

Transportation System Plan

City of Keizer Transportation System Plan

Part 2 of 2:
Supporting Documentation

Keizer, Oregon

April, 2009



City of Keizer Transportation System Plan

Part II – Supporting Documentation

Keizer, Oregon

March 2009

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Appendix A
Definitions and Acronyms

DEFINITIONS AND ACRONYMS

Access Management: Process by which access to private property is limited to improve the operational capacity of the street. Typically implemented on high volume arterials.

Americans with Disabilities Act of 1990 (ADA): Federal law that mandates equal access to public facilities to all persons regardless of disability.

Arterial Streets: High capacity, and typically high speed, streets that serve both intra- and intercity travel needs of the community.

Average Daily Traffic (ADT): The number of automobiles that use a portion of a street, in all directions, over a 24 hour period.

Capital Improvement Program (CIP): Adopted each year, the Capital Improvement Program is the document that budgets the capital investment program for the City's infrastructure.

Cherriots: The name of the fixed route bus service operated in Keizer and Salem by Salem-Keizer Transit.

City of Keizer Comprehensive Plan: The City's land master plan. This document provides the policy basis for all of the City's land development regulations as well as the zoning designations.

City of Keizer Development Code: Prepared to implement the goals and policies of the City of Keizer Comprehensive Plan. Includes the ordinances and laws of the City of Keizer.

Collector Streets: Streets used to distribute neighborhood traffic from the local street system to the arterial street system.

(Keizer or Street) Design Standards: The minimum standards under which all Keizer public facilities are designed.

Effective Capacity: The amount of traffic a roadway can carry given the physical and environmental limitations (i.e., amount of pavement, number of driveways, etc.).

Headway: Frequency of bus service.

High Occupancy Vehicle (HOV): Typically refers to vans and buses; however, sometimes used to refer to an automobile with more than one person in it.

Improvements: Within the context of goals and policies, this is intended to mean major or significant improvements, such as modernization, etc.

Interchange Area Management Plan (IAMP): A detailed plan to determine the expected impact of a new or upgraded interchange upon the highway system and the local road network in the vicinity of the interchange.

Keizer Departmental Policies: A set of policies adopted by the Department Director in conjunction with the City Attorney and the City Manager that guide the day-to-day operations of a City of Keizer department.

(State) Land Use Planning Goals: Nineteen goals related to environmental resources and public infrastructure adopted by the Land Conservation and Development Commission. The goals are implemented by local governments through local comprehensive plans.

LCDC: State of Oregon Land Conservation and Development Commission.

Level of Service (LOS): A set of characteristics that indicate the quality and quantity of transportation service provided. For streets, a qualitative rating of the effectiveness of the street in terms of operating conditions. The condition is typically expressed as a letter grade from A to F, where A describes free flowing traffic and F describes gridlock.

Level of Service Definitions for Signalized Intersections

Level of Service	Traffic Flow Characteristics
A	Very low delay, less than 10.0 seconds per vehicle. This occurs when traffic progression is extremely favorable, and most vehicles arrive during the green phase.
B	Average delay is in the range of 10.1 to 20.0 seconds per vehicle. This generally occurs with good traffic progression. More vehicles stop than for LOS A.
C	Average delay is in the range of 20.1 to 35.0 seconds per vehicle. These higher delays may result from fair traffic progression and/or longer signal cycle lengths. The number of vehicles stopping is significant at this level; although, some may still pass through the intersection without stopping.
D	Average delay is in the range of 35.1 to 55 seconds per vehicle. The influence of congestion becomes more noticeable. Longer delays may result from combination of unfavorable traffic progression, longer cycle lengths, and high v/c ratios. Many vehicles stop, and the proportion of vehicles not stopping declines.
E	Average delay is in the range of 55.1 to 80 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor traffic progression, long signal cycle lengths, and high v/c ratios.
F	Reflects forced flow, with an average delay in excess of 80 seconds per vehicle. This condition indicates that the intersection has greater vehicle arrival rates than its capacity. Poor traffic progression and long signal cycle lengths may be major contributing causes to such long delays.

Source: Transportation Research Board, Highway Capacity Manual 2000.

Level of Service Definitions for Unsignalized Intersections

Level of Service	Traffic Flow Characteristics
A	Average delay per vehicle is in the range of 0 to 10 seconds. Free flowing with no congestion. Very few vehicles waiting in a queue.
B	Average delay per vehicle is in the range of 10 to 15 seconds. Slight delay to vehicles or no vehicles waiting in a queue.
C	Average delay per vehicle is in the range of 15 to 25 seconds. Occasional delay and congestion. More than one vehicle may be waiting in a queue.
D	Average delay per vehicle is in the range of 25 to 35 seconds. Frequent delay and congestion. More than one vehicle is waiting in a queue.
E	Average delay per vehicle is in the range of 35 to 50 seconds. This condition exists when the demand is near or equal to the capacity of the intersection or movement. Unstable flow includes almost continuous lines of vehicles waiting in queues.
F	Forced flow, with an average delay per vehicle in excess of 50 seconds. Queues are extensive. The intersection is considered to be overcapacity.

Source: Transportation Research Board, Highway Capacity Manual 2000.

Local Improvement District (LID): Districts created to finance transportation system improvements the special assessments against benefited properties.

Local Streets: Streets whose primary function is property access, and secondary function is movement of traffic.

Major Activity Center: A location with intensive land development (i.e., downtown, Keizer Station, Capitol Mall, Lancaster Mall, Fairview Industrial Park, etc.).

Metropolitan Planning Organization (MPO): A federally-mandated consortium of local governments and the state department of transportation whose purpose is to provide local input into the expenditure of federal transportation funds. In the Salem-Keizer area, the MPO function is administered by the Mid-Willamette Valley Council of Governments through the Salem-Keizer Area Transportation Study.

MWVCOG: Mid-Willamette Valley Council of Governments.

Mode: The means of travel (i.e., automobile, public transportation, bicycle, walk, etc.).

Multimodal: Providing the capability for more than one mode of transportation.

ODOT: Oregon Department of Transportation

Oregon Administrative Rules (OAR): The code that implements the statutes of the State of Oregon.

Oregon Benchmarks: State-adopted performance measures, used to measure progress towards the vision outlined in the State's Strategic Plan.

Oregon Revised Statutes: The laws of the State of Oregon.

Oregon Transportation Plan: The state's master plan for transportation policy, services, and infrastructure for the next 40 years. The Plan was adopted by the Oregon Transportation Commission in 1992.

P&W: Portland and Western Railroad.

Paratransit: Public or privately provided public transportation service to special needs groups such as the elderly or the disabled.

Park-and-Ride Lots: Designated parking area for automobile drivers who then board transit vehicles from these locations.

Peak Hour: The hour with the highest volume of automobiles, beginning at any one of the four quarter hours (:00, :15, :30, or :45). Traffic analyses typically uses a morning, or A.M., peak hour, and an afternoon, P.M., peak hour, analysis.

Preventive Maintenance: Maintenance activities that go beyond a routine level of treatment, proactively extending pavement life. These activities are generally site-specific, occurring on an as needed basis.

Regional Transportation Systems Plan (RTSP): The umbrella transportation plan that covers the entire regional roadway system within the Salem-Keizer urban area.

Response Maintenance: Maintenance activities that are made in immediate response to existing problems. These activities are designed to keep the street's structure and surface in a minimally operable condition.

Routine Maintenance: Maintenance that occurs on a determined frequency that prolongs the useful life of the facility or pavement surface for as long as possible.

Safe, Accountable, Flexible, Efficient, Transportation Equity Act - A Legacy for Users (SAFETEA-LU): The umbrella federal legislation that appropriates transportation funding and mandates local transportation planning. Prior to 2005, known as Transportation Efficiency Act for the 21st Century (TEA-21) and before 1998 as Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA).

Salem Area Mass Transit District (SAMTD): The transit authority responsible for operating transit in the greater Salem area, including Keizer. Also known as Salem-Keizer Transit.

Salem-Keizer Area Transportation Study (SKATS): The designated metropolitan planning organization for the Salem-Keizer urban area.

Salem-Keizer Transit: The transit authority responsible for operating transit in the Salem and Keizer areas. Also known as SAMTD.

Single Occupant Vehicle (SOV): An automobile with only the driver as an occupant. Typically used to refer to commuter travel.

State Transportation Improvement Program (STIP): Federally-mandated document that shows how the state department of transportation intends to spend its transportation funds. The STIP is adopted by the Oregon Transportation Commission every 3 years.

Street Classification System: The blueprint for the city's roadway system. It classifies every street and alley within the city into one of eight categories. The categories define the mission of the street. Standards such as right of way width, access management, pavement depth, traffic control, etc., are then applied to the facility depending on its classification.

Technical Advisory Committee (TAC): Members included citizens, representatives from the City and Planning Commission, the City of Salem, and Marion County.

Telecommuting: Working from home.

Through Trips: Trips, regardless of mode, that neither begin nor end within the Salem-Keizer region, but pass through the region (e.g., trips from Eugene to Portland on I-5).

Transportation Demand Management (TDM): Actions that attempt to manage and reduce the automobile trip demand on the transportation system.

Transportation Growth Management Program (TGM): A joint project of the Oregon Department of Transportation and the Oregon Department of Land Development and Conservation that provides planning grants to local governments.

Transportation Improvement Program (TIP): Federally-mandated document that shows how a region intends to spend its transportation funds. The TIP is typically created and adopted by the MPO governing board every 3 to 5 years.

Transportation Management Association (TMA): A voluntary association of neighboring employers for the purpose of providing access to alternative modes of transportation to their employees.

(State) Transportation Planning Rule (TPR): Administrative rule that implements Goal 12 - Transportation of the State Land Use Planning Goals.

Transportation System Development Charges (TSDC): Developer exactions used to finance transportation infrastructure improvements required due to urban growth.

Transportation System Management (TSM): Low cost, localized improvements used to increase the efficiency of streets and intersections.

TSP: Transportation System Plan.

Urban Growth Boundary (UGB): The state-mandated boundary that separates land available for urban development from rural or farm lands.

Vehicle Miles Traveled (VMT): The number of miles traveled regionally by vehicles for a period of one year.

Volume-to-Capacity Ratio (v/c): An expression of the amount of street capacity being used during a period of time, typically either 1 or 24 hours, as a percentage.

WES: Tri-Met's Westside Express Service commuter rail.

Appendix B
Plan and Policy
Review



Memorandum

Date: August 13, 2007
To: Sam Litke, City of Keizer Planning Department
cc: Elizabeth Wemple, PE, Kittelson & Associates
From: Frank Angelo, Angelo Planning Group
Darci Rudzinski, AICP, Angelo Planning Group
Drew McCartor, Angelo Planning Group
Re: City of Keizer Transportation System Plan, DRAFT Plan and Policy Review

I. Introduction

This memorandum summarizes the plans, policies, and other pertinent existing background data at the federal, state, regional, and local levels that directly impact transportation planning in the City of Keizer. Although each document reviewed contains many policies, only the most pertinent policies and information were chosen to help focus the Keizer Transportation System Plan (TSP) update work. This memorandum provides a policy framework for this planning process, and new policies considered for inclusion in the updated Draft Keizer TSP should be consistent with the currently adopted policies listed.

Section II of this memorandum is an assessment of how adopted City plans and ordinances meet the Transportation Planning Rule (TPR) OAR 660, Division 12. This review also serves as the basis for identifying City policies or requirements that may be out-of-date or inconsistent with each other. Table 1 reviews the requirements of TPR Section -0045, Implementation of the Transportation System Plan, lists the applicable implementation elements of the TPR, and demonstrates where the adopted City regulations comply, and where amendments to code language is needed to comply with the TPR. Appendix A contains the required elements of a TSP, pursuant to the TPR.

Section III contains summaries of regulatory documents that contain information pertinent to the development and adoption of an updated TSP for the City of Keizer. State documents and requirements were reviewed for applicability to the Keizer TSP. Marion County documents that contain policies or regulations with potential impacts to the Keizer transportation system are also reviewed. The regional section contains a summary of applicable sections of the regional transportation plan. In the final subsection of this

memorandum, the City's adopted land use and transportation policies and regulations are summarized.

Appendix A is text from OAR 660-12-0020, the section of the TPR that lists the elements that are required to be included in local TSPs.

The following documents were reviewed for policies and regulations applicable to the City's transportation planning. The page number (p.) where each document's review begins in this memorandum is included for quick reference in the list below.

Federal

- Safe, Accountable, Flexible, and Efficient Transportation Equity Act - A Legacy for Users (SAFETEA-LU) and implementing regulations (23 CFR 450 and 49 CFR 613) - p. 15

State/ODOT

- Transportation Planning Rule (OAR 660-12, last amended 2005) - p. 15
- Oregon Transportation Plan (1992) - p. 16
- Oregon Highway Plan (1999, last amended 2005) - p. 18
- Oregon Bicycle and Pedestrian Plan (1995) - p. 20
- Oregon Rail Plan (2001) - p. 20
- Oregon Public Transportation Plan (1997) - p. 21
- Access Management Rule (OAR 734-051) - p. 21
- Freight Moves the Oregon Economy (1999) - p. 22

Regional

- Salem-Keizer Area Transportation Study (SKATS) Regional Transportation Systems Plan (RTSP) (2007) - p. 23
- Marion County Comprehensive Plan (Transportation Element revised 2005) - p. 24
- Marion County Rural Transportation System Plan (2005) - p. 25
- Salem-Keizer Transit Strategic Business Plan, Short-Range Element (2004) - p. 27
- Specialized Transportation Plan for Polk and Marion Counties (2007) - p. 28

City of Keizer

- Keizer Comprehensive Plan (1987, last amended 2003) - p. 30
- City of Keizer Transportation Systems Plan (2004) - p. 32
- City of Keizer Development Code - p. 33

II. Transportation Planning Rule Compliance

The Transportation Planning Rule (TPR) requires all jurisdictions to complete a transportation system plan (TSP), including policies and ordinances to implement that plan. Keizer's TSP was adopted in 2000 and amended in 2004. The City is updating the TSP to accurately reflect the current transportation system and plan for Keizer's future transportation needs. The goal of the update is to establish a set of land use and transportation measures and plans to incorporate state and local transportation investments and to maintain local character. Specifically, amendments to the TSP will address new development and plans for development in the City.

The TPR requires that local governments adopt land use regulations consistent with state and federal requirements "to protect transportation facilities, corridors, and sites for their identified functions OAR 660-012-0045(2)." The applicable portion of the TPR is found in OAR Section 660-12-045, Implementation of the Transportation System Plan. In summary, the TPR requires that local governments revise their land use regulations to implement the TSP in the following manner:

- *Amend land use regulations to reflect and implement the TSP.*
- *Clearly identify which transportation facilities, services, and improvements are allowed outright, and which will be conditionally permitted or permitted through other procedures.*
- *Adopt land use or subdivision ordinance measures, consistent with applicable federal and state requirements, to protect transportation facilities, corridors and sites for their identified functions, to include the following topics:*
 - *access management and control;*
 - *protection of public use airports;*
 - *protection of the future operations of roadways and transit corridors;*
 - *coordinated review of land use decisions potentially affecting transportation facilities;*
 - *conditions to minimize development impacts to transportation facilities;*
 - *regulations to provide notice to public agencies providing transportation facilities and services of land use applications that potentially affect transportation facilities;*
 - *regulations assuring that amendments to land use designations, densities, and design standards are consistent with the Transportation System Plan.*
- *Adopt land use or subdivision regulations for urban areas and rural communities to provide safe and convenient pedestrian and bicycle circulation and bicycle parking, and to ensure that new development provides on-site improvements that accommodate pedestrian and bicycle travel.*
- *Establish street standards that minimize pavement width and total right-of-way.*

The following assessment of TPR compliance is based primarily on the City's adopted Development Code, as this document implements transportation policy. Table 1 lists TPR

implementation requirements, an assessment of related existing Development Code language, and, where relevant, TSP and other regulatory provisions that address the requirements. This table also includes recommendations for changes to the Development Code that will likely be needed to fully implement the a new TSP and bring the City regulations in compliance with the TPR. Recommended changes to local regulatory documents, indicated in **bold text**, are intended to provide guidance to project staff during the update of the Keizer TSP. In particular, modifications to the City Development Code will be drafted during the planning process and become implementation recommendations for inclusion in the draft TSP.

DRAFT

Table 1. TPR Requirements and City of Keizer Compliance	
TPR Requirement (OAR Section 660-12-0045)	Ordinance Compliance/Recommendations
(1) Each local government shall amend its land use regulations to implement the TSP.	
(b) To the extent, if any, that a transportation facility, service, or improvement concerns the application of a comprehensive plan provision or land use regulation, it may be allowed without further land use review if it is permitted outright or if it is subject to standards that do not require interpretation or the exercise of factual, policy or legal judgment.	Development Code Section 2.203, Permitted Uses Generally, meets this TPR requirement. This section lists street improvements (surfaced travel lanes, curbs, gutters, drainage ditches, sidewalks, transit stops, landscaping and related structures and facilities located within rights-of-ways controlled by a public agency) and public right-of-way expansion (expansion, widening or adding improvements within the right-of-way, provided the right-of-way is not expanded to more width than prescribed for the street in the Public Facilities segment of the Comprehensive Plan) as allowed uses in all zones.
(c) Local governments shall provide a review and approval process that is consistent with 660-012-0050 (Transportation Project Development). Local governments shall amend regulations to provide for consolidated review of land use decisions required to permit a transportation project.	Section 3.204, Public Notice Requirements, does not include a referral or review process that includes Marion County, Mid-Willamette Valley COG, and local, state or federal agencies to ensure that there is a coordinated effort to permit a land use project. Recommendations: The Development Code does not contain specific requirements for notice to ODOT for applicable land use applications. Section 3.202 should be amended to include such provisions. The City should develop/document a clear and objective review process for the approval of land use decisions required to permit a transportation project.
(2) Local governments shall adopt land use or subdivision ordinance regulations, consistent with applicable federal and state requirements, to protect transportation facilities for their identified functions.	

Table 1. TPR Requirements and City of Keizer Compliance	
TPR Requirement (OAR Section 660-12-0045)	Ordinance Compliance/Recommendations
(a) Access control measures.	<p>The Development Code does not include access control measures. Measures appropriately contained in a local development ordinance include limiting access onto arterials and/or collectors within a certain distance from an intersection and specifying the minimum distance between driveway access points on these facilities.</p> <p>Recommendations: The Development Code at a minimum should include driveway and public road spacing, median control, and signal spacing standards. These standards should implement the recommendations of the TSP, be included in public works engineering standards, and be consistent with the functional classification of roads.</p>
(b) Standards to protect the future operations of roadways and transit corridors	<p>The Development Code does not contain adopted standards to protect the future operation of roads or reference any outside documents regarding future operations of transit corridors.</p> <p>Recommendation: Amend the Development Code to include standards to protect future operation of roads and major transit corridors.</p>
(d) Coordinated review of future land use decisions affecting transportation facilities, corridors or sites	<p>The Development Code does not provide a process for coordinated review of future land use decisions that affect transportation facilities.</p> <p>Recommendations: The City should consider adding language to Section 3.202, General Procedures – Types I, II and III Actions, of the Development Code to specifically include land use reviews for transportation-related facilities. Section 3.203, Type IV Actions, should be similarly modified. Notification to ODOT, for land use amendments that affect state facilities, to affected local jurisdictions, and to relevant transit providers/departments should be included in Section 3.204, Public Notice Requirements, to ensure a “coordinated review.”</p>

Table 1. TPR Requirements and City of Keizer Compliance	
TPR Requirement (OAR Section 660-12-0045)	Ordinance Compliance/Recommendations
<p>(e) Process to apply conditions to development proposals in order to minimize impacts and protect transportation facilities</p>	<p>The Development Code does not have a process to apply development conditions in order to minimize impacts to transportation facilities. The exception to this is found in the Keizer Station Master Plan Review section (Section 3.113), which give the City discretion to apply conditions of approval to meet listed objectives, including transit orientation, pedestrian/bicycle circulation, and "other conditions of approval it deems appropriate for the health, safety, and welfare of the citizens of Keizer or to ensure the desired implementation of the approved master plan."</p> <p>The Development Code contains provisions to condition approval of conditional uses (Section 3.103) through a Type I-B process (approval by the Zoning Administrator).</p> <p>Implicit in Section 3.108, Subdivisions, Planned Unit Developments, and Manufactured Home Parks, is the ability to condition approval (3.108.06, Review Criteria, "Improvements or dedications required as a condition of development approval, when not voluntarily accepted by the applicant, shall be roughly proportional to the impact of development").</p> <p>Recommendations: The Development Code should explicitly give the City the ability to apply conditions of approval to new development and should specify that one of the objectives in imposing conditions will be to minimize impacts to transportation facilities. The subdivisions section (Section 3.108) should be amended to include a requirement that development proposals include data on the potential traffic impacts. The City should consider amending the Development Code to include a process to apply conditions to development proposals that will affect City road facilities by more than a certain number of average daily motor vehicle trips.</p> <p>See the TPR requirements in section 660-012-0060 below.</p>

Table 1. TPR Requirements and City of Keizer Compliance

TPR Requirement (OAR Section 660-12-0045)	Ordinance Compliance/Recommendations
<p>(f) Regulations to provide notice to public agencies providing transportation facilities and services, MPOs, and ODOT of: land use applications that require public hearings, subdivision and partition applications, applications which affect private access to roads, applications within airport noise corridor and imaginary surfaces which affect airport operations.</p>	<p>Section 3.204, Public Notice Requirements, of the Development Code does not specify the types of decisions that require notice to public agencies, nor which public agencies should receive notice.</p> <p>Recommendations: The City should amend the Development Code to include a requirement that ODOT and other affected public agencies (DEQ, Oregon Department of Aviation, Mid-Willamette Valley COG, Marion County, etc.) receive notification of land use applications that meet the descriptions in this TPR requirement. Similarly, notification should be provided to the City of Salem if an action by the City potentially affects this neighboring jurisdiction's roads or facilities.</p>
<p>g) Regulations assuring amendments to land use designations, densities, design standards are consistent with the function, capacities and levels of service of facilities designated in the TSP.</p>	<p>Criteria for zone change approval (Section (3.110) includes the provision that adequate public facilities, services, and transportation networks are in place or are planned to be provided concurrently with the development of the property. Criteria for text amendments are found in Section 3.111 and pertain to Plan or Ordinance amendments. Approval is contingent on finding that that the proposed amendment complies with all applicable Statewide Planning, which would include compliance with the TPR.</p> <p>Recommendations: While the code requirements for text amendments and zone changes are consistent with this section of the TPR, the City should consider amending the Development Code to specifically state that approval of amendments to land use designations, densities, and design standards is contingent on findings of consistency with the planned transportation system, as adopted in the City's TSP. In addition, language that governs zone changes (Section 3.110) and plan amendments (Section 3.111) should be revised to include reference to TPR Section -0060 (see Section 660-12-0060 below), or should include language from this TPR section that states under what circumstances a plan or land use regulation</p>

Table 1. TPR Requirements and City of Keizer Compliance	
TPR Requirement (OAR Section 660-12-0045)	Ordinance Compliance/Recommendations
	amendment “significantly affects a transportation facility” and the mitigation that is required. The options for ensuring that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP should be included in the Development Code, or code language should reference the relevant TPR section.
(3) Local governments shall adopt land use or subdivision regulations for urban areas and rural communities as set forth in 660-012-0040(3)(a-d):	
(a) Provide bicycle parking in multifamily developments of 4 units or more, new retail, office and institutional developments, transit transfer stations and park-and-ride lots	Section 2.303.08, Bicycle Parking, meets this TPR requirement.
(b) Provide “safe and convenient” (per subsection 660-012-0045.3(d)) pedestrian and bicycle connections from new subdivisions/multifamily development to neighborhood activity centers; bikeways are required along arterials and major collectors; sidewalks are required along arterials, collectors, and most local streets in urban areas except controlled access roadways	<p>Subsection 2.310.04 under Development Standards for Subdivisions meets the “safe and convenient” TPR requirement. Pursuant to subsection 2.302.04, General Right-of-Way and Improvement Widths, Sidewalks are required on local streets. The table in the subsection indicates that the need for sidewalks on arterials and collectors will be evaluated on a case-by-case basis.</p> <p>The Development Code does not require bikeways along arterials and major collectors. However, conditions for approval of a zone change can include improvement of public streets, including bike paths, curbs, and sidewalks (Section 3.110.05).</p> <p>Recommendations: Code and public works standards should specify where bikeways are required (based on street classification) and their construction design (width, material). The Development Code should be amended to specify under what circumstances arterials and major collectors will be required to have bikeways or should cross-reference engineering standards that include this information.</p>

Table 1. TPR Requirements and City of Keizer Compliance	
TPR Requirement (OAR Section 660-12-0045)	Ordinance Compliance/Recommendations
(c) Off-site road improvements required as a condition of development approval must accommodate bicycle and pedestrian travel, including facilities on arterials and major collectors	<p>City code language does not specifically indicate that off-site road improvements can be required as a condition of development approval.</p> <p>Recommendation: Section 2.310, Development Standards for Land Divisions, should be amended to meet this TPR requirement.</p>
(e) Provide internal pedestrian circulation within new office parks and commercial developments	<p>The City's Mixed Use, Industrial Business Park, Office Commercial, and Commercial Retail zones do not include requirements for internal pedestrian circulation. The applicable zones do specify circulation standards for the River and Chemawa Specific Area Plans, including standards for pedestrian ways. The Development Code does not require pedestrian circulation within new office and commercial developments.</p> <p>Recommendation: Section 2.310, Development Standards for Land Divisions, should be amended to meet this TPR requirement.</p>
(6) As part of the pedestrian and bicycle circulation plans, local governments shall identify improvements to facilitate bicycle and pedestrian trips to meet local travel needs in developed areas.	<p>Recommendation: This requirement should be addressed by the TSP update planning process. The requirement can be met by adopting improvements in developed areas that meet the needs identified in the TSP's pedestrian and bicycle circulation elements.</p>

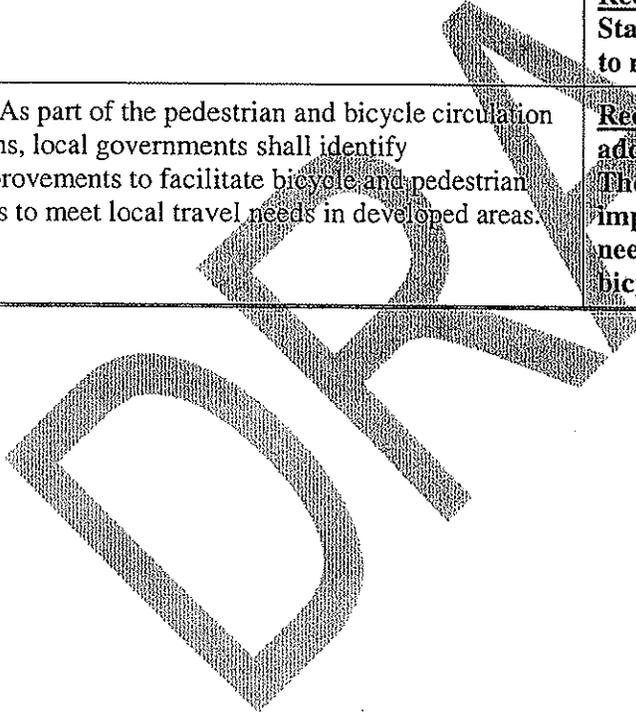


Table 1. TPR Requirements and City of Keizer Compliance	
TPR Requirement (OAR Section 660-12-0045)	Ordinance Compliance/Recommendations
<p>(7) Local governments shall establish standards for local streets and accessways that minimize pavement width and total ROW consistent with the operational needs of the facility.</p>	<p>Street standards are found in Section 2.302; a table that contains General Right-of-Way and Improvement Widths is in Section 2.302.04. Local streets are categorized (I, II, III) based on the number of dwelling units accessing the street, the number of square footage of buildable area, and the average daily trips generated by development.</p> <p>The required pavement (first figure listed) and road right-of-way widths (second figure listed) per the Street Standards table are listed below. Total right-of-way width is not specified in the table, as this is determined on a case-by-case basis.</p> <p>Major Arterial – 68-84 feet; Evaluated on an individual basis Minor Arterial – 68 feet; Evaluated on an individual basis Collector – 64-68 feet; Evaluated on an individual basis Local Street III – 34 feet; 58 feet Local Street II – 32 feet; 56 feet Local Street I – 30 feet; 44 feet</p> <p>Improvement (pavement) width is based on parking on two sides: the Development Code does not provide for a narrower street width when on-street parking is restricted to one side or is prohibited.</p> <p>Street standards in the Development Code are not consistent with Table 6, Street Standards, in the 2004 TSP. Improvement widths for collectors, minor arterials, and major arterials are smaller than required by the code. Improvement widths for local streets in the TSP and the Development Code are the same, but the required right-of-way widths are smaller in the TSP.</p> <p>The Department of Land Conservation and Development has developed a guidebook (Neighborhood Street Width Guidebook) that suggests the following local street standards:</p>

¹ Note: Code requirements reference "major collectors" but does not include corresponding standards. Street classifications are not defined in the Development Code.

Table 1. TPR Requirements and City of Keizer Compliance		
TPR Requirement (OAR Section 660-12-0045)	Ordinance Compliance/Recommendations	
	Pavement	Right of-Way
	No On-Street Parking	20' 42-48'
	Parking on One Side	24' 47-52'
	Parking on Two Sides	28' 52-56'
	<p>While the City's low volume (Local Street I) street right-of-way width (44 feet) is consistent with the guidebook's recommended width, the pavement width of 30 feet is in excess of the recommended standard. In general, the City's required local street right-of-way widths in both the Development Code and the adopted TSP are not consistent with the guidebook recommendations and may not meet the TRB requirement of "minimizing pavement width," because a narrower local street right-of-way option is not provided.</p> <p>The City allows for modifications to the right-of-way and improvement widths (Section 2.302.05) when the alteration would preserve trees or natural features, there are unusual topographic features, parcel shape and configuration, and when the alteration necessary to provide greater privacy or aesthetic quality to the development.</p> <p>Recommendations: The Street Standards table in Section 2.302.04 should be amended to provide for a narrower street right-of-way option, defined by clear and objective standards and consistent with the model language listed above. The City may also want to distinguish the different designs for local streets (parking allowed on one or both sides, or prohibited) to identify where the narrower standards are appropriate.</p>	

Table 1. TPR Requirements and City of Keizer Compliance	
TPR Requirement (OAR Section 660-12-0045)	Ordinance Compliance/Recommendations
<p>Amendments to functional plans, acknowledged comprehensive plans, and land use regulations that significantly affect an existing or planned transportation facility shall assure that allowed land uses are consistent with the identified function, capacity, and performance standards of the facility.</p>	<p>Recommendations: Revise the Development Code to include language that is consistent with the language of this section of the TPR.</p> <p>Section -0060 was amended in March 2005 and includes new provisions for local jurisdictions on how to make a determination whether or not an amendment to the City's adopted plans or land use regulations has a significant affect on a transportation facility.</p> <p>The TPR includes a category of facilities, improvements, and services that can be assumed to be "in-place" or committed and available to provide transportation capacity (-0060)(4)). For the City of Keizer, these include projects in the STIP or locally adopted TIP or CIP and projects that are authorized in the local TSP for which a funding plan or mechanism is in place.</p> <p>The TPR also allows applicants and decision-makers to rely on transportation improvements that are "reasonably likely to be provided by the end of the planning period" (-0060 (4)(b)(D)) when considering amendments to local plans and land use regulations. Through this TSP update process, the City of Keizer has an opportunity to identify what, if any, planned improvements in the adopted TSP may be considered "reasonably likely" to be funded and built within the 20-year planning horizon.</p> <p>Pending the 20-year transportation improvement needs and the development of a corresponding funding element, revisit -0060 determination of "reasonably likely" transportation projects.</p>

DRAFT

III. PLAN & POLICY REVIEW

FEDERAL

Safe, Accountable, Flexible, and Efficient Transportation Equity Act - A Legacy for Users (SAFETEA-LU)

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (commonly known by its acronym, SAFETEA-LU) is the most recent federal transportation bill authorizing funding for the nation's surface transportation programs. Signed into law in August 2005, SAFETEA-LU replaced the expired Transportation Equity Act for the 21st Century (TEA-21). The law establishes funding levels and policies for the federal government's highway, highway safety, transit, motor carrier, and some rail programs administered by the U.S. Department of Transportation. SAFETEA-LU expires September 30, 2009.²

Over the course of SAFETEA-LU, Oregon expects to have an additional \$212.5 million of additional flexible federal highway funds that can be used for transportation projects and activities throughout the state. The Oregon Transportation Commission (OTC) approved a plan to distribute the additional federal funding coming to the state under SAFETEA-LU. The OTC dedicated nearly half of the additional federal money to modernization projects throughout the state by increasing the amount of modernization funding available in the 2008-2011 Statewide Transportation Improvement Plan (STIP). Determination on how to use these modernization funds will be made based on recommendations from Area Commissions on Transportation that cover most regions of the state.

SAFETEA-LU puts in place a number of new policies, processes, and programs including:

- An Environmental Impact Statements (EISs) process that will streamline and expedite environmental review processes and support early identification and resolution of issues. SAFETEA-LU obligates lead agencies to formally involve the public and participating agencies in the environmental review process, complementing ODOT's Context Sensitive and Sustainable Solutions (or CS³, pronounced C-S-cubed) initiative.³ It also creates a mechanism for issue identification and dispute resolution and establishes a 180-statute of limitations for lawsuits challenging approvals, which may reduce potential delays due to litigation on projects in which complex or controversial issues or impacts may generate opposition. (Section: 6002)
- A Safe Routes to School (SR2S) program to encourage children in grades K-8 to walk or ride their bicycles to school by funding physical improvements within two miles of schools. Each State must set aside 10-30% of the funds for non-infrastructure-related activities to encourage walking and bicycling to school. These include public awareness campaigns and outreach to press and community leaders, traffic education and enforcement in the vicinity of schools, student sessions on bicycle and pedestrian safety, health, and environment, and training, volunteers, and managers of safe routes to school programs.

² See the Surface Transportation Policy Project, <http://www.istea.org/>, for current information on SAFETEA; U.S. Department of Transportation, <http://www.fhwa.dot.gov/reauthorization/safetea.htm>

³ The CS³ initiative was developed for the OTIA III State Bridge Delivery Program. More on this initiative can be found at http://www.oregon.gov/ODOT/HWY/OTIA/bridge_delivery.shtml.

- Changes to metropolitan planning requirements to make them consistent with statewide planning requirements. A clear emphasis of the legislation is increased coordination. For example, SAFETEA-LU requires that metropolitan planning organizations (MPOs) coordinate their transportation planning with other activities in the area including economic development, environmental protection, airport operations and freight movement.

STATE OF OREGON

Transportation Planning Rule (TPR) (last amended 2005)

Statewide Planning Goal 12, Transportation, requires cities, counties, metropolitan planning organizations, and ODOT to provide and encourage a safe, convenient, and economic transportation system. This is accomplished through development of Transportation System Plans (TSPs) based on inventories of local, regional and state transportation needs. Goal 12 requirements state that transportation plans shall:

- ❑ *consider all modes of transportation, including pedestrian, bicycle, highway, rail, mass transit, air, water, and pipeline*
- ❑ *be based upon an inventory of local, regional, and state transportation needs*
- ❑ *consider the differences in social consequences that would result from utilizing differing combinations of transportation modes*
- ❑ *avoid principal reliance on any one mode of transportation*
- ❑ *minimize adverse social, economic, and environmental impacts and costs and conserve energy*
- ❑ *meet the needs of the transportation disadvantaged*
- ❑ *facilitate the flow of goods and services so as to strengthen the local and regional economy*
- ❑ *conform with local and regional comprehensive land use plans*
- ❑ *be developed, adopted, amended and implemented in accordance with the standards set out in OAR 660, Division 12*

In 1991, the Land Conservation and Development Commission (LCDC), with the concurrence of ODOT, adopted the Transportation Planning Rule, OAR 660 Division 12, to implement State Planning Goal 12, Transportation (amended in May and September 1995, and March 2005). The TPR requires cities with a population of 2,500 or greater to prepare and adopt a Transportation System Plan. All counties are also required to prepare and adopt a TSP.

The TPR requires local governments to adopt land use regulations consistent with state and federal requirements "to protect transportation facilities, corridors, and sites for their identified functions (OAR 660-012-0045(2))."

The applicable portion of the TPR is found in OAR Section 660-12-0045, Implementation of the Transportation System Plan. In summary, the Transportation Planning Rule requires that local governments revise their land use regulations to implement the TSP. The following TPR

requirements are paraphrased from Section -0045:

- Amend land use regulations to reflect and implement the Transportation System Plan.
- Adopt land use or subdivision ordinance measures, consistent with applicable federal and state requirements, to protect transportation facilities, corridors and sites for their identified functions, to include the following topics:
 - access management and control;
 - protection of public use airports;
 - coordinated review of land use decisions potentially affecting transportation facilities;
 - conditions to minimize development impacts to transportation facilities;
 - regulations to provide notice to public agencies providing transportation facilities and services of land use applications that potentially affect transportation facilities;
 - regulations assuring that amendments to land use applications, densities, and design standards are consistent with the Transportation System Plan.
- Adopt land use or subdivision regulations for urban areas and rural communities to provide safe and convenient pedestrian and bicycle circulation and bicycle parking, and to ensure that new development provides on-site streets and accessways that provide reasonably direct routes for pedestrian and bicycle travel.
- In MPO areas, adopt land use and subdivision regulations to reduce reliance on the automobile.
- Identify improvements to facilitate bicycle and pedestrian trips in developed areas.
- Establish street standards that minimize pavement width and total right-of-way.

Table 1 in this report provides a comparison of the TPR requirements, specifically those in Section -0045, with the City's current planning documents and identifies steps the City would need to take to comply with the TPR.

Oregon Transportation Plan (2006)

Originally adopted in 1992, the Oregon Transportation Plan (OTP) is a policy document developed by ODOT in response to federal and state mandates for systematic planning for the future of Oregon's transportation system. The OTP is intended to meet statutory requirements (ORS 184.618(1)) to develop a state transportation policy and comprehensive long-range plan for a multi-modal transportation system that addresses economic efficiency, orderly economic development, safety, and environmental quality. The 2006 OTP expands on the policy objectives of the 1992 plan, with an emphasis on maintaining assets⁴ in place, optimizing existing system

⁴ The OTP defines "asset management" as a "systematic process of maintaining, upgrading and operating physical assets cost-effectively. It combines engineering principles with sound business practices and economic theory, and it provides tools to facilitate a more organized, logical approach to decision-making. Asset management provides a framework for handling both short- and long-range planning."

performance through technology and better system integration, creating sustainable funding, and investing in strategic capacity enhancements.

The OTP's goals, policies and strategies guide the development of state multimodal, modal/topic⁵ and facility plans and regional and local transportation system plans. The OTP provides the framework for prioritizing transportation improvements and funding, but it does not identify specific projects for development.⁶ As required by Oregon and federal statutes, the OTP guides development and investment in the transportation system through:

- Transportation goals and policies,
- Transportation investment scenarios and an implementation framework, and
- Key initiatives to implement the vision and policies.

Goals in the OTP include: Mobility and Accessibility; Management of the System; Economic Vitality; Sustainability; Safety and Security; Funding the Transportation System; and Coordination, Communication and Cooperation. Policies and strategies under many of these goals emphasize increasing coordination and cooperation among federal and state agencies, regional and local governments and private entities to achieve these goals.

The Implementation Framework section of the OTP describes the implementation process and how state multimodal, modal/topic plans, regional and local transportation system plans and master plans will further refine the OTP's broad policies and investment levels. Local transportation system plans can further OTP implementation by defining standards, instituting performance measures, and requiring that operational strategies be developed.

The Implementation section also describes three investment levels, examples of the investment priorities for each level of investment, and their impacts on the transportation system. These levels are described as "flat funding" (Level 1), "maintaining and improving existing infrastructure" (Level 2), and "expanding facilities and services" (Level 3). The recommendation in the OTP is for the State to invest at levels closer to Level 3 "in order to be competitive economically and to have the transportation infrastructure and services that allow communities to function well."

Finally, a list of "key initiatives" describes the OTP's implementation priorities. The key initiatives are intended to help frame plan implementation and reflect the directions of the OTP including system optimization, integration of transportation modes, integration of transportation, land use, the environment and the economy, and the need to make strategic investments using a sustainable funding structure. The key initiatives envision creating the sustainable funding plan using both traditional and new revenue sources.

⁵ Modal or topic plans, as developed by ODOT and other state agencies, include plans for aviation, bicycle and pedestrian facilities, highways, marine ports and waterways, public transportation and rail.

⁶ Projects are identified through facility plans and regional and local transportation system plans, and sometimes through modal plans.

⁷ As stated in the Implementation section of the OTP, requirements for regional and local transportation system plans (TSPs) are found in the Transportation Planning Rule (OAR 660-012). Regional and local TSPs must be consistent with the state TSP (the OTP), state multimodal, modal/topic and transportation facility plans.

Oregon Highway Plan (1999, last amended 2006)

The Oregon Highway Plan (OHP), an element and modal plan of the state's comprehensive transportation plan (OTP), guides the planning, operations, and financing of ODOT's Highway Division. Policies in the OHP emphasize the efficient management of the highway system to increase safety and to extend highway capacity, partnerships with other agencies and local governments, and the use of new techniques to improve road safety and capacity. These policies also link land use and transportation, set standards for highway performance and access management, and emphasize the relationship between state highways and local road, bicycle, pedestrian, transit, rail, and air systems.

The Oregon Transportation Commission adopted the Highway Plan on March 18, 1999. In July 2006, ODOT published an update that includes amendments made from November 1999 through January 2006. The updated Keizer TSP will need to be consistent with the OHP and the planning process will review and reference the recent changes to the OHP, where applicable.

The policies found within the OHP that apply to the Keizer TSP include:

Policy 1A: State Highway Classification System;

Policy 1F: Highway Mobility Standards;

Policy 1G: Major Improvements;

Policy 2B: Off-System Improvements;

Policy 2F: Traffic Safety;

Policy 3A: Classification and Spacing Standards;

Policy 4A: Efficiency of Freight Movement.

Policy 4B: Alternative Passenger Modes.

Policy 4D: Transportation Demand Management

Policy 4E: Park-and-Ride Facilities

Policy 1A: State Highway Classification System. The state highway classification system includes five classifications: Interstate, Statewide, Regional, District, and Local Interest Roads. In addition, there are four special purpose categories that overlay the basic classifications: special land use areas, statewide freight route, scenic byways, and lifeline routes. These special designations supplement the highway classification system and are used to guide management, needs analysis, and investment decisions on the highway system. Interstate 5 borders the city limits to the east and Salem Parkway (99E BUS) forms the City's southeastern boundary, but neither of these highways enters the city limits. 99E lies to the east of the city limits and is a Regional Highway.

Both I-5 and 99E BUS are on the National Highway System (NHS). The federal Intermodal Surface Transportation Efficiency Act of 1991 required that states establish a National Highway System to provide an interconnected system of principal arterial routes which will serve "interstate and inter-regional travel." In Oregon the National Highway System includes routes designated Interstates and most Statewide Highways and intermodal connectors.

Policy 1F: Highway Mobility Standards Access Management Policy. This policy addresses state highway performance expectations for planning and plan implementation or amendment, as well as

providing guidance for managing access and traffic control systems. For Keizer, this policy pertains to I-5 and 99E. Action 1F.1 states that highway mobility standards apply to all state highway sections; for areas outside of the Portland Metro area, the maximum volume to capacity ratios for peak hour operating conditions in Table 6 apply. 1F.5 states that within transportation system plans, where the volume-to-capacity (v/c) ratio is worse than the identified standards in the OHP and transportation improvements are not planned, the performance standard for the highway shall be to improve performance as much as feasible and to avoid further degradation of performance.

Policy 1G: Major Improvements. This policy requires maintaining performance and improving safety by improving efficiency and management before adding capacity.

Policy 2B: Off-System Improvements. This policy recognizes that the state may provide financial assistance to local jurisdictions to make improvements to local transportation systems if the improvements would provide a cost-effective means of improving the operations of the state highway system.

Policy 2F: Traffic Safety. This policy emphasizes the state's efforts to improve safety of all users of the highway system. Action 2F.4 addresses the development and implementation of the Safety Management System to target resources to sites with the most significant safety issues.

Policy 3A: Classification and Spacing Standards. This policy addresses the location, spacing, and type of road and street intersections and approach roads on state highways. It includes standards for each highway classification. The adopted standards can be found in Appendix C of the Oregon Highway Plan; generally, the minimum access spacing distance increases as either the highway's importance or posted speed increases. The access management spacing standards established in the OHP are implemented by OAR 734, Division 51.⁸

Policy 4A: Efficiency of Freight Movement. This policy emphasizes the need to maintain and improve the efficiency of freight movement on the state highway system.

Policy 4B: Alternative Passenger Modes. This policy encourages the development of alternative passenger services and systems as part of broader corridor strategies and promotes the development of alternative passenger transportation services located off the highway system to help preserve the performance and function of the state highway system.

Policy 4D: Transportation Demand Management. This policy establishes the state's interest in supporting demand management strategies that reduce peak period single occupant vehicle travel, thereby improving the flow of traffic on the state highway system.

Policy 4E: Park-and-Ride Facilities. This policy documents that the State will encourage the efficient use of the existing transportation system through the development and use of park-and-ride facilities. This policy is important to Keizer because of the number of commuters who regularly use 99E and I-5.

⁸ Oregon Revised Statute (OAR) 734, Division 51, was amended in September 2005 to be consistent with August 2005 OHP revisions to Policy 1B. Specifically, the spacing standards in OAR 734-051 were amended to be consistent with the OHP tables in Appendix C, Access Management Standards.

Oregon Bicycle and Pedestrian Plan (1995)

The Oregon Bicycle and Pedestrian Plan provides guidance to regional and local jurisdictions for the development of safe, connected bicycle and pedestrian systems. The plan is a modal element of the Oregon Transportation Plan. It contains the standards used on State Highway projects and provides guidance to cities in establishing facilities on local transportation systems. These standards are recommended but are not required for use by local jurisdictions in Oregon.

The plan includes two major sections: policies and implementation strategies and design, maintenance, and safety. The policy section contains relevant state and federal laws. The stated bicycle and pedestrian transportation vision is as follows:

Oregon envisions a transportation system where walking and bicycling are safe and convenient transportation modes for urban trips.

This plan affects bicycle and pedestrian facilities on state-owned transportation facilities within the Cities. Although the Plan does not regulate bicycle facilities in Keizer, it may be helpful in planning to reduce reliance on automobiles and in implementing the North River Road Alternative Modal Opportunity Study (1995) and the River and Chemawa Design Study (1995). The state plan will be used in the development of the bicycle and pedestrian element of the City's TSP.

Regarding areas in the vicinity of Keizer, the Oregon Bicycle and Pedestrian Plan considers rural highways and county roads suitable for cycling if they have paved shoulders or relatively low traffic volumes. Map 1, Conditions for Bicyclists on Rural Highways, shows that I-5 and highway 99E both have four-foot or greater shoulders. Table 7, Standard Rural Highway Shoulder Widths, provides shoulder width recommendations based on roadway type (Rural Arterials, Rural Collectors, Rural Local Routes) and ATD.

Oregon Rail Plan (2001)

The Oregon Rail Plan is a modal element of the OTP. It is intended to implement the OTP's long-range vision of a viable freight and passenger rail system in Oregon.

Chapter 1, Rail Policies and Planning, includes federal requirements for rail freight. This chapter includes a section addressing compliance with Statewide Planning Goals. ODOT's certified State Agency Coordination (SAC) Program and Oregon Administrative Rules Chapter 31, Division 15 describe the procedures that ODOT will follow when developing and adopting plans to assure that they comply with the statewide planning goals and are compatible with acknowledged comprehensive plans. Relevant to the development of a TSP for the City of Keizer, the stated focus of ODOT's efforts to establish compatibility with acknowledged comprehensive plans will be at the facility planning and project planning stages of the planning program. Policy 1 under Freight Rail is "increase economic opportunities for the State by having a viable and competitive rail system." Regarding passenger rail policy, the OTP supports intercity rail passenger service as part of a balanced transportation system. Convenient connections with other modes should integrate passenger train service into a network linking all areas of the state, nation, and the world.

Chapter 2 is the Freight Element of the Oregon Rail Plan. The element has four major purposes: (1) describe Oregon's freight rail system in terms of the carriers and the individual properties that make

up the state railroad system, (2) describe the commodities transported by rail in Oregon, (3) identify funding needs and potential funding sources for railroads in Oregon, (4) assess what shippers require of rail service in Oregon. In Keizer, Burlington Northern has a (Class I) rail line running north-south, parallel to I-5 on the western side. This line is leased to and operated by Portland and Western (P & W) Railroad.

The Passenger Element is in Chapter 3. The Rail Plan identifies criteria that could be used to evaluate potential passenger rail services including patronage, cost recovery, and running time. The Plan identifies improvements needed for passenger stations, primarily in the Willamette Valley, as well as improvements to thruway bus stops. This Chapter provides useful information for passenger rail planning. The requirements included in the Passenger Element are associated with the Eugene-Portland Union Pacific (UP) main line, located outside of Keizer city limits. Because the Eugene-Portland corridor is a federally designated high speed corridor, it is eligible to compete for federal high speed rail capital funding. Chapter 3 of The Rail Plan would be particularly relevant to the Keizer TSP if the state moves ahead with a proposed commuter rail line between Wilsonville and Salem. Although AMTRAK provides passenger service to Salem, there are currently no passenger rail stops in Keizer.

Oregon Public Transportation Plan (1997)

The Oregon Public Transportation Plan forms the transit modal plan of the Oregon Transportation Plan. The vision guiding the Public Transportation Plan is as follows:

The public transportation plan builds on and begins implementing the OTP's long-range vision for public transportation in the State of Oregon. That vision includes:

- *A comprehensive, interconnected and dependable public transportation system, with stable funding, that provides access and mobility in and between communities of Oregon in a convenient, reliable, and safe manner that encourages people to ride*
- *A public transportation system that provides appropriate service in each area of the state, including service in urban areas that is an attractive alternative to the single-occupant vehicle, and high-quality, dependable service in suburban, rural, and frontier (remote) areas*
- *A system that enables those who do not drive to meet their daily needs*
- *A public transportation system that plays a critical role in improving the livability and economic prosperity for Oregonians.*

The plan contains goals, policies, and strategies relating to the whole of the state's public transportation system. The plan is intended to provide guidance for ODOT and public transportation agencies regarding the development of public transportation systems.

Transit issues in Keizer will be addressed as part of this TSP process through a cooperative effort with the Salem-Keizer Transit District. The service area for the district is the Salem-Keizer Urban Growth Boundary.

Access Management Rule (OAR 734-051)

Oregon Administrative Rule 734-051 defines the State's role in managing access to highway facilities in order to maintain functional use and safety and to preserve public investment. The provisions in

the OAR apply to all roadways under Oregon State jurisdiction within the City of Keizer. The access management rules include spacing standards for varying types of state roadways.⁹ It also lists criteria for granting right of access and approach locations onto state highway facilities.

Freight Moves the Oregon Economy (1999)

This report summarizes a variety of information about issues and needs surrounding the transport of freight by roads, rail lines, waterways, aircraft, and pipelines. The document's stated purpose is to demonstrate the importance of freight to the Oregon economy and identify concerns and needs regarding the maintenance and enhancement of current and future mobility within the state of Oregon.

The report recognizes the I-5 corridor as the most important north-south freight corridor in Oregon. The report notes that "Much of Oregon's freight is moved by highways, rail lines, and waterways in the I-5 and I-84 corridors (figure II-1). Similarly, petroleum and natural gas pipelines are located along the I-5 and I-84 corridors...The state's largest airports are located where people live—the four metropolitan areas along I-5; thus the majority of Oregon's in-state air traffic follows the I-5 corridor too." The report estimates that truck volume on I-5 in the Salem area ranges from 10,000 – 15,000 trucks daily, and stresses that access to I-5 is of critical importance to the state's freight system.

The Freight Move the Oregon Economy report will be integrated in the Keizer TSP, particularly in conjunction with access to I-5 and 99E and specifically with the planning of the I-5/Chemawa interchange.

⁹ "Spacing Standards" mean Access Management Spacing Standards as set forth in OAR 734-051-0115 and specified in Tables 2, 3, and 4, adopted and made a part of division 51 rules and Access Management Spacing Standards for Approaches in an Interchange Area as set forth in OAR 734-051-0125 and specified in Tables 5, 6, 7, and 8 and Figures 1, 2, 3, and 4, adopted and made a part of Division 51 rules (734-051-0040(62)).

REGIONAL

Salem-Keizer Area Transportation Study (SKATS) Regional Transportation Systems Plan (RTSP) (2007)

The MPO in the Keizer area is the Salem-Keizer Area Transportation Study (SKATS). SKATS provides a forum for developing the Regional Transportation Systems Plan (RTSP) and programming federal and state funded transportation investments to implement the plan.

The RTSP, adopted on May 22, 2007, is based on 24-year projections of population, employment, and land use in the Salem-Keizer area. It provides a comprehensive, long-range plan for meeting the region's transportation needs over the next 24 years. The main portion of the plan identifies projects that have a reasonable certainty of being funded and will result in an improvement in the air quality of the area. Another portion of the plan describes those transportation projects that the area would like to implement if additional funding was secured.

The 2000 U.S. Census recorded that the population in the SKATS area surpassed 200,000 persons, which resulted in SKATS being designated as a Transportation Management Area (TMA). This threshold was reached as a result of the U.S. Bureau of the Census combining the urbanized area of Salem-Keizer with the city of Turner, along with areas along the edges of the previous SKATS boundary. In addition to meeting all the federal requirements for an urbanized area and MPO, TMAs are also responsible for developing congestion management systems, TIP project selection, and are subject to a joint federal certification review of the planning process at least every three years.

For the SKATS area, the population and employment is forecast to grow 40 and 39 percent respectively between 2000 and 2031 (Chapter 3, Growth and Travel Demand). The RTSP modeled the impact this growth will have on the transportation system in two ways: by determining the ratio of travel demand to built road capacity and by using the regional multi-modal travel demand model maintained by SKATS to estimate the number of trips by automobile, bus, bicycle, and walking, by type of trip, in order to compare current conditions with the forecasted future travel demand.

There is a chapter in the RTSP devoted to each regional transportation system – pedestrian, bicycle, goods movement, aviation, maritime, rail, intermodal (freight and passenger), public transportation, and roads and highways. In each chapter are goals, objectives, policies, and recommended improvements for each system. The following list is a sample of items found in the RTSP that relate to transportation planning in Keizer:

- *Ensuring connectivity between Keizer and Salem for all modes is a continuing aim for the Regional Transportation Systems Plan. One option to address this situation would be the development of a multi-use path along the Willamette River, providing access for the residents of Keizer west of North River Road to downtown Salem. Currently, this proposal is still in the conceptual stages, with no specific routes through Salem-Keizer identified (Chapter 6, Regional Pedestrian Plan, Outstanding Issues).*
- *Affected jurisdictions shall include bicycle facilities on all newly constructed regional arterials (Policy 1, Regional Bicycle System).*
- *Affected jurisdictions shall include bicycle facilities as part of major improvement projects on roadways*

identified as part of the Regional Bicycle System unless significant constraints can be demonstrated. In such cases, viable alternatives shall be provided (Policy 2, Regional Bicycle System).

- *Chemawa at N. River Road in Keizer is identified as a future regional major transit stops (Chapter 14, Regional Public Transportation System).*
- *The Broadway/River Road North corridor is identified as a High Priority Transportation Corridor (Chapter 15, Roads and Highways).*

The projects presented in the RTSP that address regional road system deficiencies come from six sources: The 2005 Update to the Regional Transportation Systems Plan (RTSP), Salem's 1998 Transportation Systems Plan (as amended, currently being updated), Keizer's 2000 Transportation Systems Plan, Marion County's 2004 Rural Transportation Systems Plan, Turner's 1999 Transportation System Plan, and ODOT's 2006-2009 State Transportation Improvement Program (STIP). These projects address both near-term and long-term needs of the Salem-Keizer-Turner area to provide the residents and businesses with an adequate level of mobility. The financially constrained portion of the RTSP (Table 15-1) includes a total of 71 recommended projects and 56 committed projects from these documents. Due to the financial shortfall facing the area over the next 24 years, as detailed in Chapter 5 (Finance), there are an additional 154 projects that have been identified as necessary for maintaining the region's mobility but no funding is anticipated for them during the 24-year life of this Plan. These improvements are identified in the RTSP as "illustrative."

The Keizer TSP update will review the projects listed in the RTSP and, based on the analysis undertaken as part of this local planning process, will make recommendations for updating the RTSP project list.

Marion County Comprehensive Plan (2005)

The introduction to the Marion County Comprehensive Plan states that the plan was developed for the purpose of providing a guide to development and conservation of Marion County's land resources. The Comprehensive Plan establishes goals and objectives for a variety of factors that influence community development such as sewer and water, transportation, housing, commerce, industry, schools, land use, recreation, and natural resources. The goals and policies recognize and plan for the interrelationships and interactions of these factors.

The Transportation Element of the Comprehensive Plan was updated in 2005 to be consistent with the County's updated Rural Transportation System Plan (RTSP). The Transportation Element summarizes the findings, recommendations, and policies from the Marion County RTSP (reviewed in the *Marion County Rural Transportation System Plan* section below).

The recommended revisions to the City of Keizer's TSP will need to be coordinated and consistent with the County's RTSP. The County's relationship with the cities that lie within it is summarized under the "Rural and Urban Transportation Planning" heading in the RTSP:

City transportation plans start where the RTSP ends, at the urban growth boundaries. Since many of the main city streets are maintained by Marion County, the County has a vested interest in the transportation planning process for each community. The County also recognizes that the needs, goals and visions vary from city to city. For these reasons, the County works with each city individually to determine the transportation

plan most appropriate for that community, rather than developing one countywide urban plan to encompass all urban areas.

Marion County Rural Transportation System Plan (2005)

The Marion County Rural Transportation System Plan (RTSP) is a 20-year transportation plan for all rural County transportation facilities outside the urban growth boundaries of the 20 cities within Marion County. Transportation issues located within urban areas are addressed in individual city plans. The City of Keizer's TSP will need to be consistent with the adopted County RTSP or will need to make recommendations for updating the County's plan.

The RTSP Executive Summary (Chapter 1) explains that with the 20-year forecast growth in population, economic activity, and travel demand, several key roadways will be facing capacity issues. In association with increases in roadway usage, safety issues and needs will continue to increase. The County recognizes that while a good transportation network, with good connections to the national transportation network, is critical to the economy, adequate funding is not anticipated to be available to meet these needs. Over the next 20 years, the County will continue to keep maintenance and preservation of the existing roadway system its top priority in terms of resource allocation. Available funding for rural capital improvements over a 20-year time span is expected to be only a fraction of what is needed to address the identified rural needs. Table 2-1 provides a list of rural improvements that the County intends to pursue with the projected \$17 million available over the course of the 20-year planning horizon.

Chapter 2, Plan Overview, outlines the issues in the County that affect transportation planning. Keizer is documented as one of the cities facing significant growth and "observing growing negative effects of traffic congestion on main routes through town." The Salem-Keizer area is also mentioned as wanting more trails for non-motorized recreation.

Chapter 3, Background and Existing Plans, lists relevant transportation information and policies from adopted local plans, including the following for the City of Keizer:

Keizer Comprehensive Plan (1992 periodic review)

- *Proposes a study for Lockhaven Dr. from N. River Road to Chemawa interchange for future widening, noise buffering, and pedestrian crossing (safety is a concern near middle school).*
- *Recommends minimizing BNRR crossing conflicts.*
- *Supports evaluation of third bridge to support industrial development of the City.*
- *Establishes noise standard of 67dB for residential compatibility.*
- *Recommends increasing transit service to Clear Lake area, McNary Town Center, Chemawa Center.*

Keizer Transportation System Plan (2000)

- *Forecasts a Keizer population of 35,698 in 2020.*
- *55% of Keizer trips were home-based non-work trips.*

- *Designates North River Rd. and Lockhaven Dr. as major arterials.*
- *Recommends improvements to traffic flow on Lockhaven Dr. to and from I-5.*
- *Recommends study of access management along North River Road.*
- *Supports a SKATS RTSP goal of restoring commercial navigation through the upper Willamette River where environmental impacts can be mitigated or minimized and economic justification exists.*
- *Goal: A safe pipeline into and out of Keizer.*
- *Notes Washington County's plan to start rail service from Beaverton to Wilsonville in 2003-2004 [now 2008] and the possibility of extending service to the Salem-Keizer area.*
- *Objective: Preserve all rail corridor rights-of-way for transportation-related uses.*

Keizer Station Plan (2002)

- *Provides preliminary planning work for an area set aside for substantial development near the interchange of I-5 and Chemawa Road.*

The Goals and Objectives for the County transportation system are in Chapter 4. These include a goal to address intergovernmental coordination and an objective to improve coordination with all affected jurisdictions to meet future transportation needs (Goal 8). Other objectives are to minimize adverse impacts of the transportation system on quality of life in communities and to foster cooperation between the County and cities to address a wide variety of transportation issues (Goal 5).

Roadway System Needs and Recommended Improvements (Chapter 8) include a recommendation for a Brooklake Road corridor study from River Road NE to Oregon 99E, connection the I-5 interchange, Keizer and Brooks (Table 8-15). Identified issues that would be addressed in a corridor study include capacity, future signal locations, turn lanes and access management. Also in this chapter is a modernization project for 35th Avenue. This project includes the realignment of 35th Avenue north of the city limits in correlation with a City project to realign Radiant Drive west of the baseball stadium in the Keizer UGB.

Recommended Non-roadway Improvements (Chapter 9) that have an impact on Keizer's transportation system include future improvements on Highway 219 north of the City for shoulders over 4 feet wide to improve the facility for bicyclists and pedestrians (Figure 9-1, Potential Future Trails). Potential future transit corridors (Figure 9-2) are shown on North River Road (Salem/Keizer to Newberg) and Salem Parkway (Salem to Portland), with Salem Parkway identified as a future expressway.

The RTSP policies are found in Chapter 10. This chapter includes the County's policies regarding access management, spacing standards, roadway maintenance and preservation, and transportation system planning. Table 10-2 is the County's spacing requirement standards for County-maintained roadways within the UGB of a city with no adopted access spacing standards.

The Urban Growth Management Framework Coordination Policies (10.3.7) are also part of the urbanization element of the Marion County Comprehensive Plan and direct the County to coordinate planning efforts with cities. These policies also direct cities to implement street connectivity standards and adopt plans that improve the walking and biking environment.

Salem-Keizer Transit Strategic Business Plan, Short-Range Element (2004)

The Salem-Keizer Transit District developed the strategic business plan ("strategic plan") that "establishes principles to guide future decision making on services and allocation of public transportation resources and develops an action plan that focuses on improving mobility for Salem/Keizer residents." This document plans for a five year period and articulates a vision for the future of the public transportation provider (Cherriots) and its programs expansion of services and facilities. Expansion plans are based on growth in the area and a growing demand for public transit. The executive summary states that local jurisdictions – Salem, Keizer, Marion and Polk counties – have noted in their transportation plans that transit needs to assume a larger share of trips in order to reduce traffic congestion and lower the costs for new highway construction.

Section II, the Short Range Plan, summarizes a new vision for the future of Cherriots. This section includes the following highlights of this new vision:

- *Fundamentally redesigning the Cherriots fixed route services from a radial pulse system to a more interconnected design that better serves new community development goals;*
- *Identifying and developing new public transportation products and services that meet a wider variety of travel needs and thereby attract new users. The Cherriots TripLink program and commuter express service to Wilsonville are examples of how the District is already working in this direction;*
- *Seeking new and expanded sources of revenue to support operations and capital improvements;*
- *Establishing productivity improvement and cost containment as one of the District's highest priorities; and*
- *Redoubling the District's efforts with local jurisdictions, regional government and the state of Oregon to encourage and promote land use development and management that improves access to and convenient use of public transportation services.*

The central feature of the strategic plan is the redesign of the fixed route bus system to a "3C" pattern of operation, where there is a network of circulators, connecting to transit centers, which are served by frequent, high-capacity Corridor routes. The transit centers are to be located in areas where land use ordinances encourage mixes and densities of development that support good transit service.

Section II also talks about the funding climate for the public transit system in the area and planning for moderate growth that is consistent with available funding. The strategic plan proposes a new service program, on a five-year timeframe, that continues the basic upgrading of services and moves transit to "a higher level of utility to the public." In anticipation of the "doubling or tripling in capacity that will be needed to help meet future travel demand in Salem and Keizer," the strategic

plan cites the need to plan new and increased transit services and to create a new and more diverse funding plan to support these services.

Subsection A details proposed capacity improvements. The plan lists frequency improvements for five routes, including Route 11, Lancaster Drive, which connects from Keizer to Lancaster Drive. ("The portion of the route from Keizer to Chemeketa College and Lancaster Mall needs more frequent service, and is programmed in FY'06 to improve from 60-minute to 30-minute frequency.") In addition, Saturday service as a whole is scheduled for improvement from 60-minute to 30-minute frequency on many or all routes.

Subsection B, Increasing Service Convenience, summarizes a study completed in 2003 that identified strategies that can reasonably be employed in Salem/Keizer to increase the operating speed and flow of transit vehicles on key corridors in the district. Strategies developed included optimizing bus stop locations, traffic signal extensions, queue jump lanes and signal prioritization, and dedicated transit lanes. The Broadway/River Rd north corridor was identified as a High Priority Transportation Corridor (HPTC) and the first to begin to apply these strategies and implement changes to the transportation infrastructure to improve the movement of buses. The strategic plan notes that the next steps in the implementation of high-priority transportation corridor treatments are "to work with the staffs of the cities of Salem and Keizer to define the specific projects that need to be undertaken, and establish a public review process to seek input on the projects. Specific projects and their cost estimates then need to be programmed and approved by the local jurisdictions."

Subsection C, Enhance Mobility, discusses the proposed 3C Route structure and includes a map that shows Minor and Major Transit Corridors in Keizer, as well as a "Mixed-Use Community Center" on River Road. This section also provides rationale for a proposed Keizer Transit Center in the vicinity of the Chemawa Road/River Road intersection. The existing and planned activities at this node, including banks, retail opportunities, food establishments, higher density housing, and services, serve as trip attractors and provide a logical location to bring all of the local neighborhood routes together at one location. Another reason given for planning a Transit Center at this location is that the planned Broadway/River Road high-priority transit corridor will terminate on the north end at the Chemawa Road intersection with River Road. The strategic plan states that "(a)nchoring the corridor with a Keizer transit center in proximity to that intersection enhances the opportunity for transit to provide convenient and direct service on the first dedicated transit corridor in the area." The strategic plan lists the next steps to be taken in laying the foundation for the Keizer transit center. These include identifying potential sites in the area of the Chemawa/River Road intersection and engaging Keizer community development staff in discussions on issues such as zoning, redevelopment plans, feasibility for development, compatibility with comprehensive plans, and project financing. The strategic plan has programmed funds in FY 2005 through 2007 to support this work, but anticipates that additional funding will be needed to acquire property in the targeted area.

Specialized Transportation Plan for Polk and Marion Counties (2007)

The Specialized Transportation Plan for Polk and Marion Counties ("Plan") was developed so that projects identified in this coordinated plan could be eligible for federal funding, as distributed by the Oregon State Department of Transportation (ODOT). ODOT serves as the designated recipient for funds intended for non-urbanized portions of the state, and, in turn distributes them to local entities through a competitive grant process. ODOT is requiring that projects funded through the next funding

cycle, effective July 1, 2007, be derived from a coordinated plan.

As stated in the executive summary, the focus of this Plan is to identify primary characteristics of the existing transit services operating in Polk and Marion Counties; review the geography and demographics of the region; present the concerns of stakeholders, transit users and other community members; evaluate Chemeketa Area Regional Transportation System (CARTS) operations; present recommended service, marketing, fare and administrative changes for CARTS; and identify recommended coordination strategies for transit providers and human service agencies in the Salem-Keizer urbanized area and throughout Polk and Marion Counties.

Chapter 3, Overview of Existing Transit and Specialized Transportation Services, provides information on Salem-Keizer Transit (SKT). Established in 1979 with the goal of consolidating transit services, SKT is the primary public transit provider in Salem and Keizer, overseeing the fixed route service, Cherriots, and the dial-a-ride service, CherryLift. SKT administers Cherriots, CherryLift, and CARTS, but only provides operations and maintenance for Cherriots. (The other services are contracted to Oregon Housing and Associated Services, Inc.) CARTS is a partnership between Marion and Polk counties, providing transit service to the small cities and largely rural areas near Salem in these Counties. Service is provided through deviated fixed routes¹⁰ and general public dial-a-ride for seniors, disabled persons, and economically disadvantaged persons to provide access to medical services, educational, employment, shopping, and recreational opportunities. CARTS service is administered by Salem-Keizer Transit and operated by Oregon Housing and Associated Services, Inc. (OHAS). In addition to transportation, SKT provides travel training and administers a ridesharing program.

Chapter 6, Goals, Objectives and Performance Measures, includes goals and objectives for coordination and for rural public transportation (CARTS). The coordination goals and objectives are broadly defined, but specific service measures and standards were developed for CARTS and are included in this chapter. Strategies to address these goals are presented in Chapters 7 and 8. Chapter 9 is the Transportation Coordination Plan. It contains short-term coordination recommendations for Polk and Marion Counties. As stated in the introduction to this chapter, the recommendations build upon the CARTS recommendations presented in Chapter 7 but provide a broader set of actions for agencies and organizations to work together to achieve specific outcomes. This chapter identifies recommended efforts to enhance coordination among transit providers and human service agencies. Generally, Chapter 9 contains specific recommendations from CARTS, including approaches to funding, but defers to plans already developed by SKT for Cherriots and CherryLift service. The Plan offers this overview of SKT-offered services under the "Service Enhancements" subheading.

Proposals have included Sunday services, improved frequencies and additional CherryLift service, among other things. Due to limited funding and an unsuccessful funding measure in 2006, SKT has reduced services instead of pursuing recommended service enhancements. Service reductions affect both urbanized area residents and rural residents who travel into the Salem area for shopping, jobs and medical services. Additional funding can be used to enhance specific routes and services as recommended in Cherriots' service plan and the SKT Paratransit Review completed in 2004. Operationally, to better track riders, SKT is encouraged to purchase handheld passenger counters for its vehicles.

¹⁰ While a fixed route is identified with regular bus stops, CARTS will deviate up to ¼ of a mile from the route on request to better serve riders.

CITY OF KEIZER

City of Keizer Comprehensive Plan (1987, last amended 2003)

This document presents the official goals and policies that are relevant to land use in Keizer. The stated goal of the document is to "accommodate the conservation and development of Keizer's resources, neighborhoods and lands in a timely, orderly and efficient manner consistent with the needs and aspirations of present and future city residents." Land use regulations and implementation actions are governed by the policies in the Comprehensive Plan.

The transportation goals and objectives in the Comprehensive Plan (listed below) references a regional transportation document Salem Area Transportation Study (SATS) that has been updated (2007 SKATS, reviewed in this memorandum under the "Regional" section of Part II). Chapter 2, Overview Of The Findings And Concepts On Which The Plan Policies Are Based, states that the Comprehensive Plan incorporates transportation policies, functional classifications and standards found in the SATS. This section also documents that the Comprehensive Plan recommends several modifications to the SATS with regards to specific street classifications. The following goals and policies related to transportation are in Section III, Findings and Policies:

E. PUBLIC FACILITIES TO SUPPORT DEVELOPMENT

2. GOALS AND POLICIES: GENERAL

a. General Goals

- 1) *Plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban development.*
- 2) *Provide and encourage a safe, convenient and economic transportation system.*

4. GOALS AND POLICIES: TRANSPORTATION

a. General Goals

- 1) *Adopt the goals and objectives of the Salem Area Transportation Plan as the goal statements for the City of Keizer. The goals are:¹¹*
 - (a) *Implement the type and level of transportation services to different parts of the urban area that are most compatible with desired development pattern and achieve the orderly implementation of the Comprehensive Plan.*
 - (b) *Provide for the safe and efficient movement of people and goods throughout the metropolitan area.*
 - (c) *Develop a transportation system that avoids or reduces an undesirable reliance upon any one form of transportation.*
 - (d) *Minimize the undesirable environmental, social, aesthetic and economic impacts produced by transportation facilities*

b. General Policies

¹¹ In the electronic copy of the 1987 Comprehensive Plan there is an error in the numbering of the Transportation General Goals. This error has been corrected here for clarity.

- 1) *Adopt the goals, objectives, recommendations, and proposed facilities and services contained in the Salem Area Transportation Study as the basis for guiding surface transportation improvements in Keizer.*
- 2) *Encourage and assist in the updating of the SATS.*
 - (a) *Provide population and employment forecasts, and land use forecasts by traffic analysis zone to SATS staff.*
 - (b) *Continue to actively participate in the SATS program.*

c. Roadways

- 1) *Adopt as the Keizer functional highway classifications, and recommend these modifications to the SATS Functional Classification roadway network:*
 - (a) *Wheatland Road a minor arterial.*
 - (b) *Radiant Drive up-grade from collector to minor arterial.*
 - (c) *Windsor Island/Olson a new collector.*
 - (d) *Wheatland/North River Road a new collector.*
 - (e) *North River Road/Radiant a new collector.*
 - (f) *Bever Drive Extension downgrade to local street.*
- 2) *Adopt a roadway classification system in Keizer as shown on Figure 3.*
- 3) *Adopt the roadway classification design standards recommended in the SATS. See Table 4.*
- 4) *Ensure that Lockhaven Drive from North River Road to the Chemawa Interchange is carefully studied to determine the need for future widening, noise buffering, and for pedestrian crossing and safety improvements near the Whiteaker Middle School. Require that existing and planned residential areas be protected from excessive noise levels resulting from an increase in traffic.*
- 5) *Ensure that the North Willamette Bridge project is evaluated to increase the project's priority for funding. This project would support commercial and industrial development in Keizer, as well as relieve traffic pressure from the bridges in downtown Salem.*
- 6) *If the City voluntarily undertakes a street improvement project, which will increase traffic noise levels, it is the policy of the City of Keizer to protect existing residential uses from traffic noise levels that exceed those noise levels, which are typical of residential areas. Traffic noise levels below Leq67dBA are considered typical in an urban area and no mitigation of them shall be required.*

d. Transit

- 1) *Ensure that Olson Street from North River Road to Windsor Island Road is designed so that access points do not create traffic congestion and capacity problems, adjacent sensitive properties are protected from noise impacts, and public transportation improvements are considered.*

- 2) *Continue to work closely with the Salem Area Transit Districts:*
 - (a) *Increase transit service to the Clear Lake area.*
 - (b) *Increase transit service to the McNary Town Center.*
 - (c) *Increase transit service to the Keizer Station.*
 - (d) *Ensure that major new developments provide transit facilities, and are designed in such a way to make transit service efficient and convenient.*

e. Bicycles and Pedestrians.

Adopt for Keizer and recommend that additional bicycle routes be identified in the SATS:

- 1) *Extend the skeletal system on Wheatland Road north into the Clear Lake area.*
- 2) *Establish a bike route north of Olson Street connecting North River Road with Windsor Island Road.*
- 3) *Extend the skeletal system along Windsor Island Road north of Olson Street.*

f. Other

Coordinate with Burlington Northern Railroad so that rail crossings at Lockhaven Drive and Tepper Lane do not cause rail or traffic congestion problems.

Upon adoption, the TSP will become an element of the City's Comprehensive Plan. The goals and policies in the TSP will be the City's adopted long-range vision for transportation planning. Most of the policies in the Comprehensive Plan do not conflict with policies in the adopted (2004) TSP. However, some adopted policies may no longer be valid; others are clearly out of date. Final proposed TSP goals, policies, and implementation measures should be reviewed against the adopted Comprehensive Plan policies and recommended changes to the Comprehensive Plan should be included in the TSP adoption ordinance.

City of Keizer Transportation Systems Plan (2004)

The City of Keizer's Transportation Systems Plan (TSP) was adopted in 2000 and was updated with minor amendments in 2004. The current planning process to update the TSP will include new operating conditions analysis and system needs analysis based on population projections to the to the forecast year of 2030. The project will result in refinements to the TSP and recommended implementation measures, such as amendments to the Development Code standards, that will ensure that the City's transportation policies and standards are consistent with the Transportation Planning Rule.

The updated TSP is expected to follow the same structure as the existing TSP. The TSP includes chapters that detail public involvement, the street system, transportation demand management, transportation system management, parking management, the bicycle and pedestrian system, the

public transportation systems, air/water/rail/pipeline facilities, project financing, and "next steps" ("outstanding actions").

Similar to Part II of this memorandum, the TSP includes a section covering "Regulatory Context" in Chapter 1, Introduction. Where appropriate, the summaries of federal, state, and MPO regulations and plans will be updated with more recent or detailed information, consistent with information documented in this memorandum. Chapter 1 of the TSP also summarizes City plans, programs, and recent actions relevant to transportation planning. Items summarized in the TSP include:

- North River Road Alternative Modal Opportunity Study, 1995
- River & Chemawa Design Study, 1995
- Interstate5/Chemawa Road, 1995
- Keizer Station Plan (KSP)/Chemawa Activity Center Plan
- Alder Street Study
- City Ordinance No. 86-074
- River Road Mixed Use Zoning Change
- Urban Renewal Grant Programs
- River Road Renaissance Project
- High Priority Transportation Corridor
- Development Standards Revisions

The local plans, programs, and actions listed above have not been further reviewed and/or summarized for inclusion in this memorandum. However, these items will inform the planning process to update the TSP and the final draft of the TSP document will be reviewed for consistency with local planning documents and projects.

City of Keizer Development Code

The Development Code establishes the zoning in the City, the uses permitted under each zoning (land use) category, and the regulations that apply in each zone. The Development Code also contains the development and design standards for land division (Section 2.310) and development standards and review procedures for subdivisions and planned unit development (Section 3.108)

Transportation-related standards can be found in Section 2.302, which contains the City's street standards, and Section 2.310 (Development Standards for Land Divisions), which includes requirements and standards for pedestrian and bicycle accessways (2.310.04(C) and (D)). A complete review of the Development Code, as it relates to Transportation Planning Rule requirements, is summarized in Table 1 in this memorandum.

TPR Requirement (OAR Section 660-12-0020)

(1) A TSP shall establish a coordinated network of transportation facilities adequate to serve state, regional and local transportation needs.

(2) The TSP shall include the following elements:

(a) A determination of transportation needs as provided in OAR 660-012-0030;

(b) A road plan for a system of arterials and collectors and standards for the layout of local streets and other important non-collector street connections. Functional classifications of roads in regional and local TSPs shall be consistent with functional classifications of roads in state and regional TSPs and shall provide for continuity between adjacent jurisdictions. The standards for the layout of local streets shall provide for safe and convenient bike and pedestrian circulation necessary to carry out OAR 660-012-0045(3)(b). New connections to arterials and state highways shall be consistent with designated access management categories. The intent of this requirement is to provide guidance on the spacing of future extensions and connections along existing and future streets which are needed to provide reasonably direct routes for bicycle and pedestrian travel. The standards for the layout of local streets shall address:

- (A) Extensions of existing streets;
- (B) Connections to existing or planned streets, including arterials and collectors; and
- (C) Connections to neighborhood destinations.

(c) A public transportation plan which:

- (A) Describes public transportation services for the transportation disadvantaged and identifies service inadequacies;
- (B) Describes intercity bus and passenger rail service and identifies the location of terminals;
- (C) For areas within an urban growth boundary which have public transit service, identifies existing and planned transit trunk routes, exclusive transit ways, terminals and major transfer stations, major transit stops, and park-and-ride stations. Designation of stop or station locations may allow for minor adjustments in the location of stops to provide for efficient transit or traffic operation or to provide convenient pedestrian access to adjacent or nearby uses.
- (D) For areas within an urban area containing a population greater than 25,000 persons, not currently served by transit, evaluates the feasibility of developing a public transit system at buildout. Where a transit system is determined to be feasible, the plan shall meet the requirements of paragraph (2)(c)(C) of this rule.

(d) A bicycle and pedestrian plan for a network of bicycle and pedestrian routes throughout the planning area. The network and list of facility improvements shall be consistent with the requirements of ORS 366.514;

(e) An air, rail, water and pipeline transportation plan which identifies where public use airports, mainline and branchline railroads and railroad facilities, port facilities, and major regional pipelines and terminals are located or planned within the planning area. For airports, the planning area shall include all areas within airport imaginary surfaces and other areas covered by state or federal regulations;

(f) For areas within an urban area containing a population greater than 25,000 persons a plan for transportation system management and demand management;

TPR Requirement (OAR Section 660-12-0020)
(g) A parking plan in MPO areas as provided in OAR 660-012-0045(5)(c);
(h) Policies and land use regulations for implementing the TSP as provided in OAR 660-012-0045;
(i) For areas within an urban growth boundary containing a population greater than 2,500 persons, a transportation financing program as provided in OAR 660-012-0040.
(3) Each element identified in subsections (2)(b)–(d) of this rule shall contain:
(a) An inventory and general assessment of existing and committed transportation facilities and services by function, type, capacity and condition:
(A) The transportation capacity analysis shall include information on:
(i) The capacities of existing and committed facilities;
(ii) The degree to which those capacities have been reached or surpassed on existing facilities; and
(iii) The assumptions upon which these capacities are based.
(B) For state and regional facilities, the transportation capacity analysis shall be consistent with standards of facility performance considered acceptable by the affected state or regional transportation agency;
(C) The transportation facility condition analysis shall describe the general physical and operational condition of each transportation facility (e.g., very good, good, fair, poor, very poor).
(b) A system of planned transportation facilities, services and major improvements. The system shall include a description of the type or functional classification of planned facilities and services and their planned capacities and levels of service;
(c) A description of the location of planned facilities, services and major improvements, establishing the general corridor within which the facilities, services or improvements may be sited. This shall include a map showing the general location of proposed transportation improvements, a description of facility parameters such as minimum and maximum road right-of-way width and the number and size of lanes, and any other additional description that is appropriate;
(d) Identification of the provider of each transportation facility or service.

Memorandum

Date: September 18, 2007
To: Sam Litke, City of Keizer Planning Department
cc: Elizabeth Wemple, PE, Kittelson & Associates
From: Frank Angelo, Angelo Planning Group
Darci Rudzinski, AICP, Angelo Planning Group
Re: City of Keizer Transportation System Plan – TPR Compliance Supplement
to the DRAFT Plan and Policy Review

The Draft Plan and Policy Review (August 13, 2007) includes an assessment of how adopted City of Keizer plans and ordinances meet the Transportation Planning Rule (TPR) OAR 660, Division 12. This matrix did not include TPR Sections -0045(4), which pertains to transit in urban jurisdictions with populations greater than 25,000, or -0045(5), which includes requirements for reducing reliance on the automobile in MPO areas. This oversight is addressed in this memo, which includes a matrix that summarizes Sections -0045(4) and (5) and provides recommendations for addressing the TPR requirements within the City's TSP update planning process. Specifically, the second column of the matrix includes suggested amendments to the City's Development Code to comply with TPR sections that were not addressed in the August 13 memorandum. Sections -0045(4) and (5) and the associated recommendations will ultimately be incorporated into the TPR compliance matrix in the final Plans and Policy Review memorandum

Transportation Planning Rule Compliance

The TPR requires that local governments adopt land use regulations consistent with state and federal requirements "to protect transportation facilities, corridors, and sites for their identified functions OAR 660-012-0045(2)." The applicable portion of the TPR is found in OAR Section 660-12-045, Implementation of the Transportation System Plan.

The following assessment of TPR compliance is based primarily on the City's adopted Development Code, as this document implements transportation policy. The following table, a supplement to the TPR compliance matrix in the August 13, 2007 memorandum, covers TPR Sections -0045(4) and (5) and provides an assessment of related existing Development Code and TSP language that address the requirements. This table also includes recommendations for changes to the Development Code that will likely be needed to fully implement the new TSP and bring the City regulations in compliance with the TPR. Recommended changes to local regulatory documents, indicated in **bold text**, are intended to provide guidance to project staff during the update of the Keizer TSP. In particular, modifications to the City Development Code will be drafted during the planning process and become implementation recommendations for inclusion in the draft TSP.

TPR Requirements and City of Keizer Compliance - Supplemental	
TPR Requirement (OAR Section 660-12-0045)	Ordinance Compliance/Recommendations
<p>(4) To support transit in urban areas containing a population greater than 25,000, where the area is already served by a public transit system or where a determination has been made that a public transit system is feasible, local governments shall adopt land use and subdivision regulations as provided in (a)-(g) below:</p>	
<p>(a) Transit routes and transit facilities shall be designed to support transit use through provision of bus stops, pullouts and shelters, optimum road geometrics, on-road parking restrictions and similar facilities, as appropriate;</p>	<p>The updated Keizer TSP will identify transit routes and determine appropriate standards for these transportation facilities, consistent with this section of the TPR.</p>

TPR Requirements and City of Keizer Compliance Supplemental

TPR Requirement (OAR Section 660-12-0045)	Ordinance Compliance/Recommendations
<p>(b) New retail, office and institutional buildings at or near major transit stops shall provide for convenient pedestrian access to transit through the measures listed in (A) and (B) below.</p> <p>(A) Walkways shall be provided connecting building entrances and streets adjoining the site;</p> <p>(B) Pedestrian connections to adjoining properties shall be provided except where such a connection is impracticable. Pedestrian connections shall connect the on site circulation system to existing or proposed streets, walkways, and driveways that abut the property. Where adjacent properties are undeveloped or have potential for redevelopment, streets, accessways and walkways on site shall be laid out or stubbed to allow for extension to the adjoining property;</p> <p>(C) In addition to (A) and (B) above, on sites at major transit stops provide the following:</p> <p>(i) Either locate buildings within 20 feet of the transit stop, a transit street or an intersecting street or provide a pedestrian plaza at the transit stop or a street intersection;</p> <p>(ii) A reasonably direct pedestrian connection between the transit stop and building entrances on the site;</p> <p>(iii) A transit passenger landing pad accessible to disabled persons;</p> <p>(iv) An easement or dedication for a passenger shelter if requested by the transit provider; and</p> <p>(v) Lighting at the transit stop.</p>	<p>Potential Major Transit Stops are identified in the existing TSP in Figure 5, City of Keizer Bus Routes. This information will be reviewed and updated if necessary as part of the TSP update.</p> <p>The Development Code does not currently identify specific development standards for development near major transit stops.</p> <p>The Keizer Station Master Plan Review process allows for the City to require new development to provide for pedestrian and bicycle circulation and meet elements related transit orientation (Section 3.113.05).</p> <p>Recommendation: Section 2.315, Development Standards, should be amended to meet this TPR requirement. Specifically, this section should identify development standards consistent with TPR -0045(4) for development proposals that are within a certain distance from a major transit stop.</p>
<p>(c) Local governments may implement (4)(b)(A) and (B) above through the designation of pedestrian districts and adoption of appropriate implementing measures regulating development within pedestrian districts. Pedestrian districts must comply with the requirement of (4)(b)(C) above;</p>	<p>Instead of requiring that all new retail, office and institutional development meet development requirements that satisfy -0045(A) and (B), the City has the option of requiring these standards within designated pedestrian districts.</p> <p>Recommendation: The City should determine if it is necessary or desirable to implement -0045 (4)(b)(A) and (B) though the designation of pedestrian districts.</p>

TPR Requirements and City of Kelzer Compliance - Supplemental

TPR Requirement (OAR Section 660-12-0045)	Ordinance Compliance/Recommendations
<p>(d) Designated employee parking areas in new developments shall provide preferential parking for carpools and vanpools;</p>	<p>Section 2.303.09, Carpool and Vanpool Parking, of the Development Code requires that new office or industrial development with 100 or more parking spaces designate at least 5% of the parking spaces for carpool or vanpool parking.</p> <p>Recommendation: Amend Section 2.303.09 to require that all new developments with 100 or more designated employee parking space provide 5 percent of the parking spaces as preferential parking for carpools and vanpools.</p>
<p>(e) Existing development shall be allowed to redevelop a portion of existing parking areas for transit-oriented uses, including bus stops and pullouts, bus shelters, park and ride stations, transit-oriented developments, and similar facilities, where appropriate;</p>	<p>The Development Code allows a reduction of up to 10% in number of minimum required parking spaces if transit related amenities such as transit stops, pull-outs, shelters, park and ride lots, and transit oriented developments are available or when the development is abutting a street with transit service (Section 2.303.06(B)). This code section does not address redevelopment of sites.</p> <p>Recommendation: Section 2.303 should be revised to allow redevelopment of existing parking spaces for transit oriented uses.</p>
<p>(f) Road systems for new development shall be provided that can be adequately served by transit, including provision of pedestrian access to existing and identified future transit routes. This shall include, where appropriate, separate accessways to minimize travel distances;</p>	<p>Consistent with this requirement, Subsection 2.315.08(A) Pedestrian Circulation under Development Standards addresses pedestrian access to transit routes.</p> <p>Recommendation: Modify Subsection 2.315.08(A) to clarify that pedestrian access is required to both existing and future transit routes as planned by Cherriots. In addition, Subsection 2.310, Development Standards for Land Division, could include a general circulation requirement that requires new road systems to be designed to accommodate public transit.</p>

TPR Requirements and City of Keizer Compliance - Supplemental

TPR Requirement (OAR Section 660-12-0045)	Ordinance Compliance/Recommendations
<p>(g) Along existing or planned transit routes, designation of types and densities of land uses adequate to support transit.</p>	<p>The major transit provided by Cherriots in Keizer is along, N. River Road. This road is supported by adjacent commercial, employment and medium density land uses. Other identified routes in the existing TSP (Figure 5, City of Keizer Bus Routes) include service areas that do not have a high concentration of employment or higher density residential uses.</p> <p><u>Recommendation: When updating the transit element of the TSP, collaborate with Cherriots regarding future transit plans, review existing land uses and consider land use changes that would support Cherriots plans.</u></p>

TPR Requirements and City of Keizer Compliance - Supplemental

TPR Requirement (OAR Section 660-12-0045)	Ordinance Compliance/Recommendations
<p>(5) In MPO areas, local governments shall adopt land use and subdivision regulations to reduce reliance on the automobile which:</p> <p>(a) Allow transit-oriented developments (TODs) on lands along transit routes;</p>	<p>The general intent of a TOD is to create land use patterns that support transit. The focal point of a TOD is a transit stop that is linked to a regional transit system. The updated Keizer TSP will identify Cherriots' existing and planned transit routes. A mix of uses (residential, commercial, office, etc.) should be allowed along transit routes. In addition, residential densities in the vicinity of transit routes should support transit (e.g., high density residential use in urban TODs are typically constructed at a minimum of 12 dwelling units per acre and an average density of 18 dwelling units per acre; minimum densities in neighborhood or rural TODs are 7 dwelling units per acres, with an average of 10 dwelling units per acre). See the "Brief Issuc Paper" on TDM at the State's Transportation and Growth Management website, http://www.oregon.gov/LCD/TGM/publications.shtm</p> <p>Zoning in the vicinity of Keizer's main transit route, N. River Road, is predominantly Commercial Mixed Use and Mixed Use, zoning designations that allow TODs. Other identified routes in the existing TSP (Figure 5, City of Keizer Bus Routes) go through areas with a variety of zoning districts, including Single Family Residential zones (which have a maximum density of 8 dwelling units per acre).</p> <p>Recommendation: As part of the TSP update, the City should ensure that the zoning in the vicinity of Cherriots' existing and planned transit stops and along transit routes that connect Keizer to the regional public transportation system allow TODs. Specifically, areas along transit routes should allow a mix of uses and residential densities that support transit use.</p>
<p>(b) Implements a demand management program to meet the measurable standards set in the TSP in response to 660-012-0035(4) ("In MPO areas, regional and local TSPs shall be designed to achieve adopted standards for increasing transportation choices and reducing reliance on the automobile.");</p>	<p>The City's current TSP includes a chapter on Transportation Demand Management (Chapter 4). Policy in this chapter supports the Regional Transportation Demand Management Program, including the Mid-Willamette Valley Rideshare Program ("Regional Rideshare Program" in the 2007 RTSP).</p>

TPR Requirements and City of Keizer Compliance - Supplemental

TPR Requirement (OAR Section 660-12-0045)	Ordinance Compliance/Recommendations
	<p>Code provisions that support TDM include requiring new office or industrial development with 100 or more parking spaces to designate at least 5% of the parking spaces for carpool or vanpool parking.</p> <p>Other uses establishing car and vanpool spaces may reduce the minimum parking requirement by 3 spaces for each carpool/vanpool space created (Section 2.303.09 Carpool and Vanpool Parking).</p> <p>Recommendation: The TSP update should include an exploration of commonly used TDM tools (e.g., trip reduction ordinances, telecommuting, staggered work or shift schedules, parking management, signal synchronization, etc.) and their applicability to the City of Keizer. Code language to support the recommendations of the TSP can be subsequently developed.</p>
<p>(c) Implements a parking plan which:</p> <p>(A) Achieves a 10% reduction in the number of parking spaces per capita in the MPO area over the planning period. This may be accomplished through a combination of restrictions on development of new parking spaces and requirements that existing parking spaces be redeveloped to other uses;</p> <p>(B) Aids in achieving the measurable standards set in the TSP in response to OAR 660-012-0035(4);</p> <p>(C) Includes land use and subdivision regulations setting minimum and maximum parking requirements in appropriate locations, such as downtowns, designated regional or community centers, and transit oriented-developments; and</p> <p>(D) Is consistent with demand management programs, transit-oriented development requirements and planned transit service.</p>	<p>The Mid-Willamette Valley COG has inventoried the region's parking supply and has determined that there has been a decrease in the amount of parking from 1995 to 2005. The results of the regional 2005 survey shows that the area is on-track to meeting the goal of a 10 percent reduction in 20 years.</p> <p>Recommendation: The City of Keizer can help achieve the region's goals and meet this TPR requirement by establishing parking maximums for land use activities listed in Table A, Off-Street Automobile Parking Requirements, under Section 2.303.06. A refinement to this approach is to identify specific areas of the City where reduced parking requirements would be appropriate. Section 2.303 could also be revised to explicitly require that, in conjunction with a redevelopment proposal, existing parking spaces that exceed the required minimum standards be redeveloped for other uses.</p>

TPR Requirements and City of Keizer Compliance - Supplemental

TPR Requirement (OAR Section 660-12-0045)	Ordinance Compliance/Recommendations
<p>(d) As an alternative to (c) above, local governments in an MPO may instead revise ordinance requirements for parking as follows:</p> <p>(A) Reduce minimum off-street parking requirements for all non-residential uses from 1990 levels;</p> <p>(B) Allow provision of on-street parking, long-term lease parking, and shared parking to meet minimum off-street parking requirements;</p> <p>(C) Establish off-street parking maximums in appropriate locations, such as downtowns, designated regional or community centers, and transit-oriented developments;</p> <p>(D) Exempt structured parking and on-street parking from parking maximums;</p> <p>(E) Require that parking lots over 3 acres in size provide street-like features along major driveways (including curbs, sidewalks, and street trees or planting strips); and</p> <p>(F) Provide for designation of residential parking districts.</p>	<p>Recommendation: The City of Keizer should determine if the code amendments recommended to meet the -0045(c) requirements can be implemented, as outlined above, or if the alternate approach in -0045(d) is preferable. Sample code language can be developed that achieves the requirements of -0045(d) if the City chooses to revise the Development Code to address (A) – (F) in this TPR section.</p>
<p>(e) Require all major industrial, institutional, retail and office developments to provide either a transit stop on site or connection to a transit stop along a transit trunk route when the transit operator requires such an improvement.</p>	<p>Recommendation: Improvements related to transit stops should be listed as allowed or conditional uses in the City’s commercial, mixed-use, and industrial zone districts. A sub-section should be added to Section 2.315, Development Standards, that includes requirements for providing access to public transit stops for commercial, office and industrial development.</p>

Appendix C
Goals and Objectives



MEMORANDUM

Date: August 13, 2007 Project #: 8310.0
To: Sam Litke
City of Keizer
Keizer, OR
From: Elizabeth Wemple, P.E.
Severine Marechal
Project: Keizer Transportation System Plan Update and Refinement
Subject: Draft Goals and Objectives

Introduction

The purpose of the *Keizer Transportation Systems Plan (TSP) Update and Refinement* is to provide a framework for achieving transportation facilities that will serve the City of Keizer and the surrounding region through the year 2030, consistent with the Oregon Transportation Planning Rule (TPR). Before transportation investments can be planned and prioritized an agreed upon set of goals and objectives is needed to guide the transportation planning process.

Based on the goals identified in the *City of Keizer TSP*, amended in 2004, and based on initial conversations with staff, Kittelson & Associates, Inc. (KAI) has prepared the following draft list of Goals and Objectives for the TSP Update and Refinement. The list below is intended as a starting point for discussion. It is expected that this list will evolve based on input from staff and the public before it is finalized. Attachment A includes the goals and objectives from the 2004 Transportation System Plan.

Draft Goals and Objectives for the Keizer TSP Update and Refinement:

Public Involvement

Goal 1: Continued coordination with the residents of Keizer for regular monitoring and improvement to the City Transportation System.

Efficiency

Goal 2: Maximize the efficiency of the existing surface transportation system.

Objective 1: *Provide a street system that minimizes vehicular travel time and congestion, while being compatible with other modes of transportation.*

Objective 2: Increase capacity by reducing the single-occupant vehicle demands on the current and future transportation system

Objective 3: Preserve the existing street system by maintaining the integrity of existing roads.

Objective 4: Provide a street system that improves safety through design and functional classification consistent desired uses.

Objective 5: Manage on-street and off-street parking to support economic needs.

Environment

Goal 3: Provide for a sustainable transportation system which respects the environment and community.

Objective 1: Minimize adverse effects on environmentally sensitive areas and water quality.

Objective 2: Minimize adverse effects (e.g. noise, air, speed) on neighborhoods.

Objective 3: Minimize paved surfaces and incorporate recycled materials or permeable design practices to the extent possible.

Comprehensive, Connected and Multi-Modal

Goal 4: Provide efficient and comprehensive linkages between all modes of transportation

Objective 1: Develop paths, connections and facilities to provide simple access between modes at different parts of work, shopping or recreational trips.

Objective 2: Safety must be the underlying concept for any element of every project.

Goal 5: Develop a comprehensive system of pedestrian and bicycle facilities for the city of Keizer.

Objective 1: Establish a continuous, direct and safe system of bicycle and pedestrian facilities in the Keizer urban area that ties into the regional bicycle system and which adequately responds to the transportation needs of inhabitants.

Objective 2: Achieve greater public awareness of safe pedestrian, bicycling and motoring practices, procedures, and skills.

Goal 6: Support a public transit system for all Keizer residents focusing on accessibility and mobility.

Objective 1: Provide public transit services throughout the urbanized portions of the Keizer area that ensures convenient accessibility to a variety of destinations at different times of the day. Advocate affordable transit service and increase ridership.

Objective 2: *Maintain and improve a system which offers connectivity between activity centers, such as schools, parks, shopping centers, and residences with a minimum of transfers.*

Objective 3: *Support transportation to disadvantaged citizens with the maximum level of access to all social and work resources.*

Supplementary Transportation Resources

Goal 7: Sustain an adequate aviation, maritime, pipeline, and rail system to serve area demand.

Objective 1: *Support a cost-effective regional aviation system operations and facilities adequate to serve area demand.*

Objective 2: *Restore commercial navigation through the upper Willamette River where environmental impacts can be mitigated or minimized and economic justification exists.*

Objective 3: *Provide a safe pipeline system that provides an adequate level of service for the movement of natural gas into, within, and through the Keizer area.*

Objective 4: *Provide a rail system to support an adequate level of service to passenger and freight rail consumers within the MPO. Reserve all rail corridor rights-of-way for transportation-related uses such as Rails-to-Trails projects, where viable.*

Funding

Goal 8: Provide adequate funding to meet current and future capital, maintenance, and operations needs of Keizer's Transportation System.

Objective 1: *Meet the current and future capital improvement needs of the transportation system through an optimum mix of funding sources.*

Objective 2: *Secure adequate funding to implement a street maintenance program which sustains a maximum service life for pavement surfaces and other transportation facilities.*

Objective 3: *Secure funding to adequately operate the transportation system including advance planning, design engineering, signal operations, system management, illumination, and cleaning activities.*

City of Keizer Transportation Systems Plan: Goals, Objectives and Policies

September 2000
Amended May 2004

This project is partially funded by a grant from the Transportation Growth Management (TGM) Program, a joint program of the Oregon Department of Transportation and Oregon Department of Land Conservation and Development. The TGM grant is funded with federal Intermodal Surface Transportation Efficiency Act and local government funds.

The contents of this document do not necessarily reflect the view or policies of the State of Oregon.

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E. Plan Development

The development of the *Keizer Transportation Systems Plan* followed an eight-step process:

1. Identify system needs--develop goals and objectives to improve mobility.
2. Identify deficiencies in the transportation system that do not meet the identified goals and objectives.
3. Create policies that will guide city efforts in meeting its goals and objectives.
4. Determine physical and program-related investments that will correct identified deficiencies.
5. Identify and assign financial resources to provide transportation system investments.
6. Solicit public participation in each of the key steps of the process, with the same goals and objectives of achieving mobility.
7. Coordinate planning activities with other government agencies.
8. Implement the Plan through city codes, design standards, land use planning actions, city programs, and the Capital Improvement Program.

The *Keizer Transportation Systems Plan* was developed by the Mid-Willamette Valley Council of Governments and city of Keizer staff. The Planning Commission, comprised of seven members, was the project's Transportation Advisory Committee and met approximately monthly.

Chapter 2 - Public Involvement

The Keizer TSP was developed cooperatively with an advisory committee consisting of the Planning Commission and staff and the recommendations and input of residents.

Chapter 3 - Streets System

E. Goals, Objectives, and Policies

Goal 1: Provide for a comprehensive system of streets to serve the vehicular movements of people and goods into, out of, across, and through the Keizer urban area.

Objective 1: Establish basic information regarding the street system.

Policy 1: Identify, designate, and adopt functional classifications for city streets.

Policy 2: As much as practical, maintain a street inventory that satisfies planning and decision-making needs. The inventory and/or portions thereof should be updated on a regular basis.

Objective 2: Ensure adequate levels of service on the Keizer Road System for movement of people and goods.

Policy 1: Peak-hour level of service (LOS) E is the capacity deficient level for collector and arterial streets.

Policy 2: When a street at Level of Service (LOS) E is improved, improvements should be designed to provide operating characteristics within the Level of Service (LOS) D, unless circumstances warrant a lesser degree of improvement.

Objective 3: Maximize the efficiency of existing and planned roads wherever practical.

Policy 1: Techniques that improve capacity shall be used within existing rights-of-way to the extent practical.

Policy 2: When appropriate, access management strategies should be employed on arterials to improve safety and facilitate through-traffic flow.

Goal 2: Provide for a safe street system.

Policy 1: Higher accident locations will be periodically evaluated for potential safety improvements.

Policy 2: Safety issues will be considered when comparing projects.

Policy 3: Safety considerations will be incorporated as part of all improvement projects.

Goal 3: Preserve the existing street system by maintaining the integrity of existing roads.

Objective 1: Preservation of existing roads shall be given a high priority.

Policy 1: The costs associated with maintaining the existing roads at an acceptable condition shall be determined and addressed prior to the allocation of funds for all improvements.

Goal 4: Provide for a street system that minimizes adverse neighborhood and environmental impacts.

Objective 1: Minimize adverse impacts on neighborhoods wherever practical.

Policy 1: Minimize through traffic infiltration of neighborhoods by application of the appropriate road standards and other measures.

Policy 2: Minimize disruption of neighborhoods when designing and constructing new roads.

Objective 2: Reduce or prevent localized pollutants.

Policy 1: Recommended improvements shall meet the requirements stipulated in the Clean Air Act Amendments of 1990 and the Oregon State Conformity Rule (OAR Section 340-20-700, et. seq.)

Objective 3: Minimize adverse effects on environmentally sensitive areas.

Policy 1: Analysis of all potential improvements shall include potential impacts to wetlands and threatened or endangered species.

Policy 2: The planning and construction of future roads shall meet the requirements of applicable federal, state, and local environmental legislation.

Objective 4: Minimize adverse water quality effects.

Policy 1: Potential impacts from increased surface runoff associated with all improvements shall be evaluated when comparing projects, options, or alternatives.

Policy 2: Road modernization and construction improvements shall be in compliance with all federal, state, and local water quality regulations.

Goal 5: Provide for a street system that is compatible with other modes of transportation and minimizes vehicular travel time.

Objective 1: Integrate the street system with other transportation modes.

Policy 1: Consider installation of the appropriate bikeway, pedestrian, and public transportation amenities and facilities during design of either new streets or major improvements.

Policy 2: The street system shall provide connectivity and continuity of travel between city entrance and exit points and major destinations and activity centers. The purpose is to minimize out-of-direction travel and circuitous routing.

Chapter 4 - Transportation Demand Management

D. Goals, Objectives, and Policies

Goal: Reduce the single-occupant vehicle demands on the current and future transportation system.

Objective 1: Work towards reducing the city's vehicle miles of travel by 5 percent. This objective should be achieved by 2020.

Policy 1: Establish a 2000 baseline of VMT to measure progress during five-year updates.

Policy 2: Continue support of the Regional TDM Program, including the Mid-Willamette Valley Rideshare Program. The Program includes the provision of:

1. information and referrals to the public on transit service, vanpools, bicycle routes, telecommuting, park-and-ride lots, other ridesharing agencies, and transportation services for special needs;
2. public outreach;
3. school outreach;
4. services to employers, including commuting surveys and individualized trip-reduction plans;
5. coordination with other agencies and organizations with similar goals; and
6. marketing of alternative transportation modes. (Public Bulletin Boards, Keizer Forum)

Policy 3: The city shall explore the availability of funding sources to assure the ongoing viability of the Regional TDM Program.

Objective 2: Reduce automobile travel demand generated by employment sites, colleges, schools, and public events in cooperation with the Metropolitan Planning Organization and other public interest groups.

Policy 1: Identify groups which have the greatest potential for reducing automobile trips, including employers and employment sites, and commuting students. Flexible-work schedules, telecommuting, transit

ridership and car/van-pooling shall be emphasized as means to reducing trips.

- Policy 2:** Increase contacts to employers and schools by periodically contacting employers and schools to encourage trip reduction efforts. The city may also use public recognition for those organizations' efforts.
- Policy 3:** Increase ridesharing within the city by implementing internal incentive and recognition programs for employees who already use alternative transportation modes.
- Policy 4:** Develop a program, possibly through the permit process, to encourage promoters of public events to raise awareness of available alternative transportation. An example is placing bus routes and times in advertisements for sporting events.
- Policy 5:** Conduct marketing campaigns through various media to raise awareness of transportation options and to encourage the use of alternative transportation modes.
- Policy 6:** Conduct outreach activities at schools and community groups to inform them about transportation mode choices and the effects. Outreach to schools should be designed to educate children about alternative transportation modes before they start driving.

Chapter 5 – Transportation System Management

B. Goals, Objectives, and Policies

GOAL: Maximize the efficiency of the existing surface transportation system through management techniques and facility improvements.

Objective 1: Provide a system of traffic control devices maintained and operated to obtain an acceptable LOS.

Policy 1: Continue modernization of the signal system and improvements in coordination and efficiency. The city shall employ traffic signal timing plans that maximize the efficiency of the system given the particular travel demand of that time of day.

Policy 2: Conduct regular, preventive signal maintenance to avoid traffic delays and congestion from avoidable malfunctions.

Policy 3: Regularly maintain all of the traffic control devices (signs and markings) to minimize congestion and driver delay due to confusion. While priority shall always be given to regulatory and warning signs, informational (street name and directional) signs shall also be given attention.

Objective 2: Improve physical design and management of on-street parking, consistent with community need.

Policy 1: Strive to give the physical improvement of intersections a higher priority than general street widening when seeking ways to increase capacity and relieve congestion.

Policy 2: When on-street parking is permitted on an arterial street, removing the on-street parking shall be the first consideration for enhancing capacity. Depending upon the situation and proper analysis, timed on-street parking prohibitions during peak travel periods may be considered in lieu of permanent removal.

Policy 3: Install bus turnouts on existing rights-of-way for arterial streets as a means of facilitating traffic flow during peak travel periods. The feasibility, location, and design of bus bays shall be developed in consultation with the Salem Area Mass Transit District.

Policy 4: Improve vision clearance through enforcement of maintenance requirements.

Objective 3: Increase street system safety and capacity through access management.

Policy 1: Develop specific access management standards.

Policy 2: When developed, access management standards will be incorporated into all arterial street design projects.

Policy 3: Consistent with the goal of improving mobility, develop access management projects for arterials to improve safety and traffic flow.

Chapter 6 - Parking Management

B. Goals, Objectives, and Policies

Goal 1: Ensure that the city of Keizer has an appropriate supply of parking facilities.

Objective 1: Determine Keizer's need for on-street parking facilities.

Policy 1: On-street parking is second in priority to the needs of the travel modes (i.e., vehicle, transit, bicycle, pedestrian) using the street right-of-way, except where abutting properties have no ability to provide their own off-street parking or where on-street parking is needed to support an existing business district.

Policy 2: Where practical, existing on-street parking will be removed in preference to widening streets for additional travel lanes.

Objective 2: Promote economic vitality and neighborhood livability by requiring an appropriate supply of off-street parking facilities.

Policy 1: New development must provide, or have access to, an appropriate supply of off-street parking.

Policy 2: Develop a maximum parking requirement based on the needs of a land use type to complement the minimum requirement recently planned in the Development Code. The purpose of this policy is to avoid the unnecessary use of lands for off-street parking for new developments.

Policy 3: Major activity centers shall be accessible by transit and shall meet their parking demand through a combination of shared, leased, and new off-street parking facilities.

Objective 3: Reduce the city's parking supply per capita by 10 percent by the year 2020.

Policy 1: Every five years, in connection with the TSP review, estimate the parking supply for commercial, industrial, and institutional lands. The estimate will be used to monitor the progress towards meeting the statewide goal of reducing parking supply per capita by 10 percent over 20 years.

Chapter 7 - Bicycle/Pedestrian

Goals, Objectives and Policies

Goal 1: Develop a system of bicycle facilities for the city of Keizer.

Objective 1: Establish a system of bicycle facilities within the Keizer urban area that provides an adequate level of service to meet the bicycling needs.

Policy 1: The Bicycle System Element of the TSP shall designate the bicycle system of the Keizer urban area.

Objective 2: Develop and maintain an accurate and up-to-date inventory of the Keizer bicycle system in order to respond to the changing needs of the bicycling public.

Policy 1: The bicycle facilities inventory shall be included in the Bicycle System Element of the TSP and updated on a regular basis to maintain accuracy.

Objective 3: Design a system of bicycle facilities that enhances safety by improving compatibility among bicycling and other transportation modes.

Policy 1: All bicycle facilities on the Keizer bicycle system shall be constructed in accordance with ODOT bicycle facility standards where applicable.

Policy 2: Project designs that accommodate bicycle facilities within the roadway rights-of-way shall be implemented on the Keizer bicycle system where practicable.

Objective 4: Provide for well maintained Keizer bicycle system facilities that afford a safe environment and reduce potential hazards to the traveler.

Policy 1: Keizer will develop routine maintenance standards and practices that ensure smooth, clean, and safe conditions on the bicycle system facilities.

Policy 2: Keizer supports volunteer community services and programs that assist in the provision of adequate maintenance service on Keizer bicycle system facilities.

Policy 3: Bicycle safety devices such as bicycle-proof drain grates, rubberized pads at railroad crossings, and appropriate signage shall be utilized on Keizer bicycle system facilities wherever practicable.

Objective 5: Achieve greater public awareness of safe bicycling and motoring practices, procedures, and skills.

Policy 1: The development and implementation of bicycle safety and education programs aimed at all ages are encouraged in order to improve bicycle skills, increase the observance of traffic laws, and enhance the overall safety of the traveling public.

Policy 2: Monitor and analyze bicycle accident data to formulate ways to improve bicycle safety.

Goal 2: Develop a continuous and direct system of bicycle facilities in the city of Keizer that is integrated with the regional bicycle system and other modes of transportation.

Objective 1: Establish a continuous and direct system of bicycle facilities in the Keizer urban area that ties into the regional bicycle system and which adequately responds to the transportation needs of bicyclists.

Policy 1: Designate a continuous and direct system of bicycle facilities in the Bicycle System Element of the TSP.

Policy 2: Identify facility improvements necessary to ensure a direct and continuous network of bicycle facilities on the Keizer bicycle system.

Objective 2: Establish a bicycle system that provides access to activity centers including schools and other major destinations.

Policy 1: Designate a continuous and direct system of bicycle facilities that provides access to activity centers, schools, and other major destinations.

Policy 2: Identify necessary facility improvements on the bicycle system to ensure adequate bicycle access to activity centers, schools, and other major destinations.

C. Pedestrian Facilities

Goals, Objectives, and Policies

Goal 1: Create a continuous network of safe, convenient, and accessible pedestrian facilities to schools, parks, activity centers, and transit facilities.

Objective 1: Ensure a viable comprehensive system of pedestrian facilities throughout Keizer.

Policy 1: Pedestrian issues shall be included in the prioritization of projects for allocation of all city funds.

Policy 2: Support continuation of current (or equivalent) federal, state, and local funding sources to construct or improve pedestrian facilities.

Policy 3: Encourage the timely repair and maintenance of existing pedestrian facilities including those identified as regionally significant.

Policy 4: Ensure that all pedestrian facilities are accessible and constructed in accordance with ADA and city sidewalk standards, including reasonable grades and adequate clearances.

Policy 5: The city shall work toward the completion of the street lighting system, designed to city illumination standards, on all arterial and collector streets. Through the use of neighborhood street lighting districts, property owners shall be encouraged to provide street lighting, designed to city illumination standards, on all public local streets.

Goal 2: Increase the percentage of trips made by pedestrians in Keizer.

Objective 1: Encourage local land use patterns, densities, and designs that decrease trip lengths and that support walking as a practical and attractive transportation mode.

Policy 1: Support an urban design that adequately considers pedestrian needs.

Policy 2: Encourage the delineation of safe pedestrian ways, emphasizing separation from vehicular areas using planting strips, crosswalks, and increased lighting where appropriate.

Objective 2: Encourage appropriate linkages with other alternative modes of transportation, including public transit and bicycling.

Policy 1: Support the incorporation of multimodal connections and modal balance into local transportation facilities.

Chapter 8 - Public Transportation Systems

G. Goals, Objectives, and Policies

Public Transit (Cherriots)

Goal 1: Support a public transit system accessible to all Keizer residents and which provides service to a variety of destinations throughout the day and evening.

Objective 1: Support public transit services throughout the urbanized portions of the Keizer area.

Policy 1: Support Salem Area Mass Transit District's policies to provide Keizer residents with quality transit services responsive to local community needs.

Objective 2: Support the provision of a diverse system of transit routes that ensure convenient accessibility to a variety of destinations with a minimum of transfers.

Objective 3: Support a convenient system of transfer opportunities within the urban area that facilitates timely and convenient access to a wide variety of destinations.

Objective 4: Support a system which offers connectivity between activity centers, such as schools, parks, shopping centers, and residences.

Policy 1: Support the development and implementation of a public transit route system and support facilities that effectively combine appropriate elements of radial and circumferential services.

Objective 4: Support transit services for area residents that operates over an appropriately diverse time frame.

Policy 1: Support prudent extensions in the hours and days of operation of the transit system.

Goal 2: Facilitate increasing levels of ridership on the public transit system.

Objective 1: Increase overall daily ridership of the transit system.

Policy 1: Support effective marketing and responsiveness to consumer need for transit services.

Policy 2: Consider transit operations in the design of street infrastructure and land use developments wherever practicable.

Objective 2: Increase the percentage of journey to work trips made by transit in the Keizer area.

Policy 1: Support the implementation of regionwide transportation system efficiency management strategies and activities (such as employer subsidized bus pass programs) that encourage the diversion of commute trips away from the single-occupant vehicle.

Goal 3: Support development of public transit routes that provide efficient, competitive service in the regional transit corridors.

Objective 1: Support an efficient and convenient system of public transit services in the regional travel corridors.

Policy 1: Encourage preferential transit treatments, transit-related facility improvements, and appropriate transit-supportive land uses and development along the regional transit corridors.

Policy 2: Support incremental increases in the frequency and capacity of service in the regional transit corridors as warranted by demand.

Goal 4: Advocate affordable transit service throughout the urban area while creating a sustainable public transit system.

Objective 1: Support development and implementation of funding strategies that provide adequate, long-term, stable revenue source(s) for the public transportation system.

Policy 1: Support regional efforts to identify and implement transit funding strategies and programs that will provide adequate, long-term, stable revenue source(s) for the public transportation system.

Policy 2: Support ongoing review and analysis of farebox revenues, ridership levels, and service costs to optimize the transit fare structure.

Transportation Disadvantaged

Goal 1: Seek to provide transportation disadvantaged citizens with the maximum level of access to all social and work resources.

Objective 1: Consistent with the Transit District's adopted ADA Transit Plan, provide transportation services that adequately meet the needs of the region's transportation disadvantaged and disabled populations.

Policy 1: Support continued development and implementation of accessible fixed-route and appropriate complementary paratransit services as identified in the ADA Transit Plan.

Policy 2: Consider supporting efforts of the Special Transportation Advisory Committee or its successors in implementing the RTEP and/or similar efforts to improve transportation for the transportation disadvantaged.

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Chapter 9 - Air/Water/Rail/Pipeline

A. Air Service

Goals, Objectives, and Policies

Goal 1: Provide for an aviation system that provides an adequate level of facilities and services to meet the needs of Keizer's residents and businesses.

Objective 1: Support a cost-effective regional aviation system operations and facilities adequate to serve area demand.

Policy 1: Support appropriate, cost-effective improvements to the region's aviation and related facilities based on sound economic analysis.

Policy 2: Support efforts to renew commercial airline service to McNary Field as demand and financial considerations warrant.

Policy 3: Support maintenance efforts that will preserve the region's general aviation facility in a manner that makes resumption of commercial aviation activities viable.

Goal 2: Provide for a regional aviation facility with adequate multimodal access.

Objective 1: Support adequate multimodal access to the regional aviation facility.

Policy 1: Support development of an appropriate multimodal transportation infrastructure that provides adequate access to the regional aviation facility, including a Cherriots drop point at the terminal when scheduled commercial service becomes available.

B. Waterborne Transportation

Goals, Objectives, and Policies

Although Keizer does not have, or contemplate, any facilities for the maritime system, it does support the Regional Maritime Element of the RTSP. Goals, objectives, and policies from that document are repeated as follows:

Goal 1: The restoration of commercial navigation through the upper Willamette River where environmental impacts can be mitigated or minimized and economic justification exists.

Objective 1: Support efforts to restore commercial navigation in the upper Willamette River through the SKATS area where environmental impacts can be mitigated or minimized and economic justification exists.

Policy 1: Provide appropriate assistance to further efforts to restore commercial navigation in the upper Willamette River through the SKATS area as warranted.

C. Pipeline Facilities

Goals, Objectives, and Policies

Goal 1: Provide for a pipeline system that provides an adequate level of service for the movement of natural gas into, within, and through the Keizer area.

Objective 1: Maintain adequacy of capacity and operations of pipeline facilities and services in, within, and through the Keizer area.

Policy 1: Support activities that maintain adequate pipeline operations and services into, within, and through the Keizer area.

Goal 2: A safe pipeline system into, within, and through the Keizer area.

Objective 1: Comply with federal and state regulations pertaining to the safety of pipeline facilities and operations in the Keizer area.

Policy 1: Support activities and procedures that ensure compliance with federal and state regulations pertaining to the safety of pipeline facilities and operations in the Keizer area.

D. Rail Facilities

Goals, Objectives, and Policies

In Keizer, the Rail System Element is implemented through the cooperative adoption of regional goals, objectives, and policies contained in the regional Plan.

Goal 1: Provide for a rail system that provides an adequate level of service to passenger and freight rail consumers within the MPO.

Objective 1: Support the provision of rail service within the MPO that adequately addresses service demands of both passengers and freight.

Policy 1: Encourage continued and improved rail service to and from the MPO

Objective 2: Promote the development and maintenance of an adequate infrastructure and facility system to support continued and improved rail service in the MPO.

Policy 1: Support the continued improvement of the region's existing rail infrastructure and facilities.

Policy 2: Encourage the development and implementation of adequate infrastructure and facilities to address the needs of both passenger and freight movements in the region.

Goal 2: A safe system of rail transport serving the MPO.

Objective 1: Support efforts to maintain and improve rail transportation safety by complying with federal and state rail safety standards.

Policy 1: Encourage improvements to the regional transportation system that enhance rail safety as well as safety between railroads and other transportation modes.

Goal 3: Efficient use of existing rail transportation infrastructure.

Objective 1: Promote the maximization of efficient use of existing regional rail transportation infrastructure.

Policy 1: Encourage actions that maximize efficient use of existing rail infrastructure and improved service levels to address MPO rail transportation needs.

Goal 4: Preserve rail rights-of-way that may be abandoned for future transportation-related uses.

Objective 1: Reserve all rail corridor rights-of-way for transportation-related uses such as Rails-to-Trails projects, where viable.

Policy 1: Designate all rail corridor rights-of-way as "Transportation Corridor Preserves" pending results of alignment specific suitability studies.

Goal 5: Multimodal connectivity to passenger rail terminal.

Objective 1: Support improved multimodal access to passenger rail terminal.

Policy 1: Promote infrastructure upgrades to the passenger rail terminal.

Policy 2: Promote and support intercity and intracity public transportation system connections to the passenger rail terminal.

Chapter 10 - Finance

C. Goals, Objectives, and Policies

The city of Keizer shall have the following goal, objectives, and policies on financing transportation capital and maintenance needs through the 20-year horizon of this Plan:

Goal: Provide adequate funding to meet current and future capital, maintenance, and operations needs of Keizer's Transportation System.

Objective 1: Meet the current and future capital improvement needs of the transportation system through an optimum mix of funding sources.

Policy 1: As defined by Oregon Revised Statutes and city ordinances, Systems Development Charges may be collected by the city to mitigate impacts placed on area wide transportation facilities.

Policy 2: As authorized in the *Keizer Development Code* and *Oregon Revised Statutes*, those responsible for new development will mitigate their development's impacts to the transportation system concurrent with the development of the property.

Policy 3: Seek federal funding for capital improvements through participation in the MPO or other designated distribution process.

Policy 4: Continue to set aside one (1) percent of its allocation of State Highway Gas Tax funds for creation of on-street bicycle and pedestrian facilities.

Policy 5: Whenever necessary, reserve funds for acquisition of property for future right-of-way opportunities.

Objective 2: Secure adequate funding to implement a perpetual life street maintenance program which shall sustain a maximum service life for pavement surfaces and other transportation facilities.

Policy 1: Assuming no changes in state funding mechanisms, the primary funding sources for street system maintenance activities shall be the city's allocation of the State Highway Fuel Tax.

- Policy 2:** Seek additional funding sources to meet the long term financial requirements of sustaining a perpetual life street maintenance program.
- Policy 3:** Continue to participate in cooperative agreements with other state and local jurisdictions for maintenance and operations activities based on equitable determinations of responsibility and benefit.
- Objective 3:** *Secure funding to adequately operate the transportation system including advance planning, design engineering, signal operations, system management, illumination, and cleaning activities.*
- Policy 1:** Assuming no changes in state funding mechanisms, transportation system operations activities shall be funded primarily from the city's allocation of the State Highway Fuel Tax. Other funding sources should be pursued to augment the financial requirements of providing adequate future system operations.
- Policy 2:** Encourage and facilitate the formation of local street lighting districts to enable neighborhoods the opportunity for street illumination. The city shall consolidate street lighting districts by subdivision to achieve cost equity and benefits from economies of scale. The City may consider consolidation of existing street lighting local improvement districts.
- Policy 3:** Pursue the award of federal, state, and private grants to augment operations activities, especially in the planning and engineering functions.

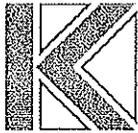
Commission and will be made based on the above criteria

Chapter 11 - Outstanding Actions, Steps, or Refinements

Table 11
Action Steps and Refinements

Actions Steps and Refinements	Year Completed
<i>Note: Shaded areas depict five-year increments</i>	
Update VMT Baseline (\$5,000)	2000
Parking Space Survey for parking inventory baseline data (\$10,000)	2000
Cherry/Greenwood Intersection Study (\$5,000)	2000
Access Management Standards (\$15,000)	2001
Develop procedures for constrained RAW vs. bike lanes (\$4,500)	2001
Develop specialized access management plan for River Road (\$45,000)	2002
Evaluate and reprioritize CIP as necessary (\$2,500)	2002
LOS projections for street system (\$5,000)	2003
Develop list of access management projects (\$2,000)	2004
Street Extensions Study – Sunset Cade (\$7,500)	2005
Evaluate progress in meeting TSP needs – Upgrade CIP (\$2,500)	2005
North-South Connector Refinement Study (\$20,000)	2006
East-West Connector Study (\$10,000). Should be accomplished in conjunction with north-south study	2006
Evaluate progress in meeting TSP needs – Upgrade CIP (\$2,500)	2010
Evaluate progress in meeting TSP needs – Upgrade CIP (\$2,500)	2015
Outstanding Action Total Cost	\$139,000

Appendix D
Existing Conditions
Analysis



KITTELSON & ASSOCIATES, INC.

TRANSPORTATION ENGINEERING / PLANNING

610 SW Alder Street, Suite 700, Portland, OR 97205 P 503.228.5230 F 503.273.8169

TECHNICAL MEMORANDUM

City of Keizer, Transportation System Plan Update

Existing Conditions Assessment

Date: January 31, 2008 **Project #:** 8310.03

To: Technical Advisory Committee

From: Elizabeth Wemple, P.E.; Matt Hughart, A.I.C.P.; Alek Pochowski, E.I.; & Severine Marechal

CC: Sam Litke, City of Keizer

The development of the City of Keizer Transportation System Plan (TSP) begins with this memo's summary of the Kittelson & Associates, Inc. assessment of existing transportation system conditions. This memorandum identifies the study area and describes the existing conditions of Keizer's transportation system, including roadway, pedestrian, bicycle, transit, rail, air, freight movement, and pipeline/transmission transportation modes. The assessment of each mode is conducted in terms of its current facilities, performance, and preliminary identification of issues and opportunities. This is Task 3 of the project contract.

The results of the existing conditions assessment and the associated public meetings will support the future transportation system assessment in later stages of the project

This memorandum is prepared as a draft chapter on Existing Conditions for the City of Keizer 2007 TSP Update. The current TSP was adopted in 2000, and amended in 2004. The previous TSP was developed based on data from 1998. Therefore, this update reflects more than nine years of growth and change in the use of the transportation system.

Executive Summary

The existing City of Keizer transportation system effectively manages the majority of auto travel demand throughout the city. Based on a review of existing conditions, the following issues were identified:

- Keizer's current local street design standards are not consistent with the *Neighborhood Street Design Guidelines*.

- Much of Keizer is well covered by a sidewalk network, especially the area of the city located north of Lockhaven Drive. However, the area approximately between the Shoreline Drive to the west, River Road to the east, Sunset Avenue to the south, and Lockhaven Drive to the north, has very few roadways with sidewalks. Several pedestrian generators, including the Keizer Little League Park, the Volcanoes Stadium, Claggett Creek Park, McNary High School, and River's Edge Park lack pedestrian connections.
- Based on the City's most recent inventory of the existing bicycle facilities, it was found that there are a suitable number of dedicated bicycle routes within the City of Keizer. Additionally, most of the major bicycle-trip generators are located on the bicycle network or have a local street connection to the bike network. In addition to several collectors without dedicated bike facilities, River Road south of Chemawa Road is the only arterial without dedicated bike lanes.
- An analysis of the regional transit system called "Cherriots" revealed that the system could be more attractive to choice riders (riders who have the option of taking their car or public transit), if the service frequency was improved. However, Cherriots does provide good service for captive riders (riders who lack an acceptable alternative to transit by providing good hours of service, 6:00 a.m. to 10:00 p.m.).
- The intersection of Lockhaven Drive/Verda Lane currently operates at a low level-of-service.
- A review of safety conditions at the project study intersections showed that the intersections of Verda Lane/Salem Parkway, River Road/Wheatland Road, River Road/Manbrin Drive, and River Road/Dearborn Avenue should be studied in more detail in the next phases of the project because their crash rates or crash counts appear higher than other comparable intersections. Additional analysis and field review of the intersections will be conducted to determine potential countermeasures to improve safety conditions.

Draft Goals and Objectives

Based on the goals identified in the *City of Keizer TSP* (Reference 1), amended in 2004, and based on initial conversations with staff, Kittelson & Associates, Inc. (KAI) has prepared the following draft list of Goals and Objectives for the TSP Update and Refinement. The intention of the list below is to serve as a starting point for discussion, and the expectation is that this list will evolve before finalization based on input from staff and the public.

DRAFT GOALS AND OBJECTIVES FOR THE KEIZER TSP UPDATE AND REFINEMENT

Based on collaboration with the City of Keizer Transportation System Plan (TSP) Update Technical Advisory Committee (TAC) the following draft project goals and objectives have been developed.

Public Involvement

Goal 1: Continued coordination with all residents of Keizer for regular monitoring and improvement of the Transportation System.

Environment

Goal 2: Provide for a sustainable transportation system which respects the environment and community

- Objective 1: Minimize adverse effects on environmentally sensitive areas and water quality.
- Objective 2: Minimize adverse effects on neighborhoods (e.g. noise, air, speed).
- Object 3: Minimize impervious surfaces.

Streets

Goal 3: Maximize the efficiency of the existing transportation system.

- Objective 1: Provide a street system emphasizing connectivity that minimizes travel time and congestion while being compatible with other modes of transportation
- Objective 2: Maximize available system capacity by facilitating the development and use of pedestrian, bicycle and transit transportation.
- Objective 3: Maintain the physical integrity of existing roads to preserve and maximize infrastructure investments.
- Objective 4: Manage on-street and off-street parking to support community needs.

Comprehensive Connected and Multi-Modal

Goal 4: Provide efficient and comprehensive linkages between all modes of transportation.

- Objective 1: Develop paths, connections and facilities to provide simple access between modes at different parts of work, shopping or recreational trips.
- Objective 2: Safety must be the underlying concept for any element of every project.

Pedestrians

Goal 5: Develop a comprehensive system of pedestrian and bicycle facilities for the city of Keizer.

- Objective 1: Establish a continuous, direct and safe system of bicycle and pedestrian facilities within the Keizer urban area and connect to the greater regional system.
- Objective 2: Achieve greater public awareness of safe pedestrian, bicycling and motoring practices, procedures and skills.

Transit

Goal 6: Support a public transit system for all Keizer residents focusing on accessibility and mobility.

- Objective 1: Facilitate public transit services throughout the urbanized portions of the Keizer area that ensures convenient accessibility to a variety of destinations at different times of the day. Advocate affordable transit service and increase ridership.
- Objective 2: Encourage a transit system which offers connectivity between activity centers such as schools, parks, shopping centers, and residences with a minimum of transfers.
- Objective 3: Support transit programs that serve transportation disadvantaged citizens consistent with Americans with Disabilities Act requirements.

Supplementary Transportation Resources

Goal 7: Collaborate with lead agencies to support development and maintenance of an adequate aviation, maritime, pipeline, and rail system to serve area demand.

- Objective 1: Collaborate with lead agencies to support cost-effective regional aviation system operations and facilities adequate to serve area demand.
- Objective 2: Collaborate with lead agencies to support restoration of commercial and recreational navigation through the upper Willamette River where environmental impacts can be mitigated or minimized and economic justification exists.
- Objective 3: Collaborate with lead agencies to support a safe pipeline system that provides an adequate level of service for the movement of natural gas into, within, and through the Keizer area.
- Objective 4: Collaborate with lead agencies to support an adequate level of service to passenger and freight rail consumers within the Metropolitan Planning Organization (MPO).

Funding

Goal 8: Provide adequate funding to meet current and future capital, maintenance and operations needs of Keizer's Transportation System.

- Objective 1: Strive to meet the current and future capital improvement needs of the transportation system through an optimum mix of funding sources.
- Objective 2: Strive to secure adequate funding to implement a street maintenance program which sustains a maximum service life for pavement surfaces and other transportation facilities.
- Objective 3: Strive to secure funding to adequately operate the transportation system including advance planning, design engineering, signal operations, system management, illumination, and cleaning activities.

Study Area

As stated in the current *City of Keizer TSP*, The City of Keizer is located in the center of the Willamette Valley and is situated approximately 60 miles east of the Pacific Ocean and 60 miles west of the Cascade Mountains. The City of Keizer enjoys ready access to the entire West Coast via Interstate Highway Five (I-5). The city of Salem, located adjacent to the southern city limits of Keizer, is the closest neighboring community. The Portland metropolitan area is located approximately 45 miles to the north, close enough to create employment-commuting opportunities and provide access to Portland International Airport.

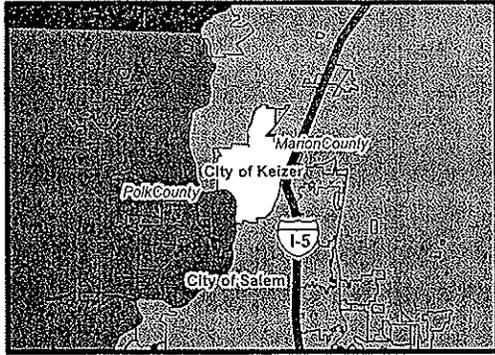
Figure 1 is a street map of Keizer, with the city limits and Urban Growth Boundary (UGB) indicated. The study area for the TSP consists of the area within the UGB, as required in Oregon's Transportation Planning Rule. Based on the requirements of Oregon's Transportation Planning Rule, only significant streets within the study area—those that can be classified as arterials or collectors and intersections of these streets—are addressed in this project.

Transportation Modes and Facilities

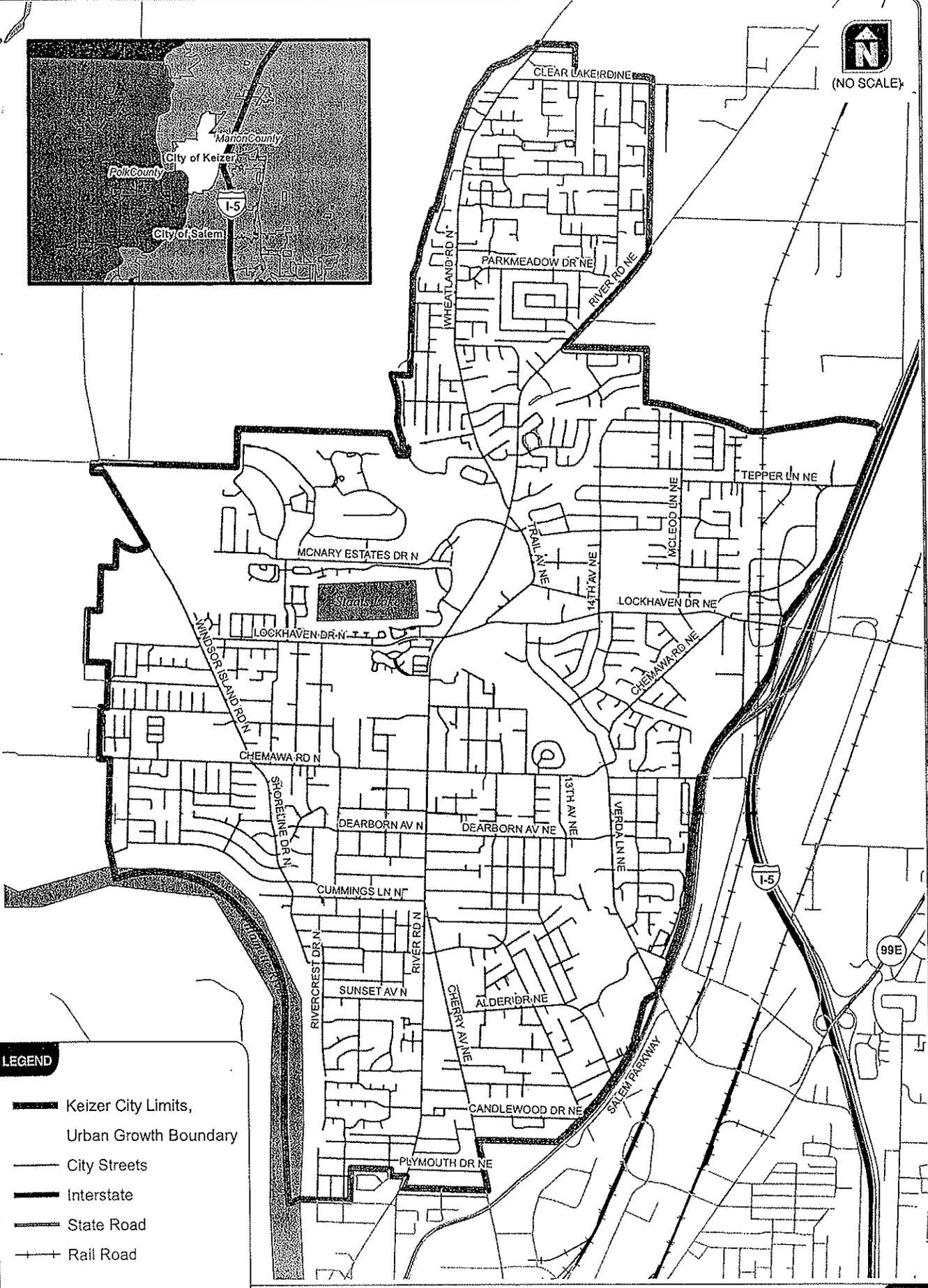
The City of Keizer's transportation system provides facilities serving many different transportation modes. This memorandum documents the existing facilities and conditions for the following:

- Roadway
- Bicycle
- Pedestrian
- Public Transportation
- Air
- Freight
- Rail
- Water
- Pipeline

In the following, a description of Keizer's roadway facilities is given prior to an evaluation of individual modes, because of the importance of the roadway network in serving the majority of trips over multiple modes. Each mode is then identified and discussed in subsequent sections.



(NO SCALE)



LEGEND

- Keizer City Limits,
- Urban Growth Boundary
- City Streets
- Interstate
- State Road
- Rail Road

STUDY AREA
KEIZER, OREGON

FIGURE
1

Hy-profile
Keizer TSP Refinement and Update

ROADWAYS

Roadway Ownership

Arterials and collector streets are the primary means of mobility for Keizer residents. Pedestrians, bicyclists and motorists all utilize public roads for the vast majority of their trips. Typically, roadways can be owned, operated and maintained by the State of Oregon, a County, and/or a local jurisdiction. In the City of Keizer, all of the arterials and collectors are owned, operated and maintained by the City of Keizer as illustrated in Figure 2. Additionally, Salem Parkway (99E Business), and I-5 are owned and maintained by ODOT.

With jurisdiction of the roadways, the City of Keizer is responsible for:

- Determining the road's functional classification. This sets the roadway's role in the transportation system and its design features, such as width, right-of-way, driveway (access) spacing standards, and the types of pedestrian and bicycle facilities provided.
- General maintenance and upkeep.
- Approving construction and access permits.

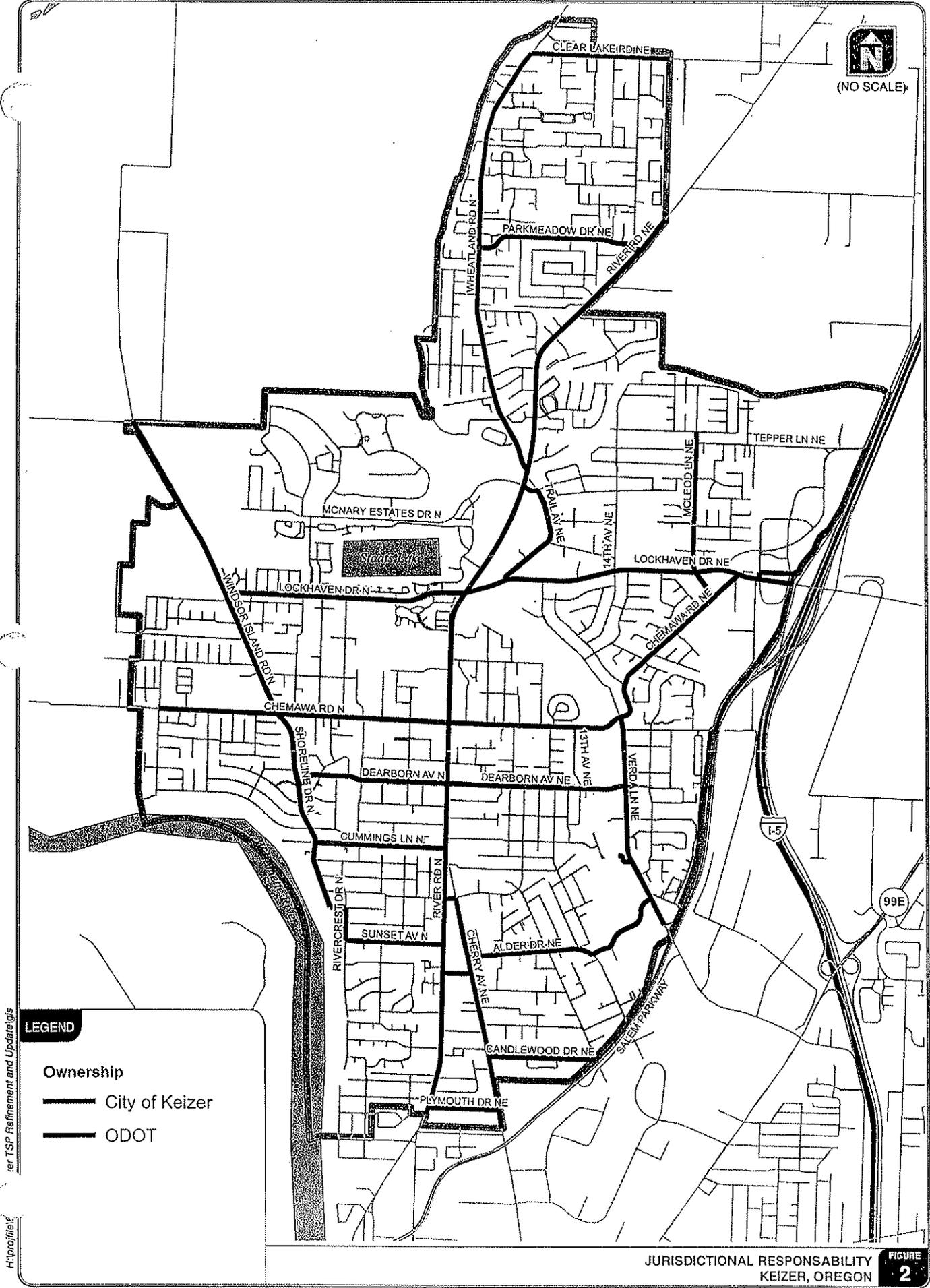
Functional Classification

A roadway's *functional classification* describes its role in the transportation system. In general, the basis of the functional classification of a roadway is dependent upon the priority given to each of its two primary functions: 1) providing regional mobility, and 2) promoting local accessibility. As referenced in the *ODOT Sustainability Program* (Reference 2), mobility refers to physical movement, and is evaluated based on travel distance and speed, while accessibility refers to the ability to reach desired goods, services, activities and destinations. The City of Keizer defines each street based on the following classifications as defined in the current *City of Keizer TSP*:

- **Major Arterials** serve as the supporting framework for the city's roadway network. These roadways are intended to serve higher volumes of traffic, and provide the highest level of mobility into, out of, and within the City of Keizer. Major arterials function at 15,000 to 50,000 Average Daily Traffic (ADT). Cherry Avenue, Lockhaven Drive between River Road and I-5, and River Road are major arterials in Keizer.
- **Minor Arterials** complement the major arterial system, and primarily handle trips within Keizer. Minor arterials should function to provide access between major arterials and collector roads. Collectors may also provide access to community activity centers, such as schools and parks. They should not go through residential neighborhoods. Minor arterials function at 7,000 to 20,000 ADT. Chemawa Road between River Road and Lockhaven Drive, and Wheatland Road are examples of minor arterials in Keizer.



(NO SCALE)



LEGEND

Ownership

-  City of Keizer
-  ODOT

JURISDICTIONAL RESPONSIBILITY
KEIZER, OREGON

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- **Collectors** represent the intermediate roadway class. As their name suggests, these roadways collect traffic from the local street system and distribute it to the arterial street system. These roadways provide a balance between traffic movement and land access and should provide extended continuous stretches of roadway to facilitate traffic circulation through the city. Collectors function at 1,600 to 10,000 ADT. Chemawa Road between Windsor Island Road and 15th Avenue, and Dearborn Avenue are examples of collectors in Keizer.
- **Local roads and streets** are the lowest roadway class. Their primary purpose is to provide local land access and to carry locally generated traffic at relatively low speeds to the collector street system. Local streets should provide connectivity through neighborhoods, but should be designed to discourage cut-through vehicular traffic. The majority of roadways in the roadway network are local streets. As a general rule of thumb, residential livability concerns arise at approximately 1,600 ADT. This discussion is provided for reference only because the TSP focuses exclusively on Collector and Arterial Streets.

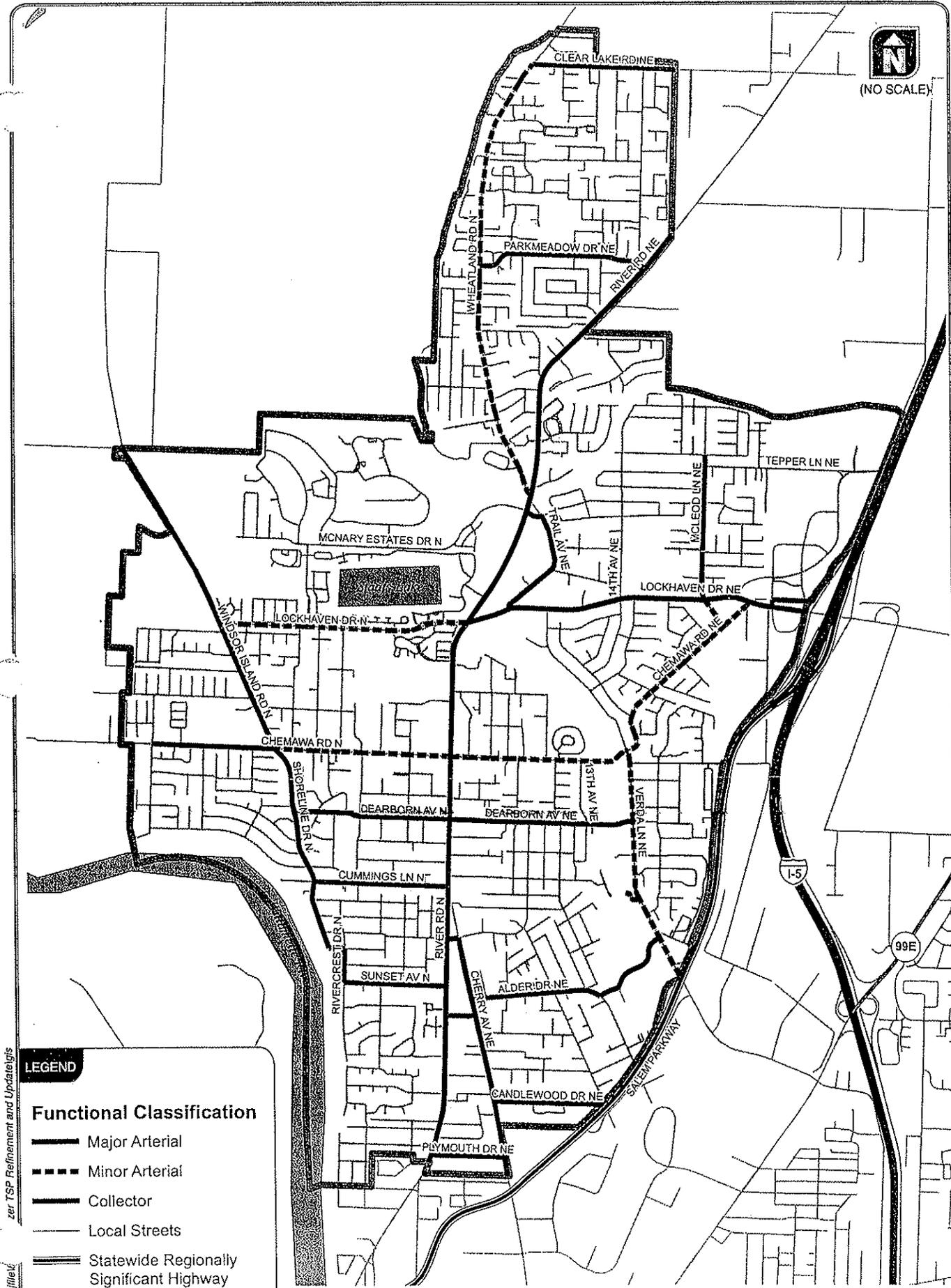
It is common for a street to have different classifications on some sections. As noted in the classification examples, Chemawa Road operates as both a minor arterial and collector within the City of Keizer. Figure 3 shows the classification of all roadways within the City of Keizer. As previously noted, Salem Parkway (99E Business), is owned and operated by ODOT. As such, ODOT has a separate functional classification system in which the Salem Parkway is classified as a Regional Highway (Expressway).

Design Standards

The City of Keizer has developed street design standards based on the functional classification of the roadway. These standards, stated in the current *City of Keizer TSP*, are displayed in Table 1. According to the current *City of Keizer TSP*, these standards were developed in accordance with the Transportation Planning Rule's requirement for minimum standards consistent with operational needs.



(NO SCALE)



Hydrofield
Keizer TSP Refinement and Updates

LEGEND

Functional Classification

-  Major Arterial
-  Minor Arterial
-  Collector
-  Local Streets
-  Statewide Regionally Significant Highway (Expressway)

FUNCTIONAL CLASSIFICATION MAP
KEIZER, OREGON **FIGURE 3**

Figure 4 Pavement Condition

Forthcoming pending data from the City of Keizer

Table 1 Street Design Standards

Functional Classification ¹	Number of Lanes	Parking	Bike Lanes ²	Improvement Width (ft.) ³	Sidewalks ⁴	Right-of-Way Width (ft.) ^{4,5}
Major Arterial	5	No	Yes	50-72	Yes	84
Minor Arterial	3	No	Yes	36-50	Yes	72
Collector	2	No	Yes	36-50	Yes	68
Local III	2	Yes	No	34	Yes	48
Local II	2	Yes	No	32	Yes	46
Local I	2	Yes	No	30	Yes	44

City of Keizer, 1999

¹ All local street categories have a ten-foot public utility easement on both sides and a five-foot slope and utility easement on collectors and arterials.

² Standard bike lane widths are six feet; although five feet may be approved on a case by case basis.

³ Street improvement and right-of-way widths may be increased on a case by case basis as required by the city in accordance with Public Works Design Standards.

⁴ All streets will have five-foot wide sidewalks on both sides. Meandering sidewalks may be considered/required on arterials and collectors.

⁵ Additional right-of-way may be required at intersections for additional turning lanes. Right-of-way at intersections is to have a minimum 20-foot radius.

These guidelines also include five-foot planter strips on collectors and arterials. Additionally, use of transit is facilitated by construction of bus pullouts on Local Street III, collectors, and arterials.

Table 2 displays the existing cross-sections for the arterials and collector streets. This information is taken from the current *City of Keizer TSP*, information received from the city, and a review of aerial photography through Google Earth and Microsoft Virtual Earth. The information is provided in order to compare the existing design standards to the actual design of roadways in Keizer.

Table 2 Existing City of Keizer Arterial and Collector Design Information

Street	Number of Through Lanes ¹	Median	Parking	Bike Lanes ²	Sidewalks ²	Approximate Roadway Width (ft.) ³
Major Arterials						
Cherry Avenue	2	TWLTL	No	Both	Both	50
Lockhaven Drive (River Road to I-5)	2	TWLTL	No	Both	Both	50
River Road (North of Wheatland Road)	2	TWLTL	No	Both	Both	52
River Road (South of Wheatland Road)	4	TWLTL	No	Both	Both	68
Minor Arterials						
Chemawa Road (Windsor Island Road to Lockhaven Drive)	2	No	No	Both	Both	36
Lockhaven Drive (Windsor Island Road to River Road)	2	TWLTL	No	Both	Both	49
McLeod Lane (Lockhaven Drive to Chemawa Road)	2	No	No	No	No	25
McLeod Lane (Ridge Drive to Chemawa Road)	2	No	No	No	No	22
Verda Lane (Salem Parkway to Chemawa Road)	2	No	No	Both	No	36
Wheatland Road	2	No	No	No	Varies	36
Collectors						
Alder Drive	2	No	No	No	Both	34
Candlewood Drive	2	No	No	No	No	24
Chemawa Road (Windsor Island Road to 15 th Avenue)	2	No	No	No	Varies	40
Clearlake Road	2	No	No	No	Varies	24
Cummings Lane	2	No	No	Both	No	32
Dearborn Avenue	2	No	Yes	Both	No	32
McLeod Lane (Lockhaven Drive to Stone Hedge Drive)	2	No	No	Both	Both	32
Parkmeadow Drive	2	No	Yes	No	Both	32
Plymouth Drive	2	No	No	Both	Both	32
Radian Drive	2	No	No	Both	Both	32
Shoreline Drive	2	No	No	No	Both	34
Sunset Avenue	2	No	Yes	No	No	24
Trail Avenue	2	No	No	No	No	32
Windsor Island Road	2	No	No	No	Varies	24

TWLTL: Two-Way-Left-Turn-Lane

¹Both directions

²More specific bike lane and sidewalk detail is provided in Figures 6, 7, & 8.**Roadway width is an approximate measure including the width of all lanes, and if present, the median, the shoulders and the bike lanes. The widths were taken from Google Earth

As shown in Table 2, while the current city of Keizer design standards identify major arterials as having up to four through lanes and a two-way-left-turn-lane (TWLTL), only River Road (South of Wheatland Road) has a four through lanes. Lockhaven Drive (Windsor Island Road to River Road) is the only minor arterial to meet the design standards indicated in the current *City of Keizer TSP*, which calls for two-through lanes, and a TWLTL. All collectors have two through lanes (no median), as identified in the Street Design Standards. Based on the operations analysis found in the "Existing Traffic Volumes and Traffic Operations" section of this document, the major and minor arterials constructed with fewer through lanes than called for in the current *City of Keizer TSP* provide acceptable operations.

None of the major and minor arterials provide on-street parking, consistent with the current roadway design standards. However, three collectors: Dearborn Avenue, Sunset Avenue and Parkmeadow Drive do provide on-street parking, which is incompatible with current roadway design standards. With the exception of McLeod Lane, all other minor arterial roadways have widths between 36 and 50 feet, meeting the current street design standards.

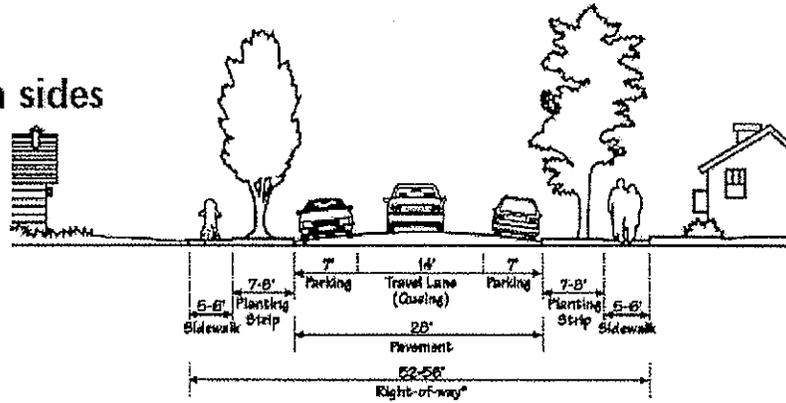
While local Streets are not reviewed as part of the development of the TSP, the Oregon (Transportation Planning Rule) TPR requires that "local governments establish standards for local streets and accessways that minimize pavement width and right of way. The rule further requires that the standards provide for the operational needs of streets including pedestrian and bicycle circulation and emergency vehicle access." (*Neighborhood Street Design Guidelines*, page 2, Reference 3). According to the DLCD document, benefits of streets with reduced pavement widths include improved livability, improved safety, slower vehicle speeds, and reduced environmental impacts. Figure 5 displays examples of narrow streets that may be considered in Keizer. *Appendix "A" includes the Neighborhood Street Design Guidelines.*

According to the *Neighborhood Street Design Guidelines*, a street wider than 28 feet is by definition not a "narrow street." Keizer design standards for Local I, Local II, and Local III streets currently call for improvement widths of 30 feet, 32 feet, and 34 feet, respectively.

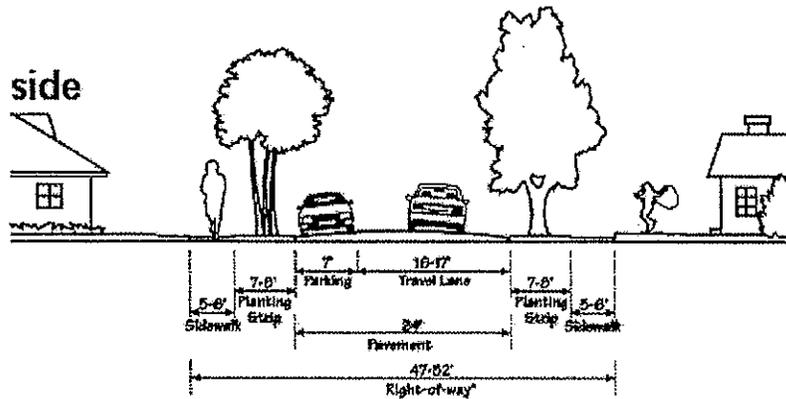
Figure 5 Skinny Streets

Summary of Three Potential Scenarios

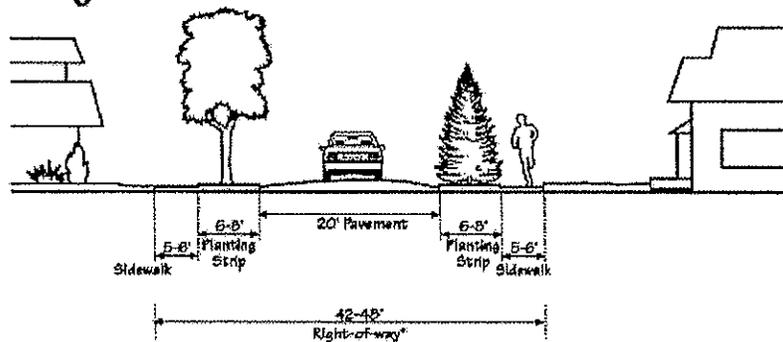
28 Ft Street
 Parking on both sides



24 Ft Street
 Parking on one side



20 Ft Street
 No on-street parking allowed



From the Neighborhood Street Design Guidelines

BICYCLE

Bicycle facilities (dedicated bicycle lanes in the paved roadway, multi-use paths shared with pedestrians, etc.) serve a variety of trips. These include:

- Trips to major attractors, such as schools, parks and open spaces, retail centers, and public facilities
- Commute trips, where changing and showering facilities are provided at the workplace
- Recreational trips
- Access to transit, where bicycle storage facilities are available at the stop, or where space is available on bus-mounted bicycle racks

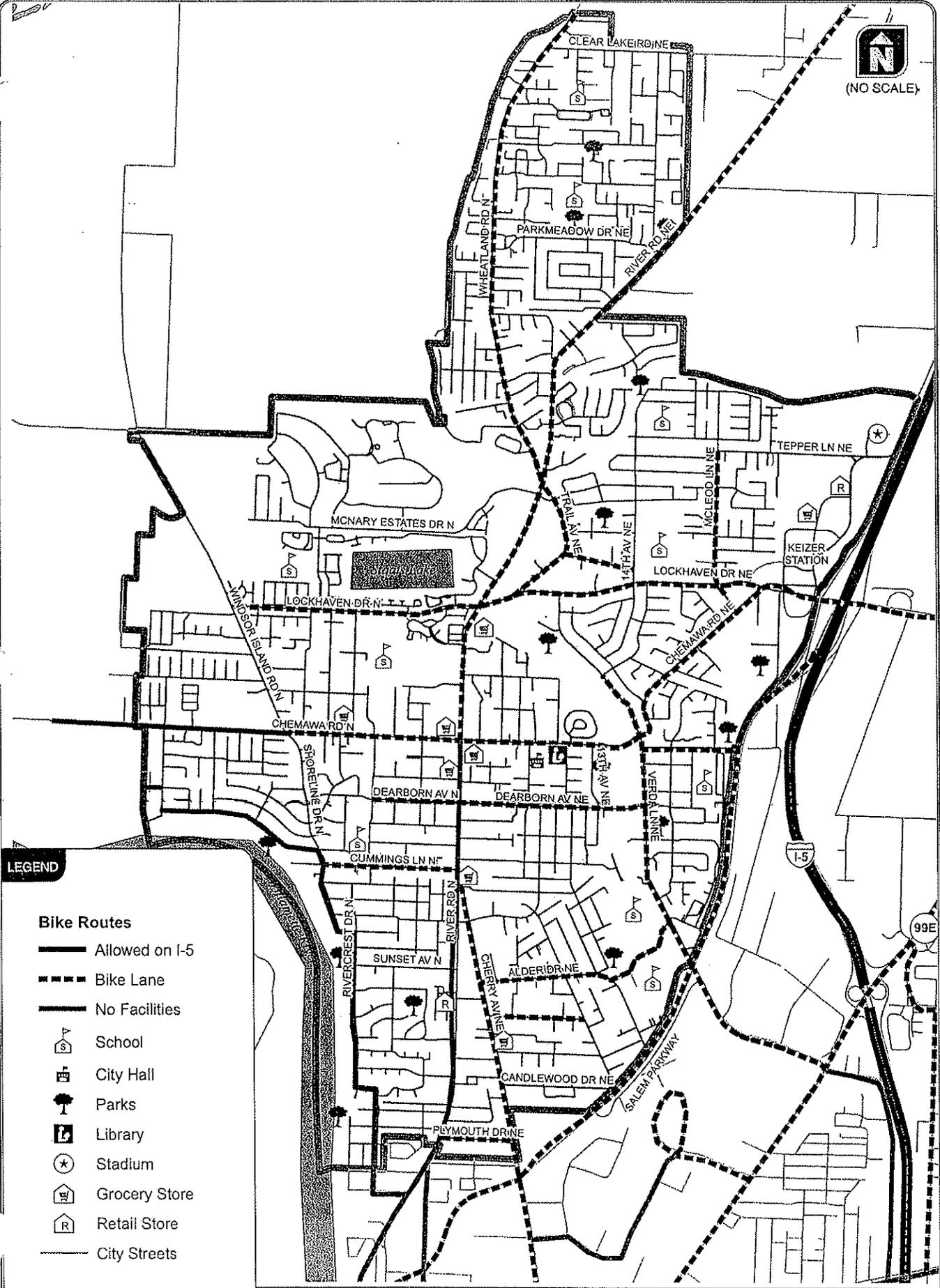
As this list suggests, supporting bicycling as a viable alternative to the automobile requires more than simply providing bicycle lanes. Support facilities, such as secure parking and worksite changing facilities, are also needed before many potential users will consider the bicycle trip as a practical alternative.

Dedicated bicycle facilities should be provided along major streets where automobile traffic speeds are significantly higher than bicycle speeds. Bicycle facilities should connect residential neighborhoods to schools, retail centers, and employment areas. However, allowing bicycle traffic to mix with automobile traffic is acceptable where the average daily traffic (ADT) on a roadway is less than 3,000 vehicles per day, according to the *Oregon Bicycle and Pedestrian Plan* (Oregon Department of Transportation, 1995).

Based on the City's most recent inventory of the existing bicycle facilities, Figure 6 depicts the locations of existing bicycle facilities in the City of Keizer. As shown in Figure 6, there are a suitable number of dedicated bicycle routes within the City of Keizer. Additionally, most of the major bicycle-trip generators are located on the bicycle network or have a local street connection to the bike network.

The only arterial without bike lanes in Keizer is River Road south of Chemawa Road. In addition, the following collectors do not have bike lanes on both sides of the street along the entire length of roadway,

- Alder Drive
- Candlewood Drive
- Chemawa Road (Windsor Island Road to 15th Avenue)
- Clearlake Road
- Parkmeadow Drive
- Shoreline Drive
- Sunset Avenue
- Trail Avenue
- Windsor Island Road



LEGEND

- Bike Routes**
- Allowed on I-5
 - Bike Lane
 - No Facilities
 - School
 - City Hall
 - Parks
 - Library
 - Stadium
 - Grocery Store
 - Retail Store
 - City Streets

**BICYCLE ROUTE NETWORK
KEIZER, OREGON** **FIGURE 6**

H:\profile\B...er TSP Refinement and Updates\gis

PEDESTRIAN

Similar to bicycle facilities, pedestrian facilities serve a variety of needs. These include:

- Relatively short trips (under a mile) to major pedestrian attractors, such as schools, parks and open spaces, retail centers, and public facilities (i.e. libraries, recreation centers, community centers, etc.)
- Recreational trips—for example, jogging or hiking—and circulation within parklands
- Access to transit (generally trips under 1/2-mile to bus stops)
- Commute trips, where mixed-use development is provided and people have chosen to live near where they work

Pedestrian facilities should be integrated with transit stops, and should separate pedestrians from vehicular traffic. Furthermore, pedestrian facilities should provide continuous connections between neighborhoods, employment areas, and nearby pedestrian attractors.

Two of the five existing minor arterials: McLeod Lane and Wheatland Road do not have bike lanes or sidewalks, while Verda Lane only has bike lanes. In addition, the following collectors do not provide sidewalks on both sides of the street along the entire length of roadway:

- Candlewood Drive
- Chemawa Road (Windsor Island Road to 15th Avenue)
- Clearlake Road
- Cummings Lane
- Dearborn Avenue
- Sunset Avenue
- Trail Avenue
- Windsor Island Road

Figures 7 and 8 show the locations of sidewalks within the study area, along with key pedestrian-trip generators. Figure 7 shows the area of Keizer located south of Lockhaven Drive and Figure 8 shows the area of Keizer located north of Lockhaven Drive. Figures 7 and 8 show that much of Keizer is well covered by the sidewalk network, especially the area of the city located north of Lockhaven Drive. However, the area approximately between the Shoreline Drive to the west, River Road to the east, Sunset Avenue to the south, and Lockhaven Drive to the north has very few roadways with sidewalks.

Figures 7 and 8 also depict sidewalk gaps on study roadways and show the locations where pedestrian generators lack sidewalk connections. As shown in Figures 7 and 8, most pedestrian generators within the study area are located adjacent to roadways with pedestrian facilities. Several, however, lack pedestrian connections, including the Keizer Little League Park, the Volcanoes Stadium, Claggett Creek Park, McNary High School, and River's Edge Park. Gaps near pedestrian generators are the greatest impediment to pedestrian trips because they occur where a high number of pedestrian trips are likely to occur.



LEGEND

Sidewalk Facility

- Sidewalk
- No Facilities
- Private
- School
- City Hall
- Parks
- Library
- Stadium
- Grocery Store
- Retail Store
- City Streets



LEGEND

Sidewalk Facility

- Sidewalk
- - - No Facilities
- Private

Facilities

- School
- City Hall
- Parks
- Library
- Stadium
- Grocery Store
- Retail Store
- City Streets



99E

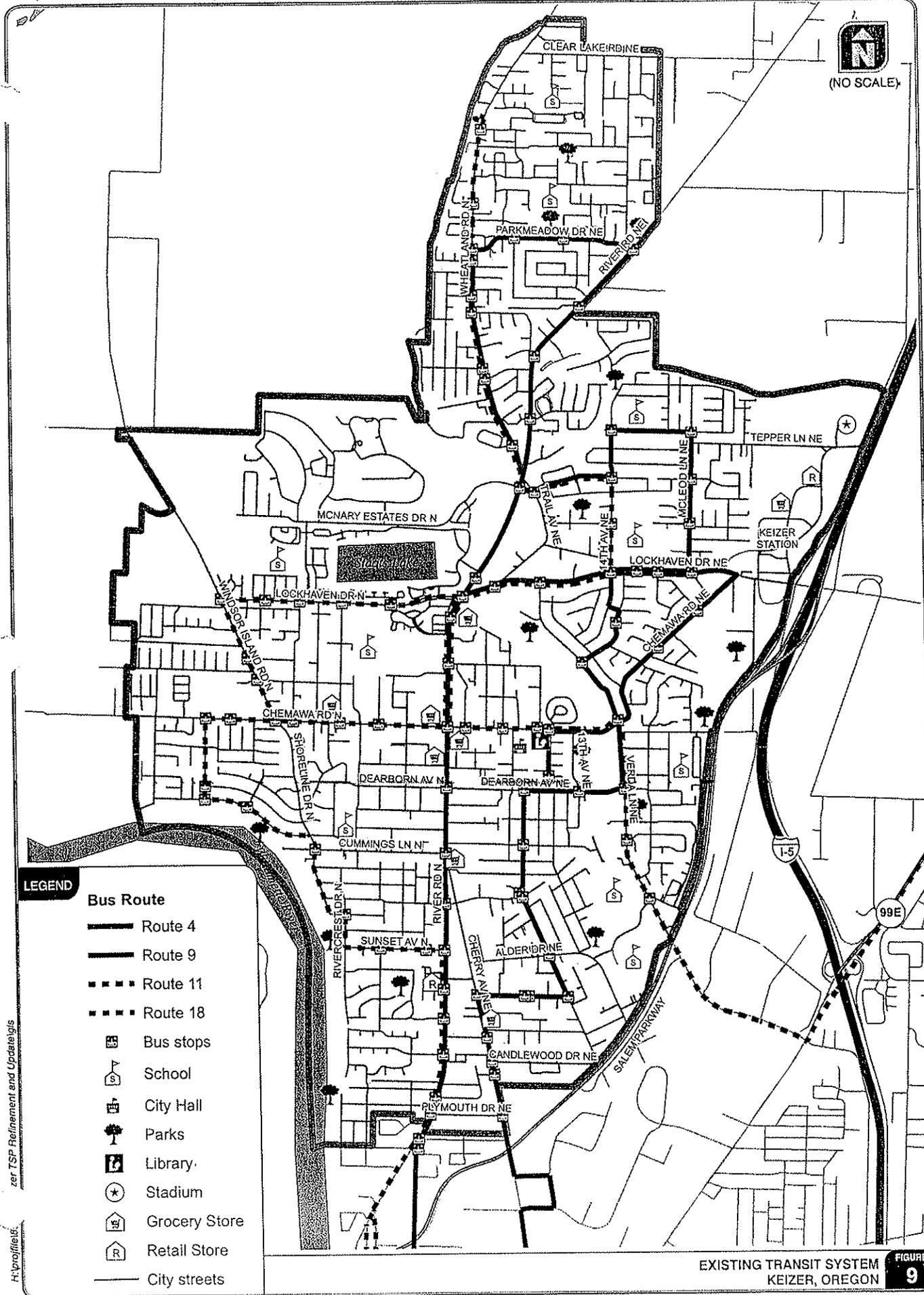
TRANSIT

Several public transportation services are provided within the City of Keizer. Services include fixed route bus, paratransit, and intercity bus and passenger rail service. The service routes and stop locations are shown in Figure 9 and described in the following section.

Transit Quality of Service Evaluation (TQSE) measures, including transit service frequency, and hours of service, were used to evaluate the corresponding levels of service for existing fixed route bus service.

Fixed Route Bus

The regional transit system is called "Cherriots," or "Salem - Keizer Transit," and provides public transportation services within the urban growth boundaries of Salem and Keizer. According to the *Specialized Transportation Plan for Polk and Marion Counties* (Reference 4), the Cherriots network is composed of 27 bus routes, with four routes: Routes 4, 9, 11 and 18, providing service to, from and within Keizer. Service is provided primarily from two transit centers. The Salem Transit Mall, the main transfer location, is located at Courthouse Square in Downtown Salem. Buses pulse from the transit center at 15 and 45 minutes after the hour. The secondary transit center, the Glen Creek Transit Station, is located in West Salem with buses departing on the hour and 30 minutes after the hour. Cherriots bus stops do not have shelters.



LEGEND

- Bus Route**
- Route 4
- Route 9
- - - Route 11
- - - Route 18
- Bus stops
- School
- City Hall
- Parks
- Library
- Stadium
- Grocery Store
- Retail Store
- City streets

EXISTING TRANSIT SYSTEM KEIZER, OREGON **FIGURE 9**

Profile: H:\profile.ctb
zer TSP Refinement and Update.dwg

Routes

A summary of routes, operating hours, and frequency is summarized below. The information was collected from the Cherriots website and using paper copies of the transit schedules. *Appendix "B" includes the Cherriots route map, and route timetables.*

- **Route 4 Keizer East** provides service from the Salem Transit Center to Whiteaker Middle School in east Keizer, and operates from 6:00 a.m. to 10:00 p.m. on weekdays. Route 4 operates with a frequency of 30-minutes during weekday a.m. and p.m. peak hours, and 60-minutes the rest of the day. On Saturdays, Route 4 operates with a 60 minute frequency from 7 a.m. until 10 p.m. Route 4 does not operate on Sundays or holidays.
- **Route 9 Keizer Central** provides service from the Salem Transit Center to Fred Meyer North along River Road in central Keizer. Route 9 operates from 6:00 a.m. to 10:00 p.m. on weekdays. Busses operating on Route 9 alternate between "Loop A" and "Loop B." "Loop A" provides service to Parkmeadow Drive, while "Loop B" provides service to Whiteaker Middle School. Route 9 operates with a frequency of 15-minutes during weekday a.m. and p.m. peak hours, and 30-minutes the rest of the day. On Saturdays, Route 9 operates with a 60-minute frequency from 7:00 a.m. until 10:00 p.m. Route 9 does not operate on Sundays or holidays.
- **Route 11 Lancaster Drive** provides service in north Keizer, and serves Kaiser Permanente, Chemeketa College, and Lancaster Mall along Lancaster Drive, Verda Lane, River Road, and Wheatland Road. Route 11 operates from 6:30 a.m. to 10:00 p.m. on weekdays with a frequency of 60 to 80-minutes. On Saturdays, Route 11 operates with frequency of 60 to 90-minutes from 7:00 a.m. until 9:30 p.m. Route 11 does not operate on Sundays or holidays.
- **Route 18 Keizer West** provides service along River Road to the Fred Meyer grocery store near the intersection of Broadway Street/Salem Parkway, and McNary High School in west Keizer. Route 18 operates from 6:00 a.m. to 10:00 p.m. on weekdays. Route 18 operates with a frequency of 60-minutes on weekdays. On Saturdays, route 18 operates with frequency of 60-minutes from 7:00 a.m. until 10:00 p.m. Route 18 does not operate on Sundays or holidays.

Service Frequency

Transit service frequency is one measure of transit quality of service as described in the 2003 *Transit Capacity and Quality of Service Manual – 2nd Edition (TCQSM)* (Reference 5) published by the Transportation Research Board. Service frequency is measured by bus headways, the amount of time between each bus at any given stop. The level of service thresholds defined in the TCQSM based on bus headways for fixed route bus systems are shown in Table 3.

Table 3 Service Frequency LOS Thresholds: Fixed Bus Route

LOS	Headway (Min.)	Veh./Hr	Comments
A	<10	>6	Passengers don't need schedules
B	10-14	5-6	Frequent Service, Passengers consult schedules
C	15-20	3-4	Maximum desirable time to wait if bus/train missed
D	21-30	2	Service unattractive to choice riders
E	31-60	1	Service available during hour
F	>60	<1	Service unattractive to all riders

Source: TCQSM

The frequency analysis summary is provided in Table 4. As shown in Table 4, Route 4 operates at a service frequency of LOS D during the weekday peak hours. Route 9 operates at a service frequency of LOS C during the weekday peak hours, and Routes 11 and 18 operate at a service frequency of LOS E. As compared to Table 3, only Route 9 is attractive to choice riders (riders who have the option of taking their car or public transit). While Routes 4, 11, and 18 offer an acceptable option for captive riders (riders who lack an acceptable alternative to transit), Routes 4, 11, and 18 are not attractive to choice riders.

It is important to note that some overlap does exist between Routes 4, 9, 11 and 18 that increase the frequency of service to some destinations. For instance, Routes 4, 9, and 18 all begin and end their routes at the Salem Transit Mall, and overlap on some portion of River Road in Keizer. River Road between Chemawa Road and Lockhaven Drive is the only portion of River Road in Salem where all three routes overlap.

Table 4 Summary of Transit Service Frequency Analysis, Weekday Peak Hours

Headway	Routes	LOS
30 Minutes	Route 4	D
15 Minutes	Route 9	C
60 Minutes	Route 11	E
60 Minutes	Route 18	E

Hours of Service

Hours of service, also known as service span, are the number of hours during the day when transit service is available. The level-of-service thresholds, provided in the TCQSM, are shown in Table 5.

Table 5 Hours of Service LOS Thresholds: Fixed Bus Route

LOS	Hours per day	Comments
A	19-24	Night or owl service provided
B	17-18	Late evening service provided
C	14-16	Early evening service provided
D	12-13	Daytime service provided
E	4-11	Peak hour service/limited midday service
F	0-3	Very limited or no service

Source: TCQSM

Services that do not operate a minimum of 16 hours throughout the day are described by the TCQSM as undesirable to users. Few hours of service can cause unwanted time constraints on daily activities or trips because of the short time span of service availability. The hours of service summary for Keizer's fixed route services are shown in Table 6. As shown, Routes 4, 9, and 18 operate at LOS B, and Route 11, operates at LOS C. Based on the hours of service analysis, the City of Keizer allows for flexibility in personal schedules by providing late evening service. However, Routes 4, 9, 11, and 18 are not available as a late night option for travelers returning from late night shifts or evening entertainment.

Table 6 Summary of Hours of Service Analysis

Hours per day	Routes	LOS
17	Route 4	B
17	Route 9	B
16	Route 11	C
17	Route 18	B

Fare

The Cherriots transit system has three fare categories: Adult (Ages 19 to 59), Youth (Ages 6 to 18), and Special (Disabled, Medicare cardholders, or over 60 years old). There are five ways for Cherriots customers to pay their fare:

- **Exact Cash Fare** – The adult one-way fare is \$1.00 (\$2.00 for a day pass). The one-way "special" fare for seniors, the disabled, and Medicare cardholders is \$0.50 (\$1.00 for day pass), and the youth one-way fare is \$0.75 (\$1.50 for a day pass).
- **Day Pass** is twice the cost of a single fare, and offers unlimited rides all day.
- **Monthly Bus Pass** is good for unlimited riding for a calendar month.
- **Annual Bus Pass** is good for unlimited riding for a calendar year.
- **Cherricards** are punch cards good for up to 10 rides, plus an additional free ride.

Ridership

Average daily ridership data for all four bus routes was provided by the Transportation Development Division of the Salem Area Mass Transit District. The data was for the period January 1, 2006 to December 31, 2006. The analysis showed that of the four routes, Route 9 had the highest average daily ridership with 12,400 (4,100 in Keizer) total average daily boardings and alightings, representing more than twice as many riders as Routes 4, 11, and 18. Additionally, the Route 9 Chemawa Road/River Road stop had the highest average daily boardings and alightings of all stops in Keizer. *Appendix "C" includes ridership data for the four Cherriots bus routes serving Keizer.*

Paratransit

CherryLift is an origin to destination paratransit service for people whose disability prevents them from using the Cherriots buses some of, or all of the time. As referenced in the *Specialized Transportation Plan for Polk and Marion Counties*, CherryLift provides curb-to-curb service to ADA-certified persons unable to ride Cherriots. CherryLift operates ten to twelve vehicles daily and provides approximately 60,000 rides annually. A 24-hour advanced reservation is required to ride CherryLift. Service hours and days parallel those of Cherriots. The fare is \$2.00 each way and can be paid in either cash or using a CherryLift ticket.

Amtrak

The closest Amtrak facility providing intercity rail travel is located in Salem. The Amtrak Cascades line and the Coast Starlight line serve the Salem Amtrak facility. The Amtrak Cascades line provides service between Eugene-Springfield, Oregon and Vancouver, British Columbia, and the Coast Starlight line provides service between Los Angeles, California and Seattle, Washington.

Greyhound

The closest intercity bus facility is the Salem Greyhound station located in Salem. The Greyhound station and ticketing office is open Monday through Saturday from 7:00 a.m. to 8:00 p.m., on Sundays from 7:00 a.m. to 9:00 a.m. and 11:30 a.m. to 8:00 p.m., and on holidays from 7:00 a.m. to 2:30 p.m.

AIR

While no airport exists in Keizer, commercial air service is available from the Salem Municipal Airport, or McNary Field. McNary Field is located four-miles south of Keizer and is accessible via I-5. The 751-acre airport also serves general aviation aircraft, the Oregon Army National Guard-Army Aviation Support Facility, and a Federal Express office and package reload facility.

Delta Airlines' connection carrier, SkyWest, recently began commercial service to and from this airport. SkyWest provides two flights daily from Salem Airport to Salt Lake City for other national and international Delta Airlines connecting flights. The first flight departs at 6:15 a.m., and arrives in Salt Lake City at 9:00 a.m., early enough for connecting flights throughout the country. The second flight departs from Salem Airport at 12:50 p.m. and arrives in Salt Lake City at 3:35 p.m., in time for late afternoon and evening connecting flights. Flights arrive from Salt Lake City at 12:07 p.m. and 9:55 p.m.

Ground transportation options to McNary Field include:

- **Personal Vehicle:** Free parking is provided at McNary Field.
- **Cherriots:** Route 7 serves the airport from downtown Salem with 30-minute headways.
- **Car Rental:** Hertz, Budget, Avis
- **Hut Limousine Service** provides regularly scheduled ground transportation between McNary Field and Portland.

In addition, Portland International Airport (PDX) is the principle airport in the State of Oregon, and is located 50-miles to the north.

FREIGHT

A rock quarry is located in west Keizer on Chemawa Road. Trucks from the quarry reach I-5 via Chemawa Road and Lockhaven Drive. Additionally, there are three commercial/distribution centers: Advantage Transportation Services located near the intersection of Cherry Avenue/Salem Parkway, Cummings Moving Systems, located near the intersection of Lockhaven Drive/River Road, and CAD NW Conveyored Aggregate Delivery, also located near the intersection of Lockhaven Drive/River Road. Finally, Salem Parkway at the southern edge of the city is also a major truck route, providing access between I-5 and Salem. Figure 10 displays existing freight, railroad and pipeline facilities.

RAIL

The existing railway through Keizer crosses the southern Keizer city limits near Ridge Drive, heads due north and exits the city limits on its northern border. The sole rail crossing in Keizer is located at the intersection of Lockhaven Drive/Ridge Road, and has a new-gated warning signal, as well as railroad crossing signs. This line has been leased to, and is operated by, Portland and Western (P & W) Railroad. P&W, is a wholly owned subsidiary of Genesee & Wyoming Inc., and operates a 520-mile regional system. It is currently a freight rail line; however, there have been preliminary plans considering connections to the new commuter rail facilities between Beaverton and Wilsonville in the Portland Metropolitan area.

In addition, P&W has a line running on the northeast edge of Keizer. This P&W line consists of 18.9 miles of through track running north-south, parallel to, and just west of I-5.

WATER

The Willamette River is located along the west side of the city of Keizer and does not include any port or harbor facilities within the Keizer area. Near Keizer, the Willamette River is approximately 500-feet wide and 4 to 16 feet deep.

The Wheatland Ferry, located approximately four miles north of Keizer on Matheny Road, provides passenger service across the Willamette River in Marion County. The ferry connects with Wheatland Road in Yamhill County. The facility is open year-round, but is closed Thanksgiving & Christmas Days and when the depth of the Willamette River is greater than 16-feet.

The Wheatland Ferry operates daily from 5:30 AM to 9:45 PM, with the following tolls:

- Motorcycles – \$1
- Autos & Pickups – \$1.35
- Vehicles w/Trailers – \$2.75
- Vehicles Over 20 Feet – \$2.75
- Dual-Axle Vehicles – \$4
- Vehicles Using Entire Ferry – \$12
- Toll Tickets:
 - \$54 buys a 48 punch ticket
 - \$27 buys a 24 punch ticket

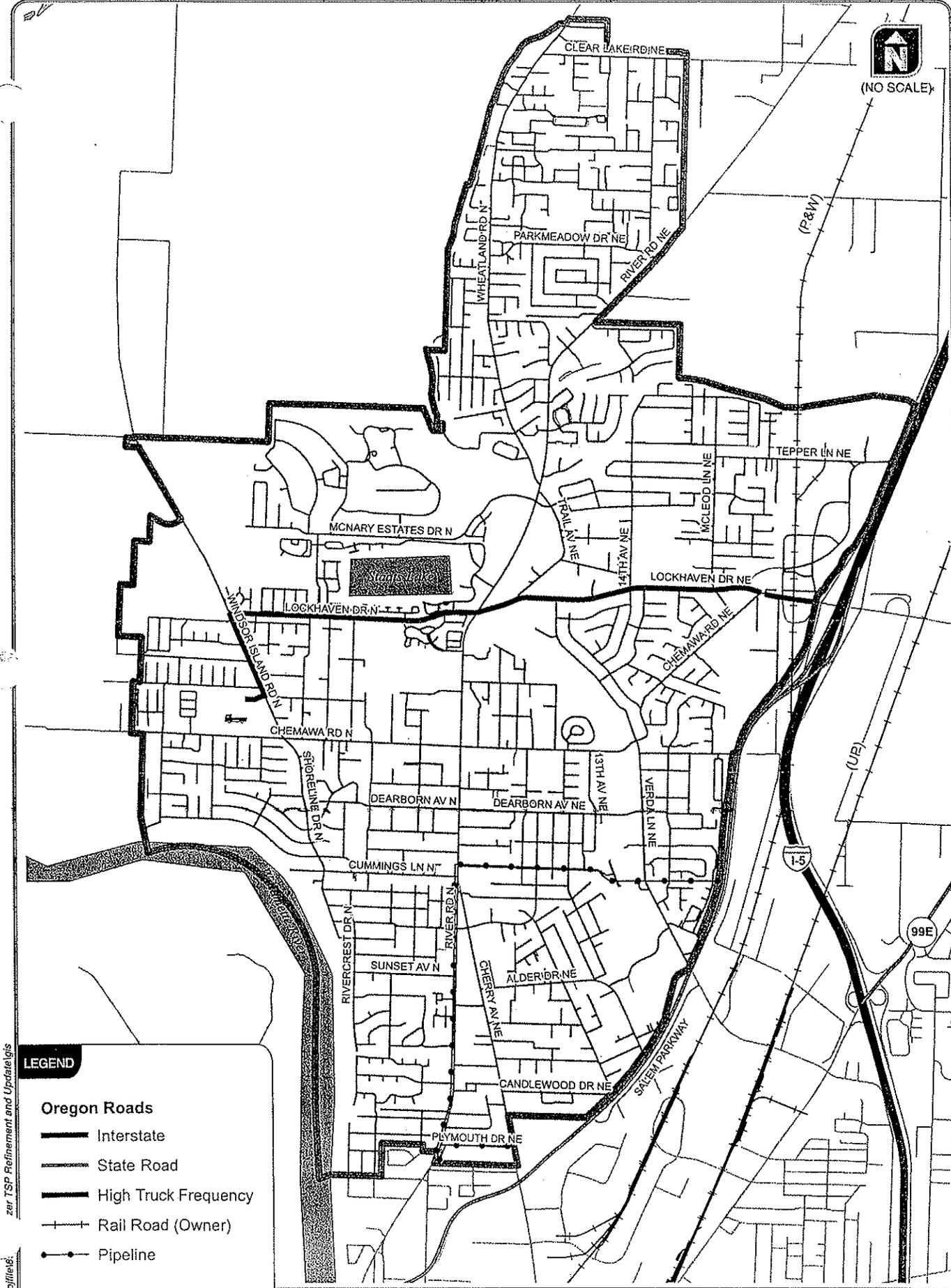
The Wheatland Ferry can carry up to nine vehicles per trip, corresponding to a maximum weight of 80,000 lbs (40 tons) and a maximum length of 63'. The ferry ride across the river is less than two minutes, and the ferry runs continuously throughout the day. The ferry carries approximately 750 cars per day in the winter and 950 cars a day in the summer. According to Marion County Public Works, most of the passengers are commuters, with equal crossings both directions.

PIPELINE

Pipelines are generally the most economical way to transport large quantities of oil or natural gas over land. Compared to railroads, they have lower cost per unit, are higher capacity, and reduce traffic impacts on the roadway system.



(NO SCALE)



Refinement and Update

LEGEND

Oregon Roads

- Interstate
- State Road
- High Truck Frequency
- Rail Road (Owner)
- Pipeline

EXISTING FREIGHT, RAILROAD AND PIPELINE FACILITIES
KEIZER, OREGON

Northwest Natural Gas manages all pipelines in Keizer. Most of the pipelines feeding houses and public buildings have a diameter of less than 5 inches. Two feeder pipelines provide service to Keizer. The first feeder pipeline comes from Salem, and runs under the west side of River Road. It turns towards east on Dietz Avenue, which becomes Lawless Street. The pipeline has a diameter of 8.625 inches, first traveling south, and then turning east, undergoing an offset of 200 feet. It then continues east, traveling under a residential area, before exiting Keizer.

The second feeder pipeline branches off the first one under the River Road/Plymouth Drive intersection, and follows Plymouth Drive east along the centerline of the roadway. The pipeline then goes south on Cherry Avenue for 400 feet and exits Keizer towards the nearby industrial area. This pipeline is 6.625 inches in diameter, and does not feed any infrastructure in Keizer.

Existing Traffic Volumes and Traffic Operations

INTERSECTION OPERATIONS

Traffic operations at intersections are generally described using a measure known as "level of service" (LOS). Level of service represents ranges in the average amount of delay that motorists experience when passing through the intersection. LOS is measured on an "A" (best) to "F" (worst) scale. At signalized and all-way stop-controlled intersections, LOS is based on the average delay experienced by all vehicles entering the intersection. At two-way stop-controlled intersections, LOS is based on the average delay experienced by the worst movement at the intersection, typically a left-turn from the stop-controlled street. For signalized intersections, LOS "D" or better (representing no more than 55 seconds of average delay) is commonly considered acceptable operations. For unsignalized intersections, LOS "E" or better (representing no more than 50 seconds of average delay) is generally considered to be acceptable operations.

The Salem Parkway is an ODOT owned and maintained highway that is subject to the operations standards defined the 1999 Oregon Highway Plan. According to the latest update to Table 7 in the 1999 Oregon Highway Plan, a signalized intersection on a Regional Highway (Expressway) with a posted speed greater than or equal to 45 mph is required to operate at or below a volume-to-capacity ratio of 0.85 during the peak hours.

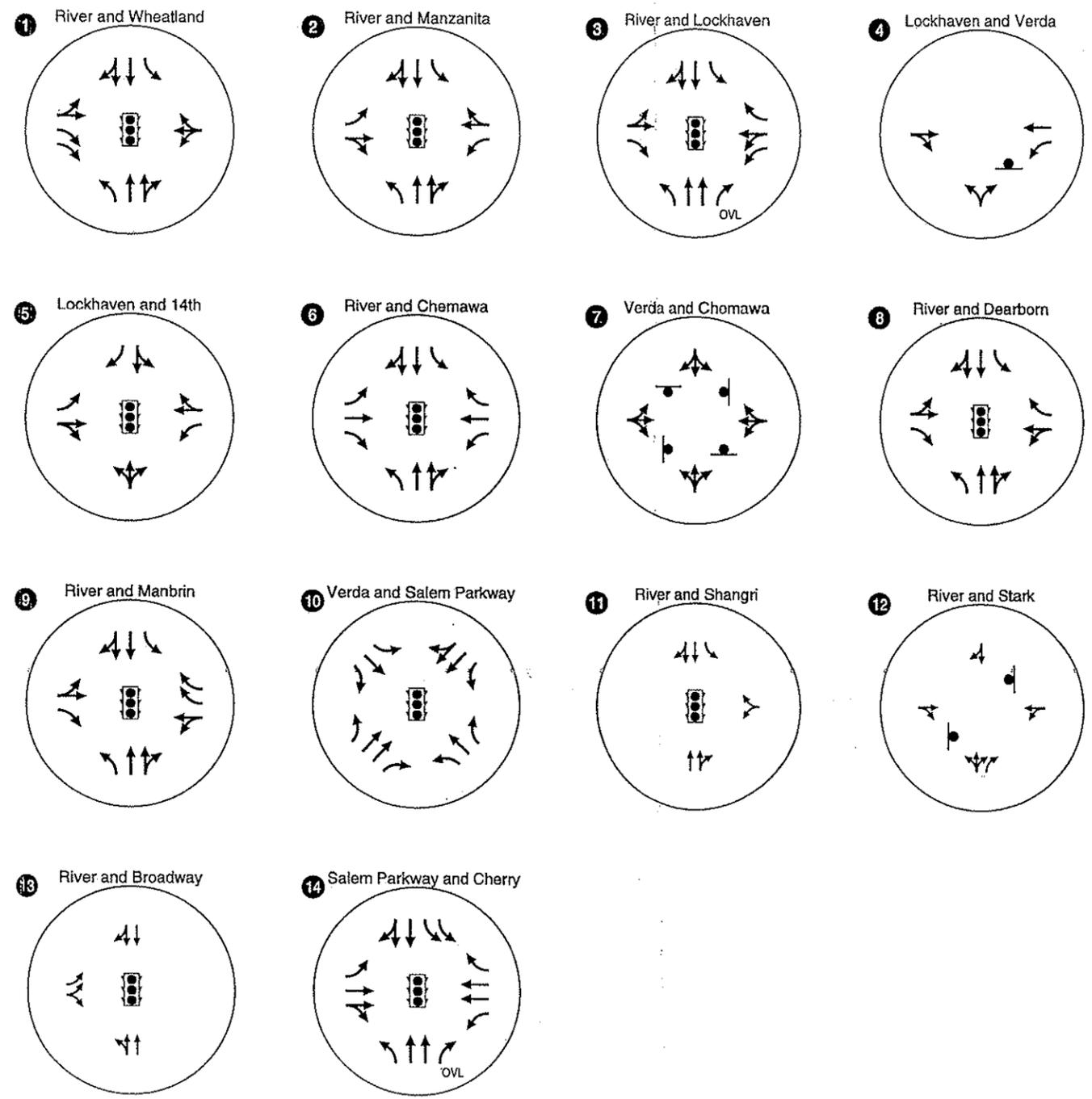
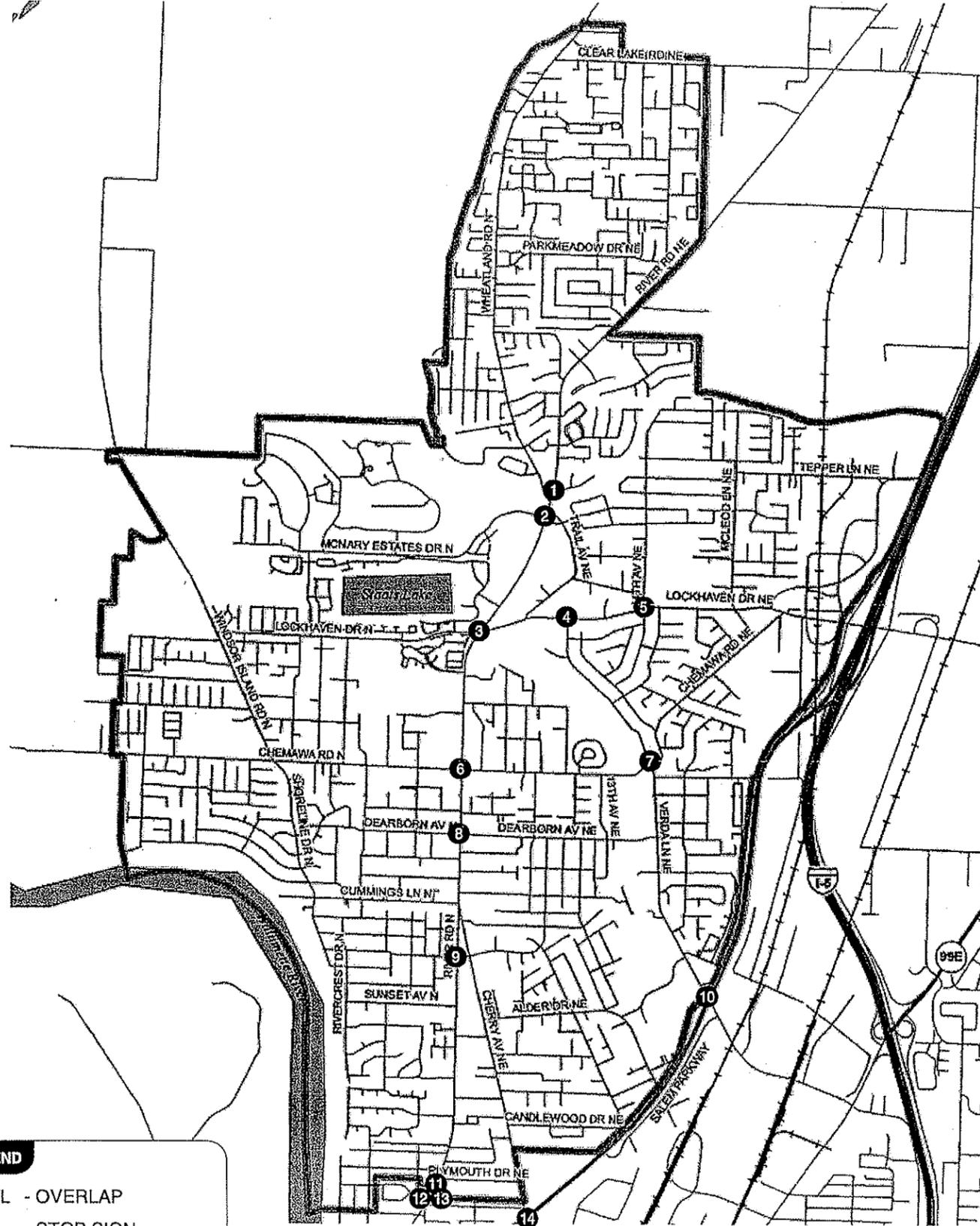
All of the operational analyses described in this report were performed in accordance with the level of service analysis procedures stated in the *2000 Highway Capacity Manual* (Reference 6). A total of 12 intersections were identified for traffic operations analysis through recommendations from City Staff. ODOT provided traffic volumes for the study intersections counted in the summer of 2007¹. Figure 11 shows the existing lane configuration and traffic control devices for the study intersections, and Figures 12 and 13 show the traffic volumes and results of the operations analysis for the weekday a.m. and p.m. peak hours, respectively. *Appendix "D" includes the traffic counts, and Appendix "E" includes the intersection operations worksheets.*

¹ It should be noted that the traffic counts were taken during the bridge closure on Dearborn Avenue. However, based on consultation with City staff and a review of the traffic volumes, it was determined that the bridge closure did not have a significant impact on overall travel patterns within the City.



(NO SCALE)

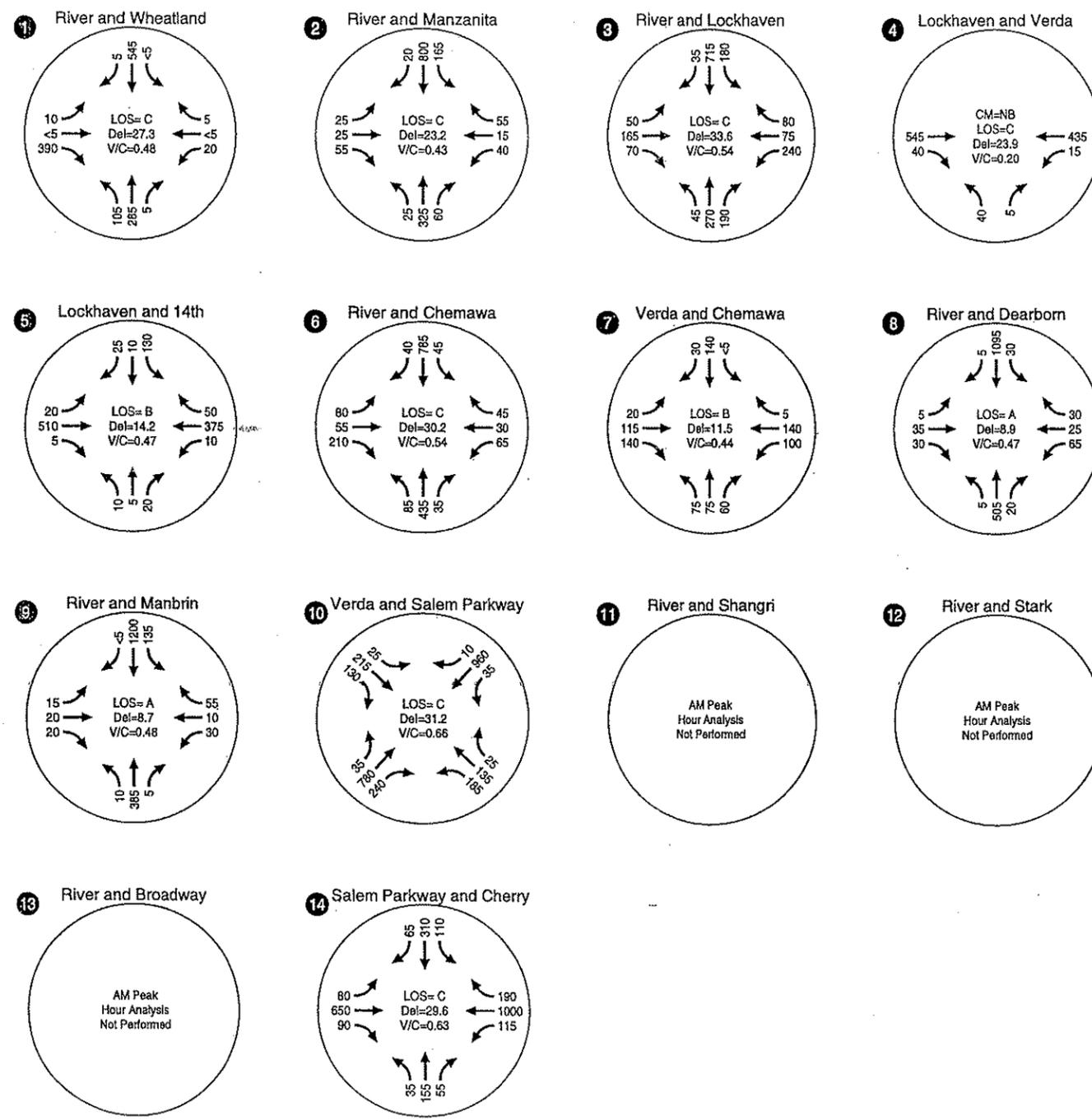
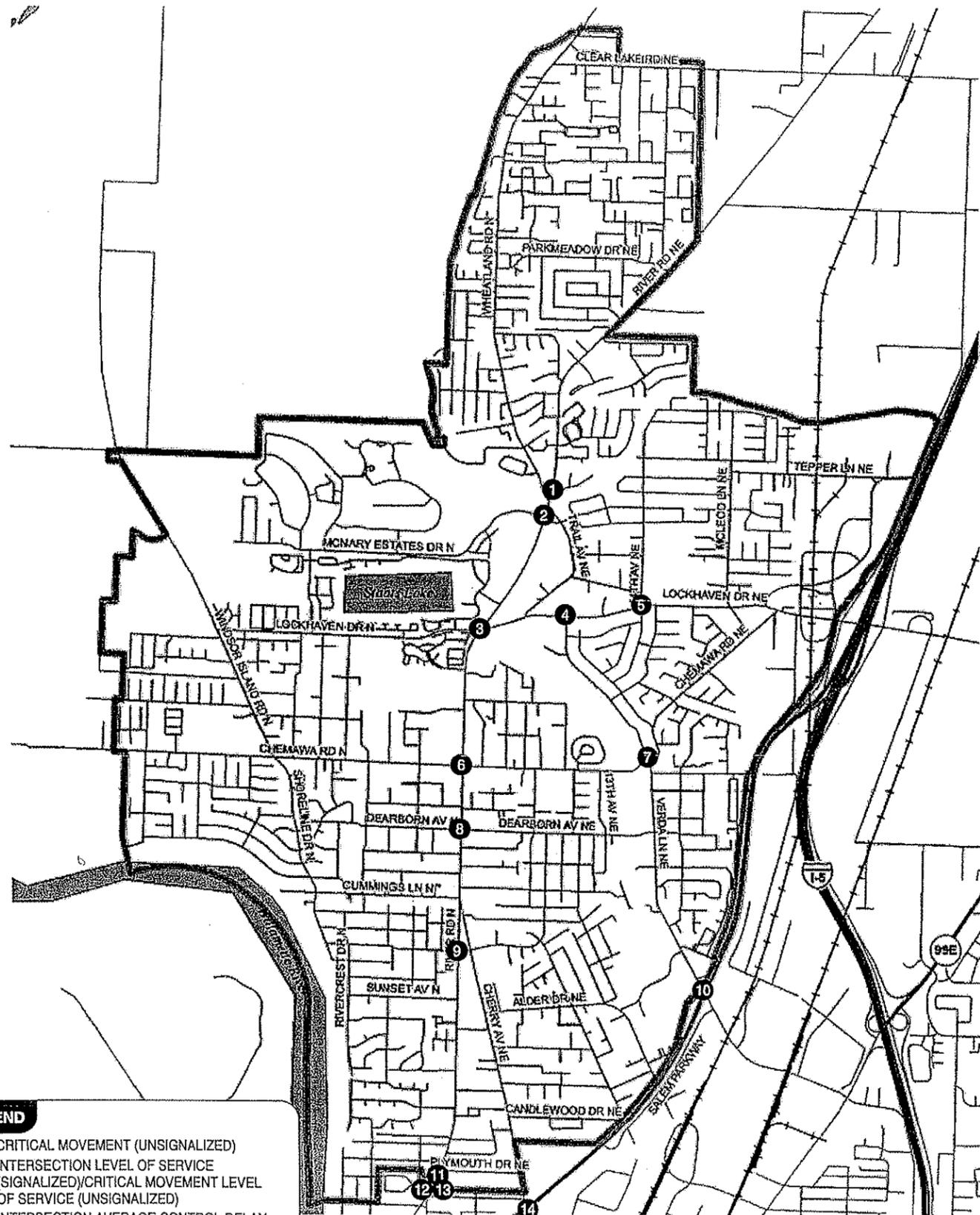
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LEGEND

- OVL - OVERLAP
- - STOP SIGN
- ⚡ - TRAFFIC SIGNAL

EXISTING LANE CONFIGURATION
KEIZER, OREGON

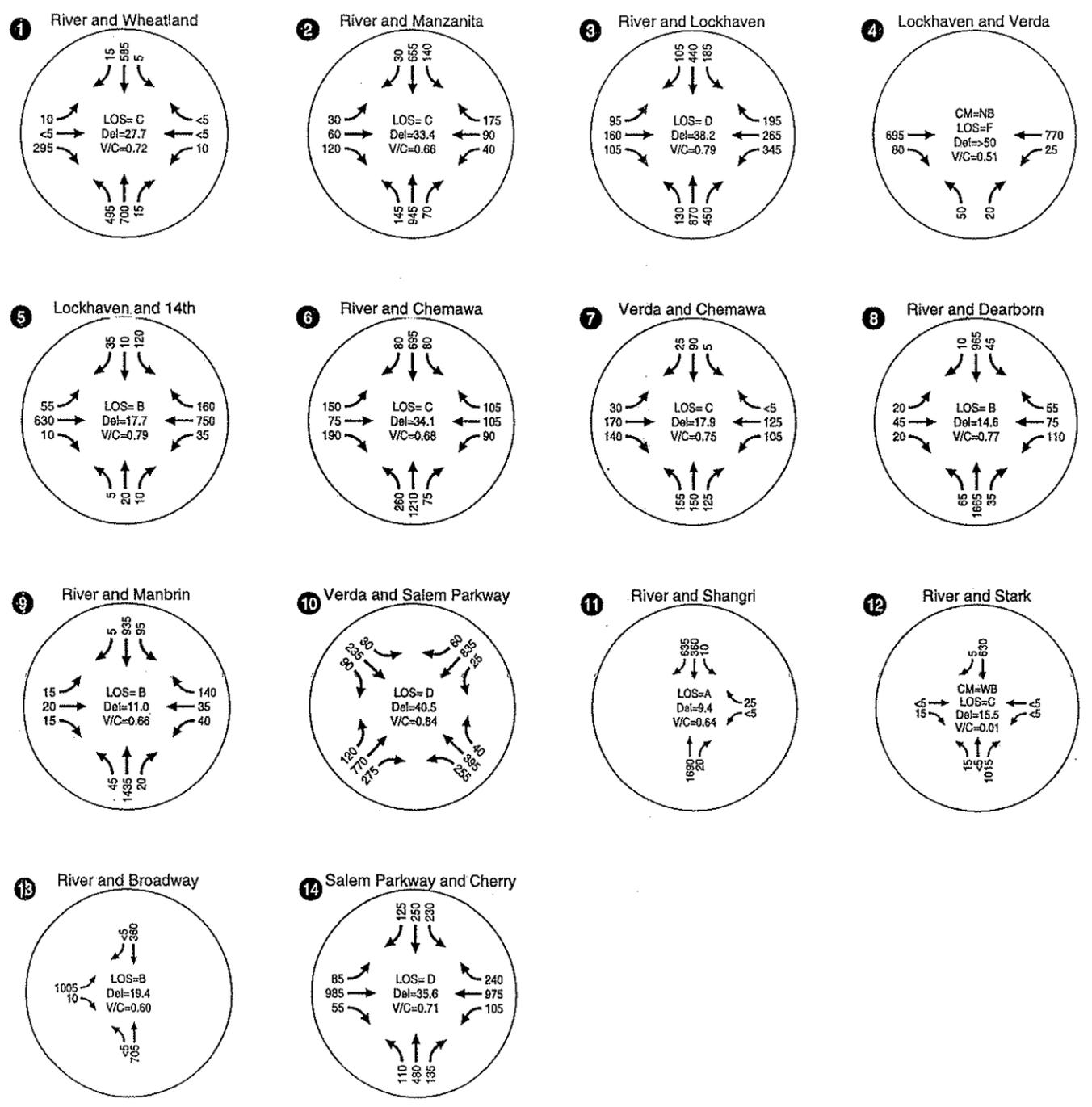
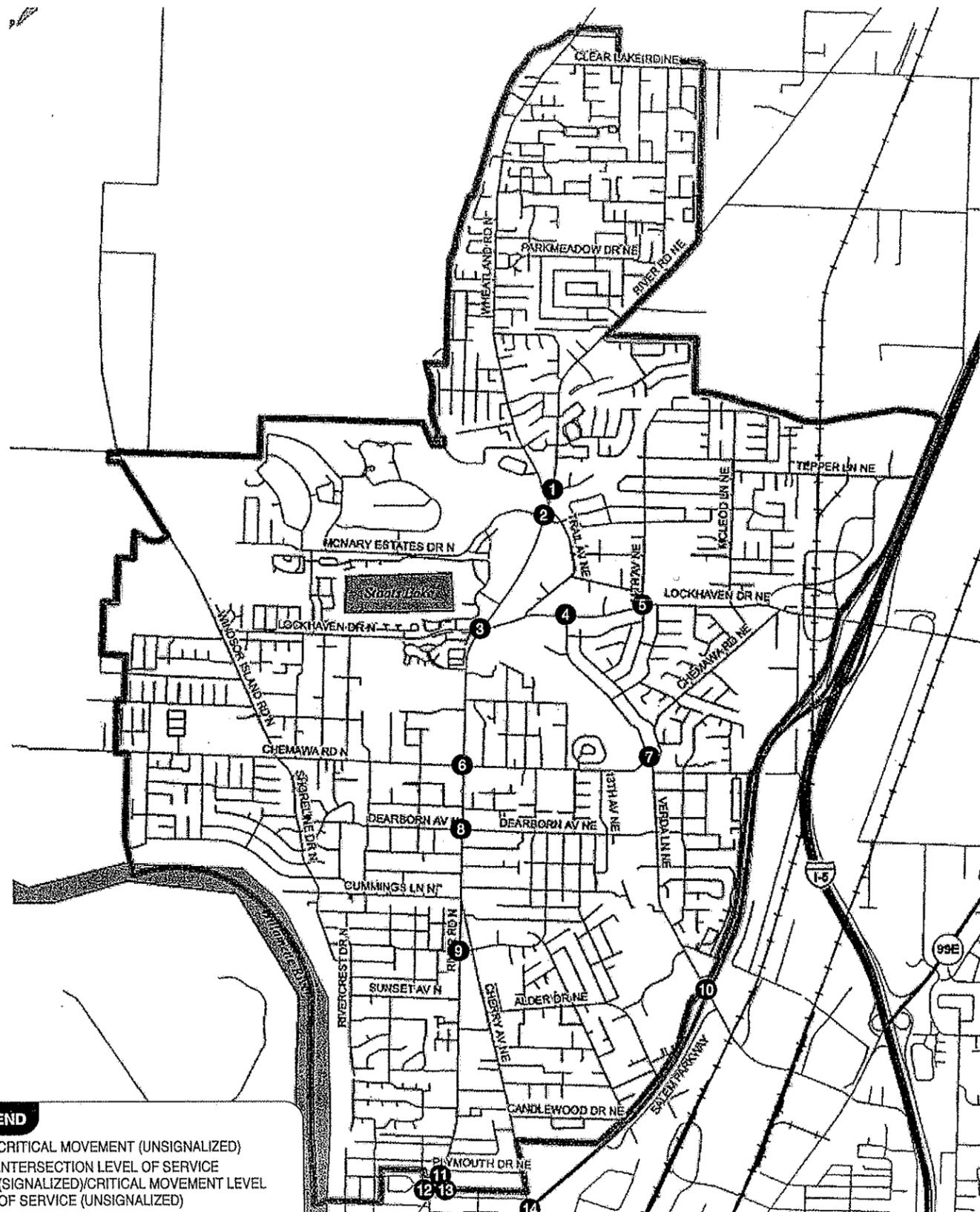


LEGEND

CM = CRITICAL MOVEMENT (UNSIGNALIZED)
 LOS = INTERSECTION 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 AM PEAK HOUR KEIZER, OREGON **FIGURE 12**

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LEGEND

- CM = CRITICAL MOVEMENT (UNSIGNALIZED)
- LOS = INTERSECTION 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 PM PEAK HOUR
KEIZER, OREGON **FIGURE 13**

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Signalized Intersections

All signalized study intersections along City of Keizer arterials and collectors currently operate at LOS D or better. Along the Salem Parkway, the signalized study intersections at Cherry Avenue and Verda Lane currently operate at acceptable volume-to-capacity ratios.

Unsignalized Intersections

During the existing weekday p.m. peak hour, the Lockhaven Drive/Verda Lane intersection operates at LOS F due to the critical shared northbound left/right movement. All other traffic movements through this intersection currently experience acceptable levels of service. The shared northbound left/right movement on Verda Lane is currently under capacity with a v/c ratio of 0.46, and it is likely that adequate gaps exist in traffic on Lockhaven Drive due to the signalized intersections of River Road/Lockhaven Drive, and 14th Avenue/Lockhaven Drive surrounding the intersection.

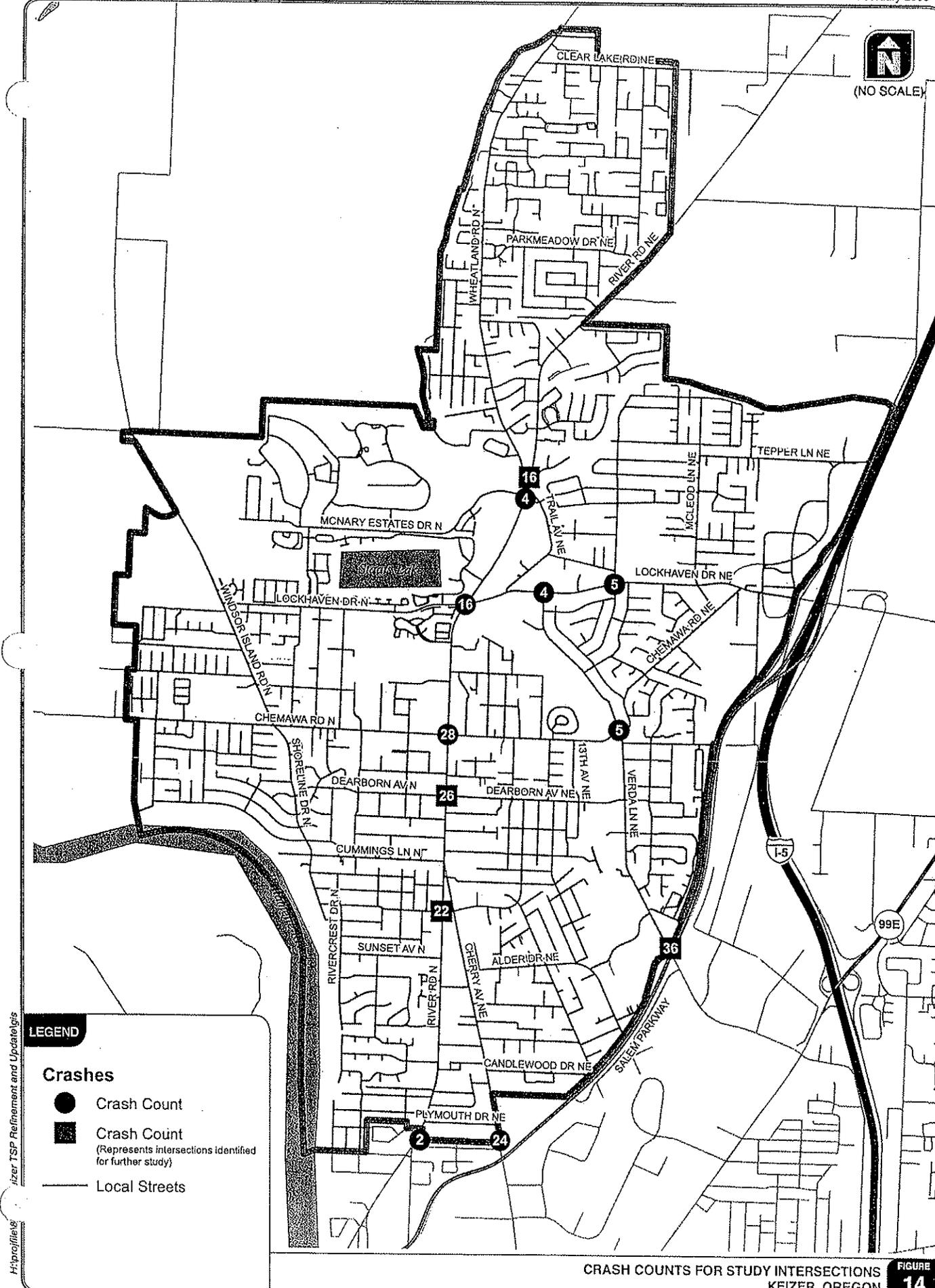
Safety

STUDY INTERSECTIONS CRASH REVIEW

ODOT provided detailed crash data, and collision diagrams for all crashes that occurred at the study intersections for the five-year period from January 1, 2002 to December 31, 2006. These data were analyzed to determine crash rates for all study intersections, as shown in Table 7. The rates shown are per million entering vehicles (MEV). Figure 14 displays the crash count at the study intersections. *Appendix "F" contains the crash data, and Appendix "G" contains the collision diagrams.*



(NO SCALE)



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LEGEND

Crashes

-  Crash Count
-  Crash Count (Represents intersections identified for further study)
-  Local Streets

**CRASH COUNTS FOR STUDY INTERSECTIONS
KEIZER, OREGON**

Table 7 Study Intersections Crash Rates (January 2002 – December 2006)

Intersection	Crashes	Fatalities	Total 24 Hour Volumes*	Crash Rate per MEV**
Four-way Signalized Intersections (Average Crash Rate: 0.31)				
River Road/Lockhaven Drive	16	0	38,648	0.23
River Road/Chemawa Road	28	0	37,648	0.41
River Road/Manbrin Drive	22	0	33,641	0.36
Salem Parkway/Cherry Avenue	24	0	43,027	0.31
Verda Lane/Salem Parkway	36	0	37,367	0.53
River Road/Dearborn Avenue	26	0	36,270	0.39
Lockhaven Drive/14 th Avenue	5	0	22,230	0.12
River Road/Manzanita Street	4	0	27,925	0.08
River Road/Wheatland Road	16	0	23,365	0.38
Three-way Signalized Intersection				
River Road/Broadway Street	2	0	31,537	0.03
Unsignalized Intersections				
Verda Lane/Chemawa Road	5	0	11,840	0.23
Lockhaven Drive/Verda Lane	4	0	20,654	0.11

*16 hour counts obtained from ODOT, and factored with a multiplier of 1.10 consistent with ODOT methodology

**Crash rate per MEV = (Number of crashes)*1 million/(24 Hour Volume*365 days per year*5 years of crash data)

As shown above the crash rate at the intersection of River Road/Broadway street is very low. Based on this low rate, and the low crash frequency, no further safety analysis is recommended at this intersection. Similarly, because of the low crash frequency during the five year study period the intersections of Verda Lane/Chemawa Road, and Lockhaven Drive/Verda Lane were eliminated from further investigation.

The crash rates for four-way signalized intersections varied between 0.08 at the intersection of River Road/Manzanita Street, and 0.53 at the intersection of Verda Lane/Salem Parkway. The average rate for four-way signalized intersections was 0.31. With the large variance in these crash rates, it was difficult to identify intersections for further analysis based on crash rates alone. Therefore, the rate-quality control criteria method was used to establish a threshold in identifying intersections for a more detailed crash analysis.

Appendix "H" provides an overview of the rate-quality control criteria methodology. In summary rate-quality control criteria method compares the crash rate for each intersection to the average crash rate for other similar study intersections within the study area. A major benefit of using rate-quality control analysis is that it identifies the locations within a study area that are performing worse than peer intersections, and consequently may have room for safety improvements.

The method produces the "critical crash rate" for the intersection. Each intersection has a different critical crash rate which takes into account both facility type and traffic volumes. If the crash rate for a facility is greater than that facility's critical crash rate, then the facility has a significantly higher crash rate than would be expected given its design characteristics.

In the case of Keizer, the crash rates for the eight four-way-signalized study intersections were compared to each other to determine whether the specific intersection has a crash rate significantly worse than the would be average crash rate for other four-way-signalized study intersections.

Table 8 Study Intersections Rate-Quality Control Criteria Method Summary (January 2002 - December 2006)

Intersection	Crash Rate per MEV	Critical Crash Rate	Exceeds Critical Crash Rate?
Four-way Signalized Intersections (Average Crash Rate: 0.31)			
River Road/Lockhaven Drive	0.23	0.43	No
River Road/Chemawa Road	0.41	0.43	No
River Road/Manbrin Drive	0.36	0.44	No
Salem Parkway/Cherry Avenue	0.31	0.42	No
Verda Lane/Salem Parkway	0.53	0.43	Yes
River Road/Dearborn Avenue	0.39	0.43	No
Lockhaven Drive/14 th Avenue	0.12	0.47	No
River Road/Manzanita Street	0.08	0.45	No

Shading represents intersections exceeding the critical crash rate and have been identified for further study.

As shown in Table 8, the intersection of Verda Lane/Salem Parkway intersection was identified for further study because the calculated crash rate of 0.53 exceeded the calculated critical crash rate of 0.43.

A review of the crash type and severity data, collision diagrams, and intersection geometry was also conducted, and is summarized in Table 9. It is notable that there were no fatalities at any of the project study intersections during the five year period of crash data under review. Based on this review, the intersections of River Road/Manbrin Drive, and River Road/Dearborn Avenue were identified for further study due to the relatively high number of turning-movement collisions, and injury accidents. Additionally, the intersection of River Road/Wheatland Road was identified for further review due to the complexity of the intersection involving off-setting eastbound and westbound approaches, and the curvature of the eastbound approach in close proximity to the signal.

A further review of each of the identified four intersections is presented below.

Table 9 Intersection Crash Type and Severity

Intersection Name	No. of Crashes	Collision Type						Severity	
		Rear-End	Turning	Angle	Head-On	Ped/Bike	Fixed Object	PDO*	Injury
Four-way Signalized Intersections									
River Road/Lockhaven Drive	16	11	2	1	-	1	1	8	8
River Road/Chemawa Road	28	18	7	1		2	-	11	17
River Road/Manbrin Drive	22	6	12	3		1		9	13
Salem Parkway/Cherry Avenue	24	15	5	4		-	-	8	16
Verda Lane/Salem Parkway	36	22	9	5				18	18
River Road/Dearborn Avenue	26	7	10	6		3		5	24
Lockhaven Drive/14 th Avenue	5	2	1	1	1	-	-	2	3
River Road/Manzanita Street	4								
River Road/Wheatland Road	16	10	4	2				11	9
Three-way Signalized Intersections									
River Road/Broadway Street	2	2	-	-		-		1	1
Unsignalized Intersections									
Verda Lane/Chemawa Road	5	-	1	4	-	-	-	3	2
Lockhaven Drive/Verda Lane	4	-	3	1	-	-	-	3	1

Shading represents intersections identified for further study in the rate-quality control criteria method and based on a review of intersection crash type and severity, intersection geometry.

*PDO: Property Damage Only

River Road/Manbrin Drive

The River Road/Manbrin Drive intersection was identified for further study because of the relatively high number of turning-movement collisions, and injury accidents. A review of collision diagrams provided by ODOT revealed a high number of accidents on the conflicting southbound left turn and northbound through movements. Additional analysis and field review of intersection geometry and signal timing is warranted based on the results of this preliminary analysis.

Verda Lane/Salem Parkway

The Verda Lane/Salem Parkway intersection was identified for further study because the calculated crash rate of 0.53 exceeded the calculated critical crash rate of 0.43. A review of collision diagrams provided by ODOT revealed a high number of rear-end accidents on the southbound Salem Parkway approach.

This issue could be caused by motorists traveling at high speeds on Salem Parkway after exiting I-5 and not ready for the signal at Verda Lane/Salem Parkway. Additionally, the southbound right-turn movement is constructed as a bypass; however, there is not an established separate lane on the southbound approach to the intersection. While making the southbound right-turn movement, vehicles could suddenly stop for a pedestrian using the crosswalk or while yielding to traffic on Verda Lane, potentially causing a crash with a vehicle seeking to go through the intersection unaware of the sudden stop. Additionally, vehicles traveling northbound could be accelerating towards I-5, and not be aware of the signal at Verda Lane/Salem Parkway.

The collision diagrams also revealed two bicycle accidents that were classified as a turning movement accident and an angle accident, and not included as pedestrian/bicycle collisions in the intersection crash type and severity data. Additional analysis and field review of intersection geometry and signal timing is warranted based on the results of this preliminary analysis.

River Road/Dearborn Avenue

The River Road/Dearborn Avenue intersection was identified for further study because of the relatively high number turning-movement collisions, and injury accidents. The collision diagrams showed a variety of collision types, and no distinct patterns were found. Additional analysis and field review of intersection geometry and signal timing is warranted based on the results of this preliminary analysis.

River Road/Wheatland Road

The River Road/Wheatland Road intersection was identified for further study because of the complexity of the intersection involving off-setting eastbound and westbound approaches, and the curvature of the eastbound approach in close proximity to the signal. In addition, the collision diagrams showed a potential issue with the northbound left-turn movement, and revealed that there could also be issues with sneakers –vehicles attempting to make the northbound left-turn movement during the yellow or all-red clearance interval. The northbound left-turn will be the focus of future investigations at the River Road/Wheatland Road intersection as additional analysis and field review of intersection geometry and signal timing is warranted based on the results of this preliminary analysis.

Conclusion

The existing City of Keizer transportation system effectively manages the majority of auto travel demand throughout the city. Arterials and collector streets are the primary means of mobility for residents of Keizer, and are the focus of the existing conditions analysis. The following sections provide a brief overview of the major findings:

TRANSPORTATION MODES AND FACILITIES

Roadway Facilities

A review of current jurisdictional responsibility, functional classification and design standards was conducted as part of the existing conditions analysis, with the results included herein. No issues were identified in regards to jurisdictional responsibility or functional classification. However, a review of design standards revealed that Keizer's current local street design standards are not consistent with the *Neighborhood Street Design Guidelines*.

A review of pavement conditions is forthcoming pending data from the City of Keizer

Pedestrian and Bicycle Facilities

Much of Keizer is well covered by the sidewalk network, especially the area of the city located north of Lockhaven Drive. However, the area approximately between the Shoreline Drive to the west, River Road to the east, Sunset Avenue to the south, and Lockhaven Drive to the north however, has very few roadways with sidewalks. Several pedestrian generators, including: including the Keizer Little League Park, the Volcanoes Stadium, Claggett Creek Park, McNary High School, and River's Edge Park lack pedestrian facilities.

Based on the City's most recent inventory of the existing bicycle facilities, it was found that there are a suitable number of dedicated bicycle routes within the City of Keizer. Additionally, most of the major bicycle-trip generators are located on the bicycle network or have a local street connection to the bike network. In addition to several collectors without dedicated bike facilities, River Road south of Chemawa Road is the only arterial without dedicated bike lanes.

Public Transportation

The regional transit system is called "Cherriots," or "Salem - Keizer Transit," and provides public transportation services within the urban growth boundaries of Salem and Keizer. The Cherriots network is composed of 27 bus routes, with four routes: Routes 4, 9, 11 and 18, providing service to, from and within Keizer. An analysis revealed that Cherriots could be more attractive to choice riders, riders who have the option of taking their car or public transit, if the service frequency was improved. However, Cherriots does provide good service for captive riders, riders who lack an acceptable alternative to transit by providing good hours of service (6:00 a.m. to 10:00 p.m.).

Air, Water, Freight and Pipeline

Air, freight, rail, water, and pipeline transportation was also reviewed, with no issues identified. While no airport currently exists in Keizer, commercial air service is available from the nearby Salem Municipal Airport. Transportation is provided on the Willamette River via the Wheatland Ferry, located approximately four miles north of Keizer on Matheny Road, and provides passenger service across the Willamette River connecting with Wheatland Road in Yamhill

County. A review of freight service in Keizer showed that Lockhaven Drive and Salem Parkway are the primary freight corridors in the City of Keizer. Lastly, a review of pipelines in Keizer revealed two feeder pipelines managed by Northwest Natural Gas.

EXISTING TRAFFIC VOLUMES AND TRAFFIC OPERATIONS

A review of existing traffic volumes and traffic operations revealed that the signalized intersection of River Road/Lockhaven Drive currently operates at LOS E, with a volume-to-capacity (v/c) ratio of 0.96 during the weekday p.m. peak hour. All movements at the River Road/Lockhaven Drive intersection operate under capacity, but the southbound left-turn movement and the shared eastbound through/left movement operate at a LOS F.

Additionally, the unsignalized Lockhaven Drive/Verda Lane intersection operates at LOS F due to the critical shared northbound left/right movement. The shared northbound left/right movement on Verda Lane is currently under capacity with a v/c ratio of 0.46, and it is likely that adequate gaps exist in traffic on Lockhaven Drive due to the signalized intersections of River Road/Lockhaven Drive, and 14th Avenue/Lockhaven Drive surrounding the intersection.

SAFETY

The rate quality control criteria method was used to evaluate safety data in Keizer, and identified one intersection for further study: Verda Lane/Salem Parkway, and. In addition, a review of crash type and severity data, and intersection geometry was also conducted. Based on this review, two additional intersections were identified for further study: River Road/Manbrin Drive, River Road/Dearborn Avenue, and River Road/Wheatland Road. There were no fatalities during the study period at any of the study intersections.

Next Steps

Following the Technical Advisory Committee's (TAC) review and discussion of this memo, an open house will be scheduled to hear viewpoints from the public and allow for community response and comments. Using what was learned in the open house, this memo will be updated, and the issues identified here will be considered in combination with the results of the future conditions analysis.

References

1. City of Keizer Transportation System Plan, September 2000, Amended May 2004
2. ODOT Sustainability Program
<http://www.oregon.gov/ODOT/SUS/accessibility_mobility.shtml>
3. Neighborhood Street Design Guidelines

4. Specialized Transportation Plan for Polk and Marion Counties
<www.cherriots.org/Documents/5 Year Coordination Plan.pdf>
5. Transit Capacity and Quality of Service Manual – 2nd Edition
6. 2000 Highway Capacity Manual

Appendix "A"
Neighborhood Street
Design Guidelines



NEIGHBORHOOD STREET DESIGN GUIDELINES

*An Oregon Guide
for Reducing Street Widths*

**A Consensus Agreement
by the Stakeholder Design Team**

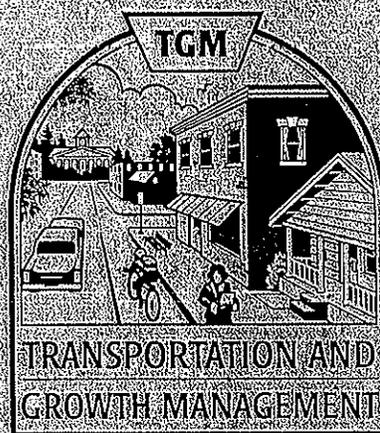
**November
2000**

**Prepared by the
Neighborhood Streets
Project Stakeholders**

*This guidebook is dedicated to the memory of
Joy Schetter*

*who passed away before she could see the
remarkable success of this project.*

*Joy's leadership, hard work, calm manner, and
ability to work with all of the stakeholders
were key factors in that success.*



*Funding for this project was provided from
two State of Oregon programs:*

*the Public Policy Dispute Resolution Program
and
the Transportation and Growth Management
(TGM) Program.*

*TGM is a joint program between the
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Includes minor clarifications to the sections on residential fire sprinklers (pages 9 and 16.)

JOHN A. KITZHABER, M.D.
GOVERNOR



February 16, 2001

To the Citizens of Oregon:

I am pleased to present to Oregon's communities a new publication called *Neighborhood Street Design Guidelines*. This handbook is a valuable tool for local governments. In workbook style, it recommends a process for development of street standards, provides important information to help communities consider and decide on the standards, and includes model designs as a starting point.

Street design, in particular street width, has been an important issue in Oregon for the past decade. Oregon's award-winning Transportation Planning Rule, adopted in 1991, requires local governments to minimize street width considering the operational needs of the streets. Also, citizens and planners in many Oregon communities, as well as towns across the country, have advocated for narrower streets as part of a larger movement to build more livable neighborhoods.

The desire to reduce the standards for street widths raises concerns about large vehicle access, especially emergency service providers who need to reach their destinations fast. The issue has resulted in heated debate in some communities and among state agencies and statewide organizations.

This document is the result of hard work and commitment of individuals who joined in a collaborative process to reconcile the multiple uses of our neighborhood streets. Many thanks to the Neighborhood Streets Project Stakeholders, Design Team members, and reviewers for the time and expertise they contributed to this effort.

John A. Kitzhaber, M.D.
Governor

PROJECT STAKEHOLDERS

These Guidelines have been endorsed by...

- Office of the State Fire Marshal
- Oregon Fire Chiefs Assoc.
- Oregon Fire Marshal's Assoc.
- Oregon Chiefs of Police Assoc.
- Oregon Refuse and Recycling Assoc.
- Oregon Building Industry Assoc.
- Oregon Chapter of the American Planning Assoc.
- Oregon Chapter of the American Public Works Assoc.
- Assoc. of Oregon City Planning Directors
- Livable Oregon, Inc.
- 1000 Friends of Oregon
- Oregon Department of Land Conservation & Development
- Oregon Department of Transportation
- Metro also supports the guidelines and has adopted a specific set of guidelines for the Portland metropolitan region.

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The Design Team was responsible for the overall collaborative process with assistance from a facilitator and DLCD staff. The Design Team vested themselves with responsibility for negotiating the issues and guiding the development of this agreement.

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Ken Johnson (for Michael Sherman, Oregon Fire Chiefs Association)
Debbie Youmans (Oregon Chiefs of Police Association)

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- Cameron Gloss (City of Klamath Falls)
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*Many thanks to the
Neighborhood Streets Project Stakeholders,
Design Team Members, and the
Community of Reviewers
for the time and expertise
they contributed to this effort*

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I. Introduction

The standards for the design of local streets, in particular the width of streets, has been one of the most contentious issues in local jurisdictions in Oregon for the past decade. The disagreements have also been fought at the state level among state agencies and advisory, advocacy, and professional groups that have sought to influence decisions made at the local level. Previous efforts of these groups to provide guidance have failed because of lack of consensus.

This document is the result of the hard work of a group of diverse stakeholders that finally developed that consensus. *Neighborhood Street Design Guidelines* was developed to help local governments consider and select neighborhood street standards appropriate for their communities. As the title attests, the handbook provides guidelines and is not prescriptive. The authors hope that the consideration of the guidelines and examples will stimulate creative ideas for street designs in local communities.

This guidebook explains the issues surrounding the width of neighborhood streets with respect to livability and access for emergency and other large vehicles. It recommends a community process for developing neighborhood street width standards, a checklist of factors that should be addressed in that process, street cross-sections, and a list of resources that provide additional information. The guidelines are intended for *local* jurisdiction streets that carry limited traffic, not collectors or arterials. They are not intended, nor are they to be used on state highways.

II. The Issues

Why Narrow Streets?

Streets are key determinants of neighborhood livability. They provide access to homes and neighborhood destinations for pedestrians and a variety of vehicle types, from bicycles and passenger cars to moving vans and fire apparatus. They provide a place for human interaction: a place where children play, neighbors meet, and residents go for walks and bicycle rides. The design of residential streets, together with the amount and speed of traffic they carry, contributes significantly to a sense of community, neighborhood feeling, and perceptions of safety and comfort. The fact that these may be intangible values makes them no less real, and this is often reflected in property values.

The width of streets also affects other aspects of livability. Narrow streets are less costly to develop and maintain and they present less impervious surface, reducing runoff and water quality problems.

The topic of automobile speeds on neighborhood streets probably tops the list of issues. Where streets are wide and traffic moves fast, cities often get requests from citizens to install traffic calming devices, such as speed humps. However, these can slow response times of emergency service vehicles creating the same, or worse, emergency response concerns than narrow streets.

Oregon's Land Conservation and Development Commission recognized the values associated with narrow street widths when it adopted the Transportation Planning Rule. The rule requires local governments to establish standards for local streets and accessways that minimize pavement width and right-of-way. The rule requires that the standards provide for the operational needs of streets, including pedestrian and bicycle circulation and emergency vehicle access.

Why Are Emergency Service Providers Concerned?

Street width affects the ability of emergency service vehicles to quickly reach a fire or medical emergency. Emergency service providers and residents alike have an expectation that neighborhood streets provide adequate space for emergency vehicles to promptly reach their destination and for firefighters to efficiently set up and use their equipment.

Fire equipment is large and local fire departments do not have full discretion to simply "downsize" their vehicles. Efforts by some departments to do this have generally not been successful, since these smaller vehicles did not carry adequate supplies for many typical emergency events.

The size of fire apparatus is driven, in part, by federal Occupational Health and Safety Administration (OSHA) requirements and local service needs. The regulations require that fire trucks carry considerable equipment and that firefighters ride completely enclosed in the vehicle. In addition, to save money, fire departments buy multi-purpose vehicles that can respond to an emergency like a heart attack or a traffic accident, as well as a fire. These vehicles typically provide the

first response to an emergency. An ambulance will then provide transport to a hospital, if needed. To accommodate the need to move the vehicles and access equipment on them quickly, the Uniform Fire Code calls for a 20-foot wide clear passage.

The risk of liability also raises concerns about response time and the amount of equipment carried on trucks. A successful lawsuit in West Linn, Oregon found that a response time of eight minutes was inadequate. The National Fire Protection Association, which is the national standard-setting body for the fire service, is proposing new rules that would require a maximum four-minute response time for initial crews and eight-minute response for full crews and equipment for 90% of calls. Fire departments have also been sued for not having the proper equipment at the scene of an accident. This puts pressure on departments to load all possible equipment onto a vehicle and increases the need to use large vehicles.

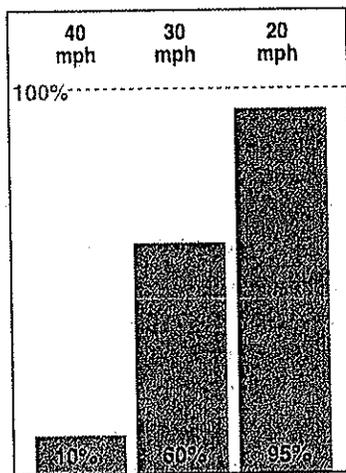
III. Background

Residential streets are complex places that serve multiple and, at times, competing needs. Residents expect a place that is relatively quiet, that connects rather than divides their neighborhood, where they can walk along and cross the street relatively easily and safely, and where vehicles move slowly. Other street users, including emergency service providers, solid waste collectors, and delivery trucks, expect a place that they can safely and efficiently access and maneuver to perform their jobs. Clearly, balancing the needs of these different users is not an easy task.

Oregon's cities reflect a variety of residential street types. In many older and historic neighborhoods built between 1900 and 1940, residential streets typically vary in width in relation to the length and function of the street. In many cases, a typical residential street may be 24 feet to 28 feet in width with parking on both sides. However, it is not uncommon to find streets ranging from 20 feet to 32 feet in width within the same neighborhood. Newer subdivisions and neighborhood streets built since 1950 tend to reflect a more uniform design, with residential streets typically 32 feet to 36 feet in width with parking on both sides and little or no variation within a neighborhood.

Designs For Livability. Over the last decade, citizens, planners, and public officials throughout the United States have expressed increased interest in development of compact, pedestrian-friendly neighborhoods. The design of neighborhood streets is a key component in this effort. Nationally, the appropriate width and design of neighborhood streets has been the subject of numerous books and articles targeted not just to the planning and development community, but also the general population. In May 1995, *Newsweek* magazine featured an article on neotraditional planning that listed reducing the width of neighborhood streets as one of the "top 15 ways to fix the suburbs." In addition, developments such as Kentlands in Maryland and Celebration in Florida have gained fame by incorporating many of the features of traditional, walkable neighborhoods and towns, including narrow neighborhood streets.

Chances of a Pedestrian Surviving a Traffic Collision



Survival Rates
Graphic adapted from "Best Management Practices," Reid Ewing, 1996; data from "Traffic Management and Road Safety," Durkin & Pheby, 1992.

Safe and Livable. There is growing appreciation for the relationship between street width, vehicle speed, the number of crashes, and resulting fatalities. Deaths and injuries to pedestrians increase significantly as the speed of motor vehicles goes up. In 1999, planner Peter Swift studied approximately 20,000 police accident reports in Longmont, Colorado to determine which of 13 physical characteristics at each accident location (e.g., width, curvature, sidewalk type, etc.) accounts for the crash. The results are not entirely surprising: the highest correlation was between collisions and the width of the street. A typical 36-foot wide residential street has 1.21 collisions/mile/year as opposed to 0.32 for a 24 foot wide street. The safest streets were narrow, slow, 24-foot wide streets.

Award-Winning Neighborhoods. In Oregon, citizens, non-profit organizations, transportation advocates, and state agencies interested in the livability of our communities have advocated reducing the width of neighborhood streets. Several new developments that include narrow neighborhood streets such as Fairview Village in Fairview, West Bend Village in Bend, and Orenco Station in Hillsboro have received *Governor's Livability Awards* (See Appendix A for contact

information). Although cited as models of livable communities, the narrow street widths included in these developments are not allowed in many of Oregon's cities, often because of concerns about emergency service access.

Emergency Response. The movement to reduce street standard widths raised concerns with emergency service providers. Thus, the most controversial issue facing Oregon's fire departments in the past decade has been street width. Fire departments must move large trucks, on average, 10 feet wide mirror-to-mirror.

Response times can be slowed depending upon the amount of on-street parking and traffic encountered. Narrow streets lined with parked cars may not provide adequate space for firefighters to access and use their equipment once they have reached the scene of an emergency. In addition, emergency vehicle access can be completely blocked on streets that provide less than 10 feet of clear travel width.

Authority to Establish Standards. Prior to 1997, there had been some confusion over who had the authority to establish street standards. Oregon's land use laws grant local governments the authority to establish local subdivision standards, which include street widths (ORS 92.044). However, the *Uniform Fire Code*, which was adopted by the State Fire Marshal and is used by many local governments to establish standards for the prevention of and protection from fires, includes standards which affect the width and design of streets. The *Uniform Fire Code* is published by the Western Fire Chiefs and the International Congress of Building Officials as partners.

This question of authority was clarified in 1997 when ORS 92.044 was amended to state that standards for the width of streets established by local governments shall "*supersede and prevail over any specifications and standards for roads and streets set forth in a uniform fire code adopted by the State Fire Marshal, a municipal fire department or a county firefighting agency.*" ORS 92.044 was also amended to establish a consultation requirement for the local governments to "*consider the needs of the fire department or fire-fighting agency when adopting the final specifications and standards.*"

IV. Collaborative Process

This project was undertaken to:

“Develop consensus and endorsement by stakeholders on a set of flexible guidelines for neighborhood street designs for new developments that result in reduced street widths.”

The collaborative process relied on two groups of stakeholders. A larger group was comprised of a broad cross-section of interest groups and numbered about thirty people from around the state. A core team of nine members, a subset of the larger group, was convened to guide the collaborative problem-solving process, working in conjunction with the consultant and staff. This “Design Team” consisted of representatives from these groups: special districts, fire service, state fire marshal, non-profit advocacy, traffic engineering, builder/developer, city planner, public works, and a representative from the Department of Land Conservation and Development.

The Design Team’s responsibilities were to recommend participants for the larger collaborative working group, determine the priority interests, recommend a statewide endorsement and implementation process, and provide input on technical presentations required. At the Design Team’s first meeting, they decided to assign themselves the task of creating the draft street design guidelines. They would take their products to the larger group for input, recommendations, and eventual endorsement. Consensus would be sought within the Design Team before going to the large group. Likewise, consensus at the large group would be fundamental to achieving the project’s goals.

The large group was instrumental in providing actual scenarios of community experiences to the Design Team. They also helped enlarge the scope of affected parties and corresponding issues by including other service providers that use large vehicles, such as school busses and solid waste haulers. Members of the large group provided valuable reference materials to the Design Team. They provided substance that had been over-looked on more than one occasion. Large group members were pleased to know that a core team of well-respected stakeholders was representing their interests. The Design Team engaged the large group at significant junctures in its work.

V. A Community Process for Adopting Standards

Unique issues will arise in each community, whether related to hills, higher density neighborhoods, or existing street patterns. Close collaboration with fire and emergency service providers, public works agencies, refuse haulers, and other neighborhood street users must be maintained throughout the process. This will ensure that the standards developed to meet the general goals of the community will also meet the specific needs of different stakeholder groups.

Through broad-based involvement, educational efforts, and sensitive interaction with stakeholders, a community can adopt new street standards that will meet the transportation needs of the citizens, while providing and encouraging a very livable residential environment.

The following steps reflect a realistic process development and local government adoption of standards for narrow neighborhood streets.

Steps for Local Government Consideration and Adoption of Neighborhood Street Standards

1. Determine stakeholders.
2. Inform/Educate: What is the value of narrow residential street standards?
3. Ensure dialogue among stakeholders.
4. Identify specific issues, such as seasonal needs and natural features.
5. Prepare draft standards.
6. Review draft with stakeholders/officials/public.
7. Revise, conduct public review, and adopt standards.
8. Implement and ensure periodic evaluation.

Determine stakeholders. There are many benefits to a community adopting narrow street standards. Many stakeholders share an interest in residential transportation issues. These stakeholders must be included from the outset of any new street standard adoption process.

Inform and Educate. A community or jurisdiction considering the adoption of narrow residential street standards must conduct an open and information-intensive process. Narrow streets have many advantages for a community, including slower traffic speeds and increased neighborhood livability. But there are some access trade-offs. A strong educational component involving city council members, planning commissioners, community groups, developers and emergency service providers must be conducted at the beginning of the process. Agreement about the value of narrow streets, i.e., slow speeds, safer pedestrian environments, and more livable neighborhoods must be understood and agreed to prior to beginning to develop specific standards. There are many educational resources available including printed materials, videos, and professional speakers willing to share their experience.

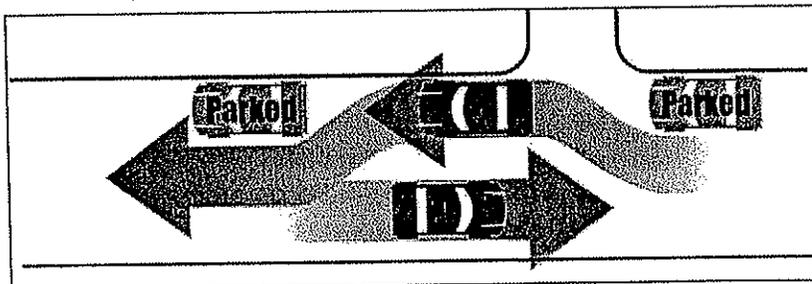
Develop standards that reflect local concerns. Once a jurisdiction has determined that more narrow street standards will be beneficial, the development of specific standards, unique to the community where they will be implemented, is the next step. Many cities and counties have adopted narrow street standards, and their efforts can provide a model for the initial drafts. Review and input from stakeholders, the public, and community officials will help identify local issues and provide the opportunity to tailor standards to local needs.

VI. Checklist for Neighborhood Streets

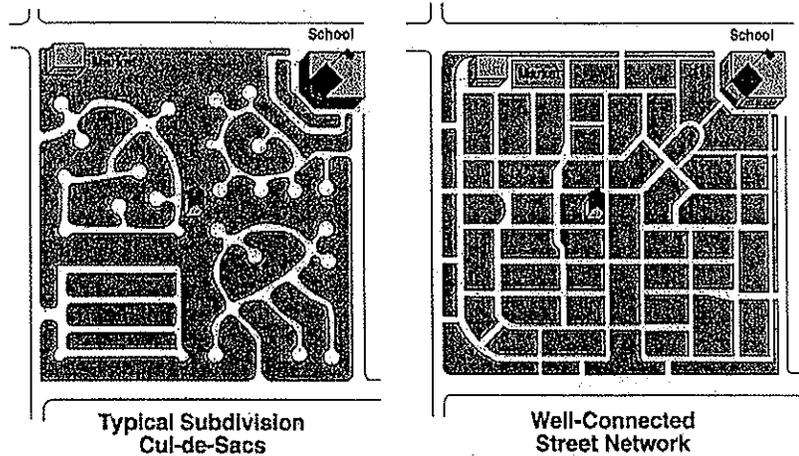
Key Factors

The checklist is based on five key factors listed below:

- ✓ *Queuing.* Designing streets so that moving cars must occasionally yield between parked cars before moving forward, as shown below, permits development of narrow streets, encourages vehicles to move slower, and allows for periodic areas where a 20-foot wide clear area is available for parking of fire apparatus.



✓ *Connected Street Networks.* Connected street networks provide multiple ways for emergency response vehicles to access a particular location and multiple evacuation routes. In addition, a connected street system encourages slow, cautious driving since drivers encounter cross traffic at frequent intervals.



✓ *Adequate Parking.* When parking opportunities are inadequate, people are more likely to park illegally in locations that may block access by emergency service vehicles. Communities need to review their parking standards when they consider adopting narrow street standards to make sure that adequate on-street and off-street parking opportunities will be available.

✓ *Parking Enforcement.* The guidelines are dependent on strict enforcement of parking restrictions. Communities must assure an on-going commitment to timely and effective parking enforcement by an appropriate agency. In the absence of such a commitment, these narrow street standards should not be adopted.

✓ *Sprinklers Not Required.* The checklist and model cross-sections provided in this guidebook do not depend upon having fire sprinklers installed in residences. More flexibility in street design may be possible when sprinklers are provided. However, narrow streets still need to accommodate fire apparatus that respond to non-fire, medical emergencies. Other types of vehicles (such as moving vans, public works machinery, and garbage/recycling trucks) also need to be able to serve the neighborhood.

Users of the Street

Notes



Use of Street

Recognize the needs of all of the "everyday" users of the street, including autos, pedestrians, and bicycles. Street standards typically provide for easy maneuverability by autos. It is very important that neighborhood streets also provide a comfortable and safe environment for pedestrians. Consideration should be given to pedestrians both moving along and crossing the street.



Fire/Emergency Response and Large Service Vehicle Access

Provide access to the street for Fire/Emergency Response and large service vehicles to meet their main objectives. Consider the maneuvering needs of all large vehicles such as fire/emergency response, refuse/recycling trucks, school buses, city buses, delivery vehicles, and moving trucks. Fire trucks are generally 10 feet wide from mirror to mirror and room adjacent to a truck is necessary to access equipment from the truck. Recognize that for some service providers, the federal government has requirements that affect vehicle size such as fire trucks, school buses, and ambulances.



Utility Access

Provide utility access locations regardless of whether utilities are in the street, the right-of-way adjacent to the street, utility easements, or some combination thereof. Consider utility maintenance requirements.

Street Design



Traffic Volume and Type

Relate street design to the traffic that will actually use the street and the expected demand for on-street parking. Generally, on streets that carry less than 1,000 vehicles per day, a clear lane width of 12 to 14 feet is adequate for two-way traffic. If there are frequent pull-outs to allow vehicles to pass. Where there is on-street parking, driveways typically provide gaps in parking adequate to serve as pull-outs. If there is a high percentage of trucks or buses, wider streets or longer pull-outs may be needed for street design, consider both the current traffic volume and the projected long-term traffic volume.

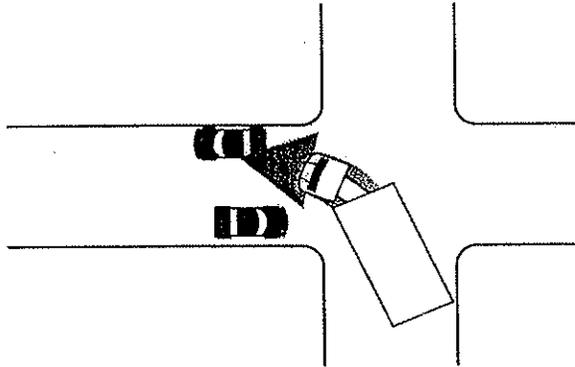


Provision for Parking

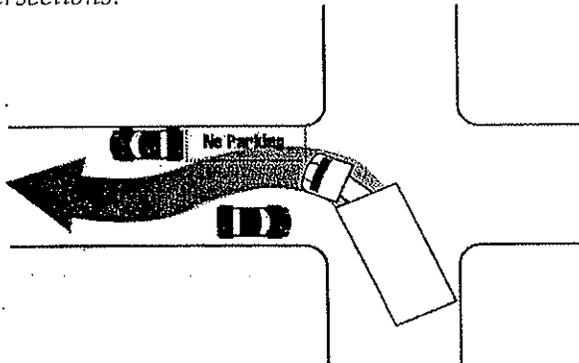
Make sure that adequate parking is provided so that on-street parking is not the typical primary source of parking. The objective is to have space between parked cars so that there are queuing opportunities. Also, parking near intersections on narrow streets should not be permitted because it can interfere with the turning movements of large vehicles (see illustration at the end of the checklist). This can be accomplished by a lack of demand for on-street parking or by design. The design option requires place-

No Parking At Intersections

On narrow streets, parked cars near the intersection can interfere with the turning movements of large vehicles.



The solution is to prohibit on-street parking within 20 - 50 feet of intersections.



VII. Model Cross-Sections

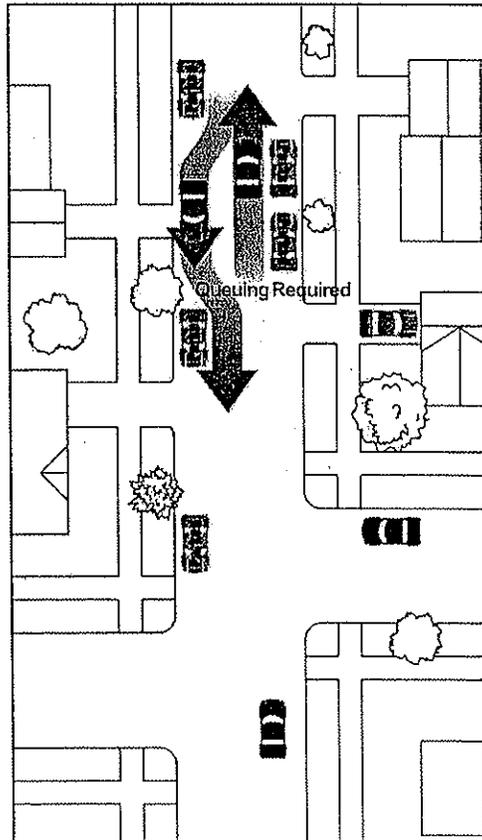
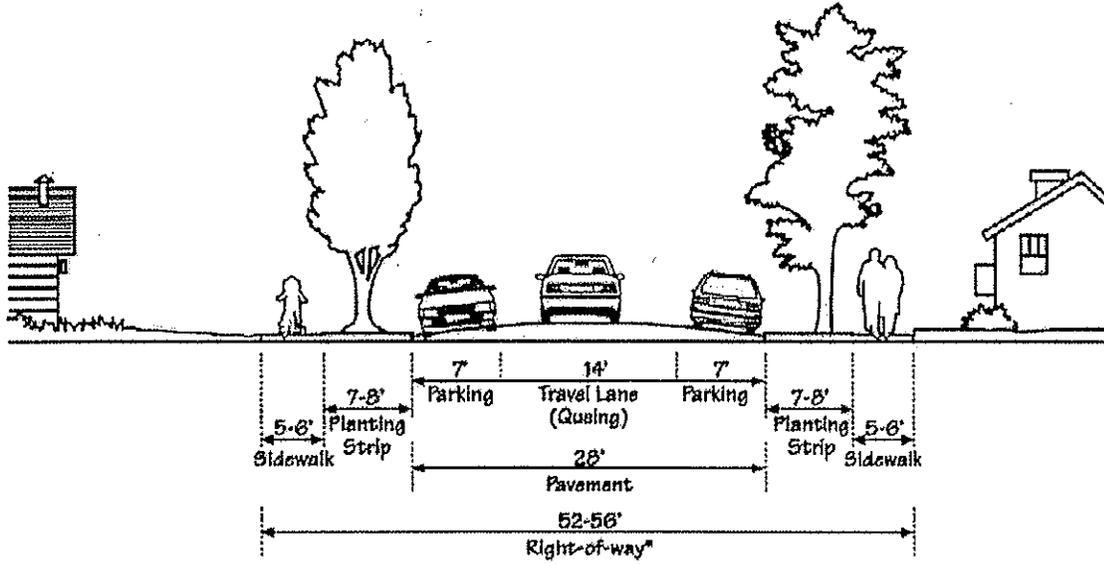
The following three scenarios are presented as "model standards." However, *they do not represent the full range of possible solutions.* Communities are encouraged to use these as a starting point; innovative solutions can be designed for local situations. Here are a few key points to keep in mind:

- ✓ Streets wider than 28 feet are NOT, by definition, a "narrow street."
- ✓ Two-way streets under 20 feet are NOT recommended. If, in a special circumstance, a community allows a street less than 20 feet, safety measures such as residential sprinklers*, one-way street designations, and block lengths less than 300 feet may be needed.

* Fire sprinklers in one and two family structures must be approved by the local building department in accordance with standards adopted by the Building Codes Division under ORS 455.610.

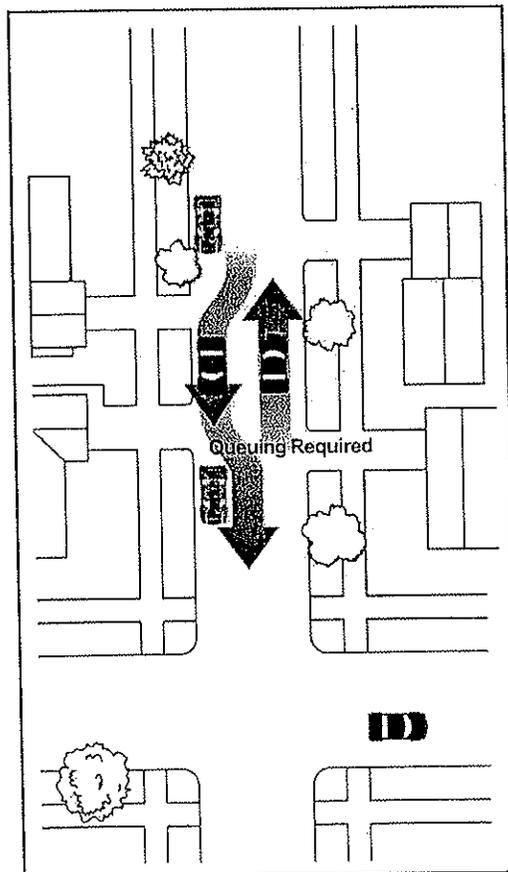
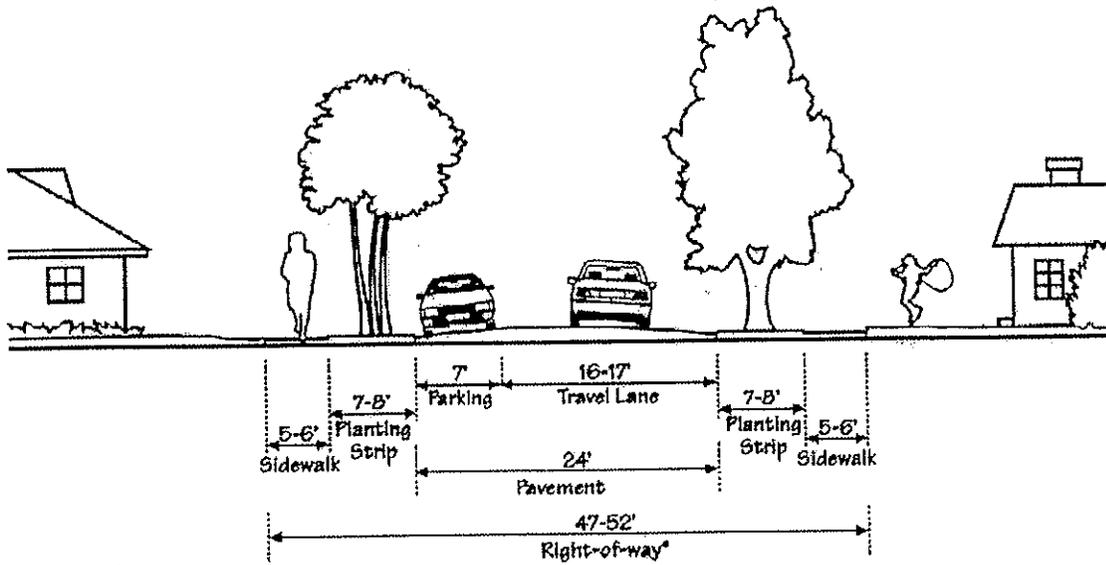
Scenario 1

28 Ft. Streets Parking on both sides



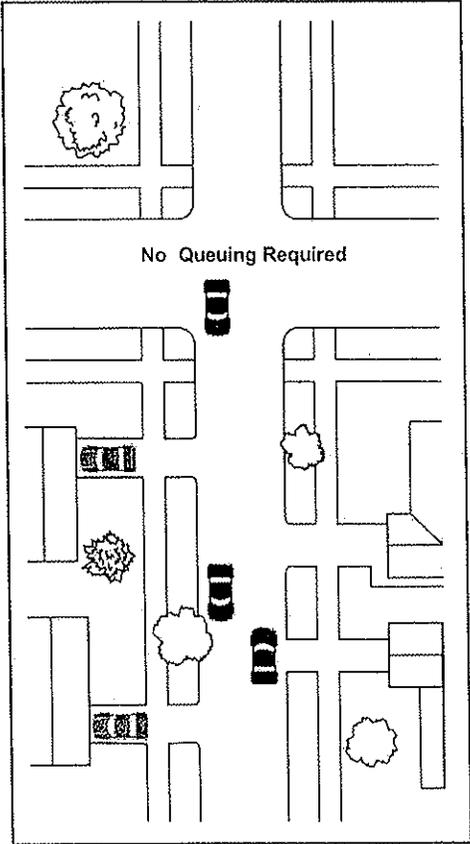
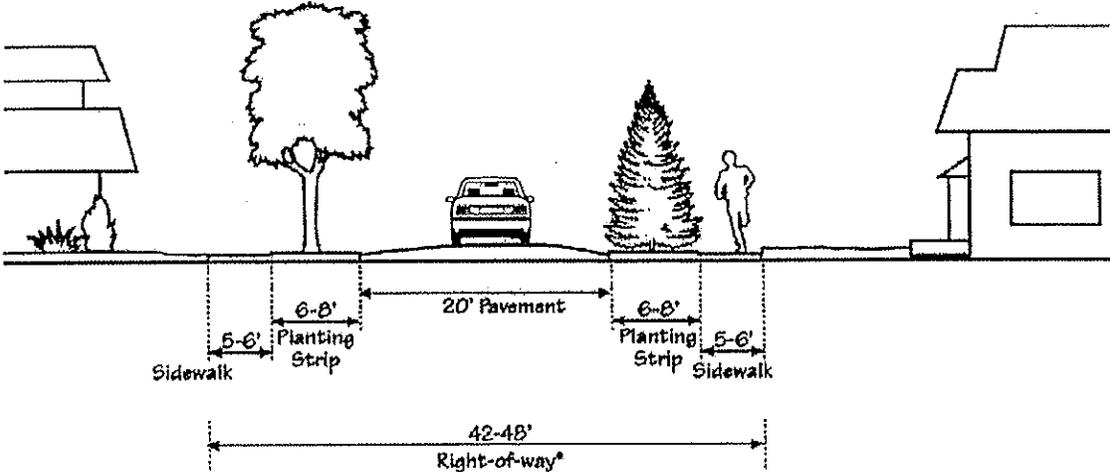
Scenario 2

24 Ft. Streets Parking on one side only



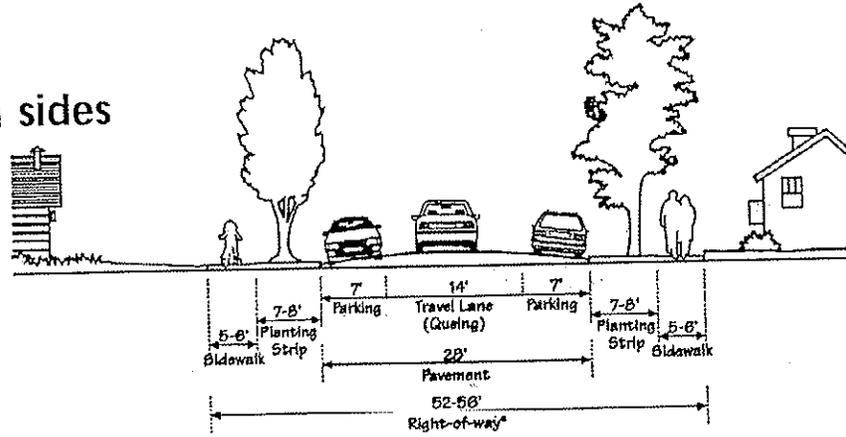
Scenario 3

20 Ft. Streets
No parking allowed

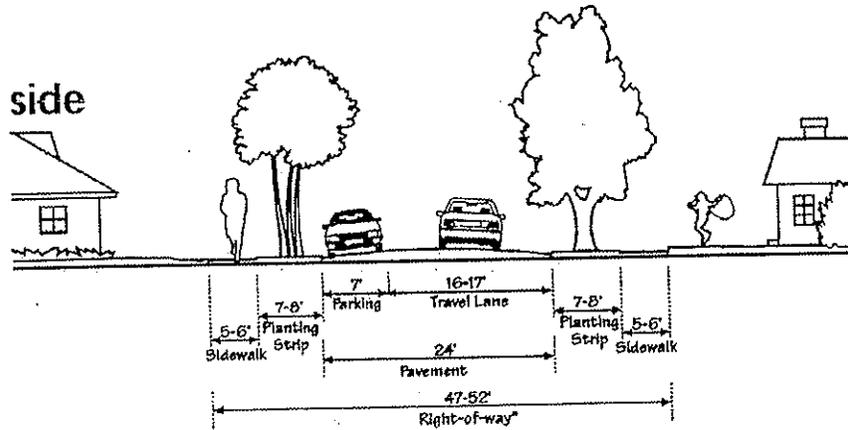


Summary of Three Potential Scenarios

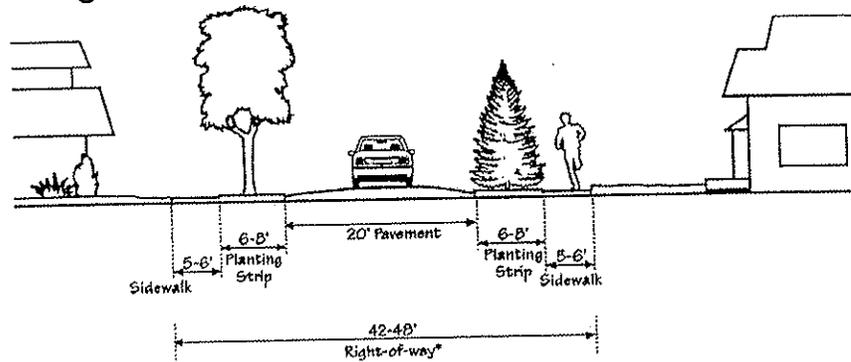
28 Ft Street Parking on both sides



24 Ft Street Parking on one side



20 Ft Street No on-street parking allowed



Appendix A -
References and
Resources

Annotated References

AASHTO - The Policy on Geometric Design of Highways and Streets, also known as the "Green Book," is published by the American Association of State Highway and Transportation Officials (AASHTO) and is considered to be the principle authority on street geometrics. Narrow streets are sometimes cited as being contrary to traffic engineering practices because they may hinder the free-flowing movement of vehicular traffic. However, the *Green Book* supports the notion of using narrow residential streets. For example, the *Green Book* states: "On residential streets in areas where the primary function is to provide land service and foster a safe and pleasant environment, at least one unobstructed moving lane must be ensured even where parking occurs on both sides. The level of user inconvenience occasioned by the lack of two moving lanes is remarkably low in areas where single-family units prevail...In many residential areas a 26-ft.-wide roadway is typical. This curb-face-to-curb-face width provides for a 12-ft. center travel lane and two 7-ft. parking lanes. Opposing conflicting traffic will yield and pause on the parking lane area until there is sufficient width to pass."

Residential Streets - Residential Streets is published jointly by the American Society of Civil Engineers, the National Association of Homebuilders, and the Urban Land Institute. This book was published to encourage a flexible approach to designing residential streets to respond to the street's function in the transportation system as well as part of the community's living environment. *Residential Streets* is a hierarchy of residential streets, including 22'-24' access streets with parking on both sides, 26' subcollector street with parking on both sides, and a 28' subcollector with parking on both sides where "on-street parking lines both sides of the street continuously."

ITE - The Institute of Transportation Engineers (ITE) has published several documents that refer to the recommended width of neighborhood streets. The 1993 publication *Guidelines for Residential Subdivision Street Design* states that a 28-foot curbed street with parking on both sides is an acceptable standard "based upon the assumption that the community has required adequate off-street parking at each dwelling unit." In addition, the 1994 publication *Traffic Engineering for Neo-Traditional Neighborhood Design, (NTND)*, states that the recommended width of a basic NTND residential street "may be as narrow as 28 to 30 feet."

Street Design Guidelines for Healthy Neighborhoods - Published by the Local Government Commission's Center for Livable Communities, Street Design Guidelines for Healthy Neighborhoods was developed by a multi-disciplinary team based upon field visits to over 80 traditional and 16 neo-traditional neighborhoods. When combined with other features of traditional neighborhoods, the guidelines recommend neighborhood streets ranging from 16-26 feet in width. The team found 26-foot-wide roadways to be the most desirable, but also "measured numerous 24-foot and even 22-foot wide roadways, which had parking on both sides of the street and allowed delivery, sanitation and fire trucks to pass through unobstructed."

Oregon Resources

Fairview Village. Holt & Haugh, Inc., phone: 503-222-5522, fax: 503-222-6649, www.fairviewvillage.com

West Bend Village. Tennant Developments, 516 SW 13th St., Suite A, Bend, Oregon 97702, phone: 541-388-0086

Orenco Station. Mike Mehaffy, Pac Trust, 15350 SW Sequoia Pkwy, Suite 300, Portland, Oregon 97224, 503-624-6300, www.orencostation.com

Street Standard Modification Process. The City of Beaverton has a modification process similar to an administrative variance procedure. If you would like information on this process contact: Margaret Middleton, City of Beaverton, Engineering Department, P.O. Box 4755, Beaverton, Oregon 97076-4755, 503-526-2424, mmiddleton@ci.beaverton.or.us

Additional References

Street Design Guidelines for Healthy Neighborhoods. Dan Burden with Michael Wallwork, P.E., Ken Sides, P.E., and Harrison Bright Rue for Local Government Commission Center for Livable Communities, 1999.

A Policy on Geometric Design of Highways and Streets. American Association of State Highway and Transportation Officials (ASSHTO), 1994.

Guidelines for Residential Subdivision Street Design. Institute of Transportation Engineers (ITE), 1993.

Traffic Engineering for Neo-Traditional Neighborhood Design. Institute of Transportation Engineers (ITE), 1994.

Residential Streets. American Society of Civil Engineers (ASCE), National Association of Home Builders (NAHB), Urban Land Institute (ULI), 1990.

A Handbook for Planning and Designing Streets. City of Ashland, 1999.

Eugene Local Street Plan. City of Eugene, 1996.

Skinny Streets, Better Streets for Livable Communities. Livable Oregon, Inc. and the Transportation and Growth Management Program, 1996.

The Technique of Town Planning, Operating System of the New Urbanism. Duany Plater-Zyberk & Company, 1997.

Narrow Streets Database. A Congress for the New Urbanism. Alan B. Cohen AIA, CNU, Updated 1998.

Washington County Local Street Standards. Revision Project No. 2455. McKeever/Morris, Inc., Kittleson & Associates, Inc. and Kurahashi & Associates, Inc., 1995.

Washington County Uniform Road Improvement Design Standards. Washington County Department of Land Use and Transportation, 1998.

Livable Neighborhoods Community Design Code. A Western Australian Government Sustainable Cities Initiative. Ministry for Planning.

Woonerf. Royal Dutch Touring Club, 1980.

Creating Livable Streets: Street Design Guidelines for 2040. Prepared by Fehr & Peers Associates, Inc. Calthorpe Associates, Kurahashi & Associates, Julia Lundy & Associates for Metro, 1997.

Model Development Code & User's Guide for Small Cities. Transportation and Growth Management Program by Otak, 1999.

APA Recommendations for Pedestrians, Bicycle and Transit Friendly Development Ordinances. TPR Working Group Oregon Chapter APA, 1993.

Residential Street Typology and Injury Accident Frequency. Swift & Associates, Longmont, CO, Peter Swift, Swift and Associates, Longmont, CO., 1998.

Appendix B

Oregon Community Street Widths

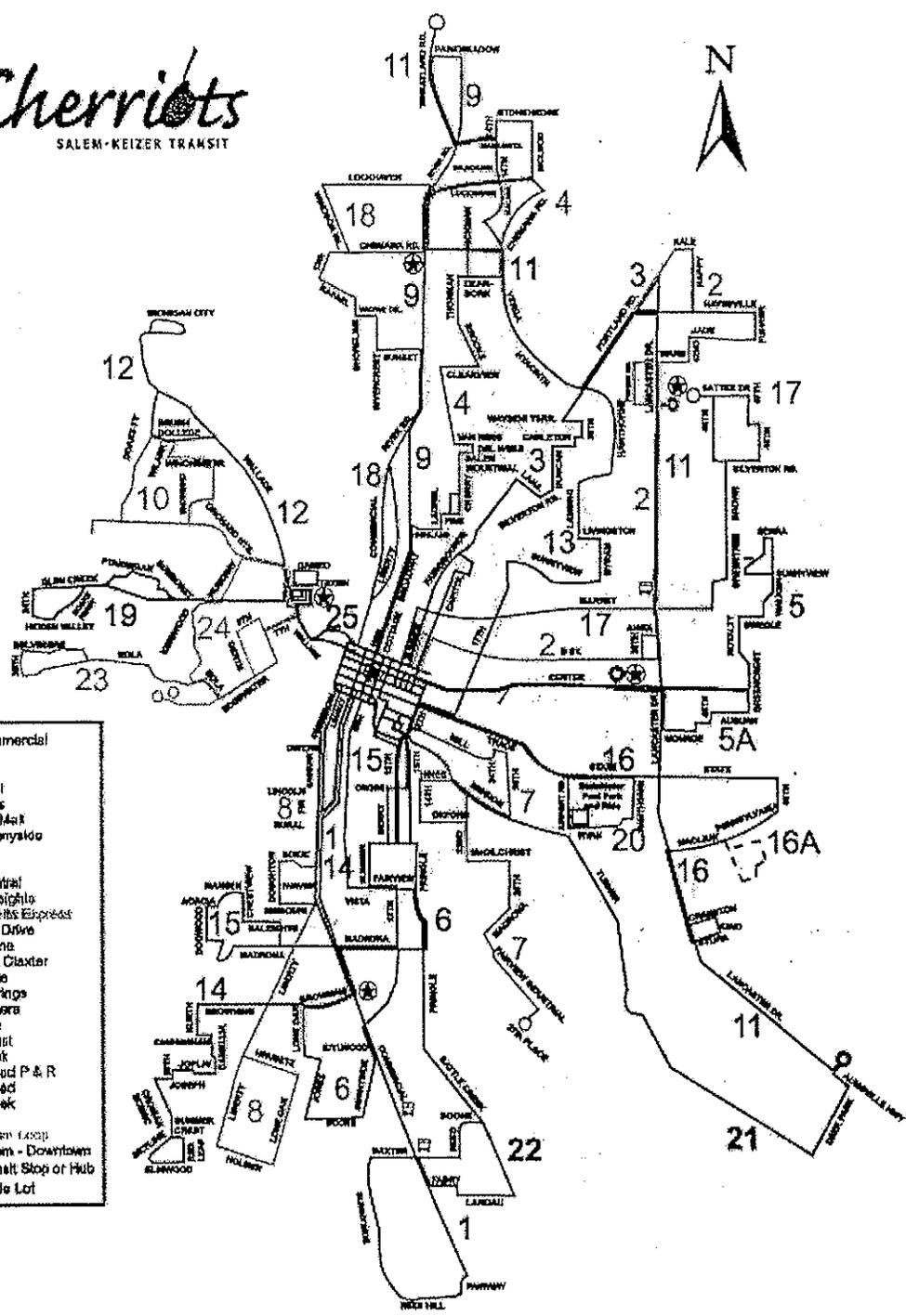
City/County	No Parking	Parking One Side	Parking Both Sides	Contact Information
Ashland		22'	25'-28'	Maria Harris, Associate Planner, 541-552-2045
Albany		28'		Rich Catlin, Senior Planner, Albany Community Development, 541-917-7564
Beaverton	20'	25.5' "infill option," with rolled curb on other	28'	Margaret Middleton, Engineering Department, 503-526-2424
Brookings			30'	John Bischoff, Planning Director, 541-469-2163,x237
Clackamas County			28'	Joe Marek, County Engineer, 503-650-3452
Coburg			28'	Harriet Wagner, City Planner, 541-682-7858
Corvallis			28'	Kelly Schlesener, Planning Manager - Community Development, 541-766-6908
Eugene		24'	28'	Allen Lowe, Eugene Planning, 541-682-5113
Forest Grove			26'	Jon Holan, Community Dev. Director, 503-992-3224
Gresham			26'	Brian Shetterly, Long Range Planner, 503-618-2529; Ronald Papsdorf, Lead Transportation Planner, 503-618-2806
Happy Valley			26'	Jim Crumley, Planning Director, 503-760-3325
Lincoln City			28'	Richard Townsend, Planning Director 541-996-2153
McMinnville			26'	Doug Montgomery, Planning Director, 503-434-7311
Milton-Freewater		28'		Gina Hartzheim, City Planner, 503-938-5531
Portland		20'	26'	Steve Dotterer, Portland Department of Transportation, 503-823-7731
Redmond			28'	Bob Quitmeier, Community Development Director, 541-923-7716
Seaside		20'	26'	Kevin Cupples, Planning Director, 503-738-7100
Sherwood			28'	John Morgan, City Manager, 503-625-5522
Washington County		24'	28'	Tom Tushner, Principal Engineer, 503-846-7920
Wilsonville		28'		Stephan Lashbrook, Planning Director, 503-682-1011.

Source: February 2000, Livable Oregon, Inc.

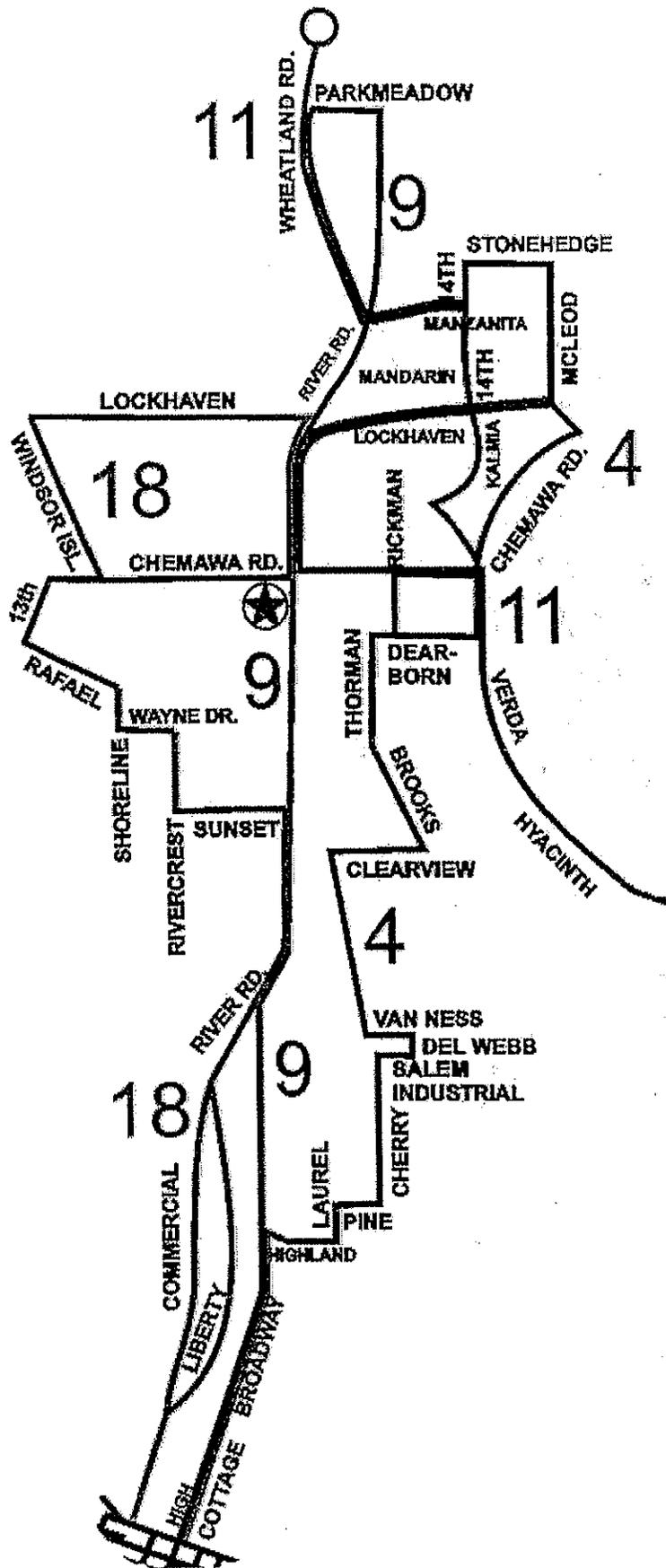
Appendix "B"
Cherriots Route Maps
and Timetables

Cherriots

SALEM-KEIZER TRANSIT



- 1 South Commercial
- 2 Jsn Rae
- 3 Capstola
- 4 Kelzer East
- 5 Royal Oaks
- 6 Lancaster Mall
- 6A 12th & Sunnyside
- 7 Fairview
- 8 Liberty Rd
- 9 Kelzer Central
- 10 Orchard Heights
- 10X Orchard Hills Express
- 11 Lancaster Drive
- 12 Salem/Dona
- 13 Lansing & Claxter
- 14 Sunnyside
- 15 Laurel Springs
- 16 Four Corners
- 17 Hayeaville
- 18 Kelzer West
- 19 Glen Creek
- 20 Airport Road P & R
- 21 Turner Road
- 22 Ballis Creek
- 23 Sola
- 24 West Salem Loop
- 25 West Salem - Downtown
- ⊕ Major Transit Stop or Hub
- ⊞ Park & Ride Lot





School for the Deaf,
East Keizer,
Whiteaker Middle School

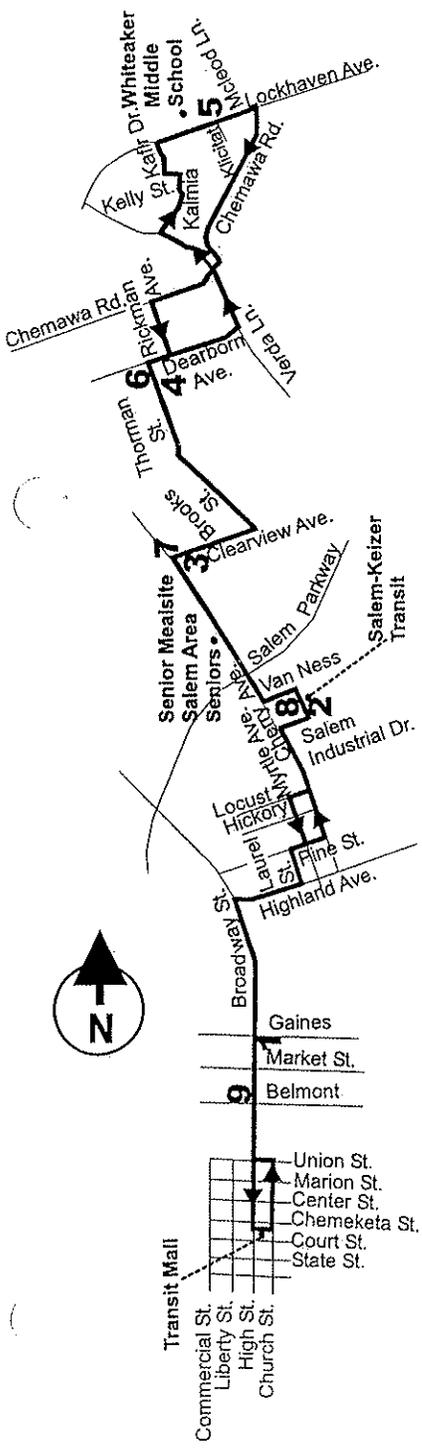
SEP 2006

BUS FARES (exact change required)
 Children (age 5 and under).....Free
 Youth (age 6 to 18)
 Single Fare\$0.75
 Day Pass\$1.50
 Adults (age 19 to 59)
 Single Fare\$1.00
 Day Pass\$2.00
 Seniors (60+), Disabled,
and Medicare card holders
 Single Fare\$0.50
 Day Pass\$1.00

INFORMATION

Cherriots Information Office
 220 High Street NE, Salem, OR 97301
 Web site: www.cherriots.org
 Routes & Schedules: 503-588-BUSS
 503-588-2877

8/28/06



Saturdays

Leaving	1	2	3	4	5	6	7	8	9	Arriving
Transit Mall & Gaines	7:45a	7:48a	7:53a	7:57a	8:02a	8:08a	8:17a	8:22a	8:29a	8:35a
Transit Salem-Keizer	8:45a	8:48a	8:53a	8:57a	9:02a	9:08a	9:17a	9:22a	9:29a	9:35a
Transit Clearview	9:45a	9:48a	9:53a	9:57a	10:02a	10:08a	10:17a	10:22a	10:29a	10:35a
Transit Cherry & Thorman	10:45a	10:48a	10:53a	10:57a	11:02a	11:08a	11:17a	11:22a	11:29a	11:35a
Transit Dearborn & Kitchat	11:45a	11:48a	11:53a	11:57a	12:02p	12:08p	12:17p	12:22p	12:29p	12:35p
Transit Clearview	12:45p	12:48p	12:53p	12:57p	1:02p	1:08p	1:17p	1:22p	1:29p	1:35p
Transit Salem-Keizer	1:45p	1:48p	1:53p	1:57p	2:02p	2:08p	2:17p	2:22p	2:29p	2:35p
Transit Dearborn & Kitchat	2:45p	2:48p	2:53p	2:57p	3:02p	3:08p	3:17p	3:22p	3:29p	3:35p
Transit Clearview	3:45p	3:48p	3:53p	3:57p	4:02p	4:08p	4:17p	4:22p	4:29p	4:35p
Transit Cherry & Thorman	4:45p	4:48p	4:53p	4:57p	5:02p	5:08p	5:17p	5:22p	5:29p	5:35p
Transit Dearborn & Kitchat	5:45p	5:48p	5:53p	5:57p	6:02p	6:08p	6:17p	6:22p	6:29p	6:35p
Transit Clearview	6:45p	6:48p	6:53p	6:57p	7:02p	7:08p	7:17p	7:22p	7:29p	7:35p
Transit Salem-Keizer	7:45p	7:48p	7:53p	7:57p	8:02p	8:08p	8:17p	8:22p	8:29p	8:35p
Transit Dearborn & Kitchat	8:45p	8:48p	8:53p	8:57p	9:02p	9:08p	9:17p	9:22p	9:29p	9:35p
Transit Clearview	9:45p	9:48p	9:53p	9:57p	10:02p	10:08p				

Please see the reverse for weekday schedule. Buses do not operate on Sundays or holidays.

KEIZER EAST

4

DAY PASSES

Day Passes are available for twice the cost of a single fare and will allow you to ride all day, as often as you want. You can purchase Day Passes from your bus operator or at the Cherriots Information Office.

BUS STOPS

Buses will stop at designated bus stops only.

DETOURS

We try to maintain our regular service as close as possible; however, not only weather, but also traffic and road construction sometimes make it impossible. Please watch for detour notices that are placed on the buses to notify riders of route changes. Remember, you can call the Cherriots information office at 503-588-2877 for updated information.

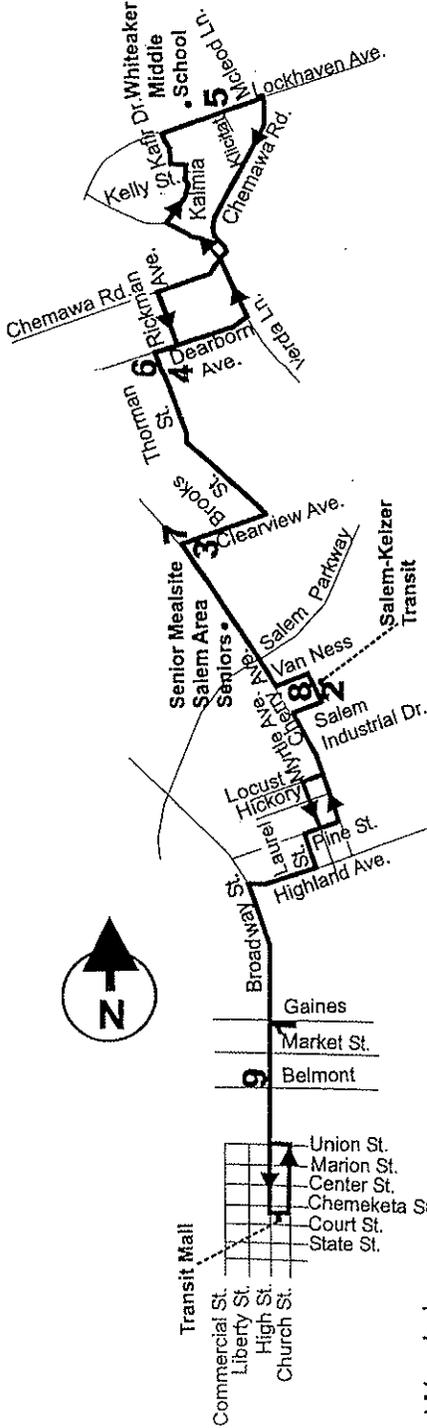
REMINDERS

Please,

- Do not eat on a Cherriots bus.
- Drinks are allowed if they are in a hard-sided, spill-resistant covered container.
- No smoking on the bus.
- Do not play radios or tapes - headphones are okay.
- Have exact change if you're paying cash - drivers carry no change.
- Offer your seat to a senior or person with disabilities.

PURCHASE BUS PASSES

- Cherriots Information Office (220 High St. NE)
- Roth's (Salem/Keizer stores only)



Weekdays

Leaving	1	2	3	4	5	6	7	8	9	Arriving
Transit Mall & Gaines	6:15a	6:23a	6:31a	6:39a	6:47a	6:55a	7:03a	7:11a	7:19a	7:27a
6:45a	6:53a	7:01a	7:09a	7:17a	7:25a	7:33a	7:41a	7:49a	7:57a	8:05a
7:15a	7:23a	7:31a	7:39a	7:47a	7:55a	8:03a	8:11a	8:19a	8:27a	8:35a
7:45a	7:53a	8:01a	8:09a	8:17a	8:25a	8:33a	8:41a	8:49a	8:57a	9:05a
8:15a	8:23a	8:31a	8:39a	8:47a	8:55a	9:03a	9:11a	9:19a	9:27a	9:35a
8:45a	8:53a	9:01a	9:09a	9:17a	9:25a	9:33a	9:41a	9:49a	9:57a	10:05a
9:15a	9:23a	9:31a	9:39a	9:47a	9:55a	10:03a	10:11a	10:19a	10:27a	10:35a
10:45a	10:53a	11:01a	11:09a	11:17a	11:25a	11:33a	11:41a	11:49a	11:57a	12:05p
11:45a	11:53a	12:01p	12:09p	12:17p	12:25p	12:33p	12:41p	12:49p	12:57p	1:05p
12:45p	12:53p	1:01p	1:09p	1:17p	1:25p	1:33p	1:41p	1:49p	1:57p	2:05p
1:45p	1:53p	2:01p	2:09p	2:17p	2:25p	2:33p	2:41p	2:49p	2:57p	3:05p
2:45p	2:53p	3:01p	3:09p	3:17p	3:25p	3:33p	3:41p	3:49p	3:57p	4:05p
3:15p	3:23p	3:31p	3:39p	3:47p	3:55p	4:03p	4:11p	4:19p	4:27p	4:35p
3:45p	3:53p	4:01p	4:09p	4:17p	4:25p	4:33p	4:41p	4:49p	4:57p	5:05p
4:15p	4:23p	4:31p	4:39p	4:47p	4:55p	5:03p	5:11p	5:19p	5:27p	5:35p
4:45p	4:53p	5:01p	5:09p	5:17p	5:25p	5:33p	5:41p	5:49p	5:57p	6:05p
5:15p	5:23p	5:31p	5:39p	5:47p	5:55p	6:03p	6:11p	6:19p	6:27p	6:35p
5:45p	5:53p	6:01p	6:09p	6:17p	6:25p	6:33p	6:41p	6:49p	6:57p	7:05p
6:45p	6:53p	7:01p	7:09p	7:17p	7:25p	7:33p	7:41p	7:49p	7:57p	8:05p
7:45p	7:53p	8:01p	8:09p	8:17p	8:25p	8:33p	8:41p	8:49p	8:57p	9:05p
8:45p	8:53p	9:01p	9:09p	9:17p	9:25p	9:33p	9:41p	9:49p	9:57p	10:05p
9:45p	9:53p	10:01p	10:09p	10:17p	10:25p	10:33p	10:41p	10:49p	10:57p	11:05p

Please see the reverse for Saturday schedule. Buses do not operate on Sundays or holidays.



SEP 2006

Fred Meyer North,
River Road, Whiteaker
Middle School

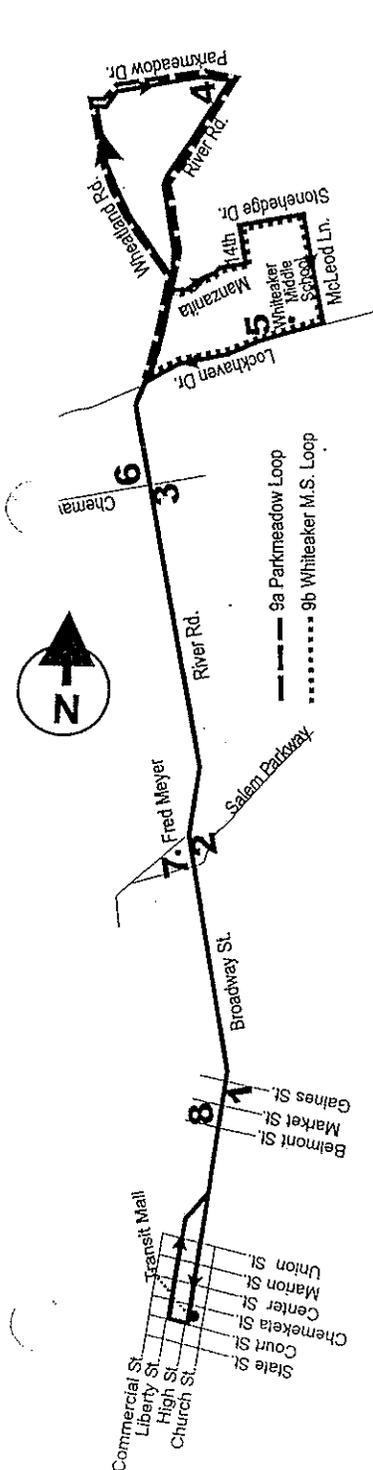
BUS FARES (exact change required)
 Children (age 5 and under).....Free
 Youth (age 6 to 18)
 Single Fare\$0.75
 Day Pass\$1.50
 Adults (age 19 to 59)
 Single Fare\$1.00
 Day Pass\$2.00
 Seniors (60+), Disabled,
 and Medicare card holders
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INFORMATION

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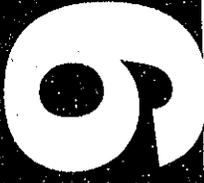
11/08/06



On Saturday, bus does both Parkmeadow & Whiteaker M.S. loops.

Leave	1	2	3	4	5	6	7	8	Arrive
Transit Mall	Transit Mall	Fred Meyer	Whiteaker Middle School	Transit Mall					
7:45a	7:49a	7:53a	8:00a	8:07a	8:10a	8:13a	8:22a	8:27a	8:35a
8:45a	8:49a	8:53a	9:00a	9:07a	9:10a	9:13a	9:22a	9:27a	9:35a
9:45a	9:49a	9:53a	10:00a	10:07a	10:10a	10:13a	10:22a	10:27a	10:35a
10:45a	10:49a	10:53a	11:00a	11:07a	11:10a	11:13a	11:22a	11:27a	11:35a
11:45a	11:49a	11:53a	12:00p	12:07p	12:10p	12:13p	12:22p	12:27p	12:35p
12:45p	12:49p	12:53p	1:00p	1:07p	1:10p	1:13p	1:22p	1:27p	1:35p
1:45p	1:49p	1:53p	2:00p	2:07p	2:10p	2:13p	2:22p	2:27p	2:35p
2:45p	2:49p	2:53p	3:00p	3:07p	3:10p	3:13p	3:22p	3:27p	3:35p
3:45p	3:49p	3:53p	4:00p	4:07p	4:10p	4:13p	4:22p	4:27p	4:35p
4:45p	4:49p	4:53p	5:00p	5:07p	5:10p	5:13p	5:22p	5:27p	5:35p
5:45p	5:49p	5:53p	6:00p	6:07p	6:10p	6:13p	6:22p	6:27p	6:35p
6:45p	6:49p	6:53p	7:00p	7:07p	7:10p	7:13p	7:22p	7:27p	7:35p
7:45p	7:49p	7:53p	8:00p	8:07p	8:10p	8:13p	8:22p	8:27p	8:35p
8:45p	8:49p	8:53p	9:00p	9:07p	9:10p	9:13p	9:22p	9:27p	9:35p
9:45p	9:49p	9:53p	10:00p	10:07p	10:10p	10:13p	10:22p	10:27p	10:35p

Please see reverse for weekday schedule.
 Buses do not operate on Sundays or holidays.



Weekday

Leave	1	2	3	4	5	6	7	8	Arrive
Transit Mall	Broadway & Gaine	Fred Meyer	River Road	Parkmeadow	Whiteaker	River Road	Fred Meyer	Broadway & Belmont	Transit Mall
9	-	-	6:00a	6:07a	6:10a	6:13a	6:22a	6:27a	6:35a
9a	6:15a	6:33a	6:30a	6:37a	6:43a	6:43a	6:52a	6:57a	7:05a
9b	6:30a	6:38a	6:45a	-	6:52a	6:58a	7:07a	7:12a	7:20a
9a	6:45a	6:53a	7:00a	7:07a	7:13a	7:13a	7:22a	7:27a	7:35a
9b	7:00a	7:08a	7:15a	-	7:22a	7:28a	7:37a	7:42a	7:50a
9a	7:15a	7:23a	7:30a	7:37a	7:43a	7:43a	7:52a	7:57a	8:05a
9b	7:30a	7:38a	7:45a	-	7:52a	7:58a	8:07a	8:12a	8:20a
9a	7:45a	7:53a	8:00a	8:07a	8:13a	8:13a	8:22a	8:27a	8:35a
9b	8:00a	8:08a	8:15a	-	8:22a	8:28a	8:37a	8:42a	8:50a
9a	8:15a	8:23a	8:30a	8:37a	8:43a	8:43a	8:52a	8:57a	9:05a
9b	8:30a	8:38a	8:45a	8:52a	8:58a	8:58a	9:07a	9:12a	9:20a
9a	8:45a	8:53a	9:00a	9:07a	9:13a	9:13a	9:22a	9:27a	9:35a
9b	9:00a	9:08a	9:15a	-	9:22a	9:28a	9:37a	9:42a	9:50a
9a	9:15a	9:23a	9:30a	9:37a	9:43a	9:43a	9:52a	9:57a	10:05a
9b	9:30a	9:38a	9:45a	9:52a	9:58a	9:58a	10:07a	10:12a	10:20a
9a	9:45a	9:53a	10:00a	10:07a	10:13a	10:13a	10:22a	10:27a	10:35a
9b	10:00a	10:08a	10:15a	10:22a	10:28a	10:28a	10:37a	10:42a	10:50a
9a	10:15a	10:23a	10:30a	10:37a	10:43a	10:43a	10:52a	10:57a	11:05a
9b	10:30a	10:38a	10:45a	10:52a	10:58a	10:58a	11:07a	11:12a	11:20a
9a	10:45a	10:53a	11:00a	11:07a	11:13a	11:13a	11:22a	11:27a	11:35a
9b	11:00a	11:08a	11:15a	11:22a	11:28a	11:28a	11:37a	11:42a	11:50a
9a	11:15a	11:23a	11:30a	11:37a	11:43a	11:43a	11:52a	11:57a	12:05a
9b	11:30a	11:38a	11:45a	11:52a	11:58a	11:58a	12:07a	12:12a	12:20a
9a	11:45a	11:53a	12:00a	12:07p	12:13p	12:13p	12:22p	12:27p	12:35p
9b	12:00p	12:08p	12:15p	12:22p	12:28p	12:28p	12:37p	12:42p	12:50p
9a	12:15p	12:23p	12:30p	12:37p	12:43p	12:43p	12:52p	12:57p	1:05p
9b	12:30p	12:38p	12:45p	12:52p	12:58p	12:58p	1:07p	1:12p	1:20p
9a	12:45p	12:53p	1:00p	1:07p	1:13p	1:13p	1:22p	1:27p	1:35p
9b	1:00p	1:08p	1:15p	1:22p	1:28p	1:28p	1:37p	1:42p	1:50p
9a	1:15p	1:23p	1:30p	1:37p	1:43p	1:43p	1:52p	1:57p	2:05p
9b	1:30p	1:38p	1:45p	1:52p	1:58p	1:58p	2:07p	2:12p	2:20p
9a	1:45p	1:53p	2:00p	2:07p	2:13p	2:13p	2:22p	2:27p	2:35p
9b	2:00p	2:08p	2:15p	2:22p	2:28p	2:28p	2:37p	2:42p	2:50p
9a	2:15p	2:23p	2:30p	2:37p	2:43p	2:43p	2:52p	2:57p	3:05p
9b	2:30p	2:38p	2:45p	2:52p	2:58p	2:58p	3:07p	3:12p	3:20p
9a	2:45p	2:53p	3:00p	3:07p	3:13p	3:13p	3:22p	3:27p	3:35p
9b	3:00p	3:08p	3:15p	3:22p	3:28p	3:28p	3:37p	3:42p	3:50p
9a	3:15p	3:23p	3:30p	3:37p	3:43p	3:43p	3:52p	3:57p	4:05p
9b	3:30p	3:38p	3:45p	3:52p	3:58p	3:58p	4:07p	4:12p	4:20p
9a	3:45p	3:53p	4:00p	4:07p	4:13p	4:13p	4:22p	4:27p	4:35p
9b	4:00p	4:08p	4:15p	4:22p	4:28p	4:28p	4:37p	4:42p	4:50p
9a	4:15p	4:23p	4:30p	4:37p	4:43p	4:43p	4:52p	4:57p	5:05p
9b	4:30p	4:38p	4:45p	4:52p	4:58p	4:58p	5:07p	5:12p	5:20p
9a	4:45p	4:53p	5:00p	5:07p	5:13p	5:13p	5:22p	5:27p	5:35p
9b	5:00p	5:08p	5:15p	5:22p	5:28p	5:28p	5:37p	5:42p	5:50p
9a	5:15p	5:23p	5:30p	5:37p	5:43p	5:43p	5:52p	5:57p	6:05p
9b	5:30p	5:38p	5:45p	5:52p	5:58p	5:58p	6:07p	6:12p	6:20p
9a	5:45p	5:53p	6:00p	6:07p	6:13p	6:13p	6:22p	6:27p	6:35p
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9a	6:15p	6:23p	6:30p	6:37p	6:43p	6:43p	6:52p	6:57p	7:05p
9b	6:30p	6:38p	6:45p	6:52p	6:58p	6:58p	7:07p	7:12p	7:20p
9a	6:45p	6:53p	7:00p	7:07p	7:13p	7:13p	7:22p	7:27p	7:35p
9b	7:00p	7:08p	7:15p	7:22p	7:28p	7:28p	7:37p	7:42p	7:50p
9a	7:15p	7:23p	7:30p	7:37p	7:43p	7:43p	7:52p	7:57p	8:05p
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9a	7:45p	7:53p	8:00p	8:07p	8:10p	8:10p	8:22p	8:27p	8:35p
9b	8:00p	8:08p	8:15p	8:22p	8:28p	8:28p	8:37p	8:42p	8:50p
9a	8:15p	8:23p	8:30p	8:37p	8:40p	8:40p	8:52p	8:57p	9:05p
9b	8:30p	8:38p	8:45p	8:52p	8:58p	8:58p	9:07p	9:12p	9:20p
9a	8:45p	8:53p	9:00p	9:07p	9:10p	9:10p	9:22p	9:27p	9:35p
9b	9:00p	9:08p	9:15p	9:22p	9:28p	9:28p	9:37p	9:42p	9:50p
9a	9:15p	9:23p	9:30p	9:37p	9:40p	9:40p	9:52p	9:57p	10:05p
9b	9:30p	9:38p	9:45p	9:52p	9:58p	9:58p	10:07p	10:12p	10:20p
9a	9:45p	9:53p	10:00p	10:07p	10:10p	10:10p	10:22p	10:27p	10:35p
9b	10:00p	10:08p	10:15p	10:22p	10:28p	10:28p	10:37p	10:42p	10:50p

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REMINDEES

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 - Do not eat on a Cherris bus.
 - Drinks are allowed if they are in a hard-sided, spill-resistant covered container.
 - No smoking on the bus.
 - Do not play radios or tapes - headphones are okay.
 - Have exact change if you're paying cash - drivers carry no change.
 - Offer your seat to a senior or person with disabilities.

PURCHASE BUS PASSES

- Cherris Information Office (220 High St. NE)
- Roth's (Salem/Keizer stores only)

Please see reverse for map and Saturday schedule. Buses do not operate on Sundays or holidays.



Keizer, Chemekeeta
College, Lancaster Mall,
McKay High School, Marion
County Corrections

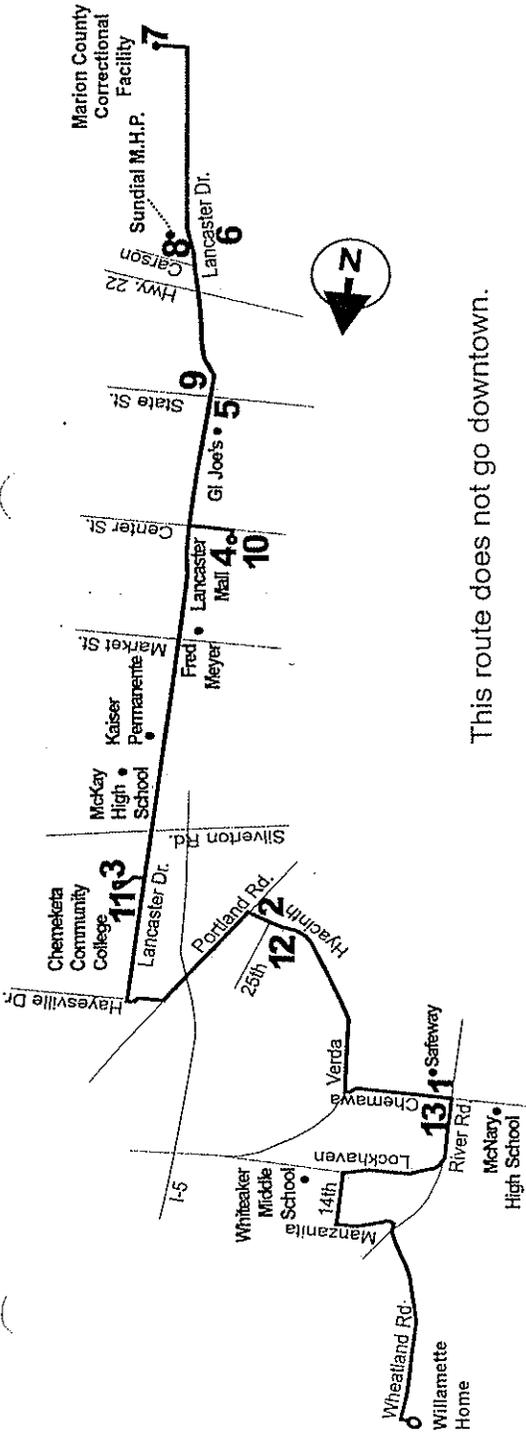
DEC 2006

BUS FARES (exact change required)
Children (age 5 and under).....Free
Youth (age 6 to 18)
Single Fare\$0.75
Day Pass\$1.50
Adults (age 19 to 59)
Single Fare\$1.00
Day Pass\$2.00
Seniors (60+), Disabled,
and Medicare card holders
Single Fare\$0.50
Day Pass\$1.00

INFORMATION

Cherriots Information Office
220 High Street NE, Salem, OR 97301
Web site: www.cherriots.org
Routes & Schedules: 503-588-BUSS

11/22/06

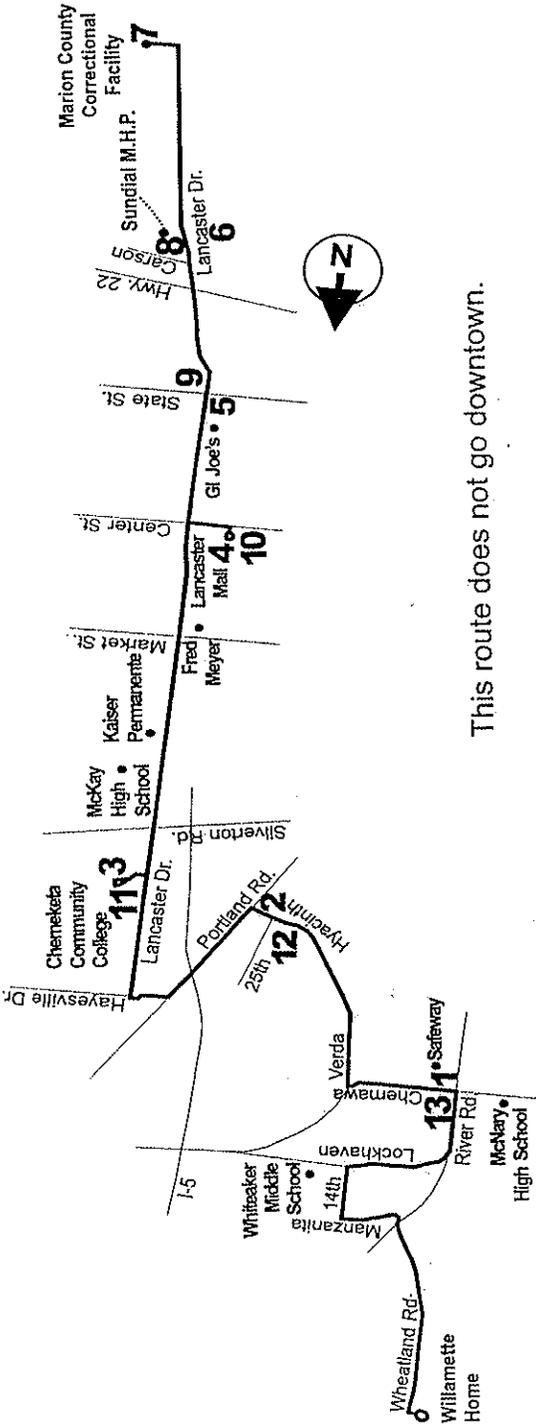


This route does not go downtown.

Saturday

Leaving	1	2	3	4	5	6	7	8	9	10	11	12	13	Arriving
7:35a	8:05a	8:20a	8:35a	8:50a	9:05a	9:20a	9:35a	9:50a	10:05a	10:20a	10:35a	10:50a	11:05a	11:20a
8:50a	9:02a	9:09a	9:20a	9:35a	9:44a	9:48a	10:02a	10:06a	10:10a	10:15a	10:31a	10:38a	10:44a	10:55a
9:50a	10:02a	10:09a	10:20a	10:35a	10:44a	10:48a	11:02a	11:06a	11:10a	11:15a	11:31a	11:38a	11:44a	11:55a
11:10a	11:22a	11:29a	11:40a	11:55a	12:04p	12:08p	12:22p	12:26p	12:30p	12:35p	12:51p	12:58p	1:04p	1:15p
12:10p	12:22p	12:29p	12:40p	12:55p	1:04p	1:08p	1:22p	1:26p	1:30p	1:35p	1:51p	1:58p	2:04p	2:15p
1:30p	1:42p	1:49p	2:00p	2:15p	2:24p	2:28p	2:42p	2:46p	2:50p	2:55p	3:11p	3:18p	3:24p	3:35p
2:30p	2:42p	2:49p	3:00p	3:15p	3:24p	3:28p	3:42p	3:46p	3:50p	3:55p	4:11p	4:18p	4:24p	4:35p
3:50p	4:02p	4:09p	4:20p	4:35p	4:44p	4:48p	5:02p	5:06p	5:10p	5:15p	5:31p	5:38p	5:44p	5:55p
4:50p	5:00p	5:05p	5:15p	5:28p	5:33p	5:37p	5:51p	5:55p	6:00p	6:05p	6:21p	6:28p	6:34p	6:45p
6:05p	6:15p	6:20p	6:30p	6:43p	6:48p	6:52p	7:06p	7:00p	7:04p	7:09p	7:24p	7:30p	7:35p	7:43p
6:50p	7:00p	7:05p	7:15p	7:28p	7:33p	7:37p	7:51p	7:45p	7:49p	7:54p	8:09p	8:15p	8:20p	8:28p
7:50p	8:00p	8:05p	8:15p	8:28p	8:33p	8:37p	8:41p	8:45p	8:49p	8:54p	9:09p	9:15p	9:20p	9:28p
8:35p	8:45p	8:50p	9:00p	9:13p	9:18p	9:22p	9:36p	9:30p	9:34p	9:39p	9:54p	10:00p	10:05p	10:13p

Please see reverse for Weekday schedule. Buses do not operate on Sundays or holidays.



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REMEMINDERS

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- No smoking on the bus.
- Do not play radios or tapes - headphones are okay.
- Have exact change if you're paying cash - drivers carry no change.
- Offer your seat to a senior or person with disabilities.

PURCHASE BUS PASSES

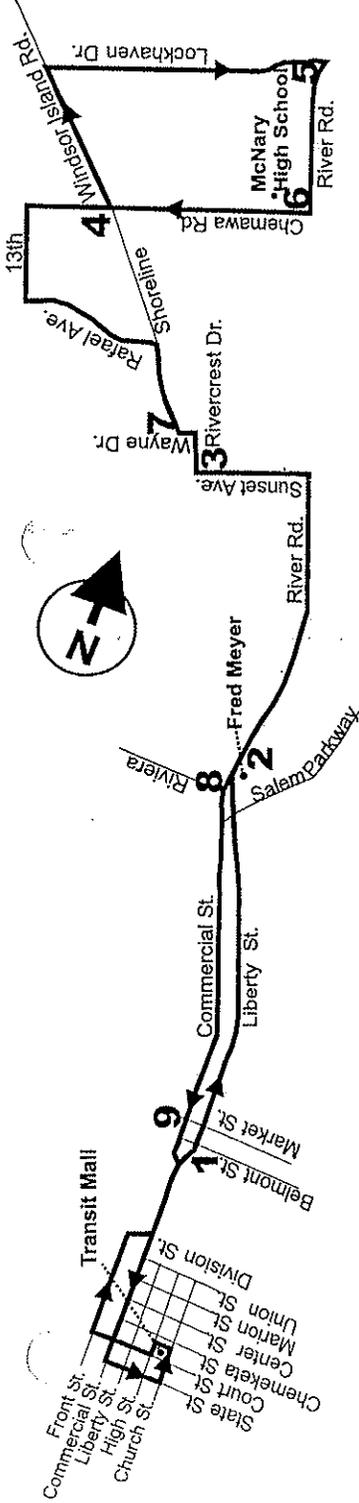
- Cheriots Information Office (220 High St. NE)
- Roth's (Salem/Keizer stores only)

Weekday	1	2	3	4	5	6	7	8	9	10	11	12	13	
Leaving	6:35a	6:47a	6:54a	7:05a	7:11a	7:22a	7:28a	7:42a	7:50a	8:05a	8:09a	8:16a	8:22a	8:36a
131 Safeway	7:35a	7:47a	7:54a	8:05a	8:17a	8:22a	8:28a	8:42a	8:50a	8:55a	9:11a	9:18a	9:24a	9:35a
Whitaker Middle School	8:50a	9:02a	9:09a	9:20a	9:25a	9:48a	10:02a	10:06a	10:15a	10:31a	10:35a	10:41a	10:47a	10:55a
Manzanita School	9:50a	10:02a	10:09a	10:20a	10:35a	10:44a	11:02a	11:06a	11:15a	11:31a	11:38a	11:44a	11:50a	11:55a
Lockhaven	11:10a	11:22a	11:29a	11:40a	11:55a	12:04a	12:22a	12:26a	12:30a	12:35a	12:51a	12:58a	1:04a	1:16a
McKary High School	12:10p	12:22p	12:29p	12:40p	12:55p	1:04p	1:08p	1:22p	1:30p	1:35p	1:51p	1:58p	2:04p	2:16p
Chemeketa Community College	1:30p	1:42p	1:49p	2:00p	2:15p	2:24p	2:28p	2:42p	2:50p	2:55p	3:11p	3:19p	3:25p	3:37p
Chambers	2:30p	2:42p	2:49p	3:00p	3:15p	3:24p	3:28p	3:42p	3:50p	3:55p	4:11p	4:19p	4:25p	4:37p
Hyacinth	3:50p	4:02p	4:09p	4:20p	4:35p	4:44p	4:48p	5:02p	5:10p	5:15p	5:31p	5:39p	5:45p	5:57p
State St	4:50p	5:02p	5:09p	5:20p	5:35p	5:44p	5:48p	6:12p	6:20p	6:25p	6:40p	6:46p	6:51p	6:59p
Center St	6:15p	6:27p	6:34p	6:40p	6:55p	7:04p	7:08p	7:22p	7:30p	7:35p	7:51p	7:59p	8:05p	8:17p
Market St	7:15p	7:27p	7:34p	7:40p	7:55p	8:04p	8:08p	8:22p	8:30p	8:35p	8:51p	8:59p	9:05p	9:17p
State St	8:15p	8:27p	8:34p	8:40p	8:55p	9:04p	9:08p	9:22p	9:30p	9:35p	9:51p	9:59p	10:05p	10:17p
Center St	9:05p	9:17p	9:24p	9:30p	9:45p	9:54p	9:58p	10:12p	10:20p	10:25p	10:41p	10:49p	10:55p	11:07p
Arriving														

Please see reverse for Saturday schedule. Buses do not operate on Sundays or holidays.



Fred Meyer North,
Chemawa Road,
Keizer, McNary High



Saturdays

Leaving	1	2	3	4	5	6	7	8	9	Arriving
Transit Mall	7:45a	7:48a	7:51a	7:54a	7:57a	8:00a	8:03a	8:06a	8:09a	8:12a
1:45p	1:48p	1:51p	1:54p	1:57p	2:00p	2:03p	2:06p	2:09p	2:12p	2:15p
3:45p	3:48p	3:51p	3:54p	3:57p	4:00p	4:03p	4:06p	4:09p	4:12p	4:15p
5:45p	5:48p	5:51p	5:54p	5:57p	6:00p	6:03p	6:06p	6:09p	6:12p	6:15p
8:45p	8:48p	8:51p	8:54p	8:57p	9:00p	9:03p	9:06p	9:09p	9:12p	9:15p
10:45a	10:48a	10:51a	10:54a	10:57a	11:00a	11:03a	11:06a	11:09a	11:12a	11:15a
12:45p	12:48p	12:51p	12:54p	12:57p	1:00p	1:03p	1:06p	1:09p	1:12p	1:15p
2:45p	2:48p	2:51p	2:54p	2:57p	3:00p	3:03p	3:06p	3:09p	3:12p	3:15p
4:45p	4:48p	4:51p	4:54p	4:57p	5:00p	5:03p	5:06p	5:09p	5:12p	5:15p
6:45p	6:48p	6:51p	6:54p	6:57p	7:00p	7:03p	7:06p	7:09p	7:12p	7:15p
8:45p	8:48p	8:51p	8:54p	8:57p	9:00p	9:03p	9:06p	9:09p	9:12p	9:15p
10:45a	10:48a	10:51a	10:54a	10:57a	11:00a	11:03a	11:06a	11:09a	11:12a	11:15a

SEP 2006

BUS FARES (exact change required)

- Children (age 5 and under).....Free
- Youth (age 6 to 18)
- Single Fare\$0.75
- Day Pass\$1.50
- Adults (age 19 to 59)
- Single Fare\$1.00
- Day Pass\$2.00
- Seniors (60+), Disabled, and Medicare card holders
- Single Fare\$0.50
- Day Pass\$1.00

INFORMATION

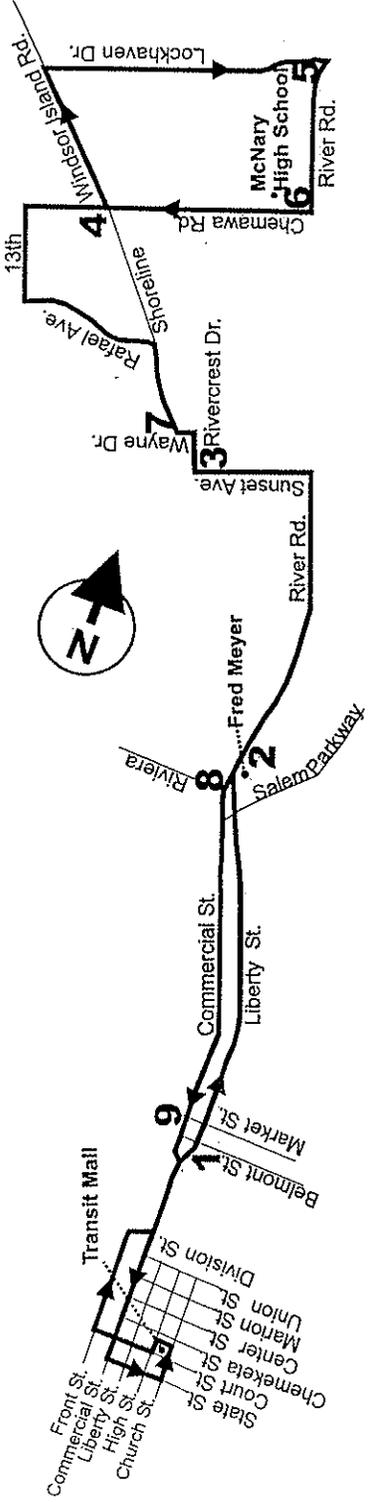
Cherriots Information Office
220 High Street NE, Salem, OR 97301
Web site: www.cherriots.org
Routes & Schedules: 503-588-8UUS
503-588-2877

8/3/06



Please see reverse for weekday schedule. Buses do not operate on Sundays or holidays.

KEIZER WEST 118



Weekdays

Leaving	1	2	3	4	5	6	7	8	9	Arriving
	Transit Mall	Liberty & Fred Meyer	Rivercrest	Chemawa Lockhaven	Rivercrest	Wayne & Rivercrest	Commercial Transit Mall	Belmont	McNary High School	
6:45a	6:48a	6:51a	6:57a	7:03a	7:07a	7:10a	7:18a	7:23a	7:26a	7:35a
7:45a	7:48a	7:51a	7:57a	8:03a	8:07a	8:10a	8:18a	8:23a	8:26a	8:35a
8:45a	8:48a	8:51a	8:57a	9:03a	9:07a	9:10a	9:18a	9:23a	9:26a	9:35a
9:45a	9:48a	9:51a	9:57a	10:03a	10:07a	10:10a	10:18a	10:23a	10:26a	10:35a
10:45a	10:48a	10:51a	10:57a	11:03a	11:07a	11:10a	11:18a	11:23a	11:26a	11:35a
11:45a	11:48a	11:51a	11:57a	12:03p	12:07p	12:10p	12:18p	12:23p	12:26p	12:35p
12:45p	12:48p	12:51p	12:57p	1:03p	1:07p	1:10p	1:18p	1:23p	1:26p	1:35p
1:45p	1:48p	1:51p	1:57p	2:03p	2:07p	2:10p	2:18p	2:23p	2:26p	2:35p
2:45p	2:48p	2:51p	2:57p	3:03p	3:07p	3:10p	3:18p	3:23p	3:26p	3:35p
3:45p	3:48p	3:51p	3:57p	4:03p	4:07p	4:10p	4:18p	4:23p	4:26p	4:35p
4:45p	4:48p	4:51p	4:57p	5:03p	5:07p	5:10p	5:18p	5:23p	5:26p	5:35p
5:45p	5:48p	5:51p	5:57p	6:03p	6:07p	6:10p	6:18p	6:23p	6:26p	6:35p
6:45p	6:48p	6:51p	6:57p	7:03p	7:07p	7:10p	7:18p	7:23p	7:26p	7:35p
7:45p	7:48p	7:51p	7:57p	8:03p	8:07p	8:10p	8:18p	8:23p	8:26p	8:35p
8:45p	8:48p	8:51p	8:57p	9:03p	9:07p	9:10p	9:18p	9:23p	9:26p	9:35p
9:45p	9:48p	9:51p	9:57p	10:03p	10:07p	10:10p				

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- Roth's (Salem/Keizer stores only)

Please see reverse for Saturday schedule. Buses do not operate on Sundays or holidays.

Appendix "C"
Cherriots Ridership Data
for Keizer Bus Routes

SALEM AREA TRANSIT
 APC RIDERSHIP STATISTICS
 obtained from the Transportation Development Division
 of the Salem Area Mass Transit District

APC STOP SUMMARY - DAILY TOTALS
 LOAD of Passengers getting Off and On the bus

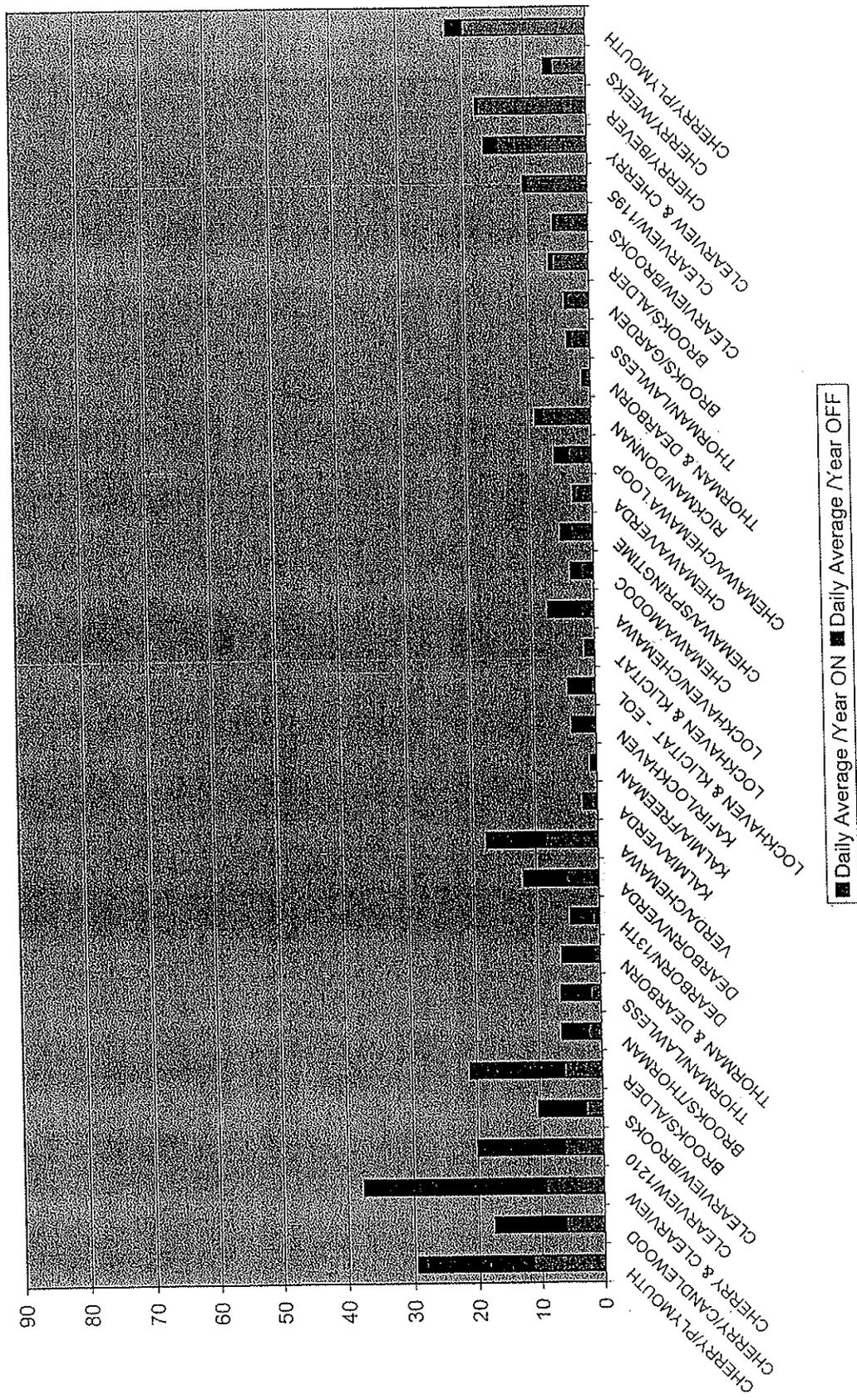
Route 4		Total of the 4 Daily Ave/Quarter			Daily Average /Year		
		ON	OFF	TOTAL	ON	OFF	TOTAL
18	392 CHERRY/PLYMOUTH	46	72	118	12	18	30
19	393 CHERRY/CANDLEWOOD	25	45	71	6	11	18
20	28 CHERRY & CLEARVIEW	37	113	149	9	28	37
21	394 CLEARVIEW/1210	25	55	80	6	14	20
22	395 CLEARVIEW/BROOKS	11	30	41	3	8	10
23	396 BROOKS/ALDER	24	60	83	6	15	21
24	397 BROOKS/THORMAN	9	16	25	2	4	6
25	398 THORMAN/LAWLESS	7	18	26	2	5	7
26	29 THORMAN & DEARBORN	4	20	23	1	5	6
27	399 DEARBORN/13TH	5	13	19	1	3	5
28	400 DEARBORN/VERDA	21	27	47	5	7	12
29	401 VERDA/CHEMAWA	34	37	68	9	9	17
30	402 KALMIA/VERDA	4	5	9	1	1	2
31	403 KALMIA/FREEMAN	2	2	5	1	1	1
32	404 KAEIR/LOCKHAVEN	4	11	15	1	3	4
33	405 LOCKHAVEN & KLICITAT - EOL	3	14	17	1	4	4
1	405 LOCKHAVEN & KLICITAT	6	0	6	2	0	2
2	30 LOCKHAVEN/CHEMAWA	9	20	29	2	5	7
3	406 CHEMAWA/MODOC	8	6	14	2	2	4
4	407 CHEMAWA/SPRINGTIME	14	6	20	4	2	5
5	408 CHEMAWA/VERDA	11	1	12	3	0	3
6	409 CHEMAWA/CHEMAWA LOOP	15	8	22	4	2	6
7	410 RICKMAN/DONNAN	31	4	35	8	1	9
8	161 THORMAN & DEARBORN	4	1	4	1	0	1
9	411 THORMAN/LAWLESS	12	2	13	3	1	3
10	412 BROOKS/GARDEN	14	1	15	4	0	4
11	413 BROOKS/ALDER	28	2	25	6	1	6
12	414 CLEARVIEW/BROOKS	21	1	22	5	0	6
13	415 CLEARVIEW/1195	39	2	41	10	1	10
14	162 CLEARVIEW & CHERRY	58	8	65	15	2	16
15	416 CHERRY/BEVER	70	1	72	18	0	18
16	419 CHERRY/WEEKS	22	5	27	6	1	7
17	417 CHERRY/PLYMOUTH	79	10	87	20	3	22

Route 9		Total of the 4 Daily Ave/Quarter			Daily Average /Year		
		ON	OFF	TOTAL	ON	OFF	TOTAL
16	995 RIVER RD/PLYMOUTH	66	149	212	17	37	53
17	996 RIVER RD/GLYNBROOK	32	149	183	8	37	46
18	997 RIVER RD/HOLLYHOCK	7	47	54	2	12	14
19	998 RIVER RD/HOMEWOOD	66	199	265	17	50	66
20	1160 RIVER RD/SUNSET	22	56	78	6	14	20
21	1161 RIVER RD/MANBRIN	22	82	104	6	21	26
22	1162 RIVER RD/GUMMINGS	29	162	190	7	41	48
23	1163 RIVER RD/DEARBORN	10	117	128	3	29	32
24	1163 CHEMAWA & RIVER TP/CHEM RIVE	36	205	242	9	76	86
25	1111 RIVER RD/CLAGGETT	111	119	230	29	30	58
26	1112 RIVER RD/KEIZER CREEK SIDE S	26	54	78	7	14	20
27	1164 RIVER RD/LOCKHAVEN	21	27	48	5	7	12
28	1119 WHEATLAND/MISTLETOE	6	15	23	2	4	6
29	1120 WHEATLAND/DELTA	32	42	76	8	11	19
30	1121 WHEATLAND/NOTTINGHAM	9	13	22	2	3	6
31	1122 WHEATLAND/PARK MEADOW	39	46	84	10	12	21
32	1166 PARK MEADOW/FIELDVIEW	13	11	24	3	3	6
33	1167 PARK MEADOW/MEADOWGLEN	16	24	40	4	6	10
34	1164 PARK MEADOW DR & RIVER RD/TP	68	48	111	16	12	28
35	1168 RIVER RD/OAKWOOD	24	34	62	12	9	21
36	1169 RIVER RD/NOTTINGHAM	12	8	20	3	2	5
37	1170 RIVER RD/HIDDEN CREEK	27	9	36	7	2	9
38	1125 RIVER RD/MCNARY ESTATES	18	37	56	5	9	14
40	1120 MANZANITA/PAUL	2	2	4	0	1	1
41	1180 MANZANITA/4TH	7	15	22	2	2	4
42	1165 14TH/STONE HEDGE	16	16	32	4	4	8
43	1171 STONE HEDGE/MOLEOD	18	18	32	3	5	8
44	1172 MOLEOD/MANZANITA	16	10	26	4	3	7
45	1173 MOLEOD/SAUNDRA LEE	32	28	60	8	7	15
46	1174 MOLEOD/LOCKHAVEN	16	12	28	4	3	7
47	1165 LOCKHAVEN & WHITEAKER MSU	41	21	62	10	5	16
48	1138 LOCKHAVEN/VERDA	17	0	10	2	0	3
49	1124 LOCKHAVEN/761	14	6	16	1	0	2
52	1178 CHEMAWA & RIVER TP/CHERIE EG	0	28	28	0	7	7
51	1176 CHEMAWA & RIVER TP/CHERVIN	279	0	279	70	0	70
52	1176 RIVER RD/DEARBORN	38	9	49	21	2	23
53	1176 RIVER RD/GUMMINGS	150	32	182	38	8	46
54	1177 RIVER RD/MANBRIN	106	22	129	27	6	32
55	1178 RIVER RD/SUNSET	44	11	58	11	3	15
6	1024 RIVER RD/HOMEWOOD	126	65	191	32	16	48
7	1025 RIVER RD/HOLLYHOCK	66	13	78	17	3	20
8	1026 RIVER RD/GLYNBROOK	78	18	96	20	5	24
9	1027 RIVER RD/APPLE BLOSSOM	131	61	193	33	15	48

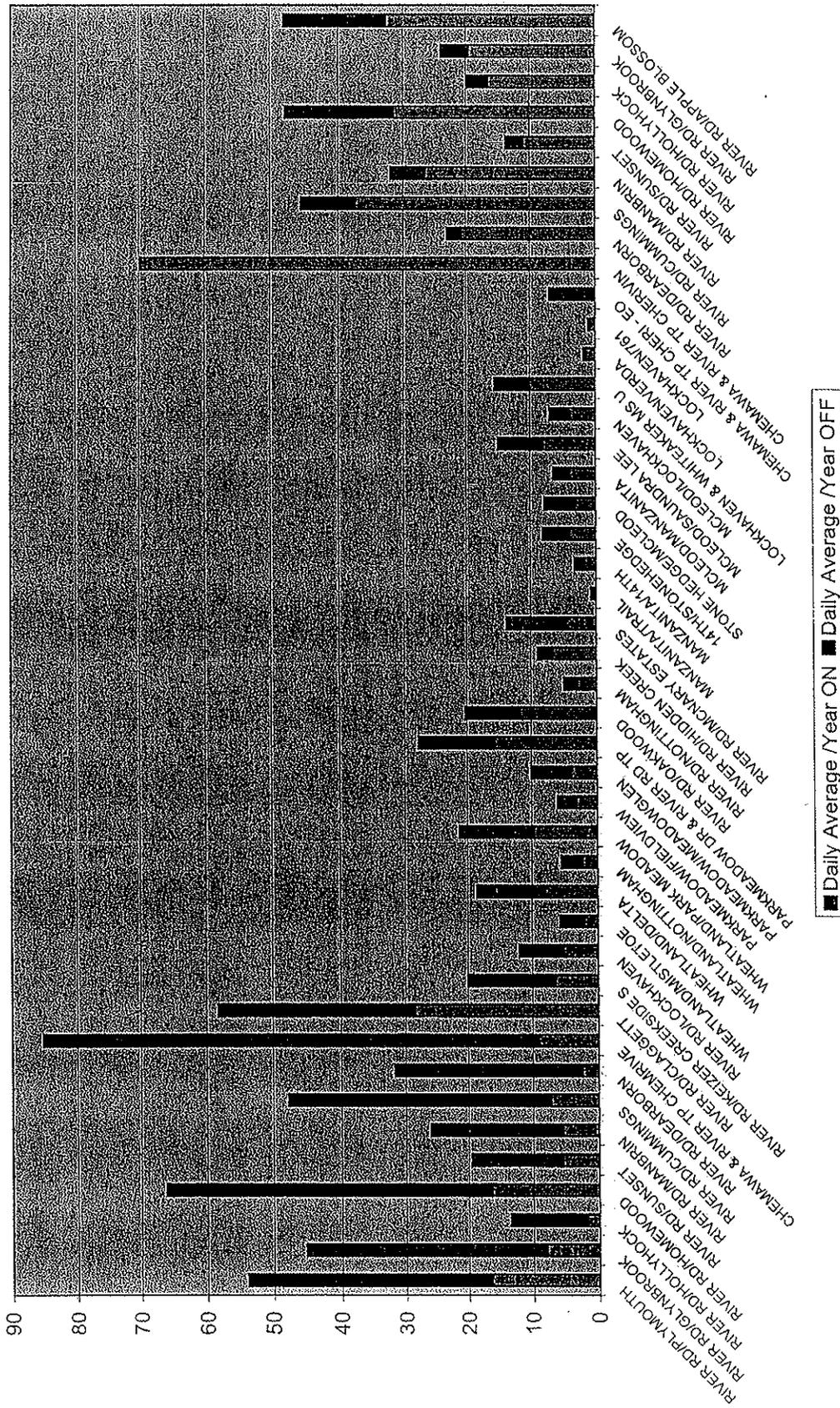
Route 18

		ON	OFF	TOTAL	ON	OFF	TOTAL
13	995 RIVER RD/PLYMOUTH	10	20	31	3	5	8
14	996 RIVER RD/GLYNBROOK	6	14	21	2	4	5
15	997 RIVER RD/HOLLYHOCK	0	5	6	0	1	2
16	998 RIVER RD/HOMEWOOD	24	16	39	6	4	10
17	999 SUNSET/211A	6	15	23	2	4	6
18	1000 SUNSET/5TH AVE N	0	5	5	0	1	1
19	117 RIVERCREST & WAYNE U RIVEWA	0	11	11	0	3	3
20	1001 SHORELINE/CUMMINGS	3	20	23	1	5	6
21	1002 RAFAEL/10TH PLACE	3	12	15	1	3	4
22	1003 13TH/MONEDA	10	17	27	3	4	7
23	1004 13TH/CHEMAWA	20	44	65	5	11	16
24	118 CHEMAWA & SHORELINE U CHEM	5	28	32	1	7	8
25	1005 WINDSOR ISLAND/ORCHARD	75	78	153	19	20	38
27	1007 WINDSOR ISLAND/LOCKHAVEN	6	6	12	2	2	3
28	1008 LOCKHAVEN/WILDWOOD CT	13	17	33	3	4	8
29	1009 LOCKHAVEN/JOAN	15	13	29	4	3	7
30	1010 LOCKHAVEN/NEWBERG	5	13	17	1	3	4
31	1011 LOCKHAVEN/LAKEFAIR	2	2	4	1	1	1
32	119 LOCKHAVEN & RIVER RD U LOCK	3	9	12	1	2	3
33	1012 RIVER RD/MCNARY OAKS MHP	5	3	9	1	1	2
34	1013 RIVER RD/CLAGGETT	45	12	55	11	3	14
35	67 RIVER RD & CHEMAWA U CHE - EC	0	22	22	0	6	6
1	67 RIVER RD & CHEMAWA U CHEMRI	85	0	85	21	0	21
2	1014 CHEMAWA/ROBINDALE	11	13	24	3	3	6
3	1015 CHEMAWA/NEWBERG	43	25	68	11	6	17
4	1016 CHEMAWA/JOAN	13	7	19	3	2	5
5	1017 CHEMAWA/TRADE WIND	8	3	9	2	1	2
6	1018 13TH/CHEMAWA	20	8	29	5	2	7
7	1019 13TH/RAFAEL	10	1	11	3	0	3
8	1020 RAFAEL/10TH	4	0	4	1	0	1
9	1021 SHORELINE/CUMMINGS	20	1	21	5	0	5
10	195 WAYNE & RIVERCREST U RIVEWA	8	1	9	2	0	2
11	1022 SUNSET/5TH	4	1	6	1	0	2
12	1023 SUNSET/RIVER RD	18	5	23	5	1	6
13	1024 RIVER RD/HOMEWOOD	36	18	54	8	3	11
14	1025 RIVER RD/HOLLYHOCK	24	2	26	6	1	7
15	1026 RIVER RD/GLYNBROOK	24	7	30	6	2	8
16	1027 RIVER RD/APPLE BLOSSOM	39	12	51	10	3	13

Average Daily Ridership for Year 2007 on Keizer Bus stops of Route 4



Average Daily Ridership for Year 2007 on Keizer Bus stops of Route 9



Appendix "D"
ODOT Traffic Counts

TRANSPORTATION DEVELOPMENT BRANCH
 TRANSPORTATION SYSTEM MONITORING UNIT
 VEHICULAR VOLUME

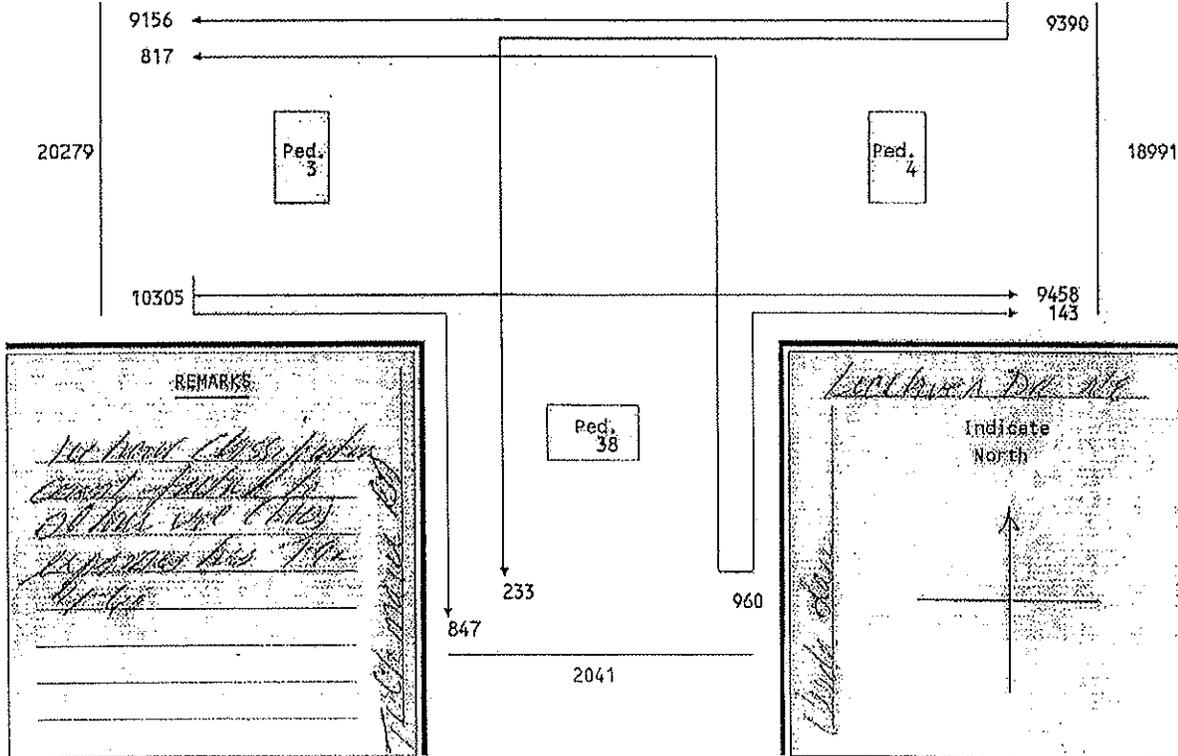
DATE : July 23/24, 2007
 DAY WEEK : Mon. Tues.
 ACT COUNT: 16
 HRS COUNT: 6AM - 10PM
 PED COUNT: 16
 HRS COUNT: 6AM - 10PM
 WEATHER : clear

CITY or COUNTY : Keizer
 INTERSECTION OF: Lockhaven Dr, NE @ Verda Lane
 MILE POST: n/a
 CLASSIFICATION : All vehicles

RECEIVED
 AUG 29 2007
 O.D.O.T. Region 2

	No.	%
TOTAL VEHICLES		
ENTERING INTERSECTION :	20654	100
ENTERING FROM NORTH & SOUTH :	960	4.6
ENTERING FROM EAST & WEST :	19694	95.3

McBrien PD *Tr. 14/23/07*



VPK

**SUMMARY OF TRAFFIC COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION**

DATE : JULY 23/24, 2007
 HOURS : 6AM - 10PM
 DAY : Mon, Tues.
 WEATHER : clear
 COUNTY : Marion
 INTERSECTION OF: Lockhaven Dr. & Verda Lane
 CITY: Keizer
 MILE POST : n/a

Tab by: CHB: bvs

TIME OF DAY	SUMMARY BY MOVEMENTS								TOTAL	NORTH AND SOUTH	PERCENT OF TOTAL	EAST AND WEST	PERCENT OF TOTAL	ENTERING VOLUMES BY LEGS	
	E-S	E-W	S-E	S-W	W-E	W-S	EAST	WEST							
06:00-07:00A	7	219	5	19	481	22	753	24	3.2	729	96.8	226	24	503	
07:00-07:15A		78		10	127	6	221	10	4.5	211	95.5	78	10	133	
07:15-07:30A	1	64	2	4	138	3	212	6	2.8	206	97.2	65	6	141	
07:30-07:45A	2	86	1	12	154	10	265	13	4.9	252	95.1	88	13	164	
07:45-08:00A	4	105	2	7	120	11	249	9	3.6	240	96.4	109	9	151	
08:00-08:15A	1	98	2	11	143	5	260	13	5.0	247	95.0	99	13	148	
08:15-08:30A	5	97		5	127	12	246	5	2.0	241	98.0	102	5	139	
08:30-08:45A	1	111	2	10	142	12	278	12	4.3	266	95.7	112	12	154	
08:45-09:00A	7	130	1	13	135	11	297	14	4.7	283	95.3	137	14	146	
09:00-10:00A	10	453	6	47	435	35	986	53	5.4	933	94.6	463	53	470	
10:00-11:00A	8	462	8	54	516	49	1172	62	5.7	1035	94.3	470	62	565	
11:00-12:00P	12	461	9	37	609	44	1346	46	3.9	1126	96.1	473	46	653	
12:00-01:00P	17	566	10	50	643	60	1312	60	4.5	1286	95.5	583	60	703	
01:00-02:00P	10	581	4	46	614	57	1363	50	3.8	1282	96.2	591	50	671	
02:00-03:00P	8	649	8	63	595	40	1465	71	5.2	1292	94.8	657	71	635	
03:00-04:00P	22	674	8	49	654	61	1465	57	3.9	1408	96.1	693	57	715	
04:00-04:15P	7	165	1	15	147	24	359	16	4.5	343	95.5	172	16	171	
04:15-04:30P	4	190	2	23	167	17	403	25	6.2	378	93.8	194	25	184	
04:30-04:45P	5	209	3	11	195	18	442	14	3.2	428	96.8	214	14	214	
04:45-05:00P	3	184	3	17	162	17	386	20	5.2	366	94.8	187	20	179	
05:00-05:15P	3	179		7	171	20	380	7	1.8	373	98.2	182	7	191	
05:15-05:30P	8	200	10	11	163	18	410	21	5.1	389	94.9	208	21	181	
05:30-05:45P	5	204	5	11	182	21	428	16	3.7	412	96.3	209	16	203	
05:45-06:00P	7	185	4	21	177	23	417	25	6.0	392	94.0	192	25	205	
06:00-07:00P	23	691	13	60	601	51	1439	73	5.1	1366	94.9	714	73	652	
07:00-08:00P	11	466	10	57	435	44	1023	67	6.5	956	93.5	477	67	479	
08:00-09:00P	8	438	6	44	338	45	879	50	5.7	829	94.3	446	50	383	
09:00-10:00P	13	382	5	29	226	34	689	34	4.9	655	95.1	395	34	260	
TOTAL COUNT	212	8324	130	743	8598	770	18777	873	4.6	17904	95.4	8536	873	9368	
24HR FACTOR	1.10	1.10	1.10	1.10	1.10	1.10	20554	960	4.6	19695	95.4	9390	960	10305	
24HR VOLUME	233	9156	143	817	9458	847									

North and South is: Verda Lane
 East and West is: Lockhaven Dr. - NE
 SUM_2419

**SUMMARY OF AFFIC COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION**

DATE : July 23/24, 2007 DAY : Mon. Tues. COUNTY : Marion CITY : Keizer
 HOURS : 6AM - 10PM HEATER: clear INTERSECTION OF: Lockhaven Dr. NE @ Verda Lane
 Tab by: Mile Post : n/2

TIME OF DAY	SUMMARY BY MOVEMENTS								TOTAL	NORTH AND SOUTH		PERCENT OF TOTAL		ENTERING VOLUMES BY LEGS		
	E-S	E-W	S-W	W-E	N-S	S-E	S-W	W-E		South	North	East	West	East	South	West
06:00-07:00A	7	219	5	19	481	22	753	24	3.2	729	96.8	226	24	505		
07:00-08:00A	7	333	5	33	539	30	947	38	4.0	909	96.0	340	38	569		
08:00-09:00A	14	436	5	39	547	40	1081	44	4.1	1037	95.9	450	44	587		
09:00-10:00A	10	453	6	47	435	35	986	53	5.4	933	94.6	463	53	470		
10:00-11:00A	8	462	8	54	516	49	1097	62	5.7	1035	94.3	470	62	565		
11:00-12:00P	12	461	9	37	609	44	1172	46	3.9	1126	96.1	473	46	653		
12:00-01:00P	17	566	10	50	643	60	1346	60	4.5	1286	95.5	583	60	703		
01:00-02:00P	10	581	4	26	614	57	1312	50	3.8	1262	96.2	591	50	671		
02:00-03:00P	8	649	8	53	595	40	1363	71	5.2	1292	94.8	657	71	635		
03:00-04:00P	22	671	8	49	654	61	1465	57	3.9	1408	96.1	693	57	715		
04:00-05:00P	19	748	9	66	672	76	1590	75	4.7	1515	95.3	767	75	748		
05:00-06:00P	23	766	19	59	693	82	1635	69	4.2	1566	95.8	791	69	775		
06:00-07:00P	23	691	13	60	601	51	1439	73	5.1	1366	94.9	714	73	652		
07:00-08:00P	11	466	10	57	435	44	1023	67	6.5	956	93.5	477	67	479		
08:00-09:00P	8	438	6	44	338	45	879	50	5.7	829	94.3	446	50	383		
09:00-10:00P	13	382	5	29	226	34	689	34	4.9	655	95.1	395	34	260		
TOTAL COUNT	212	8324	130	743	8598	770	18777	873	4.6	17904	95.4	8536	873	9368		
24-HR FACTOR	1.10	1.10	1.10	1.10	1.10	1.10	20654	960	4.6	19695	95.4	9590	960	10305		
24-HR VOLUME	233	9156	143	817	9458	847										

North and South is: Verda Lane East and West is: Lockhaven Dr. NE SUM_2419

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 DAY OF WEEK : Mon. Tues.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : EAST
 COUNTY : Marion
 CITY : Keizer
 INTERSECTION OF : Lockhaven Dr. NE & Verda Lane
 MELE POST : n/a
 TO : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS	DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	CYCLE
	Cars	Mtr	Mtr	Other			5 Axl	6 Axl	>7Axl	7 Axl	8 Axl	>9Axl				
06:00-07:00A	3		2		2										7	
07:00-07:15A	1														1	
07:15-07:30A	2														2	
07:30-07:45A	1		2												4	
07:45-08:00A	1		3		1										1	
08:00-08:15A	1		1												5	
08:15-08:30A	4		2												1	
08:30-08:45A	5		4												7	
08:45-09:00A	5		3												10	
09:00-10:00A	6		6												8	
10:00-11:00A	9		8												12	
11:00-12:00P	6		3												17	
12:00-01:00P	6		2										1		10	
01:00-02:00P	5		6		3										8	
02:00-03:00P	13		2												22	
03:00-04:00P	4		2												7	
04:00-04:15P	3		1												4	
04:15-04:30P	4		1												5	
04:30-04:45P	3		1												3	
04:45-05:00P	3		3												3	
05:00-05:15P	5		3												8	
05:15-05:30P	3		1		1										5	
05:30-05:45P	5		2												7	
05:45-06:00P	16		7												23	
06:00-07:00P	8		3												11	
07:00-08:00P	6		2												8	
08:00-09:00P	9		4												13	
09:00-10:00P																
16 HOUR	131		68		5	2							1		212	

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : JULY 23/24, 2002 COUNTY : Marion CITY: Keizer
 DAY OF WEEK : Mon. Tues. INTERSECTION OF: Lockhaven Dr. NE of Vanda Lane
 HOURS COUNTED: 6AM - 10PM. MILE POST : n/a
 WEATHER : clear TO : WEST
 FROM : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CYCLE
	Cars	WFLP	Other	WFLP	2 Axl	3 Axl	>4axl	4 Axl	5 Axl	>5Axl	6 Axl	>7Axl	7 Axl	8 Axl	>9Axl				
06:00-07:00A	95		97	2	8	1		3	8						3	2	219	2	
07:00-07:15A	36		33	1	1	1			5							1	78	1	
07:15-07:30A	33		26					1									64		
07:30-07:45A	42		33	1	3		1									3	86		
07:45-08:00A	48		38	1	8	1	1		2							1	105		
08:00-08:15A	48		38		6		1		2								98		
08:15-08:30A	41		39	3	5		1		3							1	97		
08:30-08:45A	58		41	1	5		1		1							1	111		
08:45-09:00A	71		48	1	3	1		1	3							2	130		
09:00-10:00A	242		157	3	22	4	1	1	13							2	453		
10:00-11:00A	243		179	6	14	1	4	4	5							3	462		
11:00-12:00P	232		190	5	14	3	1	1	9							2	461		
12:00-01:00P	342		196	7	9	2	2	2	3							1	566		
01:00-02:00P	347		204	5	7	4	4	1	8							2	649		
02:00-03:00P	381		226	8	15	3		1	8							1	671		
03:00-04:00P	388		257	4	8	4										6	165		
04:00-04:15P	93		65	2	3	1										2	190		
04:15-04:30P	114		71	1	1	1			1							1	184		
04:30-04:45P	116		83	4	2	2			1							2	209		
04:45-05:00P	109		72		2											1	179		
05:00-05:15P	116		59	1	1				1							1	200		
05:15-05:30P	107		88	2	2											1	204		
05:30-05:45P	118		81	2	1											1	185		
05:45-06:00P	124		57	2												6	691		
06:00-07:00P	430		237	5	4	1		4								3	466		
07:00-08:00P	298		158	1	4			1								1	438		
08:00-09:00P	268		163	1	4											2	382		
09:00-10:00P	245		133													2			
16 HOUR:	4785	2	3069	69	152	28	5	12	41	74					45	37	8324	14	

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 DAY OF WEEK : Mon. Tues.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : SOUTH

CITY : Keizer
 COUNTY : Marion
 INTERSECTION OF : Lockhaven Dr. NE @ Verda Lane
 MILE POST : n/a
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK >4AXL	SGL TRAILER TRUCKS >6AXL	DBL TRAILER TRUCKS >6AXL	TRP TRAILER TRUCKS >7AXL	BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BT CY ELE
	Cars	WTrlr	Other	WTrlr								
06:00-07:00A	2		2	1							5	
07:00-07:15A	1				1						2	
07:15-07:30A	1										1	
07:30-07:45A			1								2	
07:45-08:00A			2								2	
08:00-08:15A												
08:15-08:30A	1		1								2	
08:30-08:45A	1										1	
08:45-09:00A	2		3								6	
09:00-09:15A	4		4								8	
10:00-11:00A	6		3								10	
11:00-12:00P	5		4		1						10	
12:00-01:00P	2		2								4	
01:00-02:00P	4		2						1		8	
02:00-03:00P	5		2		1						11	
03:00-04:00P	1		2								3	
04:00-04:15P	1		1								2	
04:15-04:30P	3										3	
04:30-04:45P	2		1								3	
04:45-05:00P												
05:00-05:15P	6		4								10	
05:15-05:30P	3		2								5	
05:30-05:45P	3		1								4	
05:45-06:00P	8		4						1		13	
06:00-07:00P	7		3								10	
07:00-08:00P	4		2								6	
08:00-09:00P	4		1								5	
09:00-10:00P												
15 HOUR	76		43	2	4	1			1		130	2

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : JULY 23/24, 2007 COUNTY : Marion CITY: Ketzar
 DAY OF WEEK : Mon. Tues. INTERSECTION OF: Lockhaven Dr. NE @ Verda Lane
 HOURS COUNTED: 6AM - 10PM MILE POST : n/a
 WEATHER : clear TO : WEST
 FROM : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS	DBL TRAILER TRUCKS	TRP. TRAILER TRUCKS	BUSES	MOTORCYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY
	cars	MTLP	Other	MTLP								
06:00-07:00A	7		11							1	19	
07:00-07:15A	3		7								10	
07:15-07:30A	1		3								4	
07:30-07:45A	8		4								12	
07:45-08:00A	3		4								7	
08:00-08:15A	3		3		3						11	
08:15-08:30A	1		2		2						5	
08:30-08:45A	6		3		1						10	
08:45-09:00A	6		7								13	
09:00-10:00A	28		17		1						47	
10:00-11:00A	37		13		2						54	
11:00-12:00P	24		11		2						37	
12:00-01:00P	30		19		1						50	
01:00-02:00P	30		14		3						46	
02:00-03:00P	37		22		1						63	
03:00-04:00P	34		13		2						49	
04:00-04:15P	11		4								15	
04:15-04:30P	12		9		2						23	
04:30-04:45P	7		4								11	
04:45-05:00P	12		5								17	
05:00-05:15P	7										7	
05:15-05:30P	8		3								11	
05:30-05:45P	7		4								11	
05:45-06:00P	14		6		1					1	21	
06:00-07:00P	38		20								60	
07:00-08:00P	39		17		1						57	
08:00-09:00P	28		14		1						44	
09:00-10:00P	20		9								29	
16 HOUR	461		248		9	4				2	743	2

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 DAY OF WEEK : Mon., Tues.
 HOURS COUNTED: 6am - 10pm
 WEATHER : clear
 FROM : WEST
 COUNTY : Marion
 INTERSECTION OF: Lockhaven Dr. NE @ Verda Lane
 CITY: Keizer
 MILE POST : r/a
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLES	BI CY CLE
	Cars	WTrlr	Other	WTrlr	2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	9 Axl	10 Axl	11 Axl	12 Axl				
06:00-07:00A	248		203	4	6	2	1	4	6						1	7	481	1	
07:00-07:15A	71		50	1	1	1		1	1	3					1	2	127	1	
07:15-07:30A	76		51	1	5	1		1	1	3					1	1	138	1	
07:30-07:45A	85		63	1	1	1		1	2						1	1	154		
07:45-08:00A	66		48	4	4	6		1							1	1	120		
08:00-08:15A	74		57	4	6	6		1	4						1	1	143		
08:15-08:30A	68		51	4	4	4		3							1	1	127		
08:30-08:45A	86		48	4	4	4		1							1	1	142		
08:45-09:00A	68		56	3	3	3		2	12						2	2	135		
09:00-10:00A	240		147	8	13	4		3							1	1	435		
10:00-11:00A	295		182	6	15	1		7							1	3	516		
11:00-12:00P	336		225	10	15	6		3	8						2	2	609		
12:00-01:00P	361		237	8	14	5		3	8						4	4	643		
01:00-02:00P	347		222	10	15	4		3	1	6					2	4	614		
02:00-03:00P	338		216	11	15	7		1	6						2	7	595		
03:00-04:00P	369		246	4	15	4		2	8						2	2	654		
04:00-04:15P	86		54	1	4	4		1							1	1	147		
04:15-04:30P	96		61	2	3	2		1	1						1	1	167		
04:30-04:45P	117		68	1	3	1		1							3	3	196		
04:45-05:00P	92		63	2	3	1		1							2	2	162		
05:00-05:15P	112		55	1	3	3		1							1	1	171		
05:15-05:30P	106		56	2	1	1		1							1	1	163		
05:30-05:45P	115		63	2	1	1		1							1	1	182		
05:45-06:00P	104		69	1	1	1		1							4	4	177		
06:00-07:00P	366		217	7	5	1		1	2						2	2	601		
07:00-08:00P	268		154	3	4	4		1							1	1	435		
08:00-09:00P	211		113	4	4	4		1							1	1	336		
09:00-10:00P	150		71	1	1	1		1							2	2	226		
16 HOUR	4951	1	3143	100	155	43	3	26	32	66	1				26	51	8598	14	

Summarized by: _____ | 08/21/07

TRAFFIC COUNTY SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 DAY OF WEEK : Mon. Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : WEST

COUNTY : Marion
 INTERSECTION OF: Lockhaven Dr. NE @ Verda Lane
 CITY: Keizer

MILE POST : n/a
 TO : SOUTH

TIME OF DAY	PASSENGER bars	OTHER 2 AXLE		SGL UNIT TRUCK 3 AXL >4AXL	SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP. TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT VEHICLE	TOTAL ALL VEHICLE	BI. CY
		bars	WtrLr		WtrLr	2 AXL	3 AXL	4 AXL	5 AXL	6 AXL	7 AXL	8 AXL	9 AXL				
06:00-07:00A	12	10													22	1	
07:00-07:15A	3	3													6		
07:15-07:30A	2	1													3		
07:30-07:45A	7	3													10		
07:45-08:00A	8	2		1											11		
08:00-08:15A	3	2													5		
08:15-08:30A	8	4		1											12		
08:30-08:45A	5	4		1											12		
08:45-09:00A	9	2													11		
09:00-10:00A	20	12		1											35	1	
10:00-11:00A	28	18		3											49		
11:00-12:00P	26	18													44		
12:00-01:00P	39	19		1											60		
01:00-02:00P	35	18		2											57		
02:00-03:00P	25	11		2											40		
03:00-04:00P	34	24		2											61	1	
04:00-04:15P	15	9													24		
04:15-04:30P	13	4		2											17		
04:30-04:45P	11	5													18		
04:45-05:00P	12	4		1											17		
05:00-05:15P	10	8		1											20		
05:15-05:30P	7	10		1											18		
05:30-05:45P	13	8													21		
05:45-06:00P	15	8													23		
06:00-07:00P	29	22													51	1	
07:00-08:00P	27	17													44		
08:00-09:00P	25	17												2	45		
09:00-10:00P	21	13													34		
16 HOUR	462	276	8	17	2								3	2	770	5	

SUMMARY OF BICYCLE COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : JULY 23/24, 2007 DAY : Mon, Tues.
 HOURS : 6AM - 10PM WEATHER : clear
 CITY : Keizer
 COUNTY : Marion
 INTERSECTION OF: Lockhaven Dr. NE & Verda Lane
 MILE POST: S.D.A.

Tab by:

TIME OF DAY	BICYCLES MOVING WITH VEHICULAR TRAFFIC							BICYCLES USING CROSS-WALKS		
	E-S	E-W	S-E	S-W	N-E	N-S	TOTAL	EAST	SOUTH	WEST
06:00-07:00A		2			1				1	
07:00-07:15A		1			1					
07:15-07:30A					1					
07:30-07:45A										
07:45-08:00A										
08:00-08:15A										
08:15-08:30A										
08:30-08:45A										
08:45-09:00A										
09:00-10:00A		1								
10:00-11:00A										
11:00-12:00P										
12:00-01:00P										
01:00-02:00P		1								
02:00-03:00P										
03:00-04:00P										
04:00-04:15P			2							
04:15-04:30P										
04:30-04:45P		1								
04:45-05:00P										
05:00-05:15P		2								
05:15-05:30P										
05:30-05:45P										
05:45-06:00P										
06:00-07:00P		2								
07:00-08:00P		3								
08:00-09:00P		1								
09:00-10:00P										
TOTAL VOLUME	14	2	2	2	14	5	37	1	1	3

North and South is: Verda Lane East and West is: Lockhaven Dr. NE BIKE_2419

SUMMARY OF PEDESTRIAN COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : JULY 23/24, 2007 DAY : Mon. Tues. COUNTY : Marion CITY: Keizer
 HOURS : 5AM - 10PM WEATHER: clear INTERSECTION OF: Lockhaven Dr. NE @ Verda Lane
 Tab by: Chk. by: MILE POST : n/a

TIME OF DAY	STUDENT PEDESTRIANS			OTHER PEDESTRIANS			STUDENT AND OTHER PEDESTRIAN			TOTAL
	EAST	SOUTH	WEST	EAST	SOUTH	WEST	EAST	SOUTH	WEST	
06:00-07:00A				1					1	1
07:00-07:15A										
07:15-07:30A										
07:30-07:45A										
07:45-08:00A										
08:00-08:15A				2					2	2
08:15-08:30A										
08:30-08:45A				2					2	2
08:45-09:00A										
09:00-10:00A				6					6	6
10:00-11:00A				5					5	5
11:00-12:00P				1					1	1
12:00-01:00P										
01:00-02:00P				2					2	2
02:00-03:00P				1					1	1
03:00-04:00P				3					3	3
04:00-04:15P										
04:15-04:30P										
04:30-04:45P				1					1	1
04:45-05:00P										
05:00-05:15P				2					2	2
05:15-05:30P				1					1	1
05:30-05:45P										
05:45-06:00P				2					2	2
06:00-07:00P										
07:00-08:00P				5					5	5
08:00-09:00P				2					2	2
09:00-10:00P				7					7	7
TOTAL VOLUME				4	38	3	4	38	3	45

TRANSPORTATION DEVELOPMENT BRANCH
TRANSPORTATION SYSTEM MONITORING UNIT
VEHICULAR VOLUME

DATE : July 24/25, 2007

CITY or COUNTY : Keizer

DAY WEEK : Tues./Wed.

INTERSECTION OF: N River Rd. @ Wheatland Rd.

ACT COUNT: 16

HRS COUNT: 6AM - 10PM

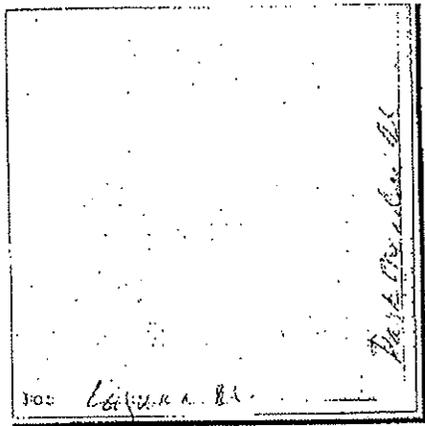
PED COUNT: 16

MILE POST: n/a

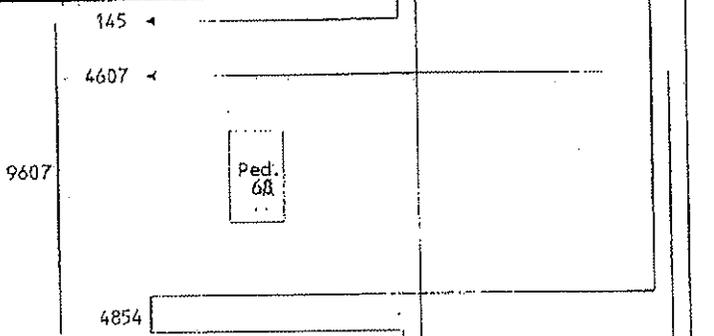
HRS COUNT: 6AM - 10PM

CLASSIFICATION : All vehicles

WEATHER : clear



Loc: *Keizer, OR*



REMARKS

*No more displacement
counted for
20 miles (1/10)
Highway 101
7/24/07*

TO be checked in 10/07

	No.	%
TOTAL VEHICLES ENTERING INTERSECTION	23365	100
ENTERING FROM NORTH & SOUTH	18511	79.2
ENTERING FROM EAST & WEST	4854	20.7

Indicate North

✓ P
K

**SUMMARY OF TRAFFIC COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION**

DATE : July 24/25, 2007 DAY : Tues./Wed. COUNTY : Marion CITY: Keizer
 HOURS : 5AM - 10PM WEATHER: Clear INTERSECTION OF: N River Rd. & Wheatland Rd.
 Tab by: Chk. by: MILE POST : N/A

TIME OF DAY	SUMMARY BY MOVEMENTS										ENTERING VOLUMES BY LEGS			
	N-S	N-W	S-N	S-W	W-N	W-S	TOTAL	NORTH AND SOUTH	PERCENT OF TOTAL	EAST AND WEST	PERCENT OF TOTAL	NORTH	SOUTH	WEST
06:00-07:00A	344	8	276	83	9	219	939	711	75.7	228	24.3	352	359	228
07:00-07:15A	120	1	80	15	2	92	310	216	69.7	94	30.3	121	95	94
07:15-07:30A	137	3	58	26	1	73	298	224	75.2	74	24.8	140	84	74
07:30-07:45A	155	4	70	30	4	127	386	255	66.1	131	33.9	155	100	131
07:45-08:00A	135	2	75	35	2	98	345	245	71.0	100	29.0	135	110	100
08:00-08:15A	104	3	78	36	2	85	308	221	71.8	87	28.2	107	114	87
08:15-08:30A	123	2	54	39	1	67	286	218	76.2	65	23.8	125	93	68
08:30-08:45A	105	1	60	36	1	91	292	201	68.8	91	31.2	105	96	91
08:45-09:00A	102	1	77	50	4	73	307	239	74.9	77	25.1	103	127	77
09:00-10:00A	362	22	306	178	6	281	1155	868	75.2	287	24.8	384	484	287
10:00-11:00A	328	6	269	218	11	248	1080	821	76.0	259	24.0	334	487	259
11:00-12:00P	349	5	329	239	9	277	1208	922	76.3	286	23.7	354	568	286
12:00-01:00P	420	7	453	278	10	276	1444	1138	80.2	286	19.8	427	731	286
01:00-02:00P	346	4	386	259	10	274	1279	995	77.8	284	22.2	350	645	284
02:00-03:00P	354	5	395	280	11	270	1315	1034	78.6	281	21.4	359	675	281
03:00-04:00P	454	5	490	344	6	288	1587	1293	81.5	294	18.5	459	834	294
04:00-04:15P	140	3	135	86	3	72	444	365	83.0	75	17.0	143	222	75
04:15-04:30P	107	1	155	102	67	67	432	365	84.5	67	15.5	108	257	67
04:30-04:45P	140	1	145	106	1	77	470	392	83.4	78	16.6	141	251	78
04:45-05:00P	128	5	158	99	7	62	459	390	85.0	69	15.0	133	257	69
05:00-05:15P	159	5	167	108	4	67	510	439	86.1	71	13.9	164	275	71
05:15-05:30P	150	6	202	150	4	78	590	508	86.1	82	13.9	156	352	82
05:30-05:45P	151	2	177	118	4	82	530	448	84.5	82	15.5	153	295	82
05:45-06:00P	123	4	154	118	3	66	468	399	85.3	68	14.7	127	272	69
06:00-07:00P	425	13	526	382	4	292	1642	1346	82.0	296	18.0	439	908	296
07:00-08:00P	281	7	341	261	6	242	1138	890	78.2	248	21.8	288	602	248
08:00-09:00P	231	10	395	286	7	199	1128	922	81.7	206	18.3	241	681	206
09:00-10:00P	242	3	281	226	4	139	895	752	84.0	143	16.0	245	507	143
TOTAL COUNT	6215	132	6293	4188	131	4282	21241	16828	79.2	4413	20.8	6347	10481	4413
2-HR FACTOR	1.10	1.10	1.10	1.10	1.10	1.10	2365	18511	79.2	4854	20.8	6982	11529	4854
2-HR VOLUME	6837	145	5922	4607	144	4710								

North and South is: N River Rd. East and West is: Wheatland Rd. SUN_2420

SUMMARY OF TRAFFIC COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 24/25, 2037 COUNTY : Marion CITY: Keizer
 DAY : Tues./Wed. INTERSECTION OF: N River Rd. @ Wheatland Rd.
 WEATHER: clear MILE POST : n/a
 HOURS : 6AM - 10PM
 Tab by: Chk. by:

TIME OF DAY	SUMMARY BY MOVEMENTS										TOTAL	NORTH PERCENT AND SOUTH			EAST AND WEST			ENTERING VOLUMES BY LEGS		
	N-S	N-W	S-W	W-N	W-S	S-E	S-N	W-E	U-S	U-N		TOTAL	PERCENT OF SOUTH	PERCENT OF NORTH	TOTAL	EAST	WEST	NORTH	SOUTH	WEST
06:00-07:00A	344	8	276	83	9	219	939	711	75.7	228	24.3	352	359	228	352	359	352	359	228	
07:00-08:00A	547	4	283	106	9	396	1339	940	70.2	399	29.8	551	399	399	551	399	551	399	399	
08:00-09:00A	434	6	269	161	7	316	1193	870	72.9	323	27.1	440	430	323	440	430	440	430	323	
09:00-10:00A	362	22	306	178	6	281	1155	868	75.2	287	24.8	384	484	287	384	484	384	484	287	
10:00-11:00A	328	6	269	218	11	248	1080	821	76.0	259	24.0	334	467	259	334	467	334	467	259	
11:00-12:00P	349	5	329	239	9	277	1444	1158	80.2	286	19.8	427	568	286	427	568	427	568	286	
12:00-01:00P	420	7	453	278	10	276	1279	995	77.8	284	22.2	350	645	284	350	645	350	645	284	
01:00-02:00P	346	4	386	259	10	274	1315	1034	78.6	281	21.4	359	675	281	359	675	359	675	281	
02:00-03:00P	354	5	395	280	11	270	1587	1293	81.5	294	18.5	459	834	294	459	834	459	834	294	
03:00-04:00P	454	5	490	344	6	288	1801	1512	84.0	289	16.0	525	987	289	525	987	525	987	289	
04:00-05:00P	515	10	594	393	11	278	2098	1794	85.5	304	14.5	600	1194	304	600	1194	600	1194	304	
05:00-06:00P	583	17	730	494	11	293	1642	1346	82.0	296	18.0	438	908	296	438	908	438	908	296	
06:00-07:00P	425	13	526	382	4	292	1138	890	78.2	248	21.8	288	602	248	288	602	288	602	248	
07:00-08:00P	281	7	341	261	5	242	1128	922	81.7	206	18.3	241	681	206	241	681	241	681	206	
08:00-09:00P	231	10	395	286	7	199	895	752	84.0	143	16.0	245	507	143	245	507	245	507	143	
09:00-10:00P	242	3	281	226	4	139														
TOTAL COUNT	5215	132	6293	4188	131	4282	21241	16628	79.2	4413	20.8	6347	16481	4413	6347	16481	6347	16481	4413	
24HR FACTOR	1.1C	1.10	1.10	1.10	1.10	1.10	23365	16511	79.2	4894	20.8	6985	11529	4894	6985	11529	6985	11529	4894	
24HR VOLUME	6837	145	6922	4607	144	4710														

North and South is: N River Rd. East and West is: Wheatland Rd. SUM_2420

TRAFFIC COUN. SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 24/25, 2007
 DAY OF WEEK : Tues./Wed.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : NORTH
 COUNTY : Marion
 INTERSECTION OF: N River Rd. @ Wheatland Rd.
 CITY: Keizer
 MILE POST : 7.3
 TO : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY -CLE
	Cars	WTrlr	WTrlr	Other	WTrlr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl				
06:00-07:00A	214	1	122	1	1	1	1	1	1	1	1	1	2	2	344	2
07:00-07:15A	79		37	1	1	1	1	1	1	1	1	1	1	1	120	1
07:15-07:30A	81		51	1	3	1	1	1	1	1	1	1	1	1	137	1
07:30-07:45A	98		54	1	1	1	1	1	1	1	1	1	1	1	155	1
07:45-08:00A	88		39	4	2	1	1	1	1	1	1	1	1	1	135	2
08:00-08:15A	67		31	1	1	2	1	1	1	1	1	1	1	1	184	1
08:15-08:30A	72		39	3	6	1	1	1	1	1	1	1	1	1	123	1
08:30-08:45A	65		32	6	1	1	1	1	1	1	1	1	1	1	105	1
08:45-09:00A	63		30	3	4	4	1	1	1	1	1	1	1	1	102	1
09:00-10:00A	195		131	9	15	4	4	1	1	1	1	1	1	2	362	2
10:00-11:00A	192		119	5	7	3	3	1	1	1	1	1	1	1	328	1
11:00-12:00P	210		112	2	12	7	7	1	1	1	1	1	2	1	349	1
12:00-01:00P	267		127	4	9	7	7	1	1	1	1	1	3	1	420	1
01:00-02:00P	213		107	2	11	4	4	2	3	1	1	1	4	3	346	1
02:00-03:00P	227		110	1	4	4	2	2	1	1	1	1	2	1	354	1
03:00-04:00P	279		140	7	18	5	3	3	1	1	1	1	2	1	454	5
04:00-04:15P	90		40	2	5	5	2	2	1	1	1	1	1	2	140	1
04:15-04:30P	69		32	2	2	2	2	2	1	1	1	1	1	1	107	1
04:30-04:45P	94		40	1	2	2	2	1	1	1	1	1	1	1	140	1
04:45-05:00P	81	2	36	3	3	3	1	1	1	1	1	1	2	1	128	1
05:00-05:15P	103		40	3	4	2	1	1	1	1	1	1	3	1	159	1
05:15-05:30P	95		51	2	1	1	1	1	1	1	1	1	1	1	150	1
05:30-05:45P	105		42	1	2	2	1	1	1	1	1	1	1	1	151	2
05:45-06:00P	77		44	1	1	1	1	1	1	1	1	1	1	1	123	1
06:00-07:00P	271	1	141	4	5	5	1	1	1	1	1	1	2	1	425	2
07:00-08:00P	195		78	3	1	1	1	1	1	1	1	1	1	2	281	2
08:00-09:00P	155		71	1	1	1	1	1	1	1	1	1	1	2	231	5
09:00-10:00P	163		70	2	3	3	1	2	1	1	1	1	1	2	242	2
16 HOUR	3908	4	1966	71	122	43	11	11	7	5	2	2	33	30	6215	26

Summarized by: _____ | 05/27/07

WORK_2420

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 24/25, 2007
 DAY OF WEEK : Tues./Wed.
 HOURS COUNTED: 6AM - 50PM
 WEATHER : clear
 FROM : NORTH
 COUNTY : Marion
 INTERSECTION OF: N River Rd. @ Wheatland Rd.
 CITY: Keizer
 MILE POST : r/a
 TO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE/SCOOTER/VEHICLE	TOTAL ALL	BI CY CLE
	Cars	WTrLr	Other	WTrLr	2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	>9Axl				
06:00-07:00A	4		4											8		
07:00-07:15A			1											1		
07:15-07:30A	3													3		
07:30-07:45A																
07:45-08:00A	3													3		
08:00-08:15A	2													2		
08:15-08:30A																
08:30-08:45A	1													1		
08:45-09:00A	7		11	2										22		
09:00-10:00A	4		2											5		
10:00-11:00A	1		3											5		
11:00-12:00P	3		4											7		
12:00-01:00P	2		2											4		
01:00-02:00P	3		1											5		1
02:00-03:00P	3		2											5		
03:00-04:00P	2		1											3		
04:00-04:15P			1											1		
04:15-04:30P			1											1		
04:30-04:45P	3		2											5		
04:45-05:00P	3		3											6		
05:00-05:15P	3		3											6		
05:15-05:30P			2											2		
05:30-05:45P	2		2											4		1
05:45-06:00P	8		5											13		1
06:00-07:00P	4		3											7		1
07:00-08:00P	6		4											10		
08:00-09:00P	2		1											3		
09:00-10:00P																
16 HOUR	69		57	2		2								132		4

Summa-ized by: _____ | 08/27/07
 WORK 2420

TRAFFIC COUN. SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 24/25, 2007
 DAY OF WEEK : Tues./Wed.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : SOUTH
 TO : NORTH
 COUNTY : Marion
 INTERSECTION OF: N River Rd. @ Wheatland Rd.
 CITY: Keizer
 MILE POST : N/A

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK			SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY CLE
	Cars	WTr	Tr	Other	2 AXL	3 AXL	>4AXL	>4AXL	4 AXL	5 AXL	>6AXL	6 AXL	>7AXL	7 AXL	8 AXL	>9AXL				
06:00-07:00A	182			74	5	3		1									5	276		
07:00-07:15A	45			27	2	1											2	80		
07:15-07:30A	38			16	1												1	58		
07:30-07:45A	44			18	1	3											2	70		
07:45-08:00A	49			19	2	1											2	75	1	
08:00-08:15A	46			17	11	1											1	78		
08:15-08:30A	36			13	2	1												54	1	
08:30-08:45A	38			19	1	1												60		
08:45-09:00A	47			21	4	5												77	1	
09:00-10:00A	179			105	8	7		2									1	306		
10:00-11:00A	151			103	3	4		3									5	269		
11:00-12:00P	192			111	4	10		11									1	329	2	
12:00-01:00P	270			156	8	5		1									2	453		
01:00-02:00P	225			129	5	8		9		3							2	366		
02:00-03:00P	230			130	8	12		7		2							3	395	3	
03:00-04:00P	321			150	2	9		5		1							1	490	5	
04:00-04:15P	92			39	2	2		1									2	136	2	
04:15-04:30P	104			45	3	2		1									1	145		
04:30-04:45P	84			51	4	1		2									2	158		
04:45-05:00P	105			47	1	3		1									1	167		
05:00-05:15P	112			51	1	2											2	202	1	
05:15-05:30P	138			62		2											2	177	1	
05:30-05:45P	123			49		2											2	154		
05:45-06:00P	105			45	2	8											2	526	5	
06:00-07:00P	360			149	5	8		1									2	341	1	
07:00-08:00P	232			106	2	1												395	3	
08:00-09:00P	276			112	3	3		1										281	1	
09:00-10:00P	202			78	1															
16 HOUR	4026	3	1942	78	111	55	8	10	5	10	2	2	2	15	36	6293	27			

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 24/25, 2007 COUNTY : Marion CITY: Keizer
 DAY OF WEEK : Tues./Wed. INTERSECTION OF: N River Rd. @ Wheatland Rd.
 HOURS COUNTED: 5AM - 10PM MILE POST : n/a
 WEATHER : clear POST : WEST
 FROM : SOUTH TO :

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	CY. CLE
	Cnts	Wt/Tr	Wtr/Tr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	6 Axl	>7Axl	7 Axl				
06:00-07:00A	42		32	1	2	1								3	1	83	
07:00-07:15A	10		2	2										1	1	15	
07:15-07:30A	17		6	1										1	1	26	
07:30-07:45A	13		10	1	4									1	1	30	
07:45-08:00A	21		13	1	1									1	1	35	
08:00-08:15A	21		8	2	2	1								1	1	36	1
08:15-08:30A	26		12	1	3	2								1	1	39	
08:30-08:45A	17		12	1	3	2								2	2	36	1
08:45-09:00A	26		21	1	4									2	2	50	
09:00-10:00A	108		59	4	4									2	1	178	
10:00-11:00A	138		61	4	6	1								6	1	218	
11:00-12:00P	127		91	3	7	1	3							7	1	239	
12:00-01:00P	167		98	3	3	2	2							3	3	278	
01:00-02:00P	154		90	3	6	1	2							3	1	259	
02:00-03:00P	182		84	2	3	2	2							5	1	280	
03:00-04:00P	232		97	1	4									5	4	344	
04:00-04:15P	57		25	1	1									2	2	86	
04:15-04:30P	67		32			1								1	1	102	
04:30-04:45P	73		29											2	1	106	
04:45-05:00P	70		25		1									3	3	99	
05:00-05:15P	73		32											2	2	108	
05:15-05:30P	113		34	1	1									1	1	150	
05:30-05:45P	86		27	2	1									1	1	118	
05:45-06:00P	78		37	1										1	1	118	
06:00-07:00P	265		106	2	4									2	1	382	2
07:00-08:00P	175		82	1										2	1	261	1
08:00-09:00P	193		85	2	1									3	1	286	2
09:00-10:00P	153		69											2	2	226	
16 HOUR	2704		1279	35	54	9	14	8	1	5				52	27	4188	9

Summary by: _____ | 08/27/07

TRAFFIC COUN. SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 24/25, 2007
 DAY OF WEEK : Tues./Wed.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : WEST

CITY: Keizer

COUNTY : Marion
 INTERSECTION OF: N River Rd. @ Wheatland Rd.
 MILE POST : n/a
 ID : NORTH

TIME OF DAY	PASSENGER Cars	OTHER 2-AXLE Other: n/a	SGL UNIT TRUCK 2 AXL 3 AXL	SGL TRAILER TRUCKS 4 AXL 5 AXL	DBL TRAILER TRUCKS 5 AXL 6 AXL	TRP TRAILER TRUCKS 7 AXL 8 AXL	TRUCKS >9AXL	BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	CY
06:00-07:00A	5	3	1							9	
07:00-07:15A	1	2								3	
07:15-07:30A	2	2								4	
07:30-07:45A	1	1								2	
07:45-08:00A	2	1								3	
08:00-08:15A											
08:15-08:30A											
08:30-08:45A	2	2								4	
08:45-09:00A	3	2								5	
09:00-10:00A	5	4	1							11	
10:00-11:00A	6	3								9	
11:00-12:00P	4	5								9	
12:00-01:00P	5	3								8	
01:00-02:00P	6	5								11	
02:00-03:00P	3	2								5	
03:00-04:00P	1	2								3	
04:00-04:15P											
04:15-04:30P	1									1	
04:30-04:45P	3	4								7	
04:45-05:00P	4									4	
05:00-05:15P	3	1								4	
05:15-05:30P											
05:30-05:45P	2	1								3	
05:45-06:00P	2	2								4	
06:00-07:00P	4	2								6	
07:00-08:00P	4	2								6	
08:00-09:00P	2	2								4	
09:00-10:00P											
16 HOUR	71	51	3	1	2			1	1	131	

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 24/25, 2007
 DAY OF WEEK : Tues./Wed.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : WEST
 COUNTY : Marion
 INTERSECTION OF : N River Rd. @ Wheatland Rd.
 CITY : Keizer
 MILE POST : n/a
 TO : SOUTH

TIME OF DAY	PASSENGER Cars	OTHER 2 AXLE WTrlr	SGL UNIT TRUCK 2 AXL	SGL TRAILER TRUCKS 3 AXL	SGL TRAILER TRUCKS 4 AXL	SGL TRAILER TRUCKS 5 AXL	DBL TRAILER TRUCKS 6 AXL	TRP TRAILER TRUCKS >7AXL	TRP TRAILER TRUCKS 7 AXL	TRP TRAILER TRUCKS 8 AXL	TRP TRAILER TRUCKS >9AXL	BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY CLE	
																117
06:00-07:00A	117	86	2	5	1	1	1	1	1	1	1	2	1	4	219	1
07:00-07:15A	49	38	2	1	1	1	1	1	1	1	1	1	1	1	92	1
07:15-07:30A	47	24	1	1	1	1	1	1	1	1	1	1	1	1	73	1
07:30-07:45A	74	46	1	2	1	1	1	1	1	1	1	3	1	1	127	1
07:45-08:00A	53	42	1	1	1	1	1	1	1	1	1	1	1	1	98	1
08:00-08:15A	53	31	1	1	1	1	1	1	1	1	1	1	1	1	85	1
08:15-08:30A	37	27	1	1	1	1	1	1	1	1	1	1	1	1	67	1
08:30-08:45A	51	37	2	1	1	1	1	1	1	1	1	1	1	1	91	1
08:45-09:00A	41	28	2	1	1	1	1	1	1	1	1	1	1	1	73	1
09:00-10:00A	172	94	2	6	1	1	1	1	1	1	1	4	2	2	281	3
10:00-11:00A	156	74	6	8	2	1	1	1	1	1	1	4	2	2	248	1
11:00-12:00P	144	107	4	8	1	1	1	1	1	1	1	4	3	3	277	1
12:00-01:00P	177	81	4	6	2	1	1	1	1	1	1	2	2	2	276	1
01:00-02:00P	150	113	4	4	1	1	1	1	1	1	1	1	1	1	274	1
02:00-03:00P	160	101	1	4	1	1	1	1	1	1	1	1	1	1	270	2
03:00-04:00P	159	114	3	6	1	1	1	1	1	1	1	1	3	3	288	1
04:00-04:15P	38	30	1	3	1	1	1	1	1	1	1	1	1	1	72	1
04:15-04:30P	34	32	1	2	1	1	1	1	1	1	1	1	1	1	67	1
04:30-04:45P	47	27	3	2	1	1	1	1	1	1	1	1	1	1	77	1
04:45-05:00P	31	22	1	1	1	1	1	1	1	1	1	1	1	1	62	1
05:00-05:15P	43	22	1	1	1	1	1	1	1	1	1	1	1	1	67	1
05:15-05:30P	44	31	1	1	1	1	1	1	1	1	1	1	1	1	78	1
05:30-05:45P	51	27	1	3	1	1	1	1	1	1	1	1	1	1	82	1
05:45-06:00P	40	23	1	1	1	1	1	1	1	1	1	1	1	1	66	1
06:00-07:00P	168	112	2	2	1	1	1	1	1	1	1	1	6	6	292	1
07:00-08:00P	162	74	1	2	1	1	1	1	1	1	1	1	2	2	242	2
08:00-09:00P	130	64	2	1	1	1	1	1	1	1	1	1	2	2	199	1
09:00-10:00P	91	46	1	1	1	1	1	1	1	1	1	1	1	1	139	2
16 HOUR	2519	1558	46	63	10	7	5	7	3	3	3	28	36	4282	19	

**SUMMARY OF BICYCLE COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION**

DATE : July 24/25, 2007 DAY : Tues./Wed. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: clear INTERSECTION OF: N River Rd. @ Wheatland Rd.
 Chk. by: MILE POST: : n/a

TIME OF DAY	BICYCLES MOVING WITH VEHICULAR TRAFFIC								BICYCLES USING CROSS WALKS		
	N-S	N-W	S-N	S-W	W-N	W-S	TOTAL	NORTH	SOUTH	WEST	
06:00-07:00A	2					1	3			1	
07:00-07:15A	1						1				
07:15-07:30A						1	1				
07:30-07:45A	1						1				
07:45-08:00A			1				1				
08:00-08:15A	2						3				
08:15-08:30A	1		1				1				
08:30-08:45A						1	3				
08:45-09:00A			1			3	4				
09:00-10:00A											
10:00-11:00A											
11:00-12:00P											
12:00-01:00P											
01:00-02:00P	1					1	2			1	
02:00-03:00P	1	1					2				
03:00-04:00P	5		3				8				
04:00-04:15P	1		2				10			1	
04:15-04:30P	1						2				
04:30-04:45P	1						3				
04:45-05:00P							2				
05:00-05:15P							2				
05:15-05:30P	1						1				
05:30-05:45P	2		1				4				
05:45-06:00P							2				
06:00-07:00P			5			1	7				
07:00-08:00P	2	1	1			2	7			1	
08:00-09:00P	5		3			2	11				
09:00-10:00P			1				3				
TOTAL VOLUME	26	4	27	9	19		85			6	

North and South is: N River Rd. East and West is: Wheatland Rd. BIKE 2420

SUMMARY OF PEDESTRIAN COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 24/25, 2007 DAY : Tues./Wed. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: clear INTERSECTION OF: N River Rd. @ Wheatland Rd.

Tab by: CHK. by: MILE POST : h/a

TIME OF DAY	STUDENT PEDESTRIANS			OTHER PEDESTRIANS			STUDENT AND OTHER PEDESTRIAN			TOTAL		
	NORTH	SOUTH	WEST	TOTAL	NORTH	SOUTH	WEST	TOTAL	NORTH		SOUTH	WEST
06:00-07:00A						2		2			2	2
07:00-07:15A												
07:15-07:30A												
07:30-07:45A						1		1			1	1
07:45-08:00A												
08:00-08:15A						1		1			1	1
08:15-08:30A						1		1			1	1
08:30-08:45A						2		2			2	2
08:45-09:00A						3		3			3	3
09:00-10:00A						6		6			6	6
10:00-11:00A						5		5			5	5
11:00-12:00P						5		5			5	5
12:00-01:00P						10		10			10	10
01:00-02:00P						2		2			2	2
02:00-03:00P												
03:00-04:00P						2		2			2	2
04:00-04:15P												
04:15-04:30P												
04:30-04:45P												
04:45-05:00P						3		3			3	3
05:00-05:15P						2		2			2	2
05:15-05:30P												
05:30-05:45P												
05:45-06:00P						6		6			6	6
06:00-07:00P						4		4			4	4
07:00-08:00P						8		8			8	8
08:00-09:00P						5		5			5	5
09:00-10:00P												
TOTAL VOLUME						68		68			68	68

North and South is: N River Rd. East and West is: Wheatland Rd. PED_2420

TRANSPORTATION DEVELOPMENT BRANCH
 TRANSPORTATION SYSTEM MONITORING UNIT
 VEHICULAR VOLUME

DATE : July 25/26, 2007
 DAY WEEK : Wed./Thurs.
 ACT COUNT: 16
 HRS COUNT: 6AM - 10PM
 PED COUNT: 16
 HRS COUNT: 6AM - 10PM
 WEATHER : clear

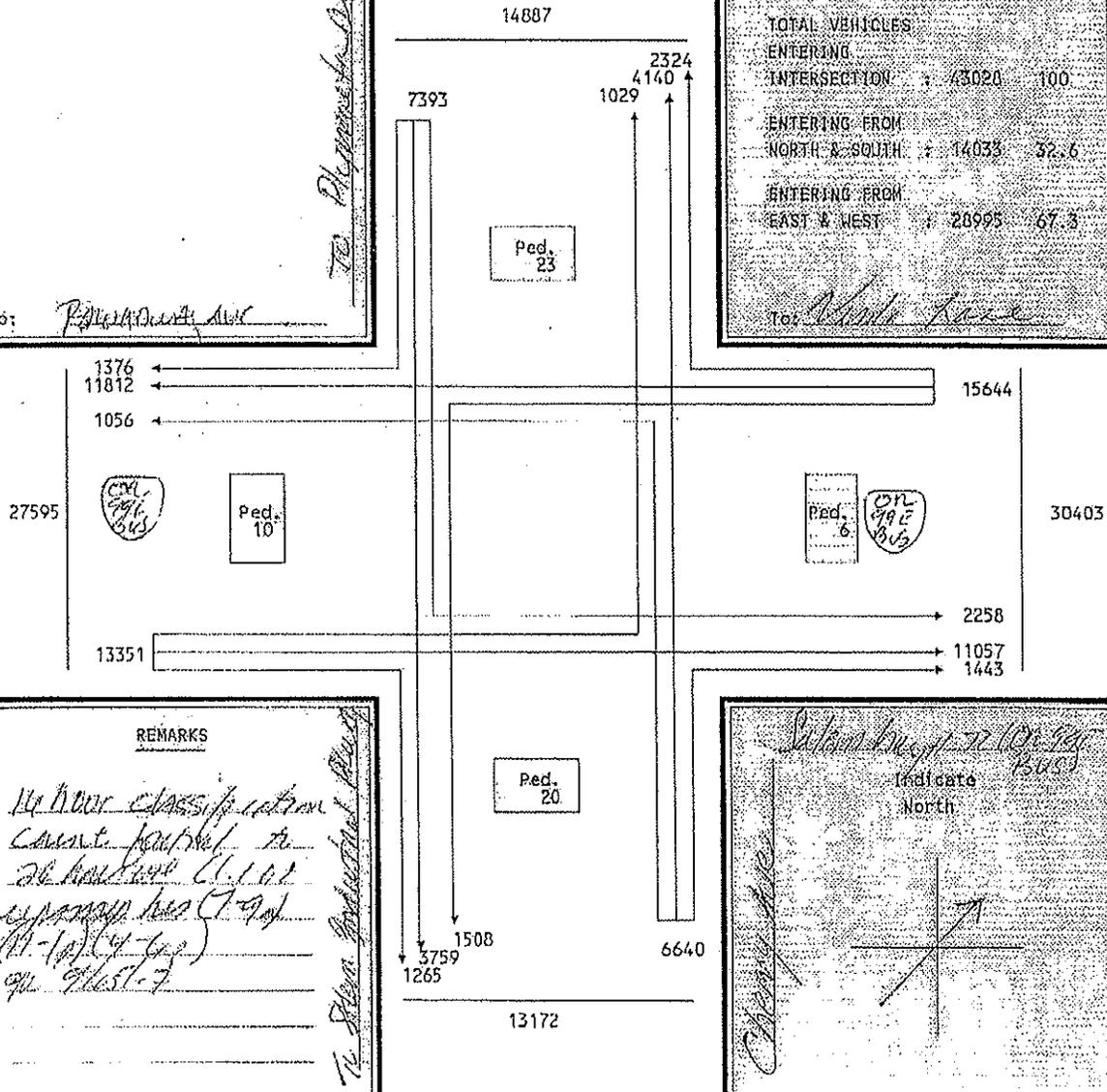
CITY or COUNTY : Keizer
 INTERSECTION OF: Salem Hwy #72 (OR99EBus) @ Cherry Ave.
 MILE POST: 2.61
 CLASSIFICATION : All vehicles

RECEIVED
 SEP 1 2007
 O.D.O.T. Region 2
 RECEIVED
 SEP 1 2007
 O.D.O.T. Region 2

To: *Plumerville Ave*

No. %	
TOTAL VEHICLES ENTERING INTERSECTION : 43020 100	
ENTERING FROM NORTH & SOUTH :	14033 32.6
ENTERING FROM EAST & WEST :	28995 67.3

To: *Cherry Ave*



REMARKS
 No clear classification count for the 20 bus (11-10) (4-6) on 9/25-7
 To Salem Production Plant



**SUMMARY OF TRAFFIC COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION**

CITY: Keizer

COUNTY : Marion
INTERSECTION OF : Salem Hwy #72(OR99EBus) @ Cherry Ave.

DAY : Wed./Thurs.
WEATHER: clear

DATE : July 25/26, 2007
HOURS : 6AM - 10PM

Tab by: Chk. by: MILE POST : 2.61

SUMMARY BY MOVEMENTS

TIME OF DAY	N-S		N-U		E-N		E-S		E-W		S-N		S-E		S-W		W-N		W-E		U-S TOTAL		NORTH AND SOUTH	PERCENT OF TOTAL	ENTERING VOLUMES BY LEGS		
	N-E	N-S	N-U	E-N	E-S	E-W	S-N	S-E	S-W	W-N	W-E	U-S TOTAL	N	S	N	E	S	W	N	E	S	W			PERCENT OF TOTAL	NORTH	EAST
06:00-07:00A	131	198	56	75	59	563	84	52	34	28	665	37	1982	555	28.0	1427	72.0	385	697	170	730	385	72.0	385	697	170	730
07:00-07:15A	26	44	16	21	21	179	37	8	6	7	171	11	547	137	25.0	410	75.0	86	221	51	189	86	75.0	86	221	51	189
07:15-07:30A	32	59	11	30	33	221	38	13	4	19	200	15	675	157	23.3	518	70.7	102	284	55	234	102	70.7	102	284	55	234
07:30-07:45A	24	82	20	55	17	263	41	14	12	18	323	19	688	193	28.1	495	71.9	126	335	67	160	126	71.9	126	335	67	160
07:45-08:00A	31	114	17	68	35	281	35	13	9	27	358	18	806	219	27.2	587	72.8	162	384	57	203	162	72.8	162	384	57	203
08:00-08:15A	22	57	18	36	28	236	42	15	10	27	370	26	687	164	23.9	523	76.1	97	300	67	223	97	76.1	97	300	67	223
08:15-08:30A	22	48	15	31	33	185	45	16	8	13	155	21	595	157	26.4	438	73.5	88	249	69	189	88	73.5	88	249	69	189
08:30-08:45A	30	40	20	24	22	161	32	16	12	15	169	20	562	150	26.7	412	73.3	90	207	69	205	90	73.3	90	207	69	205
08:45-09:00A	20	41	13	38	18	177	46	18	17	20	134	17	559	155	27.7	404	72.3	74	233	81	171	74	72.3	74	233	81	171
09:00-10:00A	103	188	77	101	84	575	181	86	62	34	511	86	2088	697	33.4	1391	66.6	368	760	329	631	368	66.6	368	760	329	631
10:00-11:00A	116	213	71	121	96	667	255	105	44	53	593	81	2415	804	33.3	1611	66.7	400	824	404	727	400	66.7	400	824	404	727
11:00-11:15A	27	65	20	26	31	129	65	26	20	13	135	21	578	223	38.6	355	61.4	112	186	111	169	112	61.4	112	186	111	169
11:15-11:30A	29	47	14	19	28	174	52	25	14	21	172	21	616	181	29.4	435	70.6	90	221	91	214	90	70.6	90	221	91	214
11:30-11:45A	33	59	23	31	26	137	82	27	28	12	163	35	656	252	38.4	404	61.6	115	194	137	210	115	61.6	115	194	137	210
11:45-12:00P	39	69	34	30	31	163	62	26	29	12	153	30	678	259	38.2	439	61.8	142	224	117	195	142	61.8	142	224	117	195
12:00-12:15P	32	62	40	35	26	164	77	25	35	12	159	29	696	271	38.9	425	61.1	134	225	137	200	134	61.1	134	225	137	200
12:15-12:30P	28	73	26	35	21	176	79	25	34	12	151	29	689	265	38.5	424	61.5	127	232	138	192	127	61.5	127	232	138	192
12:30-12:45P	24	65	27	39	34	176	56	20	27	23	154	27	672	219	32.6	453	67.4	116	249	103	204	116	67.4	116	249	103	204
12:45-01:00P	38	66	27	30	26	154	63	21	18	22	168	36	649	233	35.9	476	66.1	131	210	102	206	131	66.1	131	210	102	206
01:00-02:00P	118	263	78	111	104	698	270	117	81	57	671	100	2668	927	34.7	1741	65.3	459	913	468	828	459	65.3	459	913	468	828
02:00-03:00P	134	218	85	135	108	635	250	112	61	66	706	96	2806	860	33.0	1746	67.0	437	878	423	868	437	67.0	437	878	423	868
03:00-04:00P	164	235	82	178	104	896	336	114	80	99	781	78	3147	1011	32.1	2136	67.9	481	1178	530	958	481	67.9	481	1178	530	958
04:00-04:15P	48	65	36	48	16	232	69	28	22	19	227	36	846	268	31.7	578	68.3	149	296	119	282	149	68.3	149	296	119	282
04:15-04:30P	49	49	18	48	57	230	108	25	20	21	201	25	851	269	31.6	582	68.4	116	335	153	247	116	68.4	116	335	153	247
04:30-04:45P	65	64	31	54	38	246	103	32	31	16	242	15	937	326	34.8	611	65.2	160	338	166	273	160	65.2	160	338	166	273
04:45-05:00P	42	65	19	58	30	256	123	37	27	16	211	16	900	313	34.8	587	65.2	126	344	187	243	126	65.2	126	344	187	243
05:00-05:15P	61	72	50	69	23	242	138	37	39	26	199	11	967	397	41.1	570	58.9	183	334	214	236	183	58.9	183	334	214	236
05:15-05:30P	60	51	26	60	15	231	115	31	13	28	331	13	974	296	30.4	678	69.6	137	306	159	372	137	69.6	137	306	159	372
05:30-05:45P	66	57	34	40	22	157	115	24	20	19	245	13	812	316	38.9	496	61.1	157	219	159	277	157	61.1	157	219	159	277
05:45-06:00P	47	57	29	55	19	217	94	20	13	25	226	25	827	260	31.4	567	68.6	133	291	127	276	133	68.6	133	291	127	276
06:00-07:00P	144	229	81	167	63	651	234	63	47	52	668	77	2476	798	32.2	1678	67.8	454	881	344	797	454	67.8	454	881	344	797
07:00-08:00P	79	165	63	98	46	424	190	51	31	42	421	28	1638	579	35.3	1059	64.7	307	568	272	491	307	64.7	307	568	272	491

North and South is: Cherry Ave. East and West is: Salem Hwy #72(OR99EBus)

SUMMARY OF TRAFFIC COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007 DAY : Wed./Thurs. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: clear INTERSECTION: OF: Salem Hwy #72(CR99EBus) @ Cherry Ave.

Tab by: Chk. by: MILE POST : 2.61

SUMMARY BY MOVEMENTS

TIME OF DAY	ENTERING VOLUMES BY LEGS																					
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-N	W-E	W-S	TOTAL	NORTH AND SOUTH	PERCENT OF TOTAL	EAST AND WEST	PERCENT OF TOTAL	NORTH	EAST	SOUTH	WEST	
08:00-09:00P	96	131	46	67	37	427	110	43	40	34	342	15	1388	466	33.6	922	66.4	273	531	193	391	
09:00-10:00P	73	106	25	80	20	415	137	27	12	26	297	23	1241	380	30.6	861	69.4	204	515	176	346	
TOTAL COUNT	2053	3417	1251	2113	1371	10758	3764	1312	960	959	10052	1150	39116	12757	32.6	26359	67.4	6721	14222	6056	12137	
24-HR FACTOR	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10										
24-HR VOLUME	2258	3759	1376	2324	1508	11812	4146	1443	1056	1029	11057	1265	43027	14033	32.6	28995	67.4	7393	15644	6640	13551	

North and South is: Cherry Ave. East and West is: Salem Hwy #72(CR99EBus)

**SUMMARY OF TRAFFIC COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION**

DATE : July 25/26, 2007 DAY : Wed./Thurs. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: Clear INTERSECTION OF: Salem Hwy #72(OR99EBus) @ Cherry Ave.

Tab by: Chk. by: MILE POST : 2.61

SUMMARY BY MOVEMENTS

TIME OF DAY	MOVEMENTS								W-S TOTAL	NORTH PERCENT AND SOUTH TOTAL		EAST AND WEST		ENTERING VOLUMES BY LEGS								
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E		S-W	W-N	W-E	N-SOUTH	N-NORTH	E-WEST	E-EAST	S-SOUTH	S-NORTH	W-WEST	W-NORTH		
06:00-07:00A	131	198	56	75	59	563	84	52	34	28	665	37	1982	555	28.0	1427	72.0	355	697	170	730	
07:00-08:00A	113	299	64	174	106	944	151	48	31	71	652	63	2716	706	26.0	2010	74.0	476	1224	230	786	
08:00-09:00A	94	186	69	129	101	759	165	65	47	76	628	84	2403	626	26.1	1777	73.9	349	989	277	788	
09:00-10:00A	103	182	77	101	84	575	181	86	62	34	511	86	2088	697	33.4	1591	66.6	368	760	329	631	
10:00-11:00A	116	213	71	121	96	667	255	105	44	53	593	81	2415	804	33.3	1611	66.7	400	884	404	727	
11:00-12:00P	128	240	91	106	116	603	261	104	91	58	623	107	2528	915	36.2	1613	63.8	459	825	456	788	
12:00-01:00P	122	266	120	139	107	670	275	91	114	69	612	121	2706	988	36.5	1718	63.5	508	916	480	802	
01:00-02:00P	118	263	78	111	104	698	270	117	81	57	671	100	2668	927	34.7	1741	65.3	452	913	468	828	
02:00-03:00P	134	218	85	135	108	635	230	112	61	66	706	96	2606	860	33.0	1746	67.0	437	878	423	868	
03:00-04:00P	164	235	82	178	104	896	336	114	80	99	781	78	3147	1011	32.1	2156	67.9	481	1178	530	958	
04:00-05:00P	204	243	104	208	141	964	403	122	100	72	891	92	3534	1176	33.3	2358	66.7	531	1313	625	1045	
05:00-06:00P	234	237	139	224	79	847	462	112	85	98	1001	62	3580	1269	35.4	2381	64.6	610	1150	659	1161	
06:00-07:00P	144	229	81	167	63	651	234	63	47	52	668	77	2476	798	32.2	1678	67.8	454	881	344	797	
07:00-08:00P	79	165	63	98	46	424	190	51	31	42	421	28	1638	579	35.3	1059	64.7	307	568	272	491	
08:00-09:00P	96	131	46	67	37	427	110	43	40	34	342	15	1388	466	33.6	922	66.4	273	531	193	391	
09:00-10:00P	73	106	25	80	20	415	137	27	12	26	297	23	1241	380	30.6	861	69.4	204	515	176	346	
TOTAL COUNT	2053	3417	1251	2119	1371	10758	3764	1312	960	935	10052	1150	39116	12757	32.6	26359	67.4	6721	14222	60361	12137	
24HR FACTOR	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
24HR VOLUME	2258	3559	1376	2324	1508	11012	4140	1443	1056	1029	11057	1265	43827	14035	32.6	28995	67.4	7393	15644	6640	13531	

North and South is: Cherry Ave. East and West is: Salem Hwy #72(OR99EBus) SUM_2424

TRAFFIC COUN. SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : NORTH

COUNTY : Marion CITY: Keizer
 INTERSECTION OF: Salem Hwy #72(COR99EBus) @ Cherry Ave.
 MILE POST : 2.61
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	CYCLE
	Cars	HT/LF	HT/LF	Other	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	9 Axl	10 Axl				
06:00-07:00A	56		52		8	1	1	2						1	131	
07:00-07:15A	11		13			1								1	26	
07:15-07:30A	16		13		2										32	
07:30-07:45A	10		11										2		24	
07:45-08:00A	14		16		1										31	
08:00-08:15A	12		9		1										22	
08:15-08:30A	8		13		3										22	
08:30-08:45A	11		15		1								1		30	
08:45-09:00A	8		9		1								1		20	
09:00-10:00A	31		60		7	3		1							103	
10:00-11:00A	44		59		4	2		4							116	
11:00-11:15A	13		13												27	
11:15-11:30A	9		18		1										29	
11:30-11:45A	16		16		1										33	
11:45-12:00P	16		22		1										39	
12:00-12:15P	14		15		1										32	
12:15-12:30P	11		15		1										28	
12:30-12:45P	6		15		1										24	
12:45-01:00P	21		14		1										38	
01:00-02:00P	52		65		3	2		1							118	
02:00-03:00P	66		62		6	1		1							134	
03:00-04:00P	73		76		8										164	
04:00-04:15P	18		25		4										48	
04:15-04:30P	25		19		2									2	49	
04:30-04:45P	25		37		1										65	
04:45-05:00P	19		21												42	
05:00-05:15P	36		24												61	
05:15-05:30P	32		26		2										60	
05:30-05:45P	33		31		1										66	
05:45-06:00P	22		23		1										47	
06:00-07:00P	70		71		3									3	144	
07:00-08:00P	34		42												79	

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : NORTH
 COUNTY : Marion
 INTERSECTION OF: Salem Hwy #72 (OR99EBus) @ Cherry Ave.
 CITY: Keizer
 MILE POST : 2.61
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE	TOTAL ALL VEHICLE	BI BY
	Gar	Wtr	Other	Wtr	2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	9Axl				
08:00-09:00P	45		50											1	96	
09:00-10:00P	18		54												73	
15 HOUR	895		1029		20	54	15	1	5	1			10	14	2053	

WORK 2424

Summarized by: _____ | 09/05/07

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : NORTH

COUNTY : Marion
 INTERSECTION OF: Salem Hwy #72(OR99EBus) @ Cherry Ave.
 CITY: Keizer

MILE POST : 2.61
 ID : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	CY
	Cars	Trlr	Other	Trlr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	6 Axl	7 Axl				
06:00-07:00A	75		66	2	17	1	2								1	198	7
07:00-07:15A	14		25		4											44	3
07:15-07:30A	22		33		2			1								59	7
07:30-07:45A	31		44		4			1								82	2
07:45-08:00A	35		57		5			1								114	1
08:00-08:15A	20		33		1											57	1
08:15-08:30A	25		18		1											48	1
08:30-08:45A	12		23		1											40	1
08:45-09:00A	12		22		1											41	1
09:00-10:00A	50		117		16			1								188	3
10:00-11:00A	78		105		16			5								213	5
11:00-11:15A	21		32		7			1								65	1
11:15-11:30A	20		24		5											47	2
11:30-11:45A	20		29		5			2								59	1
11:45-12:00P	27		35		1			4								69	2
12:00-12:15P	23		33		2			2								62	1
12:15-12:30P	25		36		2			5								73	2
12:30-12:45P	21		39		1			3								65	3
12:45-01:00P	26		35		3			2								66	2
01:00-02:00P	103		135		2			2								263	3
02:00-03:00P	104		105		2			2								218	1
03:00-04:00P	93		122		10			1								235	2
04:00-04:15P	25		35		4			1								65	1
04:15-04:30P	20		23		3											49	1
04:30-04:45P	26		31		2			1								54	2
04:45-05:00P	23		41		2											65	1
05:00-05:15P	30		35		1			5								72	1
05:15-05:30P	24		19		1			5								51	2
05:30-05:45P	26		26		3			3								57	1
05:45-06:00P	28		27		2			2								57	1
06:00-07:00P	112		104		8			1								229	3
07:00-08:00P	73		80		10											165	6

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : NORTH
 COUNTY : Marion
 CITY: Keizer
 INTERSECTION OF: Salem Hwy #72(OR99ERBus) @ Cherry Ave.
 MILE POST : 2.61
 TO : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS 4 AXL >4AXL	DBL TRAILER TRUCKS 5 AXL >6AXL	TRP TRAILER TRUCKS 7 AXL >9AXL	BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY CLE
	Cars	Trlr	WTrlr	Other								
08:00-09:00P	69		50		1	4	5	7	1	5	131	1
09:00-10:00P	35		70						1		106	3
16 HOUR	1348		1739		18	14	6	2	42	18	3417	57

Summarized by: _____ | 09/05/07

TRAFFIC COUN. SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : NORTH

COUNTY : Marion CITY: Keizer
 INTERSECTION OF: Salem Hwy #72 (OR99EBus) @ Cherry Ave.
 MILE POST : 2.61
 TO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS			OBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CYCLE
	Cars	Mtr	Other	WTr	Tr	2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	>9Axl	5 Axl	6 Axl				
06:00-07:00A	20		26	3		2	4	1										56	
07:00-07:15A	8		8															16	
07:15-07:30A	5		6															11	
07:30-07:45A	7		10			2			1									20	
07:45-08:00A	7		9															17	
08:00-08:15A	5		11															18	
08:15-08:30A	4		10			1		1										18	
08:30-08:45A	7		12															20	
08:45-09:00A	2		11															13	
09:00-10:00A	25		45			4	1											77	
10:00-11:00A	30		33			6	1		1									71	1
11:00-11:15A	9		10			1												20	
11:15-11:30A	8		5															14	
11:30-11:45A	7		15			1												23	
11:45-12:00P	14		17															34	
12:00-12:15P	19		21															40	
12:15-12:30P	13		13															26	
12:30-12:45P	11		15			1												27	
12:45-01:00P	9		14			2	1			1								27	
01:00-02:00P	32		42			4												78	
02:00-03:00P	34		42			4		1										85	2
03:00-04:00P	34		43			1												82	
04:00-04:15P	21		14			1												36	
04:15-04:30P	3		11			2												18	
04:30-04:45P	8		20			2												31	
04:45-05:00P	8		11			1												19	
05:00-05:15P	12		37															50	
05:15-05:30P	6		28															26	
05:30-05:45P	14		18			2												34	
05:45-06:00P	11		16			1												29	
06:00-07:00P	33		44			3												81	
07:00-08:00P	31		30			2												63	5

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED: 5AM - 10PM
 WEATHER : clear
 FROM : NORTH
 COUNTY : Marion
 INTERSECTION of: Salem Hwy #72(OR99EBus) & Cherry Ave.
 CITY: Keizer
 MILE POST : 2.61
 TO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY CLE
	Cars	WTrif	Other	WTrif	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	6 Axl	>7Axl				
08:00-09:00P	19		25	1	1											46	
09:00-10:00P	8		17													25	
16 HOUR	485		681	13	42	10	5	1	2					7	6	1251	16

Summarized by: _____ | 09/05/07

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 COUNTY : Marion CITY: Keizer
 DAY OF WEEK : Wed. / hours: Salem Hwy #72 (OR 99EBus) @ Cherry Ave.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear MILE POST : 2.61
 FROM : EAST TO : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK			SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	CY CLE
	Cars	Wtrlr	Other	Wtrlr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	6 Axl	>7Axl	7 Axl	8 Axl	>9Axl				
05:00-07:00A	31	42			2													21	75	
07:00-07:15A	12	9			1													1	30	
07:15-07:30A	13	13																	55	
07:30-07:45A	27	27																	68	
07:45-08:00A	38	28			1														36	
08:00-08:15A	14	22																	31	
08:15-08:30A	16	14																	24	
08:30-08:45A	8	12																	38	
08:45-09:00A	12	24			2														101	
09:00-10:00A	33	60			3														121	
10:00-11:00A	50	63			4														26	
11:00-11:15A	6	15			2														19	
11:15-11:30A	10	8			1														31	
11:30-11:45A	12	15			1														30	
11:45-12:00P	16	15			2														35	
12:00-12:15P	13	20			1														35	
12:15-12:30P	16	20			2														39	
12:30-12:45P	13	14																	30	
12:45-01:00P	50	54			3														111	
01:00-02:00P	59	69			1														135	
02:00-03:00P	70	97			3														178	
03:00-04:00P	14	32			1														48	
04:00-04:15P	19	25			2														48	
04:15-04:30P	21	31			1														54	
04:30-04:45P	25	31			1														58	
04:45-05:00P	40	27			2														69	
05:00-05:15P	28	28																	60	
05:15-05:30P	16	22			1														40	
05:30-05:45P	22	31			1														55	
05:45-06:00P	76	86			3														167	
06:00-07:00P	49	45			1														98	
07:00-08:00P																				

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : EAST

COUNTY : Marion
 CITY: Keizer
 INTERSECTION OF: Salem Hwy #72(COR99EBus) @ Cherry Ave.
 MILE POST : 2.61
 TO : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK 2 AXI 3 AXI	SGL TRAILER TRUCKS 4 AXI 5 AXI	DBL TRAILER TRUCKS 5 AXI 6 AXI	TRP TRAILER TRUCKS 7 AXI 8 AXI >9AXI	BUSES	MOTOR CYCLE / SCOOTER	TOTAL ALL VEHICLE	BI-CYCLE
	Cars	MP-Lr	Other	MP-Lr								
08:00-09:00P	33		32		2						67	
09:00-10:00P	39		41								80	
16 HOUR	913		1088		18	20	8	6	1		2113	

Summarized by: _____ | 09/05/07

WORK 2424

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : EAST
 TO : SOUTH
 MILE POST : 2.61
 COUNTY : Marion
 INTERSECTION OF: Salem Hwy #72(DR99EBus) @ Cherry Ave.
 CITY: Keizer

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DGL TRAILER TRUCKS		TRP TRAILER TRUCKS			MOTOR BUSES: SCOOT	TOTAL ALL VEHICLE	CY
	Cars	WTrlr	Other	WTrlr	2 Axl	3-Axl	>4Axl	4 Axl	5-Axl	>6Axl	5-Axl	6 Axl	>7Axl			
06:00-07:00A	17		35		2	1		1	2					1	21	59
07:00-07:15A	5		12		1	1		1	1						33	
07:15-07:30A	10		18		1	2		1	1					1	17	
07:30-07:45A	4		10		2	2		2	1						35	
07:45-08:00A	10		21		1	4		1	1						28	
08:00-08:15A	11		19		1	3		1	2						33	
08:15-08:30A	5		19		2	3		4	1						22	
08:30-08:45A	2		8		3	2		1	1						18	
08:45-09:00A	6		8		2	1		1	6						84	
09:00-10:00A	21		42		2	8		1	4					2	96	
10:00-11:00A	30		51		1	4		1	4					1	31	
11:00-11:15A	6		18		1	1		1	2						28	
11:15-11:30A	5		15		1	1		1	2						26	
11:30-11:45A	3		17		1	2		2	1						31	
11:45-12:00P	7		17		1	2		1	1						26	
12:00-12:15P	5		16		1	2		1	1						21	
12:15-12:30P	4		13		1	1		1	1						21	
12:30-12:45P	12		17		2	1		2	2					1	26	
12:45-01:00P	9		12		1	1		2	4						104	
01:00-02:00P	31		50		5	9		2	4					1	109	
02:00-03:00P	34		52		4	6		3	4						164	
03:00-04:00P	30		61		4	4		1	2						16	
04:00-04:15P	7		9		4	4		1	2						57	
04:15-04:30P	22		33		1	1		1	1						38	
04:30-04:45P	11		22		1	3		1	1						30	
04:45-05:00P	10		18		1	1		1	1						23	
05:00-05:15P	9		11		1	1		1	1						15	
05:15-05:30P	4		10		1	1		1	1						22	
05:30-05:45P	7		13		1	1		1	1						19	
05:45-06:00P	7		9		1	1		1	2						63	
06:00-07:00P	14		37		2	2		1	1						46	
07:00-08:00P	21		20		2	1		1	1							

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : EAST
 COUNTY : Marion
 INTERSECTION OF: Salem Hwy #72(OR99EBus) @ Cherry Ave.
 CITY: Keizer
 MILE POST : 2.61
 TO : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS	DBL TRAILER TRUCKS	TRP TRAILER TRUCKS	BUSES	MOTOR CYCLE	TOTAL ALL VEHICLE	BI CY
	Cars	MTrip	Other	MTrip								
08:00-09:00P	12		20		1				3		37	1
09:00-10:00P	8		11						1		20	
16 HOUR	399		735		71	4	12	1	14		1371	1

WORK 2424

Summarized by: _____ | 09/05/07

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007 COUNTY : Marion CITY: Keizer
 DAY OF WEEK : Wed./Thurs. INTERSECTION OF: Salem Hwy #72(OR99EBus) @ Cherry Ave.
 HOURS COUNTED: 6AM - 10PM MILE POST : 2.61
 WEATHER : clear TO : WEST
 FROM : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK			SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER VEHICLE	TOTAL ALL VEHICLE	BJ CY CLE
	Cars	WTrlr	WTrlr	Differ	2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	9 Axl	10 Axl	11 Axl	12 Axl	13 Axl				
06:00-07:00A	213		1	283	29	6	2	17	4							2	3	563	1	
07:00-07:15A	71		1	85	7	9		5								1	5	179		
07:15-07:30A	84		2	106	13	3	1	5	2							2	5	221	1	
07:30-07:45A	123		4	109	14	2	2	9	1							1	1	263		
07:45-08:00A	118		2	135	15	6	1	3	1							1	2	281	1	
08:00-08:15A	93		2	120	9	4	3	3	2							1	2	236		
08:15-08:30A	80		3	82	12	1	1	4	2							1	2	185		
08:30-08:45A	64		1	71	13	3	1	4	2							1	1	161		
08:45-09:00A	78		3	76	9	2	1	5	4							1	1	177		
09:00-10:00A	209		9	279	35	13	1	14	6							2	2	575	1	
10:00-11:00A	222		10	351	31	7	2	25	11							4	2	667		
11:00-11:15A	46		2	66	5	2	2	5	4							1	1	129		
11:15-11:30A	63		1	97	3	2	1	2	1							1	1	174		
11:30-11:45A	46		4	68	5	2	3	8	1							1	1	137		
11:45-12:00P	63		1	85	5	3	2	2	3							1	1	163		
12:00-12:15P	65		1	77	8	2	2	5	4							1	1	164		
12:15-12:30P	64		6	87	4	3	1	6	2							1	2	176		
12:30-12:45P	64		2	100	4	4	2	6	1							1	2	176		
12:45-01:00P	53		4	83	2	4	2	3	2							1	1	154		
01:00-02:00P	244		11	377	19	11	2	15	10							3	3	698	1	
02:00-03:00P	250		15	309	24	6	1	15	5							1	1	635		
03:00-04:00P	336		10	458	28	10	1	20	2							3	18	896	1	
04:00-04:15P	87		6	122	3	4	8	8	2							1	1	232		
04:15-04:30P	84		3	127	8	1	1	2	1							1	4	230	1	
04:30-04:45P	95		4	133	4	6		2								1	4	246		
04:45-05:00P	110		3	136	2	4	1	2								1	1	256		
05:00-05:15P	113		1	118	2	2	2	2	2							1	4	242		
05:15-05:30P	88		3	130	2	1	1	2	1							1	4	231	2	
05:30-05:45P	71		2	116	3	3	1	1	1							1	1	157	1	
05:45-06:00P	92		2	116	2	1	1	2	2							1	1	217	1	
06:00-07:00P	305		13	306	7	1	1	3	1							2	12	651		
07:00-08:00P	158		6	239	10	1	1	2	1							1	3	424	1	

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : EAST
 COUNTY : Marion City: Keizer
 INTERSECTION OF: Salem Hwy #72(OR99Ebus) @ Cherry Ave.
 MILE POST : 2.61
 ID : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY
	Cars	WTRTR	UTRTR	Other	2 AXL	3 AXL	4 AXL	5 AXL	6 AXL	7 AXL	8 AXL	9 AXL	10 AXL	11 AXL	12 AXL				
08:00-09:00P	175		5	225	0	3	2	7	1						2	427			
09:00-10:00P	135		1	268	3	1	5								1	415			
16 HOUR	410	550	141		553	124	12	56	202	68	4	2	28	1	72	10738	12		

Summarized by: _____ | 09/05/07

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed. / Thurs.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : cLEAR
 FROM : SOUTH
 COUNTY : Marion
 INTERSECTION OF: Salem Hwy #72 (OR99EBus) @ Cherry Ave.
 CITY: Kelzer
 MILE POST : 2.61
 TO : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SQL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI. CY CLE
	Cars	WTrlr	Other	WTrlr	2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	>9Axl				
06:00-07:00A	24		38	2	13	1							4	1	84	1
07:00-07:15A	27		6		2	1							1		37	
07:15-07:30A	12		21	1	2	2							2		38	
07:30-07:45A	11		25	1	1	1							1	1	41	
07:45-08:00A	13		17	1	1	1							1	1	35	
08:00-08:15A	12		21	2	3	1							2		42	
08:15-08:30A	21		16	1	5								1		45	
08:30-08:45A	9		20	1	2								1		32	
08:45-09:00A	12		22	1	7	1							1		46	
09:00-10:00A	63		97	5	9	4							2	1	181	1
10:00-11:00A	77		154	3	11	6							1	1	255	2
11:00-11:15A	27		33	1	1								2	1	65	1
11:15-11:30A	17		28		3	1							2	1	52	1
11:30-11:45A	25		38	1	15	1							2	1	82	2
11:45-12:00P	18		35		5	1							2	1	62	
12:00-12:15P	28		37	3	5	1							2	1	77	
12:15-12:30P	28		40	5	5	1							1		79	
12:30-12:45P	19		28	2	5								1		56	
12:45-01:00P	29		26		6								2		63	
01:00-02:00P	100		144	1	19	2							1	1	270	1
02:00-03:00P	97		134	1	11	1							1	2	250	4
03:00-04:00P	121		189	5	9	3							6	2	336	6
04:00-04:15P	33		29	1	2								1		69	3
04:15-04:30P	34		67	1	3								2	1	108	2
04:30-04:45P	46		52	2	2										103	2
04:45-05:00P	51		64	1	5										123	2
05:00-05:15P	71		64	1	2								2		138	1
05:15-05:30P	46		64		1								2	2	115	1
05:30-05:45P	59		49	1	4								1	5	115	2
05:45-06:00P	39		47		1								2	2	94	3
06:00-07:00P	107		114		10								1	2	234	12
07:00-08:00P	82		103	1	2								1	1	190	4

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : SOUTH
 COUNTY : Marion
 CITY: Keizer
 INTERSECTION OF: Salem Hwy #72(CR9568us) & Cherry Ave.
 MILE POST : 2.61
 TO : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE / SCOOTER	TOTAL ALL VEHICLE	BI CY CLE
	Cars	Wrttr	Other	Wrttr		2 AXL	3 AXL	>4AXL	4 AXL	5 AXL	>6AXL	5 AXL	6 AXL	>7AXL				
08:00-09:00P	48		55		6										1	110		
09:00-10:00P	61		72		1											137		
16 HOUR	1467		1949		178	25	2	11	6	2					52	26	3764	65

Summarized by: _____ | 09/05/07

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : SOUTH
 COUNTY : Marich
 INTERSECTION OF: Salem Hwy #72(GR99EBus) @ Cherry Ave.
 CITY: Keizer
 MILE POST : 2.61
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP - RAILER TRUCKS		BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	SI CY CLE
	Cars	WTrlr	Other	UTrTr	2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	>9Axl				
06:00-07:00A	18		16	2	2	3		4				1	5	1	52	
07:00-07:15A	1		3	1	2	1		1					1		8	
07:15-07:30A	4		4		2										13	
07:30-07:45A	3		8		1		1								14	
07:45-08:00A	2		9												13	
08:00-08:15A	2		9		2										15	
08:15-08:30A	5		5		5										16	
08:30-08:45A	7		7	1	3		1				1				18	
08:45-09:00A	3		9		11		1							1	86	
09:00-10:00A	15		46	4	14		8	2	2	1	1		1		105	
10:00-11:00A	24		51	1											26	
11:00-11:15A	5		17		1										25	
11:15-11:30A	8		14		1										27	
11:30-11:45A	7		17		1										26	
11:45-12:00P	5		11		3		1								25	
12:00-12:15P	4		16		2										25	
12:15-12:30P	7		13		1										20	
12:30-12:45P	4		14		1										21	
12:45-01:00P	9		7		1		3								117	1
01:00-02:00P	32		63	4	8		2						1		112	1
02:00-03:00P	36		56	3	7		3	2					1		114	1
03:00-04:00P	43		54	1	9		5								28	
04:00-04:15P	15		12												29	
04:15-04:30P	3		19		1		1								32	
04:30-04:45P	11		17												37	
04:45-05:00P	9		25		2										37	
05:00-05:15P	14		20		1										31	
05:15-05:30P	12		15		1										24	
05:30-05:45P	11		13												20	
05:45-06:00P	7		9		1										63	1
06:00-07:00P	22		35		1								2		51	
07:00-08:00P	20		26	3								1				

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : SOUTH
 COUNTY : Marion
 CITY: Keizer
 INTERSECTION OF: Salem Hwy #72(OR99EBus) @ Cherry Ave.
 MILE POST : 2.61
 TO : EAST

TIME OF DAY	PASSENGER Cars	OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT VEHICLE	TOTAL ALL VEHICLE	BI CY CLE
		WTrlr	Other		2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	>9Axl					
08:00-09:00P	15	23	1	1										2	43		1
09:00-10:00P	5	19		1										1	27		
16 HOURS	20	682	29	21	3	43	10	5	17	3	1	15	9	1312		7	

TRAFFIC COUN. SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : SOUTH
 TO : WEST
 MILE POST : 2.61
 COUNTY : Marion
 INTERSECTION OF: Salem Hwy #72 (OR99EBus) @ Cherry Ave.
 CITY: Keizer

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP. TRAILER TRUCKS		BUSES	MOTOR CYCLE SEDET	TOTAL BI CY CLE VEHICLE
	Cars	w/Trl	Other	w/Trl	2 AXL	3 AXL	>4AXL	4 AXL	5 AXL	6 AXL	7 AXL	8 AXL			
06:00-07:00A	6	7			2								14		34
07:00-07:15A	1	3			1								1		6
07:15-07:30A	2	2			1										4
07:30-07:45A	2	8			2										12
07:45-08:00A	2	4			1										9
08:00-08:15A	1	6			1										10
08:15-08:30A	3	3			1										8
08:30-08:45A	4	3			1										12
08:45-09:00A	4	5			1										17
09:00-10:00A	12	28			3								1		62
10:00-11:00A	19	12			7								2		44
11:00-11:15A	5	13			1										20
11:15-11:30A	4	8			1										14
11:30-11:45A	9	16			2										28
11:45-12:00P	11	15			2										29
12:00-12:15P	9	23			1										35
12:15-12:30P	12	18			2										34
12:30-12:45P	12	9			2										27
12:45-01:00P	9	8			1										16
01:00-02:00P	25	43			1								2		81
02:00-03:00P	13	30			2								12		61
03:00-04:00P	24	46			2								4		80
04:00-04:15P	5	15			1								1		22
04:15-04:30P	9	9			1										20
04:30-04:45P	17	13			1								1		31
04:45-05:00P	4	22			2										27
05:00-05:15P	8	28			1										39
05:15-05:30P	2	9			1										13
05:30-05:45P	3	15			1										20
05:45-06:00P	3	8			1										13
06:00-07:00P	19	26			1								1		47
07:00-08:00P	13	16			1								1		31

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : SOUTH
 COUNTY : Marion
 INTERSECTION OF: Salem Hwy #72 (OR99Bus) @ Cherry Ave.
 CITY: Keizer
 MILE POST : 2.61
 TO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK >4AxL 4 AxL 5 AxL	SGL TRAILER TRUCKS >6AxL 6 AxL	DBL TRAILER TRUCKS >7AxL 7 AxL 8 AxL	TRP TRAILER TRUCKS >9AxL	BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY CLE
	Cars	Trlr	Other	WTrlr								
08:00-09:00P	14		23							1	40	
09:00-10:00P	4		8								12	
16 HOUR	290		502	13	57	19	4	8	8	4	21	4
												960

WORK 2424

Summarized by: _____ | 09/05/07

TRAFFIC COUN. SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : WEST
 TO : WEST

COUNTY : Marion CITY: Keizer
 INTERSECTION OF: Salem Hwy #72(OR99EBus) @ Cherry Ave.
 MILE POST : 2.61
 TO : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BJ CY CLE
	Cars	WTRIP	Other	WTRIP	2 Axle	3 Axle	4 Axle	5 Axle	6 Axle	7 Axle	8 Axle	>9Axle						
06:00-07:00A	14		14													28		
07:00-07:15A	3		4													7		
07:15-07:30A	5		12		1									1		19		
07:30-07:45A	12		5			1										18		
07:45-08:00A	11		14			1								1		27		
08:00-08:15A	17		10													27		
08:15-08:30A	5		8													13		
08:30-08:45A	5		9		1											15		
08:45-09:00A	8		11		1											20		
09:00-10:00A	10		17		3		4								1	34		
10:00-11:00A	22		24		2		4									53		
11:00-11:15A	6		5		1		1									13		
11:15-11:30A	6		12		1		1							1		21		
11:30-11:45A	4		7				1									12		
11:45-12:00P	2		9				1									12		
12:00-12:15P	5		7													12		
12:15-12:30P	5		5		1									1		23		
12:30-12:45P	11		11				1									22		
12:45-01:00P	9		36		1		1									57	1	
01:00-02:00P	15		27				2									66		
02:00-03:00P	27		32				1									99		
03:00-04:00P	39		54				5									19		
04:00-04:15P	8		10				1									21		
04:15-04:30P	8		10				3									16		
04:30-04:45P	5		9		1		1									16		
04:45-05:00P	5		9				2									26		
05:00-05:15P	10		14		1		1									28		
05:15-05:30P	14		12													19		
05:30-05:45P	5		14													25		
05:45-06:00P	9		14				1							1		52	1	
06:00-07:00P	21		24				2							3		42		
07:00-08:00P	18		23				1											

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : WEST
 COUNTY : Marion
 CITY: Keizer
 INTERSECTION OF: Salem Hwy #72(DR99EBus) @ Cherry Ave.
 MILE POST : 2.61
 TO : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SQL UNIT TRUCK	SQL TRAILER TRUCKS	DBL TRAILER TRUCKS	TRP TRAILER TRUCKS	BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BJ CYCLE
	Cars	WTFLR	Other	WTFLR	2 Axle	3 Axle	4 Axle	5 Axle				
08:00-09:00P	19		15								34	
09:00-10:00P	11		15								26	
16 HOUR	374		488		32	6	3	1			935	3

TRAFFIC COUNTY SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED : 5AM - 10PM
 WEATHER : clear
 FROM : WEST

CITY: Keizer
 COUNTY: Marion
 INTERSECTION OF: Salem Hwy #72 (OR99EBus) @ Cherry Ave.
 MILE POST : 2.61
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY GLE
	Cars	WtTr	Other	WtTr	2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	>9Axl	1	2	3				
06:00-07:00A	315		299	1	17	2	10	11				2			8	665			
07:00-07:15A	79		75	1	2	4	3	3							2	171			
07:15-07:30A	97		76	4	6	5	4	5				1			2	200			
07:30-07:45A	59		52		4	3	2	4				2			3	123	2		
07:45-08:00A	77		62	2	7	1	2	4				5			1	158			
08:00-08:15A	79		70	1	4	4	5	1							1	170			
08:15-08:30A	61		76	3	3	3	5	3							1	155			
08:30-08:45A	75		72	2	13	3	2	1							1	169			
08:45-09:00A	49		63	2	7	1	2	6				2			4	134			
09:00-10:00A	195		241	8	24	9	11	6				3			2	511			
10:00-11:00A	199		299	12	20	6	30	11				5			2	593			
11:00-11:15A	58		59	1	8	1	5	1				2			1	135			
11:15-11:30A	59		76	5	11	3	11	3				1			1	172			
11:30-11:45A	52		90	2	10	3	4	2							1	163			
11:45-12:00P	55		80	3	6	1	6	1				1			1	153			
12:00-12:15P	69		77	3	2	2	4	2				1			1	159			
12:15-12:30P	59		65	3	10	2	5	5				1			1	151			
12:30-12:45P	55		80	4	3	3	5	1				1			1	154			
12:45-01:00P	65		58	6	5	3	4	2				1			3	168			
01:00-02:00P	244		332	7	42	8	20	9				2			4	671	3		
02:00-03:00P	263		329	17	27	16	8	28				3			2	706			
03:00-04:00P	318		390	12	19	7	6	23				6			3	781			
04:00-04:15P	99		116	5	3	2	2	2				2			4	227			
04:15-04:30P	100		94	2	2	3	1	1				1			2	201			
04:30-04:45P	112		116	2	7	3	5	1							2	242			
04:45-05:00P	102		95	1	5	3	1	5							2	211			
05:00-05:15P	100		90	1	4	1	1	1							1	199			
05:15-05:30P	171		148	4	4	1	4	4				2			1	331	2		
05:30-05:45P	117		111	3	4	3	4	5							1	245			
05:45-06:00P	92		119	1	4	4	4	4							1	326			
06:00-07:00P	302		335	5	13	4	2	5				1			5	668	1		
07:00-08:00P	188		213	5	9	1	4	1							1	421			

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed. / Thurs.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : WEST
 COUNTY : Marion
 INTERSECTION OF: Salem Hwy #72 (OR99EBus) @ Cherry Ave.
 CITY: Keizer
 MILE POST : 2.61
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SEL UNIT TRUCK		SEL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS			BUSES	MOTOR CYCLES SCOOTER	TOTAL ALL VEHICLE	BI CYCLE
	Cars	WTrlr	WTrlr	Other	2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	>9Axl					
08:00-09:00P	179		5	150			1	2						3	342		1
09:00-10:00P	120		2	155		7	3	3	1					6	297		2
16 HOUR	4264	1	4763	134	310	103	12	56	216	81	4	2	27	18	60	10052	12

WORK_2624

Summarized by: _____ | 09/05/07

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : WEST
 COUNTY : Marion
 INTERSECTION DF: Salem Hwy #72(OR99EBus) @ Cherry Ave.
 CITY: Keizer
 MILE POST : 2.61
 TO : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		OBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY
	Cars	MTPL	Other	Wtrlr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	6 Axl	>7Axl	7 Axl				
06:00-07:00A	10		17	4	4										37	
07:00-07:15A	1		6		3										11	
07:15-07:30A	9		4		1										13	
07:30-07:45A	4		9		2										19	
07:45-08:00A	7		7		1										18	
08:00-08:15A	7		15		1										26	
08:15-08:30A	4		8		2										21	
08:30-08:45A	2		15		1										20	
08:45-09:00A	7		8		1										17	
09:00-10:00A	23		38		13										86	
10:00-11:00A	18		50		9										81	
11:00-11:15A	9		7		2										21	
11:15-11:30A	5		10		4										35	
11:30-11:45A	16		17		4										30	
11:45-12:00P	9		16		4										29	
12:00-12:15P	13		13		2										29	
12:15-12:30P	8		17		3										27	
12:30-12:45P	8		17		1										36	
12:45-01:00P	7		22		5										100	
01:00-02:00P	32		57		6										96	
02:00-03:00P	30		47		9										78	
03:00-04:00P	14		46		2										36	
04:00-04:15P	7		21		6										25	
04:15-04:30P	9		12		3										15	
04:30-04:45P	6		6		2										16	
04:45-05:00P	5		9		1										11	
05:00-05:15P	4		5		2										13	
05:15-05:30P	7		6		2										13	
05:30-05:45P	8		4												25	
05:45-06:00P	5		11		5										77	
06:00-07:00P	23		30		9										28	
07:00-08:00P	9		14		1											

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : WEST

COUNTY : Marion CITY: Keizer
 INTERSECTION OF: Salem Hwy #72(DR99EBus) @ Cherry Ave.
 MILE POST : 2.61
 TO : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOT VEHICLE	TOTAL ALL VEHICLE	BI CY
	Cars	WTrlr	Other	WTrlr	2 Axl	3 Axl	>4axl	4 Axl	5 Axl	>6axl	5 Axl	6 Axl				
08:00-09:00P	6		6	1									2	15		
09:00-10:00P	5	3	13			1							1	23		
16 HOUR	337	3	583	21	114	15	1	9	10	11		1	45	2	1150	

Summarized by: _____ | 09/05/07

WORK_2424

SUMMARY BICYCLE COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 HOURS : 6AM - 10PM
 DAY : Wed./Thurs.
 WEATHER: clear
 COUNTY : Marion
 CITY: Keizer
 INTERSECTION OF: Salem Hwy #72(OR99EBus) @ Cherry Ave.

Tab by: _____ Chk. by: _____ MILE POST : 2.61

TIME OF DAY	BICYCLES MOVING WITH VEHICULAR TRAFFIC										BICYCLES USING CROSS WALKS						
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-N	W-E	W-S	TOTAL	NORTH	EAST	SOUTH	WEST
06:00-07:00A		7				1	1						9				
07:00-07:15A	3												3				
07:15-07:30A	7					1							8				
07:30-07:45A	2											2	4				
07:45-08:00A	1					1							2				
08:00-08:15A	1												1				
08:15-08:30A																	
08:30-08:45A																	
08:45-09:00A																	
09:00-10:00A	3					1	1						5				
10:00-11:00A							2						3				
11:00-11:15A							1						1				
11:15-11:30A							1						1				
11:30-11:45A							2						2				
11:45-12:00P																	
12:00-12:15P	3												3				
12:15-12:30P	2												2				
12:30-12:45P	3						1						4				
12:45-01:00P	2						2						4				
01:00-02:00P	3					1	4			1			10				
02:00-03:00P	1						6			1			11				
03:00-04:00P	2					1	7			1			13				
04:00-04:15P							3						3				
04:15-04:30P	1					1	2						3				
04:30-04:45P	2						2						4				
04:45-05:00P																	
04:45-05:15P	1						2						3				
05:00-05:30P							1						1				
05:15-05:30P							2						2				
05:30-05:45P							1						1				
05:45-06:00P							4						4				
06:00-07:00P	3						12						15				
07:00-08:00P	6					1	4						10				

North and South is: Cherry Ave. East and West is: Salem Hwy #72(OR99EBus) BIKE_2424

SUMMARY OF BICYCLE COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 HOURS : 6AM - 10PM
 DAY : Wed./Thurs.
 WEATHER: clear
 COUNTY : Marion
 CITY: Keizer
 INTERSECTION OF: Salem Hwy #72(OR99EBus) @ Cherry Ave.
 MILE POST : 2.61

Tab by: _____
 Chk. by: _____

TIME OF DAY	BICYCLES MOVING WITH VEHICULAR TRAFFIC										BICYCLES USING CROSS WALKS						
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-N	W-E	W-S	TOTAL	NORTH	EAST	SOUTH	WEST
08:00-09:00P	1				1		4	1		1		1	9				
09:00-10:00P	3											2	5				
TOTAL VOLUME	57	16			1	12	65	7		3	12		171				

North and South is: Cherry Ave.
 East and West is: Salem Hwy #72(OR99EBus)

SUMMARY OF PEDESTRIAN COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007 DAY : Wed./Thurs. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: clear INTERSECTION OF: Salem Hwy #72(OR99EBus) @ Cherry Ave.

Tab by: _____ Chk. by: _____ MILE POST : 2.61

TIME OF DAY	STUDENT PEDESTRIANS			OTHER PEDESTRIANS			STUDENT AND OTHER PEDESTRIAN			TOTAL
	NORTH	EAST	WEST	NORTH	EAST	WEST	NORTH	EAST	WEST	
06:00-07:00A										3
07:00-07:15A										2
07:15-07:30A										3
07:30-07:45A									1	3
07:45-08:00A										1
08:00-08:15A										4
08:15-08:30A										1
08:30-08:45A										1
08:45-09:00A										1
09:00-10:00A										1
10:00-11:00A										1
11:00-11:15A										1
11:15-11:30A										1
11:30-11:45A										1
11:45-12:00P										5
12:00-12:15P										2
12:15-12:30P										2
12:30-12:45P										5
12:45-01:00P										12
01:00-02:00P										12
02:00-03:00P										1
03:00-04:00P										2
04:00-04:15P										2
04:15-04:30P										2
04:30-04:45P										2
04:45-05:00P										2
05:00-05:15P										1
05:15-05:30P										1
05:30-05:45P										1
05:45-06:00P										1
06:00-07:00P										4
07:00-08:00P										4

TRANSPORTATION DEVELOPMENT BRANCH
TRANSPORTATION SYSTEM MONITORING UNIT
VEHICULAR VOLUME

DATE : July 25/26, 2007

CITY or COUNTY : Keizer

DAY WEEK : Wed./Thurs.

INTERSECTION OF: N River Rd. @ Chemawa Rd.

ACT COUNT: 16

HRS COUNT: 6AM - 10PM

PED COUNT: 16

MILE POST: n/a

HRS COUNT: 6AM - 10PM

CLASSIFICATION : All vehicles

WEATHER : clear

To: *Wing St. Island rd.*

	No.	%
TOTAL VEHICLES ENTERING INTERSECTION :	37647	100
ENTERING FROM NORTH & SOUTH :	29054	77.1
ENTERING FROM EAST & WEST :	8593	22.8

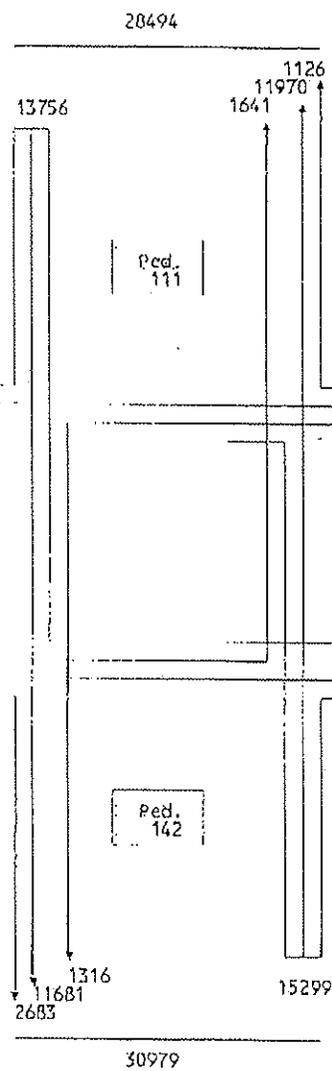
To: *Becky Hill*

1030 ←
084 ←
2342 ←

9523

Ped. 128

5267

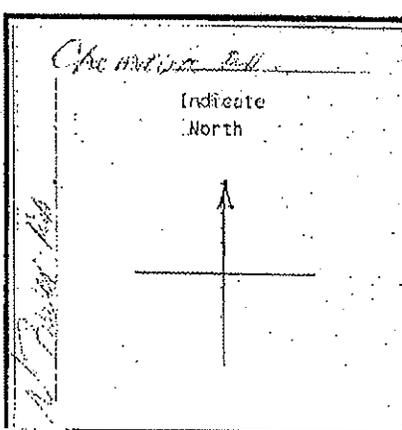


REMARKS

*16 hour observation
counted vehicles 26
Nov. 2007 (1-10)
lighted for (7-9a.)
(7-10p) 11-12p - Runners
in various crossing
Phase 10!*

*Chemawa Road
Bridge work east side
(closed)*

9/10/07



✓ P
K

**SUMMARY OF TRAFFIC COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION**

DATE : July 25/26, 2007 COUNTY : Marion CITY: Keizer
 DAY : Wed./Thurs. INTERSECTION OF: N River Rd. @ Chemawa Rd.
 WEATHER: Clear HILE POST : n/a

Tab. by: Chk. by:

TIME OF DAY	SUMMARY BY MOVEMENTS										ENTERING VOLUMES BY LEGS										
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	U-N	U-E	U-S	TOTAL	NORTH AND SOUTH	PERCENT OF TOTAL	EAST AND WEST	PERCENT OF TOTAL	NORTH	EAST	SOUTH	WEST
05:00-07:00A	9	445	25	14	17	9	307	22	39	54	19	137	1097	847	77.2	250	22.8	479	40	358	210
07:00-07:15A	2	150	14	6	9	4	65	3	16	15	4	48	336	250	74.4	86	25.6	166	19	84	67
07:15-07:30A	5	199	8	7	7	5	77	13	10	21	5	55	405	312	77.0	93	23.0	212	12	100	81
07:30-07:45A	4	234	8	7	10	3	81	7	18	14	18	58	462	352	76.2	110	23.8	246	20	106	90
07:45-08:00A	10	230	8	8	18	5	105	11	16	16	13	62	502	380	75.7	122	24.3	248	31	132	91
08:00-08:15A	9	183	9	9	15	8	95	7	29	17	17	61	459	332	72.3	127	27.7	291	32	131	95
08:15-08:30A	7	175	9	15	24	8	112	12	23	20	13	44	462	338	73.2	124	26.8	191	47	147	77
08:30-08:45A	17	196	16	12	10	9	123	7	15	25	13	41	484	374	77.3	110	22.7	229	31	145	79
08:45-09:00A	14	153	8	11	14	6	120	16	21	25	10	41	439	332	75.6	107	24.4	175	31	157	76
09:00-10:00A	55	682	50	51	77	37	531	44	80	62	39	151	1859	1442	77.6	417	22.4	787	155	655	252
10:00-11:00A	44	999	38	52	71	50	608	54	118	87	26	119	2266	1861	82.1	405	17.9	1081	173	780	232
11:00-12:00P	74	703	48	69	99	47	747	61	118	107	60	154	2287	1751	76.6	536	23.4	825	215	926	321
12:00-01:00P	87	822	65	82	129	65	836	60	134	124	58	187	2465	2043	77.0	611	23.0	974	276	1069	335
01:00-02:00P	73	753	54	65	91	65	801	67	168	102	59	155	2465	1875	76.1	590	23.9	880	221	995	369
02:00-03:00P	63	559	95	70	92	50	751	75	136	105	66	175	2497	1703	76.3	528	23.7	717	212	986	316
03:00-04:00P	61	695	72	98	102	56	836	75	136	105	66	175	2497	1895	75.9	602	24.1	828	256	1067	346
04:00-04:15P	20	208	28	20	13	17	258	20	45	35	22	33	719	579	80.5	140	19.5	256	50	323	90
04:15-04:30P	22	175	27	28	18	11	245	15	56	29	21	48	695	540	77.7	155	22.3	224	57	316	98
04:30-04:45P	28	194	20	24	20	22	222	20	59	31	22	40	707	543	76.8	164	23.2	242	71	301	93
04:45-05:00P	10	166	23	24	24	26	281	23	67	43	15	47	749	570	76.1	179	23.9	199	74	371	105
05:00-05:15P	21	189	24	28	23	36	292	17	50	38	19	43	790	603	76.3	187	23.7	234	87	369	100
05:15-05:30P	26	171	15	28	21	24	305	26	70	24	23	50	783	613	78.3	170	21.7	212	73	401	97
05:30-05:45P	22	168	19	26	24	19	330	10	62	44	18	50	792	611	77.1	181	22.9	209	69	402	112
05:45-06:00P	18	93	14	25	26	14	256	19	30	23	14	17	569	430	78.3	119	21.7	125	65	305	54
06:00-07:00P	85	757	80	80	83	71	858	69	211	131	67	157	2669	2060	77.8	589	22.2	922	234	1138	355
07:00-08:00P	67	477	49	71	49	45	608	58	154	81	59	110	1828	1413	77.3	415	22.7	593	165	820	250
08:00-09:00P	50	457	50	45	48	50	582	45	100	69	46	104	1646	1284	78.0	362	22.0	557	143	727	219
09:00-10:00P	47	386	60	56	55	44	450	42	95	52	43	83	1413	1080	76.4	333	23.6	493	155	587	178
TOTAL COUNT	950	10619	936	1024	1196	894	10882	897	2129	1492	857	2439	34225	26413	77.2	7812	22.8	12505	3024	13908	4788
24HR FACTOR	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	29055	77.2	8593	22.8	13786	3326	15299	5267
24HR VOLUME	1045	11681	1030	1126	1316	884	11970	987	2342	1641	943	2683	37648	29055	77.2	8593	22.8	13786	3326	15299	5267

North and South is: N River Rd. East and West is: Chemawa Rd. SUM 2-23

SUMMARY OF TRAFFIC COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
HOURS : 6AM - 10PM

DAY : Wed./Thurs.
WEATHER: clear

COUNTY : Marion
INTERSECTION OF: N River Rd. @ Chemawa Rd.

CITY: Keizer

Tab by:

CHK. by:

MILE POST : n/a

TIME OF DAY	SUMMARY BY MOVEMENTS												TOTAL	NORTH AND SOUTH	PERCENT OF TOTAL	EAST AND WEST	PERCENT OF TOTAL	ENTERING VOLUMES BY LEGS				
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-N	W-E	W-S						NORTH	EAST	SOUTH	WEST	
06:00-07:00A	9	445	25	14	17	9	307	22	39	54	19	137	1097	847	77.2	250	22.8	479	40	368	210	
07:00-08:00A	21	813	38	21	44	17	328	34	60	66	40	223	1705	1294	75.9	411	24.1	872	82	422	329	
08:00-09:00A	47	707	42	47	63	31	450	42	88	87	53	187	1844	1376	74.6	468	25.4	796	141	580	327	
09:00-10:00A	55	682	50	51	77	37	531	44	80	62	39	151	1859	1442	77.6	417	22.4	787	165	655	252	
10:00-11:00A	44	999	38	52	71	50	608	54	118	87	26	119	2266	1861	82.1	405	17.9	1081	173	780	232	
11:00-12:00P	74	703	48	69	99	47	747	61	118	107	60	154	2287	1751	76.6	536	23.4	925	215	926	321	
12:00-01:00P	87	822	65	82	129	65	836	74	159	98	68	169	2654	2043	77.0	611	23.0	974	276	1069	335	
01:00-02:00P	73	753	54	65	91	65	801	66	134	124	58	187	2445	1875	76.5	590	23.9	880	221	995	369	
02:00-03:00P	63	559	95	70	92	50	751	67	168	105	59	155	2231	1703	76.3	528	23.7	717	212	986	316	
03:00-04:00P	61	695	72	98	132	56	836	75	156	105	66	175	2497	1895	75.9	602	24.1	828	256	1067	346	
04:00-05:00P	80	743	98	96	82	74	1006	78	227	138	80	168	2870	2232	77.8	638	22.2	921	252	1311	384	
05:00-06:00P	87	821	72	107	94	93	1183	72	222	129	74	160	2914	2257	77.5	657	22.5	780	294	1477	363	
06:00-07:00P	85	757	80	80	93	71	858	69	211	131	67	157	2649	2060	77.8	589	22.2	922	234	1138	355	
07:00-08:00P	67	477	49	71	49	45	608	58	134	81	59	110	1828	1413	77.3	415	22.7	595	165	820	250	
08:00-09:00P	50	457	50	45	48	50	582	45	100	69	46	104	1646	1284	78.0	362	22.0	557	163	727	219	
09:00-10:00P	47	386	60	56	55	44	450	42	95	52	43	83	1413	1080	76.4	333	23.6	493	155	587	178	
TOTAL COUNT	950	10619	936	1024	1196	804	10882	897	2129	1492	857	2439	34225	26413	77.2	7812	22.8	12505	3024	13598	4788	
24HR FACTOR	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
24HR VOLUME	1045	11681	1030	1126	1316	884	11970	987	2342	1641	943	2683	37648	29055	77.2	8593	22.8	13756	3336	15299	5267	

North and South is: N River Rd.

East and West is: Chemawa Rd.

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : NORTH

COUNTY : Marion CITY: Keizer
 INTERSECTION OF: K River Rd. @ Chemawa Rd.
 MILE POST : n/a
 TO : EAST

TIME OF DAY	PASSENGER CARS	OTHER 2 AXLE		SSL UNIT TRUCK	SSL TRAILER TRUCKS	DBL TRAILER TRUCKS	TRP TRAILER TRUCKS	BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY CLE
		Other	W/Trlp								
06:00-07:00A	1	6	1							9	1
07:00-07:15A		2								2	
07:15-07:30A	1	3		1						5	
07:30-07:45A	1	3		2						4	
07:45-08:00A	4	3						1		10	
08:00-08:15A	4	5								9	
08:15-08:30A	2	4								7	
08:30-08:45A	4	12								17	
08:45-09:00A	6	6		1						14	
09:00-10:00A	21	27		2				3		55	
10:00-11:00A	28	14								44	
11:00-12:00P	27	37		6				1		74	
12:00-01:00P	35	45		3					1	87	
01:00-02:00P	29	42		1						75	
02:00-03:00P	25	35		1				1		63	
03:00-04:00P	32	27		2						61	
04:00-04:15P	10	8		1				1		20	
04:15-04:30P	9	13								22	
04:30-04:45P	11	16							1	28	
04:45-05:00P	5	5								10	
05:00-05:15P	8	12						1		21	
05:15-05:30P	13	13								26	
05:30-05:45P	10	11								22	
05:45-06:00P	8	10								18	
06:00-07:00P	39	41		1				1	3	85	
07:00-08:00P	41	22		1					1	67	
08:00-09:00P	23	24		1					1	50	
09:00-10:00P	25	21						1		47	
16 HOUR	422	467	4	24	3	2	2	15	7	950	1

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007 COUNTY : Marion CITY: Keizer
 DAY OF WEEK : Wed. /Thurs. INTERSECTION OF: N River Rd. @ Crainawa Rd.
 HOURS COUNTED: 6AM - 10PM MILE POST : n/a
 WEATHER : clear TO : SOUTH
 FROM : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		SGL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE / SCOOTER VEHICLE	TOTAL ALL VEHICLE	BI CY CLE
	Cars	WTrlr	Other	WTrlr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	6 Axl				
06:00-07:00A	181		242		5	3		1	2					3	8	445
07:00-07:15A	71		73		1					1				2	1	150
07:15-07:30A	90		96		6	2			1					1	2	199
07:30-07:45A	110		111		2	1			2					1	6	234
07:45-08:00A	97		115		5			1	1					3	3	230
08:00-08:15A	87		91		3				1					1	1	183
08:15-08:30A	57		103		7				2					4	1	175
08:30-08:45A	90		101		3			1						1	1	196
08:45-09:00A	59		87		1				1					1	1	153
09:00-10:00A	284		368		9	3		1	2	1				4	4	682
10:00-11:00A	298		352		18	1		3	5	2				2	3	999
11:00-12:00P	322		331		10	5	1		4		1			9	2	703
12:00-01:00P	364		422		2	2			2					7	3	822
01:00-02:00P	333		376		12	2		2	3					5	1	753
02:00-03:00P	266		256		3	4		3	1					9	3	559
03:00-04:00P	290		368		4	2		1	2					4	3	695
04:00-04:15P	86		111		4									2		208
04:15-04:30P	72		98		3									4		175
04:30-04:45P	86		98		1					1				3		194
04:45-05:00P	83		97		1									1		166
05:00-05:15P	71		108		2									3		189
05:15-05:30P	73		89		2									2		171
05:30-05:45P	87		78		2			1						1		168
05:45-06:00P	38		53		3									2		93
06:00-07:00P	335		405		2				1					5		757
07:00-08:00P	235		228		3			1						1		477
08:00-09:00P	235		209		3			1						2		457
09:00-10:00P	188		196		1									1		386
16 HOUR	4568		5263	84	471	25	2	16	28	11	2		77	72	10619	31

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : NORTH
 COUNTY : Marion
 CITY : Keizer
 INTERSECTION OF: N River Rd. @ Chemawa Rd.
 MILE POST : n/a
 TO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SEL UNIT TRUCK	SSL TRAILER TRUCKS	DSL TRAILER TRUCKS	TRP TRAILER TRUCKS	BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	B1 CY CLE
	Cars	WTrlr	Other	WTrlr	2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	
06:00-07:00A	7		15		2						25	
07:00-07:15A	3		9								14	
07:15-07:30A	3		4								8	
07:30-07:45A	2		5								8	
07:45-08:00A	5		2		1						9	
08:00-08:15A	2		6								9	
08:15-08:30A	4		5								16	
08:30-08:45A	6		8		2						8	
08:45-09:00A	2		5		1						50	
09:00-10:00A	21		26		1						38	
10:00-11:00A	15		20		1						48	
11:00-12:00P	13		29		2						65	
12:00-01:00P	30		31		2						54	
01:00-02:00P	18		32		3						95	
02:00-03:00P	24		65		3	2					72	
03:00-04:00P	27		37		4					1	28	
04:00-04:15P	10		15			1					27	
04:15-04:30P	13		13		1						20	
04:30-04:45P	7		13								23	
04:45-05:00P	12		10								24	
05:00-05:15P	10		11		2						15	
05:15-05:30P	7		8								19	
05:30-05:45P	7		11							1	14	
05:45-06:00P	4		7		1					1	80	
06:00-07:00P	32		40		4					2	49	
07:00-08:00P	25		22		1						50	
08:00-09:00P	15		34								60	
09:00-10:00P	37		22									
16 HOUR	361		505	6	50	3	1	4	1	16	936	3

TRAFFIC COUN. SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007 COUNTY : Marion CITY: Keizer
 DAY OF WEEK : Wed./Thurs. INTERSECTION OF: N River Rd. @ Chenewaq Rd.
 HOURS COUNTED: 6AM - 10PM MILE POST : n/a
 WEATHER : clear TO : NORTH
 FROM : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS	SGL TRAILER TRUCKS			TRP TRAILER TRUCKS	BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY CLE
	Cars	WTR	Other	WTR			2 AXL	3 AXL	4 AXL					
06:00-07:00A	4		9										14	
07:00-07:15A	1		3		1								6	
07:15-07:30A														
07:30-07:45A	3				2							1	7	
07:45-08:00A	1		7										8	
08:00-08:15A	3		5										9	
08:15-08:30A	7		5		1								15	
08:30-08:45A	4		7		1								12	
08:45-09:00A	4		6		1								11	
09:00-10:00A	21		25	1	1								51	
10:00-11:00A	19		25		4								52	
11:00-12:00P	28		36	1	1								69	
12:00-01:00P	35		42		3								82	
01:00-02:00P	26		37		1							1	65	
02:00-03:00P	38		30		1								70	
03:00-04:00P	48		47		1								98	
04:00-04:15P	9		11										20	
04:15-04:30P	13		15										28	
04:30-04:45P	10		11		1								24	
04:45-05:00P	11		12		1								24	
05:00-05:15P	11		16										28	
05:15-05:30P	14		12	1	1								28	
05:30-05:45P	16		9		1								26	
05:45-06:00P	9		14	1									25	
06:00-07:00P	40		36		1								80	
07:00-08:00P	36		33									2	71	
08:00-09:00P	18		25										45	
09:00-10:00P	27		26		2								56	
16 HOUR	456		504	4	22	7	6	2			18	5	1024	

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : EAST
 TO : SOUTH
 MILE POST : n/a
 INTERSECTION OF: N River Rd. & Chemawa Rd.
 COUNTY : Marion
 CITY: Keizer

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE	TOTAL ALL VEHICLE	BI CY CLE
	Cars	Wtrlr	Other	Wtrlr		2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	>9Axl	7 Axl				
06:00-07:00A	7		9			1										17		
07:00-07:15A	4		5													9		
07:15-07:30A	3		4													7		
07:30-07:45A	4		6													10		
07:45-08:00A	10		7			1										18		
08:00-08:15A	6		8			1										15		
08:15-08:30A	12		9			1										24		
08:30-08:45A	6		3			1										10		
08:45-09:00A	6		8													14		
09:00-10:00A	28		39			5	2			1					2	77		
10:00-11:00A	32		35		3										1	71		
11:00-12:00P	48		48		1	2				1						99		
12:00-01:00P	49		75			3									1	129		
01:00-02:00P	40		47		1	2									1	91		
02:00-03:00P	42		45			5										92		
03:00-04:00P	45		51		1	2				1					1	102		
04:00-04:15P	3		10													13		
04:15-04:30P	9		9													18		
04:30-04:45P	12		13			1									1	27		
04:45-05:00P	11		12												1	24		
05:00-05:15P	12		10												1	23		
05:15-05:30P	11		10													21		
05:30-05:45P	8		16													24		
05:45-06:00P	14		12													26		
06:00-07:00P	49		33			1										83		
07:00-08:00P	29		18			2										49		
08:00-09:00P	23		25													48		
09:00-10:00P	30		25													55		
16 HOUR	553		592		8	27	3			1				4	6	1196		

Summarized by: _____ | 09/05/07

WORK_2425

TRAFFIC COUN. SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COVERED : 6AM - 10PM
 WEATHER : clear
 FROM : EAST
 TO : WEST

COUNTY : Marion CITY: Kelizer
 INTERSECTION OF: N River Rd. & Chenéwa Rd.
 MILE POST : n/a
 TO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SQL UNIT TRUCK	SQL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY	
	Cars	WTrlr	Other	WTrlr	2 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	9 Axl	7 Axl	8 Axl	9 Axl					
06:00-07:00A	4		4													1	9	1	
07:00-07:15A	2																4	1	
07:15-07:30A	1		4														5	1	
07:30-07:45A			2														3	1	
07:45-08:00A	2		3														5	1	
08:00-08:15A	3		4														8	1	
08:15-08:30A	1		6														9	1	
08:30-08:45A	3		6														6	1	
08:45-09:00A	3		2														37	1	
09:00-10:00A	15		18		2												50	1	
10:00-11:00A	24		24		2												47	2	
11:00-12:00P	23		19		4												65	2	
12:00-01:00P	30		28		6												65	2	
01:00-02:00P	33		31		1												50	2	
02:00-03:00P	27		22		1												56	1	
03:00-04:00P	29		26														17	1	
04:00-04:15P	6		9		1												11	1	
04:15-04:30P	4		7														20	1	
04:30-04:45P	10		9														26	1	
04:45-05:00P	9		16		1												36	2	
05:00-05:15P	18		18		2												24	1	
05:15-05:30P	7		15		1												19	1	
05:30-05:45P	5		13		1												14	1	
05:45-06:00P	7		6		1												71	4	
06:00-07:00P	36		34		1												45	3	
07:00-08:00P	21		23		1												50	3	
08:00-09:00P	27		20		1												44	3	
09:00-10:00P	15		29																
16 HOUR	365		388		27												804	29	

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007 COUNTY : Marion CITY: Keizer
 DAY OF WEEK : Wed./Thurs. INTERSECTION OF: N River Rd. a Chetawa Rd.
 HOURS COUNTED: 6AM - 10PM MILE POST : n/a
 WEATHER : clear TO : NORTH
 FROM : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			TOTAL ALL VEHICLE	MOTOR CYCLE SCOOTER	BI CY
	Cars	MTR	Other	WTR	2 Axl	3 Axl	4 Axl	5 Axl	>6Axl	5 Axl	>7Axl	7 Axl	8 Axl	>9Axl			
06:00-07:00A	123		169		6	1								5	1	307	
07:00-07:15A	27		32		4	1								1	1	65	
07:15-07:30A	46		25		1	2								1	1	77	
07:30-07:45A	31		39	2	4		3							1	1	83	
07:45-08:00A	43		48	3	4									4	1	105	
08:00-08:15A	33		53	1	2	2								3	1	95	
08:15-08:30A	44		60	3	4									2	1	112	
08:30-08:45A	41		72	1	4									1	1	123	
08:45-09:00A	52	1	60		5									1		120	
09:00-10:00A	220		273	6	10	1	3		1					6	2	531	
10:00-11:00A	260		311	7	13	5	1		2					4	2	608	
11:00-12:00P	357	1	352	5	14	4	2		3					6	2	747	
12:00-01:00P	375		416	8	17	5	3		2					5	5	836	
01:00-02:00P	362		403	6	14	1	1		2					4	4	801	
02:00-03:00P	309		399	8	13	4	5		1					6	4	751	
03:00-04:00P	392		401	8	14	6	2		2					5	7	836	
04:00-04:15P	128		120	4	4		1		1					1	3	258	
04:15-04:30P	105		128	1	4	1								2	4	245	
04:30-04:45P	100		116		1	1								3	3	222	
04:45-05:00P	114		156	3	3	3	1							2	4	292	
05:00-05:15P	130		149		7	2								2	4	305	
05:15-05:30P	124	1	166	3	6	1	2		1					1	4	330	
05:30-05:45P	155		166	2	2	2								1	1	256	
05:45-06:00P	119		128	1	5	2								3	6	858	
06:00-07:00P	429		410	3	6	1	1							2	9	608	
07:00-08:00P	285		301	5	3		2							1	9	592	
08:00-09:00P	284		282	1	5									1	1	450	
09:00-10:00P	226		212	1	2									1	8		
16 HOUR	4914	3	5417	82	175	38	3	31	26	11				72	82	10882	22

TRAFFIC COUN. SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 COUNTY : Marion
 CITY: Keizer
 DAY OF WEEK : Wed./Thurs.
 INTERSECTION OF: N River Rd. @ Chetawa Rd.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : 5027H
 MILE POST : n/a
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS	DBL TRAILER TRUCKS	TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	CY	CLF
	Cars	WTrlr	WTrlr	Other				2 Axl	3 Axl	4 Axl					
06:00-07:00A	12		7		2									22	
07:00-07:15A	2													3	
07:15-07:30A	4		7		1									13	
07:30-07:45A	2		4											7	
07:45-08:00A	2		8		1									11	
08:00-08:15A	5		2											7	
08:15-08:30A	1		11											12	
08:30-08:45A	4		3											7	
08:45-09:00A	7		6		1									16	
09:00-10:00A	12		29		1									44	
10:00-11:00A	25		24		2									54	
11:00-12:00P	28		30		2									61	
12:00-01:00P	28		35		8								2	74	
01:00-02:00P	30		28		2									60	
02:00-03:00P	36		29		1									67	
03:00-04:00P	27		44		1									75	
04:00-04:15P	10	1	8		1									20	
04:15-04:30P	6		7		1									15	
04:30-04:45P	9		10											20	
04:45-05:00P	19		4											23	
05:00-05:15P	6		11											17	
05:15-05:30P	11		15											26	
05:30-05:45P	5		5											10	
05:45-06:00P	8		11											19	
06:00-07:00P	33		34		2									69	
07:00-08:00P	31		25		2									58	
08:00-09:00P	26		19											45	
09:00-10:00P	27		14											42	
16 HOUR	416	1	430	5	27	2	2				10	4		897	

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : SOUTH
 COUNTY : Marion
 INTERSECTION OF: N River Rd. @ Chetawa Rd.
 CITY: Keizer
 MILE POST : n/a
 TO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCK	SGL TRAILER TRUCKS	DBL TRAILER TRUCKS	TRP TRAILER TRUCKS	BUSES	MOTOR CYCLE	TOTAL ALL VEHICLE	BI CY
	Cars	MTR	Other	MTR	2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	>9Axl	CLE
06:00-07:00A	21		16		1							39	
07:00-07:15A	4		9		1							16	
07:15-07:30A	3		6		1							10	
07:30-07:45A	10		8									18	
07:45-08:00A	8		7		1							16	
08:00-08:15A	8		18		2							29	
08:15-08:30A	4		16		1							23	
08:30-08:45A	8		6		1							15	
08:45-09:00A	10		10		1							21	
09:00-10:00A	26		47		4							80	
10:00-11:00A	48		61		1		3					118	
11:00-12:00P	52		58		1		3					118	
12:00-01:00P	76		80		1		1					159	
01:00-02:00P	60		64		2					2		134	
02:00-03:00P	84		80		2							168	
03:00-04:00P	78		76		1							156	
04:00-04:15P	23		22									45	
04:15-04:30P	31		25									56	
04:30-04:45P	29		27		1							59	
04:45-05:00P	32		30		2							67	
05:00-05:15P	27		30		2							60	
05:15-05:30P	28		42		1							70	
05:30-05:45P	34		26		1							62	
05:45-06:00P	13		16		1							30	
06:00-07:00P	94		112		2							211	1
07:00-08:00P	88		61		2							154	
08:00-09:00P	62		37		1							100	
09:00-10:00P	46		48									95	
15 HOUR	807		1038		21	30	10	6	1	2	14	2139	1

TRAFFIC COUN. SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : WEST
 COUNTY : Marion
 INTERSECTION OF: N River Rd. @ Chemaha Rd.
 CITY: Keizer
 MILE POST : n/a
 TO : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY CLE
	Cars	WtPlr	Other	WtPlr	2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	>9Axl				
06:00-07:00A	23		24		1	3								3	54	1
07:00-07:15A	5		10												15	
07:15-07:30A	10		10			1									21	
07:30-07:45A	5		8			1									14	
07:45-08:00A	5		11												16	
08:00-08:15A	6		10		1										17	
08:15-08:30A	9		11												20	
08:30-08:45A	8		14		2										25	
08:45-09:00A	12		12												25	
09:00-10:00A	29		30					2							62	
10:00-11:00A	35		49		1				1						87	
11:00-12:00P	53		49		3	2									137	
12:00-01:00P	47		46		1	4								2	98	
01:00-02:00P	56		63			1								1	124	
02:00-03:00P	48		50			3									102	
03:00-04:00P	53		49		1	2									105	
04:00-04:15P	14		19			2									35	
04:15-04:30P	9		18			1									31	
04:30-04:45P	17		14												31	
04:45-05:00P	19		24												43	
05:00-05:15P	18		18												38	
05:15-05:30P	10		13		1										24	
05:30-05:45P	24		17		1										44	
05:45-06:00P	8		15												23	
06:00-07:00P	50		79			1									131	
07:00-08:00P	48		32			1									81	
08:00-09:00P	36		32			1									69	
09:00-10:00P	30		21		1										52	
16 HOUR	687		748		13	27	2	1	3	1			1	9	1492	2

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007
 DAY OF WEEK : Wed./Thurs.
 HOURS COUNTED : 5AM - 10PM
 WEATHER : clear
 FROM : WEST TO : EAST
 COUNTY : Marion
 INTERSECTION OF: N River Rd. @ Chemaya Rd.
 CITY: Keizer
 MILE POST : n/a

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY
	cars	Wtr/cr	Wtr/cr	Dther	2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	9 Axl				
06:00-07:00A	9	7	7		1									19		
07:00-07:15A	1	2	2		1									4		
07:15-07:30A	2	3	3											5		
07:30-07:45A	6	11	11											18		
07:45-08:00A	6	7	7											13		
08:00-08:15A	5	10	10		1									17		
08:15-08:30A	4	5	5											13		
08:30-08:45A	6	5	5		1									13		
08:45-09:00A	6	3	3		1									10		
09:00-10:00A	12	23	23		4									39	3	
10:00-11:00A	6	19	19		1									26	4	
11:00-12:00P	24	33	33		1									60	1	
12:00-01:00P	32	34	34		1									68	2	
01:00-02:00P	30	25	25		1									58	1	
02:00-03:00P	34	23	23		1									59	2	
03:00-04:00P	33	32	32		1									66	4	
04:00-04:15P	10	12	12											22		
04:15-04:30P	4	15	15		1									22	3	
04:30-04:45P	11	10	10											15		
04:45-05:00P	6	7	7											19		
05:00-05:15P	8	10	10											23		
05:15-05:30P	10	13	13		2									18	1	
05:30-05:45P	5	11	11		1									14		
05:45-06:00P	5	7	7											67	5	
06:00-07:00P	31	32	32		1									59	2	
07:00-08:00P	26	31	31											46		
08:00-09:00P	24	21	21											43		
09:00-10:00P	16	26	26		1											
16 HOUR	372	437	437		7	22	2	1				4	10	857	28	

TRAFFIC COUN. SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007 COUNTY : Marion CITY: Keizer
 DAY OF WEEK : Wed./Thurs. INTERSECTION OF: N Rive- Rd. @ Chehaw Rd.
 HOURS COUNTED: 6AM - 10PM MILE POST : n/a
 WEATHER : clear TO : SOUTH
 FROM : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS	DBL TRAILER TRUCKS	TRP TRAILER TRUCKS	BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY CLE
	Cars	Other	UTR	Other								
06:00-07:00A	70	61	1	1	1				1	2	137	81
07:00-07:15A	16	30		1						1	48	55
07:15-07:30A	29	24	1							1	58	62
07:30-07:45A	22	33	1		1					4	61	44
07:45-08:00A	31	26							1	1	41	41
08:00-08:15A	30	29									151	119
08:15-08:30A	21	22	2								154	175
08:30-08:45A	15	23									33	48
08:45-09:00A	16	25	3								40	47
09:00-10:00A	65	77	3								50	50
10:00-11:00A	46	63	2		2						17	17
11:00-12:00P	70	72	4		1						157	110
12:00-01:00P	76	81	3		1						104	93
01:00-02:00P	89	89	2		2					2	2439	2
02:00-03:00P	67	73	4						2	1		
03:00-04:00P	72	96	3		3							
04:00-04:15P	15	17	1									
04:15-04:30P	23	23			1							
04:30-04:45P	24	15			1							
04:45-05:00P	20	26	1									
05:00-05:15P	22	21										
05:15-05:30P	23	27										
05:30-05:45P	20	30										
05:45-06:00P	8	9										
06:00-07:00P	70	81	2		1					2		
07:00-08:00P	61	49								2		
08:00-09:00P	60	40	1		1					1		
09:00-10:00P	44	37			1					1		
16 HOUR	1125	1199	31	44	5	4			6	21	2439	2

Summarized by: _____ | 09/05/07
 WORK_2423

SUMMARY OF BICYCLE COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007 DAY : Wed./Thurs. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: clear INTERSECTION OF: N River Rd. @ Chenawa Rd.

Tab by: Chk. by: MILE POST: BICYCLES USING CROSS WALKS

TIME OF DAY	BICYCLES MOVING WITH VEHICULAR TRAFFIC										BICYCLES USING CROSS WALKS						
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	M-N	M-E	M-S	TOTAL	NORTH	EAST	SOUTH	WEST
6:00-07:00A	1	2				1	1						6				
6:00-07:15A		1				1							2				
6:15-07:30A		1											1				
6:30-07:45A		1					1						2				
6:45-08:00A						1	1						2				
6:45-08:15A						1	1						2				
6:45-08:30A						1	1						2				
6:45-08:45A		1				1							2				
6:45-09:00A		1				1							2				
6:45-09:15A		2				1	4					3	12				
6:45-09:30A		3				1	1					4	6				
6:45-09:45A		2				2	1					1	6				
6:45-10:00A		5				2	3					2	12				
6:45-10:15A		5				2	1					1	7				
6:45-10:30A		2				2	2					2	8				
6:45-10:45A		2				1	3					4	8				
6:45-11:00A						1	1						2				
6:45-11:15A						1	1						2				
6:45-11:30A						1	1						2				
6:45-11:45A						1	1						2				
6:45-12:00P						1	1						2				
6:45-12:15P						1	1						2				
6:45-12:30P						1	1						2				
6:45-12:45P						1	1						2				
6:45-13:00P						1	1						2				
6:45-13:15P						1	1						2				
6:45-13:30P						1	1						2				
6:45-13:45P						1	1						2				
6:45-14:00P						1	1						2				
6:45-14:15P						1	1						2				
6:45-14:30P						1	1						2				
6:45-14:45P						1	1						2				
6:45-15:00P						1	1						2				
6:45-15:15P						1	1						2				
6:45-15:30P						1	1						2				
6:45-15:45P						1	1						2				
6:45-16:00P						1	1						2				
6:45-16:15P						1	1						2				
6:45-16:30P						1	1						2				
6:45-16:45P						1	1						2				
6:45-17:00P						1	1						2				
6:45-17:15P						1	1						2				
6:45-17:30P						1	1						2				
6:45-17:45P						1	1						2				
6:45-18:00P						1	1						2				
6:45-18:15P						1	1						2				
6:45-18:30P						1	1						2				
6:45-18:45P						1	1						2				
6:45-19:00P						1	1						2				
6:45-19:15P						1	1						2				
6:45-19:30P						1	1						2				
6:45-19:45P						1	1						2				
6:45-20:00P						1	1						2				
6:45-20:15P						1	1						2				
6:45-20:30P						1	1						2				
6:45-20:45P						1	1						2				
6:45-21:00P						1	1						2				
6:45-21:15P						1	1						2				
6:45-21:30P						1	1						2				
6:45-21:45P						1	1						2				
6:45-22:00P						1	1						2				
6:45-22:15P						1	1						2				
6:45-22:30P						1	1						2				
6:45-22:45P						1	1						2				
6:45-23:00P						1	1						2				
6:45-23:15P						1	1						2				
6:45-23:30P						1	1						2				
6:45-23:45P						1	1						2				
6:45-24:00P						1	1						2				
6:45-24:15P						1	1						2				
6:45-24:30P						1	1						2				
6:45-24:45P						1	1						2				
6:45-25:00P						1	1						2				
6:45-25:15P						1	1						2				
6:45-25:30P						1	1						2				
6:45-25:45P						1	1						2				
6:45-26:00P						1	1						2				
6:45-26:15P						1	1						2				
6:45-26:30P						1	1						2				
6:45-26:45P						1	1						2				
6:45-27:00P						1	1						2				
6:45-27:15P						1	1						2				
6:45-27:30P						1	1						2				
6:45-27:45P						1	1						2				
6:45-28:00P						1	1						2				
6:45-28:15P						1	1						2				
6:45-28:30P						1	1						2				
6:45-28:45P						1	1						2				
6:45-29:00P						1	1						2				
6:45-29:15P						1	1						2				
6:45-29:30P						1	1						2				
6:45-29:45P						1	1						2				
6:45-30:00P						1	1						2				
6:45-30:15P						1	1						2				
6:45-30:30P						1	1						2				
6:45-30:45P						1	1						2				
6:45-31:00P						1	1						2				
6:45-31:15P						1	1						2				
6:45-31:30P						1	1						2				
6:45-31:45P						1	1						2				
6:45-32:00P						1	1						2				
6:45-32:15P						1	1						2				
6:45-32:30P						1	1						2				
6:45-32:45P						1	1						2				
6:45-33:00P						1	1						2				
6:45-33:15P						1	1						2				
6:45-33:30P						1	1						2				
6:45-33:45P						1	1						2				
6:45-34:00P						1	1						2				
6:45-34:15P						1	1						2				
6:45-34:30P						1	1						2				
6:45-34:45P						1	1						2				
6:45-35:00P						1	1						2				
6:45-35:15P						1	1						2				
6:45-35:30P						1	1						2				
6:45-35:45P						1	1						2				
6:45-36:00P						1	1						2				
6:45-36:15P						1	1						2				
6:45-36:30P						1	1						2				
6:45-36:45P						1	1						2				
6:45-37:00P						1	1						2				
6:45-37:15P						1	1						2				
6:45-37:30P						1	1						2				
6:45-37:45P						1	1						2				
6:45-38:00P						1	1						2				
6:45-																	

SUMMARY OF PEDESTRIAN COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 25/26, 2007 DAY : Wed./Thurs. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: clear INTERSECTION OF: N River Rd. @ Chemawa Rd.

Tab by: Chk. by: MILE POST : N/A

TIME OF DAY	STUDENT PEDESTRIANS			OTHER PEDESTRIANS			STUDENT AND OTHER PEDESTRIAN			TOTAL	
	NORTH	EAST	WEST	NORTH	EAST	WEST	NORTH	EAST	WEST		
06:00-07:00A				5	5	4	14	5	5	4	14
07:00-07:15A						1	2			1	2
07:15-07:30A						2	4			2	4
07:30-07:45A				2	2	1	6	1	2	2	6
07:45-08:00A				3	1	1	5		1	1	5
08:00-08:15A				4		1	5		1	1	5
08:15-08:30A						1	3		1	1	3
08:30-08:45A				2	1	4	12	5	1	4	12
08:45-09:00A				3	10	3	22	10	6	3	22
09:00-10:00A				5	8	8	27	8	6	8	27
10:00-11:00A				30	36	15	114	34	35	15	114
11:00-12:00P				4	11	13	37	4	11	13	37
12:00-01:00P				7	12	8	33	7	12	8	33
01:00-02:00P				3	19	4	47	3	19	4	47
02:00-03:00P				8	9	2	25	8	9	2	25
03:00-04:00P					2	6	11		2	6	11
04:00-04:15P				5	3	3	15	5	3	3	15
04:15-04:30P				3	6	3	12	3	6	3	12
04:30-04:45P					1	1	2		1	1	2
04:45-05:00P					2	2	2		2	2	2
05:00-05:15P					6	5	22		6	5	22
05:15-05:30P				2	4	2	12	2	4	2	12
05:30-05:45P				4	7	4	15	4	7	4	15
05:45-06:00P				6	8	5	26	6	8	5	26
06:00-07:00P				3	6	6	23	3	6	6	23
07:00-08:00P				8	7	9	38	8	7	9	38
08:00-09:00P				4	3	7	19	4	3	7	19
09:00-10:00P											
TOTAL VOLUME	111	172	142	129	553	111	172	142	128	553	

**SUMMARY OF TRAFFIC COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION**

DATE : July 23/24, 2007 DAY : Mon./Tués. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: clear INTERSECTION OF: Lockhaven Dr. NE @ 14th Ave. & Kafir Dr.

Tab by: MILE POST : n/a

TIME OF DAY	SUMMARY BY MOVEMENTS										ENTERING VOLUMES BY LEGS									
	N-E	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-N	W-E	U-S TOTAL	NORTH AND SOUTH	PERCENT OF TOTAL	EAST WEST	NORTH	SOUTH	WEST			
06:00-07:00A	86	13	27	4	194	3	12	3	3	462	2	811	119	14.7	692	85.3	101	225	467	
07:00-07:15A	31	3	8	2	71	2	3	1	2	131	2	255	41	16.1	214	83.9	35	81	133	
07:15-07:30A	42	1	4	1	50	2	5	3	2	132	2	246	55	22.4	191	77.6	45	55	136	
07:30-07:45A	43	2	4	4	69	2	12	1	1	146	2	291	71	24.4	220	75.6	56	73	147	
07:45-08:00A	37	3	7	1	98	3	8	3	6	110	2	281	57	20.3	224	79.7	43	106	118	
08:00-08:15A	29	5	9	4	93	2	4	1	2	134	1	283	44	15.5	239	84.5	37	102	137	
08:15-08:30A	38	3	7	4	76	1	5	2	4	130	1	294	48	16.3	246	83.7	40	109	134	
08:30-08:45A	34	2	7	5	99	1	5	2	7	129	1	294	48	16.3	246	83.7	40	109	134	
08:45-09:00A	30	1	10	3	109	1	8	1	8	118	3	313	51	16.3	262	83.7	41	133	129	
09:00-10:00A	97	13	28	49	408	7	11	11	18	407	4	1064	167	15.7	897	84.3	138	468	429	
10:00-11:00A	74	11	24	47	433	11	21	8	24	479	6	1157	149	12.9	1008	87.1	109	499	509	
11:00-12:00P	87	7	26	51	528	6	21	5	26	556	2	1324	152	11.5	1172	88.5	120	586	586	
12:00-01:00P	82	4	24	75	536	6	20	2	32	579	7	1381	138	10.0	1243	90.0	110	625	618	
01:00-02:00P	85	12	27	63	549	6	13	7	26	572	1	1378	150	10.9	1228	89.1	124	629	599	
02:00-03:00P	93	6	22	70	620	8	11	10	31	552	7	1448	150	10.4	1298	89.6	121	708	590	
03:00-04:00P	92	9	23	116	644	6	10	7	34	573	6	1537	147	9.6	1390	90.4	124	777	613	
04:00-04:15P	15	5	9	34	155	2	7	1	9	150	4	393	39	9.9	354	90.1	29	191	163	
04:15-04:30P	19	4	11	36	181	2	6	4	13	131	2	405	40	9.9	365	90.1	34	219	146	
04:30-04:45P	21	4	7	39	209	3	2	1	10	164	4	470	38	8.1	432	91.9	32	254	178	
04:45-05:00P	12	4	6	35	174	2	2	3	4	166	2	413	29	7.0	384	93.0	22	212	172	
05:00-05:15P	17	4	6	33	169	5	4	2	13	154	2	417	38	9.1	379	90.9	27	210	169	
05:15-05:30P	29	3	9	47	229	4	5	2	21	139	4	486	43	9.1	451	90.9	41	287	164	
05:30-05:45P	24	2	10	33	175	4	5	2	14	143	3	424	47	11.1	377	88.9	36	217	160	
05:45-06:00P	49	1	10	47	179	8	1	1	9	193	2	506	70	13.8	436	86.2	60	232	204	
06:00-07:00P	104	8	34	118	636	10	14	7	29	564	5	1546	177	11.4	1369	88.6	146	771	598	
07:00-08:00P	72	6	18	91	447	15	12	2	32	399	6	1112	125	11.2	987	88.8	96	550	437	
08:00-09:00P	36	6	19	78	414	1	7	4	18	304	5	898	73	8.1	825	91.9	61	498	327	
09:00-10:00P	35	2	19	68	388	3	7	1	21	222	2	778	67	8.6	711	91.4	56	466	245	
TOTAL COUNT	1410	131	391	1230	7933	126	250	97	419	7941	85	20208	2385	11.8	17823	88.2	1952	9378	8445	
24-HR FACTOR	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
24-HR VOLUME	1551	144	430	1353	8726	139	253	107	461	8735	94	22230	2633	11.8	19605	86.2	2125	10316	9290	

North and South is: 14th Ave. (n) Kafir Dr. (s) East and West is: Lockhaven Dr. NE SUM_2422

**SUMMARY OF TRAFFIC COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION**

DATE : July 23/24, 2007
 HOURS : 5AM - 10PM
 DAY : Mon./Tues.
 WEATHER: Clear
 COUNTY : Maricopa
 INTERSECTION OF: Lockhaven Dr. NE @ 14th Ave. & Kafir Dr.
 CITY: Keizer
 Chk. by: MILE POST : n/a

SUMMARY BY MOVEMENTS

TIME OF DAY	MOVEMENTS										PERCENT OF TOTAL			ENTERING VOLUMES BY LEGS						
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-N	W-E	W-S	TOTAL	NORTH AND SOUTH	EAST AND WEST	PERCENT TOTAL	NORTH	EAST	SOUTH	WEST
06:00-07:00A	86	2	13	27	4	194	3	12	3	3	462	2	811	119	692	14.7	101	225	18	467
07:00-08:00A	153	7	19	23	4	288	9	28	8	11	519	4	1073	224	849	20.9	179	315	45	534
08:00-09:00A	128	11	27	50	12	377	5	22	8	21	511	5	1177	201	976	17.1	166	439	35	537
09:00-10:00A	97	13	28	49	11	408	7	11	11	18	407	4	1064	167	897	15.7	138	468	29	429
10:00-11:00A	74	11	24	47	19	433	11	21	8	24	479	6	1157	149	1008	12.9	109	499	40	509
11:00-12:00P	87	7	26	51	7	528	6	21	5	26	558	2	1324	152	1172	11.5	120	586	32	586
12:00-01:00P	82	4	24	75	14	536	6	20	2	32	579	7	1381	138	1243	10.0	110	625	28	618
01:00-02:00P	85	12	27	63	17	549	6	13	7	26	572	1	1378	150	1228	8.9	124	629	26	599
02:00-03:00P	93	6	22	70	18	620	8	11	10	31	552	7	1448	150	1298	10.4	121	708	29	590
03:00-04:00P	92	9	23	116	17	644	6	10	7	34	573	6	1537	147	1390	9.6	124	777	23	613
04:00-05:00P	67	17	33	144	13	719	9	11	9	36	611	12	1681	146	1535	8.7	117	876	29	659
05:00-06:00P	119	10	35	160	34	752	21	10	5	57	629	11	1843	200	1643	10.9	164	946	36	697
06:00-07:00P	104	8	34	118	17	636	10	14	7	29	564	5	1546	177	1369	11.4	146	771	31	598
07:00-08:00P	72	5	18	91	12	447	15	12	2	32	399	6	1112	125	987	11.2	96	550	29	437
08:00-09:00P	36	5	19	78	6	414	1	7	4	18	304	5	898	73	825	8.1	61	498	12	327
09:00-10:00P	35	2	19	68	10	388	3	7	1	21	222	2	778	67	711	8.6	56	466	11	245
TOTAL COUNT	1610	131	391	1230	215	7933	126	230	97	419	7941	85	20208	2385	17823	11.8	1932	9378	453	8445
24HR FACTOR	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	2623	19506	11.8	2125	10316	498	9290
24HR VOLUME	1551	144	430	1353	237	8726	139	253	107	461	8735	94	82230	2623	19506	11.8	2125	10316	498	9290

Tab by: _____
 North and South is: 14th Ave. (n) Kafir Dr. (s)
 East and West is: Lockhaven Dr. NE
 SUM_2422

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 DAY OF WEEK : Mon, Tues.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : NORTH
 COUNTY : Marion
 INTERSECTION OF : Lockhaven Dr. NE @ 14th Ave. & Kafir Dr.
 CITY : Ketter
 MILE POST : n/a
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SEL UNIT TRUCK		SSL TRAILER TRUCKS		OSL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY CLE
	Cars	W/Tr	W/Tr	Defect	2 Axle	3 Axle	>4Axle	4 Axle	5 Axle	>6Axle	5 Axle	6 Axle				
06:00-07:00A	56		30												86	1
07:00-07:15A	17		11		1										31	
07:15-07:30A	27		14		1										42	
07:30-07:45A	27		13		1									1	43	
07:45-08:00A	24		13											1	37	2
08:00-08:15A	17		10		1										29	
08:15-08:30A	24		14												38	
08:30-08:45A	22		8												31	
08:45-09:00A	17		10		2										30	
09:00-10:00A	62		32		2										97	
10:00-11:00A	51	1	20		2										74	
11:00-12:00P	57		29		1										87	
12:00-01:00P	48		29		3										82	
01:00-02:00P	56		25		2									1	85	
02:00-03:00P	59		31		3									2	93	
03:00-04:00P	50		33		2										92	
04:00-04:15P	9		6												15	
04:15-04:30P	11		8												19	
04:30-04:45P	17		4												21	
04:45-05:00P	8		4												12	
05:00-05:15P	9		7												17	
05:15-05:30P	18		11		1										29	
05:30-05:45P	16		8												24	
05:45-06:00P	29		19												49	2
06:00-07:00P	64		37												104	
07:00-08:00P	43		28												72	
08:00-09:00P	23		12		1										36	
09:00-10:00P	23		11												35	
15 HOUR	884	1	477		15	20							1	7	1410	5

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : NORTH
 TO : SOUTH

COUNTY : Marion CITY: Keizer
 INTERSECTION OF: Lockhaven Dr. HE @ 14th Ave. & Kafir Dr.
 MILE POST : n/a
 TO : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY CLE
	Cars	WTRU	Other	WTRU	2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	9 Axl				
06:00-07:00A	1		1												2	
07:00-07:15A			1												1	
07:15-07:30A	1														1	
07:30-07:45A	1														1	
07:45-08:00A	2														3	
08:00-08:15A	3														5	
08:15-08:30A	1														3	
08:30-08:45A	2														2	
08:45-09:00A	1														1	
09:00-10:00A	7		5												13	
10:00-11:00A	7		4												11	
11:00-12:00P	4		2												4	
12:00-01:00P	2		2												4	
01:00-02:00P	6		5												12	
02:00-03:00P	4		2												6	
03:00-04:00P	5		2												9	
04:00-04:15P	3		2												5	
04:15-04:30P			2												4	
04:30-04:45P	3		4												4	
04:45-05:00P	2		1												4	
05:00-05:15P	2		2												4	
05:15-05:30P	3		2												3	
05:30-05:45P	2														2	
05:45-06:00P			1												1	
06:00-07:00P	5		3												8	
07:00-08:00P	5		1												6	
08:00-09:00P	6														6	
09:00-10:00P	2														2	
16 HOUR	80		44		1	6									131	

TRAFFIC COUNTY SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : NORTH

COUNTY : Marion CITY: Keizer
 INTERSECTION OF: Lockhaven Dr. NE @ 14th Ave. & Kiffin Dr.
 MILE POST : n/a
 IC : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI. CY. CLE
	Cars	MTPLR	Other	MTPLR		2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	6 Axl	>7Axl				
06:00-07:00A	6		6														13	
07:00-07:15A	3																3	
07:15-07:30A	2																2	
07:30-07:45A	5		4												1		11	
07:45-08:00A	1		2														3	
08:00-08:15A	2		1														3	
08:15-08:30A	4		1														7	
08:30-08:45A	5		2														7	
08:45-09:00A	5		4														10	
09:00-10:00A	17		10														28	
10:00-11:00A	16		7														24	
11:00-12:00P	12		12														26	
12:00-01:00P	13		10														24	
01:00-02:00P	16		10														27	
02:00-03:00P	11		10														22	
03:00-04:00P	16		5														23	
04:00-04:15P	6		1														9	
04:15-04:30P	6		5														11	
04:30-04:45P	4		3														7	
04:45-05:00P	4		2														6	
05:00-05:15P	4		1														6	
05:15-05:30P	5		3														9	
05:30-05:45P	5		4														10	
05:45-06:00P	6		4														10	
06:00-07:00P	22		11														34	
07:00-08:00P	13		4														18	
08:00-09:00P	13		5														19	
09:00-10:00P	14		4														19	
16 HOUR	236		131		3	6									14	1	391	

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : EAST
 TO : EAST

CITY: Keizer
 COUNTY : Marion
 INTERSECTION OF: Lockhaven Dr. NE @ 14th Ave. & Kafir Dr.
 MILE POST : n/a
 TO : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP. TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY CLE
	Cars	MTrlr	Other	WTrlr	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	>9Axl						
06:00-07:00A	15		10		2										27		
07:00-07:15A	7		1										1		8		
07:15-07:30A	1		2												4		
07:30-07:45A	3		1												4		
07:45-08:00A	4		3												7		
08:00-08:15A	5		3												9		
08:15-08:30A	12		2		1										15		
08:30-08:45A	2		3												5		
08:45-09:00A	10		10		1										21		
09:00-10:00A	32		16												49		
10:00-11:00A	34		13												47		
11:00-12:00P	29		19		3									1	51		
12:00-01:00P	46		24		2										75		
01:00-02:00P	43		16											2	63		
02:00-03:00P	48		18		1										70		
03:00-04:00P	68		45		2										116		
04:00-04:15P	16		17		1										34		
04:15-04:30P	21		15												36		
04:30-04:45P	28		30												39		
04:45-05:00P	25		10												35		
05:00-05:15P	23		10												33		
05:15-05:30P	32		13		1									1	47		
05:30-05:45P	20		13												33		
05:45-06:00P	30		16												47		
06:00-07:00P	73		43		1										118		
07:00-08:00P	58		31		1									1	91	2	
08:00-09:00P	51		26											1	78		
09:00-10:00P	43		24												68		
16 HOUR	779		414		13									5	1230	3	

TRAFFIC COUN. SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : cLEAR
 FROM : EAST
 COUNTY : Marion
 INTERSECTION OF: Lockhaven Dr. NE @ 14th Ave. & Kaffir Dr.
 CITY: Keizer
 NILE POST : n/a
 TO : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS	DAL TRAILER TRUCKS	TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY
	Cars	MTPL	Other	MTPL				2 AXL	3 AXL	>4AXL				
06:00-07:00A	3		1										4	
07:00-07:15A	1		1										2	
07:15-07:30A			1										1	
07:30-07:45A														
07:45-08:00A	1												1	
08:00-08:15A														
08:15-08:30A	2		2										4	
08:30-08:45A	3		1										5	
08:45-09:00A	3												3	
09:00-10:00A	6		5										11	
10:00-11:00A	11		8										19	4
11:00-12:00P	4		3										7	1
12:00-01:00P	11		3										14	
01:00-02:00P	12		4										17	
02:00-03:00P	16		2										18	
03:00-04:00P	10		7										17	
04:00-04:15P	2												2	
04:15-04:30P	1		1										2	
04:30-04:45P	4		2										6	
04:45-05:00P	2		1										3	
05:00-05:15P	6		2										8	
05:15-05:30P	9		2										11	
05:30-05:45P	9												9	
05:45-06:00P	2		4										6	
06:00-07:00P	12		5										17	
07:00-08:00P	10		1										12	
08:00-09:00P	6												6	
09:00-10:00P	5		4										10	
16 HOUR	151		60		2						1		215	6

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : EAST
 COUNTY : Marion
 INTERSECTION OF : Lockhaven Dr. NE @ 14th Ave. & Kafir Dr.
 CITY : Keizer
 MILE POST : n/a
 TO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY CLE
	Cars	WTr	Other	WTr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	6 Axl	>7Axl	7 Axl	8 Axl				
06:00-07:00A	101		72	2	8	1	1	3	3						3	1	194		
07:00-07:15A	37		28	1	1		1	2	1						2	1	50		
07:15-07:30A	28		17					1	1						2		69		
07:30-07:45A	45		18	1				1	1								98		
07:45-08:00A	61		23	1	8		1	2	3								93		
08:00-08:15A	48		31	2	6			3	1								76		
08:15-08:30A	41		25		4			3	1								99		
08:30-08:45A	53		35	1	5		1	1	1								109		
08:45-09:00A	75		32		1		1										408		
09:00-10:00A	228		128	6	18	7	1	7	11								433	1	
10:00-11:00A	244		143	7	15	2	2	4	6	8							528		
11:00-12:00P	310		179	7	13	2	2	5	6	6							536		
12:00-01:00P	331		176	6	11	2	1	2	1	5							549	1	
01:00-02:00P	333		181	10	6	5	1	1	2	7							620		
02:00-03:00P	380		196	6	15	5	1	3	1	8							644		
03:00-04:00P	382		226	6	10	3	1	2	4								155		
04:00-04:15P	92		55	3	4		1										181		
04:15-04:30P	106		73	1	1												209		
04:30-04:45P	134		64	4	2					2							174		
04:45-05:00P	101		70	2	2												169	1	
05:00-05:15P	111		54	1	1					1							229		
05:15-05:30P	139		84	2	1			1									175		
05:30-05:45P	110		60	1	1			1									179		
05:45-06:00P	103		70	2	2												636		
06:00-07:00P	388		221	6	6		1	5									447	1	
07:00-08:00P	293	1	148	2	2			1		1							414		
08:00-09:00P	291		119	1	2												388		
09:00-10:00P	270		114																
16 HOUR	4835	2	2639	78	144	30	11	17	62	66	1	2	29	37		7935	6		

Summarized by: _____ 09/04/07

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : SOUTH
 TO : NORTH
 COUNTY : Marion
 INTERSECTION OF: Lockhaven Dr, NE @ 14th Ave. & Kafir Dr.
 CITY: Keizer
 MILE POST : n/a
 JO : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK >4AXL	SEL TRAILER TRUCKS 4 AXL	DBL TRAILER TRUCKS 5 AXL	TRP TRAILER TRUCKS 7 AXL	TRP TRAILER TRUCKS 8 AXL	BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	CYCLE
	Cars	WTRLP	Other	WTRLP									
06:00-07:00A	2		1									3	
07:00-07:15A			2									2	
07:15-07:30A			2									2	
07:30-07:45A	1		1									2	
07:45-08:00A	1		2									3	
08:00-08:15A	2											2	
08:15-08:30A	1									1		1	
08:30-08:45A	1											1	
08:45-09:00A	4		3									7	
09:00-10:00A	9		2									11	
10:00-11:00A	5		1									6	
11:00-12:00P	2		3		1							6	
12:00-01:00P	5		3							1		6	
01:00-02:00P	4		3									8	
02:00-03:00P	5		1									6	
03:00-04:00P	1		1									2	
04:00-04:15P	1		1		1							3	
04:15-04:30P	2		1									3	
04:30-04:45P	1		1									2	
04:45-05:00P	1		1									2	
05:00-05:15P	3		2									5	
05:15-05:30P	4		4									8	
05:30-05:45P	2		2									4	
05:45-06:00P	4		4									8	
06:00-07:00P	5		3		2							10	
07:00-08:00P	11		4									15	
08:00-09:00P	1		4									5	
09:00-10:00P	3											3	
16 HOUR	79		40	1	4					2		126	

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 COUNTY : Marion
 CITY : Keizer
 DAY OF WEEK : Mon-Fri-Sat.
 INTERSECTION OF: Lockhaven Dr. NE @ 14th Ave. & Kafir Dr.
 HOURS COUNTED: 5AM - 10PM
 WEATHER : cClear
 FROM : SOUTH
 TO : EAST
 MILE POST : n/a

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE	TOTAL ALL VEHICLE	CY
	Cars	WTrlr	Other	WTrlr	3 Axle	>4Axle	4 Axle	5 Axle	>6Axle	5 Axle	6 Axle	>7Axle				
06:00-07:00A	6		4										2		12	
07:00-07:15A	2												1		3	
07:15-07:30A	4												1		5	
07:30-07:45A	5				1								1		12	
07:45-08:00A	4												1		8	
08:00-08:15A	1				1								1		4	
08:15-08:30A	3												1		5	
08:30-08:45A	4												1		5	
08:45-09:00A	4				1								1		8	
09:00-10:00A	7												1		11	
10:00-11:00A	12												1		21	
11:00-12:00P	12				1								2		21	
12:00-01:00P	13												1		20	
01:00-02:00P	7												1		13	
02:00-03:00P	6												1		11	
03:00-04:00P	6				1								2		10	
04:00-04:15P	3												1		7	
04:15-04:30P																
04:30-04:45P	1												1		2	
04:45-05:00P	1												1		2	
05:00-05:15P	2												1		4	
05:15-05:30P																
05:30-05:45P	3												1		5	
05:45-06:00P	1												1		1	
06:00-07:00P	10				3								1		14	
07:00-08:00P	7				3								1		12	
08:00-09:00P	5				1								1		7	
09:00-10:00P	4												1		7	
15 HOUR	133	2	65	4	3	2							23		230	6

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : SOUTH
 COUNTY : Marion
 INTERSECTION OF: Lockhaven Dr, NE @ 14th Ave. & Kafir Dr.
 CITY: Keizer
 MILE POST : n/a
 TO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY
	Cars	WTrlr	Other	WTrlr	2 Axle	3 Axle	>4Axle	4 Axle	5 Axle	>6Axle	6 Axle	>7Axle				
06:00-07:00A	2		1												3	1
07:00-07:15A	1														1	1
07:15-07:30A	3														3	3
07:30-07:45A	1														1	1
07:45-08:00A	1														3	3
08:00-08:15A															1	1
08:15-08:30A	2														4	4
08:30-08:45A	2														2	2
08:45-09:00A	1														1	1
09:00-10:00A	7		3												11	11
10:00-11:00A	5		3												8	8
11:00-12:00P	4		1												5	5
12:00-01:00P															2	2
01:00-02:00P	5		2												7	7
02:00-03:00P	7		3												10	10
03:00-04:00P	3		4												7	7
04:00-04:15P	1														1	1
04:15-04:30P	2		2												4	4
04:30-04:45P	1														1	1
04:45-05:00P	2		1												3	3
05:00-05:15P	1		1												2	2
05:15-05:30P															2	2
05:30-05:45P	2		1												3	3
05:45-06:00P															1	1
06:00-07:00P	5		2												7	7
07:00-08:00P	2														2	2
08:00-09:00P	2		1												4	4
09:00-10:00P															1	1
15 HOUR	63		30			3							1		97	1

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007 COUNTY : Marion CITY: Keizer
 DAY OF WEEK : Mon./Tues. INTERSECTION OF: Lockhaven Dr. NE @ 14th Ave. & Kafir Dr.
 HOURS COUNTED: 6AM - 10PM MILE POST : n/e
 WEATHER : clear TO: NORTH
 FROM : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY CLE
	Cars	W/T/R	Other	W/T/R	2 Axle	3 Axle	4 Axle	5 Axle	6 Axle	7 Axle	8 Axle	>9Axle				
06:00-07:00A	1		2												3	
07:00-07:15A	1														2	
07:15-07:30A	1		1												2	
07:30-07:45A	1		1												1	
07:45-08:00A	4		1												6	
08:00-08:15A	2		1												2	
08:15-08:30A	2		1												4	
08:30-08:45A	4		3												7	
08:45-09:00A	7		1												8	
09:00-10:00A	12		3		1										18	
10:00-11:00A	14		8		1										24	
11:00-12:00P	17		7		1										26	
12:00-01:00P	20		11												32	
01:00-02:00P	17		8												26	
02:00-03:00P	19		8												31	
03:00-04:00P	19		12												34	
04:00-04:15P	8														9	
04:15-04:30P	6		7												13	
04:30-04:45P	6		3												10	
04:45-05:00P	3		1												4	
05:00-05:15P	9		4												13	
05:15-05:30P	14		7												21	
05:30-05:45P	10		4												14	
05:45-06:00P	8		7												19	
06:00-07:00P	21		7												29	
07:00-08:00P	20		11												32	
08:00-09:00P	10		7												18	
09:00-10:00P	12		8												21	
16 HOUR	267		127		3										419	

Summarized by: _____ | 09/06/07

WORK_2422

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : WEST

COUNTY : Marion CITY: Keizer
 INTERSECTION OF: Lockhaven Dr. HE @ 14th Ave. & K&F Dr.
 MILE POST : n/a
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SBL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER		BI CY	TOTAL ALL VEHICLE
	Cars	WFLR	WFLR	Other	WFLR	2 Axle	3 Axle	4 Axle	5 Axle	6 Axle	7 Axle	8 Axle	>9Axle		SCOOTER	CY		
06:00-07:00A	266			167	5	7									8	462		
07:00-07:15A	79			43	1	1	1								2	131		
07:15-07:30A	79			43	1	5									1	132		
07:30-07:45A	97			45	1	1										146	1	
07:45-08:00A	65			38	1	5										110		
08:00-08:15A	65			59	4	4									1	134		
08:15-08:30A	76			46	1	1										130		
08:30-08:45A	84	1		38	3	3										129		
08:45-09:00A	67			36	4	5										118		
09:00-10:00A	246			125	7	13	1								1	407		
10:00-11:00A	293			144	7	14	2								4	479		
11:00-12:00P	314			199	7	16	4								2	558	1	
12:00-01:00P	348			191	5	15	2								4	579	1	
01:00-02:00P	354			173	10	14	2								4	572		
02:00-03:00P	333			179	7	7	6								7	552		
03:00-04:00P	356			183	4	13	2								2	573	1	
04:00-04:15P	86			56	1	5									1	150	1	
04:15-04:30P	84			42	2	3	1								1	131		
04:30-04:45P	95			61	1	1									1	164		
04:45-05:00P	97	1		62	1	4									1	166		
05:00-05:15P	103			47	1	3										154		
05:15-05:30P	88			50	1	1										139		
05:30-05:45P	82	1		59	1	1										143		
05:45-06:00P	123			66	1	1									1	193		
06:00-07:00P	350	1		199	5	4									3	564	1	
07:00-08:00P	242	1		141	4	6									2	399		
08:00-09:00P	199			91	3	6									3	304		
09:00-10:00P	153			65	1	1									1	222		
15 HOUR	4824	5		2646	86	159	26	14	10	32	72	1	2	8	47	7941	9	

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : WEST
 COUNTY : Marion
 CITY: Keizer
 INTERSECTION OF: Lockhaven Dr. NE @ 14th Ave. & Kafir Dr.
 MILE POST : n/a
 TO : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGI UNIT TRUCK	SSL TRAILER TRUCKS	DBL TRAILER TRUCKS	TRP TRAILER TRUCKS	BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY
	Cars	MTrlr	Other	MTrlr	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	>9Axl	CLE
06:00-07:00A	2										2	
07:00-07:15A	1				1						2	
07:15-07:30A												
07:30-07:45A	1										2	
07:45-08:00A	1		1								1	
08:00-08:15A	1										1	
08:15-08:30A	1										1	
08:30-08:45A	1										1	
08:45-09:00A	2										3	
09:00-10:00A	3										4	
10:00-11:00A	4				1						6	
11:00-12:00P	4										2	
12:00-01:00P												
01:00-02:00P	3										4	
02:00-03:00P	3										4	
03:00-04:00P	3										2	
04:00-04:15P	1										1	
04:15-04:30P	3										4	
04:30-04:45P	2										2	
04:45-05:00P	1										1	
05:00-05:15P	1										1	
05:15-05:30P	2				1						3	
05:30-05:45P	1										2	
05:45-06:00P	4										5	
06:00-07:00P	4										6	
07:00-08:00P	4										5	
08:00-09:00P	4										2	
09:00-10:00P	2											
16 HOUR	52		27	1	3	1	1				85	

**SUMMARY OF BICYCLE COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION**

DATE : July 23/24, 2007 DAY : Mon./Tues. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: clear INTERSECTION OF: Lockhaven Dr. NE @ 14th Ave. & Kafir Dr.

Tab by: _____ CHK. by: _____ MILE POST : n/a

TIME OF DAY	BICYCLES MOVING WITH VEHICULAR TRAFFIC										BICYCLES USING CROSS WALKS						
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-N	W-E	W-S	TOTAL	NORTH	EAST	SOUTH	WEST
06:00-07:00A	1								1				2		1		
07:00-07:15A																	
07:15-07:30A																	
07:30-07:45A																	
07:45-08:00A	2												2				1
08:00-08:15A																	
08:15-08:30A																	
08:30-08:45A																	
08:45-09:00A		1											1	1			
09:00-10:00A					4								5	2			1
10:00-11:00A					1								2	1			3
11:00-12:00P					1								2	2			2
12:00-01:00P													2	3			1
01:00-02:00P													2	7			4
02:00-03:00P													3	2			2
03:00-04:00P													3	1			2
04:00-04:15P													1				1
04:15-04:30P													1				2
04:30-04:45P													3				1
04:45-05:00P													1				2
05:00-05:15P													1				1
05:15-05:30P													2				1
05:30-05:45P													1				1
05:45-06:00P													2				1
06:00-07:00P	2				1								4				1
07:00-08:00P																	
08:00-09:00P																	
09:00-10:00P																	
TOTAL VOLUME	5	1	3	4	6	1	4	5	1	1	9	36	3	15	4	20	

North and South is: 14th Ave. (n) Kafir Dr. (s) East and West is: Lockhaven Dr. NE BIKE_2622

SUMMARY OF PEDESTRIAN COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007 DAY : Mon./Tues. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: clear INTERSECTION OF: Lockhaven Dr. NE @ 14th Ave. & Kafir Dr.

Tab. by: _____ Chk. by: _____ MILE POST : n/a

TIME OF DAY	STUDENT PEDESTRIANS			OTHER PEDESTRIANS			STUDENT AND OTHER PEDESTRIAN						
	NORTH	EAST	WEST	TOTAL	NORTH	EAST	WEST	TOTAL	NORTH	EAST	SOUTH	WEST	TOTAL
06:00-07:00A													
07:00-07:15A													
07:15-07:30A													
07:30-07:45A													
07:45-08:00A													
08:00-08:15A													
08:15-08:30A													
08:30-08:45A													
08:45-09:00A													
09:00-10:00A													
10:00-11:00A													
11:00-12:00P													
12:00-01:00P													
01:00-02:00P													
02:00-03:00P													
03:00-04:00P													
04:00-04:15P													
04:15-04:30P													
04:30-04:45P													
04:45-05:00P													
05:00-05:15P													
05:15-05:30P													
05:30-05:45P													
05:45-06:00P													
06:00-07:00P													
07:00-08:00P													
08:00-09:00P													
09:00-10:00P													
TOTAL VOLUME	15	20	29	84	15	20	29	84	15	20	29	20	84

North and South is: 14th Ave. (N) Kafir Dr. (S) East and West is: Lockhaven Dr. NE PED_2422

TRANSPORTATION DEVELOPMENT BRANCH
 TRANSPORTATION SYSTEM MONITORING UNIT
 VEHICULAR VOLUME

DATE : July 23/24, 2007

CITY or COUNTY : Keizer

DAY WEEK : Mon./Tues.

INTERSECTION OF : N River Rd. @ McNary Estates DR. & Nanzanita Dr.

ACT COUNT: 16

HRS COUNT: 6AM - 10PM

PEO COUNT: 16

HRS COUNT: 6AM - 10PM

WEATHER : cClear

MILE POST: n/a

CLASSIFICATION : All vehicles

RECEIVED

SEP 11 2007

O.D.O.T. Region 2

No. 1

McNary Estates Dr

2007

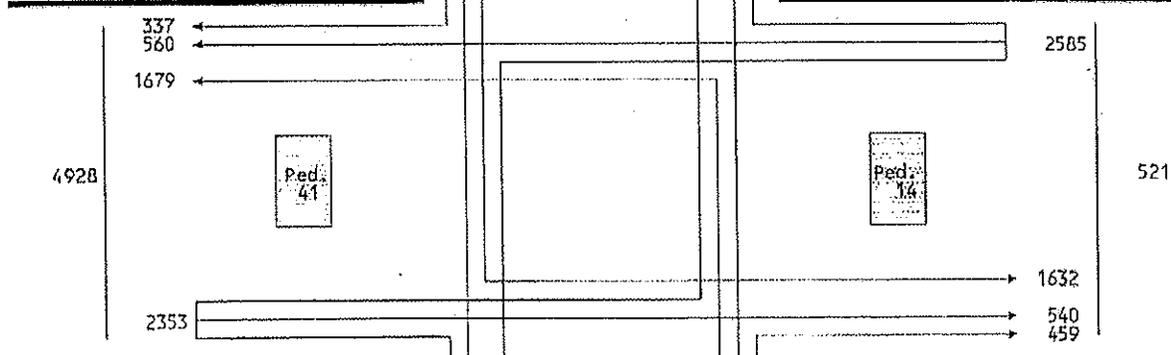
No. 2

TOTAL VEHICLES ENTERING INTERSECTION : 27924 100

ENTERING FROM NORTH & SOUTH : 22986 82.3

ENTERING FROM EAST & WEST : 4938 17.6

To: McNary Estates Dr



To: Highways

REMARKS

no person classification count reported for 2007 (1.1.0)

responder was (7-9am) (4-6p)

A S - 90 5/16

group of farm equipment

Nanzanita Dr

Indicate North

11748

521

9269

1518

23056

Ped. 2

✓ P
K

SUMMARY OF TRAFFIC COUNT TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 HOURS : 6AM - 10PM
 DAY : Mon./Tues.
 WEATHER : clear
 COUNTY : Marion
 CITY : Keizer
 INTERSECTION OF: N River Rd. & McNary Estates Dr. & Manzanita Dr.
 MILE POST : n/a
 Chk. by:

SUMMARY BY MOVEMENTS

TIME OF DAY	MOVEMENTS								TOTAL	NORTH AND SOUTH		EAST AND WEST		ENTERING VOLUMES BY LEGS								
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-W		W-N	W-E	N-S	S-N	E-S	W-E	NORTH	EAST	SOUTH	WEST			
06:00-07:00A	85	479	7	49	20	7	317	5	7	16	16	34	1040	898	86.3	142	13.7	569	76	329	65	
07:00-07:15A	38	155	4	15	15	2	65	7	7	5	4	6	323	276	85.4	47	14.6	197	32	79	15	
07:15-07:30A	31	180	1	19	7	4	77	2	7	7	6	14	355	298	83.9	57	16.1	212	30	86	27	
07:30-07:45A	50	266	4	41	12	3	90	4	10	7	7	14	478	424	88.7	54	11.3	320	26	104	28	
07:45-08:00A	30	188	4	13	5	4	90	3	15	4	6	9	371	330	88.9	41	11.1	222	22	92	31	
08:00-08:15A	40	184	7	13	8	5	74	3	15	8	5	18	580	323	85.0	57	15.0	231	26	98	31	
08:15-08:30A	43	161	4	16	13	4	72	6	18	5	6	14	362	304	84.0	58	16.0	208	33	96	25	
08:30-08:45A	30	163	6	15	16	7	93	3	25	6	6	15	387	320	82.7	67	17.3	199	38	121	29	
08:45-09:00A	32	178	6	15	12	9	93	6	24	3	5	13	396	339	85.6	57	14.4	216	36	123	21	
09:00-10:00A	74	514	19	62	28	25	378	21	85	17	17	140	1380	1091	79.1	289	20.9	607	115	484	174	
10:00-11:00A	76	456	21	43	28	27	474	13	124	16	36	88	1402	1164	83.0	238	17.0	553	98	611	140	
11:00-12:00P	69	529	29	49	29	21	528	15	95	18	25	124	1532	1266	82.6	266	17.4	627	99	639	157	
12:00-01:00P	68	564	18	59	32	36	628	28	131	13	43	125	1745	1437	82.3	308	17.7	650	127	787	181	
01:00-02:00P	85	498	13	76	26	27	568	20	124	12	34	109	1592	1308	82.2	284	17.8	596	129	712	155	
02:00-03:00P	110	487	12	92	32	38	615	30	108	19	23	97	1663	1362	81.9	301	18.1	609	162	753	139	
03:00-04:00P	99	556	21	102	31	54	706	33	158	12	42	103	1908	1564	82.0	344	18.0	667	187	897	157	
04:00-04:15P	26	160	7	30	11	13	210	8	32	3	7	26	533	443	83.1	90	16.9	193	54	259	36	
04:15-04:30P	26	159	11	26	9	16	203	13	58	5	17	28	571	470	82.3	101	17.7	196	51	274	50	
04:30-04:45P	16	177	7	46	11	17	181	17	39	7	14	27	559	437	78.2	122	21.8	200	74	237	48	
04:45-05:00P	22	152	13	45	11	21	222	10	37	4	11	16	564	456	80.9	108	19.1	187	77	269	31	
05:00-05:15P	33	165	11	37	9	15	210	26	38	11	13	40	608	483	79.4	125	20.6	209	61	274	64	
05:15-05:30P	30	173	5	46	15	33	240	16	39	7	19	29	652	503	77.1	149	22.9	208	94	295	55	
05:30-05:45P	41	178	9	54	7	31	243	12	42	6	18	29	670	525	78.4	145	21.6	228	92	297	53	
05:45-06:00P	36	138	7	39	10	13	250	14	26	5	11	24	573	471	82.2	102	17.8	181	62	290	40	
06:00-07:00P	112	619	12	138	33	32	738	29	101	19	50	86	1969	1611	81.8	358	18.2	743	203	868	155	
07:00-08:00P	82	397	11	96	20	22	578	30	66	13	22	67	1404	1164	82.9	240	17.1	490	138	674	102	
08:00-09:00P	63	310	19	97	13	10	451	21	61	7	19	55	1126	925	82.1	201	17.9	392	129	533	81	
09:00-10:00P	48	240	18	64	11	13	342	22	34	11	9	30	842	704	83.6	138	16.4	306	88	398	50	
TOTAL COUNT	1484	8426	306	1367	474	509	8737	417	1526	268	491	1380	25385	20896	82.3	4469	17.7	10276	2350	10680	2139	
24HR FACTOR	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
24HR VOLUME	1632	9269	337	1504	521	568	9611	659	1679	295	540	1516	27925	22986	82.3	4938	17.7	11238	2585	11746	2353	

East and West is: McNary Estates Dr. (W) Manzanita Dr. (E)
 SUM 2425

**SUMMARY OF TRAFFIC COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION**

DATE : July 23/24, 2007 DAY : Mon./Tues. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: clear INTERSECTION OF: N River Rd. @ McNary Estates Dr. & Manzanita Dr.
 Tab by: Chk. by: MILE POST : n/a

TIME OF DAY	SUMMARY BY MOVEMENTS												ENTERING VOLUMES BY LEGS									
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-N	W-E	U-S	TOTAL	NORTH AND SOUTH	PERCENT OF TOTAL	EAST AND WEST	PERCENT OF TOTAL	NORTH	EAST	SOUTH	WEST	
06:00-07:00A	83	479	7	49	20	7	317	5	7	16	16	34	1040	898	86.3	142	13.7	569	76	329	66	
07:00-08:00A	149	789	13	58	39	13	322	16	39	23	23	43	1527	1328	87.0	199	13.0	951	110	377	89	
08:00-09:00A	145	686	23	59	49	25	332	18	82	24	22	60	1525	1286	84.3	239	15.7	854	133	432	106	
09:00-10:00A	74	514	19	62	28	25	378	21	85	17	17	140	1380	1091	79.1	289	20.9	607	115	484	174	
10:00-11:00A	76	456	21	43	28	27	474	13	124	16	36	88	1402	1164	83.0	238	17.0	533	98	611	140	
11:00-12:00P	69	529	29	49	29	21	529	15	95	18	25	124	1532	1266	82.6	266	17.4	627	99	639	167	
12:00-01:00P	68	564	18	59	32	36	628	28	131	13	43	125	1745	1437	82.3	308	17.7	650	127	787	181	
01:00-02:00P	85	498	13	76	26	27	568	20	124	12	34	109	1592	1398	87.8	284	17.8	596	129	712	155	
02:00-03:00P	110	487	12	92	32	38	615	30	108	19	23	97	1663	1362	81.9	301	18.1	609	162	753	139	
03:00-04:00P	90	556	21	102	31	54	706	33	158	12	42	103	1908	1564	82.0	344	18.0	667	187	897	157	
04:00-05:00P	90	648	38	147	42	67	816	48	166	19	49	97	2227	1806	81.1	421	18.9	776	256	1030	165	
05:00-06:00P	140	654	32	176	41	92	943	68	145	29	61	122	2503	1982	79.2	521	20.8	826	309	1156	212	
06:00-07:00P	112	619	12	138	33	32	738	29	101	19	50	86	1969	1611	81.8	358	18.2	743	203	864	155	
07:00-08:00P	82	397	11	96	20	22	578	30	66	13	22	67	1404	1164	82.9	240	17.1	490	138	674	162	
08:00-09:00P	63	310	19	97	13	10	451	21	61	7	19	55	1266	1026	80.9	201	15.9	392	120	533	91	
09:00-10:00P	48	240	18	64	11	13	342	22	34	11	9	30	842	704	83.6	138	16.4	306	88	398	50	
TOTAL COUNT	1484	8426	306	1367	474	509	8337	417	1328	268	691	1380	25385	20896	82.3	4485	17.7	10216	2350	10480	2139	
2-HR FACTOR	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
2-HR VOLUME	1632	9269	337	1504	521	560	9611	459	1679	295	540	1518	27925	22986	82.3	4938	17.7	11238	2585	11748	2333	

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 DAY OF WEEK : MON./TUES.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : NORTH
 TO : EAST

CITY: Keizer
 COUNTY: Marion
 INTERSECTION OF: N. River Rd. @ McKary Estates Dr. & Manzanita Dr.
 MILE POST : n/a
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY CLE
	Cars	WTRIF	Other	WTRIF	2 Axle	3 Axle	>4Axle	4 Axle	5 Axle	6 Axle	7 Axle	8 Axle	>9Axle						
06:00-07:00A	50		29	1	1										2		85		
07:00-07:15A	24		13		1												38		
07:15-07:30A	20		11														31		
07:30-07:45A	34		11	1											3	1	50		
07:45-08:00A	19		10			1										1	40		
08:00-08:15A	27		12														43		
08:15-08:30A	29		11			3										1	30		
08:30-08:45A	23		6			1									1	1	32		
08:45-09:00A	17		13			2									3	1	74		
09:00-10:00A	46		22			2									1		76		
10:00-11:00A	44		29		1												69		
11:00-12:00P	46		21		1												68		
12:00-01:00P	44		21		1												85		
01:00-02:00P	47		32		4	1									1		110		
02:00-03:00P	70		34		2										1		90		
03:00-04:00P	55		32												1		26		
04:00-04:15P	16		10														26		
04:15-04:30P	16		10														26		
04:30-04:45P	10		6														16		
04:45-05:00P	15		6														22		
05:00-05:15P	20		12		1										1		33		
05:15-05:30P	22		8														30		
05:30-05:45P	24		15			1										1	41		
05:45-06:00P	25		11												1		36		
06:00-07:00P	75		35												4	1	112		
07:00-08:00P	51		27		1										2		82		
08:00-09:00P	37		23												2		63		
09:00-10:00P	26		19												2		48		
16 HOUR	932		489	9	22	2									23	6	1484		

WORK_2425

Summarized by: _____ | 09/10/07

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007 COUNTY : Marion CITY : Keizer
 DAY OF WEEK : Mon./Tues. INTERSECTION OF: N River Rd. @ McNary Estates DR. & Manzanita Dr.
 HOURS COUNTED: 6AM - 10PM MILE POST : n/a
 WEATHER : clear TO : SOUTH
 FROM : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI. CY
	Cars	WVLR	Other	WVLR	2 Axle	3 Axle	4 Axle	5 Axle	6 Axle	7 Axle	8 Axle	>9Axle					
06:00-07:00A	279		183		3	4								1	8	479	3
07:00-07:15A	101		45		2	3	1							1	2	153	1
07:15-07:30A	111		60		2	1	2		2					2	2	180	
07:30-07:45A	181		82			2	1	1								266	
07:45-08:00A	122		57		2	3	1	1						2	1	188	1
08:00-08:15A	107		66		3	1	1	1								184	
08:15-08:30A	111		48		1	1	1	1								161	
08:30-08:45A	94		61		3	3	3	1								163	1
08:45-09:00A	100		67		2	2	3	3								178	1
09:00-10:00A	336		137		8	14	6	8	1	1						514	2
10:00-11:00A	277		144		7	11	3	7	2	1					2	456	2
11:00-12:00P	330		159		8	17	5	4	1	2					2	529	1
12:00-01:00P	345		182		6	13	2	5	1	2					1	564	1
01:00-02:00P	315		151		5	13	1	7	1	1					4	498	1
02:00-03:00P	296		157		6	10	6	3	2						4	487	1
03:00-04:00P	338		178		7	20	4	3	1						1	556	2
04:00-04:15P	107		45		2	2	1	1							2	160	
04:15-04:30P	100		50			3	3		2	1					2	159	
04:30-04:45P	117		52			4	1	1	1							177	
04:45-05:00P	96		55		1											152	
05:00-05:15P	101		57		2		1	1							1	165	
05:15-05:30P	113		55			3	1	1	1							173	
05:30-05:45P	124		51		1	1									2	178	
05:45-06:00P	85		49		1			1							1	138	
06:00-07:00P	410		193		3	4	1	2						3	1	619	2
07:00-08:00P	259		126		4	6	1								1	397	
08:00-09:00P	206		93		1	7		1							2	310	2
09:00-10:00P	162		75			1									1	240	
16 HOUR	5323		2678		75	147	57	59	14	13	10			35	37	8426	18

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : NORTH
 COUNTY : Marion
 INTERSECTION OF: N River Rd. @ McNary Estates Dr. & Manzanita Dr.
 CITY: Keizer
 MILE POST : n/a
 TO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS	DBL TRAILER TRUCKS	TRP TRAILER TRUCKS	BUSES	MOTOR CYCLE	TOTAL ALL	BI CY				
	Cars	WT-Tr	Other	Wtr-Tr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	6 Axl	>7Axl		7 Axl	8 Axl	>9Axl	VEHICLE
06:00-07:00A	5		2												7	
07:00-07:15A	3		1												4	
07:15-07:30A	1														1	
07:30-07:45A	4														4	
07:45-08:00A	1		2			1									4	
08:00-08:15A	5		1												7	
08:15-08:30A	2		2												4	
08:30-08:45A	4		1												6	
08:45-09:00A	4		1												6	
09:00-10:00A	8		9			1									19	
10:00-11:00A	9		9			3									21	
11:00-12:00P	15		10			1									29	
12:00-01:00P	13		5												18	
01:00-02:00P	8		3			1									13	
02:00-03:00P	7		3			1									12	
03:00-04:00P	13		6												21	
04:00-04:15P	4		3												7	
04:15-04:30P	9		2												11	
04:30-04:45P	3		2												7	
04:45-05:00P	10		3												13	
05:00-05:15P	8		3												11	
05:15-05:30P	4		1												5	
05:30-05:45P	5		3												9	
05:45-06:00P	7		4												12	
06:00-07:00P	8		4												11	
07:00-08:00P	7		4												11	
08:00-09:00P	12		7												19	
09:00-10:00P	13		5												18	
16 HOUR	192		92		6	9	1	3				3			306	1

TRAFFIC COUNTY SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : EAST
 COUNTY : Marion
 INTERSECTION OF : N River Rd. @ McNary Estates Dr. & Manzanita Dr.
 CITY : Keizer
 MILE POST : n/a
 TO : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK >4AXL	SGL TRAILER TRUCKS 5 AXL	DBL TRAILER TRUCKS 6 AXL	TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY CLE
	Cars	WTRLP	Other	WTRLP				2 AXL	3 AXL	4 AXL				
06:00-07:00A	31		15		2							1	49	
07:00-07:15A	9		6								1		15	
07:15-07:30A	11		7										19	
07:30-07:45A	7		4										11	
07:45-08:00A	10		3										13	
08:00-08:15A	8		4										13	
08:15-08:30A	5		9										16	
08:30-08:45A	11		3								1		15	
08:45-09:00A	11		3								2		15	
09:00-10:00A	37		20		1								62	
10:00-11:00A	28		13		1						1		43	
11:00-12:00P	27		17		2								49	
12:00-01:00P	39		18		1						2		59	
01:00-02:00P	50		21		2						1		76	
02:00-03:00P	60		27		2						1		92	
03:00-04:00P	61		37		1						1		102	
04:00-04:15P	16		11		2								30	
04:15-04:30P	19		7										26	
04:30-04:45P	29		15								2		46	
04:45-05:00P	31		14										45	
05:00-05:15P	25		12										37	
05:15-05:30P	35		11										46	
05:30-05:45P	34		20								1		54	
05:45-06:00P	25		12								1		39	
06:00-07:00P	94		43										138	
07:00-08:00P	64		27		1						2		96	
08:00-09:00P	60		35								1		97	
09:00-10:00P	39		23								2		64	
16 HOUR	876		437		12						19		1367	

Summarized by: _____ | 09/10/07

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 DAY OF WEEK : Mon./Tués.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : EAST

COUNTY : Marion CITY: Keizer
 INTERSECTION OF: N River Rd. @ McNary Estates DR. & Mantemita Dr.
 MILE POST : n/a
 TO : SOUTH

TIME OF DAY	PASSENGER Cars	OTHER 2 AXLE Other	SGE UNIT TRUCK 2 AXLE	SGE TRAILER TRUCKS 3 AXLE	SGE TRAILER TRUCKS 4 AXLE	DBL TRAILER TRUCKS 5 AXLE	TRP TRAILER TRUCKS 6 AXLE	TRP TRAILER TRUCKS 7 AXLE	TRP TRAILER TRUCKS 8 AXLE	TRP TRAILER TRUCKS >9 AXLE	BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY CLE
06:00-07:00A	11	8										1	20	
07:00-07:15A	5	8	1									1	15	
07:15-07:30A	6	1											7	
07:30-07:45A	9	3											12	
07:45-08:00A	2	1									2		5	
08:00-08:15A	6	2											8	
08:15-08:30A	9	3									1		13	
08:30-08:45A	14	3											16	
08:45-09:00A	9	3											12	
09:00-10:00A	18	9											28	
10:00-11:00A	18	8											28	
11:00-12:00P	19	9											29	
12:00-01:00P	21	9											32	
01:00-02:00P	20	6											26	
02:00-03:00P	22	9											32	
03:00-04:00P	23	8									1		31	
04:00-04:15P	7	3											11	
04:15-04:30P	6	3											9	
04:30-04:45P	8	3											11	
04:45-05:00P	7	4											9	
05:00-05:15P	5	4											15	
05:15-05:30P	11	4											7	
05:30-05:45P	5	2											19	
05:45-06:00P	7	3											33	
06:00-07:00P	21	11											20	
07:00-08:00P	15	5											13	
08:00-09:00P	10	3											11	
09:00-10:00P	7	4												
16 HOUR	321	138	6	1	1	1	1	1	1	1	4	2	474	1

TRAFFIC COUN. SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED : 5AM - 10PM
 WEATHER : clear
 FROM : EAST
 COUNTY : Marion CITY: Keizer
 INTERSECTION OF : N River Rd. @ McNary Estates Dr. & Manzanita Dr.
 STYLE POST : n/a
 TO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SEL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRF TRAILER TRUCKS			BUSES	MOTOR CYCLES SCOOTER/VEHICLE	TOTAL ALL VEHICLE	BI CY
	Cars	MTLR	Other	MTLR		2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	9 Axl	10 Axl				
06:00-07:00A	4		3													7		
07:00-07:15A	1		1													2		
07:15-07:30A	2		2													4		1
07:30-07:45A	2		1													3		
07:45-08:00A	3		1													4		
08:00-08:15A	2		3													5		
08:15-08:30A	3		1													4		
08:30-08:45A	5		2													7		
08:45-09:00A	5		4													9		
09:00-10:00A	12		8		1											25		1
10:00-11:00A	19		7		1											27		1
11:00-12:00P	14		7													21		
12:00-01:00P	21		12													36		
01:00-02:00P	16		10		1											27		
02:00-03:00P	26		12													38		
03:00-04:00P	34		18												2	54		
04:00-04:15P	9		4													13		
04:15-04:30P	13		6													16		
04:30-04:45P	12		5													17		
04:45-05:00P	16		5													21		
05:00-05:15P	10		5													15		
05:15-05:30P	20		13													33		
05:30-05:45P	18		13													31		
05:45-06:00P	9		4													13		
06:00-07:00P	20		12													32		
07:00-08:00P	15		6												1	22		
08:00-09:00P	6		4													10		
09:00-10:00P	8		5													13		
16 HOUR	322		174		3										3	509		3

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : SOUTH
 COUNTY : Marion
 CITY: Keizer
 INTERSECTION OF: N River Rd. @ McNary Estates Dr. & Manzanita Dr.
 MILE POST : n/a
 TO : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS			TRP. TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	CYCLE
	cars	WTrlr	Other	WTrlr	2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	>9Axl	4	3				
06:00-07:00A	184		117	1	4	1	2	1						4	3	317		
07:00-07:15A	39		23	1		1								1	2	65	1	
07:15-07:30A	46		28											1		77		
07:30-07:45A	53		30		2	3	1		1					1		90		
07:45-08:00A	46		33	1	5	1	1	1						1	2	90		
08:00-08:15A	41		24	1	3	2	1	1						1	1	74		
08:15-08:30A	35		26	2	2	2	2	2						1	1	72		
08:30-08:45A	54		32	1	1	4	2									93		
08:45-09:00A	45		39	1	2	1	1		3	1				4	1	93		
09:00-10:00A	207		112	9	16	12	6	2	5	4				3	1	378		
10:00-11:00A	258		175	4	17	8	2	4	1	1				3	1	474		
11:00-12:00P	314		175	6	17	6	4	4	1	2				4		529		
12:00-01:00P	377		221	21	7				2	2						628		
01:00-02:00P	340		187	13	14	7	1	1						3	2	568		
02:00-03:00P	385		190	5	16	4	3	2	3	2				3	4	615		
03:00-04:00P	421		251	6	13	6	1	1						2	4	706		
04:00-04:15P	136		65	5	5									1	1	210		
04:15-04:30P	129		66	2	2	2								1	2	203		
04:30-04:45P	110		63	2	2										2	181	2	
04:45-05:00P	139		75	2	3	3	1								1	222		
05:00-05:15P	138		64	3	3	1	1							2	1	210		
05:15-05:30P	160		73	3	4	1	1								1	240		
05:30-05:45P	140		95	2	2										3	243	1	
05:45-06:00P	154		91	1	1				1						1	250		
06:00-07:00P	502		216	4	8	2								1	4	738		
07:00-08:00P	380		187	2	4									1	2	578		
08:00-09:00P	291		156	2										1	1	451		
09:00-10:00P	228		110	1										1	2	342		
16 HOUR	5352		3924	97	146	65	26	21	14	14				37	41	8737	6	

Summarized by: _____ | 09/10/07

WORK_2425

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007 COUNTY : Marion CITY: Keizer
 DAY OF WEEK : Mon./Tues. INTERSECTION OF: N River Rd, @ McNary Estates DR. & Manzanita Dr.
 HOURS COUNTED: 6AM - 10PM MILE POST : n/a
 WEATHER : clear TO : EAST
 FROM : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS	DBL TRAILER TRUCKS	TRP TRAILER TRUCKS	BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY
	Cars	WTR	Other	WTR	2 AXL	3 AXL	4 AXL	5 AXL	6 AXL	7 AXL	8 AXL	>9AXL
06:00-07:00A	2		2									5
07:00-07:15A	4		3									7
07:15-07:30A			1									2
07:30-07:45A	2		2									4
07:45-08:00A	1		2									3
08:00-08:15A	2		1									3
08:15-08:30A	3		2									6
08:30-08:45A	1		1									3
08:45-09:00A	3		2									6
09:00-10:00A	14		6									21
10:00-11:00A	6		4									13
11:00-12:00P	10		4									15
12:00-01:00P	17		10									28
01:00-02:00P	12		3									20
02:00-03:00P	14		13									30
03:00-04:00P	19		10									33
04:00-04:15P	4		4									8
04:15-04:30P	8		4									13
04:30-04:45P	10		7									17
04:45-05:00P	7		2									10
05:00-05:15P	14		12									26
05:15-05:30P	12		3									16
05:30-05:45P	10		2									12
05:45-06:00P	9		4									14
06:00-07:00P	19		7									29
07:00-08:00P	21		8									30
08:00-09:00P	12		9									21
09:00-10:00P	14		8									22
16 HOUR	250		136		3	5	2					417

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : SOUTH
 COUNTY : Marion
 INTERSECTION OF: N River Rd. & Henry Estates Dr. & Manzanita Dr.
 CITY: Keizer
 MILE POST : n/a
 TO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP. TRAILER TRUCKS		BUSES	MOTORCYCLE ALL SCOOTER		TOTAL ALL VEHICLE	BI CY CLE
	Cars	MTR	MTR	Other	2 Axle	3 Axle	4 Axle	5 Axle	6 Axle	7 Axle	8 Axle	9 Axle		Motorcycle	Scoter		
06:00-07:00A	5		2													7	
07:00-07:15A	5		2													7	
07:15-07:30A	4		3													10	
07:30-07:45A	6		4													15	
07:45-08:00A	8		5													15	
08:00-08:15A	7		7													19	
08:15-08:30A	11		4													25	
08:30-08:45A	13		11													24	
08:45-09:00A	18		4													25	
09:00-10:00A	56		26													85	
10:00-11:00A	73		41													124	
11:00-12:00P	58		33													95	
12:00-01:00P	81		45													131	
01:00-02:00P	68		52													124	
02:00-03:00P	74		31													108	
03:00-04:00P	111		45													188	
04:00-04:15P	23		9													32	
04:15-04:30P	35		22													58	
04:30-04:45P	26		13													39	
04:45-05:00P	28		9													37	
05:00-05:15P	28		19													38	
05:15-05:30P	26		12													39	
05:30-05:45P	29		12													42	
05:45-06:00P	18		8													26	
06:00-07:00P	64		35													101	
07:00-08:00P	51		15													66	
08:00-09:00P	42		19													61	
09:00-10:00P	23		18													34	
TS HOUR	991		489		15	18	2				1		4	6		1526	3

TRAFFIC COUNTY SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007 COUNTY : Maricopa CITY: Keizer
 DAY OF WEEK : Mon./Tue. INTERSECTION OF: N. Silver Rd. @ McNary Estates DR. & Manzanita Dr.
 HOURS COUNTED: 6AM - 10PM MILE POST : n/a
 WEATHER : clear TO : NORTH
 FROM : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY
	Cars	MTRC	Other	MTRC	Other	>4Axl	4 Axl	5 Axl	6 Axl	>7Axl	7 Axl	8 Axl				
06:00-07:00A	10		5											1	16	
07:00-07:15A	4		1												5	
07:15-07:30A	4		3												7	
07:30-07:45A	5		2												7	
07:45-08:00A	3		1												4	
08:00-08:15A	5		3												8	
08:15-08:30A	3		2												5	
08:30-08:45A	2		4												8	
08:45-09:00A	2		1												3	
09:00-10:00A	12		5												17	
10:00-11:00A	9		5		1										16	
11:00-12:00P	12		6												18	
12:00-01:00P	8		4												13	
01:00-02:00P	7		4												12	
02:00-03:00P	12		6												19	
03:00-04:00P	5		6												12	
04:00-04:15P	2		1												3	
04:15-04:30P	3		1												5	
04:30-04:45P	4		3												7	
04:45-05:00P	2		2												4	
05:00-05:15P	5		4												11	
05:15-05:30P	4		2												7	
05:30-05:45P	4		2												6	
05:45-06:00P	3		2												5	
06:00-07:00P	12		7												19	
07:00-08:00P	8		5												13	
08:00-09:00P	5		2												7	
09:00-10:00P	5		6												11	
16 HOUR	151		95		2		1			1				5	268	1

Summarized by: _____ | 09/10/07

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007
 COUNTY : Marion
 CITY : Keizer
 DAY OF WEEK : Mon./Tues.
 INTERSECTION OF : N River Rd. @ McHary Estates DR. & Manzanita Dr.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : WEST
 TO : EAST
 MILE POST : n/a

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI. CY. CLE
	cars	MT-1r	MT-1r	Other	2 Axle	3 Axle	>4Axle	4 Axle	5 Axle	>6Axle	5 Axle	>7Axle				
06:00-07:00A	11		5												16	
07:00-07:15A	2		3												4	
07:15-07:30A	3		2												6	
07:30-07:45A	5		2												7	
07:45-08:00A	5		1												6	
08:00-08:15A	4		1											1	5	
08:15-08:30A	4		1												6	
08:30-08:45A	4		2												6	
08:45-09:00A	2		3												5	
09:00-10:00A	9		5		1			1							17	
10:00-11:00A	22		13		1										36	
11:00-12:00P	16		8		1										25	
12:00-01:00P	28		13		1									1	43	
01:00-02:00P	21		11		2										34	
02:00-03:00P	15		7		1									2	23	
03:00-04:00P	24		16												42	
04:00-04:15P	5		2												7	
04:15-04:30P	11		6												17	
04:30-04:45P	10		4												14	
04:45-05:00P	6		5												11	
05:00-05:15P	8		5												13	
05:15-05:30P	12		7												19	
05:30-05:45P	13		5												18	
05:45-06:00P	7		4												11	
06:00-07:00P	32		17					1							50	
07:00-08:00P	15		7												22	
08:00-09:00P	12		7												19	
09:00-10:00P	5		4												9	
16 HOUR	311		166		3	5		2						4	491	3

Summarized by: _____ | 09/10/07

WORK_2423

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007 COUNTY : Marion CITY: Keizer
 DAY OF WEEK : Mon./Tues. INTERSECTION OF: N River Rd. @ McNary Estates Dr. & Manzanita Dr.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear MILE POST : n/a
 FROM : WEST TO : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BJ CY. CLE
	Cars	Mtrlr	Ctrc	Mtrlr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	6 Axl				
06:00-07:00A	20		14												34	1
07:00-07:15A	2		4												6	6
07:15-07:30A	9		5												14	14
07:30-07:45A	10		4												14	14
07:45-08:00A	6		3												9	9
08:00-08:15A	11		7												18	18
08:15-08:30A	8		6												14	14
08:30-08:45A	12		3												15	15
08:45-09:00A	8		5												13	13
09:00-10:00A	78		57	2	2										140	140
10:00-11:00A	58		28	1	1										88	88
11:00-12:00P	77		43		4						1				124	124
12:00-01:00P	80		42		1									1	125	125
01:00-02:00P	75		32	2	2									2	109	109
02:00-03:00P	56		31	6	6										97	97
03:00-04:00P	73		30		2									1	103	103
04:00-04:15P	16		7												26	26
04:15-04:30P	16		12												28	28
04:30-04:45P	18		8												27	27
04:45-05:00P	10		6												16	16
05:00-05:15P	22		17		1										40	40
05:15-05:30P	19		10												29	29
05:30-05:45P	19		10												29	29
05:45-06:00P	17		7												24	24
06:00-07:00P	59		26	1											86	86
07:00-08:00P	43		24												67	67
08:00-09:00P	34		21												55	55
09:00-10:00P	20		10												30	30
15 HOUR	876	1	472	13	10	1	1	1			1			4	1380	7

SUMMARY OF BICYCLE COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007 DAY : Mon./Tues. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: clear INTERSECTION OF: N River Rd. @ McNary Estates Dr. & Manzanita Dr.

Tab by: _____ MILE POST : 0/8

TIME OF DAY	BICYCLES MOVING WITH VEHICULAR TRAFFIC											BICYCLES USING CROSS WALKS					
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-N	W-E	W-S	TOTAL	MDRTH	EAST	SOUTH	WEST
06:00-07:00A	3												4				
07:00-07:15A	1					1							2	1			
07:15-07:30A							1						1				
07:30-07:45A													2				
07:45-08:00A												1	1				
08:00-08:15A												1	1				
08:15-08:30A												1	1				
08:30-08:45A												1	1				
08:45-09:00A												1	3				
09:00-10:00A												2	4				1
10:00-11:00A												2	2				2
11:00-12:00P												1	4				1
12:00-01:00P												1	2				2
01:00-02:00P												1	2				1
02:00-03:00P												1	4				2
03:00-04:00P												1	2				1
04:00-04:15P												1	2				2
04:15-04:30P												2	2				1
04:30-04:45P												2	4				2
04:45-05:00P												3	4				1
05:00-05:15P												3	2				2
05:15-05:30P												3	4				1
05:30-05:45P												3	4				1
05:45-06:00P												1	4				2
06:00-07:00P												1	1				1
07:00-08:00P												1	2				2
08:00-09:00P												1	1				1
09:00-10:00P												1	1				1
TOTAL VOLUME	18	1	1	1	3	5	6	3	3	1	3	7	43	9	9	6	6

North and South is: N River Rd. East and West is: McNary Estates Dr. (W) Manzanita Dr. (e) BICYCLE_2425

SUMMARY OF PEDESTRIAN COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 23/24, 2007 DAY : Mon./Tues. COUNTY : Marion CITY: Keizer
 HOURS : 5AM - 1CPM WEATHER: clear INTERSECTION OF: N River Rd. @ McNary Estates DR. & Manzanita Dr.
 Tab by: Cak. by: MILE POST : n/a

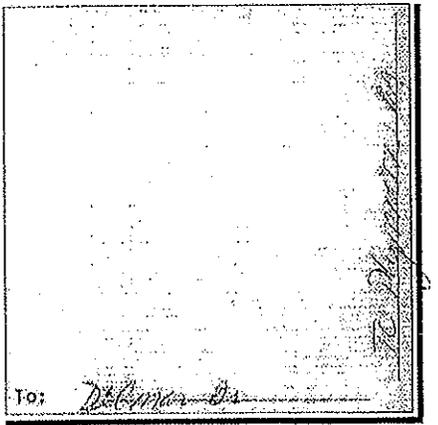
TIME OF DAY	STUDENT PEDESTRIANS			OTHER PEDESTRIANS			STUDENT AND OTHER PEDESTRIAN			TOTAL		
	NORTH	EAST	SOUTH	NORTH	EAST	SOUTH	TOTAL	NORTH	EAST		SOUTH	WEST
06:00-07:00A				1			1	1				1
07:00-07:15A												
07:15-07:30A				2			3	2			1	3
07:30-07:45A							1					1
07:45-08:00A												
08:00-08:15A												
08:15-08:30A							2		2			2
08:30-08:45A							1					1
08:45-09:00A				3			9	3	1		5	9
09:00-10:00A				3			5	3	1		4	5
10:00-11:00A				3			6	3			3	6
11:00-12:00P				2			2	2			2	2
12:00-01:00P				1			8	1			6	8
01:00-02:00P							4				3	4
02:00-03:00P												
03:00-04:00P				3			3	3				3
04:00-04:15P												
04:15-04:30P												
04:30-04:45P				1			3	1			2	3
04:45-05:00P												
05:00-05:15P							5				5	5
05:15-05:30P							2					2
05:30-05:45P												
05:45-06:00P				2			4	2				4
06:00-07:00P							7		5		2	7
07:00-08:00P							8		3		5	8
08:00-09:00P												
09:00-10:00P												
TOTAL VOLUME	18	14	2	41	75	18	14	2	41	75		75

TRANSPORTATION DEVELOPMENT BRANCH
 TRANSPORTATION SYSTEM MONITORING UNIT
 VEHICULAR VOLUME

DATE : July 16/17, 2007
 DAY WEEK : Mon./Tues.
 ACT COUNT: 16
 HRS COUNT: 6AM - 10PM
 PED COUNT: 16
 HRS COUNT: 6AM - 10PM
 WEATHER : cloudy

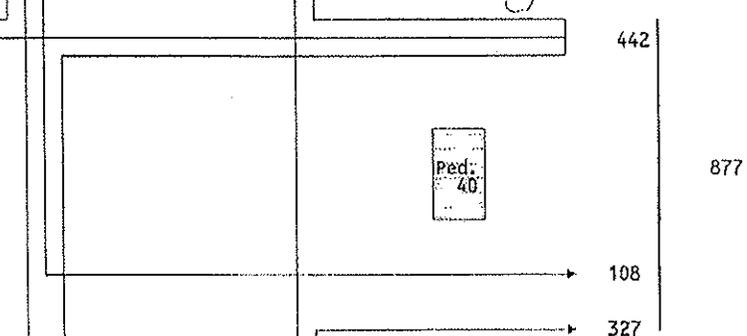
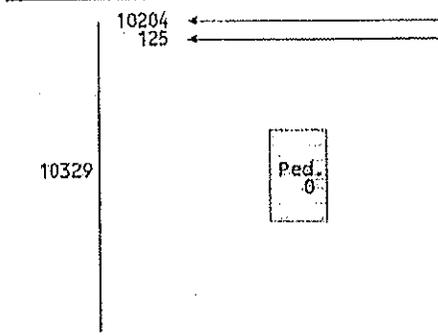
CITY OF COUNTY : Keizer
 INTERSECTION OF: N River Rd. @ Broadway Ave. & Shangmi St.
 MILE POST: N/A
 CLASSIFICATION : All vehicles

RECEIVED
 SEP 14 2007
 O.D.O.T. Region 2

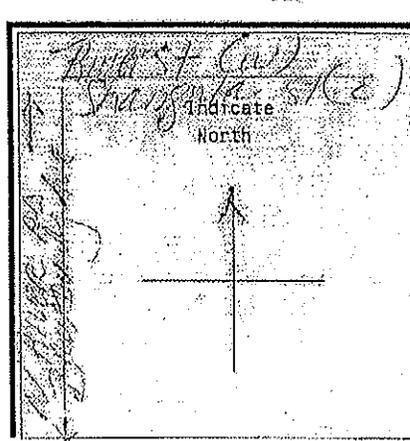


	No.	%
TOTAL VEHICLES ENTERING INTERSECTION	34538	100
ENTERING FROM NORTH & SOUTH	34096	98.6
ENTERING FROM EAST & WEST	442	1.4

To: Broadway Ave



REMARKS
 No driver classification
 count reported to O.D.
 from VTL (L.H.P.)
 equipment has (1-9a)
 (4-8a) 9/10/07
 A set map of Salem/Keizer
 for better understanding



✓ 9/10/07

**SUMMARY OF TRAFFIC COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION**

DATE : July 16/17, 2007
HOURS : 8AM - 10PM

DAY : Mon./Tues.
WEATHER : cloudy

CITY : Keizer
COUNTY : Marion
INTERSECTION OF: N River Rd. & Broadway Ave. & Shangri-la St.

Tab by:

chk. by:

MILE POST : n/a

TIME OF DAY	SUMMARY BY MOVEMENTS												ENTERING VOLUMES BY LEGS					
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-S	W-R	W-S	TOTAL	NORTH AND SOUTH	PERCENT OF TOTAL	EAST WEST	PERCENT OF TOTAL	
06:00-07:00A	2	212	496	2	3	2	225	6					948	941	99.3	7	0.7	710
07:00-07:15A	1	73	182	4	1		65	4					330	325	98.5	5	1.5	256
07:15-07:30A		70	195	4	2	2	89	3					365	357	97.8	8	2.2	265
07:30-07:45A		142	233	4	1		92	1					493	488	99.0	5	1.0	395
07:45-08:00A	3	128	271	5	1	1	131	2					542	535	98.7	7	1.3	402
08:00-08:15A		79	149	5			126	3					363	357	98.3	6	1.7	228
08:15-08:30A	3	80	186	3		4	107	5					388	381	98.2	7	1.8	269
08:30-08:45A		66	161	3	1		129	1					361	357	98.9	4	1.1	227
08:45-09:00A		91	156	4		1	164	5					421	416	98.8	5	1.2	247
09:00-10:00A	5	289	529	7	3	6	644	12					1495	1479	98.9	16	1.1	823
10:00-11:00A	6	283	524	10	4	8	635	11					1481	1459	98.5	22	1.5	813
11:00-12:00P	9	644	1062	8	7	4	849	21					2604	2585	99.3	19	0.7	1715
12:00-01:00P	10	479	612	19	5	7	1060	23					2215	2184	98.6	31	1.4	1101
01:00-02:00P	5	413	588	11	5	7	970	14					2013	1990	98.9	23	1.1	1006
02:00-03:00P	5	385	570	7	8	11	989	22					1997	1971	98.7	26	1.3	960
03:00-04:00P	4	404	623	10	7	10	1100	20					2178	2151	98.8	27	1.2	1031
04:00-04:15P	1	88	144	2	3	4	354	4					600	591	98.5	9	1.5	233
04:15-04:30P	4	92	173	7	2	3	338	12					631	619	98.1	12	1.9	269
04:30-04:45P	3	90	162	6	2	2	349	11					625	615	98.4	10	1.6	255
04:45-05:00P	1	119	157	6	1	9	348	8					649	633	97.5	16	2.5	277
05:00-05:15P	2	80	152	4	4	4	407	7					656	648	98.8	8	1.2	234
05:15-05:30P	5	90	132	8		1	456	6					678	669	98.7	9	1.3	227
05:30-05:45P	2	81	161	8	1	2	414	10					679	668	98.4	11	1.6	244
05:45-06:00P	3	79	136	2	2	5	344	5					576	567	98.4	9	1.6	218
06:00-07:00P	5	344	543	19	8	6	999	25					1949	1916	98.3	33	1.7	892
07:00-08:00P	3	258	352	7	8	4	656	18					1306	1287	98.5	19	1.5	613
08:00-09:00P	7	198	321	8	4	7	617	19					1183	1164	98.4	19	1.6	528
09:00-10:00P	7	167	286	21	5	3	437	19					945	916	96.9	29	3.1	460
TOTAL COUNT	98	5524	9276	204	84	116	13074	297					28671	28269	98.6	492	1.4	14898
24HR FACTOR	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10						
24HR VOLUME	108	6076	10204	224	92	125	14381	327					31537	31096	98.6	442	1.4	16388

North and South is: N River Rd.(n) Broadway Ave. (s) East and West is: River St (sw). (sw) Shangri-la St. (e) SUM_2420

**SUMMARY OF TRAFFIC COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION**

DATE : July 16/17, 2007 DAY : Mon./Tues. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: cloudy INTERSECTION OF: N River Rd. @ Broadway Ave. & Shangrila St.

Tab by: Chk. by: MILE POST : n/a

TIME OF DAY	SUMMARY BY MOVEMENTS										TOTAL	PERCENT OF TOTAL				ENTERING VOLUMES BY LEGS			
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-S		NORTH AND SOUTH	EAST AND WEST	PERCENT OF TOTAL	NORTH	EAST	SOUTH	WEST	
06:00-07:00A	2	212	496	3	2	225	6	10	377	5	3	377	10	1705	25	710	7	231	
07:00-08:00A	4	413	901	5	5	377	10	14	526	6	6	526	14	1511	22	1318	25	387	
08:00-09:00A	3	316	652	1	1	644	12	12	644	3	3	644	12	1479	16	823	16	556	
09:00-10:00A	5	289	529	7	3	635	11	8	635	4	8	635	11	1481	22	813	22	646	
10:00-11:00A	6	283	524	4	4	849	21	21	849	4	4	849	21	2604	19	1715	19	870	
11:00-12:00P	9	644	1052	8	7	1060	23	23	1060	7	7	1060	23	2215	31	1101	31	1083	
12:00-01:00P	10	479	612	19	5	970	14	14	970	7	7	970	14	2013	23	1006	23	984	
01:00-02:00P	5	413	588	11	5	989	22	22	989	11	11	989	22	1997	26	960	26	1011	
02:00-03:00P	5	385	570	7	8	1000	20	20	1000	10	10	1000	20	2178	27	1031	27	1120	
03:00-04:00P	4	404	623	10	7	1389	35	35	1389	18	18	1389	35	2505	47	1034	47	1424	
04:00-05:00P	9	389	636	21	8	1601	28	28	1601	12	12	1601	28	2589	37	923	37	1629	
05:00-06:00P	12	330	581	22	3	999	25	25	999	6	6	999	25	1949	33	892	33	1024	
06:00-07:00P	5	344	543	19	8	656	18	18	656	4	4	656	18	1306	19	613	19	674	
07:00-08:00P	3	258	352	7	8	617	19	19	617	4	7	617	19	1183	19	528	19	636	
08:00-09:00P	9	198	321	8	4	437	19	19	437	3	3	437	19	945	29	460	29	456	
09:00-10:00P	7	167	285	21	5														
TOTAL COUNT	98	5524	9276	84	84	13074	297	297	13074	114	114	13074	297	28571	28269	14898	402	13371	
24HR FACTOR	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	31096	31096	16388	442	14708	
24HR VOLUME	108	6076	10204	224	92	13581	327	327	13581	125	125	13581	327	31537	31096	16388	442	14708	

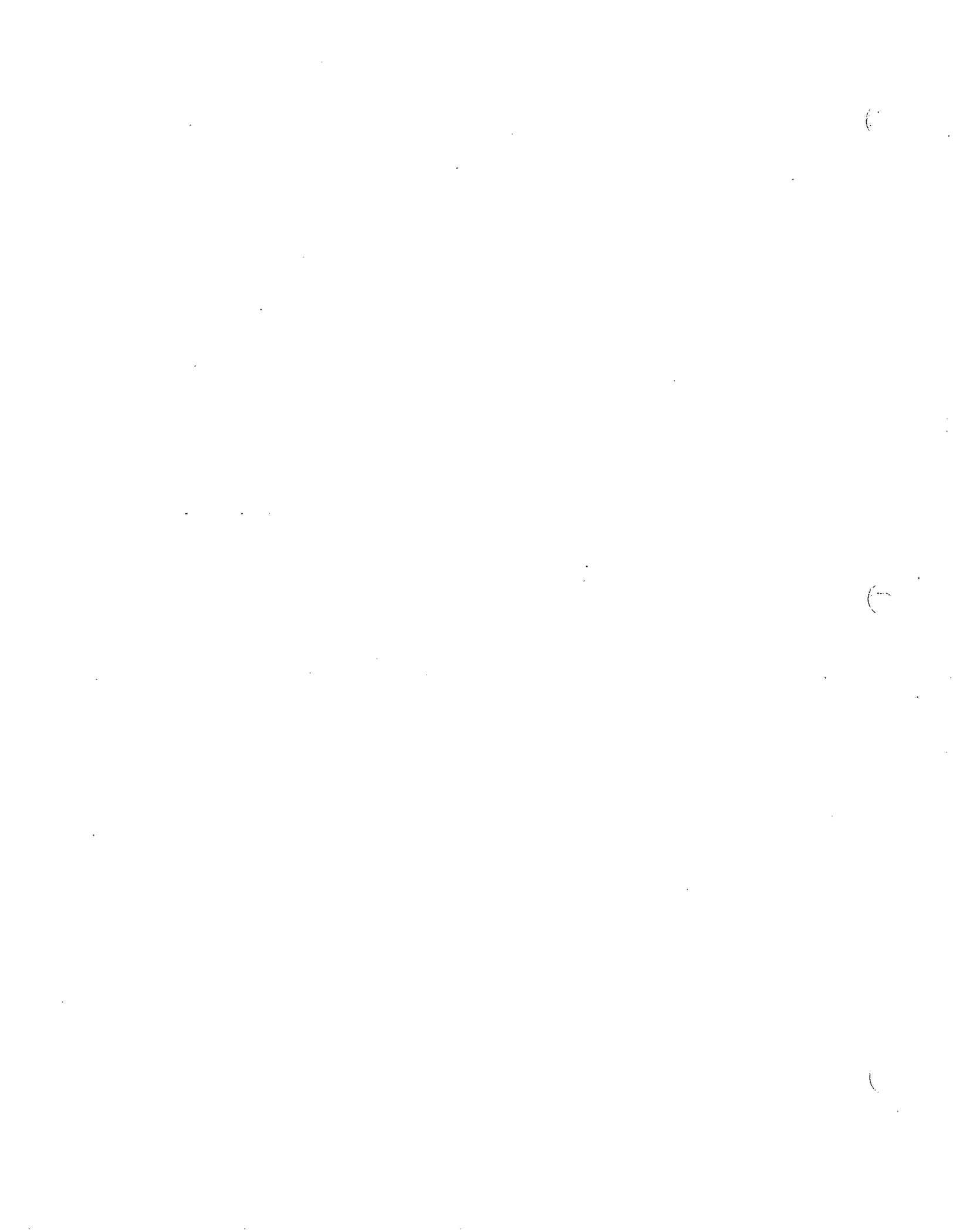
North and South is: N River Rd.(n) Broadway Ave. (s) East and West is: River St (sw). (sw) Shangrila St. (e) SUM_2426

TRAFFIC COUN. SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : JULY 16/17, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : cloudy
 FROM : NORTH

COUNTY : Marion CITY: Keizer
 INTERSECTION OF: N River Rd. @ Broadway Ave. & Shangrila St.
 MILE POST : n/a
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY CLE
	Cars	W/Trl	Other	W/Trl	2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	>9axl				
06:00-07:00A	1		1												2	
07:00-07:15A			1												1	
07:15-07:30A																
07:30-07:45A																
07:45-08:00A	2		1												3	
08:00-08:15A																
08:15-08:30A																
08:30-08:45A			3												3	
08:45-09:00A																
09:00-09:15A																
09:15-09:30A			5												5	
09:30-09:45A			2		1										6	
09:45-10:00A			6												9	
10:00-10:15A			5												10	
10:15-10:30A			2												5	
10:30-10:45A			2												5	
10:45-11:00A			3												4	
11:00-11:15A			1												1	
11:15-11:30A			3												4	
11:30-11:45A			2												3	
11:45-12:00P			1												1	
12:00-12:15P			1												1	
12:15-12:30P			2												2	
12:30-12:45P			1												1	
12:45-01:00P			3												4	
01:00-01:15P			1												1	
01:15-01:30P			2												3	
01:30-01:45P			1												1	
01:45-02:00P			1												1	
02:00-02:15P			1												1	
02:15-02:30P			1												1	
02:30-02:45P			1												1	
02:45-03:00P			1												1	
03:00-03:15P			1												1	
03:15-03:30P			2												2	
03:30-03:45P			1												1	
03:45-04:00P			1												1	
04:00-04:15P			1												1	
04:15-04:30P			1												1	
04:30-04:45P			1												1	
04:45-05:00P			1												1	
05:00-05:15P			1												1	
05:15-05:30P			1												1	
05:30-05:45P			1												1	
05:45-06:00P			1												1	
06:00-06:15P			1												1	
06:15-06:30P			2												2	
06:30-06:45P			2												2	
06:45-07:00P			4												4	
07:00-07:15P			1												1	
07:15-07:30P			2												2	
07:30-07:45P			2												2	
07:45-08:00P			7												7	
08:00-08:15P			3												3	
08:15-08:30P			4												4	
08:30-08:45P			3												3	
08:45-09:00P			3												3	
09:00-09:15P			3												3	
09:15-09:30P			3												3	
09:30-09:45P			3												3	
09:45-10:00P			4												4	
15 HOUR	35		61		1										98	1



TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007 COUNTY : Marion CITY: Keizer
 DAY OF WEEK : Mon./Tues. INTERSECTION OF: N River Rd. & Broadway Ave. & Shangrila St.
 HOURS COUNTED: 6AM - 10PM MILE POST : n/a
 WEATHER : cloudy TO : SOUTH
 FROM : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		D&L TRAILER TRUCKS		TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI. CY
	Cars	WTRUP	Other	WTRUP	2 AXL	3 AXL	4 AXL	5 AXL	6 AXL	7 AXL	8 AXL	9 AXL	10 AXL				
06:00-07:00A	108		97		1									2	3	212	
07:00-07:15A	37		34			1								1		73	
07:15-07:30A	31		36											2		70	
07:30-07:45A	70		71											1		142	
07:45-08:00A	55		69		1									1		128	
08:00-08:15A	39		37			1								1		79	
08:15-08:30A	36		42		1									1		80	
08:30-08:45A	27		35		1									1		66	
08:45-09:00A	34		52		1									1		91	
09:00-10:00A	117		152		6									3		289	
10:00-11:00A	118		146		2									2		283	
11:00-12:00P	299		313		4									3		644	
12:00-01:00P	209		253		11									2		479	
01:00-02:00P	205		192		1									2		413	
02:00-03:00P	176		189		5									3		385	
03:00-04:00P	169		223		2									5		404	
04:00-04:15P	34		51											2		88	
04:15-04:30P	51		39											1		92	
04:30-04:45P	45		41		2									1		90	
04:45-05:00P	46		69											2		119	
05:00-05:15P	33		43											1		80	
05:15-05:30P	52		37											2		90	
05:30-05:45P	41		38											1		81	
05:45-06:00P	37		40		1									1		79	
06:00-07:00P	168		164		2									5		344	
07:00-08:00P	144		107		2									1		258	
08:00-09:00P	107		87		2									1		198	
09:00-10:00P	90		75											1		167	
16 HOUR	2578		2732		31	81	24	1	6	5	1	1		48	18	5524	5

TRAFFIC COUNT SUMMARY SHEET
 TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007 COUNTY : Marion CITY: Keizer
 DAY OF WEEK : Mon./Tues. INTERSECTION OF: N River Rd. @ Broadway Ave. & Shangrila St.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : cloudy MILE POST : n/a
 FROM : NORTH TO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS		OBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY CLE
	Cops	W/Flr	Other	W/Flr		2 AXL	3 AXL	4 AXL	5 AXL	6 AXL	7 AXL				
06:00-07:00A	228		251	4	5	1	1					1	3	496	1
07:00-07:15A	99		81		1	1							1	182	1
07:15-07:30A	100		92		1							1	1	195	
07:30-07:45A	125		124		2		2							253	
07:45-08:00A	134		134		1								2	271	
08:00-08:15A	80		67	1	1									149	
08:15-08:30A	81		97	3	3							2		186	
08:30-08:45A	74		85	1	1									161	
08:45-09:00A	78		73	1	3									156	
09:00-10:00A	245		267	2	9	1	1					3		529	
10:00-11:00A	221		280	4	11	1	1					2	3	524	
11:00-12:00P	461		562	3	21	4	1					5	3	1062	
12:00-01:00P	276		315	4	9	2	1					2	2	612	
01:00-02:00P	241		312	7	12	4	2					1	7	588	
02:00-03:00P	269		279	9	8							3	2	570	
03:00-04:00P	272		322	7	13		1					3	2	625	
04:00-04:15P	63		72	5	4									144	
04:15-04:30P	72		95	2	1							1	2	173	1
04:30-04:45P	58		98	1	2	1							2	162	
04:45-05:00P	73		78	2	3								1	157	
05:00-05:15P	71		79	1										152	
05:15-05:30P	47		81	2	1							1		132	
05:30-05:45P	81		77	2										161	
05:45-06:00P	64		70	1	1									136	
06:00-07:00P	267		266	3	2		1					1	3	543	
07:00-08:00P	167		178	2	2		1					1	1	352	1
08:00-09:00P	147		164	1	4							2	3	321	
09:00-10:00P	128		150		2							1	5	286	
16 HOUR	4222		4749	67	122	17	3	10	9	4		30	43	9276	5

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : cloudy
 FROM : EAST
 COUNTY : Marion
 CITY: Keizer
 INTERSECTION OF: N River Rd. @ Broadway Ave. & Shangrila St.
 MILE POST : n/a
 TO : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY CLE
	Cars	MTWR	other	MTWR	2 Axle	3 Axle	>4Axle	4 Axle	5 Axle	6 Axle	7 Axle	>9Axle				
06:00-07:00A	1		1												2	
07:00-07:15A	2		2												4	
07:15-07:30A			4												4	
07:30-07:45A	2		2												4	
07:45-08:00A	3		2												5	
08:00-08:15A	2		3												5	
08:15-08:30A	1		2												3	
08:30-08:45A			3												3	
08:45-09:00A	2		2												4	
09:00-09:08A	3		4												7	
10:00-11:00A	3		4	1											10	
11:00-12:00P	3		4		1										19	
12:00-01:00P	8		11												11	
01:00-02:00P	4		7												7	
02:00-03:00P	4		3												10	
03:00-04:00P	6		4												2	
04:00-04:15P	1		1												7	
04:15-04:30P	6		1												6	
04:30-04:45P	3		3												6	
04:45-05:00P	2		4												4	
05:00-05:15P	1		3												8	
05:15-05:30P	4		4												8	
05:30-05:45P	5		3												2	
05:45-06:00P			2												19	
06:00-07:00P	6		13												7	
07:00-08:00P	4		3												8	
08:00-09:00P	4		4												21	
09:00-10:00P	11		10													
16 HDJR	91		109	1	2	1									204	1

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007 COUNTY : Marion CITY: Keizer
 DAY OF WEEK : Mon./Tues. INTERSECTION of: N River Rd. @ Broadway Ave. & Shangri-la St.
 HOURS COUNTED: 6AM - 10PM MILE POST : n/a
 WEATHER : cloudy TO : SOUTH
 FROM : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER/VEHICLE	TOTAL ALL VEHICLE	BI CY CLE
	Cars	MTFR	Other	MTFR		2 AXL	3 AXL	4 AXL	5 AXL	6 AXL	7 AXL	8 AXL	>9AXL					
06:00-07:00A	1		2													3		
07:00-07:15A			1													1		
07:15-07:30A	2															2		
07:30-07:45A	1															1		
07:45-08:00A	1															1		
08:00-08:15A																		
08:15-08:30A	1															1		
08:30-08:45A																		
08:45-09:00A	2		1													3		
09:00-10:00A	2		1													4		
10:00-11:00A	3		4													7		
11:00-12:00P	4		3													5		
12:00-01:00P	2		1													5		
01:00-02:00P	3		4													8		
02:00-03:00P	6				1											7		
03:00-04:00P	3															3		
04:00-04:15P	3															2		
04:15-04:30P	2															2		
04:30-04:45P	2															1		
04:45-05:00P	1															1		
05:00-05:15P																		
05:15-05:30P																		
05:30-05:45P	2															1		
05:45-06:00P	6		2													2		
06:00-07:00P	4		4													8		
07:00-08:00P	2		2													4		
08:00-09:00P	2		3													5		
09:00-10:00P																		
16 HOUR	52		29		2											94		

TRAFFIC COUNT SUMMARY SHEET
 TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : cloudy
 FROM : EAST

COUNTY : Marion CITY: Keizer
 INTERSECTION OF: N River Rd. @ Broadway Ave. & Shargilla St.
 MILE POST : n/a
 TO : WEST

TIME OF DAY	PASSENGER Cars - WTRIP	OTHER 2 AXLE Other: WTRIP	SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTORCYCLE SCOOTER	TOTAL ALL VEHICLE	BT CY CLE
			2 AXL	3 AXL	>4AXL	4 AXL	5 AXL	>6AXL	5 AXL	6 AXL				
06:00-07:00A	2												2	
07:00-07:15A		1											2	
07:15-07:30A													1	
07:30-07:45A													1	
07:45-08:00A													1	
08:00-08:15A													4	
08:15-08:30A													1	
08:30-08:45A													6	
08:45-09:00A													8	
09:00-10:00A													4	
10:00-11:00A													7	
11:00-12:00P													11	
12:00-01:00P													10	
01:00-02:00P													4	
02:00-03:00P													3	
03:00-04:00P													2	
04:00-04:15P													9	
04:15-04:30P													4	
04:30-04:45P													1	
04:45-05:00P													2	
05:00-05:15P													1	
05:15-05:30P													2	
05:30-05:45P													5	
05:45-06:00P													6	
06:00-07:00P													4	
07:00-08:00P													7	
08:00-09:00P													3	
09:00-10:00P													114	
16 HOUR	47	64											114	

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : cloudy
 FROM : SOUTH TO : NORTH
 COUNTY : Marion
 INTERSECTION OF: N River Rd. @ Broadway Ave. & Shangri-la St.
 CITY: Keizer
 MILE POST : n/a
 TO : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK			SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY CLE
	Cars	Mtr	Other	Mtr	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	9 Axl	5 Axl	6 Axl	7 Axl	8 Axl	9 Axl				
06:00-07:00A	102		105	1	6	3	1	1								5		225		
07:00-07:15A	28		32		3	1										1		65		
07:15-07:30A	44		42		2											1		89		
07:30-07:45A	44		44		2											3		92		
07:45-08:00A	47		73	1	4	1										3		131	1	
08:00-08:15A	49		67	3	4	1		2								2		126		
08:15-08:30A	39		61	1	1	3										1		107		
08:30-08:45A	56		62	1	6	3												129		
08:45-09:00A	57		95	1	2	6										2		164		
09:00-10:00A	279		330	7	10	4		2								6		644		
10:00-11:00A	289		322	5	12	4										3		635	1	
11:00-12:00P	398		411	6	19	1		3								5		849	2	
12:00-01:00P	505		504	13	23	4										3		1060	3	
01:00-02:00P	461		460	10	20	7		1								4		970	2	
02:00-03:00P	503		458	8	9	1										6		989	4	
03:00-04:00P	536		530	8	13	1		1								8		1100	6	
04:00-04:15P	148		194	2	6	1												354	4	
04:15-04:30P	167		155	8	6	1										2		338	1	
04:30-04:45P	176		160	1	6	1										1		349	3	
04:45-05:00P	144		193	1	1	1										2		348	2	
05:00-05:15P	199		197	1	4	1										1		407		
05:15-05:30P	231		200		3	3		1								1		436	2	
05:30-05:45P	200		209		3	3										1		414	1	
05:45-06:00P	159		169	1	6	1										2		344	3	
06:00-07:00P	485		475	7	18			1								6		999	3	
07:00-08:00P	342		304	2	2			1								2		656	3	
08:00-09:00P	348		251	4	2											2		617	3	
09:00-10:00P	236		191	1	4											2		437	3	
24 HOUR	6265		6294	95	188	45	1	14	9	5						74	85	13074	41	

WORK 2426

Summarized by: _____ | 09/12/07

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007 COUNTY : Marion CITY: Keizer
 DAY OF WEEK : Mon./Tues. INTERSECTION OF: N River Rd. @ Broadway Ave. & Shangtilla St.
 HOURS COUNTED: 6AM - 10PM MILE POST : n/a
 WEATHER : cloudy TO : EAST
 FROM : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS	DBL TRAILER TRUCKS	TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY. CLE
	Cars	Wtrlr	Other	Wtrlr				2 Axle	3 Axle	>4Axle				
06:00-07:00A	3		3										6	
07:00-07:15A	1		3										4	
07:15-07:30A			3										3	
07:30-07:45A			1										1	
07:45-08:00A			2										2	
08:00-08:15A	1		2										3	
08:15-08:30A	2		3										5	
08:30-08:45A			1										1	
08:45-09:00A	4		1										5	
09:00-10:00A	5		4		2	1							12	
10:00-11:00A	4		6		1								11	
11:00-12:00P	7		12		1								21	
12:00-01:00P	10		13										23	1
01:00-02:00P	6		8										14	
02:00-03:00P	8		12										22	
03:00-04:00P	10		10		1								20	
04:00-04:15P	2		2										4	
04:15-04:30P	6		6										12	
04:30-04:45P	8		3										11	
04:45-05:00P	3		5										8	
05:00-05:15P	3		4										7	
05:15-05:30P	2		4										6	
05:30-05:45P	1		9										10	
05:45-06:00P	4		1										5	
06:00-07:00P	15		9		1								25	
07:00-08:00P	6		12										18	
08:00-09:00P	8		11										19	
09:00-10:00P	10		9										19	
16 HOUR	129		159		6	2							297	1

Summarized by: _____ 09/12/07

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : cloudy
 FROM : SOUTH
 TO : WEST
 COUNTY : Marion
 CITY: Keizer
 INTERSECTION OF: N River Rd. @ Broadway Ave. & Shansilla St.
 MILE POST : 0/0
 TO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS	DBL TRAILER TRUCKS	TRP TRAILER TRUCKS	BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	CY
	Cars	Witr	WTrlr	Other								
06:00-07:00A												
07:00-07:15A												
07:15-07:30A												
07:30-07:45A												
07:45-08:00A												
08:00-08:15A												
08:15-08:30A												
08:30-08:45A												
08:45-09:00A												
09:00-10:00A												
10:00-11:00A												
11:00-12:00P												
12:00-01:00P												
01:00-02:00P												
02:00-03:00P												
03:00-04:00P												
04:00-04:15P												
04:15-04:30P												
04:30-04:45P												
04:45-05:00P												
05:00-05:15P												
05:15-05:30P												
05:30-05:45P												
05:45-06:00P												
06:00-07:00P												
07:00-08:00P												
08:00-09:00P												
09:00-10:00P												
16 HOUR												

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007 COUNTY : Marion CITY: Keizer
 DAY OF WEEK : Mon./Tues. INTERSECTION OF: N River Rd. @ Broadway Ave. & Shanhila St.
 HOURS COUNTED: 6AM - 10PM MILE POST : n/a
 WEATHER : cloudy ID: NORTH
 FROM : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SQL UNIT TRUCK	SQL TRAILER TRUCKS	DBL TRAILER TRUCKS	TRP TRAILER TRUCKS	BUSES	MOTOR CYCLE / SCOOTER	TOTAL ALL VEHICLE	TR: CY
	Cars	HT-LR	Other	HT-LR	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	>9Axl	CLE
06:00-07:00A												
07:00-07:15A												
07:15-07:30A												
07:30-07:45A												
07:45-08:00A												
08:00-08:15A												
08:15-08:30A												
08:30-08:45A												
08:45-09:00A												
09:00-10:00A												
10:00-11:00A												
11:00-12:00P												
12:00-01:00P												
01:00-02:00P												
02:00-03:00P												
03:00-04:00P												
04:00-04:15P												
04:15-04:30P												
04:30-04:45P												
04:45-05:00P												
05:00-05:15P												
05:15-05:30P												
05:30-05:45P												
05:45-06:00P												
06:00-07:00P												
07:00-08:00P												
08:00-09:00P												
09:00-10:00P												
16 HOUR												

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : cloudy
 FROM : WEST
 TO : EAST
 COUNTY : Maricopa
 CITY: Keizer
 INTERSECTION OF: N. River Rd. & Broadway Ave. & Shangri-la St.
 MILE POST : n/a
 TO : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL. TRAILER TRUCKS		TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY CLE
	Cars	WTR	Other	WTR	2 AXL	3 AXL	>4AXL	4 AXL	5 AXL	>6AXL	5 AXL	6 AXL	>7AXL				
06:00-07:00A																	
07:00-07:15A																	
07:15-07:30A																	
07:30-07:45A																	
07:45-08:00A																	
08:00-08:15A																	
08:15-08:30A																	
08:30-08:45A																	
08:45-09:00A																	
09:00-10:00A																	
10:00-11:00A																	
11:00-12:00P																	
12:00-01:00P																	
01:00-02:00P																	
02:00-03:00P																	
03:00-04:00P																	
04:00-04:15P																	
04:15-04:30P																	
04:30-04:45P																	
04:45-05:00P																	
05:00-05:15P																	
05:15-05:30P																	
05:30-05:45P																	
05:45-06:00P																	
06:00-07:00P																	
07:00-08:00P																	
08:00-09:00P																	
09:00-10:00P																	
16 HOUR																	

SUMMARY OF BICYCLE COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007 DAY : Mon./Tues. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 70PM WEATHER: cloudy INTERSECTION Of: N River Rd. @ Broadway Ave. & Shangrila St.
 Job by: Chk. by: MILE POST : n/a

TIME OF DAY	BICYCLES MOVING WITH VEHICULAR TRAFFIC										BICYCLES USING CROSS WALKS					
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-N	W-S	TOTAL	NORTH	EAST	SOUTH	WEST
06:00-07:00A			1									1	2			
07:00-07:15A												1				
07:15-07:30A			1									1	1			
07:30-07:45A							1					1				
07:45-08:00A																
08:00-08:15A																
08:15-08:30A																
08:30-08:45A												1				
08:45-09:00A		1										1				
09:00-10:00A																
10:00-11:00A		1										2	5			
11:00-12:00P												2		1		
12:00-01:00P												5	3			
01:00-02:00P												2	4			
02:00-03:00P												4	4			
03:00-04:00P												6	1			
04:00-04:15P												4	1			
04:15-04:30P												4	1			
04:30-04:45P												2				
04:45-05:00P												6				
05:00-05:15P												2				
05:15-05:30P												1				
05:30-05:45P												2				
05:45-06:00P												1				
06:00-07:00P												3				
07:00-08:00P												4	1			
08:00-09:00P												4	3			
09:00-10:00P												1	2			
TOTAL VOLUME	1	5	5	1	1		4					54	24	1		

**SUMMARY OF PEDESTRIAN COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION**

DATE : July 16/17, 2007
 HOURS : 6AM - 10PM
 DAY : Mon./Tues.
 WEATHER : cloudy
 COUNTY : Marion
 INTERSECTION OF: N River Rd. @ Broadway Ave. & Shangrila St.
 CITY: Keizer
 Tab by: MILE POST : n/a

TIME OF DAY	STUDENT PEDESTRIANS			OTHER PEDESTRIANS			STUDENT AND OTHER PEDESTRIAN			TOTAL
	NORTH	EAST	WEST	NORTH	EAST	WEST	NORTH	EAST	WEST	
06:00-07:00A							2			2
07:00-07:15A							1			1
07:15-07:30A							2			2
07:30-07:45A							1			1
07:45-08:00A										
08:00-08:15A										
08:15-08:30A										
08:30-08:45A										
08:45-09:00A							2	1	2	5
09:00-10:00A							1	4	4	9
10:00-11:00A							3	3	4	7
11:00-12:00P							6	4	8	18
12:00-01:00P							4	4	8	15
01:00-02:00P							7	7	14	12
02:00-03:00P							5	5	10	12
03:00-04:00P							1	11	12	24
04:00-04:15P							1	1	2	3
04:15-04:30P							1	2	3	5
04:30-04:45P							1	4	5	6
04:45-05:00P										1
05:00-05:15P										
05:15-05:30P										
05:30-05:45P										
05:45-06:00P										
06:00-07:00P							7	3	4	10
07:00-08:00P							2	3	5	9
08:00-09:00P							2	9	9	11
09:00-10:00P							6	7	5	18
TOTAL VOLUME:	43	40	81	43	40	81	43	40	81	164

TRANSPORTATION DEVELOPMENT BRANCH
 TRANSPORTATION SYSTEM MONITORING UNIT
 VEHICULAR VOLUME

DATE : July 17/18, 2007

CITY or COUNTY : Keizer

DAY WEEK : Tues./Wed.

INTERSECTION OF: N River Rd. @ Manbrin Ave.

ACT COUNT: 16

HRS COUNT: 6AM - 10PM

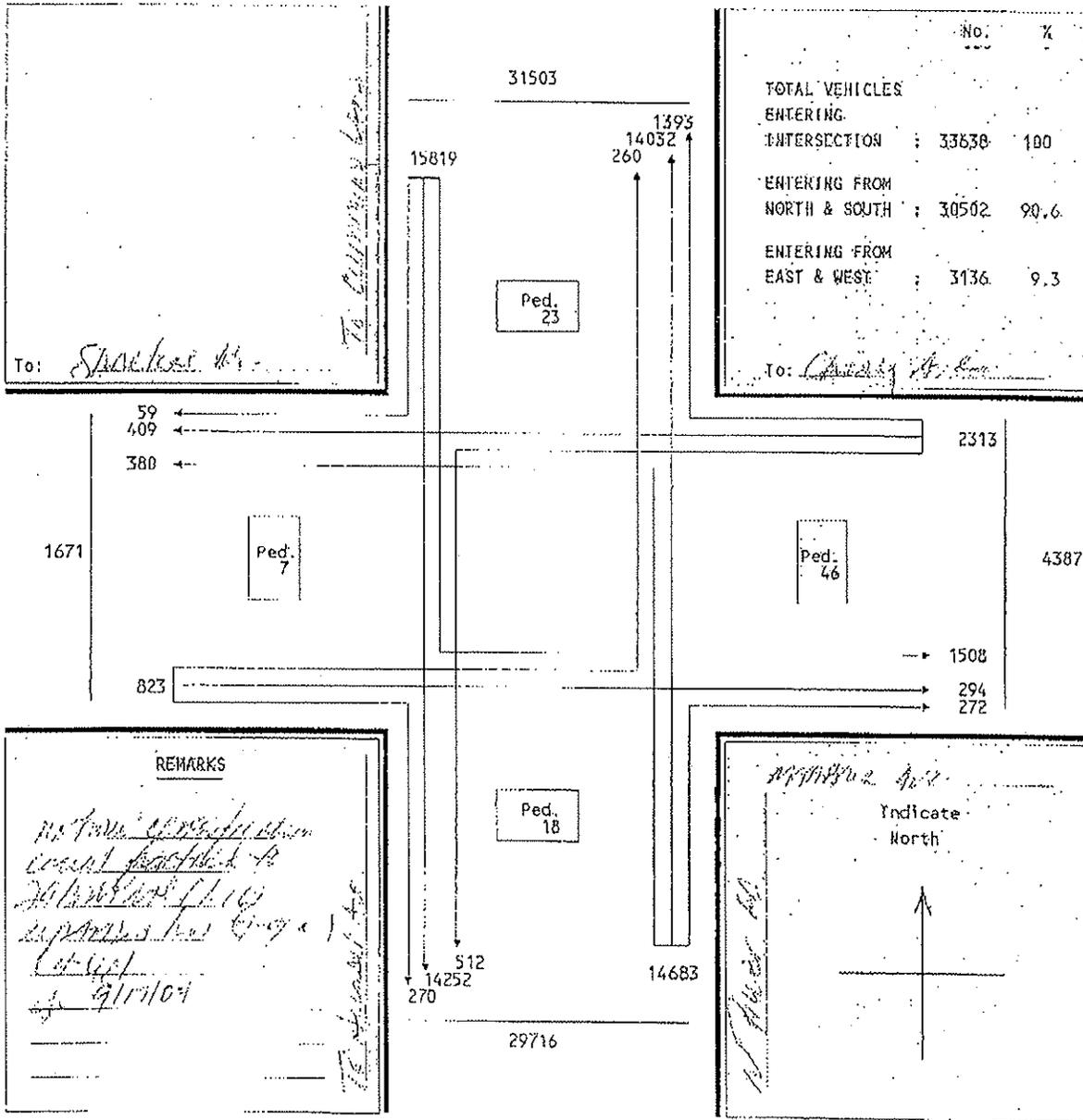
PED COUNT: 16

MILE POST: n/a

HRS COUNT: 6AM - 10PM

CLASSIFICATION : All vehicles

WEATHER : clear



JS 9/19/07

**SUMMARY OF TRAFFIC COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION**

DATE : July 17/18, 2007 DAY : Tues./Wed. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: clear INTERSECTION OF: N River Rd. & Manbrin Ave.

Tab by: _____ Chk. by: _____ MILE POST : n/a

SUMMARY BY MOVEMENTS

TIME OF DAY	MOVEMENTS																ENTERING VOLUMES BY LEGS		
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-E	W-S	W-N	NORTH AND SOUTH TOTAL	EAST AND WEST TOTAL	PERCENT OF TOTAL	NORTH	SOUTH	WEST	
06:00-07:00A	53	568	2	23	13	2	213	8	5	8	9	4	908	59	6.5	623	226	21	
07:00-07:15A	20	207		12	5		66	3	3	1	5	5	324	28	8.6	227	69	11	
07:15-07:30A	38	280		21	10		78	3	1	2	2	2	437	37	8.5	318	82	6	
07:30-07:45A	36	376		10	10	1	85	2	5	2	4	6	537	33	6.1	412	92	12	
07:45-08:00A	40	311		19	5	4	111	2	3	3	11	5	512	47	9.2	351	114	19	
08:00-08:15A	20	232	2	6	3	5	111	2	3	7	5	9	405	35	8.6	254	116	21	
08:15-08:30A	29	220		15	8	8	105	5	8	8	6	11	415	56	13.5	249	31	25	
08:30-08:45A	18	253	1	13	8	1	120	2	1	5	5	4	408	33	8.1	252	123	11	
08:45-09:00A	24	186	2	11	6	3	140	4	2	3	5	5	391	33	8.4	212	146	13	
09:00-10:00A	66	795	3	51	17	5	497	12	14	9	12	14	1495	108	7.2	864	523	35	
10:00-11:00A	100	763	2	54	23	21	627	12	17	19	15	14	1667	146	8.8	865	656	48	
11:00-12:00P	81	992	3	113	44	22	831	20	34	16	20	17	2193	232	10.6	1076	885	53	
12:00-01:00P	103	954	12	92	44	37	933	20	20	16	25	26	2282	240	10.5	1069	973	67	
01:00-02:00P	95	967	12	97	30	28	844	17	16	17	15	25	2163	212	9.8	1074	977	57	
02:00-03:00P	91	880		85	35	19	939	10	22	16	21	12	2130	188	8.8	971	971	49	
03:00-04:00P	108	938		114	38	35	1043	27	32	14	14	13	2374	228	9.6	1044	1102	41	
04:00-04:15P	21	279		33	7	7	341	7	11	8	7	2	723	64	8.9	300	359	17	
04:15-04:30P	29	212		37	9	18	376	5	7	1	8	4	706	77	10.9	241	388	13	
04:30-04:45P	26	245	1	26	3	6	313	8	8	8	6	2	644	43	6.7	272	329	8	
04:45-05:00P	27	213		23	3	7	297	7	5	1	4	2	589	40	6.8	240	309	7	
05:00-05:15P	26	239	1	31	12	9	387	4	12	3	4	5	733	64	8.7	266	403	12	
05:15-05:30P	27	237	2	54	6	6	426	6	12	8	4	2	790	80	10.1	266	444	14	
05:30-05:45P	30	229		31	9	13	348	3	9	4	6	2	684	65	9.5	259	360	12	
05:45-06:00P	10	230		26	12	9	273	7	10	4	8	4	589	59	10.0	240	290	12	
06:00-07:00P	83	770	3	94	34	39	1155	18	24	26	16	15	2277	224	9.8	856	1197	57	
07:00-08:00P	82	561	2	93	37	31	1148	19	22	25	14	15	2047	213	10.4	645	1189	52	
08:00-09:00P	54	461		54	12	24	441	12	34	10	18	8	1128	126	11.2	515	487	36	
09:00-10:00P	34	380	6	28	22	12	508	12	8	6	1	12	1029	81	7.9	420	528	19	
TOTAL COUNTY	1371	12956	54	1266	465	372	12756	247	345	236	267	245	30580	2851	9.3	14381	13348	748	
24-HR FACTOR	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	9.3	15819	14683	803	
24-HR VOLUME	1508	14252	59	1393	512	409	14052	272	360	260	294	270	33641	3136	9.3	15819	14683	803	

North and South is: N River Rd. East and West is: Manbrin Ave. SUM 2427

**SUMMARY OF TRAFFIC COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION**

DATE : July 17/18, 2007 DAY : Tues./Wed. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: clear INTERSECTION OF: N. River Rd. @ Hambrin Ave.

Tab by: Chk. by: MILE POST : n/a

SUMMARY BY MOVEMENTS

TIME OF DAY	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-N	W-E	W-S	TOTAL	NORTH AND SOUTH		PERCENT OF TOTAL		ENTERING VOLUMES BY LEGS			
														NORTH	SOUTH	EAST	AND WEST	WEST	EAST	NORTH	EAST
06:00-07:00A	53	568	2	23	13	2	213	8	5	8	9	4	908	849	93.5	59	623	38	226	21	
07:00-08:00A	134	1174		62	30	5	340	5	12	8	8	18	1810	1665	92.0	145	1308	97	357	48	
08:00-09:00A	91	871	5	45	25	17	476	8	11	23	18	29	1619	1462	90.3	157	967	87	495	70	
09:00-10:00A	66	795	3	51	17	5	497	12	14	9	12	14	1495	1387	92.8	188	864	73	523	35	
10:00-11:00A	100	763	2	54	23	21	627	12	17	19	15	14	1667	1521	91.2	146	865	98	656	48	
11:00-12:00P	81	992	3	113	44	22	831	20	34	16	20	17	2193	1961	89.4	232	1076	179	885	53	
12:00-01:00P	103	954	12	92	44	37	933	20	20	16	25	26	2282	2042	89.5	240	1069	173	975	67	
01:00-02:00P	95	967	12	97	30	28	844	17	16	17	15	25	2163	1951	90.2	212	1074	155	877	57	
02:00-03:00P	91	880		85	35	19	939	10	22	16	21	12	2130	1942	91.2	188	971	139	971	49	
03:00-04:00P	108	936		114	38	35	1043	27	32	14	14	13	2374	2146	90.4	228	1044	187	1102	41	
04:00-05:00P	103	949	1	119	22	38	1327	27	31	10	25	10	2662	2438	91.6	224	1031	179	1385	45	
05:00-06:00P	93	935	3	142	39	37	1434	20	43	15	22	13	2798	2528	90.4	268	856	218	1497	50	
06:00-07:00P	83	770	3	94	34	39	1155	18	24	26	16	15	2277	2053	90.2	224	856	167	1197	57	
07:00-08:00P	82	541	2	93	37	31	1148	19	22	23	14	15	2047	1834	89.6	213	645	161	1189	52	
08:00-09:00P	54	461		54	12	24	441	12	34	10	18	8	1128	1002	88.8	126	515	90	487	36	
09:00-10:00P	34	380	6	28	22	12	598	12	8	6	1	12	1029	948	92.1	81	420	62	528	19	
TOTAL COUNT	1371	12956	54	1266	465	372	12756	247	345	256	267	245	30580	27729	90.7	2851	14381	2103	13548	748	
24-HR FACTOR	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10									
24-HR VOLUME	1508	14252	59	1393	512	409	14032	272	380	260	294	270	33641	30582	90.7	3136	15819	2313	14685	823	

North and South is: N River Rd. East and West is: Hambrin Ave. SUM 2427

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007
 DAY OF WEEK : Tues./Wed.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : NORTH
 COUNTY : Marion
 INTERSECTION OF: N River Rd. @ Manbrin Ave.
 CITY: Keizer
 VEHICLE POST : n/a
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2-AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS	DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTORCYCLE	TOTAL ALL VEHICLE	CY
	Cars	WTric	Other	WTric			2 Axle	3 Axle	4 Axle	5 Axle				
06:00-07:00A	33		17		1								53	
07:00-07:15A	12		8										20	
07:15-07:30A	26		10									1	38	
07:30-07:45A	27		8										36	
07:45-08:00A	30		7		1								40	
08:00-08:15A	14		6										20	
08:15-08:30A	19		8		1								29	
08:30-08:45A	14		3		1								18	
08:45-09:00A	15		8		1								24	
09:00-10:00A	43		19		1								66	
10:00-11:00A	60		30		6								100	
11:00-12:00P	53		20		2		1						81	
12:00-01:00P	68		23		1		1						103	
01:00-02:00P	67		22		1								91	
02:00-03:00P	67		17		1		1						108	
03:00-04:00P	68		34		2								121	
04:00-04:15P	13		7										21	
04:15-04:30P	18		10										29	
04:30-04:45P	18		8										26	
04:45-05:00P	17		9										27	
05:00-05:15P	15		10										26	
05:15-05:30P	20		6										27	
05:30-05:45P	20		7										30	
05:45-06:00P	5		4										10	
06:00-07:00P	60		20		3								83	
07:00-08:00P	55		25		2								82	
08:00-09:00P	40		14										54	
09:00-10:00P	24		10										34	
15 HOUR	921		368		19		36		8		3		1571	

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007 COUNTY : Marion CITY: Keizer
 DAY OF WEEK : Tues./Wed. INTERSECTION OF: N River Rd. @ Mainbr'n Ave.
 HOURS COUNTED: 6AM - 10PM MILE POST : n/a
 WEATHER : clear TO : SOUTH
 FROM : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SSL TRAILER TRUCKS		DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY GLE
	Cars	WTrlr	Other	WTrlr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>5Axl	5 Axl	>7Axl	7 Axl	8 Axl				
06:00-07:00A	405		151	1	5	1	2							2	1	568	1	
07:00-07:5A	143		60		1	2								1	1	207		
07:15-07:30A	199		74			1	1	2						2	1	280		
07:30-07:45A	288		82		4	1								1		376		
07:45-08:00A	236		64	2	5	1	1							2	2	311		
08:00-08:15A	175		43	1	6			4								232		
08:15-08:30A	161		46	2	7			1						4		220	1	
08:30-08:45A	192		33	1	3									3		233	1	
08:45-09:00A	135		44	4	1		1							1		186		
09:00-10:00A	543		211	12	16	1	2	1						9	2	795		
10:00-11:00A	548		184	3	14		2	2						12		763		
11:00-12:00P	706		238	4	20	6	2	4						10	2	992		
12:00-01:00P	676		236	6	14	9	4	2	5					6		954		
01:00-02:00P	656		282	10	7		4	5						3		967		
02:00-03:00P	636		204	9	13	4	2			2				10		880		
03:00-04:00P	634		262	10	14									8	2	936		
04:00-04:15P	189		74	2	6									7	1	279		
04:15-04:30P	144		61	3	1									2	1	212		
04:30-04:45P	162		75	1	3			1						2	1	245		
04:45-05:00P	153		55	1	2									1	1	213		
05:00-05:15P	163		69		4			1						1	1	239		
05:15-05:30P	156		76		2											237		
05:30-05:45P	156		68	1	3										1	229	1	
05:45-06:00P	158		71	2	7	3								1		230	1	
06:00-07:00P	634		118	4	2									6		770		
07:00-08:00P	433		120	4	2									1	1	561	1	
08:00-09:00P	366		90	4	6										1	461	1	
09:00-10:00P	298		74	2												360		
16 HOUR	9342		3171	85	166	25	15	18	11	2				3	97	12956	6	

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007
 DAY OF WEEK : Tues./Wed.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : NORTH
 CITY: Keizer

COUNTY : Marion
 INTERSECTION OF: N River Rd. S. Mainbr. Ave.
 MILE POST : n/a
 TO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT VEHICLE	TOTAL ALL VEHICLE	CY
	Cars	WTrlr	Other	WTrlr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	6 Axl	>7Axl				
06:00-07:00A	2															2	
07:00-07:15A																	
07:15-07:30A																	
07:30-07:45A																	
07:45-08:00A	2															2	
08:00-08:15A																	
08:15-08:30A	1															1	
08:30-08:45A	2															2	
08:45-09:00A	3															3	
09:00-10:00A																	
10:00-11:00A			2														
11:00-12:00P	3															3	
12:00-01:00P	6		4			1										12	
01:00-02:00P	7		3													12	
02:00-03:00P																	
03:00-04:00P																	
04:00-04:15P																	
04:15-04:30P	1															1	
04:30-04:45P																	
04:45-05:00P	1															1	
05:00-05:15P																	
05:15-05:30P			2													2	
05:30-05:45P																	
05:45-06:00P																	
06:00-07:00P	1		2													3	
07:00-08:00P	1		1													2	
08:00-09:00P																	
09:00-10:00P	2		4													6	
16 HOUR	32		38	1	1	1	1	1	1	1	1	1	1	1	1	54	

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007 COUNTY : Marion CITY : Keizer
 DAY OF WEEK : Tues./Wed. INTERSECTION OF: N River Rd. @ Manbrin Ave.
 HOURS COUNTED: 6AM - 10PM MILE POST : N/A
 WEATHER : clear TO : NORTH
 FROM : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY CLE
	Cars	WTrlr	Other	WTrlr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	6 Axl				
06:00-07:00A	18		2			1									23	
07:00-07:5A	8		2		1				1						12	
07:15-07:30A	16		3			1									21	
07:30-07:45A	8		2												10	
07:45-08:00A	7		9			1							1		19	
08:00-08:15A	2		4												6	
08:15-08:30A	9		2		2										15	
08:30-08:45A	10		2										1		13	
08:45-09:00A	7		2			2									11	
09:00-10:00A	33		18												51	
10:00-11:00A	34		13			4	3								54	
11:00-12:00P	73		31		2	2	2	1		1					115	
12:00-01:00P	67		9			2	1								92	
01:00-02:00P	68		24		1	2		1							97	
02:00-03:00P	57		22		1	4									85	
03:00-04:00P	76		33		1	1				1					114	
04:00-04:15P	13		7		1										33	
04:15-04:30P	26		10												37	
04:30-04:45P	18		8				1								26	
04:45-05:00P	16		6												23	
05:00-05:15P	20		10												31	
05:15-05:30P	36		18												54	
05:30-05:45P	22		9			1									31	
05:45-06:00P	15		10												26	
06:00-07:00P	65		27			1									94	
07:00-08:00P	64		29												93	
08:00-09:00P	34		20												54	
09:00-10:00P	18		10												28	
16 HOUR	840		362		9	23	8	1	2	1	2	1		15	2	1266

Summarized by: _____ | 09/19/07 WORK_2427

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007
 DAY OF WEEK : Tues./Wed.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : EAST
 TO : WEST

COUNTY : Marion
 INTERSECTION OF: N River Rd. @ Mainbrin Ave.
 CITY: Keizer

MILE POST : n/a
 TO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS	DBL TRAILER TRUCKS	TRP TRAILER TRUCKS	TRAILER TRUCKS	BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY CLE		
	Cars	WTrlr	Other	WTrlr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	6 Axl	>7Axl	7 Axl	8 Axl
06:00-07:00A	1			1								2			
07:00-07:15A															
07:15-07:30A	1											1			
07:30-07:45A	3		1									4			
07:45-08:00A	4		1									5			
08:00-08:15A	5		3									8			
08:15-08:30A	1											1			
08:30-08:45A	1											3			
08:45-09:00A	2		3									5			
09:00-10:00A	9		11		1							21			
10:00-11:00A	15		7									22			
11:00-12:00P	22		12		2							37			
12:00-01:00P	18		9			1						28	1		
01:00-02:00P	15		4									19			
02:00-03:00P	16		18									35			
03:00-04:00P	5		2									7			
04:00-04:15P	10		7			1						18			
04:15-04:30P	2		4									6			
04:30-04:45P	4		3									7			
04:45-05:00P	7		2									9			
05:00-05:15P	4		2									6			
05:15-05:30P	4		2									13			
05:30-05:45P	12		1									9			
05:45-06:00P	8		1									39			
06:00-07:00P	31		8									31			
07:00-08:00P	22		9									24			
08:00-09:00P	14		10									32			
09:00-10:00P	10		2												
16 HOUR	242		122		4	2	1			1		372	1		

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

CITY: Keizer

COUNTY : Marion
INTERSECTION OF: N River Rd. @ Mainbrin Ave.

DATE : July 17/18, 2007

DAY OF WEEK : Tues./Wed.

HOURS COUNTED: 6AM - 10PM

WEATHER : clear

FROM : SOUTH

MILE POST : n/a
TO : NORTH

TIME OF DAY	PASSENGER Cars	OTHER 2 AXLE Other	SEL UNIT TRUCK 2 AXL	3 AXL	SEL TRAILER TRUCKS 4 AXL	5 AXL	6 AXL	7 AXL	8 AXL	9 AXL	TRP TRAILER TRUCKS	BUSES	MOTOR CYCLE	TOTAL ALL VEHICLE	BI CY	CLE
06:00-07:00A	148	52	3	3	3	3	3	3	3	3	3	3	3	3	3	3
07:00-07:15A	39	22	2	2	2	2	2	2	2	2	2	2	2	2	2	2
07:15-07:30A	53	20	4	4	4	4	4	4	4	4	4	4	4	4	4	4
07:30-07:45A	55	24	4	4	4	4	4	4	4	4	4	4	4	4	4	4
07:45-08:00A	84	16	1	2	1	1	1	1	1	1	1	1	1	1	1	1
08:00-08:15A	76	21	1	1	1	1	1	1	1	1	1	1	1	1	1	1
08:15-08:30A	80	18	1	1	1	1	1	1	1	1	1	1	1	1	1	1
08:30-08:45A	94	21	1	1	1	1	1	1	1	1	1	1	1	1	1	1
08:45-09:00A	100	29	3	7	1	1	1	1	1	1	1	1	1	1	1	1
09:00-09:10:00A	364	111	3	12	2	2	2	2	2	2	2	2	2	2	2	2
09:00-09:10:00A	464	139	4	9	2	2	2	2	2	2	2	2	2	2	2	2
09:00-09:10:00A	626	172	4	14	5	5	5	5	5	5	5	5	5	5	5	5
09:00-09:10:00A	695	193	4	20	7	7	7	7	7	7	7	7	7	7	7	7
09:00-09:10:00A	641	175	6	11	8	8	8	8	8	8	8	8	8	8	8	8
09:00-09:10:00A	722	180	11	10	5	5	5	5	5	5	5	5	5	5	5	5
09:00-09:10:00A	770	242	6	8	1	1	1	1	1	1	1	1	1	1	1	1
09:00-09:10:00A	260	64	6	2	2	2	2	2	2	2	2	2	2	2	2	2
09:00-09:10:00A	265	99	6	3	1	1	1	1	1	1	1	1	1	1	1	1
09:00-09:10:00A	234	65	72	3	1	1	1	1	1	1	1	1	1	1	1	1
09:00-09:10:00A	233	65	72	3	1	1	1	1	1	1	1	1	1	1	1	1
09:00-09:10:00A	292	90	2	2	2	2	2	2	2	2	2	2	2	2	2	2
09:00-09:10:00A	326	92	1	1	1	1	1	1	1	1	1	1	1	1	1	1
09:00-09:10:00A	282	62	2	1	1	1	1	1	1	1	1	1	1	1	1	1
09:00-09:10:00A	203	61	1	4	4	4	4	4	4	4	4	4	4	4	4	4
09:00-09:10:00A	895	239	2	10	1	1	1	1	1	1	1	1	1	1	1	1
09:00-09:10:00A	887	240	2	12	1	1	1	1	1	1	1	1	1	1	1	1
09:00-09:10:00A	306	128	2	4	4	4	4	4	4	4	4	4	4	4	4	4
09:00-09:10:00A	395	108	3	2	2	2	2	2	2	2	2	2	2	2	2	2
16 HOUR	9586	2755	66	158	42	2	13	10	8	8	8	8	8	8	8	8
TOTAL	9586	2755	66	158	42	2	13	10	8	8	8	8	8	8	8	8
TOTAL ALL VEHICLE	9586	2755	66	158	42	2	13	10	8	8	8	8	8	8	8	8
BUSES																
MOTOR CYCLE																
TOTAL ALL VEHICLE																
BI CY																
CLE																

WORK_2427

09/19/07

Summarized by:

TRAFFIC COUN. SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007
 COUNTY : Marion
 CITY: Keizer
 DAY OF WEEK : Tues./Wed.
 INTERSECTION OF: N. River Rd. @ Manbrin Ave.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : SOUTH
 TO : EAST
 MILE POST : n/a

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY GLE
	Cars	WTrlr	Other	WTrlr		2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	>7Axl	7 Axl				
06:00-07:00A	5		2														8	
07:00-07:15A																	3	
07:15-07:30A	3																2	
07:30-07:45A	1		1														2	
07:45-08:00A																	2	
08:00-08:15A	2																2	
08:15-08:30A																	2	
08:30-08:45A	1		1														4	
08:45-09:00A	3																12	
09:00-10:00A	12																12	
10:00-11:00A	7		3		2												20	
11:00-12:00P	13		7														20	
12:00-01:00P	17		3														17	
01:00-02:00P	13		3														10	
02:00-03:00P	6		4														27	
03:00-04:00P	17		9														7	
04:00-04:15P	2		5														5	
04:15-04:30P	5																8	
04:30-04:45P	8		1														7	
04:45-05:00P	6																4	
05:00-05:15P	4																6	
05:15-05:30P	4																3	
05:30-05:45P	3																7	
05:45-06:00P	6		1														18	
06:00-07:00P	16		2														19	
07:00-08:00P	16		3														12	1
08:00-09:00P	2		10														12	
09:00-10:00P	16		2														12	
16 HOUR	182		57	1	2	2									2	1	247	1

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007 COUNTY : Marion CITY: Keizer
 DAY OF WEEK : Tues./Wed. INTERSECTION OF: H River Rd. @ Napbrin Ave.
 HOURS COUNTED: 6AM - 10PM MILE POST : n/a
 WEATHER : clear TO : WEST
 FROM : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS	DBL TRAILER TRUCKS	TRP TRAILER TRUCKS	BUSES	MOTOR CYCLE	TOTAL ALL VEHICLE	BI CY
	Cars	Wtrt	Other	Wtrt	>4Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	>9Axl	CLE
06:00-07:00A	3		2								5	
07:00-07:15A	1		1								3	
07:15-07:30A	1										1	
07:30-07:45A	5										5	
07:45-08:00A	2										3	
08:00-08:15A	1		2								3	
08:15-08:30A	3		1						1		5	
08:30-08:45A	1								1		2	
08:45-09:00A	12		2								14	
09:00-10:00A	14		2								17	
10:00-11:00A	22		10	1							34	
11:00-12:00P	16		4								20	
12:00-01:00P	10		4								16	
01:00-02:00P	14		8							1	22	
02:00-03:00P	24		7								32	
03:00-04:00P	7		4								11	
04:00-04:15P	3		4								7	
04:15-04:30P	6		2								8	
04:30-04:45P	3		2								5	
04:45-05:00P	6		5								12	
05:00-05:15P	8		4								12	
05:15-05:30P	9		1								9	
05:30-05:45P	9		9								10	
05:45-06:00P	15		6								24	
06:00-07:00P	16		4								22	
07:00-08:00P	30		8								34	
08:00-09:00P	8										8	
09:00-10:00P												
16 HOUR	250		84	1	5	1					345	

TRAFFIC COUN. SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007
 DAY OF WEEK : Tues./Wed.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : WEST
 COUNTY : Marion
 INTERSECTION OF: N River Rd. @ Manbrlin Ave.
 CITY: Keizer
 MILE POST : n/a
 TO : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BT CY CLE
	Cars	MTLR	Other	MTLR	>4AXL	>4AXL	>4AXL	>4AXL	>5AXL	>6AXL	>7AXL	>8AXL				
06:00-07:00A	4		2	2											8	
07:00-07:15A	1														1	
07:15-07:30A	2														2	
07:30-07:45A	2														2	
07:45-08:00A	3														3	
08:00-08:15A	5		2												7	
08:15-08:30A	5		2												8	
08:30-08:45A	5														5	
08:45-09:00A	3														3	
09:00-09:00A	7		2												9	
09:00-11:00A	9		10												19	
11:00-12:00P	14		2												16	
12:00-01:00P	10		6												16	
01:00-02:00P	13		4												17	
02:00-03:00P	12		4												16	
03:00-04:00P	9		4	1											14	
04:00-04:15P	6		2												8	
04:15-04:30P	1														1	
04:30-04:45P	1														1	
04:45-05:00P	3														3	
05:00-05:15P	3														3	
05:15-05:30P	3		5												8	
05:30-05:45P	3		1												4	
05:45-06:00P	16		10												26	
06:00-07:00P	15		8												23	
07:00-08:00P	4		4												10	
08:00-09:00P	4		2												6	
09:00-10:00P																
16 HOUR	161		70	3	2										236	

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007
 DAY OF WEEK : Tues./Wed.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : WEST
 COUNTY : Marion
 INTERSECTION OF: N River Rd. & Mandrin Ave.
 CITY: Keizer
 MILE POST : n/a
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY CLE
	Cars	Trif	Other	Trif	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	6 Axl	7 Axl				
06:00-07:00A	7		2												9	
07:00-07:15A	4		1												5	
07:15-07:30A	1		1												2	
07:30-07:45A			4												4	
07:45-08:00A	6		4										1		11	
08:00-08:15A	5														5	
08:15-08:30A	5		1												6	
08:30-08:45A	1		1												2	
08:45-09:00A	3		2												5	
09:00-10:00A	7		5												12	
10:00-11:00A	5		9												15	
11:00-12:00P	16		4		1									1	20	
12:00-01:00P	9		15												25	
01:00-02:00P	7		8												15	1
02:00-03:00P	9		10		1										21	
03:00-04:00P	10		4												14	
04:00-04:15P	3		4												7	
04:15-04:30P	5		3												8	
04:30-04:45P	2		3		1										6	
04:45-05:00P	2		2												4	
05:00-05:15P	3		1												4	
05:15-05:30P	2				2										4	
05:30-05:45P	4		1		1										6	
05:45-06:00P	5		3												8	
06:00-07:00P	12		4												16	
07:00-08:00P	9		5												14	
08:00-09:00P	12		6												18	
09:00-10:00P			1												1	
16 HOUR	154		104		6	1							1	1	267	1

TRAFFIC COUNTY SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007
 DAY OF WEEK : Tues./Wed.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : WEST

COUNTY : Marion CITY: Keizer
 INTERSECTION OF: N River Rd. @ Mainbrin Ave.
 MILE POST : n/a
 TO : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CV CLE
	WT-LR	Other	WT-LR	Other	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl				
06:00-07:00A	4														4	
07:00-07:15A	4			1											5	
07:15-07:30A	2			1											2	
07:30-07:45A	5			1											6	
07:45-08:00A	5			1											5	
08:00-08:15A	8			1											9	
08:15-08:30A	5			5	1										11	
08:30-08:45A	3			1											4	
08:45-09:00A	4			1											5	
09:00-10:00A	12			2											14	
10:00-11:00A	12			2											14	
11:00-12:00P	12			5											17	
12:00-01:00P	23			5	1										26	
01:00-02:00P	19			5	1	1									25	
02:00-03:00P	5				1										12	
03:00-04:00P	13				1										13	
04:00-04:15P	2														2	
04:15-04:30P															4	
04:30-04:45P	2			4											2	
04:45-05:00P				2											2	
05:00-05:15P	2			3											5	
05:15-05:30P	1			1											2	
05:30-05:45P	2			1											2	
05:45-06:00P	1			2											4	
06:00-07:00P	10			4				1							15	
07:00-08:00P	12			3											15	
08:00-09:00P	6			2										1	8	
09:00-10:00P	10			1											12	
16 HOUR	184		51	1	5	1	2						1		245	

Summarized by: _____ | 09/19/07

SUMMARY OF BICYCLE COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007 DAY : Tues./Wed. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: clear INTERSECTION OF: N River Rd. @ Hanbrin Ave.
 Tab by: Chk. by: MILE POST : n/a

TIME OF DAY	BICYCLES MOVING WITH VEHICULAR TRAFFIC										BICYCLES USING CROSS WALKS						
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-N	W-E	W-S	TOTAL	NORTH	EAST	SOUTH	WEST
06:00-07:00A	1												1				
07:00-07:15A																	
07:15-07:30A															1		
07:30-07:45A																	
07:45-08:00A																	
08:00-08:15A													1				
08:15-08:30A																	
08:30-08:45A																	
08:45-09:00A																	
09:00-10:00A						1							1				
10:00-11:00A																	
11:00-12:00P																	
12:00-01:00P																	
01:00-02:00P																	
02:00-03:00P																	
03:00-04:00P																	
04:00-04:15P																	
04:15-04:30P																	
04:30-04:45P																	
04:45-05:00P																	
05:00-05:15P																	
05:15-05:30P																	
05:30-05:45P																	
05:45-06:00P																	
06:00-07:00P																	
07:00-08:00P																	
08:00-09:00P																	
09:00-10:00P																	
TOTAL VOLUME	6					1	3	1			1		12	6	3	6	2

North and South is: N River Rd. East and West is: Hanbrin Ave. BIKE_2427

**SUMMARY OF PEDESTRIAN COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION**

DATE : July 17/18, 2007 DAY : Tues./Wed. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: clear INTERSECTION OF: N River Rd. @ Manbrin Ave.

Job by: _____ Chk. by: _____ MILE POST : 0/0

TIME OF DAY	STUDENT PEDESTRIANS				OTHER PEDESTRIANS				STUDENT AND OTHER PEDESTRIAN					
	NORTH	EAST	SOUTH	WEST	NORTH	EAST	SOUTH	WEST	NORTH	EAST	SOUTH	WEST	TOTAL	
06:00-07:00A					2		1			3	2	1		3
07:00-07:15A							1			1		1		1
07:15-07:30A														
07:30-07:45A														
07:45-08:00A														
08:00-08:15A														
08:15-08:30A														
08:30-08:45A														
08:45-09:00A														
09:00-10:00A					1					1				1
10:00-11:00A					1		3			4		3		4
11:00-12:00P					1		1			2		1		2
12:00-01:00P					1		1			2		1		2
01:00-02:00P					2		4			6		4		7
02:00-03:00P					7		2			9		2		11
03:00-04:00P					1		1			2		1		2
04:00-04:15P					2		1			3		1		4
04:15-04:30P														
04:30-04:45P														
04:45-05:00P					2		3			5		3		5
05:00-05:15P					1		1			2		1		2
05:15-05:30P					2		2			4		2		4
05:30-05:45P							1			1		1		2
05:45-06:00P					5		1			6		5		6
06:00-07:00P					3		3			6		3		6
07:00-08:00P					4		1			5		3		5
08:00-09:00P					1		2			3		1		3
09:00-10:00P														
TOTAL VOLUME					23		46		18	7		7		94

North and South is: N River Rd. East and West is: Manbrin Ave. FED_2427

TRANSPORTATION DEVELOPMENT BRANCH
 TRANSPORTATION SYSTEM MONITORING UNIT
 VEHICULAR VOLUME

RECEIVED

SEP 28 2007

O.D.O.T. Region 2

DATE : July 16/17, 2007

CITY or COUNTY : Keizer

DAY WEEK : Mon./Tues.

INTERSECTION OF: Salem Hwy #72 (OR99EBus) @ Verda Lane & Hyacinth St.

ACT COUNT: 16

HRS. COUNT: 6AM - 10PM

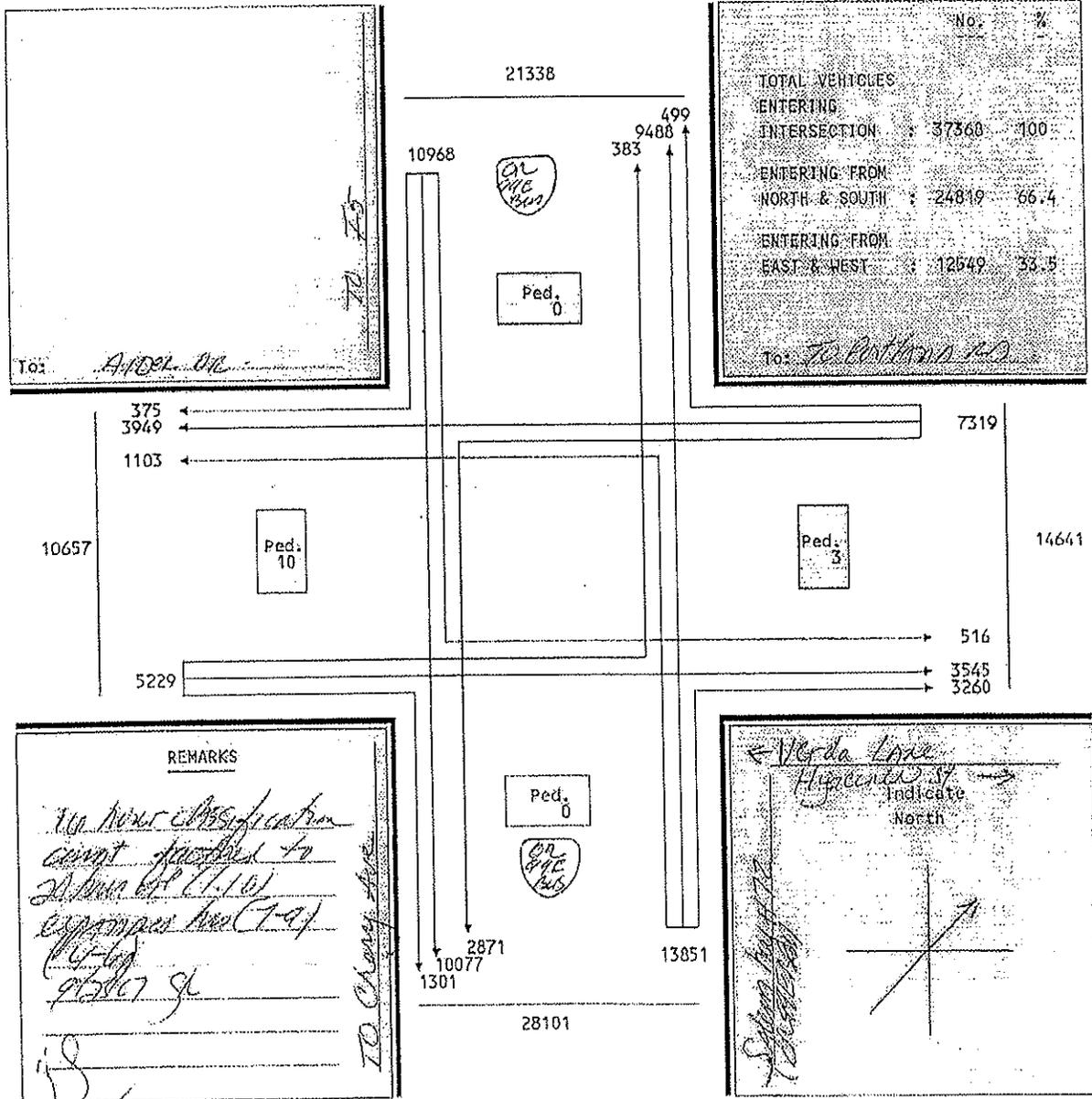
PED. COUNT: 16

MILE POST: 1.54

HRS. COUNT: 6AM - 10PM

CLASSIFICATION: All vehicles

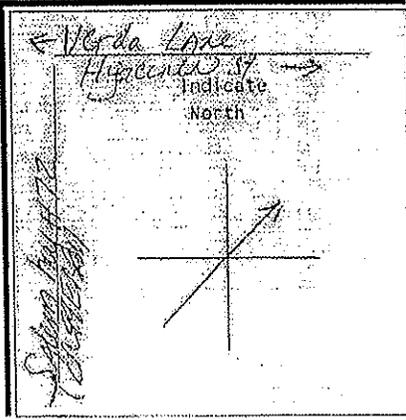
WEATHER : clear



To: *Andel Ave*

To: *Taberna Rd*

REMARKS
No hour classification count provided to Wilson for (7.10) expansion here (7.9) (4-10) 9/28/07 gl
TO Cherry Ave



**SUMMARY OF TRAFFIC COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION**

DATE : July 16/17, 2007 COUNTY : Marion CITY: Keizer
 HOURS : 5AM - 10PM INTERSECTION OF: Salem Hwy #72 (OR99EBus) E. Verda Lane & Hyacinth St.
 Chk. by: MILE POST : 1.54

SUMMARY BY MOVEMENTS

TIME OF DAY	ENTERING VOLUMES BY LEGS																				
	N-E	N-S	N-W	E-W	E-S	E-N	S-N	S-E	S-W	M-H	M-E	M-S	TOTAL	NORTH AND SOUTH	PERCENT OF TOTAL	EAST AND WEST	PERCENT OF TOTAL	NORTH	EAST	SOUTH	WEST
06:00-07:00A	20	439	9	26	129	80	516	135	9	83	201	75	1722	1128	65.5	594	34.5	468	235	660	359
07:00-07:15A	30	155	4	2	36	19	146	37	4	7	52	21	493	356	72.2	137	27.8	169	57	197	50
07:15-07:30A	8	218	8	9	46	49	342	90	11	7	16	24	828	677	81.8	151	18.2	234	104	443	47
07:30-07:45A	3	257		6	41	31	169	54	13	7	69	40	700	506	72.3	194	27.7	270	78	236	116
07:45-08:00A	9	318		3	50	26	136	57	7	6	74	37	723	527	72.9	196	27.1	327	79	200	117
08:00-08:15A	7	167		6	47	28	132	41	6	5	54	26	523	357	68.3	166	31.7	178	81	179	85
08:15-08:30A	6	180		3	45	42	133	45	8	7	44	29	571	385	67.4	186	32.6	189	96	195	90
08:30-08:45A	6	195		3	44	45	145	25	8	7	44	20	545	382	70.1	163	29.9	204	92	178	71
08:45-09:00A	9	159		4	40	41	143	35	15	5	36	16	507	365	72.0	142	28.0	172	85	193	57
09:00-10:00A	22	568		37	140	160	529	165	35	10	144	43	1855	1321	71.2	534	28.8	592	337	729	197
10:00-11:00A	36	524		40	161	185	586	164	45	12	183	71	2013	1357	67.5	553	32.5	562	387	795	266
11:00-12:00P	33	554		10	172	196	606	215	56	14	207	81	2203	1476	66.9	729	33.1	599	427	877	302
12:00-01:00P	52	494		16	187	157	568	173	70	16	228	67	2358	1373	66.7	685	33.3	562	374	811	311
01:00-02:00P	39	569		11	27	182	267	181	60	22	243	78	2221	1402	63.1	819	36.9	619	476	783	343
02:00-03:00P	40	621		11	45	178	258	233	71	20	194	67	2274	1512	66.5	762	33.5	672	481	840	281
03:00-04:00P	43	742		57	36	225	264	262	72	23	213	81	2680	1838	68.6	842	31.4	882	525	996	317
04:00-04:15P	8	201		9	62	100	179	80	27	2	70	17	776	516	66.5	260	33.5	230	171	286	89
04:15-04:30P	7	219		9	52	90	188	55	19	3	52	24	729	499	68.4	230	31.6	237	151	262	79
04:30-04:45P	8	184		18	64	96	247	68	28	11	79	27	840	553	65.8	287	34.2	252	170	343	117
04:45-05:00P	5	225		7	65	96	192	56	28	8	55	16	776	529	68.2	247	31.8	219	199	277	79
05:00-05:15P	5	206		8	76	111	144	95	45	6	48	23	779	503	64.6	276	35.4	219	199	284	77
05:15-05:30P	11	118		12	61	99	123	55	46	6	55	15	616	369	59.9	247	40.1	143	171	226	76
05:30-05:45P	1	165		11	57	118	179	59	29	1	66	32	730	444	60.8	286	39.2	177	187	267	99
05:45-06:00P	2	175		8	52	70	167	62	49	4	53	16	669	466	69.7	203	30.3	188	130	278	73
06:00-07:00P	22	489		16	136	302	481	176	89	17	243	71	2061	1276	61.9	785	38.1	530	454	746	331
07:00-08:00P	8	409		8	95	224	339	132	58	11	199	61	1563	965	61.7	598	38.3	436	327	529	271
08:00-09:00P	8	320		4	83	240	263	107	57	17	164	58	1345	779	57.9	566	42.1	352	327	427	239
09:00-10:00P	29	290		6	84	195	230	103	31	11	127	47	1172	702	59.9	470	40.1	338	285	364	185
TOTAL COUNT	469	9161	341	454	2610	3590	8625	2964	1003	348	3223	1183	33971	22563	66.4	11408	33.6	9971	6654	12592	4754
24HR FACTOR	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10									
24HR VOLUME	516	10077	375	499	2871	3949	9488	3260	1103	363	3545	1301	37367	24819	66.4	12568	35.6	10966	7319	13851	5229

North and South is: Salem Hwy #72 (OR99EBus) East and West is: Verda Lane (W) Hyacinth St. (E)
 SUM_2432

**SUMMARY OF TRAFFIC COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION**

DATE : July 16/17, 2007
 DAY : Mon./Tues.
 WEATHER : clear
 HOURS : 6AM - 10PM
 CITY : Keizer
 COUNTY : Marion
 INTERSECTION OF: Salem Hwy #72(OR99EBus) @ Verda Lane & Hyacinth St.
 MILE POST : 1.54

Tab by: Chk. by:

TIME OF DAY	SUMMARY BY MOVEMENTS																ENTERING VOLUMES BY LEGS					
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-N	W-E	W-S	TOTAL	NORTH AND SOUTH	PERCENT OF TOTAL	EAST AND WEST	PERCENT OF TOTAL	NORTH	EAST	SOUTH	WEST	
06:00-07:00A	20	439	9	26	129	80	516	135	9	83	201	75	1722	1128	55.5	594	34.5	468	235	660	359	359
07:00-08:00A	40	948	12	20	173	125	793	238	35	27	211	122	2744	2066	75.3	678	24.7	3000	318	1656	560	560
08:00-09:00A	28	701	14	22	176	156	553	150	43	24	188	91	2146	1489	69.4	657	30.6	743	354	746	303	303
09:00-10:00A	22	568	2	37	140	163	529	165	35	10	144	43	1855	1321	71.2	534	28.8	592	337	729	197	197
10:00-11:00A	36	524	2	40	161	186	586	164	45	12	183	71	2010	1357	67.5	653	32.5	562	387	795	266	266
11:00-12:00P	35	554	10	59	172	196	606	215	56	14	207	81	2205	1476	66.9	729	33.1	599	427	877	302	302
12:00-01:00P	52	494	16	30	187	157	568	173	70	16	228	67	2058	1373	66.7	685	33.3	562	374	811	311	311
01:00-02:00P	39	569	11	27	182	267	542	181	60	22	243	78	2221	1402	63.1	819	36.9	619	476	783	343	343
02:00-03:00P	40	621	11	45	178	258	536	233	71	20	194	67	2274	1512	66.5	762	33.5	672	481	840	281	281
03:00-04:00P	43	742	57	36	225	264	662	262	72	23	213	81	2688	1838	68.6	842	31.4	842	525	995	317	317
04:00-05:00P	28	829	72	35	243	382	806	259	103	24	256	84	3121	2097	67.2	1024	32.8	929	660	1168	364	364
05:00-06:00P	19	664	44	43	246	398	615	271	169	17	222	86	2794	1782	63.8	1012	36.2	727	687	1055	325	325
06:00-07:00P	22	489	19	16	136	302	481	176	89	17	243	71	2061	1276	61.9	785	38.1	530	454	746	331	331
07:00-08:00P	8	409	19	8	95	224	339	132	58	11	199	61	1563	965	61.7	598	38.3	436	327	529	271	271
08:00-09:00P	8	320	24	4	83	240	263	107	57	17	164	58	1345	779	57.9	566	42.1	352	327	427	239	239
09:00-10:00P	29	290	19	6	84	195	230	103	31	11	127	47	1172	702	59.9	470	40.1	338	285	364	185	185
TOTAL COUNT	469	9161	341	454	2610	3590	8625	2964	1005	346	3223	1183	33971	22563	66.4	11488	33.6	9971	6654	12592	4754	4754
2-HR FACTOR	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	37367	24819	66.4	12548	33.6	10968	7319	13651	5229	5229
2-HR VOLUME	516	10077	375	499	2871	3949	9488	3260	1105	368	3545	1301	37367	24819	66.4	12548	33.6	10968	7319	13651	5229	5229

North and South is: Salem Hwy #72(OR99EBus) East and West is: Verda Lane (W) Hyacinth St. (E)

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FSNH : NORTH

CITY : Keizer
 COUNTY : Marion
 INTERSECTION Of: Salem Hwy. #72 (OR99EBus) @ Varda Lane & Hyacinth St.
 MILE POST : 1.54
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIJ TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT VEHICLE	TOTAL ALL VEHICLE	BI CY CLE
	Cars	WTrlr	WTrlr	Other	2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	>2Axl	5 Axl	6 Axl				
06:00-07:00A	4		8		1	1	2	2								20		
07:00-07:15A	2		6		1	1		1								10		
07:15-07:30A	3		2					2								8		
07:30-07:45A	5		3		1	2										15		
07:45-08:00A	5		3													9		
08:00-08:15A	6		3													7		
08:15-08:30A	1															6		
08:30-08:45A	4															6		
08:45-09:00A	2															9		
09:00-10:00A	11		5													22		
10:00-11:00A	7		8		1	7	2									36		
11:00-12:00P	7		4		2	2										35		
12:00-01:00P	14		10		1	5	2									52		
01:00-02:00P	11		9		3	4										39		
02:00-03:00P	12		10		3	7										40		
03:00-04:00P	17		14		1	3	1									43		
04:00-04:15P	3		1			1										8		
04:15-04:30P			4			1										7		
04:30-04:45P	4		4													6		
04:45-05:00P	2		1													5		
05:00-05:15P	3		2													5		
05:15-05:30P	5		4													11		
05:30-05:45P	1															1		
05:45-06:00P	1															2		
06:00-07:00P	12		5			1	1									22		
07:00-08:00P	5		2													8		
08:00-09:00P	2		3													8		
09:00-10:00P	15		10			2										29		
16 HOUR	164		121		9	31	37	3	9	40	51	4				469		

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007
 DAY OF WEEK : Mon, Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : NORTH
 COUNTY : Maricopa
 INTERSECTION OF: Salem Hwy #72(OR99EBus) @ Verda Lane & Hyacinth St.
 CITY: Keizer
 MILE POST : 1.54
 TO : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY GLE
	Cars	WTrlr	Other	WTrlr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	6 Axl	>7Axl				
06:00-07:00A	275	3	101	3	18	4	1	4	17	12	1	2	1		439		
07:00-07:15A	104		34		5	1			7	4					155		
07:15-07:30A	158	1	40	1	6	4		2	3	3		1			218		
07:30-07:45A	187	1	43	1	9				10	7				3	257		
07:45-08:00A	240	1	40	1	11	4		2	7	10					318		
08:00-08:15A	120	4	24	4	2	3	1	2	5	3		2		1	180		
08:15-08:30A	124	4	28	4	4	6		3	7	2		1			195		
08:30-08:45A	139	1	29	1	10	3		3	6	4		1			159		
08:45-09:00A	117		19		5	6			6	4		1		1	568		
09:00-10:00A	362	3	115	9	20	15		3	23	14		4		5	524		
10:00-11:00A	344	8	90	8	25	7		3	22	16		4		2	554		
11:00-12:00P	363	8	109	8	21	6		1	22	16		4		2	494		
12:00-01:00P	328		87		18	10	1	3	26	11		5		1	569		
01:00-02:00P	407	10	85	10	15	11		2	19	14		1		5	621		
02:00-03:00P	422	12	104	12	19	7	1	4	26	14		1		7	742		
03:00-04:00P	531	5	146	5	18	6		5	18	6		3		2	201		
04:00-04:15P	127	4	50	4	6	5		4	4	2		1		2	184		
04:15-04:30P	160	2	35	2	7	1		1	1	3		4		1	225		
04:30-04:45P	139	3	41	3	4	4			2	1				2	206		
04:45-05:00P	174	1	33	1	4	4		1	1	1		1		3	118		
05:00-05:15P	160	1	34	1	4	1		2	3	3				1	165		
05:15-05:30P	70	1	33	1	5	1		4	1	3				1	175		
05:30-05:45P	124	1	30	1	1	3		2	2	1				2	489		
05:45-06:00P	139	6	24	6	3	1		2	2	2				3	409		
06:00-07:00P	337	2	126	2	11	4		2	2	2				2	320		
07:00-08:00P	305	3	87	3	4	3		1	1	1			1	4	290		
08:00-09:00P	244	3	60	3	5	1		3	3	1							
09:00-10:00P	231	1	43	1	4			1	4	1							
15 HOUR	6431	12	1692	88	264	106	5	48	256	155	1	6	32	2	9161		

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : NORTH

COUNTY : Marion CITY: Keizer
 INTERSECTION DF: Salem Hwy #72(DR99EBus) @ Verde Lane & Hyacinth St.
 MILE POST : 1.54
 JO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS	DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTDR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY. CLE
	Cars	MT-1F	MT-1F	2 Axle			4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	>9Axl				
06:00-07:00A	8	1	1												9	1
07:00-07:15A	2	2	2												4	4
07:15-07:30A	8														8	8
07:30-07:45A																
07:45-08:00A			2												4	4
08:00-08:15A	2														3	3
08:15-08:30A	3														3	3
08:30-08:45A	2		1												4	4
08:45-09:00A	3		1												2	2
09:00-10:00A	2														10	10
10:00-11:00A	9		1												16	16
11:00-12:00P	12														11	11
12:00-01:00P	9														11	11
01:00-02:00P	8		3												17	17
02:00-03:00P	37		16												57	57
03:00-04:00P	13		8												21	21
04:00-04:15P	11														11	11
04:15-04:30P	13		3												18	18
04:30-04:45P	16		6												22	22
04:45-05:00P	7		1												8	8
05:00-05:15P	12		1												14	14
05:15-05:30P	10		1												11	11
05:30-05:45P	8		3												19	19
05:45-06:00P	15		2												19	19
06:00-07:00P	15		4												24	24
07:00-08:00P	24														19	19
08:00-09:00P	18														1	1
09:00-10:00P																
16 HOUR	269	58	2	2	6	2	1	1	1	1	1	2	34	2	341	13

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 5PM
 WEATHER : clear
 FROM : EAST
 TO : WEST

COUNTY : Marion
 INTERSECTION OF: Salem Hwy #72 (OR99EBus) @ Verda Lane & Hyacinth St.
 CITY: Keizer

MILE POST : 1.54
 TO : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DEL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY	CLE
	Cars	MTrlr	Other	MTrlr	2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	9 Axl					
06:00-07:00A	7		5		4		2	3	4						26		
07:00-07:15A	1							1							2		
07:15-07:30A	1		3		4			1							9		
07:30-07:45A	3		1					1							6		
07:45-08:00A	1		1					1							3		
08:00-08:15A	1		2					1							6		
08:15-08:30A	5		1					1							9		
08:30-08:45A	1		1					1							3		
08:45-09:00A	1		1					1							4		
09:00-10:00A	11		10		2			7	4					1	37		
10:00-11:00A	9		7		6			2	10						40		
11:00-12:00P	10		13		5			5	7						59		
12:00-01:00P	6		7		4			2	4						30		
01:00-02:00P	18		6		2			1	6						27		
02:00-03:00P	17		8		2			10	2						45		
03:00-04:00P	3		6		2			1	1						36		
04:00-04:15P	5		6		1										9		
04:15-04:30P	5		5												10		
04:30-04:45P	4		2					1							7		
04:45-05:00P	6		5		1										12		
05:00-05:15P	7		3												11		
05:15-05:30P	7		3												12		
05:30-05:45P	6		1												8		
05:45-06:00P	9		5		1										16		
06:00-07:00P	7		1												8		
07:00-08:00P	4														4		
08:00-09:00P	5														6		
09:00-10:00P																	
16 HOUR	186		114		28			4	36			2		1	454		

WORK 2432

Summarized by: _____ | 09/27/07

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : EAST

COUNTY : Marion CITY: Keizer
 INTERSECTION-OF: Salem Hwy #72(OR99EBus) @ Verda Lane & Hyacinth St.
 MILE POST : 1.54
 TO : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK			SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY CLE
	Cars	Mfrs	Other	Mfrs	2 Axle	3 Axle	4 Axle	5 Axle	6 Axle	7 Axle	8 Axle	>9Axle	5 Axle	6 Axle	7 Axle	8 Axle				
06:00-07:00A	85		32		7	2	1											129		
07:00-07:15A	27		6		1	1												36		
07:15-07:30A	20		14		4	2												46		
07:30-07:45A	24		9		1	4												41		
07:45-08:00A	28		16		3	2												50		
08:00-08:15A	25		12		7	2												47		
08:15-08:30A	24		15		3													45		
08:30-08:45A	24		15		3													44		
08:45-09:00A	26		9		1													40		
09:00-10:00A	83		38		6	3												140		
10:00-11:00A	104	2	34		10	4												161		
11:00-12:00P	121		26		11	2												172		
12:00-01:00P	122		47		6													187		
01:00-02:00P	110		50		11													182		
02:00-03:00P	125		36		4													178		
03:00-04:00P	149		52		10	3												225		
04:00-04:15P	43		18															62		
04:15-04:30P	37		12		1													52		
04:30-04:45P	45		14															64		
04:45-05:00P	42		22		1													55		
05:00-05:15P	54		17		2	3												75		
05:15-05:30P	45		15															61		
05:30-05:45P	37		19															57		
05:45-06:00P	31		20		1													52		
06:00-07:00P	88		35		3	1												136		
07:00-08:00P	71		20															95		
08:00-09:00P	62		17		1													83		
09:00-10:00P	70		12															84		
16 HOUR	1722	3	632		58	40	6	18	25	6	1	1	1	1	17	7	2610			

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : EAST

COUNTY : Marion CITY: Keizer
 INTERSECTION OF: Salem Hwy #72(OR99Ebus) @ Verda Lane & Myacinth St.
 MILE POST : 1.54
 TO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	EBI CY CLE
	Cars	WTRLR	Other	WTRLR	3 AXLE	>4AXL	4 AXL - 5 AXL	>5AXL	6 AXL	>7AXL	7 AXL	8 AXL	>9AXL				
06:00-07:00A	65		14		2									1	80		
07:00-07:15A	11		5		1									1	19		
07:15-07:30A	33		11				1							1	49		
07:30-07:45A	22		7		2									2	31		
07:45-08:00A	19		6											1	26	1	
08:00-08:15A	18		7	1	1										28		
08:15-08:30A	22		13		1										42		
08:30-08:45A	26		13		3										45		
08:45-09:00A	27		11		1										41		
09:00-10:00A	102		44		2										160		
10:00-11:00A	131		41		8										186		
11:00-12:00P	140		43		3										196		
12:00-01:00P	84		61		4										157	4	
01:00-02:00P	182		72		4										287		
02:00-03:00P	169		75		2										258	2	
03:00-04:00P	179		75		6										264		
04:00-04:15P	61		35		1										100		
04:15-04:30P	68		15		5										90		
04:30-04:45P	65		29		1										96		
04:45-05:00P	75		19		1										111	1	
05:00-05:15P	78		31		1										99	1	
05:15-05:30P	66		32		1										118	1	
05:30-05:45P	74		38		2										70	1	
05:45-06:00P	46		24		1										302	2	
06:00-07:00P	200		98		1										224	2	
07:00-08:00P	144		70	3	2										240	1	
08:00-09:00P	168		69		1										195		
09:00-10:00P	178		16														
16 HOUR	2451	1	974	24	55	13	9	7	2				36	18	5590	17	

Summarized by: _____ | 09/27/07

WORK_2432

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : SOUTH
 TO : NORTH
 MILE POST : 1.54
 COUNTY : Marion
 INTERSECTION OF : Salem Hwy #72(OR99EBus) @ Verda Lane & Hyacinth St.
 CITY: Keizer

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK			SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLES	TOTAL ALL VEHICLE	BI CY CLE
	WT-LF	Cops	WT-LF	Other	2 Axle	3 Axle	>4Axle	4 Axle	5 Axle	>5Axle	5 Axle	6 Axle	>7Axle	7 Axle	8 Axle	>9Axle				
06:00-07:00A	1	312	149	4	10	5	2	21	10									516		
07:00-07:15A	1	99	32	2	5	8	1	2	4									146		
07:15-07:30A		233	57	1	9	5	5	24	5									342		
07:30-07:45A		119	34	2	5	1	2	6	1									169	1	
07:45-08:00A		88	34	2	5	2	1	4	3									136		
08:00-08:15A		81	35	1	4	3	2	4	2									132		
08:15-08:30A		96	19	1	7	1	1	3	2									133		
08:30-08:45A		80	39	9	9	3	1	8	4									145		
08:45-09:00A		90	30	3	9	1	3	2	4									143		
09:00-10:00A		315	118	14	28	12	2	20	15									929		
10:00-11:00A	1	351	130	7	21	10	6	29	28									586		
11:00-12:00P	1	348	158	10	19	15	1	26	19									606		
12:00-01:00P		376	96	17	17	15	3	29	8									568	1	
01:00-02:00P	2	352	90	14	21	17	1	27	8									542	1	
02:00-03:00P		298	141	15	25	12	4	21	13									536		
03:00-04:00P	1	451	143	8	17	10	2	12	10									662		
04:00-04:15P		125	35	4	6	2	3	3	4									179		
04:15-04:30P		158	27	5	5	4	2	3	4									188		
04:30-04:45P		165	50	6	8	1	2	6	7									247		
04:45-05:00P	1	155	28	1	3	1	1	1	1									192		
05:00-05:15P		97	31	1	2	1	2	6	2									144		
05:15-05:30P		68	43	6	6	1	1	5	1									125		
05:30-05:45P		140	30	3	3	1	1	3	1									179		
05:45-06:00P		116	42	2	2	1	4	4	1									167		
06:00-07:00P	1	330	111	14	8	1	1	6	2									481		
07:00-08:00P	1	217	103	2	5	1	1	3	1									339		
08:00-09:00P		158	80	7	1	1	2	4	8									263		
09:00-10:00P		189	24	1	3	2	2	5	5									230		
16 HOUR	11	5587	1909	142	263	127	6	54	159	2	4	26	1	2			33	8625	3	

Summary by: _____ | 09/27/07

WORK_2432

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : SOUTH
 CITY: Keizer
 COUNTY : Marion
 INTERSECTION OF: Salem Hwy #72(OR99EBus) @ Verde Lane & Hyacinth St.
 MILE POST : 1.54
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SQL UNIT TRUCK		SQL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY
	Cars	Wt/Tr	Wt/Tr	Other	2 Axle	3 Axle	4 Axle	5 Axle	6 Axle	7 Axle	8 Axle	>9Axle	1	2	3				
06:00-07:00A	79		42		6	3	1								2	1	135		
07:00-07:15A	25		10			1											90		
07:15-07:30A	55		29		2		2										54		
07:30-07:45A	31		18		4	2									1		57		
07:45-08:00A	31		16		3												41		
08:00-08:15A	28		11		1												49		
08:15-08:30A	25	1	14		3		2	1							1		25		
08:30-08:45A	13		7		2	1									1		35		
08:45-09:00A	24		4		4	2									1		165		
09:00-10:00A	92		52		11	5	1									1	164		
10:00-11:00A	102		59		3												215		
11:00-12:00P	120		71		11	5										2	173		
12:00-01:00P	106		51		8	1		1								2	181		
01:00-02:00P	113		50		2	10									1	3	233		
02:00-03:00P	148		59		6	8											262		
03:00-04:00P	171		65		6	7											80		
04:00-04:15P	56		17		4												55		
04:15-04:30P	37	1	9		6												68		
04:30-04:45P	48		11		6	1											56		
04:45-05:00P	37		15		2												95		
05:00-05:15P	76		17		1												55		
05:15-05:30P	45		8		2											1	59		
05:30-05:45P	48		9		1										1		62		
05:45-06:00P	42		17		2										1		176		
06:00-07:00P	132		38		1	2									1		132		
07:00-08:00P	89		40		3												107		
08:00-09:00P	74		31		1	1										1	103		
09:00-10:00P	83		16		1														
16 HOUR	1950	2	786		27	107	3	19	24	10				8	11	2964			

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : SOUTH

COUNTY : Marion CITY: Keizer
 INTERSECTION OF: Salem Hwy #72 (OR99Ebus) @ Verda Lane & Niyacinth St.
 MILE POST : 1.54
 TO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		TRP TRAILER TRUCKS	BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY
	Cars	WTrlr	Other	WTrlr	2 AXL	3 AXL	>4Axl	4 AXL	5 AXL	>6Axl	5 AXL	>7Axl					
06:00-07:00A	5		3													9	
07:00-07:15A	2		2													4	
07:15-07:30A	8		3													11	
07:30-07:45A	8		5													13	
07:45-08:00A	4		3													7	
08:00-08:15A	6															6	
08:15-08:30A	10		1		1											14	
08:30-08:45A	7		1													8	
08:45-09:00A	9		5		1											15	
09:00-10:08A	27		6		1											35	
10:00-11:00A	29		13		2											45	
11:00-12:00P	44		12		1											56	
12:00-01:00P	62		7		1											70	
01:00-02:00P	53		5		1											60	
02:00-03:00P	49		18		1										1	71	
03:00-04:00P	64		7		1											72	
04:00-04:15P	20		7													27	
04:15-04:30P	13		6													19	
04:30-04:45P	25		2		1											28	
04:45-05:00P	18		10		1											29	
05:00-05:15P	39		6		1											45	
05:15-05:30P	38		6		1										1	46	
05:30-05:45P	24		4												1	29	
05:45-06:00P	36		13													49	
06:00-07:00P	69		19												1	89	
07:00-08:00P	45		12		1										2	58	
08:00-09:00P	44		9													57	
09:00-10:00P	29		2													31	
16 HOUR	787	4	187	9	7	1	1	1					1	6	1003		

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 5AM - 10PM
 WEATHER : clear
 FROM : WEST
 COUNTY : Marion
 INTERSECTION OF: Salem Hwy #72(OR9955) & Veridia Lane & Hyacinth St.
 CITY: Keizer
 MILE POST : 1.54
 TO : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY
	Cars	Wtrc	Other	Wtrc	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	7 Axl				
06:00-07:00A	56		24												83	
07:00-07:15A	6		1												7	
07:15-07:30A	4		3												7	
07:30-07:45A	4		3												7	
07:45-08:00A	2		2			1									6	
08:00-08:15A	5		1												5	
08:15-08:30A	7														7	
08:30-08:45A	7														7	
08:45-09:00A	5														5	
09:00-10:00A	8				1										10	
10:00-11:00A	9														12	
11:00-12:00P	8														14	
12:00-01:00P	9				1										16	
01:00-02:00P	15														22	
02:00-03:00P	11														20	
03:00-04:00P	14														23	
04:00-04:15P	2														2	
04:15-04:30P	1														3	
04:30-04:45P	8														11	
04:45-05:00P	4														8	
05:00-05:15P	5														6	
05:15-05:30P	4														6	
05:30-05:45P	1														1	
05:45-06:00P	3														4	
06:00-07:00P	10														17	
07:00-08:00P	10														11	
08:00-09:00P	11														17	
09:00-10:00P	11														11	
16 HOUR	240	1	92	3	4	4	4	1	1	1	2	1	1	2	348	

WORK 2432

Summarized by: _____ | 09/27/07

TRAFFIC COUNT SUMMARY SHEET
 TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007 COUNTY : Marion City: Keizer
 DAY OF WEEK : Mon./Tues. INTERSECTION OF: Salem Hwy #72(OR99EBus) @ Verda Lane & Hyacinth St.
 HOURS COUNTED: 6AM - 10PM MILE POST : 1.54
 WEATHER : clear TO : EAST
 FROM : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY CLE
	Caps	WTRC	WTRC	Other	2 AXL	3 AXL	>4AXL	4 AXL	5 AXL	6 AXL	>7AXL	7 AXL	8 AXL	>9AXL					
06:00-07:00A	125		68		1	4									1	1	201	4	
07:00-07:15A	34		16		1	1											52		
07:15-07:30A	12		3				1									1	16		
07:30-07:45A	41		24		1											1	69	1	
07:45-08:00A	52		19		1												74		
08:00-08:15A	35		18			2											54	2	
08:15-08:30A	40	1	10		1												54		
08:30-08:45A	28		12		1												44		
08:45-09:00A	23		10			2											36		
09:00-10:00A	94		37		1	3	2									2	144	1	
10:00-11:00A	113		58		3	4	2									1	183	1	
11:00-12:00P	135		63		2	2	2									2	207		
12:00-01:00P	152		66			5	2									3	228		
01:00-02:00P	175		47		3	6	3									7	243	2	
02:00-03:00P	127	1	57			7										1	194	1	
03:00-04:00P	153		45		4											2	213	1	
04:00-04:15P	49		19		1												70	2	
04:15-04:30P	40		11		1												52		
04:30-04:45P	67		11			1											79	1	
04:45-05:00P	41		11			2	1										55		
05:00-05:15P	31		14			1										2	48		
05:15-05:30P	32		20			2										1	55	1	
05:30-05:45P	44		19		1												66		
05:45-06:00P	27		25			1											53	4	
06:00-07:00P	162		73		2	2										2	243		
07:00-08:00P	143		57		1	1											199	4	
08:00-09:00P	128		33													1	164	4	
09:00-10:00P	109		25													1	127	2	
TOTAL	2198	5	871		24	56	13		4	2	1				35	16	3223	30	

TRAFFIC COUNT SUMMARY SHEET TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : WEST
 COUNTY : Marion
 INTERSECTION OF: Setlem Hwy #72(OR99EBus) a Verda Lane & Hycinth St.
 CITY: Keizer
 MILE POST : 1.54
 TO : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY CLE
	Cars	WT-Lr	Other	WT-Lr		2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	6 Axl	>7Axl				
06:00-07:00A	51		24														75	
07:00-07:15A	15		6														21	
07:15-07:30A	19		5														24	
07:30-07:45A	33		7														40	
07:45-08:00A	30		7														37	
08:00-08:15A	20		5														26	
08:15-08:30A	22		4														29	
08:30-08:45A	15		4														20	
08:45-09:00A	32		2														16	
09:00-10:00A	35	1	5			1											43	
10:00-11:00A	59		8			1											71	
11:00-12:00P	59		17			2											81	
12:00-01:00P	60		6			1											67	
01:00-02:00P	67		7			1											78	
02:00-03:00P	49	1	15			2											67	
03:00-04:00P	66		14			1											81	
04:00-04:15P	13		2			1											17	
04:15-04:30P	21		2			1											24	
04:30-04:45P	22		5														27	
04:45-05:00P	11		5														16	
05:00-05:15P	19		4														23	
05:15-05:30P	12		3														15	
05:30-05:45P	28		3														32	
05:45-06:00P	13		1			1											16	
06:00-07:00P	61	1	9														71	
07:00-08:00P	47		12														61	
08:00-09:00P	47	1	8														58	
09:00-10:00P	42		5														47	
16 HOUR	948	4	195		15	6											1183	

Summarized by: _____ 09/27/07

SUMMARY OF BICYCLE COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007
 HOURS : 6AM - 10PM
 DAY : Mon./Tues.
 WEATHER : clear
 COUNTY : Marion
 CITY : Keizer
 INTERSECTION OF: Salem Hwy #72(OR99EBus) @ Verda Lane & Hyacinth St.
 MILE POST : 1.54

Tab by:

TIME OF DAY	BICYCLES MOVING WITH VEHICULAR TRAFFIC										BICYCLES USING CROSS WALKS						
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-N	W-E	W-S	TOTAL	NORTH	EAST	SOUTH	WEST
06:00-07:00A													5				
07:00-07:15A													1				
07:15-07:30A													2				
07:30-07:45A													2				
07:45-08:00A																	
08:00-08:15A																	
08:15-08:30A																	
08:30-08:45A																	
08:45-09:00A																	
09:00-10:00A																	
10:00-11:00A																	
11:00-12:00P																	
12:00-01:00P																	
01:00-02:00P																	
02:00-03:00P																	
03:00-04:00P																	
04:00-04:15P																	
04:15-04:30P																	
04:30-04:45P																	
04:45-05:00P																	
05:00-05:15P																	
05:15-05:30P																	
05:30-05:45P																	
05:45-06:00P																	
06:00-07:00P																	
07:00-08:00P																	
08:00-09:00P																	
09:00-10:00P																	
TOTAL VOLUME	12	1	17	3	1	30	1	66									

North and South is: Salem Hwy #72(OR99EBus)
 East and West is: Verda Lane (W) Hyacinth St. (E)
 BIKE_2432

SUMMARY OF PEDESTRIAN COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 16/17, 2007 DAY : Mon./Tues. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: Clear INTERSECT (ON OF: Salem Hwy #72(OR99EBus) @ Verda Lane & Hyacinth St.
 Chk. by: MILE POST : 1.54

TIME OF DAY	STUDENT PEDESTRIANS			OTHER PEDESTRIANS			STUDENT AND OTHER PEDESTRIAN			TOTAL	
	NORTH	EAST	WEST	NORTH	EAST	WEST	NORTH	EAST	WEST		
06:00-07:00A								1			1
07:00-07:15A											
07:15-07:30A											
07:30-07:45A									1		1
07:45-08:00A								2	2		2
08:00-08:15A											
08:15-08:30A											
08:30-08:45A											
08:45-09:00A											
09:00-10:00A								1	1		1
10:00-11:00A								5	5		5
11:00-12:00P								1	1		1
12:00-01:00P											
01:00-02:00P											
02:00-03:00P								1	1		1
03:00-04:00P											
04:00-04:15P											
04:15-04:30P											
04:30-04:45P											
04:45-05:00P											
05:00-05:15P											
05:15-05:30P											
05:30-05:45P											
05:45-06:00P											
06:00-07:00P											
07:00-08:00P											
08:00-09:00P											
09:00-10:00P											
TOTAL VOLUME								13	3	10	13

North and South is: Salem Hwy #72(OR99EBus) East and West is: Verda Lane (W) Hyacinth St. (e)

TRANSPORTATION DEVELOPEMENT BRANCH
 TRANSPORTATION SYSTEM MONITORING UNIT
 VEHICULAR VOLUME

DATE : July 17/18, 2007

CITY or COUNTY : Keizer

DAY WEEK : Tues./Wed.

INTERSECTION OF: N River Rd. @ Dearborn Ave.

ACT COUNT: 16

HRS COUNT: 6AM - 10PM

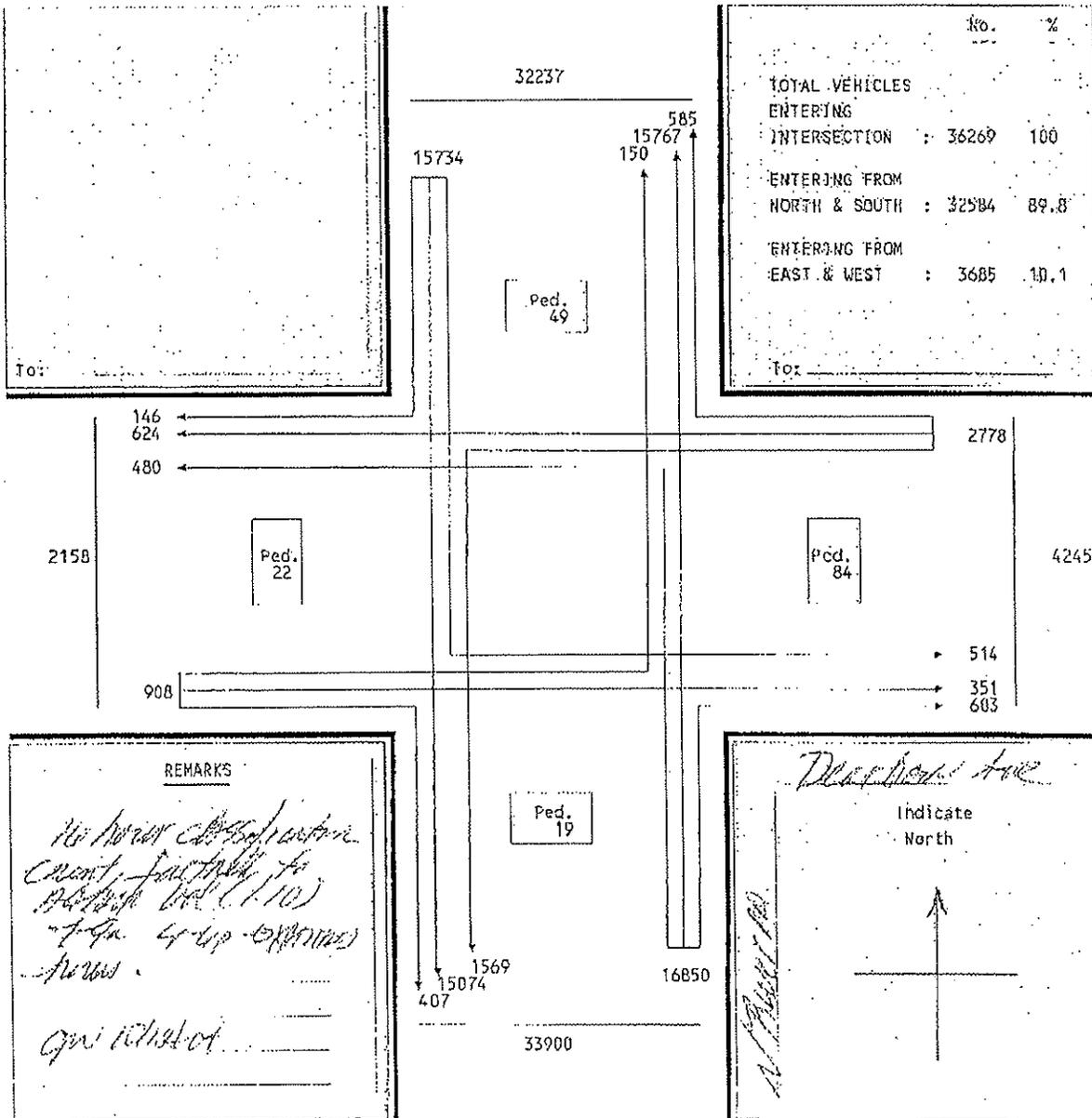
PED COUNT: 16

MILE POST: n/a

HRS COUNT: 6AM - 10PM

CLASSIFICATION : All vehicles

WEATHER : clear



VPK

SUMMARY OF TRAFFIC COUNT TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007
 HOURS : 6AM - 10PM
 DAY : Tues./Wed.
 WEATHER: clear
 COUNTY : Marion
 INTERSECTION OF: N River Rd. & Dearborn Ave.
 CITY: Keizer
 MILE POST : n/a

Tab by: _____
 CHECK BY: _____

TIME OF DAY	SUMMARY BY MOVEMENTS																ENTERING VOLUMES BY LEGS					
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	M-N	M-E	M-S	TOTAL	NORTH	SOUTH	EAST	WEST	NORTH	SOUTH	EAST	WEST	
06:00-07:00A	20	556	3	24	19	10	295	18	6	6	15	21	973	878	90.2	95	9.8	559	53	319	42	
07:00-07:15A	5	189	1	2	15	1	85	4	2	2	2	8	313	283	90.4	30	9.6	195	18	88	12	
07:15-07:30A	9	252	1	7	16	4	117	4	9	9	9	8	427	383	89.7	44	10.3	262	27	121	17	
07:30-07:45A	4	338	2	8	20	9	107	2	4	4	13	8	511	453	88.6	58	11.4	342	37	111	21	
07:45-08:00A	8	286	2	4	14	8	158	6	2	2	10	7	507	460	90.7	47	9.3	296	26	164	21	
08:00-08:15A	8	217	2	5	13	9	124	7	2	2	5	6	397	357	89.9	40	10.1	225	27	132	13	
08:15-08:30A	5	215	2	5	15	8	127	6	2	2	14	9	408	355	87.0	53	13.0	222	28	133	25	
08:30-08:45A	2	241	2	10	22	8	131	3	2	2	4	8	433	379	87.5	54	12.5	243	40	136	14	
08:45-09:00A	8	227	6	12	18	10	197	4	2	3	7	26	494	444	89.9	50	10.1	241	40	203	10	
09:00-10:00A	19	779	9	14	71	24	578	18	24	24	22	26	1602	1421	88.7	181	11.3	807	109	614	72	
10:00-11:00A	46	853	10	44	90	30	789	35	4	4	16	34	1955	1737	88.8	218	11.2	909	164	828	54	
11:00-12:00P	48	904	10	49	86	24	856	34	24	10	26	20	2091	1876	89.7	215	10.3	962	159	914	56	
12:00-01:00P	28	1089	3	15	118	26	1098	38	36	6	14	20	2491	2292	92.0	199	8.0	1120	159	1172	40	
01:00-02:00P	23	1085	5	14	107	24	1068	36	35	8	14	17	2436	2252	92.4	184	7.6	1113	145	1139	39	
02:00-03:00P	22	840	10	32	91	16	1010	48	34	1	14	20	2138	1964	91.9	174	8.1	872	139	1092	35	
03:00-04:00P	24	1315	19	57	148	73	1561	48	42	4	10	34	3335	3009	90.2	326	9.8	1359	278	1651	48	
04:00-04:15P	14	208	4	11	46	18	302	16	6	6	2	12	635	546	86.0	89	14.0	222	75	324	14	
04:15-04:30P	2	211	4	11	29	10	327	12	12	1	6	3	628	568	90.4	60	9.6	217	50	351	10	
04:30-04:45P	10	230	1	2	35	7	348	10	9	3	17	6	678	608	89.7	70	10.3	241	44	367	26	
04:45-05:00P	9	225	1	1	34	9	333	11	10	8	19	8	550	588	90.5	62	9.5	234	44	354	18	
05:00-05:15P	13	268	1	8	33	24	420	16	16	8	10	3	820	734	89.5	86	10.5	282	65	452	21	
05:15-05:30P	12	245	4	17	27	19	467	5	11	2	11	3	823	744	90.4	79	9.6	261	63	483	16	
05:30-05:45P	11	242	3	16	28	20	466	8	16	5	6	4	825	746	90.4	79	9.6	256	64	490	15	
05:45-06:00P	10	209	4	13	24	13	313	7	24	5	19	9	550	567	87.2	83	12.8	223	50	344	33	
06:00-07:00P	49	1014	3	44	150	86	1075	64	44	3	18	34	2584	2249	87.0	335	13.0	1066	280	1183	55	
07:00-08:00P	14	603	6	54	52	34	836	36	20	14	12	18	1699	1515	89.2	184	10.8	623	140	892	44	
08:00-09:00P	20	511	14	20	54	20	677	30	24	6	13	11	1400	1276	91.1	124	8.9	545	94	731	30	
09:00-10:00P	24	372	12	33	51	23	491	28	11	11	11	13	1069	938	87.7	131	12.3	408	107	530	24	
TOTAL COUNT	467	13704	133	532	1426	567	14334	548	436	136	319	370	32972	28622	89.8	3350	10.2	14504	2525	15318	825	
24HR FACTOR	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
24HR VOLUME	514	15074	146	585	1569	624	15767	685	488	150	351	407	36270	32354	89.8	3686	10.2	15734	2778	16850	908	

East end West is: Dearborn Ave.
 North and South is: N River Rd.
 SUN_2435

SUMMARY OF TRAFFIC COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007 DAY : Tues./Wed. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: clear INTERSECTION OF: N River Rd. @ Dearborn Ave.

Tab by: Chk. by: MILE POST : n/a

SUMMARY BY MOVEMENTS

TIME OF DAY	SUMMARY BY MOVEMENTS												ENTERING VOLUMES BY LEGS								
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-N	W-E	W-S	TOTAL	NORTH AND SOUTH	PERCENT OF TOTAL	EAST AND WEST	PERCENT OF TOTAL	EAST	SOUTH	WEST	
06:00-07:00A	20	536	3	24	19	10	295	18	6	6	15	21	973	878	90.2	95	9.8	559	319	42	
07:00-08:00A	26	1065	4	21	65	22	465	16	3	6	34	31	1758	1579	89.8	179	10.2	1095	484	71	
08:00-09:00A	23	900	8	32	68	35	579	14	11	9	30	23	1732	1535	88.6	197	11.4	931	604	62	
09:00-10:00A	19	779	9	14	71	24	378	18	18	24	22	26	1602	1421	88.7	181	11.3	807	614	72	
10:00-11:00A	46	853	10	44	90	30	769	35	24	4	16	34	1955	1737	88.8	218	11.2	909	828	54	
11:00-12:00P	48	904	10	49	86	24	856	34	24	10	26	20	2091	1876	89.7	215	10.3	962	914	56	
12:00-01:00P	28	1089	3	15	118	26	1098	38	36	6	14	20	2491	2292	92.0	199	8.0	1120	1172	40	
01:00-02:00P	23	1085	5	14	107	24	1068	36	35	8	14	17	2436	2252	92.4	184	7.6	1113	1159	39	
02:00-03:00P	22	840	10	32	91	15	1010	48	34	1	14	20	2138	1964	91.9	174	8.1	872	1092	35	
03:00-04:00P	24	1315	19	57	148	75	1561	48	42	4	10	34	3335	3009	90.2	326	9.8	1358	1651	44	
04:00-05:00P	35	874	5	25	144	44	1310	49	37	4	35	29	2591	2310	89.2	281	10.8	914	1396	68	
05:00-06:00P	46	964	12	54	112	76	1666	36	67	20	46	19	3118	2791	89.5	327	10.5	1022	1769	85	
06:00-07:00P	49	1014	3	44	150	86	1075	64	44	3	18	34	2584	2249	87.0	335	13.0	1066	1183	55	
07:00-08:00P	14	603	6	54	52	34	836	36	20	14	12	18	1699	1515	89.2	184	10.8	623	892	44	
08:00-09:00P	20	511	14	20	54	20	677	30	24	6	13	11	1400	1276	91.1	124	8.9	545	731	30	
09:00-10:00P	24	372	12	33	51	23	491	28	11	11	13	13	1069	938	87.7	131	12.3	468	530	24	
TOTAL COUNT	467	13704	133	532	1425	567	14334	548	436	136	319	370	32972	29654	89.8	3350	10.2	14304	2525	15318	825
24-HR FACTOR	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	32384	89.8	3686	10.2	15734	2778	16650	908
24-HR VOLUME	514	15074	146	585	1569	624	15767	603	480	150	351	407	36270	32384	89.8	3686	10.2	15734	2778	16650	908

North and South is: N River Rd. East and West is: Dearborn Ave. SUM 2435

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007
 DAY OF WEEK : Tues./Wed.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : NORTH
 COUNTY : Marion
 INTERSECTION OF: N River Rd. @ Dearborn Ave.
 CITY: Keizer
 MILE POST : n/a
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DEL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOTER		TOTAL ALL VEHICLE	BI CY CLE
	Cars	WTrlr	Other	WTrlr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	>7Axl		7 Axl	8 Axl		
06:00-07:00A	12		7													20	
07:00-07:15A	4		1													5	
07:15-07:30A	6		2			1										9	
07:30-07:45A	3		1													4	
07:45-08:00A	4		2		1											8	
08:00-08:15A	4		3		1											8	
08:15-08:30A	3		1										1			5	
08:30-08:45A	1		1													2	
08:45-09:00A	5		3		3											8	
09:00-10:00A	12		6		6		1									19	
10:00-11:00A	34		10		10											46	
11:00-12:00P	40		6		6		2									48	
12:00-01:00P	20		8		8											28	
01:00-02:00P	16		7		7											23	
02:00-03:00P	16		2		2		2									22	
03:00-04:00P	18		2		2		2									24	
04:00-04:15P	10		2		2		2									14	
04:15-04:30P	2		4		4											10	
04:30-04:45P	5		3		3											9	
04:45-05:00P	6		4		4		1									13	
05:00-05:15P	8		2		2											12	
05:15-05:30P	10		2		2											11	
05:30-05:45P	9		2		2											10	
05:45-06:00P	9		1		1											49	
06:00-07:00P	42		6		6		2									14	
07:00-08:00P	12															20	
08:00-09:00P	20															20	
09:00-10:00P	22															24	
15 HOUR	355		88		6	11	4						3			467	

TRAFFIC COUNCIL SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007
 DAY OF WEEK : Tues./Wed.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROG : NORTH

CITY: Keizer

COUNTY : Marion
 INTERSECTION OF: N River Rd; & Dearborn Ave.

MILE POST : n/a
 TO : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	81 CY CLE
	Cars	WTrLr	Other	WTrLr	2 Axle	3 Axle	>4Axle	4 Axle	5 Axle	>6Axle	>7Axle	7 Axle				
06:00-07:00A	362		161	2	2	3	2						3	1	536	1
07:00-07:15A	136		48		2	1								2	189	
07:15-07:30A	212		34	1	1	1							2	1	252	
07:30-07:45A	249		83	1	2	1							2		338	1
07:45-08:00A	192		76	4	7	1							2	2	286	
08:00-08:15A	162		42		6	1							1		217	
08:15-08:30A	142		62	3	4	1							4		215	
08:30-08:45A	176		56	1	3	1							2		241	1
08:45-09:00A	170		51	3	2	1									227	
09:00-10:00A	546		203	12	10	1								1	779	
10:00-11:00A	592		214	4	22	4								4	853	
11:00-12:00P	652		204	8	14	12								4	904	
12:00-01:00P	781		270	14	10	6								6	1089	
01:00-02:00P	775		280	15	6	3								5	1085	
02:00-03:00P	607		198	8	12	2									840	
03:00-04:00P	903		374	12	16	4									1315	
04:00-04:15P	150		55		1										208	
04:15-04:30P	143		58	2	5										211	
04:30-04:45P	167		56	4	1										230	
04:45-05:00P	173		56		1										225	
05:00-05:15P	188		76	1	2										268	
05:15-05:30P	179		59		3										245	
05:30-05:45P	175		61	1	3										242	
05:45-06:00P	166		43												209	
06:00-07:00P	658		336	2	10									2	1014	
07:00-08:00P	458		139	2	4										803	
08:00-09:00P	402		104	2										2	511	
09:00-10:00P	315		49	2	5									1	372	
16 HOUR	9835		3440	104	153	38	5	17	6				92	14	13704	5

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007
 DAY OF WEEK : Tues./Wed.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : NORTH
 COUNTY : Marion
 INTERSECTION OF: N River Rd. @ Dearborn Ave.
 CITY: Keizer
 MILE POST : n/a
 TO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE	SGL UNIT TRUCK	SGL TRAILER TRUCKS >2AXL 4 AXL 5 AXL >6AXL	DBL TRAILER TRUCKS >7AXL 6 AXL	TRP TRAILER TRUCKS >7AXL 8 AXL >9AXL	BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY CLE
	Cars	MTLR									
06:00-07:00A	2		1							3	
07:00-07:15A	1									1	
07:15-07:30A	1									1	
07:30-07:45A											
07:45-08:00A	2									2	
08:00-08:15A											
08:15-08:30A	1		1							2	
08:30-08:45A											
08:45-09:03A	6									6	
09:00-10:00A	2			3						9	
10:00-11:00A	6									10	
11:00-12:00P	10									10	
12:00-01:00P	2		1							3	
01:00-02:00P	2		3							5	
02:00-03:00P	10			2				1		19	
03:00-04:00P	12									12	
04:00-04:15P											
04:15-04:30P	3		1							4	
04:30-04:45P	1									1	
04:45-05:00P											
05:00-05:15P	1									1	
05:15-05:30P	4									4	
05:30-05:45P	3									3	
05:45-06:00P	4									4	
06:00-07:00P	2		1							3	
07:00-08:00P	6									6	
08:00-09:00P	14		2							14	
09:00-10:00P	10									10	
16 HOUR	105		21	5				1		133	

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007
 DAY OF WEEK : Tues./Wed.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : EAST

COUNTY : Marion CITY: Keizer
 INTERSECTION OF: N River Rd. & Dearborn Ave.
 MILE POST : n/a
 TO : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY CLE
	Cars	MTPLT	Other	MTPLT	2 Axl	3 Axl	>4axl	4 Axl	5 Axl	>5Axl	6 Axl	>7Axl	7 Axl				
06:00-07:00A	19		5													24	
07:00-07:15A	1		1													2	
07:15-07:30A	7															7	
07:30-07:45A	5		2		1											8	
07:45-08:00A	2		2													4	
08:00-08:15A	4		1		1											5	
08:15-08:30A	3		1		1											5	
08:30-08:45A	6		4													10	
08:45-09:00A	10		3		1											12	
09:00-10:00A	11		8													14	
10:00-11:00A	36		6		1											44	
11:00-12:00P	42		1		1											49	
12:00-01:00P	13		1		1											15	
01:00-02:00P	12		6		2											14	
02:00-03:00P	24		12		1											32	
03:00-04:00P	42		4		1									2		57	
04:00-04:15P	10															11	
04:15-04:30P	7															11	
04:30-04:45P	2															2	
04:45-05:00P	1															1	
05:00-05:15P	6		2													8	
05:15-05:30P	12		5													17	
05:30-05:45P	11		5													16	
05:45-06:00P	10		3													13	
06:00-07:00P	34		10													44	
07:00-08:00P	46		8													54	
08:00-09:00P	12		4													20	
09:00-10:00P	25		7													33	
16 HOUR	413		100		2	13		2						2		532	

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007
 DAY OF WEEK : Tues./Wed.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : 3 EAST
 CITY : Keizer
 COUNTY : Marion
 INTERSECTION OF : N River Rd. & Dearborn Ave.
 MILE POST : n/a
 TO : SCUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS	DSC TRAILER TRUCKS	TRP TRAILER TRUCKS	BUSES	MOTOR CYCLE	TOTAL ALL VEHICLE	81 CY. GLE
	Cars	WTrlr	Other	WTrlr								
06:00-07:00A	12		7								19	
07:00-07:15A	13		2								15	
07:15-07:30A	12		4								16	
07:30-07:45A	18		2								20	
07:45-08:00A	8		6								14	
08:00-08:15A	7		5	1							13	
08:15-08:30A	12		1		2						15	
08:30-08:45A	17		4	1							22	
08:45-09:00A	11		6	1						1	18	
09:00-10:00A	48		20	2						1	71	
10:00-11:00A	64		21		4					1	90	
11:00-12:00P	66		14		6						86	
12:00-01:00P	76		34		8						118	
01:00-02:00P	69		32		6						107	
02:00-03:00P	56		30	2							91	
03:00-04:00P	110		38		2						148	
04:00-04:15P	30		14								46	
04:15-04:30P	17		11								29	
04:30-04:45P	18		15		1				1		35	
04:45-05:00P	19		13		2						34	
05:00-05:15P	22		11								33	
05:15-05:30P	13		14								27	
05:30-05:45P	12		16								28	
05:45-06:00P	16		8								24	
06:00-07:00P	120		30								150	
07:00-08:00P	46		6								52	
08:00-09:00P	40		14								54	
09:00-10:00P	36		14								51	
% HOUR	988		392	6	52	2			1	2	1426	

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007 COUNTY : Marion CITY: Keizer
 DAY OF WEEK : Tues./Wed. INTERSECTION OF: N River Rd. @ Dearborn Ave.
 HOURS COUNTED: 6AM - 10PM MILE POST : n/a
 WEATHER : clear TO : WEST
 FROM : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE	SGL UNIT TRUCK	SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTORCYCLE SCOOTER	TOTAL ALL VEHICLE	BI CYCLE
	WTR	TR			4 AXL	5 AXL	6 AXL	7 AXL	8 AXL	>9AXL	5 AXL	6 AXL	7 AXL				
06:00-07:00A	9		1													10	
07:00-07:15A	1															1	
07:15-07:30A	2		2													4	
07:30-07:45A	7		1													9	
07:45-08:00A	4		3													8	
08:00-08:15A	6		3													9	
08:15-08:30A	3		4													8	
08:30-08:45A	3		5													8	
08:45-09:00A	9		1													10	
09:00-10:00A	16		8													24	
10:00-11:00A	14		16													30	
11:00-12:00P	12		10													24	
12:00-01:00P	22		2	2												26	
01:00-02:00P	20		3	1												24	
02:00-03:00P	10		6													16	
03:00-04:00P	50		23													73	
04:00-04:15P	16		2													18	
04:15-04:30P	5		5													10	
04:30-04:45P	6		1													7	
04:45-05:00P	7		2													9	
05:00-05:15P	23															24	
05:15-05:30P	13		6													19	
05:30-05:45P	16		4													20	
05:45-06:00P	10		3													13	
06:00-07:00P	70		16													86	
07:00-08:00P	30		4													34	
08:00-09:00P	16		4													20	
09:00-10:00P	21		2													23	
16 HOUR	421		137	1	4											567	1

Summarized by: _____ | 10/12/07

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007 COUNTY : Marion CITY: Keizer
 DAY OF WEEK : Tues./Wed. INTERSECTION OF: # River Rd. @ Dearborn Ave.
 HOURS COUNTED: 6AM - 10PM MILE POST : n/a
 WEATHER : clear TO : NORTH
 FROM : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SQL UNIT TRUCK		SQL TRAILER TRUCKS			TRP. TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	CY
	Cars	MT-Tr	Other	MT-Tr	2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	7 Axl	8 Axl	>9Axl				
06:00-07:00A	189		86	2	2	6	4								295	
07:00-07:15A	48		28	2	2	1	1								83	
07:15-07:30A	87		22			4									117	
07:30-07:45A	76		24			5									107	
07:45-08:00A	92		49	1	1	5	3								158	
08:00-08:15A	76		36	2	2	4	1								124	
08:15-08:30A	83		33	4	4	2									127	
08:30-08:45A	97		29	1	1	3	1								131	
08:45-09:00A	135		48			11	1								197	
09:00-10:00A	408		146	1	1	14	2								578	
10:00-11:00A	554		182	8	8	12	6								769	1
11:00-12:00P	620		204	8	8	16	2								856	
12:00-01:00P	803		241	6	6	16	15								1098	
01:00-02:00P	800		225	3	3	12	13								1068	
02:00-03:00P	732		223	24	24	14	2								1010	
03:00-04:00P	1072		424	22	22	16	3					2			1561	1
04:00-04:15P	214		83	3	3	2									302	
04:15-04:30P	246		72	3	3	2	1								327	
04:30-04:45P	247		85	7	7	3	1								348	
04:45-05:00P	246		81	2	2	1	1								333	
05:00-05:15P	336		77	1	1	3									420	
05:15-05:30P	365		98	1	1	1									467	
05:30-05:45P	357		103	2	2	1									466	
05:45-06:00P	247		57	1	1	4									313	
06:00-07:00P	834		224	3	3	8									1075	2
07:00-08:00P	632		198	2	2	2									677	1
08:00-09:00P	550		124	2	2	1									491	
09:00-10:00P	414		74													
16 HOUR	10560		3278	111	111	169	57	10	14	9	2		101	23	14334	5

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007
 DAY OF WEEK : Tues./Wed.
 FOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : SOUTH
 COUNTY : Marion
 INTERSECTION OF : N River Rd. @ Dearborn Ave.
 CITY: Keizer
 WILE PDST : N/a
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS			DSL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY CLE
	Cars	WTrlr	Other	WTrlr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	6 Axl	>7Axl	7 Axl	8 Axl	>9Axl				
06:00-07:00A	12		5		1												18		
07:00-07:15A	4																4		
07:15-07:30A	4																4		
07:30-07:45A	2																2		
07:45-08:00A	6																6		
08:00-08:15A	7																7		
08:15-08:30A	2		1														3		
08:30-08:45A	4																4		
08:45-09:00A	18																18		
09:00-10:00A	26		8		1												35		
10:00-11:00A	32		2														34		
11:00-12:00P	30		2														38		
12:00-01:00P	26		3		1												36		
01:00-02:00P	41		5		2												48		
02:00-03:00P	38		10														48		
03:00-04:00P	12		2		2												16		
04:00-04:15P	6		3		2												12		
04:15-04:30P	10																10		
04:30-04:45P	9		2														11		
04:45-05:00P	10		5		1												16		
05:00-05:15P	4		1														5		
05:15-05:30P	6		2														8		
05:30-05:45P	6				1												7		
05:45-06:00P	50		12		2												64		
06:00-07:00P	34		2														36		
07:00-08:00P	24		6														30		
08:00-09:00P	24		4														28		
09:00-10:00P																			
15 HOUR	447		75		4	10	12										548		

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007
 DAY OF WEEK : Tues./Wed.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : SOUTH
 COUNTY : Maricopa
 INTERSECTION OF: Y River Rd. @ Dearborn Ave.
 CITY: Keizer
 MILE POST : n/a
 TO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY DLE
	Cars	MTrlr	Other	MTrlr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	6 Axl	>7Axl				
06:00-07:00A	2		3											1	6		
07:00-07:15A	1														1		
07:15-07:30A															2		
07:30-07:45A	2														2		
07:45-08:00A															1		
08:00-08:15A	3		1											2	6		
08:15-08:30A			2												2		
08:30-08:45A	2														2		
08:45-09:00A	12		6												18		
09:00-10:00A	16		8												24		
10:00-11:00A	22		2												24		
11:00-12:00P	32		4												36		
12:00-01:00P	30		5												35		
01:00-02:00P	28		4											2	34		
02:00-03:00P	30		12												42		
03:00-04:00P	4		2												6		
04:00-04:15P	8		4												12		
04:15-04:30P	8		4												9		
04:30-04:45P	7		3												10		
04:45-05:00P	16		3												16		
05:00-05:15P	8		3												11		
05:15-05:30P	13		3												16		
05:30-05:45P	17		6												24		
05:45-06:00P	36		8												44		
06:00-07:00P	14		4												20		
07:00-08:00P	20		4												24		
08:00-09:00P	9		2												11		
09:00-10:00P																	
16 HOUR	340		87		2								5		456		

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007
 DAY OF WEEK : Tues./Wed.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : WEST
 COUNTY : Marion
 INTERSECTION OF : N River Rd. & Bearborn Ave.
 CITY: Keizer
 MILE POST :
 TO : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK 2 Axl	SGL TRAILER TRUCKS >4axl	DBL TRAILER TRUCKS 5 Axl	TRP TRAILER TRUCKS 7 Axl	TRP TRAILER TRUCKS 8 Axl	BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY
	Cars	WTrlr	Other	WTrlr									
06:00-07:00A	6											6	
07:00-07:15A	2											2	
07:15-07:30A													
07:30-07:45A	4											4	
07:45-08:00A	1											1	
08:00-08:15A	2											2	
08:15-08:30A	2											2	
08:30-08:45A	2											2	
08:45-09:00A	16		8									24	
09:00-10:00A	2		2									4	
10:00-11:00A	10											10	
11:00-12:00P	6				2							8	
12:00-01:00P	5		1									6	
01:00-02:00P	1		2									3	
02:00-03:00P	2											2	
03:00-04:00P													
04:00-04:15P	1											1	
04:15-04:30P	2		1									3	
04:30-04:45P													
04:45-05:00P	5		2									8	
05:00-05:15P	2											2	
05:15-05:30P	5				1							6	
05:30-05:45P	4		1									5	
05:45-06:00P	2		1									3	
06:00-07:00P	8		6									14	
07:00-08:00P	4		2									6	
08:00-09:00P	7		4									11	
09:00-10:00P													
16 HOUR	101		32		3							136	

Summarized by: _____ | 10/12/07

WORK_2435

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/16, 2007
 COUNTY : Marion
 CITY: Keizer
 DAY OF WEEK : Tues./Wed.
 INTERSECTION OF: N River Rd. @ Dearborn Ave.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 MILE POST : n/a
 FROM : WEST
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY
	Cars	Wtrlr	Wtrlr	Other		2 Axl	3 Axl	4 Axl	5 Axl	6 Axl	>7axl	7 Axl	8 Axl	>9axl				
06:00-07:00A	10			5												15		
07:00-07:15A	2															2		
07:15-07:30A	8			1												9		
07:30-07:45A	10			3												13		
07:45-08:00A	9			1												10		
08:00-08:15A	5															5		
08:15-08:30A	7			4												14		
08:30-08:45A	2			2												4		
08:45-09:00A	7															7		
09:00-10:00A	10			12												22		
10:00-11:00A	12			4												16		
11:00-12:00P	20			6												28		
12:00-01:00P	12			1												14		
01:00-02:00P	11			3												14		
02:00-03:00P	12			2												14		
03:00-04:00P	2			6												10		
04:00-04:15P	2															2		
04:15-04:30P	2			4												6		
04:30-04:45P	8			9												17		
04:45-05:00P	6			4												10		
05:00-05:15P	7			3												10		
05:15-05:30P	9			2												11		
05:30-05:45P	5			1												6		
05:45-06:00P	13			6												19		
06:00-07:00P	14			4												18		
07:00-08:00P	6			6												12		
08:00-09:00P	11			2												13		
09:00-10:00P																		
15 HOUR	222			91												319		

Summarized by: _____ | 10/12/07

WORK_2435

TRAFFIC COUN. JIMMAY SHEET
 TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 17/18, 2007
 DAY OF WEEK : Tues./Wed.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : Clear
 FROM : WEST
 COUNTY : Marion
 INTERSECTION OF: 8 River Rd. @ Dearborn Ave.
 CITY: Keizer
 MILE POST : n/a
 TO : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK	SGL TRAILER TRUCKS	DBL TRAILER TRUCKS	TRP TRAILER TRUCKS	BUSES	MOTOR CYCLE SCOOTER VEHICLE	TOTAL ALL VEHICLE	BI CY CLE
	Cars	W/Trl	Other	W/Trl								
06:00-07:00A	17		2		1				1		21	
07:00-07:15A	8										8	
07:15-07:30A	7		1								8	
07:30-07:45A	7		1								8	
07:45-08:00A	5		2								7	
08:00-08:15A	4		2								6	
08:15-08:30A	7		1		1						9	
08:30-08:45A	5		2						1		8	
08:45-09:00A												
09:00-10:00A	20		5	1							26	
10:00-11:00A	30		4								34	
11:00-12:00P	18		2		2						20	
12:00-01:00P	16		2		1						20	
01:00-02:00P	14		2								17	
02:00-03:00P	20		2		2						20	
03:00-04:00P	30		2								34	
04:00-04:15P	10		2								12	
04:15-04:30P	3										3	
04:30-04:45P	5		1								6	
04:45-05:00P	6		2								8	
05:00-05:15P	3										3	
05:15-05:30P	2				1						3	
05:30-05:45P	3		1								4	
05:45-06:00P	7		2								9	
06:00-07:00P	28		6								34	
07:00-08:00P	16		2								18	
08:00-09:00P	7		4								11	
09:00-10:00P	8		5								13	
1s HOUR	306		51	1	8	2			2		370	

TRANSPORTATION DEVELOPMENT BRANCH
TRANSPORTATION SYSTEM MONITORING UNIT
VEHICULAR VOLUME

DATE : July 30/31, 2007

CITY or COUNTY : Keizer

DAY WEEK : Mon./Tues.

INTERSECTION OF: N River Rd. @ Lockhaven Dr. NE

ACT COUNT: 16

HRS COUNT: 6AM - 10PM

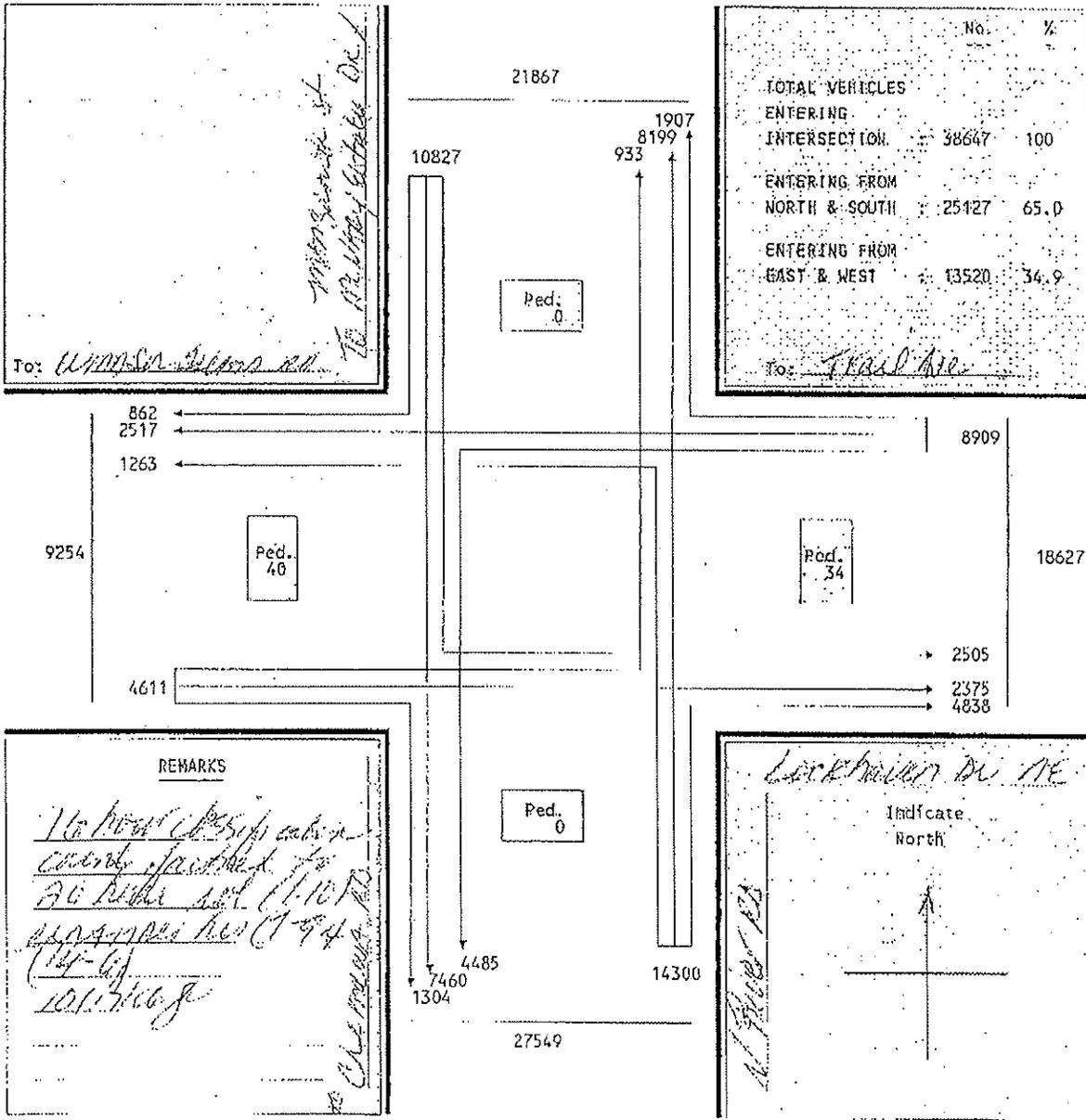
PED COUNT: 16

MILE-POST: n/a

HRS COUNT: 6AM - 10PM

CLASSIFICATION : All vehicles

WEATHER : clear



V/P
K

**SUMMARY OF TRAFFIC COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION**

DATE : July 30/31, 2007
 HOURS : 6AM - 10PM
 DAY : Mon./Tues.
 WEATHER: clear
 COUNTY : Marion
 INTERSECTION OF: N. River Rd. @ Lockhaven Dr. NE
 CITY: Keizer
 CHK. BY: MILE POST: 1 R/S

TIME OF DAY	SUMMARY BY MOVEMENTS												ENTERING VOLUMES BY LEGS									
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-R	W-E	W-S	TOTAL	NORTH AND SOUTH	PERCENT OF TOTAL	EAST AND WEST	PERCENT OF TOTAL	NORTH	EAST	SOUTH	WEST	
06:00-07:00A	113	386	29	42	95	74	212	177	22	57	172	49	1428	959	65.8	489	34.2	528	211	411	278	
07:00-07:15A	52	153	4	14	36	25	65	36	4	11	48	11	455	312	68.6	143	31.4	209	75	103	70	
07:15-07:30A	43	185	6	23	62	21	46	36	13	12	35	15	497	329	66.2	168	33.8	234	106	95	62	
07:30-07:45A	55	202	5	8	56	17	88	47	8	9	45	15	555	405	73.0	150	27.0	262	81	143	69	
07:45-08:00A	50	188	7	18	69	21	70	48	11	15	50	19	566	374	66.1	192	33.9	245	108	129	84	
08:00-08:15A	30	141	16	31	53	18	65	39	13	14	33	20	493	324	65.7	169	34.3	187	102	137	67	
08:15-08:30A	22	78	7	25	41	15	61	23	3	5	18	8	306	194	63.4	112	36.6	107	81	87	31	
08:30-08:45A	50	128	23	25	54	19	65	60	9	13	43	16	487	317	65.1	170	34.9	201	98	116	72	
08:45-09:00A	46	107	11	23	53	36	87	60	15	14	35	18	505	326	64.6	179	35.4	164	112	162	67	
09:00-10:00A	101	429	55	39	240	124	337	212	67	52	128	79	1863	1201	64.5	662	35.5	585	403	616	259	
10:00-11:00A	150	498	40	43	264	124	363	241	66	41	154	87	2071	1358	65.6	713	34.4	688	431	670	282	
11:00-12:00P	175	457	29	45	283	128	473	280	74	49	151	107	2251	1488	66.1	763	33.9	661	456	827	307	
12:00-01:00P	107	313	24	56	193	107	630	351	114	34	93	66	2088	1359	65.1	549	26.3	444	356	1095	193	
01:00-02:00P	151	486	40	94	326	111	430	337	90	49	130	87	2331	1534	65.8	797	34.2	677	531	857	266	
02:00-03:00P	167	423	46	161	356	176	531	359	83	47	158	91	2598	1609	61.9	989	38.1	636	693	973	296	
03:00-04:00P	191	482	60	179	332	196	580	320	90	48	181	97	2756	1723	62.5	1033	37.5	733	707	990	326	
04:00-04:15P	47	83	7	47	87	47	186	94	26	16	42	17	699	443	63.4	256	36.6	137	181	306	75	
04:15-04:30P	36	122	15	40	85	65	184	79	33	14	38	24	735	469	63.8	266	36.2	173	190	296	76	
04:30-04:45P	28	59	7	36	45	63	189	101	26	24	58	25	661	410	62.0	251	38.0	94	144	316	107	
04:45-05:00P	41	153	19	46	99	46	212	78	25	21	67	15	816	528	64.7	288	35.3	213	191	315	97	
05:00-05:15P	34	109	25	36	87	66	217	113	36	15	54	32	824	534	64.8	290	35.2	168	189	366	101	
05:15-05:30P	45	100	28	56	80	73	228	95	19	23	32	30	809	515	63.7	294	36.3	175	209	342	85	
05:30-05:45P	53	107	24	54	82	52	216	151	48	31	41	20	879	599	68.1	280	31.9	184	188	415	92	
05:45-06:00P	55	126	27	51	97	75	209	92	26	26	34	21	837	535	63.9	302	36.1	208	221	327	81	
06:00-07:00P	145	472	78	155	291	177	613	282	79	87	89	71	2539	1669	65.7	870	34.3	695	623	974	247	
07:00-08:00P	130	350	64	124	286	158	446	268	49	56	68	65	2062	1305	63.3	757	36.7	544	568	761	189	
08:00-09:00P	95	247	51	151	194	147	335	235	47	36	88	51	1677	1010	60.2	667	39.8	393	492	617	175	
09:00-10:00P	65	198	37	112	131	111	318	184	52	29	80	29	1346	854	63.4	492	36.6	300	354	554	138	
TOTAL COUNT	2277	6792	784	1734	4077	2288	7654	4398	1148	848	2159	1185	35134	22863	65.0	12291	35.0	9843	8099	13000	4192	
24HR FACTOR	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10
24HR VOLUME	2505	7460	862	1907	4485	2517	8199	4838	1263	933	2375	1304	38648	25127	65.0	13520	35.0	10827	8909	14300	4611	

North and South is: N River Rd. East and West is: Lockhaven Dr. NE
 SUM 2436

**SUMMARY OF TRAFFIC COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION**

DATE : July 30/31, 2007 DAY : Mon./Tues. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: clear INTERSECTION OF: N River Rd, @ Lockhaven Dr. NE

Tab by: Chk. by: MILE POST : n/a

SUMMARY BY MOVEMENTS

TIME OF DAY	MOVEMENTS																ENTERING VOLUMES BY LEGS					
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	W-N	W-E	W-S	TOTAL	NORTH AND SOUTH	PERCENT OF TOTAL	EAST AND WEST	PERCENT OF TOTAL	NORTH	EAST	SOUTH	WEST	
05:00-07:00A	113	386	29	42	95	74	212	177	22	57	172	49	1428	939	65.8	489	34.2	528	211	411	278	
07:00-08:00A	200	728	22	63	223	82	267	167	36	47	178	60	2073	1420	68.5	653	31.5	950	368	470	285	
08:00-09:00A	148	454	57	104	201	88	278	184	40	46	129	62	1791	1161	64.8	630	35.2	659	395	502	237	
09:00-10:00A	101	429	55	39	240	124	337	212	67	52	128	79	1863	1201	64.5	662	35.5	585	403	616	259	
10:00-11:00A	150	498	40	43	264	124	363	241	66	41	154	87	2071	1358	65.6	713	34.4	688	431	670	282	
11:00-12:00P	175	657	29	45	283	128	473	280	74	49	151	107	2251	1488	66.1	763	33.9	661	456	827	307	
12:00-01:00P	107	313	24	56	193	107	630	351	114	34	93	66	2088	1539	73.7	549	26.3	444	356	1095	193	
01:00-02:00P	151	486	40	94	326	111	430	337	90	49	130	87	2331	1534	65.8	797	34.2	677	531	857	266	
02:00-03:00P	157	423	46	161	356	176	531	359	83	47	158	91	2598	1609	61.9	989	38.1	636	693	973	296	
03:00-04:00P	191	482	60	179	332	196	580	320	90	48	181	97	2756	1723	62.5	1033	37.5	733	707	990	326	
04:00-05:00P	152	417	48	169	316	221	771	352	110	75	199	81	2911	1850	63.6	1061	36.4	617	706	1233	355	
05:00-06:00P	187	442	104	197	346	264	870	451	129	95	161	103	3349	2183	65.2	1166	34.8	733	807	1450	359	
06:00-07:00P	145	472	78	155	291	177	613	282	79	87	89	71	2539	1669	65.7	870	34.3	695	623	974	247	
07:00-08:00P	130	350	64	124	286	158	446	266	49	56	68	65	2062	1305	63.3	757	36.7	544	568	761	189	
08:00-09:00P	95	247	51	151	194	147	335	235	47	36	88	51	1677	1010	60.2	667	39.8	393	492	617	175	
09:00-10:00P	65	198	37	112	131	111	318	184	52	29	80	29	1346	854	63.4	492	36.6	300	354	554	158	
TOTAL COUNT	2277	6782	784	1734	4077	2288	7454	4398	1148	848	2159	1185	35134	22043	65.0	12291	35.0	9843	8099	13000	4192	
24HR FACTOR	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10	1.10												
24HR VOLUME	2505	7460	862	1907	4485	2517	8199	4838	1265	933	2375	1304	38548	25127	65.0	13520	35.0	10837	8909	14300	4611	

North and South is: N River Rd. East and West is: Lockhaven Dr. NE SUM 2436

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 30/31, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : NORTH

COUNTY : Marion
 INTERSECTION OF: N River Rd. & Lockhaven Dr. NE
 CITY: Keizer

MILE POST : n/b
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SQL UNIT TRUCK		SQL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP. TRAILER TRUCKS			BUSES	MOTOR CYCLE	SCOOTER	TOTAL ALL VEHICLE	BI CY
	Cars	MTPL	Other	MTPL	>3AXL	>4AXL	4 AXL	5 AXL	>6AXL	5 AXL	6 AXL	>7AXL	7 AXL	8 AXL	>9AXL					
06:00-07:00A	87		24		1										1			113		
07:00-07:15A	27		24		1													52		
07:15-07:30A	30	1	12															43		
07:30-07:45A	41		11				1		2									55		
07:45-08:00A	40		10															50		
08:00-08:15A	20		9	1														30		
08:15-08:30A	18		2	1				1										22		
08:30-08:45A	38		8		2													50		
08:45-09:00A	38		7													1		46		
09:00-10:00A	58	1	32	2	5	3												101		
10:00-11:00A	103		37	1	6	1		2										150		
11:00-12:00P	130	1	37		3	2		1								1		175		
12:00-01:00P	60		40		5				2									107		
01:00-02:00P	97		40	3	6	4												151		
02:00-03:00P	97		59		2	3										1		167		
03:00-04:00P	119		50		13	5										1		191		
04:00-04:15P	30		13		2	1										1		47		
04:15-04:30P	25		7		3													36		
04:30-04:45P	20		8															28		
04:45-05:00P	21		13		2	1										1		41		
05:00-05:15P	23		4		4				1							1		34		
05:15-05:30P	29		16															45		
05:30-05:45P	40		12															53		
05:45-06:00P	39		16															55		
06:00-07:00P	105		36		2	1										1		145		
07:00-08:00P	83		45		1											1		130	2	
08:00-09:00P	69		23		2													95		
09:00-10:00P	42		23															65		
16 HOUR	1529	3	618	9	59	27	1	11	3	6					6	5		2377	2	

TRAFFIC COUNTY SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 30/31, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : NORTH
 COUNTY : Marion
 INTERSECTION OF: N River Rd. @ Lockhaven Dr. NE
 CITY: Keizer
 MILE POST : n/a
 TO : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY CLE
	Ears	WTrlr	Other	WTrlr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	>7Axl				
06:00-07:00A	298	1	75	1	3	5								2	386	
07:00-07:15A	124		21		2	2								1	153	
07:15-07:30A	145	1	28		3	3								2	185	
07:30-07:45A	174		19	1	3	3		2						2	202	1
07:45-08:00A	157		27	1	3	1								1	188	
08:00-08:15A	113		23	1	1	1									141	
08:15-08:30A	60		15	1	2	2									78	1
08:30-08:45A	103		21	1	1	1								1	128	
08:45-09:00A	97		15	2	1	1								1	107	
09:00-10:00A	332		75	4	8	3		1						2	429	1
10:00-11:00A	385		93	1	8	7		1						1	498	
11:00-12:00P	395	2	36	4	12	5								2	457	5
12:00-01:00P	223		78		4	3		2						2	313	
01:00-02:00P	375	2	86	3	9	6		1						2	486	2
02:00-03:00P	326		80	3	3	4		1						3	423	4
03:00-04:00P	370	1	90	1	6	5		1						3	482	4
04:00-04:15P	64		15	2	2	1								1	83	
04:15-04:30P	92		24	2	2	1								1	122	3
04:30-04:45P	47		11	1	1	1								2	59	
04:45-05:00P	123		20	2	4	1								1	153	1
05:00-05:15P	84		20	1	1	1								1	109	
05:15-05:30P	57		40		1	1								1	100	1
05:30-05:45P	92		14		2	2								1	107	1
05:45-06:00P	97		24		1	1								1	126	1
06:00-07:00P	386	1	76	3	1	1		2						4	472	3
07:00-08:00P	300		45		2	2								1	350	
08:00-09:00P	204		39	1	1	1								1	247	
09:00-10:00P	170		27	1											198	
16 HOUR	5385	9	1157	37	80	50	2	12	3	2			29	39	6782	23

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 30/31, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : NORTH
 COUNTY : Marion
 INTERSECTION OF: N. River Rd. @ Lockhaven Dr. NE
 CITY: Keizer
 MILE POST : 0/a
 TO : WEST

TIME OF DAY	PASSENGER CARS		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES		MOTOR CYCLE		TOTAL ALL VEHICLE	BI CY
	Wt/Tr	Other	Wt/Tr	Other	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	7 Axl	8 Axl	>9Axl	SCOOT	VEHICLE			
06:00-07:00A	17	10			2											29		
07:00-07:15A	4															4		
07:15-07:30A	2															6		
07:30-07:45A	4															5		
07:45-08:00A	5															7		
08:00-08:15A	10															16		
08:15-08:30A	4															7		
08:30-08:45A	13															23		
08:45-09:00A	5															11		
09:00-10:00A	43															55		
10:00-11:00A	25															40		
11:00-12:00P	23															29		
12:00-01:00P	16															24		
01:00-02:00P	28															40		
02:00-03:00P	29															46		
03:00-04:00P	47															60		
04:00-04:15P	6															7		
04:15-04:30P	12															15		
04:30-04:45P	7															7		
04:45-05:00P	15															19		
05:00-05:15P	16															25		
05:15-05:30P	21															28		
05:30-05:45P	19															24		
05:45-06:00P	21															27		
06:00-07:00P	58															78		
07:00-08:00P	50															64		
08:00-09:00P	35															51		
09:00-10:00P	24															37		
15 HOUR	560	1	163	5	21	21	1	5	4	1	1	1	2	3	194	3		

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 30/31, 2007
 COUNTY : Marion
 CITY : Keizer
 DAY OF WEEK : Mon./Tues.
 INTERSECTION OF : N River Rd. @ Lockhaven Dr., NE
 HOURS COUNTED : 6AM - 10PM
 MILE POST : r/a
 WEATHER : clear
 FROM : EAST
 TO : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNII TRUCK		SGL TRAILER TRUCKS		OBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCORE	TOTAL ALL VEHICLE	CY
	Cars	HT/r	WT/r	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	6 Axl	>7Axl				
06:00-07:00A	33		6	1	2										42	
07:00-07:15A	7		4		2	1									14	
07:15-07:30A	12		9		2										23	
07:30-07:45A	8														8	
07:45-08:00A	11		4		2										18	
08:00-08:15A	19		9	1	1									1	31	
08:15-08:30A	14		5		3	1									25	
08:30-08:45A	16		7		1										25	
08:45-09:00A	15		4	1	1			1							23	
09:00-10:00A	33		3	1	1			2							39	
10:00-11:00A	31		8		1	1									43	1
11:00-12:00P	30		14		1										45	
12:00-01:00P	30		24		1										56	
01:00-02:00P	55		32		5			1							94	
02:00-03:00P	10		45		4	5		1						2	161	
03:00-04:00P	120		49		6	2		1						1	179	
04:00-04:15P	37		9		2										47	
04:15-04:30P	29		7		2										40	
04:30-04:45P	30		5		1										36	
04:45-05:00P	42		3		1										46	
05:00-05:15P	31		5		1										36	
05:15-05:30P	43		12		1										54	
05:30-05:45P	45		9		4									1	51	
05:45-06:00P	46		4												155	
06:00-07:00P	127		26		2										124	
07:00-08:00P	104		18	2											151	
08:00-09:00P	128		21		2										112	
09:00-10:00P	98		14													
16 HOUR	1295		356	6	40	15	1	5	5	5			3	5	1734	1

Summarized by: _____ 10/17/07

WORK_2456

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 30/31, 2007
 DAY OF WEEK : Mbn./Tues.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : EAST
 TO : SOUTH
 CITY: Keizer
 COUNTY : Marion
 INTERSECTION OF: N River Rd. @ Lockhaven Dr. NE
 MILE-POST : n/a
 TO : SOUTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	161 CY
	Cars	WTrlr	Other	WTrlr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	6 Axl	>7Axl	7 Axl	8 Axl				
05:00-07:00A	68		19	1	2			1		2							95	1	
07:00-07:15A	27		7	2													36		
07:15-07:30A	43		9		5			3									62		
07:30-07:45A	45		10		1												56		
07:45-08:00A	53		12													1	69		
08:00-08:15A	40		10	1													53		
08:15-08:30A	33		7		1												41		
08:30-08:45A	37		9		3			1									54		
08:45-09:00A	44		7		1												53		
09:00-10:00A	183		40		10			1									240	1	
10:00-11:00A	197		53		8			2									264		
11:00-12:00P	217		50	1	9			3									283		
12:00-01:00P	145		39	1	7												193		
01:00-02:00P	247		59	3	8			2									326		
02:00-03:00P	295		44	1	10			3									356		
03:00-04:00P	289		35	1	8			3									332		
04:00-04:15P	67		17		1			1									87		
04:15-04:30P	71		12		1												85		
04:30-04:45P	37		8														45		
04:45-05:00P	85		12		2												99		
05:00-05:15P	75		7		3												87		
05:15-05:30P	62		14		3												80		
05:30-05:45P	70		9		2												82		
05:45-06:00P	75		19	1	1												97		
06:00-07:00P	221		59	1	2												291	1	
07:00-08:00P	225		57		3												286	4	
08:00-09:00P	167		19	1													194		
09:00-10:00P	112		16														131		
15 HOUR	3221	5	659	14	92	10		8	14	3		1				38	12	4077	7

Summarized by: _____ | 10/17/07

WORK_2436

TRAFFIC COUN. SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 30/31, 2007 COUNTY : Marion CITY: Keizer
 DAY OF WEEK : Mon./Tues. INTERSECTION OF: N River Rd. & Lockhaven Dr. NE
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear MILE POST : n/a
 FROM : EAST TO : WEST

TIME OF DAY	PASSENGER CARS	OTHER 2 AXLE	SGL UNIT TRUCK			SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI. CY
			2 AXLE	3 AXLE	>4 AXLE	2 AXLE	3 AXLE	>4 AXLE	5 AXLE	6 AXLE	>7 AXLE	7 AXLE	8 AXLE	>9 AXLE				
06:00-07:00A	44	22	1	2	2	3	1	1	1	1	1	1	1	74	1	23		
07:00-07:15A	11	10	2	1	1	1	1	1	1	1	1	1	1	21	1	17		
07:15-07:30A	11	1	2	3	1	1	1	1	1	1	1	1	1	21	1	17		
07:30-07:45A	9	2	1	1	1	1	1	1	1	1	1	1	1	21	1	18		
07:45-08:00A	14	4	1	1	1	1	1	1	1	1	1	1	1	15	1	19		
08:00-08:15A	11	5	1	1	1	1	1	1	1	1	1	1	1	15	1	19		
08:15-08:30A	6	5	1	1	1	1	1	1	1	1	1	1	1	19	1	19		
08:30-08:45A	13	4	1	1	1	1	1	1	1	1	1	1	1	36	1	36		
08:45-09:00A	22	10	1	2	4	7	4	7	4	7	4	7	4	124	1	124		
09:00-10:00A	84	26	1	2	1	5	1	5	1	5	1	5	1	124	1	124		
10:00-11:00A	80	33	1	3	2	5	2	5	2	5	2	5	2	128	1	128		
11:00-12:00P	80	28	1	4	1	6	1	6	1	6	1	6	1	111	1	111		
12:00-01:00P	77	15	2	7	1	2	1	2	1	2	1	2	1	107	1	107		
01:00-02:00P	55	34	1	6	1	8	1	8	1	8	1	8	1	176	1	176		
02:00-03:00P	120	33	3	4	1	7	1	7	1	7	1	7	1	196	3	196		
03:00-04:00P	137	37	1	7	1	1	1	1	1	1	1	1	1	47	1	47		
04:00-04:15P	37	7	1	1	1	1	1	1	1	1	1	1	1	65	1	65		
04:15-04:30P	47	11	1	1	1	1	1	1	1	1	1	1	1	63	1	63		
04:30-04:45P	51	9	1	1	1	1	1	1	1	1	1	1	1	46	1	46		
04:45-05:00P	35	7	1	1	1	2	1	2	1	2	1	2	1	66	1	66		
05:00-05:15P	54	12	1	1	1	1	1	1	1	1	1	1	1	73	1	73		
05:15-05:30P	54	16	1	1	1	1	1	1	1	1	1	1	1	73	1	73		
05:30-05:45P	48	2	1	1	1	1	1	1	1	1	1	1	1	52	1	52		
05:45-06:00P	60	10	1	1	1	1	1	1	1	1	1	1	1	73	1	73		
06:00-07:00P	120	50	1	2	1	1	1	1	1	1	1	1	1	177	1	177		
07:00-08:00P	120	35	1	1	1	1	1	1	1	1	1	1	1	158	1	158		
08:00-09:00P	113	31	1	2	1	1	1	1	1	1	1	1	1	147	1	147		
09:00-10:00P	94	14	1	1	1	1	1	1	1	1	1	1	1	111	2	111		
16 HOUR	1607	473	19	43	35	4	5	17	53	17	53	17	53	2288	12	2288	32	

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 30/31, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : SOUTH

COUNTY : Marion
 INTERSECTION OF: N River Rd. @ Lockhaven Dr, NE
 CITY: Keizer

MILE POST : n/a
 TO : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY. CLE
	Cars	WTrLr	WTrLr	2 Axl	WTrLr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	6 Axl				
06:00-07:00A	158	42	42		3	3								4	2	212	
07:00-07:15A	40	17	17		1	2								1		63	
07:15-07:30A	28	16	16											1		46	
07:30-07:45A	68	16	16	1	2	1										88	
07:45-08:00A	49	14	14		3	2								3		70	
08:00-08:15A	41	18	18		2	2								1		65	
08:15-08:30A	38	16	16	1	3	1								1		65	
08:30-08:45A	41	16	16	1	3	2								1		87	
08:45-09:00A	67	16	16	2	2	6								4	2	337	
09:00-10:00A	247	57	57	1	16	2								3	2	363	
10:00-11:00A	266	72	72	8	5	7	2							3	1	473	
11:00-12:00P	358	87	87	3	9	3								3	2	630	
12:00-01:00P	498	108	108	2	11	3								3	2	430	
01:00-02:00P	280	119	119	6	11	7								6	2	531	
02:00-03:00P	417	84	84	2	12	7								5	5	580	
03:00-04:00P	445	101	101	5	12	3								1	2	186	
04:00-04:15P	147	32	32	1	3	1								1	1	184	
04:15-04:30P	144	35	35		1									2	1	189	
04:30-04:45P	142	39	39	2	3									2	3	212	
04:45-05:00P	143	57	57	3	4									2	5	217	
05:00-05:15P	166	42	42	1	1									1	3	228	
05:15-05:30P	180	44	44											1	1	216	
05:30-05:45P	173	39	39		2	1								1	1	209	
05:45-06:00P	150	51	51		4									3	5	613	
06:00-07:00P	480	117	117	4	4									2	3	446	
07:00-08:00P	345	90	90	1	3									2	5	335	
08:00-09:00P	289	37	37		3									1	1	318	
09:00-10:00P	282	29	29		4												
16 HOUR	5682	1411	1411	65	127	46	2	24	6	4	1		55	47	7654	14	

Summarized by: _____ | 10/17/07

WORK_2436

TRAFFIC COUN. SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 30/31, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : SOUTH

CITY: Keizer

COUNTY : Marion
 INTERSECTION OF: N River Rd. @ Lockhaven Dr. NE

MILE POST : r/a
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS			DBL TRAILER TRUCKS			TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOT	TOTAL ALL VEHICLE	BI CY CLE
	Cars	Wtr	Other	Wtr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	6 Axl	>7Axl	7 Axl	8 Axl				
06:00-07:00A	116		53		2	3		1	2							1	1	177	
07:00-07:15A	23		9			1												36	
07:15-07:30A	27		7	1														36	
07:30-07:45A	30		15		2	2			2									47	
07:45-08:00A	31		12		1	1												48	
08:00-08:15A	44		12		2	1												59	
08:15-08:30A	15		6		1	1												23	
08:30-08:45A	33		6		1	1			1									42	
08:45-09:00A	48		9	2	1	1												60	
09:00-10:00A	142	1	46	2	12	1	1		1							2	2	212	
10:00-11:00A	185		40	4	8	3		2								1	1	241	
11:00-12:00P	197		68	3	7	3		1								1	1	280	
12:00-01:00P	259		75	1	10	2		1								2	2	351	
01:00-02:00P	246		77	1	8	1										1	1	337	
02:00-03:00P	260		77	2	13	4										2	2	359	
03:00-04:00P	262		42	1	11	1										1	2	320	
04:00-04:15P	76		14		2											1	1	94	
04:15-04:30P	61		15													3	1	79	
04:30-04:45P	75		24	1														101	
04:45-05:00P	63		14	1														78	
05:00-05:15P	92		18	1					1									113	
05:15-05:30P	80		13		2	2												95	
05:30-05:45P	128		22		1	1												151	
05:45-06:00P	70		15		2	2										1	4	92	
06:00-07:00P	221		49	3	4	6		1								6	6	282	
07:00-08:00P	214		41		6	2										1	1	266	1
08:00-09:00P	210		22		2											1	1	235	
09:00-10:00P	146		35													1	1	184	
16 HOUR	3354	3	836	23	99	22	1	5	11	3						17	26	4398	1

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 30/31, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED: 6AM - 10PM
 WEATHER : clear
 FROM : SOUTH
 COUNTY : Norwich
 INTERSECTION OF: N River Rd. @ Lockhaven Dr., NE
 CITY: Keizer
 HILE POST : 7/a
 TO : WEST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	CY	CLE
	Cars	Mtrlr	Other	Mtrlr	2 AXL	3 AXL	4 AXL	5 AXL	6 AXL	7 AXL	8 AXL	>9 AXL					
06:00-07:00A	15	7	7			1								1	22		
07:00-07:15A	2						1								4		
07:15-07:30A	8	3	3										2		13		
07:30-07:45A	5	2	2			1									8		
07:45-08:00A	6	4	4			1									11		
08:00-08:15A	8	5	5												13		
08:15-08:30A	2	1	1												3		
08:30-08:45A	7	1	1												9		
08:45-09:00A	9	4	4			1									15		
09:00-10:00A	52	12	12			1			1						67		1
10:00-11:00A	45	19	19			1			1						66		
11:00-12:00P	57	12	12			1			2						74		
12:00-01:00P	91	19	19			1			1				1		114		
01:00-02:00P	71	15	15			1			3					2	90		
02:00-03:00P	66	11	11			1			2						83		1
03:00-04:00P	79	17	17			1			2						90		
04:00-04:15P	22	4	4												26		
04:15-04:30P	23	10	10												33		
04:30-04:45P	18	8	8												26		
04:45-05:00P	16	9	9												25		
05:00-05:15P	29	7	7												36		
05:15-05:30P	12	7	7												19		
05:30-05:45P	35	12	12											1	48		
05:45-06:00P	19	7	7											1	26		
06:00-07:00P	58	19	19												79		
07:00-08:00P	43	6	6												49		
08:00-09:00P	44	2	2												47		
09:00-10:00P	46	6	6												52		
16 HOUR	877	250	250	1	8	7	2	12	1				3	7	1148		3

Summarized by: _____ | 10/17/07

MPRK_2436

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 30/31, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM :
 CITY : Keizer
 COUNTY : Marion
 INTERSECTION OF : N. River Rd. & Lockhaven Dr. NE
 MILE POST :
 TO : NORTH

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SGL UNIT TRUCK		SGL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS		BUSES	MOTOR CYCLE	TOTAL ALU VEHICLE	BI CY CLE
	Cars	WTLr	Other	WTLr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	6 Axl				
06:00-07:00A	42		12		1									1	57	
07:00-07:15A	10		5											1	11	
07:15-07:30A	7		1		1										12	
07:30-07:45A	7		4												9	
07:45-08:00A	10		7		1										15	
08:00-08:15A	6		4												14	
08:15-08:30A	4		6		1										5	
08:30-08:45A	5		4		1										13	
08:45-09:00A	9		14	1	2				1						14	
09:00-10:00A	33		7		2										52	
10:00-11:00A	30		16		3										41	
11:00-12:00P	30		14		2										49	1
12:00-01:00P	17		11	2	2				1						34	
01:00-02:00P	30		8		5				1						49	1
02:00-03:00P	33		8		2										47	
03:00-04:00P	36		4		2										48	
04:00-04:15P	12		4												16	
04:15-04:30P	10		3		1										14	
04:30-04:45P	20		2	1											24	
04:45-05:00P	17		2					1							21	
05:00-05:15P	9		4	2											15	
05:15-05:30P	16		5		2										23	
05:30-05:45P	25		6		3										31	
05:45-06:00P	17		6		4										26	
06:00-07:00P	62		21		1									1	87	
07:00-08:00P	44		11		2										56	
08:00-09:00P	25		8												36	
09:00-10:00P	22		7												29	
16 HOUR	588		196	6	22	29	3	1					3		848	3

WORK_2436

Summarized by: _____ 10/17/07

TRAFFIC COUNT SUMMARY SHEET
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 30/31, 2007
 DAY OF WEEK : Mon./Tues.
 HOURS COUNTED : 6AM - 10PM
 WEATHER : clear
 FROM : WEST

CITY: Keizer

COUNTY : Marion
 INTERSECTION OF: N River Rd. @ Lockhaven Dr. NE

MILE PCST : P/B
 TO : EAST

TIME OF DAY	PASSENGER		OTHER 2 AXLE		SQL UNIT TRUCK		SQL TRAILER TRUCKS		DBL TRAILER TRUCKS		TRP TRAILER TRUCKS			BUSES	MOTOR CYCLE SCOOTER	TOTAL ALL VEHICLE	BI CY CLS
	Cars	WTrlr	Other	WTrlr	2 Axl	3 Axl	>4Axl	4 Axl	5 Axl	>6Axl	5 Axl	6 Axl	>7Axl				
06:00-07:00A	110		46	1		1		2	3						6	172	
07:00-07:15A	50		12	2		1		1	1						1	48	
07:15-07:30A	23		10						2							35	
07:30-07:45A	34		8	1		1		1	1							45	
07:45-08:00A	40		7	1		1		1	1							50	
08:00-08:15A	22		9						1							33	
08:15-08:30A	11		5			1			1							18	
08:30-08:45A	30		10	1		1			1							43	
08:45-09:00A	20		10					2	2						1	35	
09:00-10:00A	95		20	1		2		2	4						1	128	
10:00-11:00A	109		31	4		1		2	5							154	
11:00-12:00P	97		37	2		3			6							151	
12:00-01:00P	60		19	2		2			7							93	
01:00-02:00P	82		34	2		2			7							130	
02:00-03:00P	110		30	2		3		2	7							158	
03:00-04:00P	116		41	3		5		1	5							181	
04:00-04:15P	29		7			1			2							42	
04:15-04:30P	28		8			2			1							38	
04:30-04:45P	46		7			2			1							58	
04:45-05:00P	50		10			1			1							61	
05:00-05:15P	38		12	2		1			1							54	
05:15-05:30P	24		6			1			1							32	
05:30-05:45P	30		9						1							41	
05:45-06:00P	24		9						2							34	
06:00-07:00P	55		28	2		2			2						5	68	
07:00-08:00P	40		23	2		1			2							88	
08:00-09:00P	70		13			1			1							80	
09:00-10:00P	61		17														
16 HOUR	1484	1	478	25	28	33	5	15	55	17	2	18	2159	19			

SUMMARY OF BICYCLE COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 30/31, 2007 DAY : Mon./Tues. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: clear INTERSECTION OF: N River Rd. @ Lockhaven Dr. NE
 Tab by: Chk. by: MILE POST : n/a

TIME OF DAY	BICYCLES MOVING WITH VEHICULAR TRAFFIC										BICYCLES USING CROSS WALKS						
	N-E	N-S	N-W	E-N	E-S	E-W	S-N	S-E	S-W	N-N	W-E	W-S	TOTAL	NORTH	EAST	SOUTH	WEST
06:00-07:00A				1					1			2	4				
07:00-07:15A																	
07:15-07:30A																	
07:30-07:45A																	
07:45-08:00A							1										
08:00-08:15A							1										
08:15-08:30A																	
08:30-08:45A									1								
08:45-09:00A																	
09:00-10:00A																	
10:00-11:00A																	
11:00-12:00P																	
12:00-01:00P																	
01:00-02:00P																	
02:00-03:00P																	
03:00-04:00P																	
04:00-04:15P																	
04:15-04:30P																	
04:30-04:45P																	
04:45-05:00P																	
05:00-05:15P																	
05:15-05:30P																	
05:30-05:45P																	
05:45-06:00P																	
06:00-07:00P																	
07:00-08:00P																	
08:00-09:00P																	
09:00-10:00P																	
TOTAL VOLUME	2	23	3	1	7	32	14	1	3	3	19	5	115			2	

SUMMARY OF PEDESTRIAN COUNT
TRANSPORTATION DEVELOPMENT BRANCH - RESEARCH SECTION

DATE : July 30/31, 2007 DAY : Mon./Tues. COUNTY : Marion CITY: Keizer
 HOURS : 6AM - 10PM WEATHER: Clear INTERSECTION OF: N River Rd. @ Lockhaven Dr. NE

Tab by: Chk. by: MILE POST: n/s

TIME OF DAY	STUDENT PEDESTRIANS			OTHER PEDESTRIANS			STUDENT AND OTHER PEDESTRIAN						
	NORTH	EAST	WEST	TOTAL	NORTH	EAST	WEST	TOTAL	NORTH	EAST	WEST	TOTAL	
06:00-07:00A													
07:00-07:15A													
07:15-07:30A													
07:30-07:45A													
07:45-08:00A													
08:00-08:15A													
08:15-08:30A													
08:30-08:45A													
08:45-09:00A													
09:00-10:00A													
10:00-11:00A													
11:00-12:00P													
12:00-01:00P													
01:00-02:00P													
02:00-03:00P													
03:00-04:00P													
04:00-04:15P													
04:15-04:30P													
04:30-04:45P													
04:45-05:00P													
05:00-05:15P													
05:15-05:30P													
05:30-05:45P													
05:45-06:00P													
06:00-07:00P													
07:00-08:00P													
08:00-09:00P													
09:00-10:00P													
TOTAL VOLUME				34			40	74		34		40	74



Intersection Turning Movement Summary Report

Location CHEMAWA ROAD AT VERDA LANE

Date 4/24/2006

Day of Week Monday

Time Begin 16:00

Reviewed By: DH

Time Period	Eastbound			Westbound			Northbound			Southbound			Totals
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
16:00 - 16:15	38	47	4	1	22	15	31	26	33	8	19	0	244
16:15 - 16:30	28	36	9	0	41	20	27	28	36	6	20	0	249
16:30 - 16:45	35	37	3	2	33	20	32	28	35	19	23	1	268
16:45 - 17:00	40	47	8	0	30	30	26	32	38	3	18	1	273
17:00 - 17:15	35	40	9	2	29	26	39	45	38	5	29	1	296
17:15 - 17:30	31	52	5	0	35	19	25	38	44	7	18	1	275
17:30 - 17:45	34	32	8	0	31	31	33	35	39	6	27	3	281
17:45 - 18:00	36	41	10	1	33	21	15	25	43	12	24	2	263
Movement Totals	275	332	56	6	254	182	228	257	304	68	178	9	2149
Enter Totals		663			442			789			255		
Exit Totals		569			626			319			635		

Two-Hour Totals	Right	Thru	Left	Totals									
Light Trucks	8	4	0	0	4	0	1	6	3	0	2	0	28
Medium Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Trucks	0	0	0	0	2	0	0	0	0	0	0	0	2
% Trucks	2.9%	1.2%	0.0%	0.0%	2.4%	0.0%	0.4%	2.3%	1.0%	0.0%	1.1%	0.0%	1.4%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	3	0	2	6	0	0	1	0	12

Pedestrians	South 0	West 2	East 8	North 1	11
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Peak Hour Information

Peak Hour 16:45 17:45

	Eastbound			Westbound			Northbound			Southbound			Totals
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Movement Total	140	171	30	2	125	106	123	150	157	23	92	6	1125
Peak Hour Factor	0.88	0.82	0.83	0.25	0.89	0.85	0.79	0.83	0.89	0.72	0.78	0.50	0.95

Enter Totals	341	121	430	233
Peak Hour Factor	0.90	0.80	0.90	0.94
Exit Totals	300	338	182	305
Peak Hour Factor	0.94	0.92	0.81	0.89

Light Trucks	2	2	0	0	1	0	0	3	1	0	2	0	11
Medium Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0
% Trucks	1.4%	1.2%	0.0%	0.0%	0.8%	0.0%	0.0%	2.0%	0.6%	0.0%	2.2%	0.0%	1.0%
Stopped Buses	0	0	0	0	0	0	0	0	0	0	0	0	0
Bicycles	0	0	0	0	0	0	0	2	0	0	1	0	3

Pedestrians	South 0	West 0	East 6	North 0	6
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Intersection Turning Movement Peak Hour Diagram

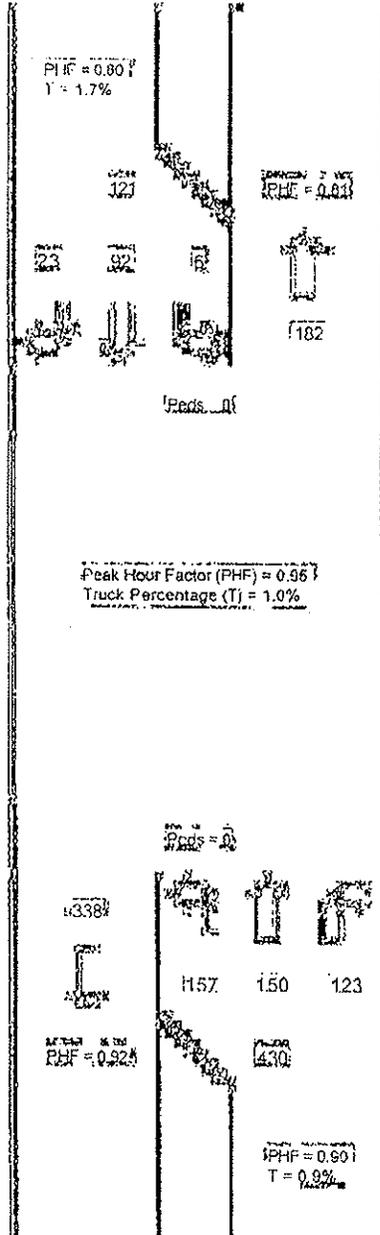
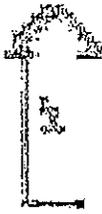
Location CHEMAWA ROAD AT VERDA LANE

Date 4/24/2006

Day of Week Monday

Time Begin 16.00

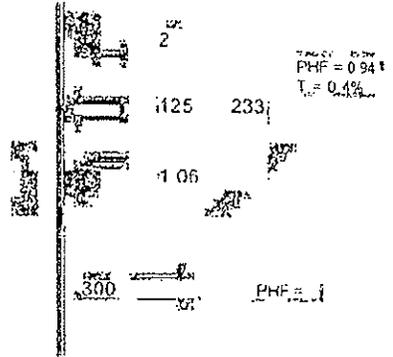
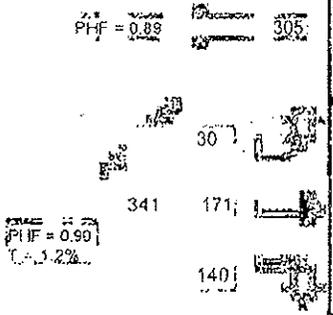
Reviewed By: DH



Peak Hour Starts 16:45

Peak Hour Volume 1125

CHEMAWA ROAD



TRAFFICSTATS

Site 1 : VERDA LN NORTH OF
 Site 2 : CHEMAWA
 Site 3 : KEIZER

Site: 43
 Date: 04/12/06

Interval	Day: Wednesday		
Begin	NB	SB	Combined
12:AM	0	2	2
01:00	6	4	10
02:00	5	2	7
03:00	3	2	5
04:00	5	6	11
05:00	8	16	24
06:00	32	48	80
07:00	68	170	238
08:00	78	114	192
09:00	56	100	156
10:00	57	62	119
11:00	90	87	177
12:PM	98	110	208
01:00	76	84	160
02:00	110	112	222
03:00	169	138	307
04:00	165	161	326
05:00	183	128	311
06:00	134	105	239
07:00	111	86	197
08:00	84	69	153
09:00	41	34	75
10:00	22	21	43
11:00	11	6	17
Totals	1,612	1,667	3,279
Split %	49.2	50.8	
AM Peak	11:00	07:00	07:00
Volume	90	170	238
PM Peak	05:00	04:00	04:00
Volume	183	161	326

TRAFFICSTATS

Site 1 : VERDA LN NORTH OF
 Site 2 : CHEMAWA
 Site 3 : KEIZER

Site: 43
 Date: 04/13/06

Interval	Day: Thursday		
Begin	NB	SB	Combined
12:AM	4	2	6
01:00	6	7	13
02:00	7	2	9
03:00	0	3	3
04:00	5	6	11
05:00	10	18	28
06:00	35	38	73
07:00	62	169	231
08:00	78	112	190
09:00	76	82	158
10:00	49	68	117
11:00	89	76	165
12:PM	90	94	184
01:00	90	95	185
02:00	106	96	202
03:00	133	128	261
04:00	163	152	315
05:00	172	126	298
06:00	148	122	270
07:00	111	79	190
08:00	71	60	131
09:00	59	38	97
10:00	45	24	69
11:00	10	8	18
Totals	1,619	1,605	3,224
Split %	50.2	49.8	
AM Peak Volume	11:00 89	07:00 169	07:00 231
PM Peak Volume	05:00 172	04:00 152	04:00 315

TRAFTSTATS

Site 1 : VERDA LN SOUTH OF
 Site 2 : CHEMAWA RD
 Site 3 : KEIZER

Site: 45
 Date: 04/12/06

Interval	Day: Wednesday		
Begin	NB	SB	Combined
12:AM	15	18	33
01:00	17	7	24
02:00	7	2	9
03:00	14	5	19
04:00	16	13	29
05:00	48	44	92
06:00	110	144	254
07:00	208	382	590
08:00	138	212	350
09:00	120	191	311
10:00	134	162	296
11:00	203	198	401
12:PM	222	258	480
01:00	232	204	436
02:00	244	258	502
03:00	314	276	590
04:00	401	342	743
05:00	493	323	816
06:00	318	292	610
07:00	259	340	599
08:00	249	205	454
09:00	159	117	276
10:00	76	85	161
11:00	30	32	62
Totals	4,027	4,110	8,137
Split %	49.5	50.5	
AM Peak Volume	07:00 208	07:00 382	07:00 590
PM Peak Volume	05:00 493	04:00 342	05:00 816

TRAFFICSTATS

Site 1 : VERDA LN SOUTH OF
 Site 2 : CHEMAWA RD
 Site 3 : KEIZER

Site: 45
 Date: 04/13/06

Interval	Day: Thursday		
Begin	NB	SB	Combined
12:AM	11	11	22
01:00	11	6	17
02:00	15	6	21
03:00	9	8	17
04:00	16	12	28
05:00	45	51	96
06:00	108	128	236
07:00	207	362	569
08:00	166	236	402
09:00	169	180	349
10:00	146	158	304
11:00	196	183	379
12:PM	202	234	436
01:00	214	206	420
02:00	238	210	448
03:00	288	281	569
04:00	396	334	730
05:00	487	322	809
06:00	328	326	654
07:00	240	302	542
08:00	184	180	364
09:00	146	108	254
10:00	89	84	173
11:00	39	26	65
Totals	3,950	3,954	7,904
Split %	50.0	50.0	
AM Peak Volume	07:00 207	07:00 362	07:00 569
PM Peak Volume	05:00 487	04:00 334	05:00 809

TRAFFICSTATS

Site 1 : CHEMEWA RD WEST OF
 Site 2 : VERDA LN
 Site 3 : KEIZER

Site: 9
 Date: 04/12/06

Interval	Day: Wednesday		
Begin	EB	WB	Combined
12:AM	21	17	38
01:00	5	9	14
02:00	8	11	19
03:00	8	11	19
04:00	17	13	30
05:00	50	27	77
06:00	134	68	202
07:00	276	246	522
08:00	208	198	406
09:00	184	167	351
10:00	184	165	349
11:00	206	214	420
12:PM	274	222	496
01:00	258	224	482
02:00	292	251	543
03:00	316	308	624
04:00	347	373	720
05:00	388	360	748
06:00	310	278	588
07:00	224	314	538
08:00	194	228	422
09:00	124	142	266
10:00	96	74	170
11:00	36	30	66
Totals	4,160	3,950	8,110
Split %	51.3	48.7	
AM Peak	07:00	07:00	07:00
Volume	276	246	522
PM Peak	05:00	04:00	05:00
Volume	388	373	748

TRAFFICSTATS

Site 1 : CHEMEWA RD WEST OF
 Site 2 : VERDA LN
 Site 3 : KEIZLER

Site: 9
 Date: 04/13/06

Interval	Day: Thursday		
Origin	EB	WB	Combined
12:AM	9	12	21
01:00	9	12	21
02:00	4	11	15
03:00	6	9	15
04:00	23	16	39
05:00	52	32	84
06:00	142	68	210
07:00	276	245	521
08:00	213	184	397
09:00	182	194	376
10:00	178	174	352
11:00	212	224	436
12:PM	244	218	462
01:00	216	212	428
02:00	268	241	509
03:00	300	285	585
04:00	304	360	664
05:00	356	390	746
06:00	322	403	725
07:00	256	276	532
08:00	214	182	396
09:00	132	131	263
10:00	76	55	131
11:00	41	37	78
Totals	4,035	3,971	8,006
Peak %	50.4	49.6	
AM Peak Volume	07:00 276	07:00 245	07:00 521
PM Peak	05:00 356	06:00 403	05:00 746

Appendix "E"
Intersection Operations
Worksheets

Kittelton & Associates, Inc. - Project #: 8310
 Keizer TSP Update -- Keizer, OR
 Year 2007 Existing Traffic Conditions - Weekday AM Peak Hour

Scenario Report

Scenario: AM
 Command: AM
 Volume: AM
 Geometry: Existing
 Impact Fee: Default Impact Fee
 Trip Generation: AM
 Trip Distribution: Default Trip Distribution
 Paths: Default Path
 Routes: Default Route
 Configuration: Existing

Kittelton & Associates, Inc. - Project #: 8310
 Keizer TSP Update -- Keizer, OR
 Year 2007 Existing Traffic Conditions - Weekday AM Peak Hour

Impact Analysis Report
 Level Of Service

Intersection	Base Del/ LOS Veh C	V/ C	Future Del/ LOS Veh C	V/ C	Change in
# 3 River and Wheatland	C 27.3	0.483	C 27.3	0.483	+ 0.000 D/V
# 5 River and Lockhaven	C 33.6	0.539	C 33.6	0.539	+ 0.000 D/V
# 8 River and Chemawa	C 30.2	0.541	C 30.2	0.541	+ 0.000 D/V
# 9 Verda and Chemawa	B 11.5	0.437	B 11.5	0.437	+ 0.000 V/C
# 10 River and Manbrin	A 8.7	0.480	A 8.7	0.480	+ 0.000 D/V
# 26 River and Dearborn	A 8.9	0.470	A 8.9	0.470	+ 0.000 D/V
# 38 Lockhaven and 14th	B 14.2	0.469	B 14.2	0.469	+ 0.000 D/V
# 53 River and Manzanita	C 23.2	0.429	C 23.2	0.429	+ 0.000 D/V
# 64 Lockhaven and Verda	C 23.9	0.000	C 23.9	0.000	+ 0.000 D/V

Kittelson & Associates, Inc. - Project #: 8310
Keizer TSP Update -- Keizer, OR
Year 2007 Existing Traffic Conditions - Weekday AM Peak Hour

Level of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #38 Lockhaven and 14th

Cycle (sec): 90 Critical Vol./Cap. (X): 0.469
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/Veh): 14.2
Optimal Cycle: 38 Level of Service: B

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Permitted Permitted Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 1 0 0 0 1 0 0 0 1 0 0 0 0 0
Lanes: 0 0 1 0 0 0 1 0 0 1 1 0 0 1 0 0 1 0

Volume Module:
Base Vol: 8 5 22 128 11 27 21 511 5 12 377 50
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 8 5 22 128 11 27 21 511 5 12 377 50
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94 0.94
PHF Volume: 9 5 23 136 12 29 22 544 5 13 401 53
Reduced Vol: 9 5 23 136 12 29 22 544 5 13 401 53
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 9 5 23 136 12 29 22 544 5 13 401 53

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.86 0.86 0.86 0.70 0.71 0.95 0.95 1.00 1.00 0.95 0.98 0.98
Lanes: 0.23 0.14 0.63 0.92 0.08 1.00 1.00 0.99 0.01 1.00 0.88 0.12
Final Sat.: 374 234 1029 1231 106 1615 1805 1880 18 1805 1647 218

Capacity Analysis Module:
Vol/Sat: 0.02 0.02 0.02 0.11 0.11 0.02 0.01 0.29 0.29 0.01 0.24 0.24
Crit Moves: ****
Green/Cycle: 0.24 0.24 0.24 0.24 0.24 0.03 0.62 0.62 0.02 0.60 0.60
Volume/Cap: 0.10 0.10 0.10 0.47 0.47 0.08 0.41 0.47 0.47 0.41 0.41
Delay/Veh: 27.0 27.0 27.0 30.7 30.7 26.9 47.6 9.6 9.6 56.2 9.7 9.7
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 27.0 27.0 27.0 30.7 30.7 26.9 47.6 9.6 9.6 56.2 9.7 9.7
LOS by Move: C C C C D A A E A A
HCM2kVqO: 21 21 21 101 101 16 15 199 199 10 162 162

Note: Queue reported is the distance per lane in feet.

Kittelson & Associates, Inc. - Project #: 8310
Keizer TSP Update -- Keizer, OR
Year 2007 Existing Traffic Conditions - Weekday AM Peak Hour

Level of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #53 River and Manzanita

Cycle (sec): 120 Critical Vol./Cap. (X): 0.429
Loss Time (sec): 16 (Y+R=4.0 sec) Average Delay (sec/Veh): 23.2
Optimal Cycle: 45 Level of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 1 0 1 0 0 0 1 0 1 0 1 0 1 0 1 0 1 0
Lanes: 1 0 1 0 0 0 1 0 1 0 1 0 1 0 1 0 1 0

Volume Module:
Base Vol: 24 326 58 163 799 19 24 24 55 38 16 53
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 24 326 58 163 799 19 24 24 55 38 16 53
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.83 0.83 0.83 0.83 0.83 0.83 0.83 0.83 0.83 0.83 0.83 0.83
PHF Volume: 29 393 70 196 963 23 29 29 66 46 19 64
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0
PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 29 393 70 196 963 23 29 29 66 46 19 64

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.93 0.93 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
Lanes: 1.00 1.70 0.30 1.00 1.95 0.05 1.00 0.30 0.70 1.00 0.23 0.77
Final Sat.: 1805 2994 533 1805 3516 84 1805 513 1176 1805 387 1281

Capacity Analysis Module:
Vol/Sat: 0.02 0.13 0.13 0.11 0.27 0.27 0.02 0.06 0.06 0.03 0.05 0.05
Crit Moves: ****
Green/Cycle: 0.04 0.37 0.37 0.31 0.64 0.64 0.05 0.13 0.13 0.06 0.14 0.14
Volume/Cap: 0.43 0.35 0.35 0.35 0.43 0.43 0.35 0.43 0.43 0.43 0.35 0.35
Delay/Veh: 60.8 27.6 27.6 32.8 10.9 10.9 57.9 49.3 49.3 57.2 47.1 47.1
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 60.8 27.6 27.6 32.8 10.9 10.9 57.9 49.3 49.3 57.2 47.1 47.1
LOS by Move: E C C C B E D A E D
HCM2kVqO: 26 156 155 134 230 230 36 92 91 54 76 75

Note: Queue reported is the distance per lane in feet.

 Kittelson & Associates, Inc. - Project #: 8310
 Keizer TSP Update -- Keizer, OR
 Year 2007 Existing Traffic Conditions - Weekday AM Peak Hour

 Level Of Service Computation Report
 2000 HCM Unsignalized Method (Base Volume Alternative)

 Intersection #64 Lockhaven and Verda

 Average Delay (sec/veh): 1.1 Worst Case Level Of Service: C [23.9]

 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Stop Sign Stop Sign Uncontrolled Uncontrolled
 Rights: Include Include Include Include
 Lanes: 0 0 1 1 0 0 0 0 0 0 0 0 1 0 1 0 0 0

Volume Module:
 Base Vol: 39 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 39 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91
 PHF Volume: 43 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 Final Volume: 43 0 5 0 0 0 0 0 0 0 0 0 0 0 0 0 0

Critical Gap Module:
 Critical Gap: 6.4 6.5 6.2 xxxxx xxx xxxxxx xxxxxx xxxxxx 4.1 xxxxxx
 FollowUpTim: 3.5 4.0 3.3 xxxxx xxx xxxxxx xxxxxx xxxxxx 2.2 xxxxxx

Capacity Module:
 Conflict Vol: 1133 623 xxxxx xxx xxxxxx xxxxxx xxxxxx 645 xxxxxx
 Potent Cap.: 226 205 490 xxxxx xxx xxxxxx xxxxxx xxxxxx 950 xxxxxx
 Move Cap.: 224 201 490 xxxxx xxx xxxxxx xxxxxx xxxxxx 950 xxxxxx
 Volume/Cap: 0.19 0.00 0.01 xxxxx xxx xxxxxx xxxxxx 0.02 xxxxxx

Level Of Service Module:
 2Way95thQ: xxx xxx xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx 1.2 xxxxxx
 Control Del: xxxxxx xxx xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx 8.9 xxxxxx
 LOS by Move: * * * * *
 Movement: LT - LTR - RT
 Shared Cap: xxx 238 xxxxxx xxx xxx xxxxxx xxx xxx xxxxxx
 Shared Queue: xxxxxx 0.7 xxxxxx xxxxxx xxxxxx xxxxxx xxxxxx
 Shrd ConDel: xxxxxx 23.9 xxxxxx xxxxxx xxxxxx xxxxxx
 Shared LOS: * * * * *
 ApproachDel: 23.9
 ApproachLOS: C

Note: Queue reported is the distance per lane in feet.

Kittelton & Associates, Inc. - Project #: 8310
Keizer TSP Update -- Keizer, OR
Year 2007 Existing Traffic Conditions - Weekday AM Peak Hour

Kittelton & Associates, Inc. - Project #: 8310
Keizer TSP Update -- Keizer, OR
Year 2007 Existing Traffic Conditions - Weekday AM Peak Hour

Scenario Report

Impact Analysis Report
Level Of Service

Scenario: AM
Command: AM
Volume: AM
Geometry: Existing
Impact Fee: Default Impact Fee
Trip Generation: AM
Trip Distribution: Default Trip Distribution
Paths: Default Path
Routes: Default Route
Configuration: Existing

Intersection
12 Salem Parkway and Cherry
20 Verda and Salem Parkway

Base	Future	Change
Del/V	Del/V	in
LOS Veh	LOS Veh	
C	C	
29.6 0.631	29.6 0.631	+ 0.000 D/V
31.2 0.660	31.2 0.660	+ 0.000 D/V

Kittelson & Associates, Inc. - Project #: 8310
 Keizer TSP Update -- Keizer, OR
 Year 2007 Existing Traffic Conditions - Weekday PM Peak Hour

Scenario Report

Scenario: PM
 Command: PM
 Volume: PM
 Geometry: Existing
 Impact Fee: Default Impact Fee
 Trip Generation: PM
 Trip Distribution: Default Trip Distribution
 Paths: Default Path
 Routes: Default Route
 Configuration: Existing

Kittelson & Associates, Inc. - Project #: 8310
 Keizer TSP Update -- Keizer, OR
 Year 2007 Existing Traffic Conditions - Weekday PM Peak Hour

Impact Analysis Report
 Level Of Service

Intersection	Base		Future		Change in
	Del/ LOS Veh C	V/ C	Del/ LOS Veh C	V/ C	
# 3 River and Wheatland	C 27.7	0.715	C 27.7	0.715	+ 0.000 D/V
# 6 River and Lockhaven	D 38.2	0.786	D 38.2	0.786	+ 0.000 D/V
# 8 River and Chemawa	C 34.1	0.677	C 34.1	0.677	+ 0.000 D/V
# 9 Verda and Chemawa	C 17.9	0.754	C 17.9	0.754	+ 0.000 V/C
# 10 River and Manbrin	B 11.0	0.662	B 11.0	0.662	+ 0.000 D/V
# 26 River and Dearborn	B 14.6	0.770	B 14.6	0.770	+ 0.000 D/V
# 38 Lockhaven and 14th	B 17.7	0.787	B 17.7	0.787	+ 0.000 D/V
# 53 River and Manzanita	C 33.4	0.662	C 33.4	0.662	+ 0.000 D/V
# 64 Lockhaven and Verda	F 54.2	0.000	F 54.2	0.000	+ 0.000 D/V

Kittelson & Associates, Inc. -- Project #: 8310
Keizer TSP Update -- Keizer, OR
Year 2007 Existing Traffic Conditions - Weekday PM Peak Hour

Level of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 River and Chemawa
Cycle (sec): 120 Critical Vol./Cap.(X): 0.677
Loss Time (sec): 16 (Y+R=4.0 sec) Average Delay (sec/veh): 34.1
Optimal Cycle: 69 Level of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Protected Protected Protected Protected
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0

Volume Module:
Base Vol: 259 1208 76 79 694 81 149 75 190 92 105 106
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 259 1208 76 79 694 81 149 75 190 92 105 106
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
PHF Volume: 264 1233 78 81 708 83 152 77 194 94 107 108
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PCE Adj: 264 1233 78 81 708 83 152 77 194 94 107 108
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 264 1233 78 81 708 83 152 77 194 94 107 108

Saturation Flow Module:
Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
Adjustment: 0.95 0.94 0.94 0.95 0.93 0.93 0.95 1.00 0.83 0.95 1.00 0.81
Lanes: 1.00 1.88 0.12 1.00 1.79 0.21 1.00 1.00 1.00 1.00 1.00 1.00
Final Sat: 1805 3365 212 1805 3180 371 1805 1900 1568 1805 1900 1546

Capacity Analysis Module:
Vol/Sat: 0.15 0.37 0.37 0.04 0.22 0.22 0.08 0.04 0.12 0.05 0.06 0.07
Crit Moves: ****
Green/Cycle: 0.24 0.54 0.54 0.07 0.37 0.37 0.14 0.18 0.18 0.08 0.12 0.12
Volume/Cap: 0.61 0.68 0.68 0.68 0.61 0.61 0.59 0.22 0.68 0.68 0.48 0.59
Delay/Veh: 43.0 20.9 20.9 69.3 31.8 31.8 52.0 42.1 52.1 66.5 51.1 55.4
User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 43.0 20.9 20.9 69.3 31.8 31.8 52.0 42.1 52.1 66.5 51.1 55.4
LOS by Move: D C C D D D D E D E
HCM2kAVGQ: 206 439 438 77 307 307 152 61 196 117 105 118

Note: Queue reported is the distance per lane in feet.

Kittelson & Associates, Inc. -- Project #: 8310
Keizer TSP Update -- Keizer, OR
Year 2007 Existing Traffic Conditions - Weekday PM Peak Hour

Level of Service Computation Report
2000 HCM 4-way Stop Method (Base Volume Alternative)

Intersection #9 Verda and Chemawa
Cycle (sec): 100 Critical Vol./Cap.(X): 0.754
Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 17.9
Optimal Cycle: 0 Level of Service: C

Approach: North Bound South Bound East Bound West Bound
Movement: L - T - R L - T - R L - T - R L - T - R
Control: Stop Sign Stop Sign Stop Sign Stop Sign
Rights: Include Include Include Include
Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Lanes: 0 0 1 0 0 0 0 0 1 0 0 0 0 0 1 0 0 0

Volume Module:
Base Vol: 157 150 123 6 92 23 30 171 148 106 125 2
Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Initial Bse: 157 150 123 6 92 23 30 171 148 106 125 2
User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
PHF Volume: 165 158 129 6 97 24 32 180 147 112 132 2
Reduced Vol: 0 0 0 0 0 0 0 0 0 0 0 0
PCE Adj: 165 158 129 6 97 24 32 180 147 112 132 2
MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Final Volume: 165 158 129 6 97 24 32 180 147 112 132 2

Saturation Flow Module:
Adjustment: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
Lanes: 0.36 0.35 0.29 0.05 0.76 0.19 0.09 0.50 0.41 0.45 0.54 0.01
Final Sat: 219 210 172 24 364 91 51 292 239 238 280 4

Capacity Analysis Module:
Vol/Sat: 0.75 0.75 0.75 0.27 0.27 0.27 0.62 0.62 0.62 0.47 0.47 0.47
Crit Moves: ****
Delay/Veh: 22.7 22.7 22.7 11.3 11.3 11.3 16.7 16.7 16.7 14.1 14.1 14.1
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
AdjDel/Veh: 22.7 22.7 22.7 11.3 11.3 11.3 16.7 16.7 16.7 14.1 14.1 14.1
LOS by Move: C C C B B B C C C B B B
ApproachDel: 22.7 14.1 14.1 16.7 16.7 16.7 14.1 14.1 14.1 1.00 1.00
Delay Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
ApprAdjDel: 22.7 11.3 11.3 16.7 16.7 16.7 14.1 14.1 14.1 1.00 1.00 1.00
LOS by Appr: C C C B B B C C C B B B
AllwayAVGQ: 58.0 58.0 58.0 6.3 6.3 6.3 31.7 31.7 31.7 17.2 17.2 17.2

Note: Queue reported is the distance per lane in feet.

Kittelson & Associates, Inc. - Project #: 8310
Keizer TSP Update -- Keizer, OR
Year 2007 Existing Traffic Conditions - Weekday PM Peak Hour

Scenario Report

Scenario: PM
Command: PM
Volume: PM
Geometry: Existing
Impact Fee: Default Impact Fee
Trip Generation: PM
Trip Distribution: Default Trip Distribution
Paths: Default Path
Routes: Default Route
Configuration: Existing

Kittelson & Associates, Inc. - Project #: 8310
Keizer TSP Update -- Keizer, OR
Year 2007 Existing Traffic Conditions - Weekday PM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base		Future		Change in
	Del/	V/	Del/	V/	
# 12 Salem Parkway and Cherry	D	35.6 0.707	D	35.6 0.707	+ 0.000 D/V
# 20 Verda and Salem Parkway	D	40.5 0.839	D	40.5 0.839	+ 0.000 D/V

HCM Signalized Intersection Capacity Analysis
 3: Shangri & River Road

Year 2007 Existing Traffic
 Weekday PM Peak Hour



Movement	EWB	WBR	NBE	NBT	NBR	SEB	SEB	SEB	NEL	NBR
Lane Configurations	Y		↑↓		↖		↑↓			
Volume (vph)	2	28	0	1690	21	10	361	637	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0		4.0		4.0			
Lane Util. Factor	1.00		0.95		1.00		0.95			
Flt	0.87		1.00		1.00		0.90			
Flt Protected	1.00		1.00		0.95		1.00			
Satd Flow (prot)	1607		3198		1752		3169			
Flt Permitted	1.00		1.00		0.95		1.00			
Satd Flow (perm)	1607		3198		1752		3169			
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj Flow (vph)	2	28	0	1817	23	11	386	685	0	0
RTOR Reduction (vph)	23	0	0	1	0	0	183	0	0	0
Lane Group Flow (vph)	7		0		1839		0		1890	
Turn Type	Prot									
Protected Phases	3		2		1		6			
Permitted Phases										
Actuated Green, G (s)	16.0		58.0		4.0		66.0			
Effective Green, g (s)	16.0		58.0		4.0		66.0			
Actuated G/Ratio	0.16		0.62		0.04		0.73			
Clearance Time (s)	4.0		4.0		4.0		4.0			
Lane Grp Cap (vph)	286		2254		78		2324			
v/s Ratio Prot	c0.00		c0.53		0.01		c0.28			
v/s Ratio Perm										
v/c Ratio	0.02		0.82		0.14		0.38			
Uniform Delay, d1	30.6		12.0		41.3		4.5			
Progression Factor	1.00		0.73		1.00		1.00			
Incremental Delay, d2	0.2		2.7		3.8		0.5			
Delay (s)	30.7		11.4		45.1		4.9			
Level of Service	C		B		D		A			
Approach Delay (s)	30.7		11.4		5.3		0.0			
Approach LOS	C		B		A		A			
Intersection Summary										
HCM Average Control Delay	9.4		9.4		12.0		12.0		12.0	
HCM Volume to Capacity ratio	0.64		0.64		0.64		0.64		0.64	
Actuated Cycle Length (s)	90.0		90.0		90.0		90.0		90.0	
Intersection Capacity Utilization	57.4%		57.4%		57.4%		57.4%		57.4%	
Analysis Period (min)	15		15		15		15		15	

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
 6: Stark Street & River Road

Year 2007 Existing Traffic
 Weekday PM Peak Hour



Volume (veh/h)	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑			↓		↔	↗			↖	
Volume (veh/h)	0	1	15	0	2	0	15	0	10	15	0	687
Sign Control		Stop			Stop		Free					Free
Grade		0%			0%							0%
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly flow rate (vph)	0	1	14	0	2	0	16	0	10	15	0	680
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None											
Median storage (veh)												
Upstream signal (ft)	250											
pX, platoon unblocked												
vC, conflicting volume	717	716	683	730	719	0	687			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	717	716	683	730	719	0	687			0		
c, single (s)	7.1	6.5	6.2	7.5	6.6	6.2	4.1			4.1		
tC, 2 stage (s)												
fE (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	100	100	97	100	99	100	98			100		
μi capacity (veh/h)	337	348	447	321	347	1082	902			1517		
Approach Summary												
Direction Lane #	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume Total	15	2	380	2	2	2	728	2	387	15	2	687
Volume Left	0	0	16	0	0	0	0	0	0	0	0	0
Volume Right	14	2	364	2	2	2	728	2	387	15	2	687
cSH	438	347	902	1700	1700							
Volume to Capacity	0.03	0.01	0.02	0.03	0.03	0.03	0.43	0.03	0.40	0.03	0.03	0.40
Queue Length 95th (ft)	3	0	1	0	0	0	0	0	0	0	0	0
Control Delay (s)	13.5	15.5	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Lane LOS	B	C	A									
Approach Delay (s)	13.5	15.5	0.2				0.0		0.0			
Approach LOS	B	C										
Intersection Summary												
Average Delay	0.3											
Intersection Capacity Utilization	51.9%											
Analysis Period (min)	15											
TCU Level of Service	A											

HCM Signalized Intersection Capacity Analysis
 7: Stark Street & Broadway

Year 2007 Existing Traffic
 Weekday PM Peak Hour



Movement	EBL	EBR	NEB	NEE	SEB	SEB
Lane Configurations	T			T	T	
Volume (vph)	1007	9	1	704	360	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost Time (s)	40			40	40	
Lane Util. Factor	0.97			0.95	0.95	
Flt Protected	1.00			1.00	1.00	
Satd Flow (prot)	3405			3605	3605	
Flt Permitted	0.95			0.95	1.00	
Satd Flow (perm)	3405			3446	3608	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj Flow (vph)	1088	10	1	767	387	
RTOR Reduction (vph)	1	0	0	0	0	0
Lane Group Flow (vph)	1092	0	10	758	388	0
Turn Type	Perm					
Protected Phases	1				6	
Permitted Phases	2					
Actuated Green, G (s)	44.0				38.0	
Effective Green, g (s)	44.0				38.0	
Actuated G/C Ratio	0.49				0.42	
Clearance Time (s)	4.0				4.0	
Lane Grp Cap (vph)	1665				1279	
v/s Ratio Prot	c0.32				0.11	
v/s Ratio Perm					c0.28	
v/c Ratio	0.66				0.54	
Uniform Delay, d1	17.3				19.4	
Progression Factor	1.00				1.00	
Incremental Delay, d2	2.0				1.5	
Delay (s)	19.3				20.9	
Level of Service	B				C	
Approach Delay (s)	19.3				20.9	
Approach LOS	B				C	
Analysis Summary						
HCM Average Control Delay	19.4			HCM Level of Service		
HCM Volume to Capacity ratio	0.60					
Actuated Cycle Length (s)	90.0			sum of lost time (s)		
Intersection Capacity Utilization	55.8%			ICU Level of Service		
Analysis Period (min)	15					

c Critical Lane Group

Appendix "F"
ODOT Crash Data

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
000	NONE	NO ACTION OR NON-WARRANTED
001	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 DMV	ENTERING STREET OR HIGHWAY FROM ALLEY OR DRIVEWAY
019	ENTR DMV	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
024	DRVR DEAD	DEAD BY UNASSOCIATED CAUSE
025	FATIGUE	FATIGUED, SLEEPY, ASLEEP
026	SUN	DRIVER BLINDED BY SUN
027	HLGHTS	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 ANOTHER VEHICLE
031	PASSING	PASSING SITUATION
032	PROFFRD	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	PLAYNRD	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
050	LAY ON RD	STANDING OR LYING IN ROADWAY
051	ENT OFFRD	ENTERING / STARTING IN TRAFFIC LANE FROM OFF-ROAD
088	OTHER	OTHER ACTION
099	UNK	UNKNOWN ACTION

CAUSE CODE TRANSLATION LIST

CAUSE CODE	SHORT DESCRIPTION	LONG DESCRIPTION
00	NO CODE	NO CAUSE ASSOCIATED AT THIS LEVEL
01	TOO-FAST	TOO FAST FOR CONDITIONS (NOT EXCEED POSTED SP)
02	NO-YIELD	DID NOT YIELD RIGHT-OF-WAY
03	PAS-STOP	PASSED STOP SIGN OR RED FLASHER
04	DIS--RAG	DISREGARDED R-A-G TRAFFIC SIGNAL
05	LEFT-CTR	DROVE LEFT OF CENTER ON TWO-WAY ROAD
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 ROADWAY
16	FATIGUE	DRIVER DROWSY/FATIGUED/SLEEPY
18	IN RDWY	NON-MOTORIST ILLEGALLY IN ROADWAY
19	NT VISBL	NON-MOTORIST CLOTHING NOT VISIBLE
20	IMP PKNG	VEHICLE IMPROPERLY PARKED
21	DEF STR	DEFECTIVE STEERING MECHANISM
22	DEF BRKE	INADEQUATE OR NO BRAKES
24	LOADSHT	VEHICLE LOST LOAD OR LOAD SHIFTED
25	TIREFAIL	TIRE FAILURE
26	PHANTOM	PHANTOM / NON-CONTACT VEHICLE
27	INATTENT	INATTENTION
30	SPEED	DRIVING IN EXCESS OF POSTED SPEED
31	RACING	SPEED RACING (PER PAR)
32	CARELESS	CARELESS DRIVING (CITATION ISSUED)
33	RECKLESS	RECKLESS DRIVING (CITATION ISSUED)
34	AGGRESV	AGGRESSIVE DRIVING (PER PAR)
35	RD RAGE	ROAD RAGE (PER PAR)

COLLISION TYPE CODE TRANSLATION LIST

COLL CODE	SHORT DESCRIPTION	LONG DESCRIPTION
6	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
4	OVERTURN	OVERTURNED
6	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-1TURN	FROM OPPOSITE DIRECTION - ONE 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	FSM 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 STPT	IMPROPER START FROM STOPPED POSITION
015	IMP LGHT	IMPROPER OR NO LIGHTS (VEHICLE IN TRAFFIC)
016	INATENT	FAILED TO DIM LIGHTS (UNTIL 4/1/97) / INATTENTION (AFTER 4/1/97)
017	UNSF VEH	DRIVING UNSAFE VEHICLE (NO OTHER ERROR APPARENT)
018	OTH PARK	ENTERING, EXITING PARKED POSITION WITH INSUFFICIENT CLEARANCE OR OTHER IMPROPER PARKING MANUEVER
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 TRNG	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	WRNSIDE	DRIVING ON WRONG SIDE OF THE ROAD
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	TO 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 (VEHICLE IS DELIBERATELY TRAVELING ON WRONG SIDE)
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	WR IN RD	WORKING IN ROADWAY OR ALONG SHOULDER
070	LAYON RD	STANDING OR LYING IN ROADWAY
073	DIS POL	DISREGARDING POLICE (ELUDING)
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	PED INV	PEDESTRIAN INVOLVED (NON-PEDESTRIAN ACCIDENT)
005	SUB-FED	"SUB-FED": PEDESTRIAN INJURED SUBSEQUENT TO COLLISION, ETC.
006	BIKE INV	TRICYCLE-BICYCLE INVOLVED
007	HITCHKR	HITCHHIKER (SOLICITING A RIDE)
008	PSNGR TOM	PASSENGER BEING TOWED OR PUSHED ON CONVEYANCE
009	ON/OFF V	GETTING ON OR OFF STOPPED OR PARKED VEHICLE (OCCUPANTS ONLY)
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	FET	FET: 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 BARS 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 (ON BRIDGE AND APPROACH)
047	BR ABUT	BRIDGE ABUTMENT (APPROACH ENDS)
048	BR COLMN	BRIDGE PILLAR OR COLUMN (EVEN THOUGH STRUCK PROTECTIVE GUARD RAIL FIRST)
049	BR GIRDR	BRIDGE GIRDER (HORIZONTAL STRUCTURE OVERHEAD)
050	ISLAND	TRAFFIC RAISED ISLAND
051	GORE	GORE
052	SOLE UNK	SOLE - TYPE UNKNOWN
053	SOLE UTL	SOLE - POWER OR TELEPHONE
054	ST LIGHT	SOLE - 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	DELINATOR OR MARKER (REFLECTOR POSTS)
061	MAILBOX	MAILBOX
062	TREE	TRUNK, 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, ROCKS OFF OR ON ROAD, FALLING ROCKS
068	FRGN OBJ	FOREIGN OBSTRUCTION/DEBRIS IN ROAD (NOT GRAVEL)
069	EOP WORK	EQUIPMENT WORKING IN/OFF ROAD
070	OTH EOP	OTHER EQUIPMENT IN OR OFF ROAD (INCLUDES PARKED TRAILER, BOAT)
071	MAIN EOP	WRECKER, STREET SWEEPER, SNOW PLOW OR SANDING EQUIPMENT
072	OTHER WALL	ROCK, BRICK OR OTHER SOLID WALL
073	IRRGL PVMT	SPEED BUMP, OTHER BUMP, POTHOLE OR PAVEMENT IRREGULARITY (PER PAR)
075	CAVE IN	BRIDGE OR ROAD CAVE IN
076	HI WATER	HIGH WATER
077	SNO BANK	SNOW BANK
078	HOLE	CHUCKHOLE IN ROAD, LOW OR HIGH SHOULDER AT PAVEMENT EDGE
079	DITCH	CUT SLOPE OR DITCH EMBANKMENT
080	OBJ F MV	STRUCK BY ROCK OR OTHER OBJECT SET IN MOTION BY OTHER VEHICLE (INCL. LOST LOADS)
081	FLY-OBJ	STRUCK BY OTHER MOVING OR FLYING OBJECT
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	OTH ACCT	ACCIDENT RELATED TO ANOTHER SEPARATE ACCIDENT
090	TO 1 SIDE	TWO-WAY TRAFFIC ON DIVIDED ROADWAY ALL ROUTED TO ONE SIDE
092	PHANTOM	OTHER (PHANTOM) NON-CONTACT VEHICLE (ON PAR OR REPORT)
093	CELL-POL	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	ABRPT EDGE	ABRUPT EDGE
099	CELL-WTN	CELL PHONE USE WITNESSED BY OTHER PARTICIPANT
100	UNK FIXD	UNKNOWN TYPE OF FIXED OBJECT
101	OTHER OBJ	OTHER OR UNKNOWN OBJECT, NOT FIXED
104	OUTSIDE V	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
110	N-MTR	NON-MOTORIZED STRUCK VEHICLE
111	S CAR VS V	STREET CAR/TROLLEY (ON RAILS AND/OR OVERHEAD WIRE SYSTEM) STRUCK VEHICLE
112	V VS S CAR	VEHICLE STRUCK STREET CAR/TROLLEY (ON RAILS AND/OR OVERHEAD WIRE SYSTEM)
113	S CAR ROW	AT OR ON STREET CAR/TROLLEY RIGHT-OF-WAY
114	RR EQUIP	VEHICLE STRUCK RAILROAD EQUIPMENT (NOT TRAIN) ON TRACKS
115	WIRE BAR	WIRE OR CABLE MEDIAN BARRIER
116	SLIPPRY	SLIDING OR SWERVING DUE TO WET, ICY, SLIPPERY OR LOOSE SURFACE
117	SHLDR	SHOULDER GAVE WAY

HIGHWAY COMPONENT TRANSLATION LIST

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

FUNCTIONAL CLASSIFICATION TRANSLATION LIST

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 COLLECTOR
19	URBAN LOCAL
78	UNKNOWN RURAL SYSTEM
79	UNKNOWN RURAL NON-SYSTEM
98	UNKNOWN URBAN SYSTEM
99	UNKNOWN URBAN NON-SYSTEM

LIGHT CONDITION CODE TRANSLATION LIST

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

MILEAGE TYPE CODE TRANSLATION LIST

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

INJURY SEVERITY CODE TRANSLATION LIST

SHORT CODE	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	FRI	DIED PRIOR TO CRASH
7	NO<5	NO INJURY - 0 TO 4 YEARS OF AGE

MEDIAN TYPE CODE TRANSLATION LIST

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

MOVEMENT TYPE CODE TRANSLATION LIST

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

PEDESTRIAN LOCATION CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
00	AT INTERSECTION - NOT IN ROADWAY
01	AT INTERSECTION - INSIDE CROSSWALK
02	AT INTERSECTION - IN ROADWAY, OUTSIDE CROSSWALK
03	AT INTERSECTION - IN ROADWAY, XWALK AVAIL UNKNWN
04	NOT AT INTERSECTION - IN ROADWAY
05	NOT AT INTERSECTION - ON SHOULDER
06	NOT AT INTERSECTION - ON MEDIAN
07	NOT AT INTERSECTION - WITHIN TRAFFIC RIGHT-OF-WAY
08	NOT AT INTERSECTION - IN BIKE PATH
09	NOT AT INTERSECTION - ON SIDEWALK
10	OUTSIDE TRAFFICWAY BOUNDARIES
15	NOT AT INTERSECTION - INSIDE MID-BLOCK CROSSWALK
18	OTHER, NOT IN ROADWAY
99	UNKNOWN LOCATION

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	BRG-GATE	BRIDGE GATE - BARRIER
013	TEMP-BARR	TEMPORARY BARRIER
014	NO-PASS-2N	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	WM W/ GATE	FLASHING LIGHTS WITH DROP-ARM GATES
027	OVRRD 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	STRAHT	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
01	PSNGR CAR	PASSENGER CAR, PICKUP, ETC.
02	SOBTAIL	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, MOTOR SCOOTER, OR MOTOR BICYCLE
07	SCHL BUS	SCHOOL BUS (INCLUDES VAN)
08	OTH BUS	OTHER BUS
09	MTRCYCLE	MOTORCYCLE
10	OTHER	OTHER: FORKLIFT, BACKHOE, ETC.
11	MTRHOME	MOTORHOME
12	TROLLEY	MOTORIZED STREET CAR/TROLLEY (NO RAILS/WIRES)
13	ATV	ATV
14	MTRSCTR	MOTORIZED SCOOTER
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	SLE	SLEET
5	FOG	FOG
6	SNOW	SNOW
7	DUST	DUST
8	SMOK	SMOKE
9	ASH	ASH

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

Lockhaven at 14th in Keizer
 1-1-2002 through 12-31-2006

COLLISION TYPE	FATAL CRASHES		NON-PROPERTY DAMAGE		TOTAL CRASHES	TOTAL PEOPLE KILLED	TOTAL PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD	
	FATAL CRASHES	ONLY	FATAL CRASHES	PROPERTY DAMAGE ONLY												
YEAR: 2006																
ANGLE	0	0	1	1	1	0	0	0	1	0	1	0	1	0	0	0
TURNING MOVEMENTS	0	0	1	1	1	0	0	0	0	1	1	0	1	0	0	0
2006 TOTAL	0	0	2	2	2	0	0	0	1	1	2	0	2	0	0	0
YEAR: 2003																
HEAD-ON	0	1	0	0	1	0	2	0	1	0	0	1	1	0	0	0
2003 TOTAL	0	1	0	0	1	0	2	0	1	0	0	1	1	0	0	0
YEAR: 2002																
REAR-END	0	2	0	0	2	0	2	0	2	0	2	0	2	0	0	0
2002 TOTAL	0	2	0	0	2	0	2	0	2	0	2	0	2	0	0	0
FINAL TOTAL	0	3	2	2	5	0	4	0	4	1	4	1	5	0	0	0

Note: Legislative changes to DMV's vehicle crash reporting requirements, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

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

River at Broadway at Commercial in Salem
 1-1-2002 through 12-31-2006

COLLISION TYPE	FATAL CRASHES		NON-PROPERTY DAMAGE ONLY		TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION RELATED ROAD		
	FATAL CRASHES	NON-FATAL CRASHES	FATAL CRASHES	PROPERTY DAMAGE ONLY									INTER-SECTION RELATED ROAD	OFF-ROAD	
YEAR: 2006	0	1	1	1	2	0	1	0	2	0	1	1	2	0	0
REAR-END	0	1	1	1	2	0	1	0	2	0	1	1	2	0	0
2006 TOTAL	0	1	1	1	2	0	1	0	2	0	1	1	2	0	0
FINAL TOTAL	0	1	1	1	2	0	1	0	2	0	1	1	2	0	0

Note: Legislative changes to DMV's vehicle crash reporting requirements, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

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

River at Chemawa in Keizer
 1-1-2002 through 12-31-2006

COLLISION TYPE	FATAL CRASHES		NON-PROPERTY DAMAGE ONLY		TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION RELATED		OFF-ROAD
	FATAL CRASHES	NON-PROPERTY DAMAGE ONLY	PEOPLE KILLED	PEOPLE INJURED									INTER-SECTION RELATED	OFF-ROAD	
YEAR: 2006	0	0	1	1	1	0	0	0	1	0	1	0	1	0	0
REAR-END TURNING MOVEMENTS	0	1	1	1	2	0	1	0	2	0	0	2	2	0	0
2006 TOTAL	0	1	2	2	3	0	1	0	3	0	1	2	3	0	0
YEAR: 2005	0	1	0	0	1	0	4	0	0	1	1	0	1	0	0
ANGLE	0	3	1	1	4	0	3	0	3	0	4	0	4	0	0
REAR-END	0	4	1	1	5	0	7	0	3	1	5	0	5	0	0
2005 TOTAL	0	4	1	1	5	0	7	0	3	1	5	0	5	0	0
YEAR: 2004	0	0	3	3	3	0	0	0	3	0	2	1	3	0	0
REAR-END	0	1	1	1	2	0	1	0	2	0	2	0	2	0	0
TURNING MOVEMENTS	0	1	1	1	2	0	1	0	2	0	2	0	2	0	0
2004 TOTAL	0	1	4	4	5	0	1	0	5	0	4	1	5	0	0
YEAR: 2003	0	4	2	2	6	0	8	0	6	0	5	1	6	0	0
REAR-END	0	0	1	1	1	0	0	0	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	4	3	3	7	0	8	0	7	0	6	1	7	0	0
2003 TOTAL	0	4	3	3	7	0	8	0	7	0	6	1	7	0	0
YEAR: 2002	0	2	0	0	2	0	2	0	2	0	2	0	2	0	0
PEDESTRIAN	0	4	0	0	4	0	5	0	4	0	4	0	4	0	0
REAR-END	0	1	1	1	2	0	1	0	2	0	1	1	2	0	0
TURNING MOVEMENTS	0	7	1	1	8	0	8	0	8	0	7	1	8	0	0
2002 TOTAL	0	7	1	1	8	0	8	0	8	0	7	1	8	0	0
FINAL TOTAL	0	17	11	11	28	0	25	0	26	1	23	5	28	0	0

Note: Legislative changes to DMV's vehicle crash reporting requirements, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

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

CDS390 9/25/2007

CITY OF KEIZER, MARION COUNTY

River at Chemawa in Keizer
1-1-2002 through 12-31-2006

SER#	INVEST	D C S L K	N N N N	DATE	CLASS	CITY STREET	RD CHAR	INT-TYP	INT-REL	OFF-RO	MTR	CRASH TYP	TRFLR QTY	SPL USE	MOVE	FRM	TO	PRTC	INJ	SVRTY	E X RES	PED	LOC ERROR	ACTN EVENT	CAUSE			
				TIME	FROM	FIRST STREET	LOCIN	CROSS	TRF SIGNAL	N DRY	N DUSK	CLR	O-TURN	TURN	PRVTE	PSNGR CAR	TURN-L	DRVR	NONE	F	OR-Y	OR<25						
03058				08/24/2006	14	CHEMAWA RD	INTER	0		N		N	0-TURN	TURN-L	PRVTE	PSNGR CAR	TURN-L	01	DRVR	NONE	50	F	OR-Y	OR<25	020	000	013	04
				Thu		RIVER RD	04			N		N	TURN	TURN	PRVTE	PSNGR CAR	TURN-L	01	DRVR	NONE	50	F	OR-Y	OR<25	020	000	013	04
				8P						N		N	TURN	TURN	PRVTE	PSNGR CAR	TURN-L	01	DRVR	NONE	50	F	OR-Y	OR<25	020	000	013	04
04761				12/09/2006	14	CHEMAWA RD	INTER	0		N		N	0-TURN	TURN-L	PRVTE	PSNGR CAR	TURN-L	01	DRVR	NONE	23	M	OR-Y	OR<25	000	000	013	00
				Sat		RIVER RD	04			N		N	TURN	TURN	PRVTE	PSNGR CAR	TURN-L	01	DRVR	NONE	20	M	OR-Y	OR<25	000	000	013	00
				8P						N		N	TURN	TURN	PRVTE	PSNGR CAR	TURN-L	01	DRVR	NONE	20	M	OR-Y	OR<25	000	000	013	00
00999				02/21/2002	14	CHEMAWA RD NE	INTER	0		N		N	0-TURN	TURN-L	PRVTE	PSNGR CAR	TURN-L	01	DRVR	NONE	54	F	OR-Y	OR<25	026	000	011	07
				Thu		RIVER RD N	06			N		N	TURN	TURN	PRVTE	PSNGR CAR	TURN-L	01	DRVR	NONE	54	F	OR-Y	OR<25	026	000	011	07
				10A						N		N	TURN	TURN	PRVTE	PSNGR CAR	TURN-L	01	DRVR	NONE	54	F	OR-Y	OR<25	026	000	011	07
05888				10/28/2002	14	CHEMAWA RD NE	INTER	0		N		N	0-TURN	TURN-L	PRVTE	PSNGR CAR	TURN-L	01	DRVR	NONE	30	M	OR-Y	OR<25	026	000	011	01
				Mon		RIVER RD N	06			N		N	TURN	TURN	PRVTE	PSNGR CAR	TURN-L	01	DRVR	NONE	30	M	OR-Y	OR<25	026	000	011	01
				1P						N		N	TURN	TURN	PRVTE	PSNGR CAR	TURN-L	01	DRVR	NONE	30	M	OR-Y	OR<25	026	000	011	01
05898				10/31/2002	14	CHEMAWA RD NE	INTER	0		N		N	0-TURN	TURN-L	PRVTE	PSNGR CAR	TURN-L	01	DRVR	NONE	41	F	OR-Y	OR<25	026	000	013	01
				Thu		RIVER RD N	06			N		N	TURN	TURN	PRVTE	PSNGR CAR	TURN-L	01	DRVR	NONE	41	F	OR-Y	OR<25	026	000	013	01
				1P						N		N	TURN	TURN	PRVTE	PSNGR CAR	TURN-L	01	DRVR	NONE	41	F	OR-Y	OR<25	026	000	013	01
										N		N	TURN	TURN	PRVTE	PSNGR CAR	TURN-L	01	DRVR	NONE	26	F	OR-Y	OR<25	080	011	013	01

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

River at Chemawa in Keizer
1-1-2002 through 12-31-2006

CITY OF KEIZER, MARION COUNTY

9/25/2007

CDS380

SER#	INVEST	D C S L K	S R S W	E A U C O	D A T E	CLASS	CITY STREET	RD CHAR	INT-TYP	INT-REL	OFF-RD	WTHR	CRASH TYP	SECL USE	TRLR QTY	MOVE	FROM	PRTC	INJ	A S	G E	L I M S	P E D	CAUSE			
									(#LANES)	CONTR	DRVWY	LIGHT	SVRTY	V#	VEH TYPE	PSNGR CAR	TO	F#	TYPE	SVRTY	E X	R E S	LOC	ERROR	ACTN	EVENT	
03425	N N N		07/05/2003	14	Sat 2P	0	CHEWAWA RD NE RIVER RD N	INTER	CROSS	N	CLR	N	S-1STOP	01	NONE	STRGHT	N S	01	DRVR	NONE	25	F	OR-Y	000	011		
									99	TRF SIGNAL	N	DAY	REAR	PSNGR CAR	PRVTE	N S	02	PSNG	NONE	02	F	OR<25	000				
04482	N N N		09/22/2003	14	Fri 5P	0	CHEWAWA RD NE RIVER RD N	INTER	CROSS	N	CLR	N	S-1STOP	01	NONE	STRGHT	N S	01	DRVR	NONE	28	M	OR-Y	026,043	013		
									99	TRF SIGNAL	N	DAY	REAR	PSNGR CAR	PRVTE	N S	02	PSNG	NONE	25	F	OR<25	000				
03004	N N N		06/08/2002	14	Sat 6P	0	CHEWAWA RD NE RIVER RD N	INTER	CROSS	N	CLR	N	S-1STOP	01	NONE	STRGHT	N S	01	DRVR	NONE	29	M	OR-Y	000	011	013	
									0	TRF SIGNAL	N	DAY	REAR	PSNGR CAR	PRVTE	N S	02	PSNG	NONE	40	M	OR-Y	000				
03367	N N N		06/27/2002	14	Thu 11A	6	CHEWAWA RD NE RIVER RD N	INTER	CROSS	N	CLD	N	PED	01	NONE	TURN-R	S N	01	DRVR	NONE	35	M	OR-Y	000	011	013	
									0	TRF SIGNAL	N	DAY	INJ	PSNGR CAR	PRVTE	N S	02	PSNG	NONE	35	F	OR<25	000				
03331	N N N		06/30/2002	14	Sun 1P	0	CHEWAWA RD NE RIVER RD N	INTER	CROSS	N	CLR	N	ANGL-OTR	01	NONE	STRGHT	S N	01	DRVR	NONE	61	F	OR-Y	020	000		
									0	TRF SIGNAL	N	DAY	TURN	PSNGR CAR	PRVTE	N S	02	PSNG	NONE	67	F	OR<25	000				

OREGON DEPARTMENT OF TRANSPORTATION TRANSPORTATION DEVELOPMENT DIVISION
 TRANSPORTATION DATA SECTION 3H ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE

River at Dearborn in Keizer
 1-1-2002 through 12-31-2006

COLLISION TYPE	FATAL CRASHES		NON-PROPERTY DAMAGE		TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION RELATED ROAD	INTER-SECTION	OFF-ROAD	
	FATAL CRASHES	NON-PROPERTY DAMAGE	ONLY	PROPERTY DAMAGE												
YEAR: 2006																
ANGLE	0	2	0	0	2	0	6	0	2	0	2	0	2	0	0	0
PEDESTRIAN	0	1	0	0	1	0	1	0	1	0	1	0	1	0	0	0
REAR-END	0	0	1	0	1	0	0	0	1	0	0	1	1	0	0	0
2006 TOTAL	0	3	1	1	4	0	7	0	4	0	3	1	4	0	0	0
YEAR: 2005																
ANGLE	0	1	0	0	1	0	2	0	1	0	0	1	1	0	0	0
REAR-END	0	2	0	0	2	0	2	0	2	0	2	0	2	0	0	0
TURNING MOVEMENTS	0	2	3	0	5	0	2	0	3	2	2	3	5	0	0	0
2005 TOTAL	0	5	3	0	8	0	6	0	6	2	4	4	8	0	0	0
YEAR: 2004																
REAR-END	0	2	0	0	2	0	2	0	2	0	2	0	2	0	0	0
2004 TOTAL	0	2	0	0	2	0	2	0	2	0	2	0	2	0	0	0
YEAR: 2003																
ANGLE	0	2	0	0	2	0	2	0	2	0	2	0	2	0	0	0
PEDESTRIAN	0	1	0	0	1	0	1	0	0	1	0	1	1	0	0	0
TURNING MOVEMENTS	0	2	1	0	3	0	4	0	2	1	3	0	3	0	0	0
2003 TOTAL	0	5	1	0	6	0	7	0	4	2	5	1	6	0	0	0
YEAR: 2002																
ANGLE	0	1	0	0	1	0	1	0	1	0	1	0	1	0	0	0
PEDESTRIAN	0	1	0	0	1	0	1	0	1	0	1	0	1	0	0	0
REAR-END	0	2	0	0	2	0	2	0	2	0	2	0	2	0	0	0
TURNING MOVEMENTS	0	2	0	0	2	0	2	0	2	1	1	1	2	0	0	0
2002 TOTAL	0	6	0	0	6	0	6	0	6	0	5	1	6	0	0	0
FINAL TOTAL	0	21	5	5	26	0	28	0	22	4	19	7	26	0	0	0

Note: Legislative changes to DMV's vehicle crash reporting requirements, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

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

02047 9/25/2007

CITY OF KEIZER, MARION COUNTY

River at Dearborn in Keizer
1-1-2002 through 12-31-2006

SRV INVEST	DATE	TIME	CLASS	CITY STREET	RD CHAR	INT-TYP	INT-REL	OFF-RD	WTHR	CRASH TYP	SECL USE	MOVE	PRTC	INJ	A S	LICNS	FED	CAUSE				
NO	DAY	TIME	FROM	FIRST STREET	DIRECT	LEGS	CONTL	DRVY	LIGHT	SVRTY	VR	VEH TYPE	SVRTY	E	X	RES	LOC	ERROR	ACTN	EVENT		
02047	N N N	06/02/2004	14	DEARBORN AVE	INTER	CROSS	N	TRF SIGNAL	N	CLR	01	NONE	01	DRVR	NONE	42	M	OR-Y			000	07
		Wed	0	RIVER RD	N	99			N	DRY	PSNGR	N	S					026,047			000	00
		11A			06				N	DAY	PSNGR	S									000	01
									N	DAY	PRVTE	N	S								011	00
									N	DAY	PSNGR	N	S	01	DRVR	NONE	51	F	OR-Y		000	00
									N	DAY	PSNGR	N	S	02	PSNG	INJB	06	M	OR<25		000	00
00997	N N N	03/16/2005	14	DEARBORN AVE	INTER	CROSS	N	TRF SIGNAL	N	CLR	01	NONE	01	DRVR	NONE	43	F	OR-Y			000	01
		Wed	0	RIVER RD	N	99			N	DRY	PSNGR	N	S					026,047			000	00
		8A			06				N	DAY	PSNGR	S									000	01
									N	DAY	PRVTE	N	S								011	00
									N	DAY	PSNGR	N	S	01	DRVR	NONE	43	F	OR-Y		000	00
									N	DAY	PSNGR	S									000	00
05024	N N N	12/13/2005	14	DEARBORN AVE	INTER	CROSS	N	TRF SIGNAL	N	CLR	01	NONE	01	DRVR	NONE	47	M	OR-Y			000	01
		Tue	0	RIVER RD	N	99			N	DRY	PSNGR	N	S					026,047			000	00
		1P			06				N	DAY	PSNGR	S									000	00
									N	DAY	PRVTE	N	S								011	00
									N	DAY	PSNGR	N	S	01	DRVR	NONE	19	F	OR-Y		000	00
03335	N N N	09/08/2006	14	DEARBORN AVE	INTER	CROSS	N	TRF SIGNAL	N	CLR	01	NONE	01	DRVR	NONE	15	M	OR-Y			000	07
		Fri	0	RIVER RD	N	0			N	DRY	PSNGR	N	S					026,043			000	00
		10P			06				N	DLIT	PSNGR	S									000	00
									N	DLIT	PSNGR	S									011	00
									N	DLIT	PSNGR	S									000	00
03253	N N N	08/31/2004	14	DEARBORN AVE	INTER	CROSS	N	TRF SIGNAL	N	CLR	01	NONE	01	DRVR	NONE	73	M	OR-Y			000	07
		Tue	0	RIVER RD	S	99			N	DRY	PSNGR	S	N					026			000	00
		1P			06				N	DAY	PSNGR	S	N								000	00
									N	DAY	PSNGR	S	N								011	00
									N	DAY	PRVTE	S	N	01	DRVR	NONE	45	F	OR-Y		000	00
									N	DAY	PSNGR	S	N								011	00
									N	DAY	PSNGR	S	N	01	DRVR	NONE	68	F	OR-Y		000	00
									N	DAY	PSNGR	S	N	02	PSNG	INJC	60	M	OR<25		000	00

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

River at Dearborn in Keizer
1-1-2002 through 12-31-2006

CDS360 9/25/2007

CITY OF KEIZER, MARION COUNTY

SRF INVEST	DATE	TIME	CLASS	STREET	AD CHAR	INT-TYP	INT-REL	OFF-RD	WTHR	CRASH TYP	SPCL USE	MOVE	OWNER	A S	E LICNS	LOC	CAUSE							
NO	DAY	TIME	DIST	FROM	LOCN	(#LANES)	CONDI	DRWAY	LIGHT	SVRTY	V#	VEH TYPE	P4	TYPE	SVRTY	E X RES	LOC	EVENT						
03015	N N N N	08/19/2006	14	DEARBORN AVE RIVER RD	W 06	CROSS	N	TRF SIGNAL	N	CLD	N	DRY	N	DAY	INJ	01	DRVR	NONE	49	M	OR-Y	000	00	
						0					01	PRVTE	PSNGR CAR				01	DRVR	NONE	49	M	OR-Y	000	00
																	01	DRVR	NONE	49	M	OR-Y	000	00
01221	N N N N	04/07/2005	14	DEARBORN AVE RIVER RD	CN 01	CROSS	N	TRF SIGNAL	N	RAIN	N	WET	N	DAY	INJ	01	DRVR	NONE	53	F	OR-Y	004,028	02	
						99					01	PRVTE	PSNGR CAR				01	DRVR	NONE	53	F	OR-Y	000	00
																	01	DRVR	NONE	53	F	OR-Y	000	00
																	01	DRVR	NONE	53	F	OR-Y	000	00
03605	N N N N	09/29/2006	14	DEARBORN AVE RIVER RD	CN 01	CROSS	N	TRF SIGNAL	N	CLR	N	DRY	N	DAY	INJ	01	DRVR	NONE	43	F	NONE	000	00	
						0					02	PRVTE	PSNGR CAR				01	DRVR	NONE	43	F	NONE	000	00
																	01	DRVR	NONE	43	F	NONE	000	00
																	01	DRVR	NONE	43	F	NONE	000	00
01037	N N N N	02/24/2003	14	DEARBORN AVE RIVER RD	CN 02	CROSS	N	TRF SIGNAL	N	CLR	N	DRY	N	DAY	INJ	01	DRVR	NONE	84	F	OR-Y	097	04	
						0					02	PRVTE	PSNGR CAR				01	DRVR	NONE	84	F	OR-Y	000	00
																	01	DRVR	NONE	84	F	OR-Y	000	00
																	01	DRVR	NONE	84	F	OR-Y	000	00
04764	N N N N	09/07/2003	14	DEARBORN AVE RIVER RD	CN 02	CROSS	N	TRF SIGNAL	N	CLR	N	DRY	N	DAY	INJ	01	DRVR	NONE	72	M	OR-Y	020	04	
						99					02	PRVTE	PSNGR CAR				01	DRVR	NONE	72	M	OR-Y	000	00
																	01	DRVR	NONE	72	M	OR-Y	000	00
																	01	DRVR	NONE	72	M	OR-Y	000	00
06354	N N N N	11/22/2003	14	DEARBORN AVE RIVER RD	CN 02	CROSS	N	TRF SIGNAL	N	CLR	N	DRY	N	DAY	INJ	01	DRVR	NONE	50	F	OR-Y	000	00	
						99					02	PRVTE	PSNGR CAR				01	DRVR	NONE	50	F	OR-Y	000	00
																	01	DRVR	NONE	50	F	OR-Y	000	00
																	01	DRVR	NONE	50	F	OR-Y	000	00

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

003380 9/25/2007

CITY OF KEIZER, MARION COUNTY

River at Dearborn in Keizer
1-1-2002 through 12-31-2006

INVEST	D C S L K	DATE	TIME	CLASS	CITY STREET	RD CHAR	INT-TYP	INT-REL	OFF-RO	WTHR	CRASH TYP	SPCL USE	MOVE	PRIC	INJ	A S	LICNS	PED	ACTN	EVENT	CAUSE	
S E A U C O	P R S W	D A T E	T I M E	D I S T	F I R S T S T R E E T	D I R E C T	(#LANES)	CONFL	DRVWY	L I G H T	S V A R Y	T R L R Q T Y	F R O M	2#	T Y P E	S V R T Y	E X R E S	L O C	E R R O R	E V E N T	C A U S E	
04566	N N N	11/16/2005	Wed 5P	14	DEARBORN AVE	04	99	TRF SIGNAL	N	CLR	O-1TURN	01 NONE	STRAIGHT	01	DRVR	NONE	37 F	OR-Y	000	000	00	
					RIVER RD					N	TURN	PRVTE	S									
										N	PDO	PSNGR CAR	N	01	DRVR	NONE	37 F	OR-Y	000	000	00	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	004,028	000	00	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	000	000	00	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	004,028	000	02	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	000	000	00	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	004,028	000	02	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	000	000	00	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	004,028	000	02	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	000	000	00	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	004,028	000	02	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	000	000	00	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	004,028	000	02	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	000	000	00	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	004,028	000	02	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	000	000	00	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	004,028	000	02	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	000	000	00	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	004,028	000	02	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	000	000	00	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	004,028	000	02	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	000	000	00	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	004,028	000	02	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	000	000	00	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	004,028	000	02	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	000	000	00	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	004,028	000	02	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	000	000	00	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	004,028	000	02	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	000	000	00	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	004,028	000	02	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	000	000	00	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	004,028	000	02	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	000	000	00	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	004,028	000	02	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	000	000	00	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	004,028	000	02	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	000	000	00	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	004,028	000	02	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	000	000	00	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	004,028	000	02	
										N		PSNGR CAR	N									
										N		PSNGR CAR	N	01	DRVR	NONE	37 M	OR-Y	000	000	00	
										N		PSNGR CAR	N									
</																						

River at Lockhaven in Keizer
 1-1-2002 through 12-31-2006

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	TOTAL PEOPLE KILLED	TOTAL PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION RELATED	OFF- ROAD
PEDESTRIAN	0	1	0	1	0	1	0	1	0	1	0	1	0
REAR-END	0	1	0	1	0	1	0	1	0	1	0	1	0
TURNING MOVEMENTS	0	0	1	1	0	0	1	0	0	0	1	1	0
2005 TOTAL	0	2	1	3	0	2	0	3	0	2	1	3	0
YEAR: 2004													
REAR-END	0	3	2	5	0	3	0	4	1	3	2	5	0
TURNING MOVEMENTS	0	1	0	1	0	1	0	0	1	0	1	1	0
2004 TOTAL	0	4	2	6	0	4	0	4	2	3	3	6	0
YEAR: 2003													
FIXED / OTHER OBJECT	0	0	1	1	0	0	0	1	0	1	0	1	1
REAR-END	0	1	2	3	0	3	0	2	1	3	0	3	0
2003 TOTAL	0	1	3	4	0	3	0	3	1	4	0	4	1
YEAR: 2002													
ANGLE	0	0	1	1	0	0	0	1	0	1	0	1	0
REAR-END	0	1	1	2	0	1	0	2	0	0	2	2	0
2002 TOTAL	0	1	2	3	0	1	0	3	0	1	2	3	0
FINAL TOTAL	0	8	8	16	0	10	0	13	3	10	6	16	1

Note: Legislative changes to DMV's vehicle crash reporting requirements, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

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

CBS380 9/25/2007

CITY OF KEIZER, MARION COUNTY

River at Lockhaven in Keizer
1-1-2002 through 12-31-2006

SP	PR	SR	SH	DATE	TIME	CLASS	STREET	RD	CHAR	INT-TYP	INT-REL	OFF-RD	WTHR	CRASH	TYP	SPCL	USE	MOVE	FROM	TO	PRVC	INJ	A	S	E	L	R	RES	LOC	ERROR	ACTN	EVENT	CAUSE
SER#	INVEST	D	R	C	O	DIST	FIRST STREET	CN	DIRCT	(LANES)	CONTR	DRVBY	LIGHT	SURF	COLL	TYP	TELR	QTY	OWNER	VEH	TYPE	BIKE	INJC	G	E	X	E	LOC					
00130	NONE	N	N	N	N	14	LOCKHAVEN DR RIVER RD	03	INTER	CROSS	N	N	FOG	O-TURN	01	NONE	01	NONE	TURN-L	STRGHT	01	DRVR	NONE	68	F	OR-Y	OR<25	020	000	000	04		
06020	NONE	N	N	N	N	14	LOCKHAVEN DR NE RIVER RD N	06	INTER	CROSS	N	CLR	S-1STOP	0	01	NONE	01	NONE	STRGHT	NE SW	01	DRVR	NONE	00	U	UNK	UNK	026	000	000	01		
02694	NONE	N	N	N	N	14	LOCKHAVEN DR NE RIVER RD N	06	INTER	CROSS	N	CLR	S-1STOP	0	01	NONE	01	NONE	STRGHT	SW NE	01	DRVR	NONE	38	F	OR-Y	OR<25	026	000	000	01		
03668	NONE	N	N	N	N	14	LOCKHAVEN DR NE RIVER RD N	01	INTER	CROSS	N	TRF SIGNAL	N	DRY	PDO	01	NONE	01	NONE	TURN-L	SW NE	01	DRVR	NONE	19	M	OR-Y	OR<25	001,047	000	017	01,08	
03757	NONE	N	N	N	N	14	LOCKHAVEN DR NE RIVER RD N	04	INTER	CROSS	N	TRF SIGNAL	N	DRY	PDO	01	NONE	01	NONE	STRGHT	W E	01	DRVR	NONE	58	M	OR-Y	OR<25	000	000	000	04	

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

River at Manbrin in Keizer
 1-1-2002 through 12-31-2006

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	TOTAL PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION RELATED	OFF- ROAD																		
														0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
YEAR: 2006																															
ANGLE	0	2	0	2	0	5	0	1	1	0	2	2	0																		
REAR-END	0	1	0	1	0	1	0	0	1	0	1	1	0																		
2006 TOTAL	0	3	0	3	0	6	0	1	2	0	3	3	0																		
YEAR: 2005																															
ANGLE	0	0	1	1	0	0	0	0	0	1	0	1	0																		
PEDESTRIAN	0	1	0	1	0	3	0	1	0	1	0	1	0																		
REAR-END	0	0	1	1	0	0	0	1	0	1	0	1	0																		
TURNING MOVEMENTS	0	1	0	1	0	2	0	1	0	1	0	1	0																		
2005 TOTAL	0	2	2	4	0	5	0	3	0	4	0	4	0																		
YEAR: 2004																															
REAR-END	0	1	2	3	0	1	0	1	2	2	1	3	0																		
TURNING MOVEMENTS	0	4	2	6	0	5	0	4	1	4	2	6	0																		
2004 TOTAL	0	5	4	9	0	6	0	5	3	6	3	9	0																		
YEAR: 2003																															
REAR-END	0	1	0	1	0	1	0	0	1	1	0	1	0																		
TURNING MOVEMENTS	0	0	3	3	0	0	0	2	0	3	0	3	0																		
2003 TOTAL	0	1	3	4	0	1	0	2	1	4	0	4	0																		
YEAR: 2002																															
TURNING MOVEMENTS	0	2	0	2	0	3	0	2	0	1	1	2	0																		
2002 TOTAL	0	2	0	2	0	3	0	2	0	1	1	2	0																		
FINAL TOTAL	0	13	9	22	0	21	0	13	6	15	7	22	0																		

Note: Legislative changes to DMV's vehicle crash reporting requirements, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

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

River at Manzanita at Wheatland in Keizer
 1-1-2002 through 12-31-2006

COLLISION TYPE	FATAL CRASHES		NON-PROPERTY DAMAGE		TOTAL CRASHES	TOTAL PEOPLE KILLED	TOTAL PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION RELATED	OFF-ROAD
	FATAL CRASHES	FATAL CRASHES	ONLY	PROPERTY DAMAGE										
YEAR: 2006														
ANGLE	0	0	3	0	3	0	0	0	1	2	2	1	3	0
REAR-END	0	1	0	0	1	0	1	0	1	0	1	0	1	0
2006 TOTAL	0	1	3	0	4	0	1	0	2	2	3	1	4	0
YEAR: 2005														
TURNING MOVEMENTS	0	1	0	0	1	0	1	0	1	0	1	0	1	0
2005 TOTAL	0	1	0	0	1	0	1	0	1	0	1	0	1	0
YEAR: 2004														
REAR-END	0	3	0	0	3	0	5	0	3	0	3	0	3	0
TURNING MOVEMENTS	0	0	2	0	2	0	0	0	1	1	1	1	2	0
2004 TOTAL	0	3	2	0	5	0	5	0	4	1	4	1	5	0
YEAR: 2003														
REAR-END	0	0	2	0	2	0	0	0	2	0	2	0	2	0
TURNING MOVEMENTS	0	1	1	0	2	0	2	0	1	1	1	1	2	0
2003 TOTAL	0	1	3	0	4	0	2	0	3	1	3	1	4	0
YEAR: 2002														
REAR-END	0	1	3	0	4	0	3	0	4	0	3	1	4	0
TURNING MOVEMENTS	0	2	0	0	2	0	5	0	2	0	1	1	2	0
2002 TOTAL	0	3	3	0	6	0	8	0	6	0	4	2	6	0
FINAL TOTAL	0	9	11	0	20	0	17	0	16	4	15	5	20	0

Note: Legislative changes to DMV's vehicle crash reporting requirements, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

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

CDS330 9/25/2007

CITY OF KEIZER, MARION COUNTY

River at Manzanita at Wheatland in Keizer
1-1-2002 through 12-31-2006

SR# INVEST	DATE	TIME	CLASS	CITY STREET	RD CHAR	INT-TYP	INT-REL	OFF-ROAD	WTHR	CRASH TYP	SPLC USE	MOVE	PRIC INJ	A S	LICNS	PED	LOC	ERROR	ACTN	EVENT	CAUSE										
NO	DAY	LINE	DIST	FIRST STREET	DIRECT	(#LANES)	CONTL	DRVWY	LIGHT	SVRTY	VEH TYPE	FROM	TYPE	SVRTY	E	X	RES														
00915	N N N	03/06/2004	14	MANZANITA ST RIVER RD	N	CROSS	N	TRF SIGNAL	N	CLR	N	DRY	REAR	INJ	01	NONE	STRGHT	N	S	01	DRVR	NONE	21	F	OR-Y	OR<25	015,026,047	039	000	00	01.27
02305	N N N	06/21/2004	14	MANZANITA ST RIVER RD	S	CROSS	N	TRF SIGNAL	N	CLR	N	DRY	REAR	INJ	01	NONE	STRGHT	S	N	01	DRVR	INJC	38	M	OR-Y	OR<25	026,047	000	000	00	01.27
01840	N N N	05/21/2006	14	MANZANITA ST RIVER RD	N	CROSS	N	TRF SIGNAL	N	RAIN	N	WET	REAR	INJ	01	NONE	STRGHT	S	N	01	DRVR	INJC	46	F	OR-Y	OR<25	026,047	000	000	00	01.27
03356	N N N	09/09/2006	14	MANZANITA ST RIVER RD	N	CROSS	N	TRF SIGNAL	N	DRY	N	DRY	REAR	INJ	01	NONE	STRGHT	S	N	01	DRVR	INJC	28	F	OR-Y	OR<25	020	000	000	00	01.27
04439	N N N	11/17/2006	14	MANZANITA ST RIVER RD	N	CROSS	N	TRF SIGNAL	N	DRY	N	DRY	REAR	INJ	01	NONE	STRGHT	S	N	01	DRVR	INJC	63	M	OR-Y	OR<25	000	000	000	00	01.27
02820	N N N	08/02/2004	15	RIVER RD WHEATLAND RD	N	3-LEG	N	TRF SIGNAL	N	CLR	N	DRY	REAR	INJ	01	NONE	STRGHT	S	N	01	DRVR	NONE	24	M	OR-Y	OR<25	020,016	038	000	00	01.27

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

River at Manzanita at Wheatland in Keizer
1-1-2002 through 12-31-2006

CDS36C 9/25/2007

CITY OF KEIZER, MARION COUNTY

INVEST	D C S L K	D A U C O	S E L C H R	D A Y	T I M E	CLASS	CITY STREET	DIST	FROM	RD CHAR	INT-TYP	INT-REL	OFF-RD	WTHR	CRASH TYP	TRAF-LEGS	CONTL	DRVW	LIGHT	SVRTF	V#	VEN TYPE	MOVE FROM TO	SECL USE	TRLR QTY	ORWR	PRIC INJ	A S	G E L I C M S	P E D	LOC ERROR	ACTN EVENT	CAUSE
00324	N N N			01/25/2006	Wed 9A	16	RIVER RD WHEATLAND RD	0		INTER N	3-LEG	N	CLR	N	S-1STOP	N	TRF SIGNAL	N	DRY	REAR	01	NONE	STOP	NONE	01	DRVR INJC	34	F	OR-Y	000	011	00	
00496	N N N			01/08/2004	Thu 5P	14	RIVER RD WHEATLAND RD	0		INTER CN	3-LEG	N	RAIN	N	O-ITURN	N	TRF SIGNAL	N	WET	TURN	01	NONE	STRGHT	NONE	01	DRVR INJC	60	M	OR-Y	000	011	00	
01259	N N N			04/09/2004	Fri 2P	14	RIVER RD WHEATLAND RD	0		INTER CN	3-LEG	N	CLR	N	O-ITURN	N	TRF SIGNAL	N	DRY	TURN	01	NONE	STRGHT	NONE	01	DRVR INJC	54	M	OR-Y	004,028	000	00	
02950	N N N			08/02/2005	Tue 5P	14	RIVER RD WHEATLAND RD	0		INTER CN	3-LEG	N	CLR	N	BIKE	N	TRF SIGNAL	N	DRY	TURN	01	NONE	TURN-L	NONE	01	DRVR INJC	50	F	OR-Y	027	000	00	
07070	N N N			12/23/2003	Tue 5P	14	RIVER RD WHEATLAND RD	0		INTER CN	3-LEG	N	RAIN	N	ANGL-OTH	N	TRF SIGNAL	N	WET	TURN	01	NONE	TURN-R	NONE	01	DRVR INJC	27	M	OR-Y	028	016	00	

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

River at Manzanita at Wheatland in Keizer
1-1-2002 through 12-31-2006

CDS390 9/25/2007

CITY OF KEIZER, MARION COUNTY

SR#	INVEST	DATE	TIME	CLASS	CITY STREET	RD CHAR	INT-TYP	INT-REL	OFF-RD	WTHR	CRASH TYP	SPL USE	MOVE	PH	INJ	A	S	PEL	LOC	ERR	ACTN	EVENT	CAUSE
01697	NONE	04/03/2002	Wed 7A	16	RIVER RD N WHEATLAND RD	06	3-LEG	STOP	SIGN	N DRY	S-1STOP	PRVTE	N S	01	DRVR	NONE	25	M	OR-Y	026	000	000	07
03194	NONE	06/19/2002	Wed 8A	14	RIVER RD N WHEATLAND RD	06	3-LEG	STOP	SIGN	N DRY	S-1STOP	PRVTE	N S	01	DRVR	NONE	47	F	OR-Y	000	000	011	07
05395	NONE	10/01/2002	Tue 7A	16	RIVER RD N WHEATLAND RD	06	3-LEG	STOP	SIGN	N DRY	S-1STOP	PRVTE	N S	01	DRVR	NONE	18	M	OR-Y	026	000	000	07
04282	NONE	08/13/2003	Wed 9A	16	RIVER RD N WHEATLAND RD	06	3-LEG	STOP	SIGN	N DRY	S-1STOP	PRVTE	N S	01	DRVR	NONE	49	F	OR-Y	000	011	011	07
02025	NONE	04/19/2002	Fri 7P	14	RIVER RD N WHEATLAND RD	06	3-LEG	STOP	SIGN	N DRY	S-1STOP	PRVTE	N S	01	DRVR	NONE	67	F	OR-Y	026	000	000	01

CDS360 9/25/2007

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
USBAR NON-SYSTEM CRASH LISTING

River at Manzanita at Wheatland in Keizer
1-1-2002 through 12-31-2006

CITY OF KEIZER, MARION COUNTY

SR#	INVEST	D C S L K	DATE	CLASS	CITY STREET	RD CHAR	INT-TYP	INT-REL	OFF-RO	WTHR	CRASH TYP	SPCL USE	MOVE	PRIC	INJ	A S	LOC	ERR	ACTN	EVENT	CAUSE
					FIRST STREET	DIRECT	(MEDIAN)	TRAF-	RDNT	DRY	CLR	N CLR	S-1STOP	VEH TYPE	TO	TYPE	SVRTY	E X RES			
					SECOND STREET	LOCTN	LEGS	CONTL	DRVMY	DRY	N DRY	STOP SIGN	STOP SIGN	DRVR	DRVR	DRVR	DRVR	DRVR	DRVR	DRVR	DRVR
							(#LANES)		DRY	DRY	N DRY	STOP SIGN	STOP SIGN	DRVR	DRVR	DRVR	DRVR	DRVR	DRVR	DRVR	DRVR
03183	NONE	N N N	06/18/2003	14	RIVER RD N WHEATLAND RD	SW	3-LEG	N	N	N	N	01	01	01	DRVR	NONE	20 M	OR-Y	026	000	07
02935	NONE	N N N	06/06/2003	14	RIVER RD N WHEATLAND RD	CN	3-LEG	N	N	N	N	01	01	01	DRVR	NONE	50 M	OR-Y	000	012	00
01061	CITY	N N N	02/27/2002	14	RIVER RD N WHEATLAND RD	CN	3-LEG	N	N	N	N	01	01	01	DRVR	INJC	36 F	OR-Y	004,028	000	02
03306	CITY	N N N	06/21/2002	14	RIVER RD N WHEATLAND RD	CN	3-LEG	N	N	N	N	01	01	01	DRVR	NONE	16 M	OR-Y	000	011	00

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 CRASH SUMMARIES BY YEAR BY COLLISION TYPE
 Salem Parkway/Salem Hwy (Hwy 72, Route 99E bus.) at Cherry in Salem
 1-1-2002 through 12-31-2006

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	TOTAL PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION RELATED	OFF-ROAD
YEAR: 2006	0	1	0	1	0	1	0	0	1	0	1	1	0
ANGLE	0	1	0	1	0	1	0	0	1	0	1	1	0
2006 TOTAL	0	1	0	1	0	1	0	0	1	0	1	1	0
YEAR: 2005	0	2	2	4	0	2	0	3	1	3	1	4	0
REAR-END	0	1	0	1	0	1	0	0	1	1	0	1	0
TURNING MOVEMENTS	0	3	2	5	0	3	1	3	2	4	1	5	0
2005 TOTAL	0	2	2	4	0	2	0	3	1	3	1	4	0
YEAR: 2004	0	2	0	2	0	3	0	2	0	1	1	2	0
REAR-END	0	1	0	1	0	2	0	0	1	1	0	1	0
TURNING MOVEMENTS	0	3	0	3	0	5	0	2	1	2	1	3	0
2004 TOTAL	0	2	0	2	0	3	0	2	0	1	1	2	0
YEAR: 2003	0	0	1	1	0	0	0	1	0	1	0	1	0
ANGLE	0	1	1	2	0	1	0	2	0	2	0	2	0
REAR-END	0	1	2	3	0	1	0	3	0	3	0	3	0
2003 TOTAL	0	0	1	1	0	0	0	1	0	1	0	1	0
YEAR: 2002	0	2	0	2	0	2	0	2	0	2	0	2	0
ANGLE	0	4	3	7	0	9	0	7	0	6	1	7	0
REAR-END	0	2	1	3	0	3	0	2	1	1	2	3	0
TURNING MOVEMENTS	0	8	4	12	0	14	0	11	1	9	3	12	0
2002 TOTAL	0	2	4	6	0	14	0	11	1	9	3	12	0
FINAL TOTAL	0	16	8	24	0	24	1	19	5	18	6	24	0

Note: Legislative changes to DMV's vehicle crash reporting requirements, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
 TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
 URBAN NON-SYSTEM CRASH LISTING
 Salem Parkway/Salem Hwy (Hwy 72, Route 99E bus.) at Cherry Ir. Salem
 1-1-2002 through 12-31-2006

CDS380 9/25/2007

CITY OF SALEM, MARION COUNTY

SER#	INVEST	D C S L K	F A U C O	E L G H R	D A T E	CLASS	CITY STREET	RD CHAR	INT-TYP	INT-REL	OFF-RD	WTHR	CRASH TYP	TRLR QTY	MOVE	FRM	OWNER	VEH TYPE	PH	TYPE	SVRTY	A S	G E	LIC	RES	LOC	ERROR	ACTN	EVENT	CAUSE		
NO RPT			FROM	TO	TIME	DIST	FIRST STREET	DIRCT	LEGS	TRAFF-	RDDBT	SURF	COLL TYP	TRKR QTY	FROM	VEH TYPE	VEH TYPE	DRVR	DRVR	DRVR	INJ	E X	R E S									
00714	NONE	N N N	14	0	02/24/2005	14	CHERRY AVE SALEM PKY	INTER	CROSS	N	TRF SIGNAL	N	CLR	S-1STOP	01	NONE	PRVTE	PSNGR CAR	01	DRVR	NONE	49	F	OR-Y	OR<25			093	093	01, 27		
02297	NONE	N N N	14	0	06/17/2005	14	CHERRY AVE SALEM PKY	INTER	CROSS	N	TRF SIGNAL	N	RAIN	S-1STOP	01	NONE	PRVTE	PSNGR CAR	01	DRVR	NONE	45	M	OR-Y	OR<25			011	011	00	00	00
05367	NONE	N N N	14	0	10/05/2002	14	CHERRY AVE NE SALEM PKY	INTER	CROSS	N	TRF SIGNAL	N	CLR	S-1STOP	01	NONE	PRVTE	PSNGR CAR	01	DRVR	NONE	22	M	OR-Y	OR<25			012	012	00	00	00
05002	NONE	N N N	14	0	11/01/2002	14	CHERRY AVE NE SALEM PKY	INTER	CROSS	N	TRF SIGNAL	N	CLR	S-1STOP	02	NONE	PRVTE	PSNGR CAR	01	DRVR	NONE	27	M	OR-Y	OR<25			011	011	07	07	07
05062	NONE	N N N	14	0	09/20/2002	14	CHERRY AVE NE SALEM PKY	INTER	CROSS	N	TRF SIGNAL	N	CLR	S-1STOP	01	NONE	PRVTE	PSNGR CAR	01	DRVR	NONE	29	F	OR-Y	OR<25			000	000	07	07	07
04554	NONE	N N N	14	0	09/08/2002	14	CHERRY AVE NE SALEM PKY	INTER	CROSS	N	TRF SIGNAL	N	CLR	S-1STOP	02	NONE	PRVTE	PSNGR CAR	01	DRVR	NONE	53	F	OR-Y	OR<25			011	011	01	01	01

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

Verda at Chemawa in Keizer
 1-1-2002 through 12-31-2006

COLLISION TYPE	FATAL CRASHES		NON-PROPERTY DAMAGE		TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
	FATAL CRASHES	NON-PROPERTY DAMAGE	ONLY	PROPERTY DAMAGE											
YEAR: 2005	0	0	1	1	1	0	0	0	1	0	0	1	1	0	0
ANGLE	0	0	1	1	1	0	0	0	1	0	0	1	1	0	0
2005 TOTAL	0	0	1	1	1	0	0	0	1	0	0	1	1	0	0
YEAR: 2003	0	0	1	1	1	0	0	0	1	0	1	0	1	0	0
ANGLE	0	0	1	1	1	0	0	0	1	0	1	0	1	0	0
2003 TOTAL	0	0	1	1	1	0	0	0	1	0	1	0	1	0	0
YEAR: 2002	0	2	0	0	2	0	2	0	2	0	2	0	2	0	0
ANGLE	0	0	1	1	1	0	0	0	1	0	0	1	1	0	0
TURNING MOVEMENTS	0	2	1	1	3	0	2	0	3	0	2	1	3	0	0
2002 TOTAL	0	2	1	1	3	0	2	0	3	0	2	1	3	0	0
FINAL TOTAL	0	2	3	3	5	0	2	0	5	0	3	2	5	0	0

Note: Legislative changes to DMV's vehicle crash reporting requirements, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

COLLISION TYPE	FATAL CRASHES		NON-FATAL CRASHES		TOTAL CRASHES	TOTAL PEOPLE KILLED	TOTAL PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION RELATED	OFF-ROAD
	FATAL	CRASHES	FATAL	CRASHES										
YEAR: 2006														
TURNING MOVEMENTS	0	0	0	1	1	0	0	0	1	0	0	1	1	0
2006 TOTAL	0	0	0	1	1	0	0	0	1	0	0	1	1	0
YEAR: 2005														
ANGLE	0	0	0	1	1	0	0	0	0	1	1	0	1	0
2005 TOTAL	0	0	0	1	1	0	0	0	0	1	1	0	1	0
YEAR: 2004														
TURNING MOVEMENTS	0	1	0	0	1	0	2	0	1	0	1	0	1	0
2004 TOTAL	0	1	0	0	1	0	2	0	1	0	1	0	1	0
YEAR: 2002														
TURNING MOVEMENTS	0	0	0	1	1	0	0	0	1	0	1	0	1	0
2002 TOTAL	0	0	0	1	1	0	0	0	1	0	1	0	1	0
FINAL TOTAL	0	1	0	3	4	0	2	0	3	1	3	1	4	0

Note: Legislative changes to DMV's vehicle crash reporting requirements, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

9/26/2007

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

CDS380 CITY OF KEIZER, MARION COUNTY

Verda at Lockhaven in Keizer
1-1-2002 through 12-31-2006

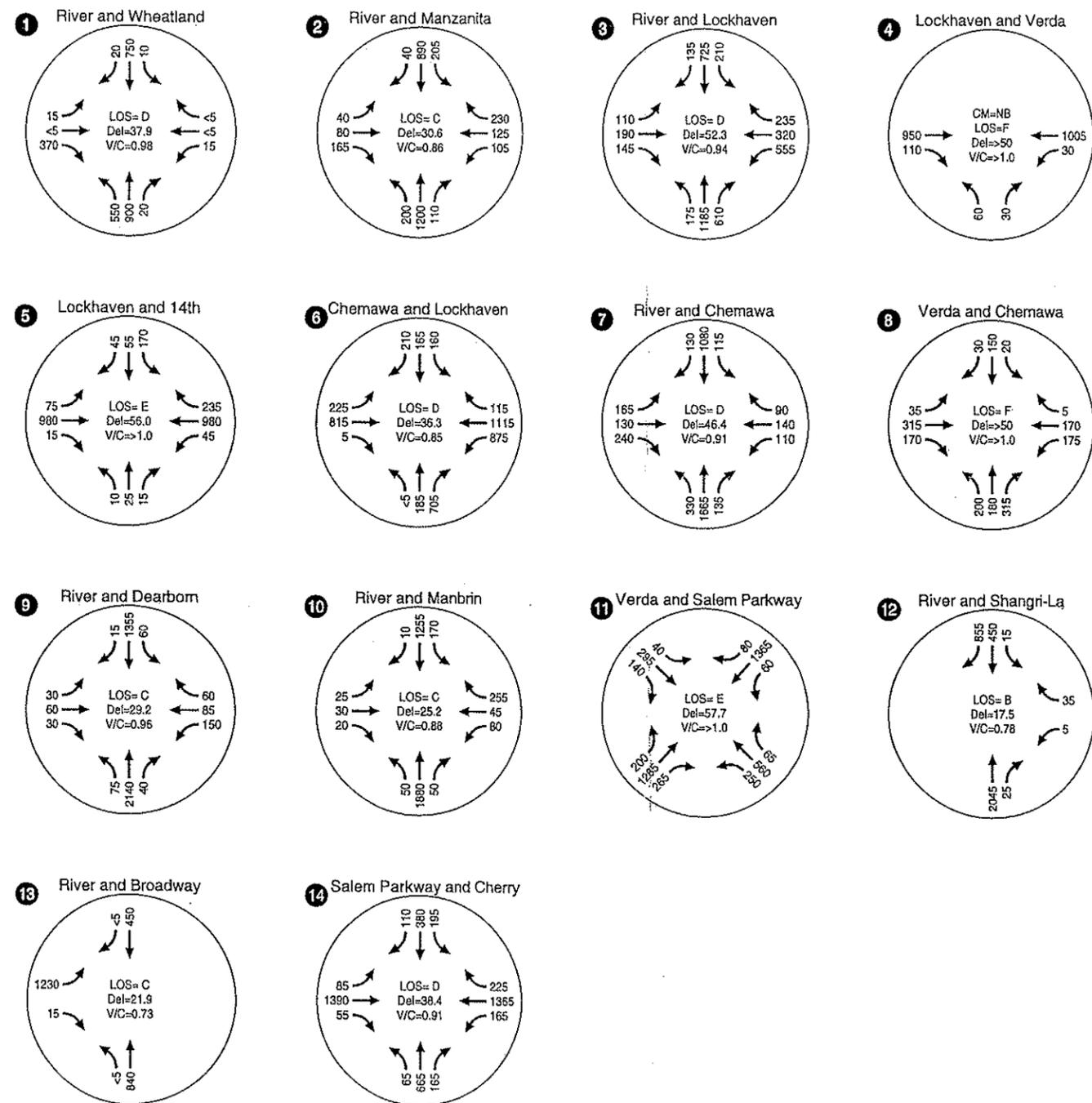
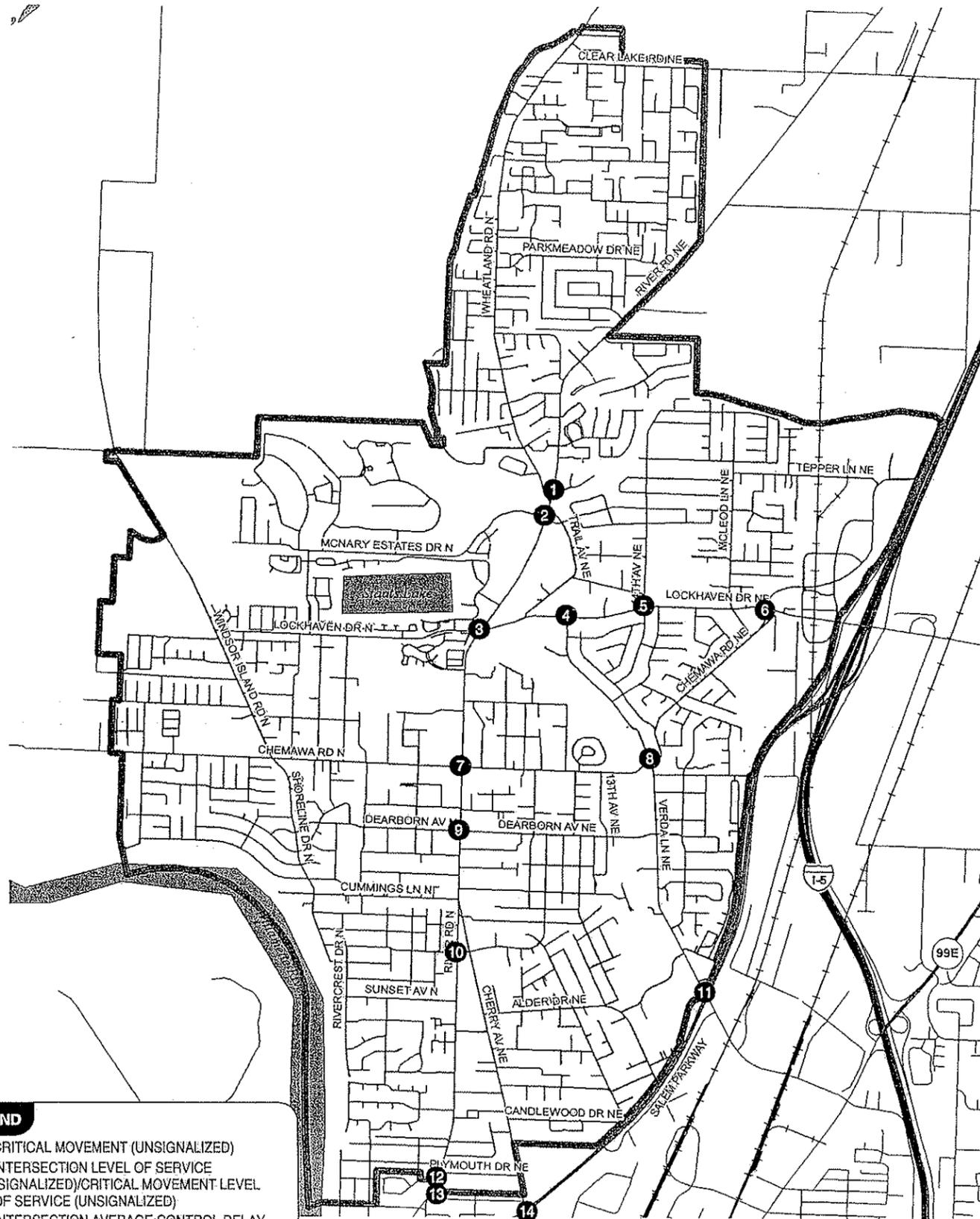
SRF INVEST	DATE	TIME	CLASS	CITY STREET	RD CHAR	INT-TYP	INT-REL	OFF-RD	WTHR	CRASH TYP	SPL USE	TRLR QTY	MOVE FROM	PRTC INJ	A S	E LICNS	FED	LOC ERROR	ACTN EVENT	CRUSE		
INVEST D C S L K	DATE	TIME	FROM	FIRST STREET	DIRECT	(LANES)	CONFL	DRWAY	LIGHT	SVRTY	VEH TYPE	OMHR	TO	TYPE	SVRTY	E X RES	LOC ERROR					
03480	N N N	N	14	LOCKHAVEN DR	INTER	3-LEG	N	CLR	N	ANGL-OTH	01	NONE	STRGHT	01	DRVR	NONE	32	M	OR-Y	000	02	
		Wed	0	VERDA LN	CN	99	STOP SIGN	N	DAY	INJ	PRVTE	FSNGR CAR	N E				900			000	00	
		2P			04						FSNGR CAR										000	00
01896	N N N	N	14	LOCKHAVEN DR	INTER	3-LEG	N	RAIN	N	ANGL-OTH	01	NONE	TURN-L	01	DRVR	NONE	18	F	OR-Y	015	02	
		Mon	0	VERDA LN	CN	99	STOP SIGN	N	DAY	PDO	PRVTE	FSNGR CAR	S W				028			000	00	
		12P			04						FSNGR CAR										000	02
00656	N N N	N	14	LOCKHAVEN DR	INTER	3-LEG	N	CLR	N	ANGL-OTH	01	NONE	STRGHT	01	DRVR	NONE	64	M	OR-Y	000	00	
		Wed	0	VERDA LN	CN	99	STOP SIGN	N	DUSK	PDO	PRVTE	FSNGR CAR	N E								000	00
		5P			04						FSNGR CAR										000	00
00777	N N N	N	14	LOCKHAVEN DR NE	INTER	3-LEG	N	CLR	N	S-1TURN	01	NONE	STRGHT	01	DRVR	NONE	83	F	OR-Y	000	01	
		Fri	0	VERDA LN NE	CN	0	STOP SIGN	N	DAY	PDO	PRVTE	FSNGR CAR	N E				042			000	01	
		2P			03						FSNGR CAR										000	01
											FSNGR CAR										000	01

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 RELATED	INTER- SECTION RELATED OFF- ROAD
YEAR: 2006													
ANGLE	0	1	0	1	0	1	0	0	1	1	0	1	0
REAR-END	0	0	1	1	0	0	0	1	0	1	0	1	0
2006 TOTAL	0	1	1	2	0	1	0	1	1	2	0	2	0
YEAR: 2005													
REAR-END	0	1	0	1	0	2	0	0	1	1	0	1	0
TURNING MOVEMENTS	0	2	0	2	0	3	0	1	1	1	1	2	0
2005 TOTAL	0	3	0	3	0	5	0	1	2	2	1	3	0
YEAR: 2004													
ANGLE	0	1	0	1	0	1	0	0	1	0	1	1	0
REAR-END	0	2	1	3	0	2	0	1	2	2	1	3	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	1	0	1	0
2004 TOTAL	0	3	2	5	0	3	0	2	3	3	2	5	0
YEAR: 2003													
REAR-END	0	1	2	3	0	1	0	2	1	2	1	3	0
TURNING MOVEMENTS	0	1	0	1	0	2	0	1	0	1	0	1	0
2003 TOTAL	0	2	2	4	0	3	0	3	1	3	1	4	0
YEAR: 2002													
REAR-END	0	1	4	5	0	4	0	2	2	5	0	5	0
2002 TOTAL	0	1	4	5	0	4	0	2	2	5	0	5	0
FINAL TOTAL	0	10	9	19	0	16	0	9	9	15	4	19	0

Note: Legislative changes to DMV's vehicle crash reporting requirements, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.



(NO SCALE)



H:\p\..._310 - Keizer TSP Refinement and Update\figs\figs10\figs4.dwg Apr 01, 2008 - 1:16pm - mhughart

LEGEND
 CM = CRITICAL MOVEMENT (UNSIGNALIZED)
 LOS = INTERSECTION 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

**FUTURE YEAR 2031 NO-BUILD TRAFFIC CONDITIONS
 WEEKDAY PM PEAK HOUR
 KEIZER, OREGON** **FIGURE 2-2**

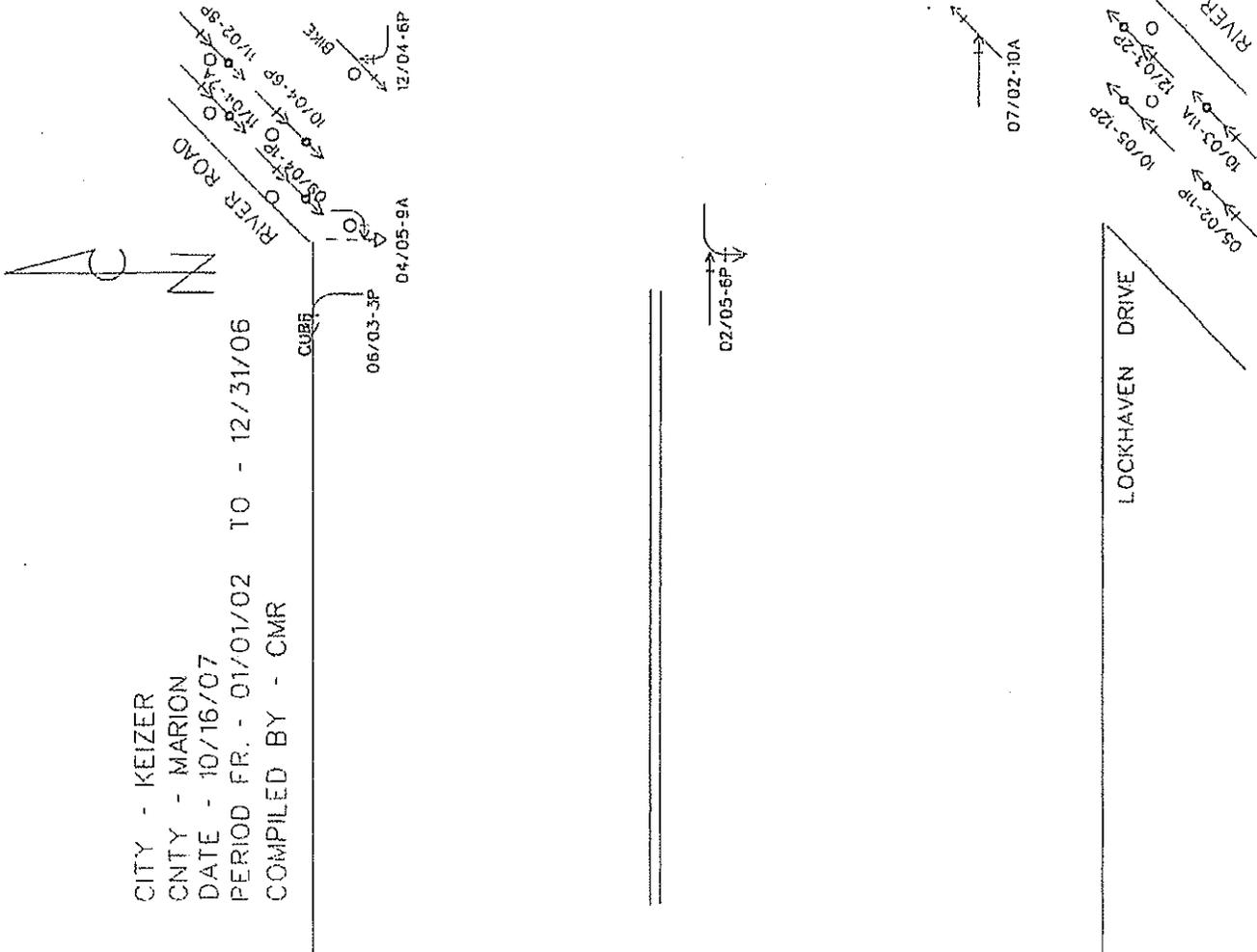
Appendix "G"
ODOT Collision Diagrams

CITY - KEIZER
 CNTY - MARION
 DATE - 10/16/07
 PERIOD FR. - 01/01/02 TO - 12/31/06
 COMPILED BY - CMR

LEGEND

- Person Killed
- ◁ --- Ped. Killed
- Person Inj.
- ◁ --- Ped. Inj.
- ◁ --- Property Damage Only
- ◁ --- Collision - Rear-end
- ◁ --- Collision - Hood-on
- ◁ --- Collision - Sideswipe
- ☆ Awaiting Left Turn

- ◁ --- Path of Pedestrian
- ◁ --- Path of Vehicle
- ◁ --- Path of Animal
- ◁ --- Vehicle Moving
- ◁ --- Vehicle Stopped
- ◁ --- Vehicle Backing
- ◁ --- Property Parked
- ◁ --- Improperly Parked
- ◁ --- Vehicle Overturned
- ◁ --- Vehicle Skidded



LOCKHAVEN DRIVE

08/05-11A

12/01-2P

11/04-7A

02/05-6P

LOCKHAVEN DRIVE

RIVER ROAD

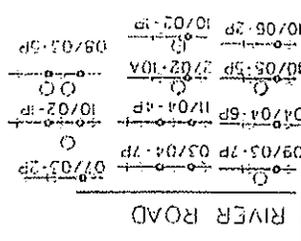
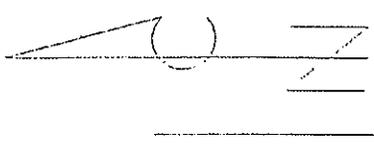
07/02-10A

05/02-11P
 10/03-11A
 12/05-2B
 10/05-12B

LEGEND

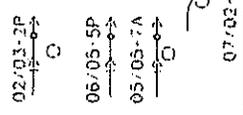
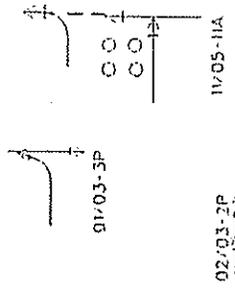
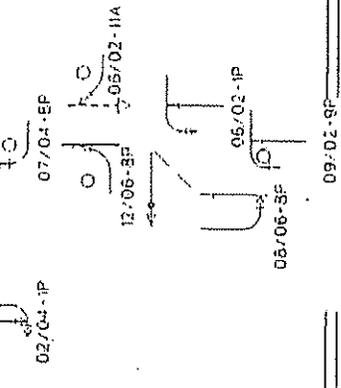
- Person Killed
- Person Inj
- Person Inj
- Ped. Inj
- Property Damage Only
- Collision - Rear-end
- Collision - Head-on
- Collision - Sideswipe
- Awaiting Left Turn
- ← Path of Pedestrian
- Path of Vehicle
- Path of Accident
- Vehicle Marking
- Vehicle Skidding
- Vehicle Backing
- Property Damage
- Improperly Parked
- Vehicle Overturned
- Vehicle Skidded

CITY - KEIZER
 CNTY - MARION
 DATE - 10/10/07
 PERIOD FR. - 01/01/02 TO - 12/31/06
 COMPILED BY - CMR



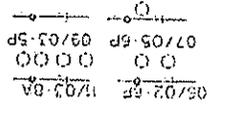
RIVER ROAD

CHEMAWA ROAD



RIVER ROAD

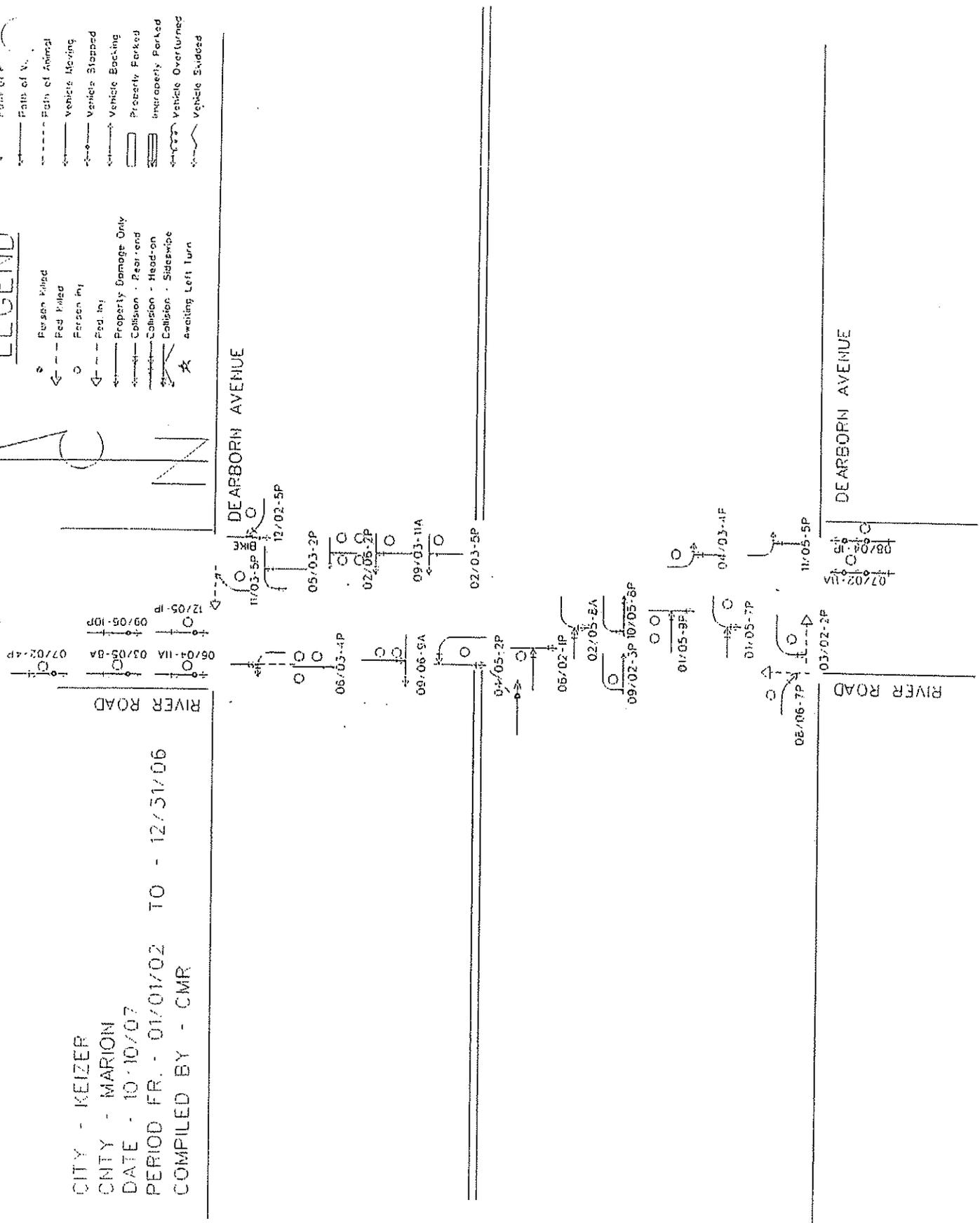
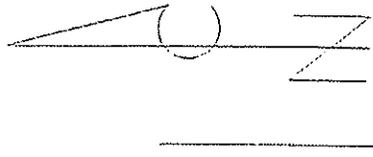
CHEMAWA ROAD



CITY - KEIZER
 CNTY - MARION
 DATE - 10/10/07
 PERIOD FR. - 01/01/02 TO - 12/31/06
 COMPILED BY - CMR

LEGEND

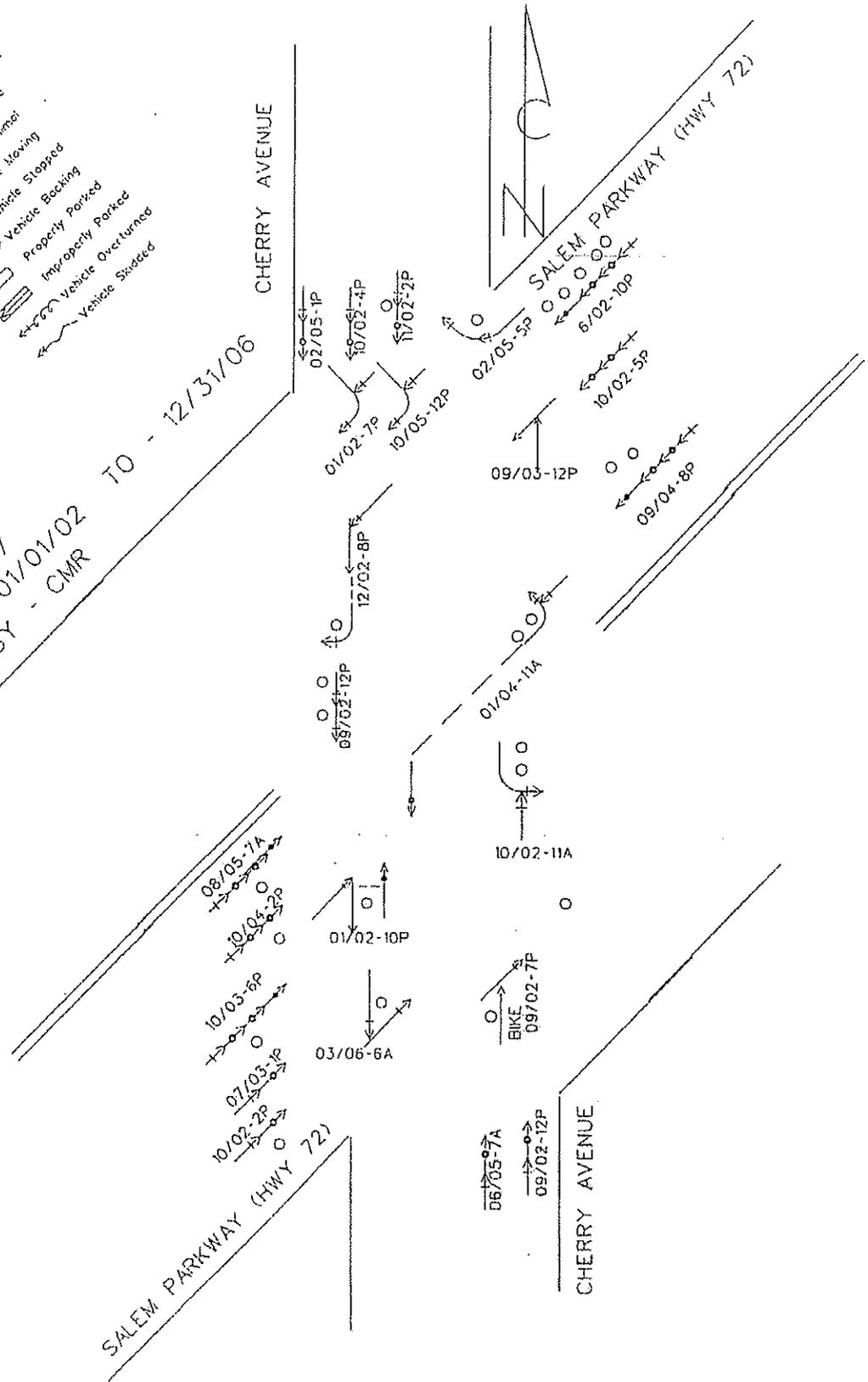
- Person Killed
- Person Inj
- Property Damage Only
- Collision - Rear-end
- Collision - Head-on
- Collision - Sideswipe
- awaiting Left Turn
- Path of P
- Path of Animal
- Vehicle Moving
- Vehicle Stopped
- Vehicle Backing
- Properly Parked
- Improperly Parked
- Vehicle Overturned
- Vehicle Sidest



LEGEND

- Person Killed
- Ped. Killed
- Person Inj.
- Ped. Inj.
- Property Damage Only
- Collision - Rear-end
- Collision - Head-on
- Collision - Side-swipe
- Awaiting Left Turn
- Path of Pedestrian
- Path of Vehicle
- Path of Vehicle
- Vehicle Moving
- Vehicle Stopped
- Vehicle Backing
- Vehicle Parked
- Properly Parked
- Improperly Parked
- Vehicle Overturned
- Vehicle Skidded

CITY - SALEM
 CNTY - MARION
 DATE - 10/15/07
 PERIOD FR. - 01/01/02
 COMPILED BY - CMR



CITY - KEIZER
 CITY - MARION
 DATE - 10/10/07
 PERIOD FR. - 01/01/02 TO - 12/31/06
 COMPILED BY - CMR

VERDA LANE

LEGEND

- Person Inj.
- Ped Killed
- Person Inv.
- Ped Inj.
- Property Damage Only
- Collision - Rear-end
- Collision - Head-on
- Collision - Sideswipe
- Assisting Left Turn
- Path of Ped.
- Path of Vehicle
- Path of Animal
- Vehicle Moving
- Vehicle Stopped
- Vehicle Backing
- Properly Parked
- Improperly Parked
- Vehicle Overturned
- Vehicle Slipped

CHEMAWA ROAD

08/02-5P

06/02-5P

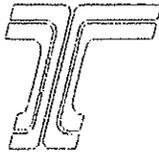
08/02-5P

12/05-6P

CHEMAWA ROAD

06/03-4P

VERDA LANE



City KEIZER County MARION

Intersection of VERDA LANE

and LOCKHAVEN DRIVE

Highway and No. _____

M.P. _____ Period Fr. 01/01/02 To 12/31/06

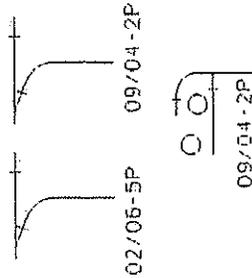
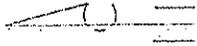
COLLISION
DIAGRAM
SYSTEM

Compiled by CMR Date 10/11/07

LEGEND

- ⊙ Person Killed
- ⊙ - - - Ped Killed
- Person Inj
- ⊙ - - - Ped. Inj.
- Property Damage Only
- Collision - Rear-end
- Collision - Head-on
- Collision - Sideswipe
- ★ Awaiting Left Turn

LOCKHAVEN DRIVE



02/02-2P

VERDA LANE

- ⊙ - - - Path of Pedestrian
- Path of Vehicle
- ⊙ - - - Path of Animal
- Vehicle Moving
- Vehicle Stopped
- Vehicle Backing
- ▭ Property Parked
- ▭ Improperly Parked
- Vehicle Overturned
- Vehicle Skidded

CITY - KEIZER
 CNTY - MARION
 DATE - 10/10/07
 PERIOD FR. - 01/01/02 TO - 12/31/06
 COMPILED BY - CMR

14TH AVENUE

09/06-5P

LOCKHAVEN DRIVE

05/06-7P

07/02-5P

10/02-1P

01/03-8P

LEGEND

- Person Killed
- Person Inj.
- Property Damage Only
- Collision - Rear-End
- Collision - Head-on
- Collision - Sideswing
- Awaiting Left Turn
- Path of Pedestrian
- Path of Vehicle
- Path of Animal
- Vehicle Moving
- Vehicle Stopped
- Vehicle Backing
- Properly Parked
- Improperly Parked
- Vehicle Overturned
- Vehicle Skipped

KAFIR DRIVE

LOCKHAVEN DRIVE

Appendix "H"
Rate-Quality Control
Criteria Methodology

641
 Critical Rate 642
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 ■ Limited data is needed 644
 ■ Reduces exaggeration effect of low volume locations 645
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11.3.5. Critical Rate Method

Definition

The observed crash rate at each site is compared to a calculated critical crash rate that is unique to each site. Sites that exceed their respective critical rate are flagged for further review. The critical crash rate depends on the average crash rate at similar sites, traffic volume, and a statistical constant that represents a desired level of significance.

Data Needs and Inputs

- Crash counts and location. The critical rate method could also be applied by specific type or severity of crashes.
- Average Daily Traffic Volumes (ADT), or Annual Average Daily Traffic Volumes (AADT)

Applications

Sites that have crash rates higher than their calculated critical crash rate are identified for further detailed analysis. This method is an extension of the Crash Rate Method.

Method

1. Categorize sites according to appropriate characteristics as described in Section 11.2: Step 2 - Identify and Categorize the Roadway Network for Screening.
2. For intersections, sum the annual average daily traffic (AADT) counts for each intersection approach to calculate the total entering volume (TEV) in millions for each intersection.

$$TMEV_i = \left(\frac{TEV_i}{1,000,000} \right) (Y)(365)$$

Where,

TMEV_i = Total Million Entering Vehicles for the specific site

TEV_i = Total Entering Vehicles for the specific site

Y = Number of years of crash data

3. For road segments, multiply the annual average daily traffic volume (AADT) for the road segment by the length of the road segment and the number of years of crash data to calculate the vehicle miles traveled (VMT). Divide by 1,000,000 to calculate the million vehicle miles of travel (MVMT)

$$MVMT_i = \frac{(AADT)(Segment Length)(365)(Y)}{1,000,000}$$

Where,

MVMT_i = Million vehicle miles traveled for the specific site

Y = Number of years of study period

4. Calculate the observed crash rate for each site by dividing the total number of site crashes by the TMEV (for intersections) or MVMT (for road segments).

$$\text{Crash Rate}_i = K_i / \text{TMEV}_i$$

Where,

K_i = Total number of observed crashes at site i

TMEV_i = Total million entering vehicles at site i

Calculate the average crash rate (R_a) for each category of sites under consideration.

Calculate the critical crash rate for each site (each site will have its own unique critical crash rate to which the site's observed crash rate will be compared).

$$R_{Ci} = R_a + K_c \sqrt{\frac{R_a}{\text{TMEV}_i} + \frac{1}{(2)(\text{TMEV}_i)}}$$

Where,

R_{Ci} = Critical Crash Rate for a site

R_a = Average Crash Rate

K_c = Probability constant based on desired level of significance

TMEV_i = Total million entering vehicles for a site

Exhibit 11-14: K_c Values for Confidence Intervals

Confidence Level	K_c - Value ⁽¹⁾
85 Percent	1.036
90 Percent	1.282
95 Percent	1.645
99 Percent	2.326
99.5 Percent	2.576

(1) Assumes Poisson Distribution and one-tailed standard normal random variable

5. Compare the observed crash rate at each site to the critical crash rate for each site.
6. Conduct detailed evaluation at sites that have an observed crash rate higher than their critical crash rate. (See Chapter 12 for guidance.)

Shown below is short example of applying the Critical Rate method. A more thorough example of the method is applied to intersections in Appendix A and to roadway segments in Appendix B.

Location	Total Crashes for Study Period	Study Period (years)	TEV	TMEV per Study Period	Annual Crash Rate R_i	Average Crash Rate, R_A	Critical Crash Rate, R_c	$R_i > R_c$?
Intersection A	80	4	34,500	50.36	1.59	1.30	1.57	Yes
Intersection B	141	4	65,000	94.92	1.49	1.30	1.50	No
Intersection C	78	4	37,500	54.76	1.42	1.30	1.56	No
Intersection D	62	5	30,000	54.75	1.13	1.30	1.56	No
Intersection E	32	5	20,000	36.50	0.88	1.30	1.62	No
*95% confidence level								
*Assuming all five intersections have similar characteristics								

The crash rate is calculated for each site in the study category. Similarly, an average crash rate for each category is calculated. Using the average crash rate, traffic volumes and a statistical constant representing a desired significance level, a critical crash is calculated for each site. The site crash rate is compared to site critical crash rate to identify whether or not the site should be flagged for further study.

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11.3.6. Method of Moments

Definition

In the method of moments, a site's observed accident frequency is adjusted to partially account for regression to the mean. The adjusted observed frequency is compared to the average frequency of crashes for the reference population to determine the potential for improvement (PI). The potential for improvement of all reference populations (e.g. signalized four-legged intersections, unsignalized three-legged intersections, urban and rural, etc) are combined into one comprehensive ranking list.

Data Needs and Inputs

- Crashes by type and location
- Average Daily Traffic Volumes (ADT), or Annual Average Daily Traffic Volumes (AADT)

Applications

The potential for improvement of all reference populations (e.g. signalized four-legged intersections, unsignalized three-legged intersections, urban and rural, etc) are combined into one comprehensive ranking list.

Method

1. Categorize sites according to appropriate characteristics as described in Section 11.2: Step 2 - Identify and Categorize the Roadway Network for Screening.
2. Calculate the average crash frequency for each category.

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Method of Moments

Strengths

- Limited Data is needed.
- Establishes a threshold of expected performance for a site.
- Considers variance in crash data.
- Allows sites of all types to be ranked in one list.
- Method concepts are very similar to empirical bayes methods.

Weaknesses

- Effects of RTM may still be present in the results.
- Ranking results are influenced by groupings; sites near boundaries of groupings may be over-emphasized.

Appendix E
Future Conditions
Analysis



KITTELSON & ASSOCIATES, INC.

TRANSPORTATION ENGINEERING / PLANNING

610 SW Alder Street, Suite 700, Portland, OR 97206 • 503.228.5230 • 503.273.8169

TECHNICAL MEMORANDUM

City of Keizer, Transportation System Plan Update

Future No-Build Conditions

Date: April 2, 2008 Project #: 8310.04

To: Technical Advisory Committee

From: Elizabeth Wemple, P.E.; Alek Pochowski, E.I.; Matt Hughart, AICP

CC: Sam Litke, City of Keizer

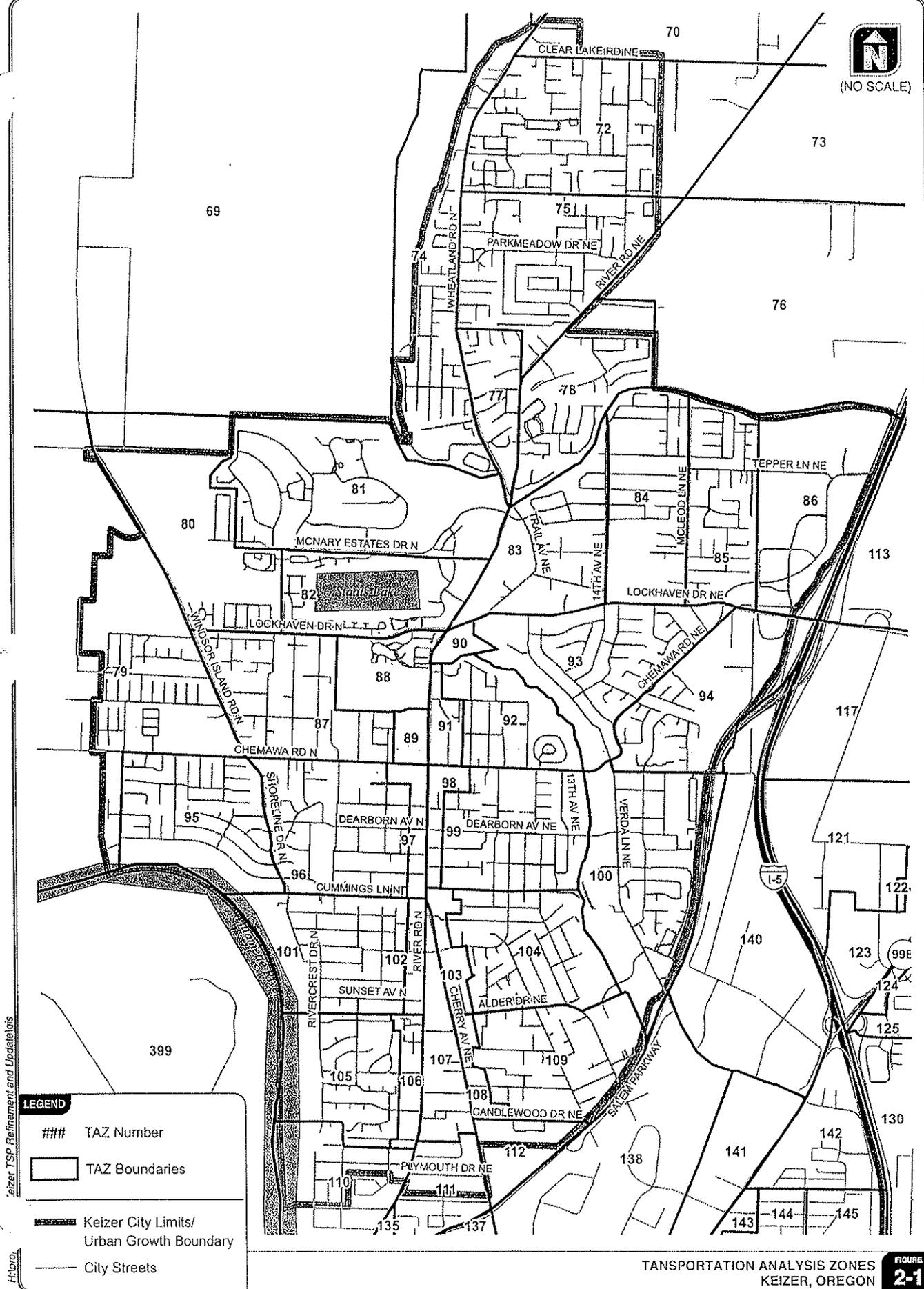
This memorandum presents a forecast of future conditions for the transportation system within the Keizer urban growth boundary, over the 2031 planning horizon. The analysis highlights the transportation needs that will result if no improvements were made to the City's transportation system.

FUTURE TRANSPORTATION DEMAND

GROWTH FORECASTS

Future transportation demand within the City of Keizer was estimated based on data from the Salem Keizer Area Transportation Study (SKATS) forecast model. For the purposes of the model, the Salem-Keizer area is divided into a number of traffic analysis zones (TAZs), which are intended to represent areas that contain similar land uses and access similar roadways. Figure 2-1 depicts the TAZ boundary locations for the City of Keizer and the immediate surrounding areas.

SKATS currently uses 2005 household and employment data as its base, and has developed year 2031 household and employment forecasts, which include estimates of future households and employment in areas that are not yet developed and re-development, where appropriate. Table 1 presents SKATS population and employment data for both 2005 and 2031 in TAZs wholly or partially within the City of Keizer. As shown in the Table, significant employment increases are shown in the TAZs that make up the developing Keizer Station retail center and along portions of River Road. Significant increases in the number of households are shown in those zones that border Wheatland Road and the northerly portions of River Road. It is likely that the residential growth is primarily infill development as the majority of vacant land within Keizer is already built out.



Keizer TSP Refinement and Updates
H. Iwano

LEGEND

- ### TAZ Number
- TAZ Boundaries
- ▬ Keizer City Limits/
Urban Growth Boundary
- City Streets

TRANSPORTATION ANALYSIS ZONES
KEIZER, OREGON **FIGURE 2-1**

Table 1 SKATS Population and Employment Forecasts for the City of Keizer

TAZ	2005		2031		Growth 2005-2031	
	Total Employment	HH	Total Employment	HH	Total Employment	HH
70	32	83	33	103	1	20
72	83	781	97	974	14	193
74	142	628	155	693	13	65
75	67	776	73	861	6	85
77	26	303	26	304	0	1
78	11	549	21	658	10	109
80	63	225	63	229	0	4
81	188	528	188	529	0	1
82	202	310	392	308	190	-2
83	116	257	311	631	195	374
84	170	403	174	450	4	47
85	17	409	278	431	261	22
86	44	19	2359	19	2315	0
87	10	542	14	604	4	62
88	*	144	165	143	*	-1
89	262	29	262	37	0	8
90	187	57	187	56	0	-1
91	351	0	375	0	24	0
92	10	371	13	419	3	48
93	87	606	140	639	53	33
94	23	376	349	600	326	224
95	69	540	69	538	0	-2
96	55	552	57	599	2	47
97	268	70	348	72	80	2
98	360	35	381	36	21	1
99	88	467	129	490	41	23
100	106	592	109	638	3	46
101	37	369	39	402	2	33
102	127	101	127	103	0	2
103	173	120	179	133	6	13
104	17	565	17	596	0	31
105	12	360	12	361	0	1
106	303	246	372	245	69	-1
107	596	210	667	217	71	7
108	55	82	128	120	73	38
109	137	640	233	805	96	165
110	73	311	121	313	48	2
111	*	485	310	517	*	32
112	502	113	809	113	307	0

Note: HH = households, Total Emp. = Total Employment

* These zones do not display the 2005 Employment estimates due to State regulations covering the confidentiality of data. The regulations state that areas that either have less than three employers or that have one employer representing 80 percent of the aggregation total, may not be displayed on public maps or tables.

MODEL PROCESS

The SKATS transportation planning model was used to develop the 2031 weekday p.m. peak hour forecasts. The travel forecasting model assigns future traffic to the transportation system based on the level of household and employment growth in each TAZ. Trips are assigned to the transportation system based on the minimum time path; this reflects the fact that travelers will seek the routes with the shortest travel time and may choose to divert their route to avoid congestion during peak periods.

The “no-build” scenario transportation analysis consists of 2031 forecasted traffic volumes planned on the existing roadway system, with no capacity improvements other than those currently programmed (i.e. those projects with committed funding). These programmed improvements include the following:

- Additional east/west travel lanes on Lockhaven Drive between McLeod Lane to Ridge Drive.
- Widening of Verda Lane from Chemawa Road to the south City limits to include additional travel lanes, bicycle lanes, and sidewalks.
- Widening of Chemawa Road to full urban standards, including sidewalks and bike lanes.
- Traffic signal interconnects along River Road and Lockhaven Drive.

TRAFFIC VOLUME FORECASTS

The transportation model produces 2031 daily traffic forecasts for the study area network. For the purposes of the analysis, it was necessary to convert these daily forecasts to single one-hour p.m. peak forecasts.

The National Cooperative Highway Research Program (NCHRP) Report 255 was used to convert the model peak one-hour volumes to volumes for the traffic operations analysis. The NCHRP 255¹ process works as follows:

- Existing turning movement volumes and patterns are used as a starting point. For example, a particular movement at an intersection might currently have 50 vehicles per hour.
- The percentage change in the model’s traffic volumes for a movement between the model’s base and future years is calculated. For example, if the model’s base year volume is 25 vehicles per hour and the future year volume is 75 vehicles per hour, the movement’s volume triples during that time. Tripling the actual volumes would result in 150 vehicles per hour.

¹ Intersection operations and delays are not modeled within the Emme/2 model. As a result, the model’s turning movements generally should not be relied upon by themselves. To compensate, the NCHRP 255 process is a technique that modifies existing intersection turning patterns based on traffic growth modeled on the intersection approaches.

- The numerical change in the model's traffic volumes is also calculated. In the example, the model's volume for the movement increased by 50 vehicles per hour, from 25 to 75. Increasing the actual volumes by 50 vehicles per hour results in a total of 100 vehicles.
- The results obtained from the two methods, percentage and numerical change, are averaged to obtain the traffic volume used as the future year forecast. In this example, 150 and 100 would be averaged to obtain a movement volume of 125 vehicles per hour.

This process was applied to all of the study intersection in the City of Keizer. Occasionally, the NCHRP 255 process produces some unreasonable results for a particular movement. In general, this occurred when the existing model volume was extremely small, resulting in a 30-40-fold increase in volumes from existing to future years. When this occurred, the model's unadjusted future volume was used, rather than the adjusted volume.

For those intersections or approaches that were not included in the SKATS base year model, growth factors were estimated for each intersection approach based on the growth calculated for other nearby intersections that are included in the base year model. In addition, where intersections are closely spaced, with little or no opportunity for access between the intersections, traffic volumes were balanced between the two intersections. The resulting 2031 traffic volumes are shown in Figure 2-2.

As can be seen in the figure, the high growth in volumes along the regionally significant facilities such as River Road and Lockhaven Drive will diminish the performance of these roadways and the intersections that reside along these corridors. The 2031 operational analysis for each intersection is outlined in the following section.

Future Intersection Operations

Assuming the existing system plus the programmed projects shown above, and if growth occurs as assumed in the SKATS model, all intersections in the City of Keizer will experience a degradation in performance. Table 2 summarizes the results of the 2031 base intersection operations. Specifically, the level-of-service and capacity conditions are reported for each intersection. A description of level of service and the criteria by which they are determined is presented in Appendix A.

Table 2 2031 Base Intersection Operations

Intersection	Existing 2007		Future 2031	
	LOS	Capacity	LOS	Capacity
Two-Way Stop Controlled Intersections				
Verda Lane / Lockhaven Drive	F	Under Capacity	F	Over Capacity
All-Way Stop Controlled Intersections				
Verda Lane / Chemawa Road	C	Under Capacity	F	Over Capacity
Signalized Intersections				
River Road / Wheatland Road	C	Under Capacity	C	At Capacity
River Road / Manzanita Street	C	Under Capacity	C	Under Capacity
River Road / Lockhaven Drive	D	Under Capacity	D	Near Capacity
Lockhaven Drive / 14 th Avenue	B	Under Capacity	E	Over Capacity
Lockhaven Drive / Chemawa Road	B	Under Capacity	D	Under Capacity
River Road / Chemawa Road	D	Under Capacity	D	Near Capacity
River Road / Dearborn Avenue	B	Under Capacity	C	At Capacity
River Road / Manbrin Drive	B	Under Capacity	C	Under Capacity
River Road / Shangri-La	A	Under Capacity	B	Under Capacity
River Road / Broadway	B	Under Capacity	C	Under Capacity
Salem Parkway / Cherry Avenue	C	Under Capacity	D	Near Capacity
Salem Parkway / Verda Lane	D	Under Capacity	E	Over Capacity

Notes:

- Shading represents intersections where the level of service (LOS) is exceeding adopted standards or the volume-to-capacity ratio is near, at, or over capacity.
- Under Capacity = V/C Ratio <0.90, Near Capacity = V/C Ratio 0.90-0.94, At Capacity = V/C Ratio 0.95-0.99, Over Capacity = V/C Ratio ≥1.0
- Signalized and all-way stop delay represents the average vehicle delay for the whole intersection.
- Unsignalized delay represents the highest minor street approach delay.
- For a detailed review of the intersection level of service and capacity conditions, see Appendix B.

Notably, the following signalized intersections are forecast to operate at an unacceptable level-of-service (LOS "E" or worse) and exceed their available capacity by the year 2031:

- 14th Street/Lockhaven Drive
- Verda Lane/Salem Parkway

The critical movements at the following unsignalized intersections are projected to exceed capacity, and operate with a level-of-service "F" in year 2031:

- Verda Lane/Chemawa
- Verda Lane/Lockhaven Drive

In addition to the failing intersections, several intersections are projected to operate near, at, or over capacity by the year 2031 without exceeding the level-of-service standards. These intersections include:

- River Road/Wheatland Road
- River Road/Lockhaven Drive
- River Road/Chemawa Road
- River Road/Dearborn Avenue
- Salem Parkway/Cherry Avenue

Pedestrian Deficiencies

The existing conditions memorandum identified the sections of arterials and collectors that lack sidewalks on one or both sides. As current City of Keizer policies require all new development to provide adequate sidewalk facilities, some of those sections will be completed as development occurs. Consequently, the sidewalk focus in the alternatives analysis phase of the TSP development will be on completing short gaps in the existing sidewalk system, identifying and prioritizing longer sidewalk gaps in already developed areas, and continuing the expansion of the City's off-street pathway network.

Sidewalk gaps that were specifically raised as issues at the public open house consist of the following:

- Areas around McNary High School and Cummings Elementary lack sidewalks.
- Dearborn Avenue between 13th Avenue and Verda Lane.
- Chemawa Road west of River Road.
- Wheatland Road north of River Road.

Comments at the public open house also related to improving pedestrian crossings in the vicinity of schools, churches, etc.

Bicycle Deficiencies

Improved bicycle facilities were the primary bicycle need identified by both the technical analysis and public comment. Specific areas of concern expressed by the public include the following:

- Provide bicycle lanes on Rivercrest and Shoreline Drives.
- Improve River Road for bicycling, particularly the section south of Chemawa Road.

Public Transportation

Providing new fixed route transit service where service is not currently offered was the focus of many of the transit-related comments. Specific issues included the provision of more cross-town service and new service to Keizer Station.

Next Steps

The next major activity on this project is the development of transportation system improvements. The deficiencies identified in this future no-build transportation analysis inform the development of alternative transportation system alternatives. The future conditions alternative analysis will be discussed at the April TAC meeting.

Appendix "A"
Description of Level-of-
Service Methods and
Criteria

Appendix B Level-of-Service Concept

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

SIGNALIZED INTERSECTIONS

The six level-of-service grades are described qualitatively for signalized intersections in Table B1. Additionally, Table B2 identifies the relationship between level of service and average control delay per vehicle. Control delay is defined to include initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Using this definition, Level of Service "D" is generally considered to represent the minimum acceptable design standard.

Table B-1 Level-of-Service Definitions (Signalized Intersections)

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

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

Table B2 Level-of-Service Criteria for Signalized Intersections

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

UNSIGNALIZED INTERSECTIONS

Unsignalized intersections include two-way stop-controlled (TWSC) and all-way stop-controlled (AWSC) intersections. The 2000 Highway Capacity Manual (HCM) provides models for estimating control delay at both TWSC and AWSC intersections. A qualitative description of the various service levels associated with an unsignalized intersection is presented in Table B3. A quantitative definition of level of service for unsignalized intersections is presented in Table B4. Using this definition, Level of Service "E" is generally considered to represent the minimum acceptable design standard.

Table B3 Level-of-Service Criteria for Unsignalized Intersections

Level of Service	Average Delay per Vehicle to Minor Street
A	<ul style="list-style-type: none"> Nearly all drivers find freedom of operation. Very seldom is there more than one vehicle in queue.
B	<ul style="list-style-type: none"> Some drivers begin to consider the delay an inconvenience. Occasionally there is more than one vehicle in queue.
C	<ul style="list-style-type: none"> Many times there is more than one vehicle in queue. Most drivers feel restricted, but not objectionably so.
D	<ul style="list-style-type: none"> Often there is more than one vehicle in queue. Drivers feel quite restricted.
E	<ul style="list-style-type: none"> Represents a condition in which the demand is near or equal to the probable maximum number of vehicles that can be accommodated by the movement. There is almost always more than one vehicle in queue. Drivers find the delays approaching intolerable levels.
F	<ul style="list-style-type: none"> Forced flow. Represents an intersection failure condition that is caused by geometric and/or operational constraints external to the intersection.

Table B4 Level-of-Service Criteria for Unsignalized Intersections

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

It should be noted that the level-of-service criteria for unsignalized intersections are somewhat different than the criteria used for signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an unsignalized intersection. Additionally, there are a number of driver behavior considerations that combine to make delays at signalized intersections less galling than at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, while drivers on the minor street approaches to TWSC intersections must remain attentive to the task of identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at unsignalized intersections than signalized intersections. For these reasons, it is considered that the control delay threshold for any given level of service is less for an unsignalized intersection than for a signalized intersection. While overall intersection level of service is calculated for AWSC intersections, level of service is only calculated for the minor approaches and the major street left turn movements at TWSC intersections. No delay is assumed to the major street through movements. For TWSC intersections, the overall intersection level of service remains undefined: level of service is only calculated for each minor street lane.

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

Appendix "B"
Detailed Intersection
Operations

The table below outlines the detailed level of service, delay, and volume-to-capacity ratios for the study intersections.

Intersection	Existing 2007			Future 2031		
	LOS	Average Delay (seconds)	Volume/Capacity	LOS	Average Delay (seconds)	Volume/Capacity
Two-Way Stop Controlled Intersections						
Verda Lane / Lockhaven Drive	F	54.2	0.51	F	321.3	1.34
All-Way Stop Controlled Intersections						
Verda Lane / Chemawa Road	C	17.9	0.75	F	148.1	1.52
Signalized Intersections						
River Road / Wheatland Road	C	26.3	0.81	C	37.9	0.98
River Road / Manzanita Street	C	23.4	0.64	C	30.6	0.86
River Road / Lockhaven Drive	D	40.4	0.71	D	52.3	0.94
Lockhaven Drive / 14 th Avenue	B	17.7	0.79	E	56.0	1.09
Lockhaven Drive / Chemawa Road	B	19.6	0.51	D	36.3	0.85
River Road / Chemawa Road	D	36.2	0.67	D	46.4	0.91
River Road / Dearborn Avenue	B	17.7	0.74	C	29.2	0.96
River Road / Manbrin Drive	B	13.3	0.63	C	25.2	0.88
River Road / Shangri-La	A	9.4	0.64	B	17.5	0.78
River Road / Broadway	B	19.4	0.60	C	21.9	0.73
Salem Parkway / Cherry Avenue	C	34.4	0.67	D	38.4	0.91
Salem Parkway / Verda Lane	D	38.0	0.80	E	57.7	1.02

Notes:

Signalized and all-way stop delay represents the average vehicle delay for the whole intersection.
 Unsignalized delay represents the highest minor street approach delay.

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Scenario Report

Scenario: PM
Command: PM
Volume: PM
Geometry: Future
Impact Fee: Default Impact Fee
Trip Generation: PM
Trip Distribution: Default Trip Distribution
Paths: Default Path
Routes: Default Route
Configuration: Future

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Impact Analysis Report
Level Of Service

Intersection	Base Del/ LOS Veh D	V/ C 0.932	Future Del/ LOS Veh D	V/ C 0.932	Change in
# 3 River/Wheatland	E 57.7	1.021	E 57.7	1.021	+ 0.000 D/V
# 6 River/Lockhaven	D 45.1	0.919	D 45.1	0.919	+ 0.000 D/V
# 8 River/Chemawa	F 148.2	1.523	F 148.2	1.523	+ 0.000 V/C
# 9 Verda/Chemawa	C 23.2	0.920	C 23.2	0.920	+ 0.000 D/V
# 10 River/Manbrin	C 27.8	0.991	C 27.8	0.991	+ 0.000 D/V
# 26 River/Dearborn	E 56.0	1.088	E 56.0	1.088	+ 0.000 D/V
# 38 14th/Lockhaven	D 44.9	0.883	D 44.9	0.883	+ 0.000 D/V
# 53 River/Manzanita	F 321.3	0.000	F 321.3	0.000	+ 0.000 D/V
# 64 Verda/Lockhaven					

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Level of Service Computation Report
 2000 HCM Operations Method (Base Volume Alternative)

Intersection #8 River/Chemawa
 Cycle (sec): 120 Critical Vol./Cap.(X): 0.919
 Loss Time (sec): 16 (Y+R=4.0 sec) Average Delay (sec/veh): 45.1
 Optimal Cycle: 139 Level Of Service: D

Street Name: River Chemawa
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Protected Protected Protected Protected Protected
 Rights: Include Include Include Include Include
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
 Lanes: 1 0 1 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1

Volume Module: >> Count Date: 1 Jan 2031 << Future PM Peak Hour
 Base Vol: 330 1665 135 115 1080 130 165 130 240 110 140 90
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 330 1665 135 115 1080 130 165 130 240 110 140 90
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHE Adj: 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98 0.98
 PHF Volume: 337 1699 138 117 1102 133 168 133 245 112 143 92
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 337 1699 138 117 1102 133 168 133 245 112 143 92
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 FinalVolume: 337 1699 138 117 1102 133 168 133 245 112 143 92

Saturation Flow Module:
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
 Adjustment: 0.95 0.94 0.94 0.95 0.93 0.93 0.95 1.00 0.84 0.95 1.00 0.84
 Lanes: 1.00 1.85 0.15 1.00 1.78 0.22 1.00 1.00 1.00 1.00 1.00 1.00
 Final Sat.: 1805 3302 268 1805 3169 382 1805 1900 1587 1805 1900 1587

Capacity Analysis Module:
 Vol/Sat: 0.19 0.51 0.51 0.07 0.35 0.35 0.09 0.07 0.15 0.06 0.08 0.06
 Crit Moves: ****
 Green/Cycle: 0.22 0.56 0.56 0.07 0.41 0.41 0.13 0.17 0.17 0.07 0.11 0.11
 Volume/Cap: 0.85 0.92 0.92 0.92 0.85 0.85 0.71 0.42 0.92 0.92 0.71 0.55
 Delay/Veh: 60.3 31.3 31.3 110.6 36.8 36.8 60.0 45.5 83.3 112.3 63.5 54.9
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 60.3 31.3 31.3 110.6 36.8 36.8 60.0 45.5 83.3 112.3 63.5 54.9
 LOS by Move: E C C F D D E D F E D
 HCM2kAvGQ: 14 36 36 7 24 24 7 5 12 7 7 4

Note: Queue reported is the number of cars per lane.

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Level of Service Computation Report
 2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #9 Verda/Chemawa
 Cycle (sec): 100 Critical Vol./Cap.(X): 1.523
 Loss Time (sec): 0 (Y+R=4.0 sec) Average Delay (sec/veh): 148.2
 Optimal Cycle: 0 Level Of Service: F

Street Name: Verda Chemawa
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Stop Sign Stop Sign Stop Sign Stop Sign
 Rights: Include Include Include Include
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
 Lanes: 0 0 1 0 0 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0

Volume Module: >> Count Date: 1 Jan 2031 << Future PM Peak Hour
 Base Vol: 200 180 315 20 150 30 35 315 170 175 170 5
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 200 180 315 20 150 30 35 315 170 175 170 5
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHE Adj: 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95 0.95
 PHF Volume: 211 189 332 21 158 32 37 332 179 184 179 5
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 211 189 332 21 158 32 37 332 179 184 179 5
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 FinalVolume: 211 189 332 21 158 32 37 332 179 184 179 5

Saturation Flow Module:
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
 Adjustment: 0.29 0.26 0.45 0.10 0.75 0.15 0.07 0.60 0.33 0.50 0.49 0.01
 Lanes: 138 124 218 40 303 61 32 290 156 221 215 6
 Final Sat.: 138 124 218 40 303 61 32 290 156 221 215 6

Capacity Analysis Module:
 Vol/Sat: 1.52 1.52 1.52 0.52 0.52 1.14 1.14 1.14 0.83 0.83 0.83
 Crit Moves: ****
 Delay/Veh: 265.9 266 265.9 20.2 20.2 113.2 113 113.2 39.6 39.6 39.6
 AdjDel/Veh: 265.9 266 265.9 20.2 20.2 113.2 113 113.2 39.6 39.6 39.6
 LOS by Move: F F F C C C F F F E E E
 ApproachDel: 265.9 20.2 113.2
 Delay Adj: 1.00 1.00 1.00
 ApprAdjDel: 265.9 20.2 113.2
 LOS by Appr: F F F
 AllWayAvGQ: 34.1 34.1 34.1 1.0 1.0 1.0 1.0 13.6 13.6 13.6 3.5 3.5 3.5

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
 2000 HCM Operations Method (Base Volume Alternative)

Intersection #38 14th/Lockhaven
 Cycle (sec): 90 Critical Vol./Cap.(X): 1.088
 Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 56.0
 Optimal Cycle: 180 Level Of Service: E

Street Name: 14th Lockhaven
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Permitted Permitted Protected Protected
 Rights: Include Include Include Include
 Min. Green: 0 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0
 Lanes: 0 0 1 0 0 0 1 0 0 1 0 0 1 0 0 1 0

Volume Module: >> Count Date: 1 Jan 2031 << Future PM Peak Hour

Base Vol: 10 25 15 170 55 45 75 980 15 45 980 235
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 10 25 15 170 55 45 75 980 15 45 980 235
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91 0.91
 PHF Volume: 11 27 16 187 60 49 82 1077 16 49 1077 258
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 11 27 16 187 60 49 82 1077 16 49 1077 258
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MFLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Final Volume: 11 27 16 187 60 49 82 1077 16 49 1077 258

Saturation Flow Module:
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
 Adjustment: 0.75 0.75 0.74 0.75 0.76 0.83 0.95 1.00 1.00 0.95 0.97 0.97
 Lanes: 0.20 0.50 0.30 0.76 0.24 1.00 1.00 0.98 0.02 1.00 0.81 0.19
 Final Sat.: 284 710 426 1080 350 1569 1805 1868 29 1805 1487 357

Capacity Analysis Module:
 Vol/Sat: 0.04 0.04 0.04 0.17 0.17 0.03 0.05 0.58 0.58 0.03 0.72 0.72
 Crit Moves: ****

Green/Cycle: 0.16 0.16 0.16 0.16 0.16 0.16 0.04 0.68 0.68 0.03 0.67 0.67
 Volume/Cap: 0.24 0.24 0.24 1.09 1.09 0.20 1.09 0.85 0.85 0.85 1.09 1.09
 Delay/Veh: 33.7 33.7 33.7 123.0 123.0 33.3 172.6 16.9 16.9 111.5 68.1 68.1
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 33.7 33.7 33.7 123.0 123.0 33.3 172.6 16.9 16.9 111.5 68.1 68.1
 LOS by Move: C C F C F B B B F E E
 HCM2KAVGQ: 2 2 2 13 13 1 6 26 26 3 55 55

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
 2000 HCM Operations Method (Base Volume Alternative)

Intersection #53 River/Manzanita
 Cycle (sec): 120 Critical Vol./Cap.(X): 0.883
 Loss Time (sec): 16 (Y+R=4.0 sec) Average Delay (sec/veh): 44.9
 Optimal Cycle: 121 Level Of Service: D

Street Name: River Manzanita
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Protected Protected Protected Protected
 Rights: Include Include Include Include
 Min. Green: 1 0 1 0 0 0 0 0 0 0 0 0 0 0 0 0
 Lanes: 1 0 1 0 1 0 1 0 1 0 1 0 1 0 1 0

Volume Module: >> Count Date: 1 Jan 2031 << Future PM Peak Hour

Base Vol: 200 1200 110 205 890 40 40 80 165 105 125 230
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Bse: 200 1200 110 205 890 40 40 80 165 105 125 230
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93 0.93
 PHF Volume: 215 1290 118 220 957 43 43 86 177 113 134 247
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 215 1290 118 220 957 43 43 86 177 113 134 247
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MFLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Final Volume: 215 1290 118 220 957 43 43 86 177 113 134 247

Saturation Flow Module:
 Sat/Lane: 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900 1900
 Adjustment: 0.95 0.94 0.94 0.95 0.94 0.94 0.95 0.90 0.89 0.95 0.90 0.89
 Lanes: 1.00 1.83 0.17 1.00 1.91 0.09 1.00 0.32 0.68 1.00 0.35 0.65
 Final Sat.: 1805 3263 299 1805 3434 154 1805 553 1141 1805 600 1103

Capacity Analysis Module:
 Vol/Sat: 0.12 0.40 0.40 0.12 0.28 0.28 0.02 0.16 0.16 0.06 0.22 0.22
 Crit Moves: ****

Green/Cycle: 0.18 0.45 0.45 0.14 0.41 0.41 0.03 0.20 0.20 0.08 0.25 0.25
 Volume/Cap: 0.68 0.88 0.88 0.88 0.68 0.68 0.88 0.78 0.78 0.78 0.88 0.88
 Delay/Veh: 52.2 36.5 36.5 79.5 30.2 30.2 144.3 56.2 56.2 76.8 61.9 61.9
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 52.2 36.5 36.5 79.5 30.2 30.2 144.3 56.2 56.2 76.8 61.9 61.9
 LOS by Move: D D D E C C F E E
 HCM2KAVGQ: 9 28 28 11 16 16 3 11 11 6 17 17

Note: Queue reported is the number of cars per lane.

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Impact Analysis Report
Level Of Service

Intersection	Base Del/V/	Future Del/V/	Change in
# 12 Cherry/Salem Parkway	LOS Veh C E 63.0 1.032	LOS Veh C E 63.0 1.032	+ 0.000 D/V
# 20 Salem Parkway/Verda	F 90.2 1.164	F 90.2 1.164	+ 0.000 D/V

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Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #12 Cherry/Salem Parkway
 Cycle (sec): 120
 Loss Time (sec): 16 (Y+R=4.0 sec)
 Optimal Cycle: 180
 Critical Vol./Cap. (X): 1.032
 Average Delay (sec/veh): 63.0
 Level Of Service: E

Street Name: Cherry
 Approach: North Bound South Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R

Control:	Protected	Protected	Protected	Protected
Rights:	Ovl	Include	Include	Include
Min. Green:	0 0 0 0	0 0 0 0	0 0 0 0	0 0 0 0
Lanes:	1 0 2 0 1 2	0 1 1 0 1 0 1 0 1 0 1 0	1 0 1 0 1 0 1 0 2 0 1	0 0 0 0

Volume Module: >> Count Date: 1 Jan 2031 << Future PM Peak Hour

Base Vol:	150 665 180 220 380 140 100 1470 85	190 1485 270
Growth Adj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00
Initial Bse:	150 665 180 220 380 140 100 1470 85	190 1485 270
User Adj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00
PHF Adj:	0.97 0.97 0.97 0.97 0.97 0.97 0.95 0.95 0.95	0.95 0.95 0.95
PHF Volume:	155 686 186 227 392 144 105 1547 89	200 1563 284
Reduct Vol:	0 0 0 0 0 0 0 0 0	0 0 0
Reduced Vol:	155 686 186 227 392 144 105 1547 89	200 1563 284
PCE Adj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00
MLF Adj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00
Final Volume:	155 686 186 227 392 144 105 1547 89	200 1563 284

Saturation Flow Module:

Sat/Lane:	1800 1800 1800 1800 1800 1800 1800 1800 1800	1800 1800 1800
Adjustment:	0.92 0.92 0.81 0.89 0.89 0.88 0.92 0.92 0.91	0.92 0.92 0.81
Lanes:	1.00 2.00 1.00 2.00 1.46 0.54 1.00 1.89 0.11	1.00 2.00 1.00
Final Sat:	1660 3321 1461 3221 2327 857 1660 3114 180	1660 3321 1461

Capacity Analysis Module:

Vol/Sat:	0.09 0.21 0.13 0.07 0.17 0.17 0.06 0.50 0.50	0.12 0.47 0.19
Crit Moves:	0.10 0.20 0.32 0.07 0.17 0.17 0.07 0.48 0.48	0.12 0.53 0.53
Green/Cycle:	0.97 1.03 0.40 1.03 0.97 0.97 0.89 1.03 1.03	0.89 0.89 0.37
Volume/Cap:	17.7 91.3 32.6 125.1 81.2 81.2 106.4 62.3 62.3	126.2 31.6 16.9
Delay/Veh:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00
User DelAdj:	1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00	1.00 1.00 1.00
AdjDel/Veh:	117.7 91.3 32.6 125.1 81.2 81.2 106.4 62.3 62.3	126.2 31.6 16.9
LOS by Move:	F F C F F F F F F F	F F C B
LOS by Move:	9 19 5 8 15 15 6 41 41	12 30 6

Note: Queue reported is the number of cars per lane.

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Level Of Service Computation Report
 2000 HCM Operations Method (Base Volume Alternative)

 Intersection #20 Salem Parkway/Verda
 Cycle (sec): 120 Critical Vol./Cap.(X): 1.164
 Loss time (sec): 16 (Y+R=4.0 sec) Average Delay (sec/veh): 90.2
 Optimal Cycle: 180 Level Of Service: F

Street Name: Salem Parkway Verda
 Approach: North Bound East Bound West Bound
 Movement: L - T - R L - T - R L - T - R L - T - R
 Control: Protected Protected Protected Protected Protected Protected
 Rights: Include Include Include Include Include Include
 Min. Green: 0 0 0 0 0 0 0 0 0 0 0 0
 Lanes: 1 0 2 0 1 1 0 1 1 0 1 0 1 1 0 1 0 1

Volume Module: >> Count Date: 1 Jan 2031 << Future PM Peak Hour
 Base Vol: 220 1330 320 60 1450 80 40 320 165 330 560 65
 Growth Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Initial Sze: 220 1330 320 60 1450 80 40 320 165 330 560 65
 User Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 PHF Adj: 0.95 0.95 0.95 0.95 0.95 0.93 0.93 0.93 0.93 0.93 0.93 0.93
 PHF Volume: 232 1400 337 63 1526 84 43 344 177 355 602 70
 Reduct Vol: 0 0 0 0 0 0 0 0 0 0 0 0
 Reduced Vol: 232 1400 337 63 1526 84 43 344 177 355 602 70
 PCE Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 MFLF Adj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 Final Volume: 232 1400 337 63 1526 84 43 344 177 355 602 70

Saturation Flow Module:
 Sat/Lane: 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800 1800
 Adjustment: 0.95 0.95 0.82 0.95 0.94 0.94 0.95 1.00 0.84 0.95 1.00 0.84
 Lanes: 1.00 2.00 1.00 1.00 1.90 0.10 1.00 1.00 1.00 1.00 1.00 1.00
 Final Sat.: 1710 3420 1483 1710 3215 177 1710 1800 1505 1710 1800 1503

Capacity Analysis Module:
 Vol/Sat: 0.14 0.41 0.23 0.04 0.47 0.47 0.03 0.19 0.12 0.21 0.33 0.05
 Crit Moves: ****
 Green/Cycle: 0.12 0.48 0.48 0.04 0.41 0.41 0.02 0.16 0.16 0.18 0.32 0.32
 Volume/Cap: 1.16 0.85 0.47 0.85 1.16 1.16 1.05 1.16 0.72 1.16 1.05 0.15
 Delay/Veh: 168.0 31.9 21.4 114.2 118 117.7 214.4 155 57.3 153.0 92.3 29.4
 User DelAdj: 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00 1.00
 AdjDel/Veh: 168.0 31.9 21.4 114.2 118 117.7 214.4 155 57.3 153.0 92.3 29.4
 LOS by Move: F C C F F F F F F F F F
 HCM2RAVQ: 16 26 8 4 48 48 4 22 8 22 31 2

Note: Queue reported is the number of cars per lane.

HCM Signalized Intersection Capacity Analysis
 3: Shangri & River Road

Year 2031 Future Traffic
 Weekday PM Peak Hour



Movement	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NER
Lane Configurations	↔		↕			↔		↕		
Volume (vph)	35	35	0	2045	25	15	450	855	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	40		40			40		40		
Lane Util. Factor	1.00		0.95			1.00		0.95		
Flt	0.88		1.00			1.00		0.90		
Flt Protected	0.99		1.00			0.95		1.00		
Satd. Flow (prot)	1615		3498			1752		3160		
Flt Permitted	0.99		1.00			0.95		1.00		
Satd. Flow (perm)	1615		3498			1752		3160		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	35	38	0	2199	27	16	484	919	0	0
RTOR Reduction (vph)	31	0	0	1	0	0	245	0	0	0
Lane Group Flow (vph)	12	0	0	2225	0	16	1158	0	0	0
Turn Type						Prot				
Protected Phases	8		2			4		6		
Permitted Phases										
Actuated Green, G (s)	16.0		58.0			4.0		66.0		
Effective Green, g (s)	16.0		58.0			4.0		66.0		
Actuated g/C Ratio	0.18		0.64			0.04		0.73		
Clearance Time (s)	4.0		4.0			4.0		4.0		
Lane Grp Cap (vph)	287		2254			78		2317		
v/s Ratio Prot	c0.01		c0.64			0.01		c0.37		
v/s Ratio Perm										
v/c Ratio	0.04		0.99			0.21		0.50		
Uniform Delay, d1 (s)	30.6		15.6			41.5		5.1		
Progression Factor	1.00		0.75			1.00		1.00		
Incremental Delay, d2 (s)	0.3		12.7			5.9		0.8		
Delay (s)	30.9		24.5			47.3		5.8		
Level of Service	C		C			D		A		
Approach Delay (s)	30.9		24.5			6.3		0.0		
Approach LOS	C		C			A		A		
Intersection Summary										
HCM Average Control Delay	17.5			HCM Level of Service			B			
HCM Volume to Capacity ratio	0.78									
Actuated Cycle Length (s)	90.0			Sum of lost time (s)			120			
Intersection Capacity Utilization	67.3%			ICU Level of Service			C			
Analysis Period (min)	15									

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis
6: Stark Street & River Road

Year 2031 Future Traffic
Weekday PM Peak Hour



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕	↕		↕	↕
Volume (veh/h)	0	2	20	1	3	0	25	0	1243	0	350	10
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Hourly Flow Rate (vph)	0	2	22	1	3	0	27	0	1337	0	344	10
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)											250	
pX, platoon unblocked												
vC, conflicting volume	975	973	919	996	978	0	925			0		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	975	973	919	996	978	0	925			0		
tC, single (s)	7.41	6.65	6.2	7.41	6.65	6.2	7.41			7.41		
tC, 2 stage (s)												
lR (s)	3.5	4.0	3.3	3.5	4.0		3.3			2.2		
p0 queue free %	100	99	93	99	99	100	96			100		
sM capacity (veh/h)	221	242	327	201	240	1082	735			1617		
Volume - Lane #												
Volume Total	24	2	472	891	925		925					
Volume Left	0	1	27	0	0							
Volume Right	22	1	445	891	925							
cSH	317	229	735	1700	1700							
Volume to Capacity	0.07	0.02	0.04	0.52	0.54							
Queue Length 95th (ft)	6	1	3	0	0							
Control Delay (s)	17.3	21.0	1.0	0.0	0.0							
Lane LOS	C	C	A									
Approach Delay (s)	17.3	21.0	0.4		0.0							
Approach LOS	C	C										
Intersection Statistics												
Average Delay			0.4									
Intersection Capacity Utilization			61.3%									
ICU Level of Service			B									
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
 7: Stark Street & Broadway

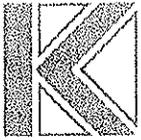
Year 2031 Future Traffic
 Weekday PM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	T		T		T	
Volume (vph)	1280	15	2	840	448	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	40		40		40	
Lane Util. Factor	0.97		0.95		0.95	
Flt Protected	1.00		1.00		1.00	
Satd Flow (prot)	3404		3504		3503	
Flt Permitted	0.95		0.95		1.00	
Satd Flow (perm)	3404		3345		3503	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93
Adj Flow (vph)	1323	16	2	903	482	2
RTOR Reduction (vph)	1	0	0	0	1	0
Lane Group Flow (vph)	1338	0	0	905	483	0
Turn Type	Perm					
Protected Phases	2		2		0	
Permitted Phases	2					
Actuated Green, G (s)	46.0		36.0		36.0	
Effective Green, g (s)	46.0		36.0		36.0	
Actuated g/C Ratio	0.51		0.40		0.40	
Clearance Time (s)	4.0		4.0		4.0	
Lane Grp Cap (vph)	1740		1388		1401	
v/s Ratio Prot	c0.39		0.14			
v/s Ratio Perm			c0.27			
v/c Ratio	0.77		0.68		0.35	
Uniform Delay, d1	17.7		22.2		18.8	
Progression Factor	1.00		1.00		0.95	
Incremental Delay, d2	3.3		2.8		0.6	
Delay (s)	21.1		25.0		18.4	
Level of Service	C		C		B	
Approach Delay (s)	21.1		25.0		18.4	
Approach LOS	C		C		B	
Intersection Summary						
HCM Average Control Delay	21.9			HCM Level of Service		
HCM Volume to Capacity ratio	0.73					
Actuated Cycle Length (s)	90.0			Sum of lost time (s)		
Intersection Capacity Utilization	66.8%			ICU Level of Service		
Analysis Period (min)	15					

c Critical Lane Group

Appendix F
Alternatives Analysis



KITTELSON & ASSOCIATES, INC.

TRANSPORTATION ENGINEERING / PLANNING

610 SW Alder Street, Suite 700, Portland, OR 97205 P 503.228.5230 F 503.273.8169

TECHNICAL MEMORANDUM

City of Keizer, Transportation System Plan Update

Alternatives Analysis

Date: March 31, 2008 Project #: 8310.04

To: Technical Advisory Committee

From: Elizabeth Wemple, P.E.; Matt Hughart, AICP; Alek Pochowski, E.I.

CC: Sam Litke, City of Keizer

The previous memorandum on future conditions identified transportation system deficiencies that will develop in Keizer through the year 2031 if no improvements are made to the system. Attention now turns to ways of addressing these deficiencies. This memorandum presents the transportation improvement alternatives that could mitigate existing and forecast future transportation deficiencies.

ALTERNATIVES ANALYSIS

MOTOR VEHICLE SYSTEM ROADWAY CAPACITY ALTERNATIVES

The results of the future conditions no-build analysis showed a number of intersections that are projected to have operating deficiencies. Notably, the following signalized intersections are forecast to operate at an unacceptable level-of-service (LOS "E" or worse) and exceed their available capacity by the year 2031:

- 14th Street/Lockhaven Drive
- Verda Lane/Salem Parkway

The critical movements at the following unsignalized intersections are projected to exceed capacity, and operate with a level-of-service "F" in year 2031:

- Verda Lane/Chemawa
- Verda Lane/Lockhaven Drive

In addition to the failing intersections, several intersections are projected to operate near, at, or over capacity by the year 2031 without exceeding the level-of-service standards. These intersections include:

- River Road/Wheatland Road
- River Road/Lockhaven Drive
- River Road/Chemawa Road
- River Road/Dearborn Avenue
- Salem Parkway/Cherry Avenue

This section provides an evaluation of intersection improvements and other street improvements that could potentially mitigate the above deficiencies. Following the project descriptions below are a series of sketches and preliminary evaluations matrices.

River Road/Wheatland Drive

This intersection is forecast to operate near capacity ($v/c=0.98$) due to a heavy northbound and southbound traffic on River Road and a particularly heavy northbound left-turn movement from River Road to Wheatland Drive. Given the constrained geographic nature of the northern part of the City and the lack of parallel north/south roadways, the River Road/Wheatland Road intersection is an intersection of local and regional significance. As such, the noted capacity constraints will need to be addressed at the intersection.

To provide additional long-term capacity and minimize vehicle queuing, the heavy northbound left-turn movement will need dual left-turn lanes. In addition, the outside southbound through lane will need to be lengthened to improve lane utilization and better accommodate directional southbound through volumes. A sketch and evaluation of the alternative is presented in Table 1.

Extension of Verda Lane

The north-south movements within the City of Keizer are currently limited to a few key corridors such as River Road and portions of Verda Lane/Chemawa Avenue. Opportunities for the development of new corridors are limited. One potential corridor that could still be established is an extension of Verda Lane from its current terminus at Lockhaven Drive to a new connection with River Road just south of the existing Manzanita Street intersection. Utilizing a portion of the Trail Avenue corridor, this extension would provide an alternative route that would allow some traffic the opportunity to bypass the River Road/Lockhaven Drive intersection. In addition, the more direct connection between River Road and Lockhaven Drive would potentially minimize the amount of neighborhood cut-through traffic that currently takes place along the 14th Avenue and Harmony Road corridors. A conceptual layout and evaluation of the alternative is presented in Table 2. Coupled with the Verda Lane extension, intersection modifications would need to occur at the Lockhaven Drive/Verda Lane and River Road/Manzanita Street intersections as outlined in the following sections.

Lockhaven Drive/Verda Lane Alternatives

In order to establish the Verda Lane extension, consideration was given to its intersection at Lockhaven Drive. In particular, two intersection treatments were considered. The first alternative would include a full movement intersection that would allow full movements across Lockhaven Drive. In turn, this intersection form would allow Verda Lane to become a de-facto north/south parallel route to River Road. A sketch and evaluation of the intersection treatment is presented in Table 3.

As an alternative, a second intersection treatment was considered that would limit the amount of through traffic volumes along Verda Lane south of Lockhaven Drive. Given that this portion of Verda Lane is a local street and travels through a residential neighborhood, the restriction of north/south through volumes through special median treatments is one possible way to maintain local street volumes on this portion of Verda Lane that are consistent with local streets and residential neighborhoods. A sketch and evaluation of the alternative is also presented in Table 3.

River Road/Manzanita Street

The River Road/Manzanita Street intersection is currently located within close proximity of the River Road/Wheatland Drive intersection. Given the projected traffic volume increases along River Road, greater separation between these two intersections would improve the progression of traffic flow along River Road and minimize the potential for vehicle queue spillback. One alternative to achieve greater intersection separation would involve the relocation of the River Road/Manzanita Street intersection by approximately 250 feet to the south. This relocation would involve the reconstruction of both the McNary Estates Drive and Manzanita Street approaches. Coupled with the extension of Verda Lane as noted above, this intersection would become a key component in the establishment of a partial north/south alternative to River Road. A sketch and evaluation of the alternative is presented in Table 4.

River Road/Lockhaven Drive

Although the River Road/Lockhaven Drive intersection is projected to operate at an acceptable LOS D, the long-term capacity of the intersection is limited due to some geometric and signal phasing inefficiencies. To improve the long-term capacity, the westbound approach will need dual left-turn lanes, a single through lane, and a separate right-turn lane. This widening and lane reconfiguration will allow the existing east-west split phasing to be replaced with a more conventional and efficient protected left-turn phasing. A sketch and evaluation of the alternative is presented in Table 5.

Lockhaven Drive Expansion

Lockhaven Drive from River Road to just east of Chemawa Road is primarily a three-lane roadway. By 2031, traffic volumes are projected to be great enough to necessitate either indirect transportation demand management measures or a more direct widening of this roadway to a

five-lane section (two through lanes in each direction and a center left-turn lane). A conceptual illustration and evaluation of the corridor alternatives is presented in Table 6.

A widening of Lockhaven Drive could potentially take place in two phases. The first phase would include a widening from Chemawa Road to Verda Lane. The second phase would complete the widening from Verda Lane to River Road.

Lockhaven Drive/14th Avenue

A high east/west travel demand is projected to limit the long-term capacity of the Lockhaven Drive/14th Avenue intersection. To maximize the available capacity of the intersection, a westbound right-turn lane will be needed to accommodate the high right-turn demand. In addition, the north and south 14th Avenue approaches will need to be modified to include a separate left-turn lane and shared through/right-turn lane. A sketch and evaluation of the alternative is presented in Table 7.

Verda Lane/Chemawa Road

This intersection is forecast to operate at LOS "F" and exceed its available capacity as an all-way stop-controlled intersection. PM peak hour signal warrants are forecast to be met at this intersection. Installing a traffic signal with separate left-turn lanes on each intersection approach would improve the intersection LOS from "F" to "A" and under capacity conditions. Some widening on each intersection approach would be necessary to provide the separate left-turn lanes, sidewalks, bike lanes, and better intersection geometrics.

As an alternative to a traffic signal, a roundabout may also be an appropriate mitigation measure. A single lane roundabout would operate comparatively to a signalized intersection. Compared to a traffic signal, a roundabout would have a larger footprint and require greater right-of-way acquisition. A sketch and evaluation of the two alternatives are presented in Table 8.

Access Management

Managing access to the City's road system is necessary to preserve the capacity of the City's arterial street system, by minimizing the number of points where traffic flow may be disrupted by traffic entering and exiting the roadway, and to enhance safety along all City roadways by minimizing the number of potential conflict points.

Several access management measures can potentially be implemented as described below:

- Work with developers during the application process to consolidate driveways and limit new ones where feasible.
- Consider the use of raised medians on busy arterials to limit driveway access to right-in/right-out turning movements.

- Develop access management plans for arterials and collector streets.

These types of access management measures should be considered on segments such as:

- River Road from the south City Limits to Lockhaven Drive;
- Lockhaven Drive between Windsor Island Drive and Chemawa Road; and
- Chemawa Avenue between Lockhaven Drive and Windsor Island Drive

Salem Parkway

The Salem Parkway is an ODOT owned and maintained facility. The two study intersections at Cherry Avenue and Verda Lane are under the jurisdiction of ODOT, but have been included in the long-term analysis as they are significant portals to/from the City of Keizer. Due to a projected increase in regional transportation demand, both intersections are forecast to operate above ODOT's 0.85 volume/capacity standard. While the Cherry Avenue intersection is forecast to have available capacity, the Verda Lane intersection is forecast to operate above capacity. To mitigate these forecast conditions, improvements would need to include a separate southbound right-turn lane and dual northbound left-turn lanes on the Salem Parkway. In addition, Verda Lane would need additional through lanes to better facilitate movements across the Parkway. Given that this intersection is an ODOT owned and maintained facility, the City of Keizer will want to coordinate closely with State transportation officials regarding future improvements to this intersection.

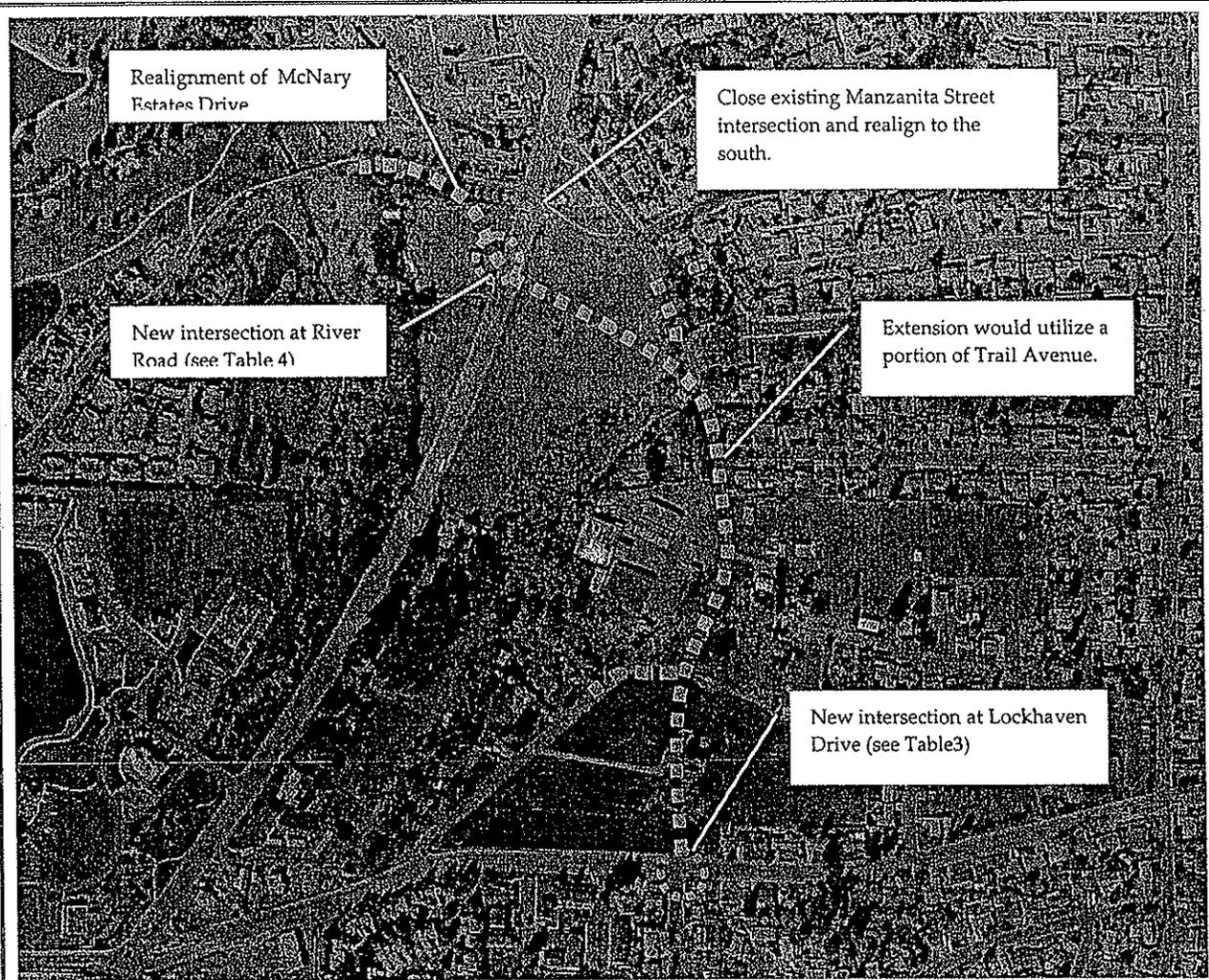
Table 1 Wheatland Road / River Road Alternative



Sketch is for illustration purposes only

	Do Nothing Alternative	Improvement Alternative
Traffic Operations	<ul style="list-style-type: none"> - Will operate at capacity. - Excessive vehicle queues on the northbound left-turn lane and southbound through lane. 	<ul style="list-style-type: none"> - Construct dual northbound left-turn lanes. - Change NB/SB to a protected left-turn phase. - Extend length of second southbound through lane. - Will operate with sufficient capacity. - Better southbound through lane utilization and vehicle queues.
Safety	<ul style="list-style-type: none"> - Likely to see crash patterns consistent with existing conditions which include rear-end collisions and angle collisions associated with the northbound left-turn. - Increasing traffic volumes and vehicle queuing concerns may lead to additional collisions involving the northbound left-turn movement. 	<ul style="list-style-type: none"> - Protected left-turn phasing has the potential to reduce the propensity and severity of angle type crashes. - Better southbound through lane utilization has the potential to reduce vehicle queues and limit rear-end collisions.
Impacts	<ul style="list-style-type: none"> - Potential for bottleneck conditions. - Increasing vehicle delay, intersection safety, and congestion. 	<ul style="list-style-type: none"> - Will require significant intersection modifications and lane widening on River Road and Wheatland Road. - Significant property impacts to the northwest quadrant of intersection.
Cost	<ul style="list-style-type: none"> - N/A 	<ul style="list-style-type: none"> - High (\$) due to significant ROW needs, additional receiving lanes on Wheatland Road, and property impacts.

Table 2 Verda Lane Extension



Sketch is for illustration purposes only

	Do Nothing Alternative	Extension Alternative
		<ul style="list-style-type: none"> - Extend Verda Lane north of Lockhaven Drive and connect to River Road at a new alignment of McNary Estates Drive. - Close the existing River Road/Manzanita Street/McNary Estates Drive.
Traffic Operations	<ul style="list-style-type: none"> - Traffic destined for River Road will continue to cut through the residential neighborhoods to the north using 14th Avenue, Harmony Drive, and Mandarin Street. 	<ul style="list-style-type: none"> - Alternative route has the potential to reduce cut-through traffic on local streets. - May potentially reduce traffic demand at the River Road/Lockhaven Drive intersection.
Safety	<ul style="list-style-type: none"> - No change to the existing condition. 	<ul style="list-style-type: none"> - Would help to reduce through traffic on residential streets, thereby improving the safety of those streets.
Impacts	<ul style="list-style-type: none"> - Continue to see cut-through traffic on local neighborhood streets. - River Road/Lockhaven Drive will continue to be the primary intersection for accommodating traffic from the northern part of the City that is destined to/from the Chemawa interchange. 	<ul style="list-style-type: none"> - Would require significant amounts of right-of-way. - Special intersection design treatments would be necessary at the Lockhaven Drive/Verda lane intersection to reduce north-south through movements (see Lockhaven Drive/Verda Lane intersection alternative).
Cost	<ul style="list-style-type: none"> - N/A 	<ul style="list-style-type: none"> - High (\$) due to ROW acquisition needs, roadway construction costs, and property impacts.

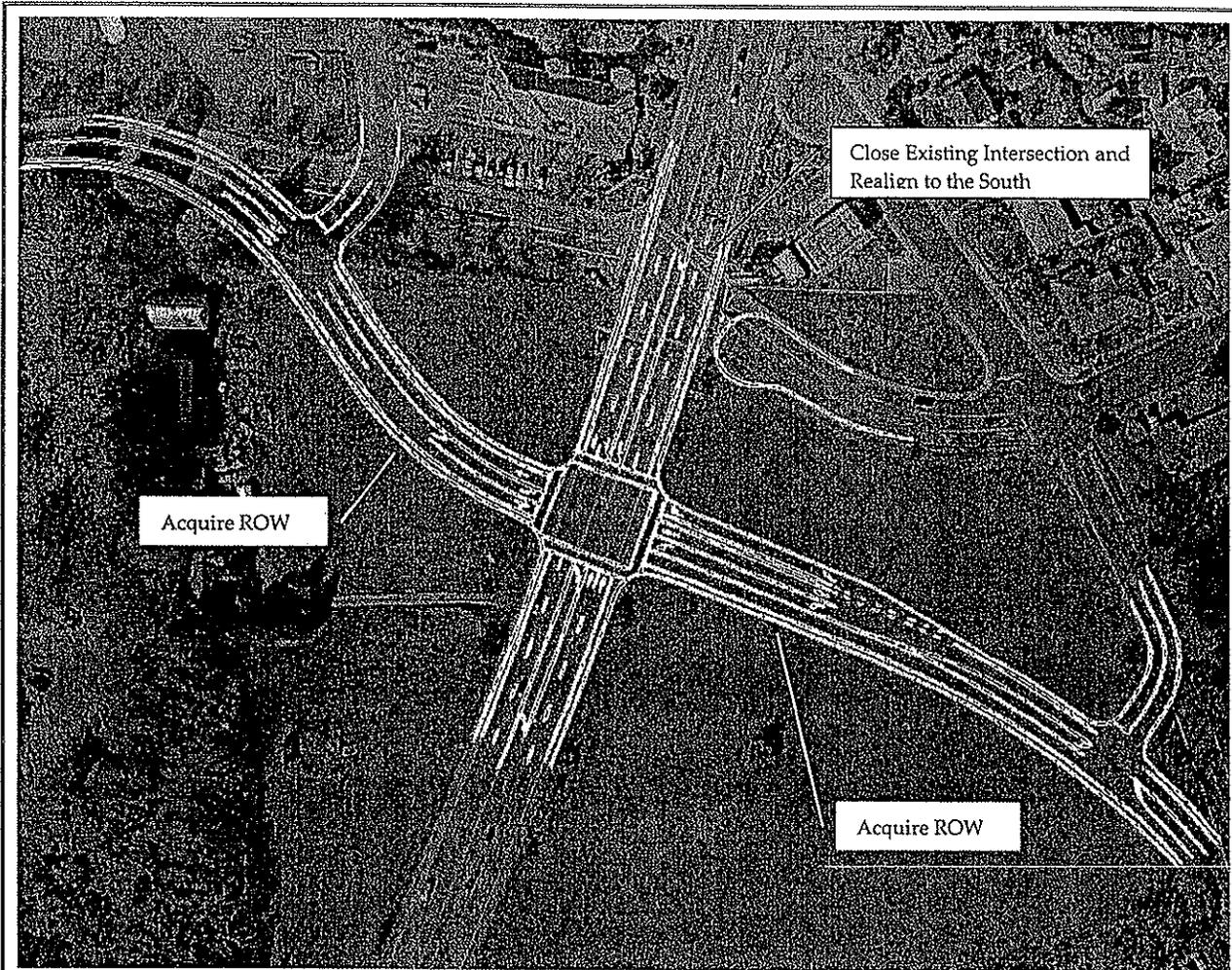
Table 3 Lockhaven Drive / Verda Lane Alternatives Comparison



Sketch is for illustration purposes only

	Full Movement Intersection Alternative	Limited Movement Intersection Alternative
	<ul style="list-style-type: none"> - Extend Verda Lane to the north of Lockhaven Drive. - Signalize the intersection and allow full turning movements. 	<ul style="list-style-type: none"> - Extend Verda Lane to the north of Lockhaven Drive. - Signalize the intersection. - Restrict north/south through movements on Verda Lane.
Traffic Operations	<ul style="list-style-type: none"> - As a signalized intersection with full turning movements, the intersection will operate moderately poorly (LOS D and near capacity). 	<ul style="list-style-type: none"> - As a signalized intersection with limited movements, the improvement will result in LOS A with sufficient longer-term capacity.
Safety	<ul style="list-style-type: none"> - Signalization will improve the accessibility and safety for turning movements to/from Verda Lane. 	<ul style="list-style-type: none"> - Signalization will improve the accessibility and safety for turning movements to/from Verda Lane.
Impacts	<ul style="list-style-type: none"> - Extension of Verda Lane will require right-of-way. Adjacent property is currently undeveloped, resulting in minimal impacts to existing properties. - Verda Lane south of Lockhaven Drive is a local street that serves the adjacent neighborhood. A full movement intersection at Lockhaven Drive is likely to increase traffic volumes to levels that are undesirable for a local street and the adjacent neighborhood. 	<ul style="list-style-type: none"> - Extension of Verda Lane will require right-of-way. Adjacent property is currently undeveloped, resulting in minimal impacts to existing properties. - Restriction of through movements will likely keep traffic volumes to levels that are desirable for a local street through a residential neighborhood.
Cost	<ul style="list-style-type: none"> - Moderate (\$) due to traffic signal construction costs and other intersection modifications. 	<ul style="list-style-type: none"> - Moderate (\$) due to traffic signal construction costs, medians, and other intersection modifications.

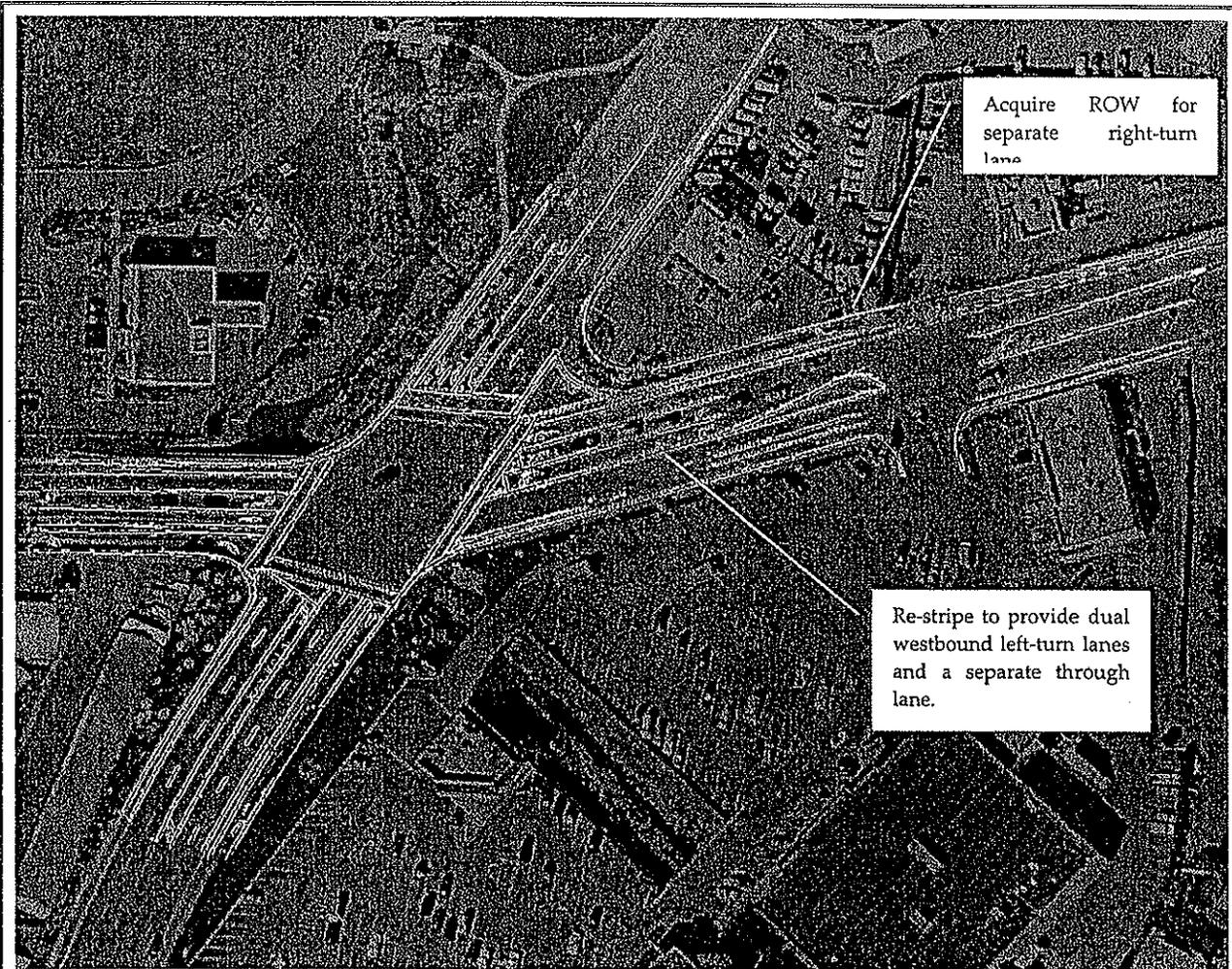
Table 4 River Road / Manzanita Street Alternative



Sketch is for illustration purposes only

	Do Nothing Alternative	Realignment Alternative
Traffic Operations	<ul style="list-style-type: none"> - Will operate near capacity. - Close spacing to River Road/Wheatland Drive intersection will result in poor progression and queuing conflicts. - Long westbound vehicle queues. 	<ul style="list-style-type: none"> - Move intersection approximately 250 feet to the south. - Construct separate WB through and right-turn lanes. - Will operate with sufficient longer-term capacity. - Better intersection spacing with River Road/Wheatland Drive. - WB right-turn lane will decrease delay and add long-term capacity to the intersection.
Safety	<ul style="list-style-type: none"> - No change to the existing condition; therefore safety concerns are likely to continue which include rear-end collisions along River Road. 	<ul style="list-style-type: none"> - Increased intersection spacing from Wheatland Road will reduce the potential for vehicle queue backups and rear end crashes.
Impacts	<ul style="list-style-type: none"> - Without improvements, queue spillbacks are likely from the River Road/Wheatland intersection. - Increasing vehicle delay, intersection safety, and congestion. 	<ul style="list-style-type: none"> - Both the McNary Estates Drive and Manzanita Street approaches will need to be reconstructed, requiring significant amounts of right-of-way. - Although right-of-way will be needed, adjacent properties are currently undeveloped.
Cost	<ul style="list-style-type: none"> - N/A 	<ul style="list-style-type: none"> - High (\$) due to ROW acquisition needs, roadway and traffic signal construction costs, intersection realignment, and property impacts.

Table 5 River Road / Lockhaven Drive Alternative



Sketch is for illustration purposes only

	Do Nothing Alternative	Improvement Alternative
		<ul style="list-style-type: none"> - Convert WB approach to dual WB left-turn lanes, a single through lane, and a separate right-turn lane. - Convert E/W split phasing to a more conventional protected left-turn phasing. - Upon redevelopment of adjacent properties, implement access management measures for those driveways within the influence area of the signalized intersection.
Traffic Operations	<ul style="list-style-type: none"> - Will operate at LOS D and near capacity. - Excessive vehicle queues on the westbound approach. 	<ul style="list-style-type: none"> - With WB dual left-turn lanes and separate through and right-turn lanes, the intersection will operate at LOS D and under capacity.
Safety	<ul style="list-style-type: none"> - No change to the existing layout; therefore safety concerns are likely to worsen as traffic volumes grow. 	<ul style="list-style-type: none"> - Additional westbound lanes will minimize vehicle queues and reduce the potential for rear-end collisions. - Improved access management will reduce turning movement conflicts within the influence area of the intersection.
Impacts	<ul style="list-style-type: none"> - Without improvements, the long-term capacity of the intersection is limited up through the 2031 study period. - Increasing vehicle delay, intersection safety, and congestion. 	<ul style="list-style-type: none"> - Lane additions on Lockhaven Drive will require right-of-way and will likely have significant property impacts to adjacent businesses.
Cost	<ul style="list-style-type: none"> - N/A 	<ul style="list-style-type: none"> - Moderate (\$) due to ROW acquisition needs for the WB right-turn lane and traffic signal modification.

Table 6 Lockhaven Drive



Sketch is for illustration purposes only

	Do Nothing Alternative	Demand Management Alternative	Widening Alternative
		<ul style="list-style-type: none"> - Improve transit service along the corridor. - Implement access management measures as possible. - Consider lower intersection operations standards that allow a greater degree of congestion. 	<ul style="list-style-type: none"> - Widen Lockhaven Drive to 5-lanes from River Road to Chemawa Road.
Traffic Operations	<ul style="list-style-type: none"> - As the main east-west arterial, the capacity of Lockhaven Drive is limited as a 3-lane facility. 	<ul style="list-style-type: none"> - Improved transit service has the potential to reduce vehicle travel, particularly during the peak travel periods. 	<ul style="list-style-type: none"> - Will restore capacity to the Lockhaven Drive corridor and improve operations at the Lockhaven Drive/14th Avenue intersection.
Safety	<ul style="list-style-type: none"> - Increasing congestion on Lockhaven Drive may force additional east-west traffic on local and collector streets. 	<ul style="list-style-type: none"> - Access management measures will reduce vehicle conflicts and minimize the potential for certain types of vehicle collisions. 	<ul style="list-style-type: none"> - Increased capacity will improve traffic flow and minimize vehicle queuing and the resulting safety deficiencies.
Impacts	<ul style="list-style-type: none"> - Without improvements, long-term accessibility to/from the Chemawa interchange is limited. 	<ul style="list-style-type: none"> - Access management measures such as medians can limit access to private property. 	<ul style="list-style-type: none"> - Widening of Lockhaven Drive will require significant amounts of right-of-way.

Cost	- N/A	- Low to Moderate (\$)	- High (\$) due to significant ROW needs and property impacts.
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Table 7 Lockhaven Drive/14th Avenue Alternative

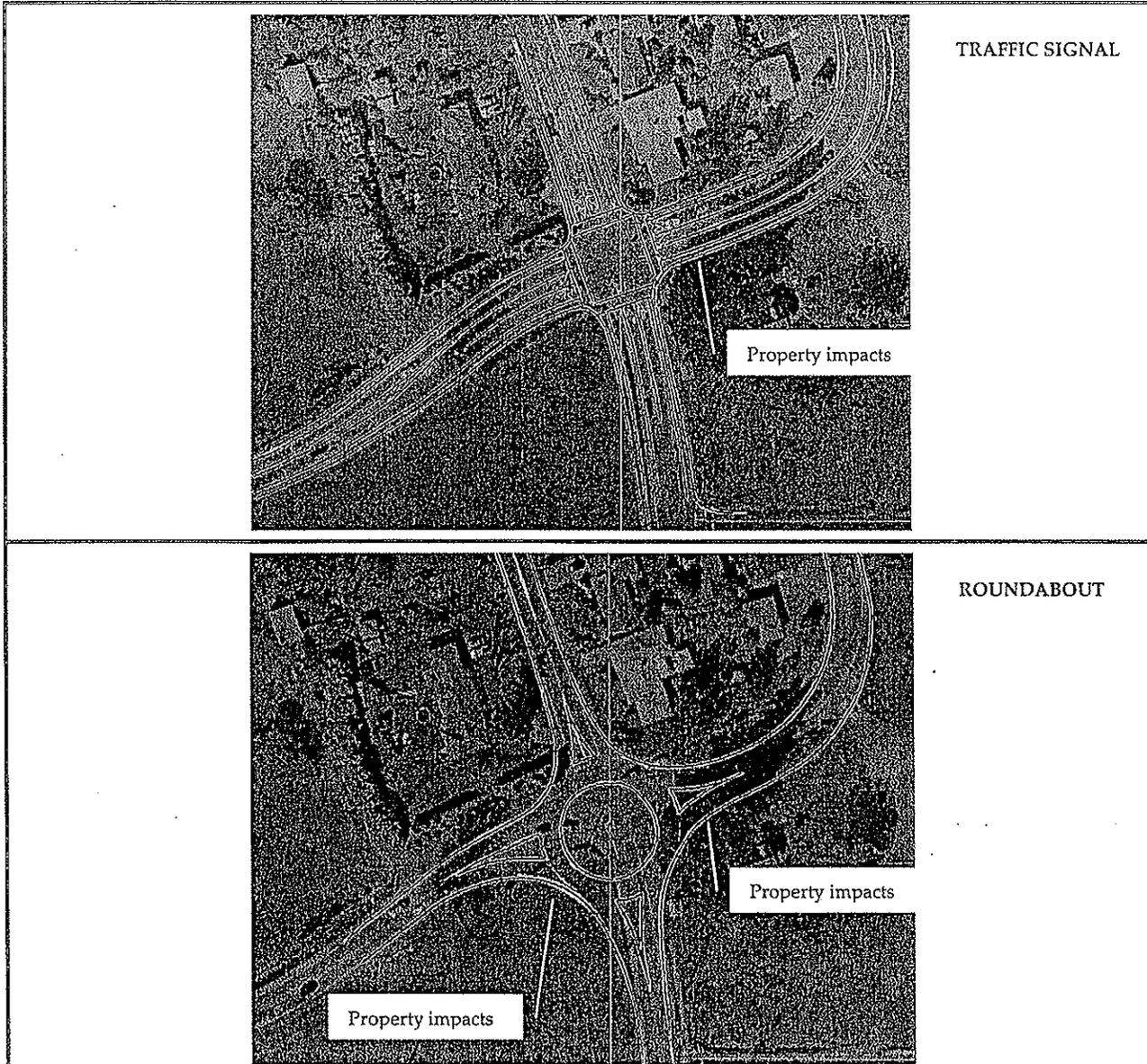


Sketch is for illustration purposes only

	Do Nothing Alternative	Improvement Alternatives
Traffic Operations	- Traffic volumes are projected to continue to increase, limiting the overall capacity of the intersection along this primary east/west arterial.	- Construct a westbound right-turn lane. - Modify the northbound & southbound approaches to include a separate left-turn lane and shared through/right-turn lane. - A westbound right-turn lane will provide additional longer-term capacity at the intersection.
Safety	- No change from existing conditions.	- May reduce the potential for rear-end collisions along Lockhaven Road.

Impacts	- Significant vehicle queues and delays.	- Will require some ROW acquisition and have some property impacts.
Cost	- N/A	- Low (\$) due to some relatively minor ROW needs and traffic signal modification requirements.

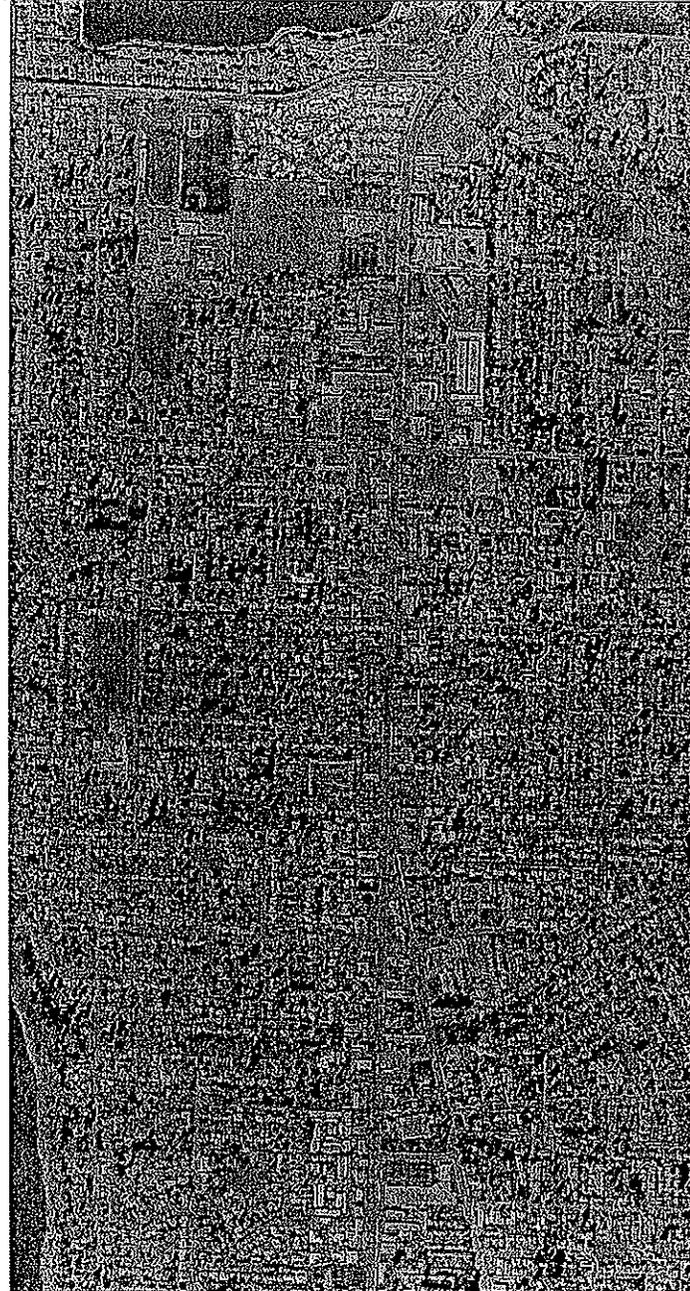
Table 8 Verda Lane/Chemawa Intersection Alternatives



Sketch is for illustration purposes only

	Traffic Signal Alternative	Roundabout Alternative
	<ul style="list-style-type: none"> - Widen all four approaches to include separate left and through/right-turn lanes. - Install traffic signal. 	<ul style="list-style-type: none"> - Acquire right-of-way (SW & NW quadrants) - Install single-lane roundabout (120 ft inscribed circle diameter).
Traffic Operations	<ul style="list-style-type: none"> - Eliminates forecast congestion. - LOS B, v/c=0.72 	<ul style="list-style-type: none"> - Eliminates forecast congestion. - v/c=0.69
Safety	<ul style="list-style-type: none"> - Would perform comparable to other traffic signals in Keizer. 	<ul style="list-style-type: none"> - Roundabouts typically have fewer high-speed injury collisions and collisions are typically less severe than signalized intersections.
Impacts	<ul style="list-style-type: none"> - Some right-of-way required for lane widening along the southwest and southeast quadrants. 	<ul style="list-style-type: none"> - The larger footprint of the roundabout requires more right-of-way compared to the signalized intersection. Some potentially significant property impacts are likely along the southwest and southeast quadrants.
Cost	<ul style="list-style-type: none"> - Moderate (\$) due to ROW acquisition and roadway/traffic signal construction costs. 	<ul style="list-style-type: none"> - Moderate to High (\$) due to increased ROW acquisition, property impacts, and roadway construction costs.

Table 9 River Road

		Do Nothing Alternative
	Traffic Operations	<ul style="list-style-type: none"> - Traffic volumes are projected to continue to increase, limiting the overall capacity of the roadway along this primary north-south arterial.
	Safety	<ul style="list-style-type: none"> - No change from existing conditions, therefore the River Road corridor will continue to see a high propensity of rear-end and turning movement collisions.
	Impacts	<ul style="list-style-type: none"> - Significant vehicle queues and delays along the corridor.
	Cost	- N/A
		Improvement Alternatives
	Traffic Operations	<ul style="list-style-type: none"> - Implement access management measures for properties that directly access River Road. - Improve transit service along the River Road corridor. - Construct right-turn deceleration lanes at major intersections. - Consider lower intersection operations standards that allow a greater degree of congestion.
	Safety	<ul style="list-style-type: none"> - Right-turn lanes at major intersections along the corridor will increase intersection capacity. - Improved transit service has the potential to reduce vehicle travel, particularly during the peak travel periods.
	Impacts	<ul style="list-style-type: none"> - Access management measures will reduce vehicle conflicts and minimize the potential for certain types of vehicle collisions.
	Cost	<ul style="list-style-type: none"> - Access management measures such as medians can limit access to private property.
Sketch is for illustration purposes only		<ul style="list-style-type: none"> - Low to Moderate (\$) - Access management measures and the construction of right-turn lanes can be implemented with a combination of capital facilities projects and private redevelopment projects.

PEDESTRIAN IMPROVEMENT ALTERNATIVES

Providing a connected network of pedestrian facilities is a significant component in the overall livability of a community. A safe and comfortable pedestrian network can be used for three primary purposes:

- Serving shorter pedestrian trips from neighborhoods to area activity centers such as schools, churches, and commercial centers
- Providing access to public transit
- Meeting recreational needs

In general, a large majority of arterial, collector, and local streets have sidewalk facilities. However, the pedestrian network is lacking in older neighborhoods and along significant east/west and north/south corridors that serve schools, public parks, and commercial centers. These deficiencies are identified in Figures 3-1 and 3-2. To address these deficiencies, the following improvement alternatives are identified in Table 8 below.

BICYCLE IMPROVEMENT ALTERNATIVES

Similar to the pedestrian network, the bicycle network expands the non-automotive transportation system within Keizer. A well designed bicycle network can provide regional access to school, shopping, and recreational destinations. Keizer currently has a number of roadway facilities with bicycle lanes or bicycle route designations. However, some gaps exist in this network as outlined in Figure 3-3. To mitigate these gaps, improvement alternatives are identified in Table 9.



LEGEND

Pedestrian Facilities

- Public Sidewalks
- No Sidewalks
- Private Sidewalks
- Sidewalk Alternative

Keizer City Limits/
Urban Growth Boundary

City Streets

Railroad

FIGURE 3-1 FUTURE SIDEWALK ALTERNATIVES KEIZER, OREGON

H:\profile\0310 - Keizer TSP Refinement and Updates



LEGEND

Pedestrian Facilities

- Public Sidewalks
- No Sidewalks
- Private Sidewalks
- Sidewalk Alternative

Keizer City Limits/
Urban Growth Boundary

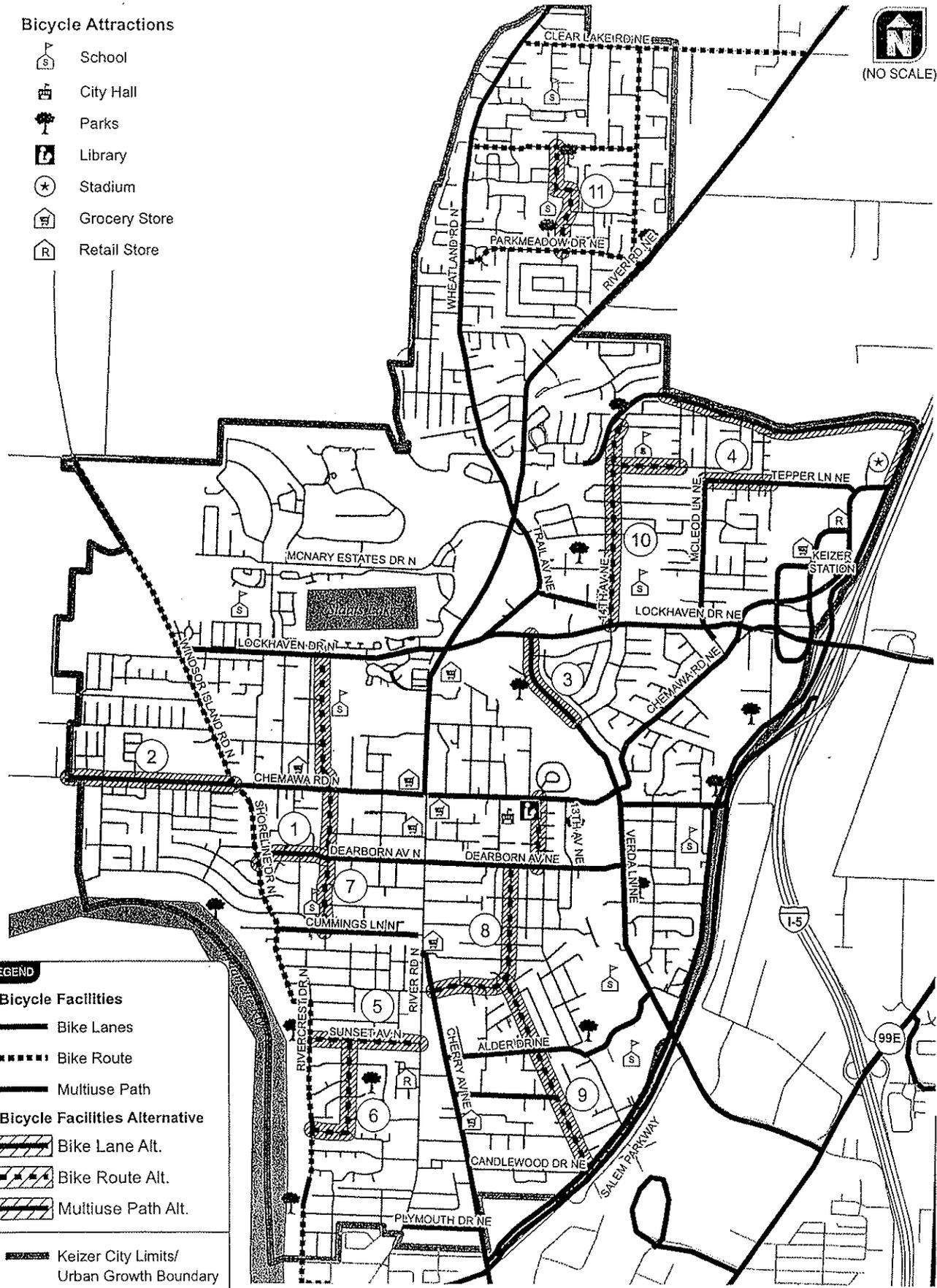
City Streets

Railroad

HyProfile#310 - Keizer TSP Refinement and Updates

Bicycle Attractions

-  School
-  City Hall
-  Parks
-  Library
-  Stadium
-  Grocery Store
-  Retail Store

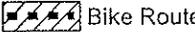


LEGEND

Bicycle Facilities

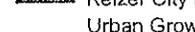
-  Bike Lanes
-  Bike Route
-  Multiuse Path

Bicycle Facilities Alternative

-  Bike Lane Alt.
-  Bike Route Alt.
-  Multiuse Path Alt.

 Keizer City Limits/
Urban Growth Boundary

 City Streets

 Railroad

BICYCLE FACILITY ALTERNATIVE
KEIZER, OREGON **FIGURE 3-3**

Table 10 Pedestrian Improvement Alternatives

Alt.	Roadway	Description	From	To	Reasons for Improvement	Priority	Cost*
1	Sunset Avenue	Construct sidewalks	Rivercrest Drive	River Road	<ul style="list-style-type: none"> - Sunset Ave is a collector roadway and a direct connection between Rivercrest Drive and River Road. - Would provide better neighborhood and regional access to Sunset Park and transit stops. 	Low	\$\$
2	Madrin Avenue	Fill in sidewalk gaps	Tori Ave.	River Road	<ul style="list-style-type: none"> - Would improve sidewalk continuity west of River Road by filling in a relatively small gap along Sunset Avenue. 	Low	\$
3	Cummings Lane	Construct sidewalks	Palma Ciea Park	River Road	<ul style="list-style-type: none"> - Cummings Lane is a collector roadway and a direct connection between Rivercrest Drive and River Road. - Would provide better regional access to Palma Ciea Park, existing transit stops, and commercial centers along River Road. - Would provide better access to Cummings Elementary School. 	High	\$\$
4	Chemawa Road	Construct sidewalks	West City Limits	River Road	<ul style="list-style-type: none"> - Would provide a continuous east-west sidewalk network with regional access to Keizer Rapids Park. - Chemawa Road is a minor arterial and provides regional access to commercial areas and transit opportunities. 	High	\$\$\$
5	Dearborn Avenue	Construct sidewalks	Delight Street	River Road	<ul style="list-style-type: none"> - Would improve sidewalk continuity west of River Road and fill in a significant gap in the sidewalk network. 	Medium	\$\$
6	Delight Street	Construct sidewalks	Cummings Lane	Chemawa Road	<ul style="list-style-type: none"> - Would provide better neighborhood access to Cummings Elementary School. - Would improve north/south sidewalk continuity west of River Road. 	Medium	\$\$
7	Dearborn Avenue	Construct sidewalks	13 th Avenue	Verda Lane	<ul style="list-style-type: none"> - Would fill in a small gap in the east-west sidewalk network. 	Medium	\$\$
8	Verda Lane	Construct sidewalks	Alder Drive	Kalmia Drive	<ul style="list-style-type: none"> - Would establish a continuous north-south sidewalk connection between Lockhaven Drive and the Salem Parkway. 	Medium	\$\$\$
9	Windsor Island Road	Fill in sidewalk gaps	Chemawa Road	City Limits	<ul style="list-style-type: none"> - Would provide better sidewalk connectivity and access to transit stops. 	Low	\$\$\$
10	O'Neil Road	Fill in sidewalk gaps	Parkmeadow Drive	Clear Lake Road	<ul style="list-style-type: none"> - Would provide a continuous north-south alternative to River Road and Wheatland Road. 	Medium	\$
11	Chemawa Road	Construct sidewalks	Verda Lane	Lockhaven Drive	<ul style="list-style-type: none"> - Would provide a continuous east-west sidewalk connection from River Road to Keizer Station. 	Medium	\$\$
12	Wheatland Road	Fill in sidewalk gaps	River Road	Clear Lake Road	<ul style="list-style-type: none"> - Would provide a continuous north/south sidewalk alternative to River Road. 	Low	\$

* \$\$\$ - Would have major ROW needs and/or a significant project scope.
 \$\$ - Would have some ROW needs and/or a moderate project scope.
 \$ - Would have minor ROW needs and/or a small project scope.

Table 11 Bicycle Improvement Alternatives

Ait.	Roadway	Description	From	To	Reasons for Improvement	Priority	Cost*
1	Dearborn Avenue	Stripe in bicycle lanes on both sides of the roadway.	Delight Street	Shoreline Drive	- Would fill in a small gap and provide continuous bike lanes from Verda Lane to Shoreline Drive.	Low	\$
2	Chemawa Road	Construct bicycle lanes on both sides of the roadway	Windsor Island Road	West City Limit	- Would provide a continuous east-west bicycle network. - Chemawa Road is a minor arterial. - Would provide regional access to Keizer Rapids Park.	High	\$\$\$
3	Verda Lane	Construct bicycle lanes on both sides of the roadway.	Kalmia Drive	Lockhaven Drive	- Would fill in a small gap and provide a continuous bike lane from Lockhaven Drive to Salem Parkway.	Medium	\$\$
4	Tepper Lane	Construct bicycle lanes on both sides of the roadway.	McLeod Drive	Railroad tracks	- Better neighborhood access to Keizer Station and multi-use path.	Medium	\$\$
5	Sunset Avenue	Designate as a bicycle route.	Rivercrest Drive	River Road	- Sunset Ave is a collector roadway and a direct connection between Rivercrest Drive and River Road. - Would provide better neighborhood and regional access to Sunset Park and transit stops.	Medium	\$
6	Fall Creek Drive/5 th Avenue	Designate as a bicycle route.	Rivercrest Drive	Sunset Avenue	- Would provide better neighborhood and regional access to Willamette Manor Park.	Low	\$
7	Delight Street	Designate as a bicycle route.	Cummings Lane	Lockhaven Drive	- Would provide neighborhood and regional route designation to Cummings Elementary School and McNary High School	High	\$
8	Mandbrin Dr/Thorman Avenue	Designate as a bicycle route.	Cherry Avenue	Dearborn Avenue	- Would provide neighborhood and regional route designation between Cherry Avenue and Dearborn Avenue.	Low	\$
9	Brooks Avenue	Designate as a bicycle route.	Mandbrin Drive	Salem Parkway	- Would provide neighborhood and regional route designation to the Salem Parkway multiuse path.	Low	\$
10	14 th Avenue	Designate as a bicycle route.	Lockhaven Drive	Gubser Elementary	- Would provide neighborhood and regional route designation to Gubser Elementary.	High	\$
11	Meadow-Glenn St.	Designate as a bicycle route.	Parkmeadow Street	Clear Lake Elementary	- Would provide neighborhood and regional route designation to Clear Lake Elementary.	High	\$

* \$\$\$ - Would have major ROW needs and/or a significant project scope.
 \$\$ - Would have some ROW needs and/or a moderate project scope.
 \$ - Would have minor ROW needs and/or a small project scope.

Next Steps

The next major activity on this project is the public open house scheduled for April 15, 2008. The improvements identified in this alternatives analysis will be formally presented to the public for review and comment. Following the open house, refinements will be made to the alternatives analysis if necessary.

Appendix G
Proposed
Development Code
Amendments

Memorandum

Date: March 2, 2009
To: Sam Litke, City of Keizer Planning Department
cc: Elizabeth Wemple, PE, Kittelson & Associates
From: Frank Angelo, Angelo Planning Group
Darci Rudzinski, AICP, Angelo Planning Group
Re: City of Keizer Transportation System Plan – Recommended Changes to the Keizer Development Code for TPR Compliance

The purpose of this memorandum is to provide the City of Keizer with regulatory language that will implement the updated Transportation System Plan (TSP) pursuant to the provisions of the Oregon Transportation Planning Rule (the "TPR," as codified in OAR 660-012-0045). The Plan and Policy Review memoranda prepared for the TSP update includes outlines that present required TPR code elements compared with the current adopted city code language.¹ This "TPR code audit" identified areas of the City's Development Code that need revisions in order to comply with the TPR. What follows in this technical memorandum are recommended changes to the City of Keizer's code based on the TPR code audit. Only areas of OAR 660-12-0045 that the City does not currently comply with will be addressed in this memorandum.

The discussion of recommended changes is generally organized in this memorandum through references to the applicable section(s) of the TPR that prompt a change in the City's implementing ordinances, followed by the recommended revisions.

The TPR requirement, the recommendation for text changes to the Development Code, and, where applicable, outstanding issues, are presented in text boxes.

Revisions to existing code language are presented with deletions shown ~~striketrough~~ and additions shown underlined. Where APG has developed new code language to meet TPR requirements, this also will be shown underlined. In some instances, APG utilized the *Model Development Code & Users Guide for Small Jurisdictions* (2005)² as a reference document for recommended code revisions.

To the extent possible, proposed text is organized using the numbering hierarchy provided by the Development Code. Where **NEWSECTION** follows a reference in the proposed text, this is an indication that the referenced section is in the body of the memorandum and does not reference an

¹ See Table 1, *TPR Requirements and City of Keizer*, in the City of Keizer Transportation System Plan DRAFT Plan and Policy Review, August 13, 2007, and the table in the TPR Compliance Supplement to the DRAFT Plan and Policy Review, September 18, 2007.

² <http://www.oregon.gov/LCD/TGM/modelCode05.shtml>

existing code section. If the City decides to use the proposed language, this marker should be deleted before adoption.

The City may find that suggested language is more appropriately placed elsewhere in the Development Code, or may wish to include reference in more than one section. In such cases, the City will need to revise the section and subsection headings and numbering accordingly. The City is advised to review the recommendations carefully to ensure that proposed language does not conflict with existing code language and, where conflicts do exist, to identify additional areas of the adopted ordinance that should be modified to better comply with the TPR. It is also possible that some additional amendments to proposed language may be necessary to more adequately express the City's needs.

Proposed Amendments to the Development Code

Requirements: Local governments must provide for consolidated review of land use decisions required to permit a transportation project (OAR Section 660-12-0045(1)(c)).

Local governments must adopt land use or subdivision ordinance standards to ensure that there is coordinated review of future land use decisions affecting transportation facilities, corridors or sites (OAR Section 660-12-0045(2)(d)).

Local jurisdictions must adopt regulations to provide notice to public agencies providing transportation facilities of land use applications that require public hearings, subdivision and partition applications, and applications which affect private access to roads, applications within airport noise corridor and imaginary surfaces which affect airport operations (OAR Section 660-12-0045(2)(f)).

Recommendation: The Development Code should be amended to include requirements for notice to ODOT for applicable land use applications and notice procedures specific to land use reviews for transportation-related facilities. Section 3.202, Public Notice Requirements, and Section 3.204, Public Notice Requirements, should be amended to include such provisions.

3.202.04 Procedures for Type II and Type III Actions

C. Agency Referrals. Referrals will be sent to interested agencies such as City departments, police and fire departments, school district, utility companies, and applicable city, county, and state agencies. Affected jurisdictions and agencies could include the Department of Environmental Quality, the Oregon Department of Transportation, Salem-Keizer Transit District, and the City of Salem. Notice of projects affecting state transportation facilities will be sent to ODOT. Referrals will be sent to affected neighborhood associations.

3.204.04 Notice for Appeals of Public Hearing

Notice of a hearing for any Type II, III or IV proposal that includes a new transportation facility or improvement, and where these facilities or improvements include or may impact a collector or arterial street, will be sent to the Oregon Department of Transportation and any special interest transportation groups as appropriate. Special interest transportation groups could include trucking organizations, bicycle and pedestrian interest groups, and disabled persons interest groups. Information that should be conveyed with the notice includes the following:

- (a) Project location
- (b) Proposed land use action
- (c) Location of project access point(s)

3.204.045 Notice for Appeals

3.204.056 Public Hearing Notice Requirements

Requirement: Local governments must adopt land use or subdivision ordinance regulations that protect transportation facilities for their identified functions, including access control. (OAR Section 660-12-0045(2)(a)).

Recommendation: Currently the City regulates access through public works standards. The Development Code does not include a specific "access control" section that articulates the City's interest in maintaining a roadway system that accommodates the community's transportation needs.

In order to better meet the TPR requirement, a new Subsection P, Access Control Standards, is recommended for inclusion under Section 2.302.03. Proposed Code language limits access on arterials and/or collectors, specifies the minimum distance between driveway access points on arterials, and includes special access control standards for certain types of developments (subdivisions located on arterial streets, double-frontage lots). The access spacing standards in the Arterial Access Spacing Standards Table are consistent with the revised TSP; existing public works standards should be reviewed for consistency with this proposed code section.

2.302.03 General Provisions

The following provisions shall apply to the dedication, construction, improvement or other development of all public streets in the City of Keizer:

O. Access Control Standards

The following access control standards apply to public, industrial, commercial and residential developments including land divisions. Access shall be managed to maintain an adequate level of service and to maintain the functional classification of roadways as required by the City of Keizer Transportation System Plan. Major roadways, including arterials and collectors, serve as the primary system for moving people and goods within and through the city. Access management is a primary concern on these roads. Local streets and alleys provide access to individual properties. If vehicular access and circulation are not properly designed, these roadways will be unable to accommodate the needs of development and serve their transportation function.

The regulations in this section further the orderly layout and use of land, protect community character, and conserve natural resources by promoting well-designed road and access systems and discouraging the unplanned subdivision of land.

1. Traffic Impact Analysis Requirements. The City or other agency with access jurisdiction may require a traffic study prepared by a qualified professional to determine access, circulation and other transportation requirements. (See also, Section 2.301.03 Traffic Impact Analysis.)
2. The City or other agency with access permit jurisdiction may require the closing or consolidation of existing curb cuts or other vehicle access points, recording of reciprocal access easements (i.e., for shared driveways), development of a frontage street, installation of traffic control devices, and/or other mitigation as a condition of granting an access permit, to ensure the safe and efficient operation of the street and highway system. Access to and from off-street parking areas shall not permit backing onto a public street.
3. Access Options. When vehicle access is required for development (i.e., for off-street parking, delivery, service, drive-through facilities, etc.), access shall be provided by one of the

following methods (a minimum of 10 feet per lane is required; planned access shall be consistent with adopted public works standards for road construction). These methods are "options" to the developer/subdivider.

- a. Option 1. Access is from an existing or proposed alley or mid-block lane. If a property has access to an alley or lane, direct access to a public street is not permitted.
 - b. Option 2. Access is from a private street or driveway connected to an adjoining property that has direct access to a public street (i.e., "shared driveway"). A public access easement covering the driveway shall be recorded in this case to assure access to the closest public street for all users of the private street/drive.
 - c. Option 3. Access is from a public street adjacent to the development parcel. If practicable, the owner/developer may be required to close or consolidate an existing access point as a condition of approving a new access. Street accesses shall comply with the access spacing standards in Subsection 6, below.
4. Subdivisions Fronting Onto an Arterial Street. New residential land divisions fronting onto an arterial street shall be required to provide alleys or secondary (local or collector) streets for access to individual lots. When alleys or secondary streets cannot be constructed due to topographic or other physical constraints, access may be provided by consolidating driveways for clusters of two or more lots (e.g., includes flag lots and mid-block lanes).
 5. Double-Frontage Lots. When a lot has frontage onto two or more streets, access shall be provided first from the street with the lowest classification. For example, access shall be provided from a local street before a collector or arterial street.
 6. Access Spacing: The following minimum access spacing standards apply to public streets and driveways on arterial streets:

Arterial Access Spacing Standards

Posted Speed (miles per hour)	Minimum Spacing (feet)
25	150
30	150
35	150
40	185
45	230
50 or higher	275

7. Number of Access Points. For single-family (detached and attached), two-family, and three-family housing types, one street access point is permitted per lot, when alley access cannot otherwise be provided; except that two access points may be permitted for two-family and three-family housing on corner lots (i.e., no more than one access per street), subject to the access spacing standards in Subsection 6, above. The number of street access points for multiple family, commercial, industrial, and public/institutional developments shall be minimized to protect the function, safety and operation of the street(s) and sidewalk(s) for all users. Shared access may be required, in conformance with Subsection 8 below, in order to maintain the required access spacing, and minimize the number of access points.
8. Shared Driveways. The number of driveway and private street intersections with public

streets shall be minimized by the use of shared driveways with adjoining lots where feasible. The City shall require shared driveways as a condition of land division or site design review, as applicable, for traffic safety and access management purposes in accordance with the following standards:

- a. Shared driveways and frontage streets may be required to consolidate access onto a collector or arterial street. When shared driveways or frontage streets are required, they shall be stubbed to adjacent developable parcels to indicate future extension. "Stub" means that a driveway or street temporarily ends at the property line, but may be extended in the future as the adjacent parcel develops. "Developable" means that a parcel is either vacant or it is likely to receive additional development (i.e., due to infill or redevelopment potential).
 - b. Access easements (i.e., for the benefit of affected properties) shall be recorded for all shared driveways, including pathways, at the time of final plat approval or as a condition of site development approval.
 - c. Exception. Shared driveways are not required when existing development patterns or physical constraints (e.g., topography, parcel configuration, and similar conditions) prevent extending the street/driveway in the future.
- C. Street Connectivity and Formation of Blocks Required. In order to promote efficient vehicular and pedestrian circulation throughout the City, land divisions and large site developments shall produce complete blocks bounded by a connecting network of public and/or private streets, in accordance with the following standards:
1. Block Length and Perimeter. The maximum block length shall not exceed 600 feet for all streets except arterials, and shall not exceed 800 feet along an arterial, consistent with 2.310.04 Additional Design Standards for Subdivisions.
 2. Street Standards. Public and private streets shall also conform to Section 2.302 Street Standards in the City of Keizer Development Code (Table 4.1 Street Design Standards in the TSP).
 3. Exception. Exceptions to the above standards may be granted when blocks are divided by one or more pathway(s), in conformance with the provisions of 2.310.04(C)(2), Pedestrian/Bicycle Accessways:. Pathways shall be located to minimize out-of-direction travel by pedestrians and may be designed to accommodate bicycles.

Requirements: Local governments must adopt land use or subdivision ordinance standards to protect the future operations of roadways and transit corridors. (OAR Section 660-12-0045(2)(b)).

Local governments must adopt a process that allows conditioning development proposals in order to minimize impacts and protect transportation facilities (OAR Section 660-12-0045(2)(e)).

Recommendation: These sections of the TPR address the need to account for potential development impacts to roadways and transit corridors and to ensure that transportation facilities continue to meet community needs. An effective way to ensure that roadways are protected for their planned function and capacity is to require a transportation impact analysis (TIA) as part of a development application. Currently the City requires a TIA for development proposals in the Activity Center Overlay (2.125(B)(2)) and in the Keizer Station Master Plan that will generate in excess of 250 average daily vehicle trips (3.113).

In order to better meet the TPR requirement, recommended code changes (below) require a TIA for all new development that would potentially impact the roadway system. The following draft language for a new section 2.301.03 Traffic Impact Analysis, would require a traffic study under prescribed conditions and lists the required elements of such a study. Since the City already has an established threshold of 250 average daily trips in the Activity Center Overlay and Keizer Station Master Plan area, this number is used in the proposed language and would be applicable to development in all areas of the City. Proposed language makes explicit that transportation related conditions of approval may be applied to development proposals.

In addition, proposed amendments to Section 3.108 Subdivisions, Planned Unit Developments and Manufactured Home Parks, cross reference the TIA submittal requirement.

2.301.03 Traffic Impact Analysis (TIA).

- A. Purpose. The purpose of this section of the code is to implement Section 660-012-0045 (2) (e) of the State Transportation Planning Rule that requires the City to adopt a process to apply conditions to development proposals in order to minimize adverse impacts to and protect transportation facilities. This section establishes the standards for when a proposal must be reviewed for potential traffic impacts; when a Traffic Impact Analysis must be submitted with a development application in order to determine whether conditions are needed to minimize impacts to and protect transportation facilities; what must be in a Traffic Impact Study; and who is qualified to prepare the Study.
- B. Typical Average Daily Trips. The latest edition of the Trip Generation manual, published by the Institute of Transportation Engineers (ITE) shall be used as standards by which to gauge average daily vehicle trips.
- C. When Required. A Traffic Impact Analysis may be required to be submitted to the City with a land use application, when the following conditions apply:
 - 1. The development application involves one or more of the following actions:
 - a. A change in zoning or a plan amendment designation; or
 - b. The development shall cause one or more of the following effects, which can be determined by field counts, site observation, traffic impact analysis or

study, field measurements, crash history, Institute of Transportation Engineers Trip Generation manual; and information and studies provided by the local reviewing jurisdiction and/or ODOT;

- (i.) An increase in site traffic volume generation by 250 Average Daily Trips (ADT) or more (or as required by the City Engineer); or
- (ii.) An increase in use of adjacent streets by vehicles exceeding the 20,000 pound gross vehicle weights by 10 vehicles or more per day; or
- (iii.) The location of the access driveway does not meet minimum intersection sight distance requirements, or is located where vehicles entering or leaving the property are restricted, or such vehicles queue or hesitate, creating a safety hazard; or
- (iv.) The location of the access driveway does not meet the access spacing standard of the roadway on which the driveway is located; or
- (v.) A change in internal traffic patterns that may cause safety problems, such as back up onto the highway or traffic crashes in the approach area.

D. Traffic Impact Analysis Requirements.

- 1. Preparation. A Traffic Impact Analysis shall be prepared by a professional engineer in accordance with OAR 734-051-180. The traffic analysis will be paid for by the applicant.
- 2. Transportation Planning Rule Compliance. See Section 3.111.05 Transportation Planning Rule Compliance. ~~NEW SECTION~~
- 3. Pre-application Conference. The applicant will meet with Keizer Public Works prior to submitting an application that requires a Traffic Impact Application. This meeting will determine the required elements of the TIA and the level of analysis expected.

E. Approval Criteria.

- 1. Criteria. When a Traffic Impact Analysis is required, approval of the development proposal requires satisfaction of the following criteria:
 - a. The Traffic Impact Analysis was prepared by a professional engineer in accordance with OAR 734-051-180; and
 - b. If the proposed development shall cause one or more of the effects in Section 2.301.03.C, above, or other traffic hazard or negative impact to a transportation facility, the Traffic Impact Analysis includes mitigation measures that meet the City's Level-of-Service and Volume/Capacity standards and are satisfactory to the City Engineer, and ODOT when applicable; and
 - c. The proposed site design and traffic and circulation design and facilities, for all transportation modes, including any mitigation measures, are designed to:
 - (i.) Have the least negative impact on all applicable transportation facilities; and
 - (ii.) Accommodate and encourage non-motor vehicular modes of transportation to the extent practicable; and
 - (iii.) Make the most efficient use of land and public facilities as practicable; and
 - (iv.) Provide the most direct, safe and convenient routes practicable between on-site destinations, and between on-site and off-site destinations; and
 - (v.) Otherwise comply with applicable requirements of the City of Keizer Development Code.

F. Conditions of Approval. The City may deny, approve, or approve a development

proposal with appropriate conditions.

1. Where the existing transportation system will be impacted by the proposed development, dedication of land for streets, transit facilities, sidewalks, bikeways, paths, or accessways may be required to ensure that the transportation system is adequate to handle the additional burden caused by the proposed use.
2. Where the existing transportation system is shown to be burdened by the proposed use, improvements such as paving, curbing, installation or contribution to traffic signals, construction of sidewalks, bikeways, accessways, paths, or streets that serve the proposed use may be required.

3.108.04 Submittal Requirements

C. Supplemental Information. The following supplemental information shall be required for all PUD Preliminary Plan applications:

6. Traffic Impact Analysis, if required pursuant to Section 2.301.03 of this code.

Requirements: Local governments must adopt land use or subdivision ordinance regulations that ensure amendments to land use designations, densities, and design standards are consistent with the function, capacities, and levels of service of facilities designated in the TSP. (OAR Section 660-12-0045(2)(g)).

Amendments to functional plans, acknowledged comprehensive plans, and land use regulations that significantly affect an existing or planned transportation facility shall assure that allowed land uses are consistent with the identified function, capacity, and performance standards of the facility. (OAR Section 660-12-0060).

Recommendation: This TPR requirement ensures that amendments to the comprehensive plan and land use regulations are reviewed for their impact on transportation facilities identified in the TSP. To better comply with the TPR, it is recommended that Development Code include clarification that approval of amendments to land use designations, densities, and design standards is contingent on findings of consistency with the planned transportation system, as adopted in the City's TSP.

Below is a proposed new Subsection 3.111.05, Transportation Planning Rule Compliance, to be added to Section 3.111, Text Amendments. The purpose of this subsection is to specify how land use amendments are to comply with the TPR. New language is included to provide guidance in determining when a code amendment is considered to have an impact on transportation facilities. The new subsection also discusses how to ensure that proposed amendments to the comprehensive plan or to the development code are consistent with the TSP when the amendment significantly affects a transportation facility. *[Note: City will need to check for consistency between this new subsection and Subsection 3.111.04 Criteria for Approval.]*

These proposed code amendments are consistent with OAR 660-12-060, which requires that amendments to functional plans, acknowledged comprehensive plans, and land use regulations that significantly affect an existing or planned transportation facility must ensure that the allowed land uses are consistent with the identified function, capacity, and performance standards of the facility.

3.111.01 Purpose

The purpose of this chapter is to provide standards and procedures for legislative and quasi-judicial amendments to this Code and the land use district map. These will be referred to as "map & text amendments." Amendments may be necessary from time to time to reflect changing community conditions, needs and desires, to correct mistakes, or to address changes in law.

3.111.05 Transportation Planning Rule Compliance

A. Review of Applications for Effect on Transportation Facilities. A proposed comprehensive plan amendment, zone change or land use regulation change, whether initiated by the City or by a private interest, shall be reviewed to determine whether it significantly affects a transportation facility, in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – "TPR"). "Significant" means the proposal would:

1. Change the functional classification of an existing or planned transportation

- facility (exclusive of correction of map errors in an adopted plan);
- 2. Change standards implementing a functional classification system; or
- 3. As measured at the end of the planning period identified in the adopted transportation system plan:
 - a. Allow land uses or levels of development that would result in types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;
 - b. Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP;
or
 - c. Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.
- B. Amendments That Affect Transportation Facilities. Amendments to the comprehensive plan and land use regulations that significantly affect a transportation facility shall ensure that allowed land uses are consistent with the function, capacity, and level of service of the facility identified in the TSP. This shall be accomplished by one or a combination of the following:
 - a. Adopting measures that demonstrate allowed land uses are consistent with the planned function, capacity, and performance standards of the transportation facility.
 - b. Amending the TSP or comprehensive plan to provide transportation facilities, improvements or services adequate to support the proposed land uses consistent with the requirements of Section -0060 of the TPR.
 - c. Altering land use designations, densities, or design requirements to reduce demand for automobile travel and meet travel needs through other modes of transportation.
 - d. Amending the TSP to modify the planned function, capacity or performance standards of the transportation facility.
- C. Traffic Impact Analysis. A Traffic Impact Analysis shall be submitted with a plan amendment or zone change application. (See Section 2.301.03 Traffic Impact Analysis (TIA)).

Requirements: Local governments must adopt land use or subdivision ordinance regulations that provide "safe and convenient" pedestrian and bicycle connections from new subdivisions/multifamily development to neighborhood activity centers; require bikeways along arterials and major collectors; and require sidewalks along arterials, collectors, and most local streets in urban areas (OAR Section 660-12-0045(3)(b)).

Recommendation: The purpose of these sections of the TPR is to ensure that safe and convenient circulation and facilities are provided for pedestrians and bicyclists, within new residential and commercial development and on public streets.

New TSP Table 4.1 Street Design Standards meets the TPR requirement for pedestrian and connectivity by requiring sidewalks on all street functional classifications. The proposed Street Design Standards also require bike lanes on arterials and collectors, consistent with this section of the TPR. The recommendation is to replace the Street Standards table under Section 2.302.04 General Right-of-Way and Improvement Widths with TSP Table 4.1. (See recommendation addressing OAR Section 660-12-0045(7) on page 15).

Requirement: Local governments must adopt land use or subdivision ordinance regulations to support transit, including requiring new retail, office, and institutional buildings at or near major transit stops to provide convenient pedestrian access to transit (OAR Section 660-12-0045(4)(b)).

Recommendation: The Development Code should be amended to include standards consistent with TPR -0045(4) for development proposals that are within a certain distance from a transit stop. Proposed amendments to Section 2.315, Development Standards, are shown below. Traffic Circulation Standards in Section 2.310.04, Additional Design Standards for Subdivisions, uses the distance of ¼ mile to distinguish if desirable uses and amenities are "nearby." The distance of ¼ mile from a transit stop is the threshold proposed for the requirements below.

2.315.08 Development Standards

[Note: A new subsection G. is recommended to meet TPR 660-12-0045(4)(e), as discussed later in this memorandum.]

H. Transit Access. New retail, office and institutional buildings at, or within ¼ mile of a transit stop, as identified in the city TSP, shall provide for convenient pedestrian access to transit through the measures listed in Subsections 1. and 2. below.

1. Walkways shall be provided connecting building entrances and streets adjoining the site;
2. Pedestrian connections to adjoining properties shall be provided except where such a connection is impracticable. Pedestrian connections shall connect the on site circulation system to existing or proposed streets, walkways, and driveways that abut the property. Where adjacent properties are undeveloped or have potential for redevelopment, streets, accessways and walkways on site shall be laid out or stubbed to allow for extension to the adjoining property;
3. In addition to Subsections 1. and 2. above, sites at transit stops must provide the following:
 - a. Either locate buildings within 20 feet of the transit stop, a transit street, or an intersecting street or provide a pedestrian plaza at the transit stop or a street intersection;
 - b. A reasonably direct pedestrian connection between the transit stop and building entrances on the site;

- c. A transit passenger landing pad accessible to disabled persons;
- d. An easement or dedication for a passenger shelter if requested by the transit provider;
and
- e. Lighting at the transit stop.

Requirement: Local governments must adopt land use or subdivision regulations to support public transit, including allowing redevelopment of existing parking areas for transit-oriented uses (OAR Section 660-12-0045(4)(e)).

Recommendation: A new subsection should be added to 2.303 Off-Street Parking and Loading that will allow the redevelopment of existing parking areas for transit-oriented uses.

2.303.11 Parking Area Redevelopment.

Existing development may redevelop a portion of existing parking areas in order to accommodate or provide transit-related amenities such as transit stops, pull-outs, shelters, and park and ride stations. The number of parking spaces may be reduced by up to 10% of the minimum required parking spaces for that use.

Requirement: Local governments must adopt land use or subdivision regulations to support public transit, including requiring new development to provide road systems that can be adequately served by transit and pedestrian access to existing and identified future transit routes. (OAR Section 660-12-0045(4)(f)).

Recommendation: Development standards should be modified to clarify that development proposals must address pedestrian access to planned, not only existing, transit stops.

2.315.08 Development Standards

A. Pedestrian Circulation.

1. Connection Required. The pedestrian circulation system for the proposed development must connect uses, building entrances, adjacent streets, and, nearby existing and planned (as adopted in the City Transportation System Plan) transit stops on, and within ¼ mile of the site.

Requirement: In MPO areas, local governments must adopt land use and subdivision regulations to reduce reliance on the automobile (OAR Section 660-12-0045(5)). One required element of this TPR section that the City has not yet met is requiring all major industrial, institutional, retail, and office developments to provide a transit stop on site or provide a connection to a transit stop when a transit operator requires such an improvement.

Recommendation: A new subsection G. under the Development Standards should be added to address when transit stops are required. (See proposed language below.) To facilitate the development of transit stops when required pursuant to this new section, improvements related to transit stops should be listed as allowed uses in the City's commercial, mixed-use, and industrial zone districts. *[Note: Because multiple zoning districts will need to be amended to include transit-related improvements as allowed uses, proposed edits are not shown here.]*

2.315.08 Development Standards

G. Transit Stop Requirement. New retail, office and institutional buildings at, or within ¼ mile of an existing or planned transit stop, as identified in the city TSP, shall provide either a transit stop on site or connection to a transit stop along a transit route when the transit operator requires such an improvement.

Requirement: Local governments are required to establish standards for local streets and accessways that minimize pavement width and total ROW consistent with the operational needs of the facility (OAR Section 660-12-0045(7)).

Recommendation: The Street Standards table in Section 2.302.04 should be amended to be consistent with Street Design Standards in Chapter 4 the TSP. The TSP provides for the use of a narrower local street design if the standards/criteria for this option can be met.

2.302.04 General Right-of-Way and Improvement Widths

The following standards are general criteria for public streets in the City of Keizer.

These standards shall be the minimum requirements for all streets, except where modifications are permitted under Subsection 2.202.05.

STREET STANDARDS *[Replace table with draft TSP Table 4.1 Street Design Standards.]*