

City of Keizer Transportation Systems Plan

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.

Contents

- Executive Summary 1**

- Chapter 1 - Introduction 3**
 - A. Overview 3
 - B. Background 3
 - C. TSP Elements 4
 - D. Regulatory Context 5
 - E. Plan Development 10
 - F. Keizer - The Community 11
 - G. Population and Employment 11

- Chapter 2 - Public Involvement..... 16**

- Chapter 3 - Streets System 18**
 - A. Background 18
 - B. Functional Classifications 18
 - C. Accidents 23
 - D. Capacities 24
 - E. Goals, Objectives, and Policies 26
 - F. Street Design Standards 29
 - G. Regional Transportation Systems Plan Planned Improvements in Keizer 29
 - H. Outstanding Issues 31

- Chapter 4 - Transportation Demand Management 33**
 - A. Background 33
 - B. Ridesharing and Park-and-Ride Lots 33
 - C. Policy Framework..... 34
 - D. Goals, Objectives, and Policies..... 34

- Chapter 5 – Transportation System Management..... 37**
 - A. Background 37
 - B. Goals, Objectives, and Policies 37

- Chapter 6 - Parking Management 39**
 - A. Background 39
 - B. Goals, Objectives, and Policies 39
 - C. Transportation Planning Rule Compliance 40
 - D. Implementation Strategies 41
 - E. Outstanding Actions 41

Chapter 7 - Bicycle/Pedestrian	43
A. Background	43
B. Bicycle Facilities	44
C. Pedestrian Facilities	55
Chapter 8 - Public Transportation Systems.....	65
A. Background	65
B. Local Transit Service (Cherriots)	66
C. Transportation Disadvantaged Services	71
D. Intercity Bus Service	72
E. Regular and Shared Taxi Services.....	72
F. Charter Bus Service	73
G. Goals, Objectives, and Policies.....	73
H. Implementation.....	76
I. Outstanding Issues	77
Chapter 9 - Air/Water/Rail/Pipeline	79
A. Air Service	79
B. Waterborne Transportation	80
C. Pipeline Facilities	81
D. Rail Facilities	82
Chapter 10 - Finance.....	87
A. Background	87
B. Funding Sources	87
C. Goals, Objectives, and Policies.....	90
D. Anticipated Revenues	91
Chapter 11 - Outstanding Actions, Steps, or Refinements	93
Appendix A - Definitions and Acronyms.....	95
Appendix B - Public Transportation Service Providers Inventory ...	105
Appendix C - Population Allocation	109
Vacant Residential Parcels in Keizer	109
2020 Population Estimates	112
Population Estimates for Interim Years.....	113
Appendix D - Access Control for Arterial Streets.....	115
Appendix E: TPR Compliance Checklist.....	121
Appendix F - Public Involvement.....	129
Public Comment Notes	129

List of Tables

Table 1	Keizer’s Population Growth.....	12
Table 2	Projected Employment for Salem-Keizer UGB	13
Table 3	Inventory of Arterials and Collectors	21
Table 4	River Road Intersection Accidents.....	23
Table 5	Levels of Service for 1995 and 2015	25
Table 6	Street Standards.....	29
Table 7	Proposed Additions to Existing Bicycle Facilities	52-53
Table 8	Multi-Use Paths	54
Table 9	Sidewalk Needs for Arterial and Collector Streets	56-57
Table 11	Outstanding Actions.....	89

List of Figures

Figure 1	Daily Trips by Type in the SKATS Area	14
Figure 2	Street Functional Classification.....	19
Figure 3	Bicycle Facilities	47
Figure 4	Sidewalk Needs	59
Figure 5	Existing Bus Routes.....	65

Executive Summary

The Transportation System Plan (TSP) is a long-range (20-year) plan that provides the city with the goals and policies to guide development of all its transportation modes (pedestrian, bicycle, motor vehicles, public transit, etc.). The TSP establishes an interconnected network of arterial and collector streets that improve the operation of the transportation systems. It also outlines a Capital Improvement Program (CIP) that shows the construction work necessary to meet the goals of the TSP.

Keizer is part of the Metropolitan Planning Organization (MPO) which was designated as a Transportation Management Area in 2002. The operation of Keizer's transportation systems is influenced by the MPO and is also influenced by the other MPO jurisdictions. Relatively recent population growth in Keizer, and the MPO, placed demand on the city to accommodate the increased transportation needs of its residents. The needs are varied and include designs for improved pedestrian and bicycle facilities and additional transit services. The TSP addresses those needs with the goals, policies, and improvements contained in the applicable transportation mode chapter.

The MPO in the Keizer area is the Salem-Keizer Area Transportation Study (SKATS). It is governed by the SKATS Policy Committee, which is made up of elected representatives from the cities of Keizer, Turner and Salem, Marion and Polk Counties, the Salem Area Mass Transit District (SAMTD), and the Salem/Keizer School District. The Mid-Willamette Valley Council of Governments (MWVCOG) facilitates the efforts of 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 Policy Committee is advised by several sub-committees which meet regularly and are comprised of private citizens, elected officials, state agencies and private transportation providers to ensure representation of various viewpoints in the decision-making process.

Keizer is also a member of the Mid-Willamette Area Commission on Transportation (MWACT). MWACT is an official advisory body to the Oregon Transportation Commission (OTC) on transportation issues within Marion, Polk, and Yamhill County areas of Oregon. MWACT balances the needs identified by local jurisdictions with the desired vision of the entire valley, advising on programs which best meet these needs based on available revenues and implement the statewide transportation policies.

Elected officials from Keizer continue to actively participate in the deliberations of both SKATS and MWACT. Both organizations deal with, and are the policy-makers, on transportation issues that affect Keizer but which, in many cases, extend beyond Keizer's city limits. Some of the issues include another cross bridge across the Willamette River, a "beltline" concept for Keizer-Salem, commuter rail between

Keizer/Salem and the Portland metropolitan area, a transit “center” in Keizer and additional access points to Interstate Highway 5 (Perkins or Quinby Roads).

Overall, the Keizer transportation systems (streets, bicycle, pedestrian, public transportation, etc.) are in good condition and meet the city’s present and future needs. Keizer is projected to reach build-out sometime after 2010, so only moderate additional demands are expected. Although traffic volumes will increase on some specific individual streets and levels of service may decrease at some intersections, the overall street system should remain above the Level of Service (LOS) E contained in the city policy. To prevent misunderstandings, it is important to note that individual streets will not operate as well (for example, decrease from LOS B to LOS C) as they do today; but they will operate at a level considered acceptable.

With completion of work shown in the (CIP) Capital Improvement Plan, improvements in bicycle and pedestrian system connectivity will be made. Gas tax is anticipated to provide less than half of the amount of revenue needed to construct anticipated capital improvements. The remainder must be obtained from other sources such as grants, cooperative projects with developers, and other sources shown in the Finance Chapter.

Adoption of the TSP as part of the Comprehensive Plan should be considered the beginning of the transportation process. As a “living document,” the TSP must be updated, refined, and improved over the years. The Outstanding Actions chapter contains a list of future work, which will help refine the plan. This chapter also contains reminders of the requirement for five-year reviews of the TSP.

Chapter 1 - Introduction

A. Overview

The purpose of the *Keizer Transportation Systems Plan* is to provide a framework of goals, objectives, and policies that will guide efforts for achieving an acceptable level of transportation facilities and services through the year 2020. In addition, the Plan will help guide use of scarce resources in future transportation programs and infrastructure.

Before transportation investments can be planned, the current and future travel demands need to be assessed. The assessments for Keizer were made using a mix of current and projected population and employment figures, social demographics, surveys, and inventories of developable land within the urban growth boundary. The computer model for the Regional Plan projected future travel demand for key parts of the Keizer transportation system through 2015. Traffic demand was proportionally extended to include the last years of this TSPs planning period (2020). Potential deficiencies were identified by comparing future travel demand to the capacity of the existing street system. Bicycle, pedestrian, and transit needs were identified through a comprehensive public involvement process.

B. Background

With the concurrence of the Oregon Department of Transportation (ODOT), the Land Conservation and Development Commission (LCDC) adopted the Transportation Planning Rule (TPR), OAR 660 Division 12, in April 1991, (revised 1995 & 1998), to guide regional and local transportation planning in carrying out the purpose of LCDC Goal 12--Transportation Planning.

The most recent Oregon Transportation Plan (OTP) (1999), along with a series of modal and facility plans (corridor plans), constitute the state's Transportation Systems Plan (TSP). Metropolitan Planning Organizations (MPOs) and counties prepare regional TSPs; and cities, in turn, prepare TSPs consistent with both regional and state TSPs.

The TSP, at any level, is not necessarily a single document. A TSP may include or authorize the creation of **refinement plans**. These further develop selected portions of the TSP.

The TPR defines a TSP as "a plan for one or more transportation facilities that are planned, developed, operated and maintained in a coordinated manner to supply continuity of movement between modes, and within and between geographic and jurisdictional areas." Generally, all cities and counties in Oregon can prepare a TSP, which becomes part of the local Comprehensive Plan. All TSPs within a MPO area must be consistent with the Regional TSP. The Salem-Keizer Area Transportation

Study (SKATS), the designated MPO for the Salem-Keizer area, adopted its Regional TSP in 2002 with an update in 2003.

The transportation work identified in the *Keizer Transportation Systems Plan* is designed to maximize mobility. Maximizing mobility means investing in several travel modes simultaneously. For example, a street improvement project may widen a roadway to add vehicle travel lanes and also add bicycle lanes and construct sidewalks. Bus turn-outs may also be constructed. Many projects contained in the Plan are designed to be multimodal.

Improvements are prioritized based primarily on when they are expected to be needed. Funding constraints determine how many projects can be constructed at any given time.

C. TSP Elements

The *Keizer Transportation Systems Plan* is a collection of elements that address each mode of travel or aspect of the entire transportation system. The Plan includes the following elements:

Street System. This element identifies the arterial, collector, and significant local streets, assigns each street a functional classification, provides typical street standards, and contains planned street improvement projects. It contains policies which facilitate connections to neighborhood activity centers such as schools, parks, and shopping, and provides access to transit service.

Transportation Demand Management/Transportation Systems Management. These elements identify ways to maximize the capacity and safety of the existing street system through traffic engineering and managing the street systems travel demand. They contain policies that encourage and facilitate the use of carpools, vanpools, flexible work hours, telecommuting, and other alternative travel modes that decrease reliance on the single-occupant automobile for commuting.

Bicycle/Pedestrian System. This element identifies bicycle and pedestrian system needs. It contains policies that encourage bicycle use and safety and encourages walking. The element designates streets that are bicycle routes and lists planned bicycle and pedestrian system improvements.

Public Transportation System. This element describes the city's role in supporting the transit system through infrastructure improvements that make transit services more accessible. Although the city of Keizer does not operate the transit system, this element identifies needs and develops policies that will help increase transit ridership.

Air/Water/Pipe/Rail. Although these are not major transportation modes for Keizer, this element contains policies that promote efficient and safe freight and commodities and potentially commuter (passenger) movement to, from, and within the city.

Parking. This element contains policies that promote an adequate supply of parking but discourages an oversupply of parking that would promote single-occupant vehicle travel.

Finance. This element identifies the financial resources needed to achieve the level of mobility outlined in the Plan. It contains policies that guide the city's funding strategy for providing transportation services.

D. Regulatory Context

There are several federal and state policies and regulations that affect regional and local transportation planning. Their policies provide guidelines for: accomplishing transportation planning, setting specific benchmark targets to evaluate plan performance, funding requirements, and planning elements. Among the more important documents are:

Federal Policies and Regulations

Transportation Efficiency Act for the 21st Century, 1998 (TEA-21). TEA-21 is the nationwide transportation planning legislation that authorizes the expenditure of Federal Highway Trust Fund revenues. These revenues represent a large portion of the funding used to sustain and improve the federal and state portions of the regional highway system. Federal transportation funds also support the Mid-Willamette Valley Regional Rideshare Program. TEA-21 and its predecessor, the Intermodal Surface Transportation Efficiency Act (ISTEA), requires the MPO to address a series of criteria in its regional plans. The criteria are: financial constraints; environmental impacts; socioeconomic impacts; equity; multimodal systems; energy consumption; and consistency with federal, state, and local transportation plans. TEA-21 combines the continuation and improvement of current programs with new initiatives to improve safety, enhance communities, and protect the natural environment. At this time a new appropriations bill, titled SAFTEA will take the place of TEA-21 in 2004.

Clean Air Act Amendments of 1990. This federal legislation requires that projects in regional transportation plans cannot contribute to worse air quality or violate standards set by the Environmental Protection Agency (EPA). These standards were revised and tightened in 1996. Failure to show conformance with the standards can result in the withdrawal of federal transportation funds.

Americans with Disabilities Act (ADA) of 1990. This Act mandates that persons with disabilities be able to use public transportation facilities and services. It also requires that paratransit services be provided on a level comparable to overall mass transit services in the region.

The ADA primarily relates to how transportation facilities are built. The *Keizer Transportation Systems Plan* takes into account paratransit services, including significant reconstruction of streets and other transportation facilities. The local transit authority must prepare an ADA Paratransit Plan. Salem Area Mass Transit District (SAMTD) has produced a plan called the Regional Transportation Enhancement Plan (RTEP), which is a long-range paratransit plan. To be effective, this plan must be integrated in all regional and local transportation plans.

State Policies and Regulations

Oregon Transportation Plan. This master plan sets policies for the state's transportation facilities and services for the next 40 years. It outlines broad strategies the state has developed for implementing federal and state policies. Projects on state facilities and those projects using state funding must be consistent with the *Oregon Transportation Plan*.

Oregon Shines II. The benchmarks in *Oregon Shines II* establish performance measures showing progress toward the vision outlined in the state's Strategic Plan. Local transportation system plans must address these benchmarks in order for them to be met on a statewide level. The state benchmark for those who commute to and from work by means other than a single occupancy vehicle (SOV) is 23 percent by 2000 and 38 percent by 2020. According to the 2000 census information, 22 percent of Keizer's workers commuted by means other than SOVs which has remained virtually unchanged in the last 10 years.

State Land Use Planning Goals. Developed through LCDC, the state adopted a series of statewide planning goals to be implemented through city and county comprehensive land use plans. Goal 1 provides for citizen involvement in the planning process, and Goal 12 for transportation is implemented through the State Transportation Planning Rule. The other 17 Statewide Planning Goals are also considered in developing the TSP.

State Transportation Planning Rule (OAR 660-12). Adopted in 1991 and amended in 1995 and 1998, this Rule implements Goal 12--Transportation. It requires that each metropolitan planning organization, city, county, port, and transit authority develop a transportation system plan that:

- Promotes transportation services that are viable alternatives to reliance on the single-occupant vehicle;
- Requires local governments to adopt transit, bicycle, and pedestrian supportive land development and subdivision ordinances;

- Requires that Salem-Keizer region achieve a 5 percent reduction in daily VMT per capita after 20 years of plan adoption or develop alternative standards in place of VMT;
- Requires plans to target and work towards a reduction in the number of certain types of automobile parking spaces per person by 10 percent over the next 20 years or adopt new regulations; and
- Require that local transportation system plans be consistent with regional and neighboring local jurisdiction transportation plans, as well as Statewide Goal 12--Transportation.

State Conformity Rule (Air Quality)(ORS 340-02-0700). Initiated by the State Department of Environmental Quality (DEQ), this Rule requires that regional emissions must not contribute to worsening air quality or violations of federal air quality standards. Projects found in the *Keizer Transportation Systems Plan* that are of regional significance must demonstrate conformity.

MPO Plans

SKATS Regional Transportation Systems Plan (RTSP). The *Regional Transportation Systems Plan*, adopted in June 1996 and updated as recently as 2003, provides a regional, multimodal framework for local transportation plans. A major emphasis of the Plan is reducing the region's reliance on the single-occupant automobile and developing alternative methods of mobility in the region.

City Plans

North River Road Alternative Modal Opportunity Study, 1995

The *North River Road Alternative Modal Opportunity Study* was completed by SKATS in 1995. Its focus is to encourage walking, bicycling, and transit along the North River Road commercial corridor. The North River Road study promotes an environment which supports other modes of transportation besides the automobile such as walking, bicycling, ridesharing, and public transit by encouraging a balanced mix of land uses that support pedestrian travel. Pedestrian-supportive land uses are those land uses/businesses that could generate a reasonable amount of pedestrian travel such as customers walking to a business or land uses that concentrate employees or residents in the commercial core area such as offices and multi-family developments.

River & Chemawa Design Study, 1995

The *River and Chemawa Design Study* was prepared for the city by Leland Consulting Group. The study is part of an economic development opportunity assessment for the northeast, southwest, and southeast corners of Chemawa Road and River Road. The

purpose of the study is to encourage the development of a revitalized commercial area for this part of Keizer and includes sections applicable to transportation.

Interstate 5/Chemawa Road, 1995

The cities of Keizer and Salem identified the need to prepare a land use and transportation facilities plan for the area surrounding the I-5/Chemawa Road interchange. A goal of the I-5/Chemawa Road Transportation Land Use Study is to preserve the existing interchange level of service and design. In other words, the existing interchange and its capacities need to adequately handle future travel demands of the area. The plan recommends the promotion of multi-modal transportation systems and mixed land uses, which could reduce the reliance of single-occupant vehicles. The plan seeks to maximize the opportunity for alternative modes of transportation through mixed land uses. As identified in the plan, the northwest and southwest quadrants provide the opportunity for increased pedestrian and bicycle usage. Interconnected pedestrian and bicycle systems are recommended for each quadrant. Connections are also recommended between quadrants. Pedestrian and bicycle connections from quadrant to quadrant will occur through improvements to the roadway system. Improvements include construction of sidewalks on both sides of local, collector, and arterial streets. As part of the Keizer Station Plan design study, new information, such as vehicle counts have been gathered showing that through the year 2020 the anticipated levels of service for all affected intersections and roads, remain below .87 volume to capacity ratio.

Keizer Station Plan (KSP)/Chemawa Activity Center Plan

The Chemawa Activity Center Plan adopted on April 7, 1997, identified a variety of uses, which were to be permitted ranging from industrial to commercial to residential development. To prevent excessive traffic problems from developments in the Chemawa Activity Center, a standard was set for the signalized intersections on Lockhaven Drive and Chemawa Road between River Road and the eastern I-5 ramp inclusive that required the volume to capacity (v/c) ratio not fall below 0.87. This information has been superseded with the adoption of the Keizer Station Plan.

The KSP was adopted in February 2003. The transportation review procedures of this plan state “Beginning with the adoption of the Chemawa Activity Center Plan (1997), a transportation level of service standard for future traffic operations at the signalized intersections on Lockhaven Drive and Chemawa Road between River Road and the eastern I-5 ramp was developed. This level-of-service standard, volume to capacity (V/C) ratio of 0.87, is included in Keizer’s Transportation System Plan as well. Traffic operations are a critical element of the future implementation of the Keizer Station Plan. Therefore, the KSP includes the 0.87 V/C ratio as adopted in the Chemawa Activity Center Plan.” In order to maintain this service ratio, significant transportation system improvements will be proposed and implemented with this plan. Additionally, this plan places a high emphasis on alternative transportation modes such as bicycle (local and

regional), pedestrian access, safety and efficiency, transit services and connection to the regional trail system.

Alder Street Study

In 1996, the city of Keizer and the Mid-Willamette Valley Council of Governments began a revision of the transportation element of the Keizer Comprehensive Plan. One task in the work scope was the analysis of the effects of extending Alder Drive east from its current terminus just east of Pleasant View Drive to Verda Lane. Two schools are being located along an extension of Alder Street. As part of this extension, sidewalks and bike lanes are being installed. Bus pullouts and pedestrian shelters may also be considered. These details should be discussed in further design plans.

City Ordinance No. 86-074

Safety is a primary concern for pedestrians who travel throughout their neighborhoods. In addition to providing sidewalks for pedestrians, the sidewalks need to be appropriately illuminated and adequately maintained. Bill No. 058 Ordinance No. 86-074 titled An Ordinance Regulating the Reconstruction, Alteration and Repair of Sidewalks, states that property owners are required to maintain and repair the public sidewalks that abutted their property. The property owner is also required to keep the sidewalk clear of debris, snow, and ice, as well as free of obstacles.

River Road Mixed Use Zoning Change

As recently as May 1998, major portions of the areas adjoining River Road have been rezoned to incorporate mixed uses, and allow, in an inclusionary, incentive oriented basis, the opportunity for property owners to develop mixed uses which reduce reliance on the auto.

Urban Renewal Grant Programs

The Keizer Urban Renewal Agency had implemented street improvement grants that property owners can utilize which improve their street frontage, separate the pedestrian sidewalk from the curb-line, and incorporate traffic calming landscaping elements at the street edge.

River Road Renaissances Project

Beginning in July 2003, Keizer had begun a community based master-planning effort to identify needed improvements to the River Road corridor. This effort is intended to identify additional improvements that are necessary to the transportation system, as well as improvement in the desirability of alternative transportation modes.

High Priority Transportation Corridor

The City Council has expressed strong support in working with the Salem Area Mass Transit District to establish a High Priority Transportation Corridor along River Road. This is in keeping with the City's desire to give strong support to the transit district in their goals and objectives, and to provide desirable, attractive alternatives to the automobile for transportation needs.

Development Standards Revisions

In December 2003, the Development Standards were reviewed and modified to reinforce pedestrian oriented development, pedestrian amenities, and connections, continuing the efforts of the city to strengthen the desirability of modes of transportation other than the auto.

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.

Issues for Future Study

There are many issues involved in planning a multimodal transportation system. Some require more detailed study and resources than are available during development of an

initial TSP. In other cases, issues have surfaced during the planning process that require additional study. These additional studies needed are identified in this plan.

F. Keizer - The Community

Keizer is located in the center of the Willamette Valley. Situated approximately 60 miles east of the Pacific Ocean and 60 miles west of the Cascade Mountains, Keizer enjoys ready access to the entire West Coast via the Interstate Highway 5 (I-5) corridor. The city of Salem, located directly on Keizer's southern boundary, is the closest neighboring community. The Portland metropolitan area is located 45 miles to the north, close enough to create employment commuting opportunities and provide access to Portland International Airport.

Incorporated in 1982, Keizer is governed by a mayor-council-manager form of government. The Mayor is the presiding officer of the Council and is elected for two years. The Mayor and six councilors are elected at large within the city. Councilors are elected for four-year terms. The Council appoints a City Manager who is responsible for the day-to-day administration and execution of the city's policies and ordinances.

The Council depends on several citizen boards and commissions to advise them on particular issues. The groups most related to transportation issues are the Keizer Planning Commission, the Keizer Urban Renewal Board (KURB), Bicycle Advisory Committee and the Traffic Safety Commission.

Keizer is part of the MPO; and the operation of its transportation systems influences, and to a larger extent, is influenced by, transportation systems operating in the other MPO jurisdictions. For example, a given percentage reduction in use of SOVs in the city of Salem has greater impact on the goals of the MPO than the same reduction in Keizer. Also, systems such as transit and air are largely affected by changes in Salem's needs. This is because Keizer is not large enough to support these systems on its own.

Within Keizer, the Urban Renewal District has a notable impact on the city's transportation needs. The Urban Renewal District includes all properties from Plymouth Street, north on River Road and Cherry Avenue encompassing the commercial corridor, including Chemawa Road north to Country Glen, west of River Road to Staats Lake and east of River Road to Whiteaker Middle School and out to the baseball stadium. Improvements in the area are subject to review and study by KURB. This group is presently involved in designing a plan for the district; and the final plan may modify impacts of, or be incorporated into, the TSP.

G. Population and Employment

Trends in population and employment growth help identify Keizer’s transportation needs. Using forecasting techniques, population and employment data can be projected to 2020 to determine future travel demand.

The estimates used in the TSP are based on data developed by the MPO (**Appendix C**). Keizer residents travel into and out of the neighboring city of Salem for employment and services, while residents of the other areas travel into and out of Keizer. The interaction of these travel patterns influences demands on the major city streets. These demands are discussed in the Street System chapter.

Population

The 1998 population estimate for the city of Keizer was approximately 29,235 people [Preliminary 2000 Population Estimate: 32,203] (**Table 1**). Within recent years, the population of Keizer and the region grew considerably, with an average annual growth rate of 3.25 percent between 1990 and 1997. The population forecast is derived from data provided by the Portland State University Center for Population Research. Although population growth in the region was high in the 1990s, a more moderate rate of increase is expected after 2000. This is due to an expectation that in-migration will decline and buildout will occur between 2005 and 2010.

In the Regional Plan, the MPO was divided into subareas. The Keizer TSP uses information from the North Subarea. The subarea is bounded by I-5 to the east, Keizer’s city limits to the south, the Willamette River, and the UGB to the north. Its population is expected to grow by 10,368 between 2000 and 2025. Most of this growth will occur in the area between North River and Wheatland Roads, and Keizer is forecast to account for 78% of the increase. Thus, Keizer is expected to reach a population of 42,571 by the year 2025.

**Table 1
Keizer’s Population Growth Through 2020**

Assumed Growth Rate	Year	Estimated Combined UGB Population	Keizer Growth	Keizer City/UGB Population
	1998	188,696		29,235
2.04%	2000	196,086	1,798	32,203
1.50%**	2005	210,472	2,995	33,133
1.41%**	2010	225,026	1,516	34,649
1.36%**	2015	240,146	547	35,196
1.28%**	2020	255,338	502	35,698
	2025*			42,574

MWVCOG-Keizer Data, 1999

*At this time, the projection for growth rate, and population are preliminary numbers, which have not been adopted, and are shown here for illustrative purposes only.

**Revised numbers are not currently available.

Employment

Based on forecasts in *Oregon Labor Trends* and additional information from the Federal Bureau of Economic Analysis and the Oregon Department of Transportation, a 20-year employment forecast was developed for the MPO region. The region anticipates a 1.7 percent average annual growth rate in employment by 2020. This means a total of 32,000 new jobs, or a regional increase of 35 percent. Projections for Keizer indicate an employment growth of 64 percent, to 7,076 (2020) (**Table 2**).

Table 2
Projected Employment for Salem-Keizer UGB

	1997 Workers	Percent of Total	2020 Workers	Percent of Total
Keizer	4,600	6%	7,076	5%
Salem	83,309	94%	113,074	95%
UGB Total	87,909	100%	120,150	100%

MWVCOG-Keizer Data, 1999

Jobs in the retail and service sectors are forecast to have the greatest increase, with moderate increases in government and school employment. Although the number of manufacturing jobs will increase, their percentage of total employment will decrease. Employment growth is projected on Cherry Avenue, North River Road, and in the Chemawa Activity Center area.

Jobs are also expected to increase in South Salem and West Salem. The growth in South Salem will not significantly impact Keizer; however, the growth in West Salem has the potential to impact Keizer significantly by placing additional demands on North River Road and Cherry Avenue. The additional demands depend on the location of a new bridge across the Willamette River. The decision is the subject of a feasibility study to assess possible bridge locations.

From an MPO survey of 1,520 households, data on the activities and trips for household members was used to develop statistics describing and forecasting travel behavior in Keizer.

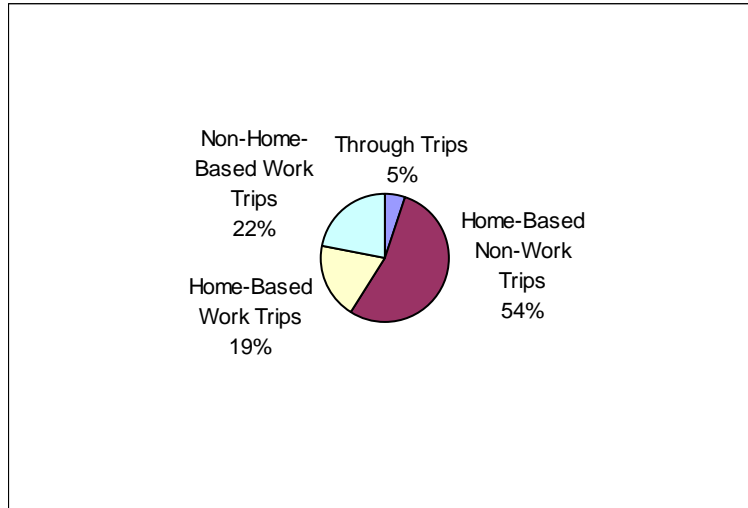
The number of trips per person in a household is consistently between 3.4 and 3.7 trips per day, and each of these trips has two trip ends: an origin and a destination. Each trip also has a purpose which is categorized as follows:

- **Home-based work trips:** trips that begin at home and end at work, including the return trip home.

- **Home-based non-work trips:** trips that begin at home and go to destinations other than to work (i.e., shopping, school, church, sport activities, etc.), including the return trip.
- **Non-home-based trips:** trips that neither begin or end at home (i.e., trips made while at work, work to shopping, school to visit friends, etc.).
- **Through trips:** trips that have neither beginning nor end within the region, and pass through the region.

Based on the regional survey, 54 percent of the total daily trips in the region were home-based, non-work trips. The second highest category was non-home-based trips at 22 percent. The home to work commute trip category only comprises 19 percent of the total.

Figure 1
Daily Trips by Type in the SKATS Area



MWVCOG Survey, 1994

The survey also provided data on the modes of travel used by people in the SKATS region. During weekday work trips, 84 percent of people drive alone in their automobiles. Carpooling captures nearly 7 percent of the trips, and just over 7 percent walk or bicycle to work. Less than 2 percent use transit.

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.

Three community workshops or open houses were held during this phase of the TSP. A previous open house and coordination with the Bicycle Advisory Committee was conducted during pre-1998 TSP work. During this phase, the first community workshop was held on June 23, 1998, for the purpose of hearing residents' issues. The second workshop, on April 8, 1999, presented information on street classification, goals and policies, as well as bike, pedestrian, and public transportation. The third event in late June 1999 presented a draft for review and comment. Hearings by the planning commission and city council will complete the public involvement process. Extracts of the workshop comments are contained in **Appendix F**.

Eleven planning commission meetings were either primarily or partially held for TSP purposes. Minutes are in **Appendix F**. The key focus of these meetings was to obtain decisions on significant policy issues, with a secondary purpose of obtaining suggestions for items to further investigate. Prior to the first of these meetings, a review of the TSP and the process was presented to the Planning Commission to prepare them for the upcoming work. The first meeting for the TSP was held on July 8, 1998, with an update of the work program and anticipated schedule. In August 1998, a copy of goals for streets, TSM, TDM, bicycle, rail, and public transportation was presented for review and comment. The September meeting was a discussion of the TSPs previously completed draft bicycle element. Members of the Bicycle Committee attended. In October, comments on the bicycle element continued, along with a review and discussion of street classifications. During the November 18, 1998, meeting, commission members received a refresher on the Alder Street extension findings. At this meeting, the commission indicated their preliminary approval of the bicycle element. In January 1999, the commission was briefed on an inventory of the Public Transportation system and relationship of the system to transportation disadvantaged, including school children. Additionally, the system's coverage was shown. The February 1999 meeting was devoted to prioritization of transportation-related projects and the work being done by the Keizer Urban Renewal Board (KURB) in its "21st" Century Plan. This meeting dealt with almost the entire range of projects in various elements of the TSP. In March 1999, the meeting emphasis was on pedestrian issues including goals and policies. A brief update on TSP progress was the related item for the April 1999 meeting along with a mention of the previous week's open house. In May 1999, the Planning Commission was presented with a rough, working draft of the TSP, and encouraged to review the goals and policies. In June 1999, two meetings were held to review the updated draft TSP in detail.

Neighborhood groups and others were periodically updated on the plan, and their input solicited. Staff from MWVCOG and Keizer attended Gubser, Clearlake, and Keizer Neighborhood Group meetings and those of the Traffic Safety Commission and Bicycle Committee. Applicable minutes are printed in **Appendix F**, with some comments co-mingled in the open house summaries.

Safety was the primary item mentioned during all the public activity. The safety issues were varied, but a significant number dealt with specific local streets and are therefore beyond the intent of the Transportation System Plan and its broader, more general focus. However, the Traffic Safety Commission developed a Neighborhood Traffic Management (NTM) program, which is adopted and incorporated by reference. This document deals with local street standards, traffic circles, speed humps, and other items appropriate to local streets, and should be considered as a key component of future TSP modifications and refinements.

Additional public input will be received during the adoption process and its public hearing requirements.

Routine coordination and management of the project was completed through standard means of communications: telephone, fax, E-mail, and approximately ten meetings. The participants varied depending on the subject but often included Mid-Willamette Valley Council of Government's planners, the city's planner, traffic engineer, city engineer, and ODOT's representative. Representatives from Marion County and Salem's Public Works Departments were periodically consulted, as was the Salem Area Mass Transit District (SAMTD).

In March 2004 the TSP is updated to bring current statistical demographic information to the plan as well as create a separate process to update the Capital Improvement Plan (CIP).

Chapter 3 - Streets System

A. Background

The backbone of Keizer's transportation system is the street infrastructure. Trips on this system involve most modes, including automobiles, bicycles, pedestrians, and public transportation.

This section:

- Describes functional classifications.
- Identifies arterials and collectors.
- Identifies high accident locations.
- Identifies street segments that are either currently or anticipated to be *Capacity Deficient* or *Approaching Capacity Deficient* by 2020.
- Identifies the goals, objectives, and policies for the streets system.

Street standards required by the TPR were previously adopted in the Development Code (May 1998), but revisions to those standards are contained in this chapter.

B. Functional Classifications

Streets are classified based on their function as: Major Arterials, Minor Arterials, Collectors, and Locals. These "functional classifications" are useful in establishing standards and policies that ensure the travel movements of people and goods can be adequately and appropriately accommodated.

Each of the functional classifications is described below.

Major Arterial. These streets serve as the supporting framework for the city's road network. The major arterials provide for the highest level of mobility into, out of, and within the urban area. The major arterials primarily serve traffic passing through the city. Typically, these are the streets with the highest traffic volumes. Major arterials function at 15,000 to 50,000 ADT. Examples: North River Road and Lockhaven.

Minor Arterial. The minor arterial system complements the major arterial systems, but primarily functions to accommodate travel moving between broadly defined areas within

the city. Ideally, minor arterials should avoid going through residential neighborhoods. Minor arterials should also function to provide access to and from the major arterials to collector areas and may provide access to significant community activity centers, such as schools or parks. Minor arterials function at 7,000 to 20,000 ADT. Example: Chemawa Road.

Collectors. Collectors provide mobility between neighborhood local streets and access to the arterials. While individual properties are often directly accessible, the emphasis of this level of facility is on collection and distribution of trips within the arterial grid. Collectors function at 1,600 to 10,000 ADT. Examples: Cummings Lane and Parkmeadow Drive.

Local. Local streets provide for the highest level of direct property access and generally make up the roads in residential neighborhoods. This part of the street network comprises the vast bulk of the total roadway mileage. Local streets provide adequate levels of transportation service to ensure that localized travel demand does not inappropriately burden the city's higher level streets. This plan does not generally address the designation and location of these facilities. Residential livability concerns arise at approximately 1,600 ADT. Example: McNary Estates Drive.

It is common for a street to have different classifications on some sections. As a city's street system evolves, one portion of a street may begin to function as an arterial, while another portion remains a collector. An example of this situation would be Chemawa Road, which is a minor arterial east of Shoreline Drive and a collector west of Shoreline Drive. **Figure 2** depicts the streets by functional classification and also shows other key street system features such as future streets, high-accident locations, park and rides, and rail crossings. **Table 3** is an inventory of the arterials and collectors.

Refer to Ordinance
 No 2000-425: Adoption of
 Keizer Transportation System Plan; and,
 No. 2004-504 Amendment of
 Keizer Transportation System Plan.

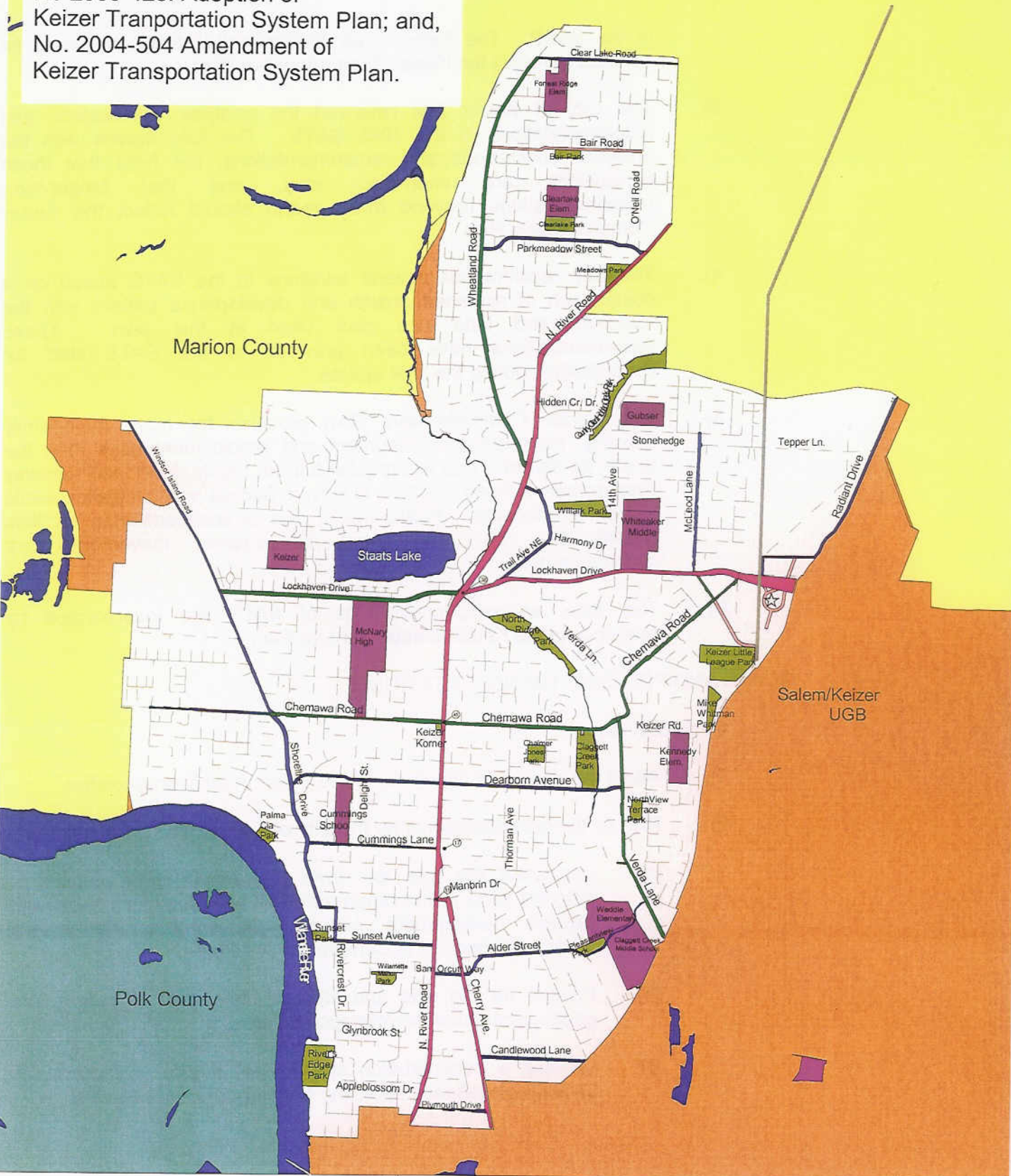


Figure 2
 City of Keizer Street Functional Classification Map

- MAJOR ARTERIAL
- MINOR ARTERIAL
- COLLECTOR
- J-TURE STREET
- PUBLIC SCHOOLS
- ⊕ NUMBER OF ACCIDENTS 1999-2002

This map is for illustrative purposes only
 and is to be used for planning purposes.

Data Provided by:
 Mid-Willamette Valley COG, Salem IT, and
 Marion County Tax Assessor's Office



**Table 3
Inventory of Arterials and Collectors**

Street	Length	Right-of-Way Width	Pavement Width (ft.)	Surface Type	Pavement Condition Index	No. of Lanes	ADTs** Ave. 1996	Right* Sidewalk	Left* Sidewalk	Right* Curb	Left* Curb	Right* Bike Lane	Left* Bike Lane	Other 1995
Major Arterials														
Cherry Ave	1.083	TBD	22 v 75	Asphalt	26 v 65	2 v 4	16,200			YES	YES	YES	YES	LOS B
Lockhaven Dr (River to I-5)	1.332	TBD					16,500	Partial	Partial	Partial	Partial	YES	YES	LOS B
North River Road	1.168	TBD	61 v 68	Asphalt	38 v 64	2 v 5	26,000	YES	YES	YES	YES	YES	YES	LOS C
Minor Arterials														
Chemawa Rd (Windsor Island to Lockhaven)	2.014	TBD		Asphalt										
Lockhaven Dr (River to Windsor Island)	.932	TBD		Asphalt			7,800	NO	NO	NO	NO			LOS A v B
McLeod Ln (Lockhaven to Chemawa)	.116	TBD		Asphalt			—	NO	Partial	NO	Partial			
McLeod Ln (Ridge to Chemawa)	.233	TBD		Asphalt				NO	NO	NO	NO			
Verda Ln (Parkway to Chemawa)	.932	TBD		Asphalt			6,500	NO	NO	NO	NO			LOS C
Wheatland Rd	1.731	TBD					5,900	NO	NO	NO	NO			LOS B
Collectors														
Alder Dr	.517	TBD	21	Asphalt	34	2				Partial	Partial	NO	NO	LOS A
Candlewood Dr N	.420	TBD	21	Asphalt	55	2		NO	NO	NO	NO			LOS B
Chemawa Rd (Windsor Island to 15 th Ave N)	2.148	TBD		Asphalt			7,700	NO	Partial	NO	Partial			
Clearlake Rd	.636	TBD	19	Asphalt	85	2		NO	NO	NO	NO			
Cummings Ln	.627	TBD	18	Asphalt	42 v 84	2	2,230	NO	NO	NO	NO	YES	NO	LOS B
Dearborn Ave	1.641	TBD	30	Asphalt	52 v 90	2	4,000	Partial	Partial	Partial	Partial	NO	NO	LOS B
McLeod Ln (Lockhaven to Stone Hedge)	.549	TBD		Asphalt			3,900	YES	YES	YES	YES			
Parkmeadow Dr	.666	TBD	32	Asphalt	95	2		YES	YES	YES	YES			
Plymouth Dr	.275	TBD	21	Asphalt	79	2	2,400	NO	NO	NO	NO			LOS B
Radian Dr														
Shoreline Dr	.803	TBD	30 v 36	Asphalt	70	2	2,400	NO	NO	NO	NO	NO	NO	LOS B
Sunset Ave	.388	TBD	21	Asphalt	46	2	1,300	NO	NO	NO	NO	NO	NO	LOS B
Trail Ave	.390	TBD		Asphalt				NO	NO	NO	NO	NO	NO	LOS B
Windsor Island Rd	1.28	TBD	21 v 28	Asphalt	60 v 82	2	4,000	Partial	Partial	Partial	Partial			LOS B

City of Keizer, 1998 TBD: To Be Determined – as needed “v” means “variable to” All Levels of Service (LOS) are from 1995

*Left or right is determined by going south to north or west to east

**Average of Counts, less high and low

C. Accidents

Between 1995 and 1998, the city's four highest accident locations were all located on River Road at or near intersections with Chemawa (72), Lockhaven (54), Manbrin (37), and Cummings (17). The next six locations with accidents in double digits are River/Sunset (15), River/Sandy (12); River/Wheatland (12); Cherry/Clearview (12), Lockhaven/14th (11). For comparison, the high accident location in Keizer has approximately 40 percent of the accidents of the highest accident location in Salem.

The four highest accident locations are shown on the Street Functional Classification Map. As one might expect, the majority of accidents at these intersections are related to turning movements, with the next highest accident type being rear end accidents. **Table 4** depicts this relationship.

Table 4
River Road Intersection Accidents*

Street	1995	1996	1997	1998	1999	2000	2001	2002	Total
Chemawa Rd	15	24	15	18	12	9	5	19	117
Lockhaven Dr	7	16	19	12	12	10	7	9	92
Manbrin Dr	11	12	8	7	1	8	4	2	53
Cummings Ln	6	5	2	4	3	5	5	4	34

ODOT, 1998

**All of these accidents occurred at or within 250 feet of the intersection.*

The fluctuations in accidents per year are fairly typical and do not indicate any trend of totals increasing or decreasing; although, one would expect that with increasing traffic, the numbers would have increased. It is possible that localized street improvements have compensated for increased traffic. Of the accidents involving turning movements, the majority involve vehicles exiting or entering driveways near intersections. Safety is a high priority for Keizer residents, and accidents, which occur during peak hours, increase or cause congestion. For these reasons, continued intersection improvements are a significant need of the street system.

A site visit was made to each of the four highest accident locations and the following observations made:

Chemawa Road. The intersection of River Road and Chemawa is well designed. Lighting, signals, and markings are easily seen. Visibility is good. Turn lanes allow for good traffic progression. Accesses onto River and Chemawa Roads are not located unreasonably close to the intersection. This is the intersection of a major and minor arterial, and a high number of turning movements occurred during the observation.

Lockhaven Drive. The observations for Lockhaven Drive are essentially the same as for Chemawa Road. There is a potential safety conflict point just north of the intersection on River Road where one access to the convenience store (Seven-Eleven) is just past the island where right turns are conducted and where traffic is in the right lane. The potential is for a vehicle on River Road in the right lane to clear the intersection northbound, pass the island, then suddenly slow to turn into the convenience store as a vehicle using the island's turn lane enters traffic. A possibility also exists for a vehicle slowly exiting the convenience store to the south, to be hit by a vehicle accelerating from the island's right-turn lane. The accident listings are insufficient to validate the observation, so there are no suggested improvements

Manbrin Drive. The businesses at the intersection generally serve automotive needs (Schuck's Auto, John's Car Wash). Driveways into the businesses are closer to the intersection: ranging from approximately 15 feet to 200 feet. Bus stops are located in both directions on River Rd. This location, as with Cummings, has many accidents attributed to drivers disregarding signals. There are no obvious improvements needed. One accident involved a pedestrian.

Cummings Lane. The east leg of the intersection is actually a driveway for the parking lots of Arby's, Pizza Hut, and other businesses in the complex. The only potential difficulties are the accesses located very close to the intersection. One close access is from Arby's off River Road. On the opposite corner, the gas station has two access close to the intersection: one on each side of the southwest corner. A notable observation from a review of the accident listings is the proportion of the accidents which are attributed to the driver's disregard of the signals. Although there are no suggested improvements, this intersection may warrant further investigation by a traffic engineer. One accident at Cummings Lane involved a bicyclist. No improvements are suggested at this time.

D. Capacities

The initial analysis of capacity for arterial streets used information from the SKATS Regional Transportation Systems Plan (RTSP) model that projected traffic through 2015. This model indicated that Lockhaven Drive would have a LOS F (Level of Service definitions can be found in **Appendix A**) between I-5 and Chemawa Road and LOS E between Chemawa Road and Kafir/14th Street. In that same year, a portion of Verda Lane north of the Salem Parkway would also be LOS F. North River Road also had a segment reaching LOS F (near the Salem Parkway), while other sections would be at LOS E. However, the initial analysis was updated using more recent traffic volumes and an improved model. Using the city's methodologies, new projections were developed and capacities updated (**Table 5**). The update showed that Lockhaven Drive will be operating at LOS C, Verda Lane at LOS C, and North River Road at LOS D in 2015.

LOS D is considered by the city to be approaching capacity, and LOS E is considered capacity deficient. (Note: The Regional Plan has inferior standards with LOS E being approaching capacity, and LOS F being deficient.) This means that the city will attempt to maintain a better level of service on its streets than that required for the region overall.

A review of traffic growth indicates that the city's buildout is expected to occur no later than 2010. After then, the only anticipated development is infill. Between 2015 and 2020, population growth is anticipated to be approximately 1,000. Employment growth will be minimal. Therefore, for planning purposes, the growth in traffic between the model year of 2015 and the plan year 2020 is negligible, and level of service projections for 2020 will be approximately those of 2015.

In 2003, the MPO will update their projections on the regional street system. The city will coordinate closely to insure the latest traffic volumes are provided for this process.

**Table 5
Level of Service for 1995 and 2020**

Street Name	1995 LOS	Anticipated 2020 LOS
N River Rd	C	D
Lockhaven Dr	B	C
Chemawa Rd	B	C
Cherry Ave	B	C
Verda Ave	C	C
Wheatland Rd	B	B
Candlewood Ln	B	B
Alder Ln	A	C with street extension
Brooks St	A	B
Thorman	A	B
Sunset Ave	B	C
Rivercrest Dr	B	B
Shoreline Dr	B	B
Windsor Island Rd	B	B
Dearborn Dr	B	C
Cummings Ln	B	B
Chemawa Rd West to Windsor Island Rd	A	B
Trail Ave	B	C
Harmony Ln	B	C
Keizer Rd	B	B
Ridge Dr	B	B

MWVCOG, 1995 and 1999

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.

F. Street Design Standards

Table 6 depicts the revised street design standards. The standards were developed in accordance with the TPR’s requirement for minimum standards consistent with operational needs.

**Table 6
Street Standards**

Functional Classification s (1)	Number of Lanes	Parking	Bike Lanes (2)	Improvement Width (ft.) (3)	Sidewalks (4)	R/W (4)(5) Width (ft.)
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 to have a minimum 20-foot radius.

Local streets are categorized into three levels based on thresholds of either average daily traffic or number of dwelling units or square footage of the area to be served. Details of the categorization can be found in the Public Works Design Standards.

To improve pedestrian amenities on collectors and arterials, five-foot planter strips are incorporated into the design standards. Additionally, use of transit is facilitated by construction of bus pullouts on Local Street III, collectors, and arterials.

G. Regional Transportation Systems Plan Planned Improvements in Keizer

This section is included for general information and coordination with future updates of the Regional Transportation Systems Plan (RTSP). It describes regionally significant streets identified in the RTSP for future improvements. Some streets and/or planned work require significant public input and engineering studies to refine the needs and

develop the appropriate improvements. Since levels of service for these streets have been revised upwards, further work is even more important because some improvements may be unnecessary or can be deferred.

Lockhaven Drive

Lockhaven Drive is a Major Arterial street connecting I-5 to North River Road. Lockhaven Drive is currently three lanes from River Road to McLeod Lane, two lanes from McLeod Lane to Chemawa Road, and five lanes from Chemawa Road to I-5. Traffic volumes on Lockhaven Drive near the I-5 interchange are expected to increase from 22,000 (1993) vehicles per day to approximately 32,000 vehicles per day by 2015. Lockhaven Drive is projected to be LOS F between I-5 and Chemawa Road and LOS E from Chemawa Road to Kafir Drive by 2015. As part of Keizer's Chemawa Interchange Land Use and Transportation Study, the RTSP identifies changes that will reduce the number of conflicting traffic movements west of the Chemawa Interchange. Ridge Drive will be dead-ended, and access from Chemawa Road will be limited. Radiant Drive will be realigned to potential new interchange designs. A new road south from this intersection will access land south of Chemawa Road, between I-5 and the Burlington Northern Railroad tracks. Chemawa Road will have five lanes, with left turns at this intersection. The red flashing lights at the railroad crossing west of this intersection will be coordinated with the new signal. Intersection improvements are recommended where Chemawa intersects with Lockhaven Drive. Intersection improvements are also recommended where McLeod Lane intersects with Lockhaven Drive. The development of the Keizer Station Plan will require modification and improvement of the affected intersections along Lockhaven Drive.

Verda Lane

Verda Lane is a two-lane Regional Minor Arterial street connecting the Salem Parkway with Chemawa Road. Traffic volumes on Verda Lane near the Parkway are expected to increase from 15,000 in 1996 to approximately 20,000 by 2020. One portion of Verda Lane between Claxter Drive and the Parkway is projected to be capacity deficient by 2015 and remain so through 2020.

Improvements recommended at the intersection of Verda Lane and the Parkway include dual left-turn lanes and one through-right lane for the southbound approach on Verda Lane. An additional northbound lane will be added.

North River Road

North River Road is the major commercial thoroughfare in the city of Keizer, as well as a through route for traffic entering/exiting the region. As development along North River Road intensifies and the population in the city of Keizer grows, North River Road will experience increases in traffic volumes and congestion. In 1996, North River Road carried approximately 26,000 vehicles per day; and traffic is projected to increase to 36,000 vehicles per day by 2020. North River Road is currently approaching capacity in

the p.m. peak hour just north of Broadway Street and will be capacity deficient at this location by 2015.

In 1995, SKATS completed a North River Road Alternative Modal Opportunity Study for the city of Keizer that evaluated transportation and land use alternatives that would encourage more walking, bicycling, and transit use on River Road. One of the key components of this study is access management on River Road. It is recommended that the access management issues identified in this study be considered an outstanding issue and further review and evaluation occur. This study, along with the *City of Keizer River and Chemawa Center Specific Plan* and the River Road Renaissance study, are being used to develop a long-range vision for the North River Road area.

H. Outstanding Issues

The following items arose during the TSP process. However, they are beyond the scope of the TSP tasking and require additional information before judgments can be made and decisions reached. The Finance chapter contains time frames for resolving the issues so they can eventually become part of an updated TSP.

- North River Road improvements
- Comprehensive Traffic Modeling and associated recommendations
- High Priority Transportation Corridor
- Realignment of Alder/Cherry/Sam Orcutt
- Additional North/South and East/West connector(s) throughout the city to relieve traffic volume pressures on River Road N.

Chapter 4 - Transportation Demand Management

A. Background

Transportation Demand Management (TDM) is defined as actions that attempt to manage and reduce the automobile trip demand on the transportation system. TDM strategies have increased importance as reliance on the private automobile has grown substantially and traffic volumes have increased. The 1990 Census revealed that 78 percent of Keizer's residents drove alone to work. Expanded use of the automobile is further evidenced by continual increases in automobile ownership, number of drivers, length and number of auto trips. All these factors cause an increase in vehicle miles of travel (VMT) per person. The result is mounting traffic congestion, greater transportation costs, worsening air quality, and increasing accidents. Continued reliance on, and increased use of, the automobile will eventually decrease our ability to travel and the overall quality of life.

Adding automobile travel lanes, building new roads, and connecting local neighborhood roads to collectors or arterials are the traditional approaches to providing for increased travel demands. However, these methods are no longer viewed as the only solution for solving traffic problems. First, road construction is expensive; and funds to finance the work are not always available when needed. Second, there is resistance to converting more land to pavement. Third, impacts on neighborhoods associated with construction disruption, air pollution, and in some cases, potential for higher speed traffic are usually unacceptable.

Fortunately, there are some transportation demand management (TDM) options for relieving traffic congestion and helping meet increased street use. Typical strategies include ridesharing programs, vanpooling, bus pooling, alternative work schedules, travel-time shifting (out-of-the-peak period), telecommuting, and increasing bicycle, pedestrian, and transit use.

B. Ridesharing and Park-and-Ride Lots

The Regional Rideshare Program originated in 1975 as a cooperative effort between the city of Salem, the Mid-Willamette Valley Council of Governments (MWVCOG), and the State of Oregon Department of General Services. The original objective was to alleviate parking demand in the Central Business District (CBD) and Capitol Mall area by providing transportation alternatives. By the end of 1977, the program had expanded to include a regionwide carpool matching service (which includes Keizer residents),

preferential parking and reduced parking fees for carpools, park-and-ride facilities connecting to Cherriot's bus service, the Cherriot Commuter Bus club (a "no-charge" express transit service for CBD/Capitol Mall area commuters), the use of flex hours, and a referral service for vanpools. The program was administered by the MWVCOG until July 1979. In July 1979, the City of Salem Public Works Department assumed administrative responsibility.

The Regional Rideshare Program is funded through the Surface Transportation Program (STP) of the ISTEA (now TEA-21, which after passage in 2004 will be known as SAFTEA) and local funding sources. Park-and-ride lots are either publicly or privately owned facilities that give automobile commuters a place to park and then carpool or ride transit. With the eventual implementation of express transit service, more park-and-ride locations will be necessary. Siting these facilities will require continued study by the city of Keizer and SAMTD.

Currently, there are two functioning park-and-ride lots in Keizer. One unofficial lot is located on the south side of Chemawa Road at Radiant Drive. The second lot is located at the Safeway store on the southeast corner of North River Road and Chemawa Road. Additional park-and-ride facilities are anticipated to be constructed as part of the Keizer Station.

C. Policy Framework

This section provides the goals, objectives, and policies to reduce automobile use. As with other sections of this document, provisions are consistent with the regional plan and with state and federal plans, policies, and mandates. Keizer, as part of the MPO, will strive to contribute to the MPOs requirement to reduce its VMT by 5 percent by 2020. However, the impact of even a significant reduction in Keizer is not likely to have a major impact on the required MPO reduction. The RTSP has predicted a 1.6 percent reduction by 2015.

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

A. Background

Transportation system management (TSM) is a term used to describe measures and techniques that attempt to maximize street system capacity and reduce demand. TSM measures are typically low cost, localized improvements that use the existing street infrastructure to increase its efficiency. TSM measures relevant to Keizer fall into five categories:

- Traffic Management
- Intersection Modification and Widening
- Access Management
- Improved Traffic Control Devices
- On-street Parking 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.

Some provisions for access management are contained in Sections 2.2 and 2.3 of the city's Development Code. Additionally, a draft ordinance for access control measures is included in **Appendix D**.

Chapter 6 - Parking Management

A. Background

The MPO must implement, through its member jurisdictions, a parking plan which achieves a ten percent reduction in the number of parking spaces per capita over the [20-year] planning period. This may be accomplished through a combination of restrictions on new parking development and requirements for redeveloping existing parking spaces to other uses. [OAR 660-12-045.(5).(c).(A)]

The city's parking goal ensures it will have both an adequate supply of parking to meet its needs and an appropriate amount of parking supply reflecting the desires of the Transportation Planning Rule. It is also important that the city's parking supply be supportive of the mission of the overall transportation system.

In working to achieve the goal, the Parking section considers three issues:

- The role of on-street parking facilities
- Supply of off-street parking facilities
- Per capita parking supply reduction

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.

C. Transportation Planning Rule Compliance

In early 1995, the Salem-Keizer MPO had a per capita parking supply of .84 spaces per person. Assuming no significant changes in the Comprehensive Plans of Keizer, Salem, or Marion County, the 2015 per capita parking estimate is calculated to be .76 spaces per person, which is a 10 percent reduction. This meets the requirement of the TPR.

The parking supply per capita reduction relates to the dynamics between expected population growth of the region versus the rate of absorption of industrial, commercial, and institutional lands. The Salem-Keizer Urban Area has already developed the majority of its commercial lands having high parking supply rates. The remaining industrial and institutional lands have much lower rates and will be the primary nonresidential lands developed. The population will continue to grow but with lower parking rates developed in the nonresidential lands. This relationship results in a decrease in the per capita parking supply simply by avoiding large-scale changes to the commercial land supply in the *Keizer Area Comprehensive Plan*.

D. Implementation Strategies

Many of the policies found in the Parking Management Plan Element will be implemented through the *Keizer Development Code*. The remainder will act as a policy framework to aid in the design and implementation of individual transportation projects.

E. Outstanding Actions

An up-to-date inventory estimate of the number of parking spaces should be completed to provide a Keizer-specific base line for reductions and to measure the city's progress in contributing to meet the regional requirement.

Chapter 7 - Bicycle/Pedestrian

A. Background

The bicycle and pedestrian section reflects the city's commitment to reduced reliance on the automobile and a commitment to provide for the needs of all its citizens, including the transportation disadvantaged. The transportation disadvantaged population includes those who do not have access to an automobile, cannot operate an automobile, or choose not to use an automobile. Bicycling and walking (and transit) provide low-cost transportation alternatives for many of Keizer's citizens and are facilitated by the city's relatively flat terrain. Bicycling and walking are also becoming popular recreational activities.

Increasing the share of overall trips made by bicycling, walking, and transit reduces the number of vehicles on the road and helps maintain our clean air requirements. An effective transit system extends the mobility of the bicyclist and pedestrian, allowing more people to commute and meet other transportation needs without the use of the automobile.

Although air quality is not currently a significant problem in Keizer, precautionary measures will ensure it does not become a problem. Simple measures such as increasing bicycling and walking can help improve air quality. This can be a very cost-effective pollution strategy because bicycling and walking activities remove shorter auto trips that on average are the most polluting.

The 2000 Census "Journey to Work" data shows that 212 workers (1.39 percent) out of 15,252 workers in the Keizer area walked to work. The census also shows that 70 workers (0.46 percent) bicycled to work. Walking and bicycling trips to transit or other modes were not recorded. In comparison, the city of Salem showed 4 percent walking and one (1) percent bicycling.

Previous Plans with Pedestrian Issues

North River Road Alternative Modal Opportunity Study, 1995

The *North River Road Alternative Modal Opportunity Study* was completed by the Salem-Keizer Area Transportation Study (SKATS) in 1995. Its focus is to encourage walking, bicycling and transit along the North River Road commercial corridor. The North River Road study promotes an environment which supports other modes of transportation besides the automobile, such as walking, bicycling, ridesharing and public transit, by encouraging a balanced mix of land uses that support pedestrian travel.

Pedestrian supportive land uses are those land uses/businesses that could generate a reasonable amount of pedestrian travel such as customers walking to a business or land uses that concentrate employees or residents in the commercial core area such as offices and multi-family developments.

River & Chemawa Design Study, 1995

The *River and Chemawa Design Study* was prepared for the city by Leland Consulting Group. The study is part of an economic development opportunity assessment for the northeast, southwest, and southeast corners of Chemawa Road and River Road. The purpose of the study is to encourage the development of a revitalized commercial area for this part of Keizer.

Interstate 5/Chemawa Road, 1995

The Cities of Keizer and Salem identified the need to prepare a land use and transportation facilities plan for the area surrounding the I-5/Chemawa Road interchange. A goal of the I-5/Chemawa Road Transportation Land Use Study is to preserve the existing interchange level of service and design. In other words, the existing interchange and its capacities need to be able to adequately handle future travel demands of the area. The plan recommends the promotion of multi-modal transportation systems and mixed land uses, which could reduce the reliance of single-occupant vehicles. The plan seeks to maximize the opportunity for alternative modes of transportation through mixed land uses. As identified in the plan, the northwest and southwest quadrants provide the opportunity for increased pedestrian and bicycle usage. Interconnected pedestrian and bicycle systems are recommended for each quadrant. Connections are also recommended between quadrants. Pedestrian and bicycle connections from quadrant to quadrant will occur through improvements to the roadway system. Improvements include construction of sidewalks on both sides of local, collector, and arterial streets.

B. Bicycle Facilities

Bicycles are legally classified as vehicles and with a few exceptions such as freeways, may be ridden on all Oregon's public streets. There are four basic types of bikeways. The following describes each type and provides a local example of each.

Shared Roadways. Shared roadways are those roadways on which bicyclists and motorists share the same travel lane. Shared roadways are the most common form of bicycle facility. The majority of shared roadways can be found along collectors and local streets and also on roads near the city limits. Local examples are Shoreline Drive and Verda Lane (from Lockhaven Drive to Chemawa Road).

Shoulder Bikeways. Shoulder bikeways are paved shoulders on rural roads that provide a suitable area for bicycling. The majority of bicycle travel on the state highway system is accommodated on shoulder bikeways. Where bicycle travel is significant,

shoulder bikeways are signed as bicycle routes. Local examples of shoulder bikeways are Windsor Island and Wheatland Roads.

Bike Lanes. Bike lanes are portions of the roadway, which is dedicated for exclusive bicycle use. Bike lanes are primarily found on urban arterials and major collectors. Bike lanes should be well marked and signed to call attention to their preferential use by bicyclists. Local examples of bike lanes can be found along Lockhaven Drive and Chemawa Road (west of River Road N.).

Multi-Use Paths. Multi-use paths are typically separated from motor vehicle traffic by open space or other barriers and are shared by pedestrians, bicyclists, and joggers. They tend to be more recreation-oriented than shared roadways, shoulder bikeways, and bike lanes. A local example of a multi-use path can be found along River's Edge Park on Willamette Drive North.

Bicycle Facility Network

The most practical way to accommodate bicycle travel is on the existing street network. Regularly traveled streets provide the best opportunity for an effective bikeway network. They are already in place and connect the various urban activity centers. In addition, streets are very public, highly visible places where bicyclists feel safer for themselves and their children.

Figure 3 depicts the bicycle network, which identifies future connections for urban and recreational areas, education centers, and retail/employment centers. This network consists of some proposed public improvements that are not mandated by the State Transportation Planning Rule (OAR 660-12). Proposed public improvements by the City that exceed state requirements may only occur upon City Council approval.

Insert Figure 3 – Keizer Bicycle Facilities Plan

Current Conditions

The majority of the bicycle facilities in Keizer lack connectivity with other routes and have a substandard design (i.e., only one side of street having facilities). Local bicycle enthusiasts indicate that their preference is for bike lanes; however, they understand that a well-maintained “shared roadway” will provide adequate service in some areas.

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.

Implementation

Completion of bike facilities on streets in Keizer will provide a complete and continuous network which ensures bicyclists efficient travel facilities within the city, as well as to and from Salem and other surrounding areas.

The TPR requires collectors and arterials to be designated bikeways (i.e., bike lanes, shared roadway, etc.). A majority of the routes in this plan are necessary so the city can comply with TPR requirements.

The additional bikeways shown in **Table 7** were based on suggestions from study sessions conducted during bicycle planning workshops. The study session occurred over approximately a year and included in-depth discussions relating to connectivity, deficiencies, safety concerns, and access to activity centers. The types of bikeways appropriate for different connectivity needs were also reviewed. After the groups identified needs, they developed solution and prioritized implementation. In subsequent groups, connectivity and safety concerns were validated and some projects were prioritized to align with associated street construction work. Participants in the sessions and workshop included representatives from the Bicycle Advisory Committee, Planning Commission, and other stakeholder groups.

**Table 7
Proposed Additions to Existing Bicycle Facilities**

Priority	Subject Facility & Location			Existing Conditions		Recommendations			
	Street	From	To	Bicycle Facility	Street Parking	Bike Facilities	Improvements	Street Parking	Right-of-Way Acquisition
1	Thorman Av	Manbrin	Dearborn	None – Res	Yes	Shoulder Bikeways	Shoulder Widening – Both Sides	No	No
1	Manbrin Drive	Cherry	Thorman	None – Res	Yes	Bike Route – Shared	Bike Route Signing	Yes	No
1	Windsor Island Rd	Chemawa	City Limits	Partial	No	Shoulder Bikeways	Shoulder Widening – Both Sides	No	No
1	Dearborn Av	No River Rd Shoreline Dr	Verda N River Rd	None None	No No	Shoulder Bikeways Shoulder Bikeways	Shoulder Widening – Both Sides Shoulder Widening – Both Sides	No No	No No
1	Delight St	Cummings	Chemawa	None	No	Shoulder Bikeways	Shoulder Widening – Both Sides	No	No
1	14 th Ave	Lockhaven	Harmony	None – Res	Yes	Bike Route – Shared	Bike Route Signing	Yes	No
1	Bailey Road	Dearborn	Chemawa	None	Yes	Bike Route – Shared	Bike Route Signing	Yes	No
1	Willamette St	Stark	River's Edge Park	None – Res	Yes	Bike Route – Shared	Bike Route Signing	Yes	No
1	River Rd Park Connection	Willamette St	South to Salem	None		10' Multi-Use Path	Multi-Use Path		Yes
1	Labish Ditch Bike Crossing	Country Glen Area	Gubser Area	None		10' Multi-Use Path	Pedestrian Bridge		Yes
2	Bair Rd	Wheatland	N River Rd	None – Res	No	Bike Lanes	Curb Widening	No	Yes
2	Clear Lake Rd	Wheatland	O'Neil	None	No	Bike Lanes	Curb Widening	No	Yes
2	Candlewood Dr	Cherry	Salem Pkwy	None	Yes	Shoulder Bikeways	Shoulder Widening	No	No
2	Brooks Ave	Salem Pkwy	Manbrin	None	Yes	Shoulder Bikeways	Shoulder Widening	No	No
2	Rivercrest Dr	Sunset	Shoreline	None – Res	Yes	Bike Route – Shared	Bike Route Signing	Yes	No
2	Chemawa Rd	15 th	Windsor Island	None – partial	No	Shoulder Bikeways	Shoulder Widening	No	Yes
2	Shoreline Dr	Wayne	Chemawa	None – Res	Yes	Bike Route – Shared	Bike Route Signing	Yes	No
2	Dearborn Av	Shoreline Dr	Cummings Ln	None	Yes	Bike Route – Shared	Bike Route Signing	Yes	No
2	Parkmeadow Dr	Wheatland Rd	N River Rd	None – Shared Res	Yes	Bike Route – Shared	Bike Route Signing	Yes	No
2	14 th Av	Harmony	Gubser School	None –Res	Yes	Bike Route – Shared	Bike Route Signing	Yes	No
2	O'Neil	Parkmeadow	Clear Lake	Res.	Yes	Bike Lanes	Curb Widening – Various Spots	No	Yes
3	Tepper Ln	BNRR	Radiant	None	No	Shoulder Bikeways	Shoulder Widening	No	Yes
3	Radiant Dr	Chemawa	Tepper	None	No	Shoulder Bikeways	Shoulder Widening	No	Yes
3	Glynbrook	Rivercrest	N River Rd	None –Res	Yes	Bike Route – Shared	Bike Route Signing	Yes	No
3	Appleblossom	Willamette	N River Rd	None –Res	Yes	Bike Route – Shared	Bike Route Signing	Yes	No

3	Stonehedge	14 th	McLeod	None –Res	Yes	Bike Route – Shared	Bike Route Signing	Yes	No
3	Sunset	N River Rd	Rivercrest	None	Yes	Shoulder Bikeways	Shoulder Widening	Yes	No
3	Tepper Ln	McLeod	BNRR	50%	Yes	Bike Route – Shared	Bike Route Signing	Yes	No
Completed Projects									
1	North River Rd	Chemawa	N City Limits	None	No	Bikes Lanes	Curb Widening – Both Sides	No	Yes
1	Chemawa Rd	Windsor Island N River Rd Verda	N River Rd Verda Lockhaven	None North Side Bike Facility Bike Lanes	No No No	Bike Lanes Bike Lanes Bike Lanes	Shoulder Widening – Both Sides Curb Widening – Both Sides Shoulder Widening – Both Sides	No No No	No No No
1	Cherry Av	Salem Parkway	Manbrin	Shoulder Bikeways	No	Bike Lanes	Curb Widening – Under Construction	No	Yes
1	Verda Lane	Chemawa	Salem Parkway	None	No	Shoulder Bikeways	Shoulder Widening – Both Sides	No	Yes
1	Wheatland Road	N River Rd	City Limits	Done	No	Shoulder Bikeways	Curb Widening – Both Sides	No	Yes
1	Cummings Ave	Shoreline Delight	Delight N River Rd	Done	No No	Shoulder Bikeways Shoulder Bikeways	Shoulder Widening – Both Sides Shoulder Widening – Both Sides	No No	No No
1	Trail Ave	Harmony	Manzanita	Done	Yes	Shoulder Bikeways	Shoulder Widening – Both Sides	No	No
1	Harmony Dr	Trail	14 th	Done	Yes	Bike Route – Shared	Bike Route Signing	No	No
1	River's Edge Park	Willamette	Rivercrest	10' Asphalt Path – Done		10' Multi-Use Path	Path Widening		No
1	Plymouth Dr	N River Rd	Cherry Av	Done	No	Bike Lanes	Proposed Curb Widening Under Design	No	Yes
2	Alder Dr	Cherry	Verda	Done	Yes	Bike Lanes	Curb Widening	No	Yes
2	Ridge Dr	Keizer	Chemawa	Done	Yes	Shoulder Bikeways	Shoulder Widening	No	Yes

Some bikeways are separated from the streets. These facilities are also designed for pedestrian use and are referred to as multi-use paths. In addition to those shown above, completion of the following multi-use paths (**Table 8**) will complete the bicycle system.

**Table 8
Multi-Use Paths**

Name	Section	Estimated Distance (in Miles)
McClure St**	From McNary Estates* (Private) to McClure St	0.12
Bair Park	Bair Park to Clear Lake Elementary	0.10
None	McLeod to Whiteaker School	0.14
None	14 th to Gubser School	0.14

* Further study needs to be done to determine the feasibility of path.

**Implementation of this path would require consent from the residents of McNary Estates Home Owners Association.

Route expansion of bicycle facilities are relatively inexpensive and easy to implement if they are located on existing roads with ample rights-of-way that are not bordered by large open drainage ditches. However, when expansion or development is needed outside of public right-of-way, it becomes expensive and a time consuming process. This is primarily due to the heavy burdens associated with conducting public hearings and ultimately the purchase of additional right-of-way from private owners. Therefore, the city will be selective in expanding or constructing new bikeways outside of public right-of-way. Using the following factors, procedures can be developed to deal with installing bikeways in areas with constrained right-of-ways.

- Topography (grade)
- Existing bicycle usage and need
- Pavement quality
- Population concentrations
- Volume and nature or type of traffic
- Safety
- Other agency plans (state, regional, county, and city)
- Existing roadway width
- Scenic value
- Potential or planned roadway width (ROW)
- Future development potential
- Existing parking

C. Pedestrian Facilities

Pedestrian Facility Network

Sidewalks located within the Keizer core area are the oldest and most in need of repair. This is especially true for sidewalks in older residential areas adjacent to mature street trees. The older residential streets also tend to be sidewalk deficient. While not a high priority, local streets such as Evans, Thorman, Lowell, and Court Streets feed pedestrian traffic to collectors and need sidewalks for connectivity purposes. Sidewalks located within the outer ring of developed areas are newer and generally in better condition. The TPR requires sidewalks along arterials, collectors, and most local streets in urban areas. Keizer's arterial and collector streets are missing approximately 116,000 feet (almost 22 miles) of sidewalk from one or both sides of the streets. Approximately 22,000 feet (approximately four miles) of needed sidewalk have been identified for inclusion in future street projects. Overall, approximately 35 to 45 percent of the local streets in Keizer need sidewalks.

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

group of property owners can form a street lighting district. In order to reach the goal of a completed street lighting system, every property owner lacking lights would need to belong to a street lighting district. The city, through franchise arrangements with PGE and Salem Electric, will provide street lighting for arterial and collector streets upon the formation of a local improvement district. City staff would need to develop an implementation schedule to organize new street lighting districts. HEP Funds may also be used to improve safety issues in regards to illumination.

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.

Implementation

Table 9 lists the sidewalk needs and priorities for arterial and collector streets. The list is prioritized, with the final order to be determined by city staff based on funds, concurrent road work and other fluctuating factors. Generally, sidewalk improvements on existing streets will occur in conjunction with other street improvements. See the CIP for a list of street improvements, including sidewalks. **Figure 4** depicts sidewalks needed on arterial and collector Streets.

**Table 9
Sidewalk Needs for Arterial and Collector Streets**

Facility			Side of Street (N/S, E/W)	Length (ft.)	Total (ft.)	Schools Affected
Street	From	To				
Chemawa Rd*	N River Rd	McNary School	N/S	910/1727	2637	McNary High
Chemawa Rd*	McNary School	Windsor Isl. Rd	N/S	1491/1706	3197	McNary High
Cummings Ln	N River Rd	Delight St.	N/S	1795/1760	3555	Cummings Elem.
Cummings Ln	Delight Ave	Shoreline Dr	N/S	1473/1685	3158	Cummings Elem.
Dearborn Ave	N River Rd	Delight St.	N/S	1726/1658	3384	Cummings Elem.
Delight Ave	Cummings Ln	Dearborn Ave	E/W	1212/1320	2532	Cummings Elem.

Facility			Side of Street (N/S, E/W)	Length (ft.)	Total (ft.)	Schools Affected
Street	From	To				
Chemawa Rd*	N River Rd	Rickman Rd	N/S	1388/1310	2698	
Bair Park*	Bair Park	Clearlake Elem.	E/W	695/695	1390	
Dearborn Ave*	N River Rd	Verda Ln	N/S	1635/2641	4276	
Willamette Dr N	Apple Blossom	Glynbrook	E/W	1041/1384	2425	
Sunset Ave *	N River Rd	Rivercrest Dr	N/S	2023/1908	3931	
Rivercrest Dr	Sunset Ave	Wayne Dr.	E/W	564/627	1191	
Alder St	N River Rd	Gary St.	N/S	2150/2300	4450	
Verda Ln	Chemawa Rd	Parkway	E/W	4336/4590	8926	
Chemawa Rd	Verda Ln	Lockhaven Dr	E/W	3851/3900	7751	
Apple Blossom	N River Rd	2nd Ave.	N/S	215	347	
Trail Ave	Lockhaven Dr	N River Rd	E/W	2505/2700	5205	
McLeod Ln	Chemawa Rd	Lockhaven Dr	E/W	564/630	1194	
Lockhaven Dr*	I-5	McLeod Ln	N/S	2130/1900	4030	
Candlewood Dr	Cherry St	Brooks Ave	N/S	2090/1820	3910	
Chemawa Rd*	Windsor Isl Rd	15 th Ave.	N/S	2500/1240	3740	
Windsor Isl Rd	Chemawa Rd	Lockhaven Dr	E/W	2624/2079	4703	
Windsor Isl Rd	Lockhaven Dr	City Limits	E/W	4015/3918	7933	
N River Rd	Country Glen	City Limits	E/W	2974/734	3708	
Wheatland Rd*	N River Rd	Cater Dr.	E/W	4650/4605	9255	
Wheatland Rd*	Cater Dr	Clearlake Dr	E/W	3451/3710	7161	
Clear Lake*	Wheatland Rd	City Limits	N/S	2880/2880	5760	
Tepper Ln*	McLeod Ln	BN Railroad				
Multi-use path	Whisper Creek					
Future Align	Alder St	Verda Ln	N/S	1810/1795	3605	Alder NEW SCH
Future Align	Chemawa Rd	Keizer Little Lea	N/S	1309/1357	2666	
Future Align	Wheatland Rd	O'Neil	N/S	3138/3143	6281	
Radiant Dr	Lockhaven Dr	City Limits	E/W	5120/5120	1140	
Future Align	Chemawa Rd	Keizer Little Leag.	N/S	1309/1356	2666	
Future Align	Wheatland Rd	O'Neil	N/S	3138/3143	6281	
Radiant Dr	Lockhaven Dr	City Limits	E/W	5120/5120	1140	11,500

* Work included in improvements shown in the CIP

Other Pedestrian Issues

Alder Street

In 1996, the City of Keizer and the Mid-Willamette Valley Council of Governments began a revision of the transportation element of the Keizer Comprehensive Plan. One task in the work scope was the analysis of the effects of extending Alder Drive east from its current terminus just east of Pleasant View Drive to Verda Lane. One or more schools are being considered for construction along an extended Alder Street. As part of this extension, sidewalks and bike lanes would need to be installed. Bus pull outs and pedestrian shelters should also be considered near the schools. These details should be discussed in further design plans.

The City of Salem Transportation System Plan calls for a multi-use pedestrian pathway along Claggett Creek in the Northgate Industrial District. The details of the pathway are not yet decided, yet the City of Keizer is interested in the concept and will work with Salem to pursue the idea. Should mutually agreeable pathway and funding mechanisms result from this coordination, the result is intended to become part of this document.

Safety and Maintenance

Safety is a primary concern for pedestrians who travel throughout their neighborhoods. In addition to providing sidewalks for pedestrians, the sidewalks need to be appropriately illuminated and adequately maintained. Bill No. 058 Ordinance No. 86-074 titled An Ordinance Regulating the Reconstruction, Alteration and Repair of Sidewalks, states that property owners are required to maintain and repair the public sidewalks that abutted their property. The property owner is also required to keep the sidewalk clear of debris, snow, and ice, as well as free of obstacles.

Street Lighting

Currently, all new public streets require the installation of street lighting. Several options currently exist for property owners to have new street lighting installed. Individual owners can pay to have a light in front of their property or, more frequently, a group of property owners can form a street lighting district. In order to reach the goal of a completed street lighting system, every property owner lacking lights would need to belong to a street lighting district. The city, through franchise arrangements with PGE and Salem Electric, will provide street lighting for arterial and collector streets upon the formation of a local improvement district. City staff would need to develop an implementation schedule to organize new street lighting districts. HEP Funds may also be used to improve safety issues in regards to illumination.

FIGURE 4 SIDEWALK NEEDS

Chapter 8 - Public Transportation Systems

A. Background

The purpose of the Public Transportation Systems chapter is to provide guidance and information that will enhance mobility and reduce reliance on the single-occupant automobile. The 2000 Census indicated that approximately 1.79 percent of Keizer's population used transit for work trips. It is anticipated that transit use needs to increase to reduce single-occupant vehicle reliance. Implementation of the provisions in this element will help create a system of public transportation services that provide expanded transportation options for all Keizer area residents, including the transportation disadvantaged.

The public transportation system consists of all transportation services in the Keizer area generally available to the public. A complete inventory of providers is contained in **Appendix B**. Although rideshare and transportation demand management programs could also be considered part of the public transportation system, these two activities were discussed earlier in the Transportation Demand Management chapter.

The eight major types of public transportation systems/services available to the public in the Keizer area are:

- Local transit service (Cherriots)
- Local ADA service, "CherryLift", funded by Salem-Keizer Transit and operated by Wheels Community Transportation (a program of Oregon Housing and Associated Services)
- Private ADA/elderly-related transportation services
- CARTS (Chemeketa Area Regional Transportation System)
- Intercity service between Salem/Keizer and Wilsonville provided by SMART (South Metro Area Rapid Transit) and Salem-Keizer Transit (Cherriots)
- Private Intercity bus service
- Regular/shared taxi services
- Charter bus service

B. Local Transit Service (Cherriots)

Overview

The Salem Area Mass Transit District (SAMTD), which is now referred to as Salem-Keizer Transit was established under Oregon Revised Statute 267 on November 6, 1979. The service area for the district is the Salem-Keizer Urban Growth Boundary (which in 1997 had a population of approximately 189,072 residents and in 2000 a population of 203,275). The district is governed by a seven-member board of directors elected by residents of the seven subdistricts.

The local fixed route system currently includes approximately 210 employees and 70 buses that log roughly 3 million miles and 163,000 total vehicle revenue hours per year. The current fleet consists of 1980 to 2003 model buses with a reserve fleet of six 1980 model buses. Each bus has a seating capacity of 25 to 44 riders with standing room for up to 30 more passengers. All buses have been equipped with front mounted bicycle racks that can carry up to two bicycles. In August of 1998, the district added 8 natural gas powered buses to its fleet. These 30-foot, 25-passenger low floor buses will operate on the less-traveled routes.

Route System and Ridership

The Cherriots fixed route system is primarily a radial "pulse" route structure in which 20 of the 26 routes converge at the same time at the central transit station located in downtown Salem. Most passengers traveling between any two points in the service area can reach their destinations by making a timed transfer at the downtown transit station. The pulse system, however, is evolving and Salem-Keizer Transit is operating the first of several planned smaller stations in West Salem. This new system is referred to as a 3-Cs (Circulator, Center and Corridor) system and consists of five routes that Circulate throughout West Salem with a connection to a Center/transit station where a Corridor route connects the West Salem transit station to the Central Transit Station in Downtown Salem. This service would look very similar in Keizer with a centrally placed transit station, in the area of Chemawa Road and River Road, to which several routes serving Keizer would access a corridor route connecting the Keizer Transit Station to the Salem Downtown Station. The other nonradial route, Route 11, provides "cross-town" service between the city of Keizer and east Salem and the Lancaster Drive area.

The buses operate from 6:00 a.m. to 10:00 p.m. weekdays and 7:00 a.m. to 10:00 p.m. on Saturdays. There is no Sunday service. The system operates on frequencies ranging from 15 to 60 minutes. The routes are on half-hour frequency in the peak periods, of which there are two per day. During non-peak times, the four routes drop to hourly frequency. Five routes not on half-hour during the peaks, three routes 2,5/5a and 9 are on fifteen peak frequencies and two routes 21 and 22 are on hourly frequency all day. Between the am and pm peaks, seven routes drop to hourly frequency. Current bus fares are \$.75 for adults, \$.50 for children and \$.35 for seniors.

Planning for transit services is primarily the responsibility of SAMTD. The city of Keizer plays a supporting role by facilitating access to transit services. SAMTD has four routes that serve the Keizer area. They are routes 4, 9, 11, and 18. The existing Keizer routes are depicted in **Figure 5** along with the park-and-ride lots and potential major transit stops. The routes that serve Keizer have a mix of frequencies ranging from 15 to 60 minutes. Route 9 is on 15 minutes intervals in the peaks (6:15 a.m. to 8:45 a.m. and 2:15 p.m. to 6:15 p.m.), routes 4 and 18 are on 30-minute intervals during the peak hours (6:15 a.m. to 8:45 a.m. and 2:15 p.m. to 6:15 p.m.) and route 11 is on 60 minute intervals all day. During the midday (8:45 a.m. to 2:15 p.m.), route 9 changes to 30 minute frequency and routes 4 and 18 change to 60-minute frequencies. All routes change from 30-minute to 60-minute intervals on Saturdays, and there is currently no Sunday transit service.

Salem Keizer Transit is currently doing its Strategic Business Plan which will be looking at several improvements in the City of Keizer:

- 30 minute frequency on route 11
- Designing and developing a Keizer Transit Station
- 30 minute frequency all day on the circulator routes
- Connection between a new Keizer Transit Station and the Keizer Station

Figure 5 - THIS PAGE FOR BUS ROUTES

C. Transportation Disadvantaged Services

The transportation disadvantaged are recognized to be all persons without the ability or capability to use personal conveyance to travel. These include but are not limited to:

- **Seniors:** Anyone 60 years of age or older.
- **Mobility Limited:** A person 16 years of age or older who has a temporary or permanent physical, mental, or emotional impairment that substantially limits them from going outside their place of residence alone.
- **Youth:** Anyone between 12 and 16 years of age.
- **Resource Limited:** Individuals in a household with low to moderate incomes who are unable to meet basic human needs due to lack of financial resources and who generally may have no personal auto access

A Special Transportation Advisory Committee (STAC) was given the role of disbursing federal and state funds for the benefit of the transportation disadvantaged in Marion County. To this end, STAC prepared The Regional Transportation Enhancement Plan (RTEP), August 1998. It is an action plan designed to use available resources for improved level of transportation disadvantaged services.

Transportation disadvantaged services in the Keizer area consist of Cherriots fixed route accessible (lift-equipped) transit, dial-a-ride, and other social/health related special transportation services. Even with the available services, there is room for significant improvement in the local and regional area.

To provide the best service possible, the Transit District recently placed emphasis on fully using existing transportation services provided by organizations already working with disadvantaged persons. As part of the emphasis, the Transit District intends to become a central dispatch for the various services.

The first regional Americans with Disabilities Act (ADA) Plan and subsequent updates assumed that as many as ten to twelve vans might be needed to provide full service. However, using existing services to their fullest, it is now estimated that a paratransit system of as few as six vans may suffice to fully meet the regional mandates in the Salem and Keizer area. In Keizer, the following transit disadvantaged transportation services are presently available.

Fixed Route Service

Each of the Keizer's four transit routes is assigned at least one lift-equipped bus. With a timed-transfer between all routes, this provides 100 percent accessibility. The assignment of accessible vehicles to routes is coordinated with the district's Elderly/Handicapped Transit Advisory Committee. SAMTD is exploring ways of increasing the number and frequency of accessible buses within its system.

Dial-a-Ride Services

In January 1997, the SAMTD added its "Cherrylift" program. This program provides dial-a-ride services to disabled persons who are unable to use regular Cherriots bus service and offers freedom from fixed route and schedule constraints. Dial-a-ride service is similar to on-call taxi service, except that several passengers and their individual origins and destinations are served on the same trip, often by a van-type of vehicle. In January 1998, Cherrylift provided over 4,000 trips.

"Wheels" is a nonprofit dial-a-ride program offered by Oregon Housing and Associated Services, Inc. The Wheels program is a demand response service, operating six 18-passenger vans Monday through Friday from approximately 8:00 a.m. to 5:00 p.m. The Wheels program carried 51,000 riders in the period 1997-1998. Of these, approximately 45,000 were elderly (over 60 years old) or disabled. No fare is charged for this service, but donations on a per-ride basis are accepted. There is no set minimum response time, and trips are scheduled on a space-available basis. Wheels also has a contract with Marion County to provide transportation to work sites and group homes for 131 clients. The Wheels program is primarily funded by Special Transportation Funds (STF) which are derived from the state cigarette tax.

Throughout the Salem-Keizer area, there are many small organizations providing transportation primarily for the disabled and seniors. Some of these organizations, such as Keizer Retirement and Health Care, also provide housing and vocational opportunities for their clients. Keizer Retirement and Health Care provides transportation services for 125 physically disabled persons in the Keizer area. Currently, they have one 24-passenger bus and one 6-passenger van.

D. Intercity Bus Service

There is no intercity bus stop in Keizer. Greyhound Lines, the major intercity bus carrier, has a station on Church Street in downtown Salem. There are nine southbound buses departing the station on a daily basis. Buses stop in Albany, Corvallis, Eugene, and other cities along the I-5 corridor. There are eight northbound buses, all of which terminate in Portland. At the Portland bus station, patrons can transfer to buses going further north and east.

E. Regular and Shared Taxi Services

Other passenger transportation services available in the Salem-Keizer area include two taxi companies, an airport shuttle service (shared taxi), and several limousine services.

Regular Taxi

Taxis provide a high degree of passenger flexibility and convenience but at a higher cost per passenger than traditional transit service. There are three regular taxi services operating the Salem-Keizer area on a 24-hour basis. Salem-Keizer Yellow Cab Company has a fleet of 20 taxicabs. Valley Taxi and Medical Transport has a fleet of eight taxicabs, and Blue Jay Cab Company has five cabs.

Shared Taxi and Limo Services

Shuttles and shared taxis are often found at airports, train stations, and other points of major passenger concentration. The Hut Airport Shuttle, located within the terminal at McNary Field (Salem Airport), provides ground transportation to and from Portland International Airport. Home/business pick up is also available in the Keizer area via one of the five 17-passenger buses. Presently, the passenger vans are operating 12 trips per day between the two airports.

There are no limousine services garaged in Keizer. In the Salem area, there are approximately 11 limousine services, most of which operate 24 hours per day, seven days a week. These operators also serve the Keizer area.

F. Charter Bus Service

There are two charter bus services operating in the region. They provide commuter transportation service between cities along the I-5 corridor. Betty's To and Fro provides round-trip service between Salem and Eugene. In Salem, the 46-passenger bus stops at the Capitol Mall, downtown Salem and State Street near the State Forestry Department. In Eugene, the bus stops at the Gateway Mall. Monthly subscription prices are approximately \$120 per month.

Evergreen Stage Lines leases a 47-passenger bus and two 14-passenger vans to a commuter club for service between Portland and Salem. The bus makes many stops in Salem and Portland. Monthly subscription prices are approximately \$110 per month.

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.

H. Implementation

Implementation of improvements to the public transportation system will continue to require additional funds. These funds can be used for marketing, education, and incentive programs to effectively encourage or shift from use of the SOV.

Keizer can help play a role in increasing transit ridership share by completing its pedestrian system. Every transit trip begins and ends as a pedestrian trip. Without adequate sidewalks, transit riders are less likely to walk to the bus stop. The city can also encourage greater transit ridership by requiring new development be more transit-oriented in design.

The SAMTD estimates that enough demand exists in the Keizer area to support prudent expansions of the transit system as the required resources became available. While some implementation actions are aimed at increasing service to meet existing and future demand, the first priority is to continue current service where demand exists and to replace equipment as needed. Meeting the first priority will ensure reliability and retain existing users.

The following actions are aimed at implementing transit services that are a realistic alternative to the automobile. Where possible, general estimates of the costs of these actions are provided.

1. Increase the frequency of service in the Keizer transit corridors to 15 minutes during the peak hours and 30 minutes during the non-peak periods as warranted by demand. It is estimated that approximately 4 more buses will be needed at a cost of almost \$270,000 to \$335,000 per bus. Operational costs will be increased by approximately \$800,000 dollars a year at a rate of \$200,000 per bus.
2. Extend service hours along the Keizer bus routes to 10:00 p.m. This coincides with evening classes at Chemeketa Community College and the closing hours of Keizer's shopping centers.
3. Develop express bus service as demand warrants and funding allows.
4. Encourage the placement of passenger stops and amenities at regular intervals, and particularly at activity centers such as schools, parks, and shopping centers. Comfortable waiting areas at transit stops, appropriate to wet winter conditions, greatly improve the experience of the transit rider. Major transit stops usually are located at higher ridership activity points. Amenities at major transit stops should

include sheltered areas, bike racks, passenger information displays, telephones, lights, drinking fountains, landscaping, and refuse containers. Basic passenger amenities at other bus stops include bus stop signs, benches, and lighting and because of the wet Oregon winters, placement of small shelters should also be considered.

5. Support the full implementation of transit and paratransit services contained in the transit district's ADA plan and the RTEP.
6. Continue to support the development and marketing of TDM and public transit services.
7. Develop special transit programs and incentives where needed to make service more convenient and increase ridership.
8. Signal (green light) extensions and turnouts for buses should be considered on segments of the Keizer route system where practicable.
9. Development of one to four major transit stops.
10. SAMTD is considering limiting use of buses with greater than twenty passenger capacity to North River Road. Service to park and rides and neighborhoods would be accomplished via vans or a small bus shuttle system. These smaller vehicles could improve transit service in a number of ways. One possibility under study is an on-call van system similar to Dial-a-ride or taxi service. Routes for these shuttles would be determined by demand with no fixed schedule. Another option would be to provide a circular shuttle route that brings transit riders to one of the major transit stops. The feasibility of these alternatives is currently being studied.
11. When the proposed Alder Street schools are built, a bus route and appropriate facilities may be made available. This is consistent with Keizer's goals, policies, and objectives that facilitate connectivity and access between transit and activity centers. The feasibility of this action will be examined by SAMTD.
12. Support the continuation of and enhancement of intercity bus service in the region, especially in the east-west corridors, including interline agreements with the smaller bus companies.

I. Outstanding Issues

The major difficulty in expanding the Public Transportation System is a lack of ongoing, stable funding for significant increases in the level and type of transit services in the region. The transit system and the transportation disadvantaged systems require additional funding to be more effective.

Transit System Funding Shortfall

The SAMTD can afford necessary capital improvements (new buses and equipment) over the next 20 years but cannot afford to provide significant expansions of transit levels of service beyond those called for in this Plan unless renewed or additional funds become available. Securing stable and continuing sources of adequate operations funding for the transit system is important to the effective functioning of the overall Keizer transportation system and is therefore a high priority. In the near term, Keizer and the other jurisdictions in the region will work cooperatively with the Transit District to identify, evaluate, and recommend appropriate new funding sources for public transit.

Transportation Disadvantaged & Related Services Funding Shortfall

Full implementation of the Transit District's ADA plan will also require additional operational funds. The city, region, and the Transit District will continue to pursue additional funding for these services as they become available.

Chapter 9 - Air/Water/Rail/Pipeline

A. Air Service

Background

Currently, nearly all Keizer area commercial air passengers depart from Portland International Airport (PDX), as there is no scheduled commercial air service in either Keizer or Salem. McNary Field is a general aviation airport located four miles south of the center of Salem.

McNary Field, four miles south of Salem's center, is primarily a general aviation airport sharing a joint-use with the Oregon National Guard. The airport is in very good condition, well operated and maintained. Hut Limousine Service provides regularly scheduled ground transportation between McNary Field and PDX. There is also a Federal Express office and package reload facility at the field.

Transit service to McNary Field is indirectly provided by Cherriots. Keizer residences may not access McNary Field directly but must first stop at the downtown bus depot and transfer to bus route number 7. This bus does not stop at the terminal building, but instead stops near the intersection of 25th Street and Madrona Avenue SE.

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

Keizer is located on the east side of the Willamette River. The average width of the Willamette River near Keizer is approximately 500 feet. The channel depth normally varies from 4 to 16 feet depending on the time of year.

There are no port or navigation facilities within Keizer or the regional area. However, periodic efforts are made to dredge the Willamette River for waterborne commerce. The Wheatland Ferry provides vehicular and passenger services across the Willamette River just north of Keizer. In 1994, the ferry transported an average of 610 vehicles per day.

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

Pipelines serve as a safe and efficient mode of transporting certain bulk commodities such as petroleum and natural gas. Without pipelines, these products would either not be available locally or would have to be transported by truck and/or rail service. If shifted to trucks, it would likely involve higher transportation costs and/or a likely increase in commercial vehicle miles of travel on the area's highway system.

The only pipelines in Keizer are feeder lines for Northwest Natural Gas. The pipeline facilities within the Keizer area have an excellent safety record, without incident. The present system is adequate to support the city's needs for the next twenty years.

The first feeder pipeline travels north on North River Road to Dietz Avenue. At Dietz Avenue, the pipeline heads east to Lawless Street, where it continues east and exits the city limits at the Salem Parkway. This pipeline is a 8 5/8" steel pipe and contains pressures between 176 psi and 400 psi.

A second feeder pipeline feeds off of the first one at Plymouth Drive and heads east to Cherry Avenue. At Cherry Avenue, the pipe heads south to and across the Parkway where it exits the city limits. This pipe is a 6 5/8" steel pipe and contains pressures between 176 psi and 400 psi.

Northwest Natural Gas indicates that the current distribution system is adequate but that future improvement plans could involve either increasing the natural gas pressure in the pipelines or increasing the diameter of the feeder pipelines in the current system.

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

The rail infrastructure is privately owned and operated. Similar to pipelines, capital investment is directly driven by market forces than by policy initiatives at the state, regional, and/or local levels. However, coordination and cooperative efforts between the public and private sectors can be mutually beneficial and increase the efficiency of both rail and non-rail elements of the Keizer's transportation system.

Keizer does not have passenger rail stops; however, AMTRAK does provide passenger service in Salem. One of the three major (Class I) railroad companies that operate in the State of Oregon, Burlington Northern (BN), has a line running through Keizer. The Burlington Northern (BN) line consists of 18.9 miles of through track running north-south, parallel to I-5 on the west, following the old Oregon Electric Branch interurban right-of-way. This line has been leased to, and is operated by, Portland and Western (P & W) Railroad. The portion through Keizer enters near the south portion of Ridge Dr NE, heads due north and exits the city limits on its northern border.

Passenger Service

Salem's Amtrak terminal is adjacent to State Highway 22, which offers connections to Interstate 5, Oregon Highway 221, Oregon Highway 219, Oregon Highway 213, and Pacific Highway 99E. The terminal area is within one-half mile of Willamette University, Tokyo International University of America, and the Capitol Mall. Cherriots bus (Route 15) stops at the corner of 12th Street and Pringle Parkway. The location of this bus stop requires rail passengers to cross the intersection of 12th and 13th Streets and Oregon Highway 22 to reach the Amtrak terminal. The terminal was remodeled in the summer of 1999. The Salem Amtrak terminal was remodeled in the summer of 1999.

Amtrak provides the region with two service options for passenger rail service: the "Coast Starlight" and "Cascades" trains. The "Coast Starlight" service (serving the entire west coast corridor) provides direct southbound service to Albany; Eugene; Chemult; Klamath Falls; and Los Angeles, California; and direct northbound service to Portland and Seattle, Washington. This service consists of one train per day in each direction. Total Oregon ridership on the route reached a peak of over 591,000 passengers in 1981. In 1998, the Starlight's ridership north of Eugene was 58,000 passengers. The Cascade train, north of Eugene, had a total rider of 401,000 passengers for the 1998 fiscal year.

Washington County is establishing commuter rail from Beaverton to Wilsonville, Oregon, to be operational in 2004. There is potential for a possible extension of service to the Keizer-Salem area. See the "Washington County Interurban Rail final Report

dated May 1997, "State of the Commute in Oregon in 1990 and Possible Scenarios for 2015" dated February 1994, and other related and subsequent reports.

Freight Service

The P & W line through Keizer is used for freight only. It has the potential to become a more active freight line, and to become a commuter connection to the Portland metropolitan area.

The Tepper Lane crossing is proposed to be closed and a bicycle/pedestrian under-crossing installed as part of the Keizer Station Plan. Rail crossings in Keizer are located at Lockhaven and Ridge Drives and on Tepper Lane. The rail crossing at Lockhaven has a gated signal while Tepper Lane has no signals or gates and warning is from a railroad crossing sign.

Although outside Keizer's city limits, a portion of the Union Pacific mainline between Eugene and Portland is the most heavily used rail line for freight in the Willamette Valley. More than 20 million gross tons are shipped over the line yearly. According to ODOT's 1995 data, about 26 through freight trains are routed over this line per day between Eugene and Portland. Three switching locomotives also use this segment of the UP mainline daily to shuttle cars and make up trains. Amtrak also offers freight delivery service to the region via its Amtrak Express service, which is accessed at the Salem passenger depot. This service can ship packages from 1 to 2,000 pounds from this area to anywhere in the nation Amtrak serves.

Miscellaneous

Infrastructure. It should be noted that all of the rail infrastructure within the region is privately owned and maintained by the railroad companies. Improvements are often made at the discretion of the railroads, with Public Utility Commission (PUC) involvement occurring whenever there are safety or capacity concerns or potential conflicts with other modes of transportation. Keizer supports and encourages continued safety improvements to rail crossings and will work with the railroads to this end.

Service. Due to mergers and a change in marketing strategies, most of the nation's largest railroads, UP and BN included, are choosing to reduce localized service and focus more heavily on the enhancement of their long haul and transcontinental service. The ability of a major railroad to concentrate on providing regularly scheduled long haul services has become a key to their profitability. Due to this change in emphasis, rail equipment is at a premium, as it is being deployed on longer nonstop routes between major cities. Allocating equipment to address the switching needs of local users and to make up local trains has become less of a priority.

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

A. Background

The TPR requires transportation system plans to have a financial plan for funding current and future needs. Federal regulations require that the financial plan for metropolitan planning organizations demonstrate “financial constraint.” Financial constraints means that prior to expanding the urban region’s transportation system, adequate funding should be available to maintain and operate the existing transportation facilities and services. This element outlines the policy parameters involved in financing the transportation system, identifies funding sources, compares them to identified needs, and provides a determination as to what portions of the Plan may be implemented within the 20-year horizon.

B. Funding Sources

Revenues and Funding Sources

Beyond maintenance and operation of the existing transportation systems, funding for projects identified in the plan must be currently available, committed, or reasonably anticipated. Available funds are those obtained from an existing source dedicated to, or historically used for, transportation purposes. Committed funds are those which are identified in the CIP or from bond issues.

Under current federal and state legislation, there are several methods of financing available to the city of Keizer for street system studies, improvements, programs, and maintenance. The following describes the funding categories identified in the Regional Transportation Systems Financial Element:

Federal Surface Transportation Program (STP) Funds. These are federal TEA-21 funds available to the Salem-Keizer Urban Area through the MPO (Mid-Willamette Valley Council of Governments/SKATS). These funds are flexible and can be used for different types of capital improvements and transportation programs, but must be used for projects listed in the regional plan.

Federal Enhancement Funds. Federal funds are available to complete capital improvements and programs related to pedestrian, bicycle, and other alternative travel modes to the automobile. This program can also be used for historic preservation of transportation facilities. The state only considers projects that cost more than \$200,000. The funds have been used for bicycle facilities on Windsor Island Road.

State Highway Funds (Also known as gas tax). The State of Oregon collects gas taxes, vehicle registration fees, overweight/over height fines and weight/mile taxes and distributes a portion of these revenues to counties and cities using an allocation formula. The state distributes a local share to cities based on a per capita rate. Revenues vary from year to year as the allocation formula can vary. Funds can be used for capital improvements or maintenance.

State Transportation Program Grants. The state provides up to \$100,000 grant funds to local jurisdictions for transportation studies, improving bicycle and pedestrian facilities, and participating in state-sponsored transportation activities. A 20 percent local match is required.

State Transportation Growth Management Grants (TGM). These grant funds are jointly administered through the Oregon Department of Land Conservation and Development and the Oregon Department of Transportation. A TGM grant funded completion of the Keizer TSP and can be used to complete further studies called for in the TSP.

Hazard Elimination Program (HEP) Funds. The mission of HEP is to carry out safety improvement projects to reduce the risk, number, and /or severity of accidents at highway locations, sections, and elements on any public road.

Special Public Works Funds (SPWF-Lottery Program). The Special Public Works Fund provides grants and loans for public works that support private projects resulting in creation or retention of permanent jobs. Loans are emphasized in this program and are available for amounts up to \$11,000,000 for a maximum of 25 years unless the project life is shorter. The maximum grant amount is \$500,000 and may not exceed 85 percent of the project cost.

Immediate Opportunity Grant. Grants are available from some economic development programs. The Immediate Opportunity Grant program, managed by ODOT, provides a maximum of \$500,000 for public road work associated with an economic development related project of regional significance, provided the project creates primary employment. Additionally, although lesser shares will be considered, the grantee should provide an equal local match.

General Obligation Bonds (Property Tax Supported). Bonds are a potential source of funds for constructing capital improvement projects in the city. Voter-approved bonds could be sold to fund street improvement projects. Transportation projects are grouped in “bond packages” that require voter approval. General Obligation Bonds are supported through the city’s property tax revenues and users chargers.

Utility Franchise Fees. Public utilities that use the public right-of-way are charged a fee. Examples include: Northwest Natural Gas, Portland General Electric, Salem Electric, Comcast, and Qwest. These funds are primarily used to recover the maintenance costs associated with utility work on city streets.

Development Exactions. To provide adequate infrastructure in response to site-specific growth, capital improvements can be exacted as conditions of approval for building permits, subdivisions, and zoning actions. Developers are usually required to complete frontage street improvements and other off-site transportation improvements to mitigate traffic impacts. The majority of the city's new local and collector streets are created and improved as a result of development exactions.

Local Improvement Districts. This method allows neighboring property owners to group together to improve public facilities and then pay for them through individual assessments. These districts are generally used to complete local street improvements or improvements to business districts. This is the primary source of funding for street lights in Keizer's residential areas.

City General Funds. Though seldom available for transportation purposes, the city may choose to use general property tax revenues to build or operate transportation facilities. However, using general fund revenues places transportation system finance in direct competition with other city services such as police, fire, libraries, and parks. Currently, no general funds are spent on transportation.

City-funded Street Improvement Projects. The city will typically construct sidewalks as part of a street improvement project that brings a street up to urban standards. The city will also use federal and state grants to enhance pedestrian facilities. An example is the Federal Community Development Block Grant (CDBG) program that has funded the construction of corner curb ramps throughout many areas of the city.

System Development Charges (SDC). This method collects an equitable share from new developments to help pay for the capital costs of improvements needed to support growth. Cities that use this SDC method are required (ORS 223.297) to complete a plan that lists the capital improvements that can be funded by SDCs and the estimated timing and cost for each improvement. SDCs are limited to those capital improvements that will be or were required to increase capacity because of increased demand due to current or expected development. This method is commonly acceptable to the public because new residents, rather than current residents, pay for the improvements. The method is less acceptable to developers because it is argued that it makes new development unaffordable. Revenues provided by this method are variable because they are linked to the amount of new development.

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.

D. Anticipated Revenues

Revenues from the state gasoline tax provide the city's major funding source for transportation. Projecting current gas tax amounts to the future, the city will receive roughly \$25,600,000 (approximately \$1.3 million per year) over the next 20 years. The city will continue to use gas tax to fund operations and maintenance (O & M). Since O & M expenses vary annually, an average of the reported 1988-99 disbursements was used to estimate the average yearly needs. The average O & M cost was calculated to be \$585,000 per year, or \$12 million over the next 20 years.

The commitment to O & M leaves approximately \$14 million (approximately \$700,000 yearly) for completing planned transportation facilities and major improvements (Capital Improvement Program (CIP)). Although a reliable forecast cannot be made at this time, it is expected that there will be success in obtaining additional funding through the sources previously outlined, and that these, coupled with gas tax, will permit accomplishment of the projects identified in the first five years of this plan. However,

past this period, it is impractical to determine project timing against funding availability. This is best dealt with by reassessing at five-year intervals.

Capital Improvement Program

The adoption of the Capital Improvement Program (CIP) is separate from the TSP, however, the CIP project list is incorporated herein by this reference.

The selection of projects for completion within five years was accomplished after a review of many of factors. These include items such as: percentage of design and contract completion; safety; traffic volume increases; availability of traffic study information; capability to combine repair, maintenance, and operational needs with improvements; scheduling of utility work; connectivity needs of the street, bicycle, and pedestrian systems; and potential funding sources. The use of “full improvement” to describe the type of work generally includes provisions for bicycles and sidewalks. Updates to the CIP for both vehicle and bicycle improvements will be referred to a combined meeting of the Transportation Safety Committee and the Planning 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 date (\$10,000)	2000
Cherry/Greenwood Intersection Study (\$5,000)	2000
Access Management Standards (\$15,000)	2001
Develop procedures for constrained R/W 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 A - 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.

Bancroft Bonding: A funding instrument that allows residents to fund assessed local improvements over a period of years.

Best Management Practices (BMP): Refers to a series of maintenance programs designed to cost effectively improve storm water quality. These programs are defined in the City of Salem’s stormwater permit application.

BNSF: Burlington Northern/Santa Fe Railroad.

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.

Clean Air Act Amendments of 1990: Federal legislation that set higher standards for emission controls and required state and regional conformance with these standards.

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

Committed Network: The existing street system and the planned improvements to it that have funding identified for them.

(State) Conformity Rule: A state administrative rule requiring that regional emissions not contribute to a worsening of the regional air quality. The rule is administered by the State Department of Environmental Quality and implements federal air quality standards.

Currently Developed Area (CDA): An area defined by the Salem Urban Growth Management Program as having existing and accessible public facilities.

DEQ: State of Oregon Department of Environmental Quality.

(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.).

Enhancement Funds: A source of federal transportation funds created by the ISTEA legislation. Enhancement funds may be used for any planned bicycle and pedestrian project or for preservation of historic passenger railroad stations.

Expanded Intersection: A street intersection treatment that provides additional through- and turn-lanes to increase capacity.

Financial Constraint: A concept by which a transportation plan only includes projects that a community can reasonably expect to fund either through existing, on-going, or reasonably anticipated sources.

Franchise Fees: Payments made to the city by utility companies for use of the street rights-of-way.

Frictional Factor: Elements of street design and operation that impact the operational capacity of the street (i.e., on-street parking, heavy pedestrian volumes, 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.

Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA): The umbrella federal legislation that appropriates transportation funding and mandates local transportation planning. This acronym was changed in 1998 to TEA-21, the Transportation Efficiency Act for the 21st Century.

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.

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: 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 described free flowing traffic and F describes gridlock.

Level Of Service Definitions for Signalized Intersections (Highway Capacity Manual)

Level of Service	Traffic Flow Characteristics
A	Very low delay, less than 5.0 seconds per vehicle. This occurs when traffic progression is extremely favorable, and most vehicles arrive during the green phase. The traffic volume-to-capacity (V/C) ratio is between 0.0 to 0.60.
B	Average delay is in the range of 5.1 to 15.0 seconds per vehicle. This generally occurs with good traffic progression. More vehicles stop than for LOS A. The traffic V/C ratio is between 0.61 to 0.70.
C	Average delay is in the range of 15.1 to 25.0 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. Individual vehicles may have to wait through more than one green signal phase. The traffic V/C ratio is between 0.71 to 0.80.
D	Average delay is in the range of 25.1 to 40 seconds per vehicle. The influence of congestion becomes more noticeable. Longer delays may result from combination of unfavorable traffic progression, longer cycle lengths, or high V/C ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Groups of vehicles may frequently have to wait through more than one green signal at this point. The traffic V/C ratio is between 0.81 to 0.90.
E	Average delay is in the range of 40.1 to 60 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. Groups of vehicles frequently have to wait through more than one green signal at this point. The traffic V/C ratio is between 0.91 to 1.00. The intersection is basically operating at capacity.
F	Reflects forced flow, with an average delay in excess of 60 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. Groups of vehicles will be waiting through two or more green signal cycles at this point. The traffic V/C ratios are > 1.00 .

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 5 seconds. Free flowing with no congestion. Very few vehicles waiting in a queue.
B	Average delay per vehicle is in the range of 5 to 10 seconds. Slight delay to vehicles or no vehicles waiting in a queue.
C	Average delay per vehicle is in the range of 10 to 20 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 20 to 30 seconds. Frequent delay and congestion. More than one vehicle is waiting in a queue.
E	Average delay per vehicle is in the range of 30 to 45 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 45 seconds. Queues are extensive. The intersection is considered to be overcapacity.

Source: Transportation Research Board, Highway Capacity Manual, "Special Report 209," 1985.

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, Capitol Mall, Lancaster Mall, Fairview Industrial Park, etc.).

Metropolitan Planning Organization: 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.

MWACT: Mid-Willamette Valley Commission on Transportation.

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.

Non-Home Based Trips: Trips, regardless of mode, that neither begin nor end at home (e.g., trips made while at work).

ODOT: Oregon Department of Transportation

One Way Couplet: system of two parallel one way streets providing traffic movement in opposite directions.

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.

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.

Pavement Management System: A computer database that contains street structural condition, scored by a rating system, based on the level of surface deterioration. The pavement management system provides accurate street condition information that is used to plan for more effective maintenance programs.

PE: Professional Engineer.

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.

PGE: Portland General Electric

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.

Quick Response System II (QRS II): The travel demand computer model used by transportation planners in the Salem-Keizer region.

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.

Reverse Commute: Travel to work in a direction opposite that to where most travelers are headed. In Salem's case away from the downtown/Capitol Mall area.

Right-of-Way Vacation: A process by which the city relinquishes its rights to use a certain property for transportation purposes.

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.

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

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

SP: Southern Pacific Railroad

Salem Revised Code (SRC): The code of ordinances and laws of the City of Salem.

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.

STAC: Special Transportation Advisory Committee.

Surface Transportation Program (STP): A source of federal transportation funds created by the ISTEA legislation. STP funds may be used for any planned transportation project or program.

TEA-21: Transportation Efficiency Act for the 21st Century. Prior to 1998, known as Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). The umbrella federal legislation that appropriates transportation funding and mandates local transportation planning

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.

UP: Union Pacific Railroad.

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

Urban Growth Management Program: A city-adopted program that delegates responsibility for the provision of major public facilities in the developing areas of Salem. Implemented through Chapter 66 of the *Salem Revised Code*.

Urban Standards: A street with sidewalks, bicycle lanes (where applicable), curbs and gutters.

Vehicle Miles of Travel (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, in percent.

Appendix B - Public Transportation Service Providers Inventory

American Medical Response [AMR]

Portland
Michael T. Marsh
503-652-1880/1-800-228-7601
2 Salem qualified drivers.
Wheel chair and stretcher transport

Blue Jay Cab Company

860 Commercial Street SE
Salem, OR 97301
503-587-8737
General Purpose Taxi service
Provider # 165024

Cherry Lift (Oregon Housing & Associated Services)

2755 19th Street SE
Salem, OR 97302
[SAMTD Area]
Donna Wickman, Program Manager
503-585-6193

City of Salem Fire Department

2742 25th Street SE
Salem, OR 97302
Ted Farr, Emergency Medical Coordinator
Medical transport

Disabled American Veterans [DAV]

Salem, OR

Garten Foundation

P.O. Box 17485
Salem, OR 97305
Sallye Mills
503-581-4472

Handicap Transport

3320 Glendale Avenue NE
Keizer, OR 97303
Peggy Jones
503-391-1401
Medical Transport

Homeless Outreach and Advocacy Project [HOAP]

150 Kingwood NW
Salem, OR 97304
503-588-5827
Free transportation to West Salem Clinic

HUT

2990 25th Street SE
Salem, OR 97302
503-363-8059
PDX shuttle service

Keizer Fire District

661 Chemawa Road NE
Keizer, OR 97303
Medical Transport

Marion County Fire District #1

300 Cordon Road NE
Salem, ORE 97301
Mark J. Bjorklund, Supervisor
503-588-6526
Non-emergency Medical Transport

Med Coach

P.O. Box 2476, Albany, OR 97321
4360 Cherry St. NE, Keizer, OR
97303

541-926-0260
Wheel Chair/Stretcher

Med Serv

4718 Deepwood Loop NE
Salem, OR 97305
503-399-0501
Nina M. Brown
Wheel Chair/stretcher
Provider # 135595

Mid-Valley Rideshare

City of Salem Public Works
Department
555 Liberty Street SE, Room 325
Salem, OR 97301
Chuck Fisher
503-588-6211
Rideshare matching service.

**Salem Area Mass Transit District
[SAMTD]**

503-588-BUSS
Intracity fixed route.

Salem Hospital [Care-a-Van]

Winter Street
Salem, OR 97301
503-370-5544
Out patient service

Salem-Keizer Yellow Cab

1487 Broadway Street NE
Salem, OR 97303
503-378-0885
General purpose taxi service
Provider # 068163

**Salem Medical Transport (City Fire
Dept.)**

2742 25th Street NE
Salem, OR 97302
503-588-6538
Stretchers Only

Provider #134424

Salem Senior Center

930 Plymouth Drive NE
Salem, OR 97303
Mr. Novak
503-390-7441

Salem Taxi

2365 Hyacinth NE
Salem, OR 97303
503-363-1240
General purpose taxi service.

Shangri-La Corp

680 Cottage
Salem Or 97301
503-581-1732

Spruce-Up Enterprises, Inc.

1880 Fisher Road NE
Salem, OR 97305
Debbie Howard
503-362-8755

Spruce Villa, Inc.

Anson Bell
503-399-7924

Wheel-Mobile

503-581-9433
Byron White
3 Salem qualified drivers
Wheel chair

Other contact persons:

SAMTD

Doug Pilant, Senior Planner
Beck Asher, Secretary
503-588-2424
FAX 588-0209

**OMAP, Oregon Dept. of Human
Resources**

Joan Frye, Medical Program Analyst

503-945-6493

**MWVCOG, Program for
Disadvantaged**

Richard VanOrman, Associate
Planner
105 High Street SE
Salem, OR. 97301-3667
503-588-6177
fax 503-588-6094

Wheels [OHAS]

Donna Wickman, Transportation
Manager

STAC

Marsha Clark, Chairman
503-623-9317
FAX 503-623-2731

**Senior and Disabled Services
Division**

Dale Shepardson
DHR Building, 3rd Floor
500 Summer Street NE
Salem, OR 97301

Appendix C - Population Allocation

During the summer of 1997, the MPO conducted a land use survey of Keizer and the area outside of the Salem UGB within the SKATS boundary. Data on current land use at the parcel level were recorded and coded into a GIS database. The data was then merged with another database containing zoning and comprehensive plan designations. The resulting maps were produced and checked for accuracy by city staff. All totals in this analysis use 1997 as the base year.

Vacant Residential Parcels in Keizer

City staff reviewed maps of vacant residential parcels and determined which parcels would be unlikely to develop because of site constraints. These parcels were coded so as to remove them from the pool of developable parcels. Some parcels were coded that they would not develop before 2020 despite having the criteria for being “developable.” These parcels were also removed from that pool of parcels to be developed by 2020.

SKATS staff collaborated with city of Keizer staff to develop assumptions for determining the development potential of the residential parcels. City staff recommended assuming that all developable vacant parcels with a comprehensive plan designation of LDR (low density residential), MDR (medium density residential), or MHDR (medium-high density residential) would develop by 2020. Half of the vacant parcels with a comprehensive plan designation of MU (mixed use) would be residential development, with the exception of the Chemawa Activity Center (CAC), 75 percent of which would develop residential.

“Underutilized” Parcels in Keizer

The next step was dealing with “underutilized” residential parcels. A parcel was considered underutilized if it was at least 1/3 acre in size, had at least one existing dwelling unit, and had enough excess land to build at least one additional unit. The amount of available underutilized land was calculated by subtracting the reserve for the existing unit(s) (0.33 acres) from the parcel size. If this result was at least the minimum lot size for its comprehensive plan designation (see table below), then additional units were calculated based on the total buildout density assumptions. [e.g., A one acre LDR parcel would reserve 0.33 acres for the existing dwelling unit and would develop 3.35 units (0.67 acres x 5 units per acre) in the future.]

Comp. Plan	Min. Lot Size
LDR	.10 acre
MDR	.16 acre
MHDR	.16 acre
MU	.14 acre

Total Build-out

Total build-out units were calculated for all developable parcels using the following densities, as determined by city staff:

Comp. Plan	Development Density
LDR	5 units per acre
MDR	9 units per acre
MHDR	17 units per acre
MU (outside CAC*)	17 units per acre
MU (inside CAC*)	8 units per acre

* CAC = Chemawa Activity Center

These calculations resulted in an estimate of the total number of new housing units at buildout (all vacant and underutilized land built):

Comp. Plan	Vacant	Underutilized	Total
LDR	879	1,232	2,111
MDR	191	0	191
MHDR	160	32	538
MU (outside CAC)	290	155	445
MU (inside CAC)	13	95	108
Total	1,533	1,860	3,393

* CAC = Chemawa Activity Center

Population increase was calculated by applying a housing unit density to the number of new units. The densities are:

Comp. Plan	Unit Density
LDR	2.7 persons per unit
MDR	.7 persons per unit
MHDR	1.77 persons per unit
MU (outside CAC)	1.77 persons per unit
MU (inside CAC)	1.77 persons per unit

* CAC = Chemawa Activity Center

Using the total new housing units, population increase at buildout was calculated as follows:

Comp. Plan	Vacant	Underutilized	Total
LDR	2,373	3,326	5,700
MDR	516	0	516
MHDR	283	669	952
MU (outside CAC)	513	274	788
MU (inside CAC)	23	168	191
Total	3,709	4,438	8,146

*CAC = Chemawa Activity Center

These densities were derived from 1990 Census data and represent average household size in the Salem-Keizer area.

2020 Population Estimates

City staff decided that for the final estimates should assume that all developable vacant land and half of the underutilized parcels would develop by 2020. Underutilized parcels were selected by size in developable acres; the largest 50 percent of underutilized parcels were selected. The final numbers for 2020 are as follows:

Development on Vacant Residential Parcels by 2020			
Comp. Plan	# Acres	# New Units	Population Increase
LDR	168	871	2,352
MDR	29	191	516
MHDR	12	159	281
MU (outside CAC**)	34	290	513
MUCAC (inside CAC**)	2	13	23
Total*	245	1,524	3,685

*8 units less than buildout because of vacant parcels on Rosie's farm, which will not develop before 2020.

** CAC = Chemawa Activity Center

Development on Underutilized Residential Parcels by 2020			
Comp. Plan	# Acres	# New Units	Population Increase
LDR	207	987	2,665
MDR	0	0	0
MHDR	20	329	582
MU (outside CAC)	16	152	269
MU (inside CAC)	18	88	156
Total	261	1,556	3,672

Total Development of Residential Parcels by 2020			
Comp. Plan	# Acres	# New Units	Population Increase
LDR	375	1,858	5,017
MDR	29	191	516
MHDR	32	488	864
MU (outside CAC)	50	442	782
MU (inside CAC)	20	101	179
Total	506	3,080	7,357

Population Estimates for Interim Years

City staff recommended using the following assumptions for calculating population estimates for the interim years between 2000 and 2020: all vacant developable land should be built by 2010, and underutilized land development should be distributed evenly. Therefore, approximately half of the developable vacant land was assumed built by 2005, and the remaining by 2010, in order of parcel size with the largest parcels assumed to develop first. The assumptions were similar for underutilized parcels, with ¼ assumed developed by 2005, ¼ by 2010, ¼ by 2015, and ¼ by 2020, in order of parcel size with the largest parcels assumed to develop first. These numbers are below.

New Units - Vacant Residential Parcels						
Year	LDR	MDR	MHDR	MUCAC	MU-CAC	Total
2000	534	132	0	0	0	666
2005	203	59	138	13	0	413
2010	134	0	21	0	257	412
2015	0	0	0	0	33	33
2020	0	0	0	0	0	0
Total	871	191	159	13	290	1,524

MUCAC = inside CAC MU-CAC = outside CAC

New Units- Underutilized Residential Parcels						
Year	LDR	MDR	MHDR	MUCAC	MU-CAC	Total
2000	0	0	0	0	0	0
2005	501	0	203	72	102	878
2010	213	0	25	9	15	262
2015	152	0	22	2	20	196
2020	121	0	79	5	15	220
Total	987	0	329	88	152	1,556

MUCAC = inside CAC MU-CAC = outside CAC

Total New Units						
Year	LDR	MDR	MHDR	MUCAC	MU-CAC	Total
2000	534	132	0	0	0	666
2005	704	59	341	85	102	1,291
2010	347	0	46	9	272	674
2015	152	0	22	2	53	229
2020	121	0	79	5	15	220
Total	1,858	191	488	101	442	3,080

MUCAC = inside CAC MU-CAC = outside CAC

Population Increase						
Year	LDR	MDR	MHDR	MUCAC	MU-CAC	Total
2000	1,442	356	0	0	0	1,798
2005	1,901	159	604	150	181	2,995
2010	937	0	81	16	481	1,516
2015	410	0	39	4	94	547
2020	327	0	140	9	27	502
Total	5,017	516	864	179	782	7,357

MUCAC = inside CAC MU-CAC = outside CAC

Development After 2020

After 2020, the remaining underutilized parcels would develop as follows:

# Parcels	# Units
3 vacant (Rosie's Farm)	8
241 underutilized	304

These underutilized parcels are on lots ranging from 0.43 acres to 1.25 acres.

Appendix D - Access Control for Arterial Streets

Section 1.00: Purpose of Access Control for Arterial Streets

The design requirements of this section are intended to recognize that arterial streets serve two divergent functions: moving traffic through the city and providing public access to individual properties located along or near arterial streets. Because of the conflicting requirements of these two functions, the traffic movement function of arterial streets can be severely hampered by providing access to individual properties. It is the purpose of this section to try and maintain the balance between these two arterial functions, recognizing both the rights of property owners to reasonable access and the public purpose of efficient traffic flow.

The standards found herein will apply to all development within the city. In addition to these standards, and in accordance with the standards of Section 1.12 through 1.13 of this ordinance, the city may adopt Access Management Plans for specific areas. These plans would address in greater detail how access will be provided to specific properties. The standards of this ordinance are subservient to any specific provisions of such Plans.

DRIVEWAYS AND CURB CUTS

Section 1.01: General Requirements

- a. Notwithstanding any Access Management Plan now or hereafter adopted by the City Council, whenever a new building site will take vehicular access from a street, the building site shall be designed in accordance with the requirements of this ordinance.
- b. Any specific provisions of an Access Management Plan shall take precedence over any conflicting standards within this ordinance.
- c. The provisions of this ordinance shall be implemented through the issuing of Driveway Permits.
- d. These standards shall apply in the following situations:
 1. New construction including expansion of an existing building where the expansion exceed 20 percent of the gross floor area of the original building as of the date of adoption of this ordinance.

2. Any change in use of a single building on a lot where a Change of Occupancy permit is required, unless the change specifically involves less than 50 percent of the gross floor area of the building.
3. Any change in use of a space in an integrated business center where the change specifically involves 50 percent or more of the gross floor area of the total center as of date of adoption of this ordinance.

Section 1.02: Construction Standards

The Director of Public Works shall adopt and publish standards for the construction and dimensions of driveways and curb cuts.

Section 1.07: Curb cut Spacing

On arterial streets, the minimum distance between curb cuts on any one block face, or between curb cuts and an intersecting street, whether or not such curb cuts are located on the same property, shall be based on the posted speed of the street and shall not be less than 150 feet. No driveway will be permitted within the operational area of a traffic signal. Minimum distance for a curb cut from a signalized intersection will be 200 feet. Measurements shall be taken from the inside edge of the driveway, excluding any apron.

<u>Posted Speed</u>	<u>Minimum Spacing</u>
25 MPH	150 Ft
30	150
35	150
40	185
45	230
50+	275

Section 1.08: Spacing Reductions and Joint-Use Driveways

Where the existing configuration of properties and curb cuts in the vicinity of the building site precludes spacing of a curb cut access in accordance with Section 1.07, the Public Works Director, with the advice of the Traffic Engineer, shall be authorized to reduce the spacing requirement if he or she finds that all of the following conditions have been met:

1. Joint-use Driveways - Wherever feasible, the Public Works Director shall require the establishment of a joint-use driveway serving two abutting building sites, with cross-access easements provided in accordance with Section 1.16.
2. Unified Access and Circulation - Where feasible, the building site shall incorporate united access and circulation in accordance with the requirements of Sections 1.12 - 1.16.

3. Curb Cut Closings - The property owner shall agree to close and eliminate any pre-existing curb cuts on the building site after the construction of both sides of the joint-use driveway, in accordance with the requirements of Section 1.11.

Section 1.09: Driveway Sight Distance

Driveway approaches must be designed and located so that an exiting vehicle will have an unobstructed sight distance (exclusive of tree trunks and post or columns less than one foot in diameter) in accordance with the following schedule:

<u>Posted Speed</u>	<u>Sight Distance</u>
25 MPH	150 Ft
30	175
35	225
40	275
45	325
50+	350

The sight distance shall be measured from the centerline of the driveway at a point 5 feet behind the sidewalk; or if there is no sidewalk, at a point 10 feet from the edge of the intersecting street extended to the centerline of the closest travel lane.

Section 1.10: One-Way Driveways

The Public Works Director is authorized to allow a pair of one-way driveways in lieu of a two-way driveway otherwise permitted by this part, where he finds that traffic flow will be improved as a result.

Section 1.11: Closing of Existing Curb Cuts

Wherever a driveway or curb cut is permitted in accordance with the requirements of this ordinance, all other pre-existing driveways and curb cuts that do not conform shall be closed and eliminated with the area redeveloped to match the adjacent improvements. In the case of a joint-use driveway, the property owner shall at his or her own expense, enter into a written agreement with the city, recorded in the records of Marion County and running with the land, that pre-existing curb cuts on the building site will be closed and eliminated after the construction of both sides of the joint-use driveway.

ACCESS MANAGEMENT PLANS (AMP)

Section 1.12: General Requirements

In addition to any other applicable subdivision and building site design requirements of this Article, the City may adopt Access Management Plans for arterial corridors or in other areas where high traffic volumes are expected. Such plans are not land use

documents, or adopted as elements of the Comprehensive Plan. The intent of these plans is to provide the best access strategy to help assure adequate and convenient access to adjoining businesses balanced against minimizing congestion and safety issues on the streets.

Section 1.13: Access Management Plan Elements

An AMP may address the following issues:

- a. Access to undeveloped property, determining if extraordinary standards should be established to guide future development where the standards of this ordinance may not be appropriate. These extraordinary standards may be more restrictive or less restrictive than the regular standards but must meet the intent of this ordinance.
- b. Access to developed property, identifying existing accesses that can be closed or combined resulting in a reduction in congestion or safety concerns while not damaging the adjoining land use. The results of this analysis can then be used to prioritize and focus programs for implementing this ordinance.
- c. Identification of Cross-Access Corridors in accordance with provisions below.
 - The AMP may designate cross-access corridors on properties adjacent to Arterial Streets.
 - Design of Cross-Access Corridors - Cross-access corridors shall be designed to provide unified access and circulation among contiguous parcels on each block of the arterial, in order to assist in local traffic movement. Each corridor should be designed to include the following elements:
 - a. A continuous linear travel corridor extending the entire length of the block which it serves, or at least 1000 ft linear frontage where feasible along the arterial, and having a design speed of at least 10 mph where feasible.
 - b. Sufficient width to accommodate two-way travel aisles designed where feasible to accommodate automobiles, service vehicles and loading vehicles in accordance with the requirements of the Keizer Zoning Ordinance.
 - c. Stub-outs and other design features that make it visually obvious that the abutting properties may be tied in to provide cross-access.
 - d. Linkage to other cross-access corridors in the area.
 - Easements Required to be Recorded - Wherever a cross-access corridor is designated, no subdivision plat, site plan, or other development shall be

approved unless the property owner shall grant an easement, running with the land, allowing general cross-access to and from the other properties in the affected area. Such easement shall be recorded in the public records of Marion County and constitute a covenant running with the land. In lieu of an easement, with the city's approval, the corridor can be dedicated as a public alley.

- Indication on the Zoning Map - Wherever an AMP designates a cross-access corridor, the corridor shall be indicated on the Official Zoning map by means of dashed or dotted lines or other suitable symbols. This indication shall distinguish those portions of the designated corridor for which easements have been granted.

Section 1.14: Coordinated or Joint Parking Design

Wherever a cross-access corridor has been designated in accordance with Section 1.13 (above), the sites within the affected area shall be so designed as to provide for mutually coordinated or joint parking, access and circulation systems, and shall include stub-outs and other design features as necessary to make it visually obvious that the abutting properties may be tied in to create a unified system.

Development Prior to Abutting Use - In the event that the building site is developed prior to an abutting property, it shall be designed to ensure that its parking, access and circulation may be easily tied in to create a unified system at a later date.

Existing Abutting Uses - In the event that the building site abuts an existing developed property, it shall be so designed as to tie into the abutting parking, access and circulation to create a unified system unless the Planning Director finds that this would be impractical.

Section 1.15: Design to Accommodate Service Vehicles

Each unified access and circulation system shall be so designed that the cross-access corridor(s) and coordinated or joint parking systems will allow adequate access for service and loading vehicle to each business site, and all easements, agreements, and stipulations shall so provide.

Section 1.16: Joint Cross-Access Maintenance Easement

Wherever cross-access corridors or coordinated or joint parking design is provided in accordance with this part, each applicant for subdivision plat or site plan approval shall provide such easements, agreements, and stipulations as may be necessary to ensure that adjoining properties may be easily tied in to create a unified system allowing general cross-access to and from the other properties in the affected area and have joint maintenance responsibility for said easement. Such easements, agreements, and stipulations shall be recorded in the public records of Marion County and constitute a covenant running with the land.

Section 1.17: Tie-Ins to Abutting Properties

Phased Development in Same Ownership - Where the abutting properties are in the same ownership, no subdivision plat or site plan shall be approved unless all building sited within the affected area are made subject to the necessary easements, agreements, and stipulations required by this Part, which shall be recorded as a binding lot agreement prior to the issuance of any Building Permits.

Leasing Situations - Where individual building site(s) within an overall development site are leased rather than owned fee-simple, the development site shall be subject to all requirements of this Part.

Abutting Properties in Different Ownership - Where the abutting properties are in different ownership cooperation between the various owners is encouraged but not required. Only the building site(s) under consideration for development approval shall be subject to the necessary easements, agreements and stipulations required by this part which shall be recorded as a binding agreement prior to the issuance of any Building Permits. Abutting properties developed at a later date shall at that time provide unified access and circulation, together with all necessary easements, agreements, and stipulations.

Where Unified Access and Circulation is not Practical - The Planning Director, in coordination with the Public Works Director, shall be authorized to modify the requirements of this part where it is found that abutting properties have been so developed that is clearly impractical to create a unified access and circulation system within part or all of the affected area.

Appendix E: TPR Compliance Checklist

Requirements/Recommendations	Compliance	Completed
Public and Interagency Involvement: (Indirectly Required-Statewide Goal 1) Ref: Suggested Procedures from ODOT's TSP Guidelines.		
Establish advisory committees	Planning Commission served as TSP Advisory Committee. Additionally, the Bicycle Advisory and Traffic Safety Committees made input.	Yes
Develop informational material, schedule meetings and hearings, and coordinate plan with other agencies	Eleven planning commission meetings and workshops were held. Seven stakeholder meetings, three open houses, and two public hearings were attended. Data, information, and the TSP coordinated with ODOT, MWVGOG, Cities of Salem, and Marion County. Minutes and other records are contained in Appendix F .	Yes
Review Existing Plans, Policies and Standards: (Not Required by TPR) Ref: Suggested Steps from ODOT's TSP Guidelines.		
Review and evaluate existing comprehensive land use and transportation plans.	Plans were initially reviewed in Phase 1 and additional reviews of plans/documents were accomplished.	Yes

Review Existing Plans, Policies and Standards: (Not Required by TPR) Ref: Suggested Steps from ODOT's TSP Guidelines. (continued)		
Review regional and state plans, significant transportation studies, and capital improvement programs.	A listing in the Introduction contains a summary of major programs reviewed. Capital Improvement Program developed as part of this TSP.	Yes
Analyze existing land uses and vacant lands	See Appendix C.	Yes
Review Population and Employment Forecasts	See Introduction and Appendix C.	Yes
Review existing ordinances and zoning, subdivision, and engineering standards	Engineering Standards included in Keizer's Development Code, Section .045/.055, and TSP where applicable.	Yes
Inventory and Assess Existing Transportation Systems: (Required by TPR, Para. 660-12-020(3)(a))		
Street system	The plan contains a basic street inventory for arterials and collectors in the Street System section, along with various assessments. See Table 3 and Figure 2.	Yes
Bicycle/Pedestrian system	See Bike and Pedestrian Chapter 7 and Figures 3 and 4.	Yes
Public transportation service	See Public Transportation Chapter 8 and Figure 5 & Appendix B.	Yes
Air transportation	See Air, Rail, Water, and Pipeline Chapter 9.	Yes

Inventory and Assess Existing Transportation Systems: (Required by TPR, Para. 660-12-020(3)(a)) (continued)		
Freight and rail transportation	See Air, Rail, Water, and Pipeline Chapter 9.	Yes
Water transportation	See Air, Rail, Water, and Pipeline Chapter 9.	Yes
Pipeline transportation	See Air, Rail, Water, and Pipeline Chapter 9.	Yes
Determination of Transportation Needs: (Required by TPR, Para. 660-12-030)		
Identify needs relevant to planning area and scale of network (Include state, regional, local, transportation disadvantaged. Also goods and services to support industrial and commercial development)	Needs are relatively minor. See all chapters.	Yes
Other Roadway Needs: (Not specified in TPR, but needed for Finance Plan, if applicable)		
Safety needs	Accident Locations Noted. Bicycle/Pedestrian Route Needs Identified and Improvements planned. See applicable sections.	Yes
Operations/Maintenance needs	Considered in Finance Chapter 10.	Yes
Public transportation needs	Discussed in Public Transportation Chapter 8.	Yes
Bikeway needs	Discussed in Bike and Pedestrian Chapter 7.	Yes
Pedestrian needs	Discussed in Bike and Pedestrian Chapter 7.	Yes

Develop and Evaluate Alternatives: (Required by TPR, Para. 660-12-035)		
Evaluate potential impacts of system alternatives. Alternatives expected to reasonably meet needs, safe, reasonable cost, available technology	Multi-modal alternatives discussed in respective sections. See TDM & TSM in Chapters 4 & 5.	Yes
Evaluate components of system alternatives: improvements to existing, new (including different modes), TSM, TDM, and no-build.	Multi-modal alternatives discussed in respective sections. See TDM & TSM in Chapters 4 & 5.	Yes
Evaluation standards: support development with transportation appropriate to serve land uses; consistent with air, land, water quality; minimize economic, social, environmental, energy consequences, minimize modal conflicts, and reduce principal reliance on automobile.	Multi-modal alternatives discussed in respective sections.	Yes
Interim Benchmarks-Five Year Intervals	Established. See Tables 10 & 11.	Yes
Produce Transportation System Plans: (Elements contained in TPR, Para. 660-12-020)		
Street Plan-Arterials and Collectors (Functional Class and Access) Standards for Local Roads (Bike and Ped, Extensions and Connections)	See Development Code and Chapter 3.	Yes
Public Transportation Plan	See Chapter 8.	Yes
Bikeway and Pedestrian Plan	See Chapter 7.	Yes
Airport element	See Chapter 9.	Yes
Freight and rail elements	See Chapter 9.	Yes
Water transportation element	See Chapter 9.	Yes
Pipeline element	See Chapter 9.	Yes
Parking Plan	See Chapter 6.	Yes

Produce Transportation System Plans: (Elements contained in TPR, Para. 660-12-020) (continued)		
Finance Plan	See Chapter 10.	Yes
Implementation and Adoption: (Required by TPR, Para. 660-12-015, 045, and 055)		
Plan Review and Coordination	Review by city staff, Planning Commission, and general public at meetings and open house.	Yes
Adoption	Recommendation by Planning Commission & Adoption by City Council anticipated by January 2000.	No
Ordinances (Including enabling, protection, and encouraging)	Access Management See Appendix D.	Future Action Required
Financing/Capital Improvements		
Proposed Improvements	Cost Estimates and general timing shown in Finance Chapter 10.	Yes

Sources: *Transportation System Planning Guidelines, ODOT, August 1995 (Appendix 2).*
Oregon Administrative Rules, Chapter 660, Division 12 - Land Conservation and Development Commission.

Appendix F - Public Involvement

Public involvement is a vital part of the TSP planning process. The Keizer TSP was developed cooperatively with input from interested citizens, the Planning Commission, Salem Area Mass Transit District, ODOT and the Department of Land Conservation and Development. Open houses for development of the TSP were conducted in:

Open House/Stakeholder meeting	June 23 rd 1998	Keizer City Hall
Gubser Neighborhood Association Meeting	July 16 th , 1998	
K-NAG meeting	July 27 th , 1998	
Clear Lake Neighborhood Association	Sept 17 th 1998	
Open House	April 8 th 1999	Keizer City Hall

Public Comment Notes

Sidewalks/Pedestrian Amenities/Bike Lanes

- Sidewalks needed- Tepper Lane, Lockhaven (east part), Chemawa, Verda, older areas, most collectors
- Bike Lane-pedestrian path under BPA power line (and bridge over Labish ditch)
- Trail needs wider sidewalks
- Bike lanes need to be bigger generally
- Need ped-bike connection to Gubser elementary from Country Glen neighborhood and Park Meadow (currently 5 buses go around)
- (Hidden Creek subdivision had trail through)
- Bike path needed on 35th (Marion County)
- Need bike path on Windsor Island to Spongs Landing
- Bridge from Swingwood restored (needs to be sensitive to flood concerns, wither low enough or can swing out of the way)
- West Keizer neighborhood has undeveloped streets need pedestrian/bike and lighting amenities
- Need pedestrian crossings on Chemawa
- Need sidewalks on Chemawa (is in urban renewal plan)
- Pedestrian connection between Country Glen subdivision and Gubser Elementary school- need to study
- South side of Chemawa needs bike lanes (issue w/state?)
- Bike lanes down both sides River Rd, also look into landscaping/medians etc.
- Crosswalk at River Rd by BiMart is very dangerous- visibility an issue (Iris Lane should take care of problem)
- River Road should be one lane each way with bike lanes
- SE Keizer need pedestrian connections to Cherry Ave
- Claggett Creek needs sidewalks /pedestrian rights of way to commercial uses

- Claggett Creek ped-bike way along Claggett Creek (part of mitigation plan both SE Keizer and Claggett Creek Neighborhood associations support)
- Clearlake sidewalks needed: O'Neil, Clearlake, Wheatland and bike lanes (not bikeways)
- Verda Lane is too narrow, no bike lanes or sidewalks (and is probably 3rd largest street in city)
- Need bike lanes on Radiant Dr and Temper
- Need ADA compliance on sidewalks
- Claggett Creek neighborhood wants to walk not use cars - need sidewalks

Safety Issues on Roads

- Onto Lockhaven from River Road (traveling south) left had turn dangerous
- Perkins and River Road is a dangerous intersection
- Cars parked in bike lanes
- Bike lanes into traffic where cars have to turn (like Chemawa to Lockhaven)
- New developments off Wheatland causing congestion - 40 mph too fast
- Private streets with no parking unenforceable and dangerous in an emergency (people park there anyway)
- Clear lake Neighborhood association speed limit on Wheatland Rd is being reduced (good) check into whether can get to 35 mph
- O'Neill Rd subdivisions only partially improved causes traffic hazards - 350 new residences, need improvements all through (same problem for Wheatland Rd)
- Park Meadow traffic calming devices wanted, too many accidents/people are continually breaking speed limit, stop sign helped but still a problem, school zone seems small, need a bigger one
- Lower neighborhood speed limit to 20 mph and need traffic calming devices
- ODOT 85 percentiles shouldn't dictate speed limit on Keizer roads
- At Verda and Chemawa traffic just pulls up and goes without stopping
- SPEEDING IN RESIDENTIAL AREAS - need stop signs, schools have major through traffic, need to improve what we have
- Speeding from schools- West Keizer
- Need traffic lights for schools
- Lockhaven runs right by middle school, speeding also 14th and Gubser- speeding/need to slow down, Lockhaven should be one-way street
- Traffic calming devices - all types (TSC is looking at)
- Need photoradar
- Gubser Neighborhood impacted by north development -rumor of road bridge (bad idea) - foot bridge over creek being proposed now
- Staats Lake area size of streets too narrow
- Traffic calming devices needed on 14th -road is wide/straight/school need trees, narrow, lights set to slow traffic
- Streets must be wide enough for fire trucks (look at Portland study)
- Safety education on issue of speeding through neighborhoods
- Cade St is narrow St example - residents didn't want improvements
- Need no parking on both sides of Claggett from River Road to 7th (safety problem: no vision clearance from cars (nursing home employees) on corner of 7th and Claggett is school bus stop- dangerous situation)

- Clear vision are in mixed use zone is a problem (can't see around cars- Chemawa)

New Streets (or new uses of existing streets)

- Need arterial/collector improvements
- Chemawa needs widening and improvements (bike/ped)
- Some way to get to Gubser Neighborhood besides 14th and Manzanita without creating through traffic - need north collector from Gubser
- Chemawa-Lockhaven needs to be re-designed, split traffic between Lockhaven and Chemawa (Lockhaven has 4 schools and freeway through traffic- Chemawa needs to add capacity)
- Need I-5 North exit at Perkins or Quinaby
- Verda-Trail connector
- Need light at Chemawa and River Road
- Be creative on getting to freeway (curves are ok - look at Forest Grove)
- East / west connector street up north, improvements to Clear Lake area
- Consider changing collectors/ need north collector
- Need east/west collectors and north/south collectors
- Should uses Chemawa to get to freeway (interchange) / Peterson Loop/Chemawa activity center study/status of?
- North developments must go through Gubser neighborhood to get to freeway, need north freeway access (at Perkins or Quinaby)
- Alder Street extension (will remedy Cherry Ave-Dearborn cut through traffic to points east)
- Re-align S curves on Chemawa (current undeveloped property) (may be developing now)
- Keizer Rd - need to extend bumps to block cars from bike lane
- Widen River Road all the way to Brooklake Road (Marion County)
- 14th St should not be a collector

Study Areas

- Peterson Loop- Chemawa Activity center - look into
- Look at Peterson Loop/Chemawa activity center
- Status of the Chemawa activity center, need to consider traffic impacts from possible development/coordination with agencies
- Protected Left turn signals were taken out of some lower volume intersections of River Road - study to see if better now

Traffic

- Too much traffic on River Rd, so much that residents have to turn right because waiting in the center lane is illegal, sidewalks are the bike lanes on River Rd
- West Keizer -Shoreline traffic due to congestion on River Road -using it as a cut-through
- Lockhaven Dr - right hand turn off 14th in plans is a bad idea, middle school traffic
- Clear Lake cut through down Lockhaven down 14th
- Claggett Creek cut through traffic- Claggett -10th and 7th to Chemawa
- Entering City from south is a confusing traffic situation

- River Rd lights are synchronized - probably can't improve
- Stadium traffic issues
- Consider/revisit rerouting school buses from Whiteaker to McLeod (instead of exiting/entering on Lockhaven)
- Stadium traffic through Gubser neighborhood should be stopped
- Make driving more difficult and use mass transit
- Slow River Road traffic to 30 mph, re-sequence lights

Transit

- Encourage transit, need transfer station (like Portland Barbur Blvd) need central area in Keizer (last funding issue passed and improvements were supposed to be made in Keizer - check transit plan)
- Need central bus station in Keizer
- Bus/trolley up and down River Road
- Need bus-trolley
- Buses too big for neighborhood streets (Cherriots is planning natural gas buses which are smaller - 30ft vs. Current 35-40 ft) even smaller buses for neighborhoods (like Denmark)
- Radiant Drive needs bus
- Buses go too fast
- Bus shelters need maps (and clocks)
- Transit route currently cuts through Gubser neighborhood through Manzanita to McLeod (should use Lockhaven to get to McLeod if not picking up riders in Gubser - don't use as cut through)
- Need expanded bus route (Cherriots is expanding Ventura and 14th and 15th and Rd north of Park Meadow)
- Need bus turn outs so people can get by stopped bus
- Pull-outs for buses along River Rd (see River Rd master plan)
- Pull-outs for buses in new subdivisions
- Bus stop at BiMart requires bus to make left hand turn ½ block later on Sunset - impedes traffic needs, to be rerouted (Cherriots can consider an exemption at stop)
- Problems getting cut off by bus, state law requires yielding to bus blinker
- Need bus for stadium (right now bus service ends before game ends)
- Need park and rides in Keizer (somewhere near Freeway)
- Better marked transit routes
- Need Clearlake-Wheatland-O'Neil bus route with turn outs (lots of houses going in)
- Cherry Ave stop is problem from Salem - people can't cross Cherry Ave easily -some ride all the way through town to get out of the bus on the right side of the street

Bridge

- Bridge study - concerns about location, if in Keizer make sure input on streets, some consensus on keeping bridge location in Salem not Keizer
- Opposed to bridge from Keizer to West Salem - keep bridge up north where ferry is or off-Salem Parkway
- Need coordination with bridge location

General

- When UGB expands it will be north- constraints are wetlands
- Consider traffic calming impacts on business
- Study traffic from east -where from where going
- Keizer welcome sign - need protection like metal bars (is in City of Salem)
- Consider neighborhood safety not vehicle movement
- Allow reduced density
- Some streets need to carry the traffic- even if through a neighborhood
- Running out of room - UGB vs. Everyone wants house with lot
- Keep people on arterials and collectors, not through neighborhoods, have narrow streets in neighborhoods, improve collectors, make difficult passing through neighborhoods
- Don't plan for peak hour traffic - design for what you want
- On new developments - don't make right-of-way too skinny for when you need capacity
- Street system works pretty well
- Consider stricter regulations on development
- River Road turning left from Park Meadow view obstructed - fence to north and poor configuration on south side
- Need sidewalks on Wheatland Rd
- Clearlake as a collector?
- Problem with parking and driving on bike lanes (an unfinished bike lanes) on Wheatland
- Problem for kids crossing River Road from Country Glen to Meadows park - walking and on bike (some Country Glen school kids still go to Clear Lake)
- Wheatland is also unsafe to get across - need a legal pedestrian crossing
- Sidewalks deficient on O'Neil Rd
- Transition between built and not yet built roads in newly developed areas dangerous - maybe need no parking or signs for transition
- Clear Lake needs bike lanes
- Traffic on Clear Lake will increase with the surrounding new developments
- Brooklake easy I-5 access
- Conflicts with truck traffic on Brooklake and also visibility problem with the dip in the road
- Park and Ride by freeway has maintenance problems - it is muddy
- Need shuttle/ park and ride to Portland - Cherriots and TRIMET need to coordinate
- Need traffic calming devices on Park Meadow
- BUS ON PARK MEADOW (Resolved There is now a bus on Parkmeadow)
- Problem with buses speeding
- Wheatland/ River Road intersection needs a light. Cars line up on left turn lane. Light at McNary instead of Wheatland doesn't make sense.
- Lockhaven needs a north connector street that is not a neighborhood street
- (People from Clear Lake use cut off to get to Lockhaven quickly - Trail/Harmony/14th- need something more appropriate)
- One suggestion is to use Perkins as a limited access road and fix intersection with 35th and develop road better to enter Lockhaven by Freeway

Rail

- Train tracks that run north and south near interchange - possible trolley to access stadium - other uses
- Save rail road tracks for trolley
- Burlington Northern railroad - keep for commuting from Eugene-Portland with feeder bus connection to downtown Keizer
- Need commuter rail - Claggett Creek neighborhood wants train to Portland and Salem

Appendix G – Document Listing

	Publication Date
State of Oregon	
Directory of Public Transportation Services	January 1996
Highway Compatibility Guidelines	June 1987
Oregon High Speed Rail Business Plan	August 1994
Oregon Administrative Rules, Chapter 660, Division 12	1999
Oregon Shines II	January 1997
Oregon Bicycle and pedestrian Plan	June 1995
1999 Oregon Highway Plan	March 1999
Oregon Inter-city passenger Times-tables	Spring, 2000
Oregon Public Transportation Plan	April 1997
Oregon Rail Freight Plan	August 1994
Oregon Transportation Plan	September 1992
State Agency Coordination Program	December 1990
2001 Statewide Transportation Improvement Program (STIP)	December 1997
Transportation System Planning Guidelines	August 1995
Willamette Valley Transportation Strategy – Phase I Report:	May 1995
Commuting in the Willamette Valley	May 1998
City of Keizer	
Comprehensive Plan	1987
Development Code	May 1998
North River Road Alternative Modal Opportunity Study	1995
River and Chemawa Design Study	1995
Interstate 5/Chemawa Road	1995
Alder Street Study	1996
An Ordinance Regulating the Reconstruction, Alteration	

and Repair of Sidewalks (No. 86-074) 1986

City of Salem

Salem Transportation System Plan
(Amended October 1999) August 1998

Vanpool Guide (Pamphlet) Undated

Miscellaneous

1994 Origin & Destination Surveys - SKATS May 1995

Portland State Population Projections 1998

Regional Transportation Systems Plan, 1996 Update - SKATS 1996

Regional Public Transportation System Element - SKATS January 1996

Salem Passenger Rail Station Study - SKATS June 1995

Salem/Keizer/Polk County/Marion County Bicycle Maps 1996

Planning for the Transportation Disadvantaged
in Marion and Polk Counties - SAMTD March 1998

Moving Towards Action - SAMTD August 1998

Options for passenger Rail in the Pacific Northwest Rail Corridor
(Executive Summary) - ODOT/WSDOT 1995