amendments Relating to Fuel Centers in the Commercial Mixed Use Zone - Request for Continuance

Dear Chair Sangster and Members of the Planning Commission:

This office represents Safeway, Inc. ("Safeway"), the original petitioner requesting a text amendment to the Keizer Development Code to allow a fuel center in conjunction with a grocery supermarket in the Commercial Mixed Use zone ("Text Amendment").

Safeway requests that the Planning Commission continue its consideration of the Text Amendment to its May meeting or such later date when the Planning Commission's agenda can accommodate the item.

As you recall, the Planning Commission previously granted a continuance to allow Safeway the opportunity to conduct research and analysis about the issue of merchandise sales at its fuel centers. Safeway has conducted its research and analysis and is awaiting formal corporate direction on how to proceed in responding to this issue at this site. Although Safeway had originally hoped to receive that direction by April 12, it will not occur until after meetings scheduled for later in April.

Safeway appreciates the Planning Commission's patience and courtesies. If the Planning Commission grants the requested continuance, Safeway looks forward to presenting further testimony to the Planning Commission at the continued hearing date.

In the event the Planning Commission declines Safeway's continuance request and decides to make a final recommendation on the Text Amendment at the April meeting,

Safeway requests that the Planning Commission strike the proposed total prohibition on all "accessory sales of other merchandise," as it is inconsistent with the purpose of the Commercial Mixed Use zoning district, and it arbitrarily and adversely affects the value of any fuel center Safeway might develop on its property. Again, Safeway anticipates being able to provide additional commentary and potential alternatives if the Planning Commission grants a continuance.

I have asked City staff to place a copy of this letter before you and to include a copy in the official record for this matter. Thank you in advance for allowing the time for a full and fair consideration of this important policy issue.

Very truly yours,

Seth J. King

SJK

cc: Mr. Shannon Johnson (via email)
Mr. Nate Brown (via email)
Mr. Shane Witham (via email)
Client (via email)
Mr. Mark Whitlow (via email)