SKATS Regional Transportation Systems Plan (RTSP)

The Salem-Keizer-Turner area 2030 Regional Transportation Systems Plan was adopted by the SKATS Policy Committee in June, 2005. For an overview of the major highlights of the 2030 RTSP, see the RTSP brochure.

Scroll down for links to the 2030 RTSP, including text and maps

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The RTSP is based on 20-year projections of population, employment, and land use in the Salem-Keizer area. It provides a comprehensive, long-range plan for meeting our transportation needs over the next 20 years. The main portion of the plan identifies projects that have a reasonable certainty of being funded and result in an improvement in the air quality of the area. Another portion of the plan describes those transportation projects that the area would like to implement if additional funding was secured.

The 2030 RTSP brings the Plan to date in three areas: 1) the existing financial projections for revenue and estimated project costs were extended from 2025 to 2030; 2) Revised population and employment estimates and forecasts were calculated for 2000 to 2030; and 3) the 2030 Plan includes projects (road, bike, and pedestrian) from the trnaposrtation plans for Salem, Marion County, Keizer, Turner, Polk County, and ODOT, as well as concepts and projects introduced in Salem-Keizer Transit's recently adopted Strategic Business Plan.

The 2030 RTSP is available on CD-ROM by request and at the Salem Public Library. It can also be downloaded through this website. Click on the links below to download or read each chapter of the RTSP. Also available are the maps and graphics for each chapter in PDF format. Click here to download a free copy of Adobe Acrobat Reader.

The Chapters of the 2030 RTSP

RTSP Brochure - An overview of the 2030 RTSP and the issues that it addresses is presented in the brochure.
-RTSP Brochure (PDF formatted)

- **Executive Summary**
- **Chapter 1**, Introduction, describes the purpose and goals of the Regional Transportation Systems Plan and provides an overview of the rest of the document.
  -Chapter 1 (PDF formatted)

-Map 1-1: SKATS TMA Boundary (PDF formatted)

- **Chapter 2**, Livability, discusses issues related to livability and growth in the region.
  -Chapter 2 (PDF formatted)
- **Chapter 3**, Population and Employment, discusses the increases in population and employment that the region is forecasted to experience by 2025.
  -Chapter 3 (PDF formatted)
  -Map 3-1: Population (2000) & Employment (2000) and Forecasts 2030 (PDF formatted)
- **Chapter 4**, Travel Characteristics, provides an overview of travel into, out of , and through the area, detailing all modes where data is available.
  -Chapter 4 (PDF formatted)
- **Chapter 5**, presents a financial analysis of the costs and revenues associated with the regional transportation systems and evaluates the ability of the region to maintain and operate the existing systems and to afford the investments called for in the Plan.
  -Chapter 5 (PDF formatted)
- **Chapter 6**, the Regional Pedestrian System, discusses a regional policy framework for the pedestrian facilities of regional significance.
  -Chapter 6 (PDF formatted)
  -Map 6-1: Regional Pedestrian System (Multi-Use Facilities) (PDF formatted)
- **Chapter 7**, the Regional Bicycle System, deals with the bicycle facilities of regional significance.
  -Chapter 7 (PDF formatted)
  -Map 7-1: Existing and Committed Regional Bicycle Facilities (PDF formatted)
  -Map 7-2: Recommended Improvements to the Regional Bicycle System (PDF formatted)
- **Chapter 8**, the Regional Goods Movement System, addresses issues related to the regionally significant movements of freight on the regional highway, rail, aviation, maritime, pipeline, and intermodal freight systems.
  -Chapter 8 (PDF formatted)
  -Map 8-1: Regional Goods Movement Network (PDF formatted)
  -Map 8-2: Regional Pipeline System (PDF formatted)
  -Map 8-3: Existing Regional Freight-Supportive Roadways (PDF formatted)
  -Map 8-4: Recommended Improvements to Freight-Supportive Roadways (PDF formatted)
- **Chapter 9**, the Regional Aviation System, describes the aviation services of regional significance.
  -Chapter 9 (PDF formatted)
  -For map of Regional Aviation System, see Map 8-1, Regional Goods Movement Network
- **Chapter 10**, the Regional Maritime System Element, deals with the ferry system in the region.
  -Chapter 10 (PDF formatted)
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Chapter 11, the Regional Rail System, discusses the regionally significant rail services and facilities.
-Chapter 11 (PDF formatted)
-Map 11-1: Regional Railroad System (PDF formatted)

- **Chapter 12**, the Regional Intermodal System, deals with issues related to the regionally significant intermodal movements of people and goods in the SKATS area.
  -Chapter 12 (PDF formatted)
  -Map 12-1: Intermodal Facility Sites and Industrial Areas (PDF formatted)
- **Chapter 13**, the Regional Transportation System Efficiency Management System, addresses the regionally significant programs and actions to reduce reliance on the single-occupant vehicle, achieve more balance among transportation modes, and improve system efficiency.
  -Chapter 13 (PDF formatted)
  -Map 13-1: Downtown Carpool and Vanpool Locations (PDF formatted)
  -Map 13-2: Park-n-Ride Locations (PDF formatted)
  -Map 13-3: Park-n-Ride Locations Greater SKATS Area (PDF formatted)
  -Map 13-4: Congestion Management System Corridors (PDF formatted)
- **Chapter 14**, the Regional Public Transportation System, deals with the region's mass transit, ADA/Elderly-related, intercity public transportation, and private-for-hire transportation systems.
  -Chapter 14 (PDF formatted)
  -Map 14-1: 2003 Transit Routes (PDF formatted)
- **Chapter 15**, the Regional Roads and Highway System, deals with the roadway system of regional significance.
  -Chapter 15 (PDF formatted)
  -Map 15-1: Regional Road Network (PDF formatted)
  -Map 15-2: Regional Functional Classification System (PDF formatted)
  -Map 15-3: 2025 Recommended Project List (PDF formatted)
  -Map 15-4: 2025 Committed Projects (PDF formatted)
- **Chapter 16**, Outstanding Issues and Next Steps, describes the regional transportation system problems that remain beyond the implementation of the Plan and outlines the processes the region will undertake to address those problems.
  -Chapter 16 (PDF formatted)

Please contact Ray Jackson at (503) 588-6177 or e-mail him at rjackson@mwvcog.org if you have any questions about the current RTSP process.

The near-term (four-year) implementation and funding schedule for the improvements called for in our adopted RTSP is contained in the SKATS Transportation Improvement Program (TIP).

Information related to the major non-highway transportation services available in our region can be found by contacting the Salem Area Mass Transit District (Cherriots), the Regional RideShare Program, and the (TDM) Regional Transportation Demand Management Program.

How can I learn more?

View the Plan on the Web

You may view the entire contents of the Regional Transportation Systems Plan, Transportation Improvement Program, and Air Quality Conformity Determination by visiting our website at www.mwvcog.org/transportation/skats.asp

Need a Speaker?

Learn more about projects in the Regional Transportation Systems Plan by scheduling a presentation for your business or community organization.

SKATS

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We'd like to hear from you!

Open House

April 6, 2005
4:00 p.m. to 7:00 p.m.
109 High St SE, Salem, Oregon

Public Hearing

April 26, 2005
12:00 Noon
Courthouse Square
Senator Hearing Room
555 Court St NE, Salem, Oregon

2030 Regional Transportation Systems Plan

River Crossing Study Update

The Willamette River Crossing Capacity Study (2000) identified the Tryon/Pine Corridor as the preferred location for the eastern terminus of a new bridge across the Willamette. The next step is to conduct environmental, design, and public involvement activities necessary to prepare an Environmental Impact Study (EIS) on a project to construct a bridge in this corridor. The EIS will also seek to identify a combination of funding sources to construct the preferred alternative. To protect the right-of-way that is identified, $20 million is allocated over the life of this Plan. This is the first step for the region to take to show its commitment to the construction of a new bridge.

Another bridge in the Kuebler-Doaks Ferry area is identified as an outstanding issue on which regional consensus has not been achieved.

The Metropolitan Planning Organization for the Salem-Keizer-Turner area is conducting an update of the Regional Transportation Systems Plan. Federal rules require an update every three years.

What's new in this plan?

- The existing financial projections for revenue and estimated project costs were extended from 2025 to 2030. These projections show an ever widening gap between the cost of projects needed in the area to maintain mobility, and funds available to implement them.
- Revised population and employment forecasts were calculated for 2000 to 2030, based on the 2000 US Census and work with the local jurisdictions to allocate them to the appropriate areas of the region.

	2000	2030
Population	214,583	297,608
Employment	91,888	127,608

- The 2030 Plan includes projects (road, bike, and pedestrian) from the transportation plans developed for Salem, Marion County, Keizer, Turner, Polk County, and ODOT. Concepts and projects introduced in the Transit District's recently adopted Strategic Business Plan are also included. All of the projects identified in this plan have received community support in the past.

Outstanding Issues

This Plan does not provide solutions to all of the transportation issues that face the region. Some of these "outstanding issues" include:

- Compliance with state requirements that the Salem-Keizer area increase the use of non-automobile modes.
- Additional projects that are undergoing further study or implementation: the I-5 interchanges at Chemawa Road and Kuebler Boulevard, OR 22 East (25th to Gaffin Road), and OR 22 West (OR 51 to Willamette River Bridges).

Other documents are also being updated

The **Transportation Improvement Program** provides a schedule of short-term improvements to address the most pressing transportation issues in the region.

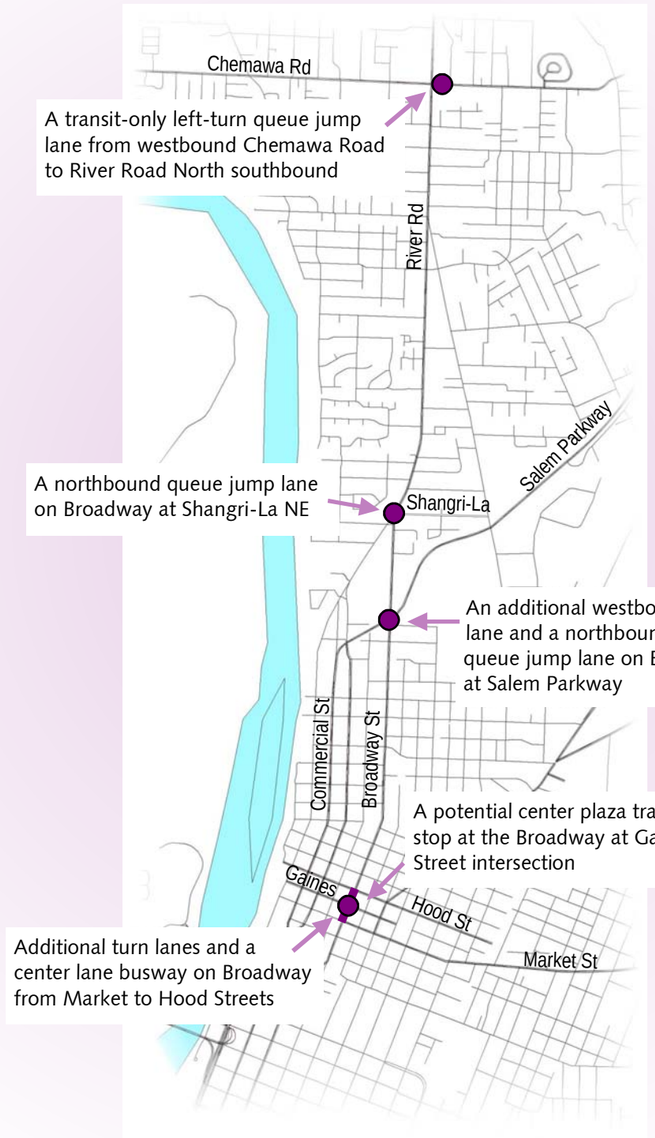
The **Air Quality Conformity Determination** documents compliance with federal and state air quality regulations.

Broadway/River Road North High Priority Transportation Corridor

After a comprehensive study, the Broadway/River Road North corridor has been selected as the prototype corridor for a series of low-impact improvements that will benefit both transit and automobiles. The proposed projects would include intersection improvements, a short busway, transit queue jumps, transit-activated green-time extensions and signal phases, bus stop improvements, the use of intelligent technology systems, and pedestrian amenities.

Why are we looking at ways to improve transit?

Traffic in our area has been getting worse and congestion is predicted to increase in the future. One way to address congestion before it becomes a serious problem is to plan ahead and provide more transportation choices. Providing for a more efficient transit system gives us more transportation options. The improvements recommended for the Broadway/River Road North corridor will improve transit schedule reliability, reduce transit travel time, and reduce automobile congestion at some intersections.

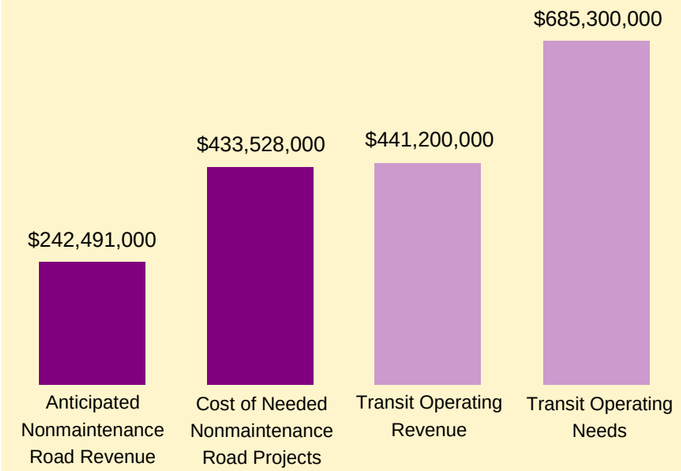


A **busway** is a dedicated bus lane that keeps buses separated from other traffic—a major factor in improving travel times for all vehicles on the road. In the future, as traffic congestion increases, bus travel times will be maintained. Landscaping within the busway increases green space and improves the overall appearance of the corridor.

Queue jumps are implemented in corridors where buses operate within the flow of traffic, and provide a short bus-only "passing lane" to allow buses to bypass vehicles stopped at a traffic light. Once in its own lane, the bus gets an advanced green signal ahead of the automobile traffic to clear the intersection and get back into the regular traffic lane.

Financial Situation

The money we use to operate, maintain, and improve our transportation system has not kept pace with our increasing needs. A large portion of our revenues are used to maintain our existing system. Although the number of cars on the road is growing, our ability to fund improvements is shrinking due to improved vehicle gas mileage, inflation, and other funding cutbacks. The 2030Plan identifies a shortfall of needed funds for both nonmaintenance road improvement projects ($191 million shortfall) and transit operating needs ($244 million shortfall). In addition, several transportation issues face the region where solutions have yet to be identified.



Executive Summary

The adopted Regional Transportation Systems Plan (RTSP) represents a comprehensive policy and planning blueprint for investments and strategies related to the regionally significant transportation systems in the Salem-Keizer-Turner urban area. The RTSP provides coordination and guidance for implementing agencies such as ODOT and the local jurisdictions to provide a multimodal, regionwide transportation system that is effective, efficient, and sufficient to meet the changing needs of our citizens. The RTSP has a rolling, 20-year horizon, and coupled with the transportation systems plans (TSPs) adopted by the local jurisdictions, Salem-Keizer Transit (SKT), and the Oregon Department of Transportation (ODOT), provides a consolidated areawide transportation plan for the entire Salem-Keizer-Turner urban area. The RTSP encompasses all long-range planning and project improvement activities associated with the regionally significant portions of the area's highway, transit, ridesharing, park-and-ride, bicycle, pedestrian, TSM, TDM, intermodal, ITS, goods movement, and other transportation-related systems.

To ensure that the RTSP continues to adequately reflect current and projected demographic, travel demand, economic, environmental, and regulatory conditions, timely updates are necessary for the plan to remain relevant and useful. Federal statutes currently require RTSP updates at three-year intervals.

The last RTSP Update was adopted in 2002. In addition, the Air Quality Conformity for the adopted RTSP expires August 15, 2005. As a result, SKATS must adopt or re-confirm a conforming, fiscally constrained, 20-year horizon RTSP by the air quality conformity determination expiration date.

The principal changes that usually necessitate a major revision to the currently adopted RTSP include:

- major changes in the adopted land uses of the local jurisdictions within the SKATS area;
- major updates to the financial projections from ODOT based on the enactment of a new surface transportation act at the federal level as well as new assumptions regarding the state of the economy in Oregon and the level of revenue anticipated from the state gas tax and other receipts; and
- completion of major planning studies resulting in the identification of regionally significant improvements and the funding necessary to implement those improvements.

Generally speaking, in any given three-to-five year span, one or all of the above conditions can be altered significantly enough such that a major, comprehensive update to the adopted RTSP is required in order to address those changes and maintain currency. In SKATS' case, however, none of the principal planning parameters have changed meaningfully enough since the last Plan Update in 2002 to require a major update of the currently adopted SKATS RTSP at this

time. Instead, minor updates to selected portions of the Plan have been completed. These are primarily focused on reconciling the project lists in the RTSP with those contained in locally adopted transportation plans to ensure that projects that require federal funding will be eligible by being listed in the RTSP.

Local Jurisdictional Adopted Comprehensive Land Use Plans. The cities of Salem and Keizer are still actively engaged in their respective visioning and implementation processes regarding the location and form of various types of potential alterations to their adopted Comprehensive Land Use Plans. Without clear direction on the part of the local jurisdictions as to the nature, location, and timing of specific land use changes, it would be both premature and presumptive for SKATS to attempt to model a set of population and employment allocations that would be based upon an undefined series of potential revisions to currently adopted land use plans. In concert with the affected local jurisdictions, SKATS produced updated year 2005 base and projected year 2030 population and employment numbers based on the currently adopted Comprehensive Land Use Plans of our member jurisdictions, and taking into account such new development as the local jurisdictions were confident would occur. This approach is totally consistent with the requirements of the federal planning regulations and avoids any perceptions that the RTSP process is attempting to prematurely project the results of the local visioning efforts. As the local land use planning processes proceed, SKATS will provide travel demand outputs of alternative "scenarios" related to specific requests from members concerning the potential impacts on the transportation system of land use changes that the jurisdiction intends to adopt.

Financial Projections. Until Congress enacts a new Surface Transportation Act, the amount of transportation funding SKATS can expect from federal and state sources is largely unknown and subject to significant revision, even for the current fiscal year. In addition, SKATS is required to employ the financial projections provided by ODOT as a basis for determining the amount of federal and state dollars likely to be available to the area over the 20-year horizon of the RTSP. ODOT released financial projections in December 2004, without specific detailed estimates of the level of federal participation due to the uncertainty of the new authorization. It is expected that once a new Surface Transportation Act is enacted by Congress, the financial estimates in the RTSP will be updated and amended into the document. SKATS will monitor this process and continue to update the financial projections associated with the Plan as new information becomes available.

Newly Identified Regionally Significant Transportation Improvements. The 2005 SKATS RTSP Update incorporates the corridor concept and prototype improvements recommended in the High Priority Transportation Corridor Study. The HPTC study concluded that the Broadway/River Road North Corridor connecting Salem and Keizer is the most appropriate corridor for the implementation of a series of transit-supportive improvements designed to make the transit trip more efficient and attractive. Although several improvements to both the facilities and the transit service itself were recommended, additional public outreach and input are necessary before a specific set of improvements is included in the SKATS Transportation Improvement Program (TIP) for construction. As a result, continued planning efforts are necessary to define the specific nature and timing of the preferred improvements in this corridor, as well as address the other major planning questions identified as outstanding issues in the 2005 RTSP Update, such as the Salem Bridge EIS; Highway 22/Cordon Road; the I-5 Interchanges with Kuebler and Chemawa; Highway 22 west of the bridgehead; etc.

1 - Introduction

Overview

Description of the Problem

Since World War II, our travel choices and our land use actions have combined to produce a behavioral and development pattern that depends on the single-occupant vehicle (SOV) for meeting our daily travel needs. Over the recent past, the number of automobiles per person of driving age in our region has nearly reached a one-to-one ratio. In addition, the number of daily trips per person that we make driving alone in an automobile has been steadily increasing as our lives have become more complex and our opportunities more diverse. Compounding these trends, the region is expected to grow by nearly 39 percent (both in jobs and residents) over the next 25 years. As a result, future travel demand projections strongly indicate an ever-widening gap between the amount of vehicular travel demand and the physical capacity of the transportation system to adequately accommodate it, particularly during the morning and evening peak travel periods.

There are, however, several reasons why merely adding additional new highway capacity to our transportation system, and continuing to promote "automobility" at the expense of mobility, is probably not the best way to meet our overall livability goals. First, automobile emissions are a major polluter of our airshed even with recent improvements in technology. Second, even if vehicles did not pollute the atmosphere, there are significant right-of-way constraints associated with siting new and widened highway facilities and an increased reluctance in our neighborhoods to convert more land to pavement. Third, the negative impacts on our livability resulting from the disruption, dislocations, fragmentation, air and water pollution, and physical danger associated with new and expanded highway facilities are often unacceptable. Fourth, construction of new highway capacity is generally very expensive, and due to the increased costs necessary to maintain the system we already have, there are progressively limited amounts of tax dollars to finance and subsidize the capital expenditures associated with these types of projects. Finally, the increasing rate of growth in vehicle travel relative to the overall increase in the amount of total person and goods movement being provided (less people and goods being moved in each vehicle), produces a gradual, but noticeable, decline in the operational efficiency of our transportation system. All of these conditions are made worse by the expansion of automobile-dependent development patterns. As a consequence, we need to continue to diversify and balance our transportation system investments and land use actions so that we can:

- provide viable modal alternatives to the single-occupant automobile (such as transit, carpooling, bicycling, and walking);

- encourage the use of those alternative modes in our daily trip-making activities;

- maximize the efficiency of the transportation investments we have already made in our existing system;

- improve the connectivity and flexibility of our transportation systems; and

- increase our overall mobility and reduce transportation-related impacts that contribute to the degradation of our livability.

Why do we need a regional transportation plan?

The daily movement of people and goods in our region crosses several city and county boundaries and results in transportation problems that require cooperative and coordinated efforts to solve. In addition, the transportation facilities in our region are owned and operated by a complex mixture of different entities, such as the cities, counties, Salem Area Mass Transit District, and the Oregon Department of Transportation (ODOT). In order to ensure a seamless overall transportation network, it is critical that the planning for investments in our system be consistent and integrated. Furthermore, some activities, like rideshare promotion programs, need to be implemented on a region-wide basis to be most effective. Finally, the interdependence of mobility and the other aspects of the quality of life in our region, such as affordability, environmental considerations, and access to opportunities, requires a broad and comprehensive approach to system planning and development. Often, changes in one area affect many others and we need to evaluate the impacts of transportation actions carefully in the context of our overall livability.

The development of the Regional Transportation Systems Plan represents a cooperative effort of the Salem-Keizer Area Transportation Study (SKATS), the cities of Salem, Keizer and Turner, Marion and Polk counties, the Salem Area Mass Transit District (SAMTD) and the Oregon Department of Transportation (ODOT). Adoption of this Plan represents:

- endorsement by the affected jurisdictions of the level and location of transportation investments needed to adequately serve the land use patterns contained in the adopted local comprehensive plans and the expected growth in the region over the next 25 years;

- endorsement of a set of 10-year regional priority improvements to the regional transportation systems;

- endorsement of the interrelated roles of the individual modal systems (highway, public transportation, bicycle, pedestrian, rail, aviation, and maritime), as well as the regionwide goods movement, intermodal and efficiency management systems;

- endorsement of the definitions and functions of the transportation systems of regional significance;

- a commitment to cooperatively seek the necessary funding for the implementation of the investments called for in the Plan;

- fulfillment of federal and state requirements as a condition for the continued receipt of federal and state transportation funds.

What area does the regional transportation plan cover?

The SKATS Regional Transportation Systems Plan (RTSP) covers the cities of Salem, Keizer, and Turner and portions of Marion and Polk counties that are within the SKATS boundary. The SKATS area is shown in **Map 1-1** and can be described in general terms as being bounded on the south by Hylo and Delaney Roads and the Turner Urban Growth Boundary and on the north by Brooklake Road. The eastern boundary is composed of Witzel Road, 72nd and 71st around Highway 22, then following 63rd north till the Little Pudding River. The western edge is just past the Highway 22/51 intersection, following Oak Grove until Orchard Heights and then north along Eagle Crest and Spring Valley to Oak Knoll.

What is the overall goal of the regional plan?

The goal of the Regional Transportation Systems Plan is to provide an adequate level of mobility for area residents and businesses while maintaining or improving the overall quality of life in the region.

In addition to identifying improvements needed on the regional transportation systems to provide adequate levels of mobility and increased safety, this Plan also embodies policies, programs, and strategies that serve to:

- make more efficient use of the transportation facilities we already have by increasing people and goods capacity, rather than merely vehicle capacity;

- develop a more balanced multimodal transportation system by providing viable options for mode choices other than just the single-occupant vehicle. This entails the improvement of transit service, bicycle facilities, and pedestrian amenities and can reduce our near-total reliance on the automobile for our mobility needs;

- improve the connectivity and accessibility of our system for the intermodal movements of both passengers and freight;

- recognize the impact transportation choices have on the environment, whether it be air or water quality, and the community around us and its livability;

- recognize the important interrelationship of land use patterns and transportation infrastructure and promoting land use, zoning, and architectural design choices that support a more balanced, efficient transportation system; and

- balance overall system costs and anticipated revenues. Currently, we can barely afford to operate and maintain basic levels of service on the systems that we already have. We must continue to develop extremely cost-effective solutions that do not require massive capital outlays or jeopardize our ability to preserve the system that is currently in place.

Content of the regional plan

To achieve these goals the RTSP identifies and evaluates current and expected problems and opportunities associated with transportation systems in the Salem-Keizer urban area, provides a recommended package of integrated, multimodal investments to improve these systems, and presents a financial analysis to ensure that the resources necessary to implement this Plan can be provided.

Why are we updating our regional plan now?

The Regional Transportation Systems Plan (RTSP) was last adopted by the jurisdictions in the region in 2002. Many changes have taken place in our region since that time that need to be incorporated in our long-range plan. In addition, we have begun to recognize the limits of our ability to merely build our way out of congestion and must continue to develop new strategies and programs to increase modal balance, emphasize system efficiency, and improve the coordination of land use, travel behaviors, and transportation planning. Furthermore, we need to reflect these plans and policies as well as updated federal and state regulations in our regional transportation plan if we are to remain in compliance and continue to be eligible for available transportation funds.

The Regional Transportation Planning Process: The Seven "C's"

This plan has evolved through a process that ensures that transportation planning activities affecting the overall regional system are comprehensive, coordinated, cooperative, continuing, consistent, coherent, and cost-effective.

Comprehensive

- Together with the state and local transportation planning efforts, the process encompasses the entire transportation system needed to serve the land uses contained in the adopted local comprehensive plans in the region.

- The planning process is both multi- and inter-modal in scope; it addresses concerns related to all the transportation modes— automobile, truck, motorcycle, transit, bicycle, and pedestrian—as well as the connectivity between them.

- The process includes all the jurisdictions, agencies, and citizens that own, operate, regulate, and use the various portions of our overall transportation system.

- The planning process addresses the mobility needs of both people and goods on our transportation system.

- The process provides a forum to make decisions about adequate levels of mobility in the context of the effect on other important aspects of our overall quality of life, such as environment, affordability, and community character.

Coordinated

- The process ensures that the various planning activities and investments undertaken by the various jurisdictions fit together in terms of intent, timing, and effect.

- The regional planning process is intended to provide a transportation system that is "seamless" in the service that it provides, preventing situations where the "left hand" seems to have no idea what the "right hand" is doing, such as a five-lane arterial in one jurisdiction suddenly turning into a two-lane residential street as it crosses the boundary into another.

Cooperative

- The process embodies the understanding that the region's political jurisdictions, governmental agencies, and citizens are "all in this together." We need to develop a plan that addresses, and ultimately "works," for all the members of our community.

- This type of planning process enables a plan to "emerge" from the process of its development, rather than dictating its design from the outset.

Continuing

- The process is ongoing and produces a "living" plan that is flexible and designed to incorporate periodic updates to respond to changing conditions, opportunities, and priorities in our community.

Consistent

- The regional planning process serves as an "umbrella" framework for the development of uniform databases (both current and future) and a common set of assumptions to be used in our estimations of future travel demand, thereby ensuring that the various planning efforts all share a similar foundation.

- The process provides a basis for the development of common goals and objectives, as well as a common understanding of the problems we face and the opportunities we have available to meet those challenges, ensuring that we are not only all on "the same page," but also looking at the same "book."

Coherent

- The planning process provides the mechanism by which all of the various land use and transportation activities undertaken in the region can be seen to "make sense" when

taken as a complete whole that our actions work together to complement and reinforce each other, rather than working at cross purposes or canceling each other out.

Cost-effective

- The cooperative process produces a blueprint for decisions and improvements that are prudent and cost-effective, maximizing the mobility available through existing facilities and leveraging as much benefit as possible from new transportation system investments.

Derived from this process, the integrated Regional Transportation Systems Plan provides the region with an affordable, coordinated blueprint of transportation investments and related activities over the next twenty years that can ensure adequate levels of mobility while maintaining or improving our overall quality of life in the region. The regional transportation planning process serves as a comprehensive framework within which to consider the various transportation and land use issues in our community, identify the opportunities and constraints associated with possible responses to those issues, and determine a coordinated and consensus course of action.

The Regional Transportation System Concept

This Plan addresses issues associated with the "regionally significant" components of the overall transportation system. Only certain portions of our total transportation systems, such as regional principal and major arterials and transit trunk routes in major corridors, serve "regional" travel movements. Most of the transportation system infrastructure is intended to serve fairly localized travel movements and is most appropriately planned for at the local level.

The underlying concept of the regional transportation system embodies the following three principles:

- There is a basic interdependence among all the elements of a cost-effective and efficient transportation system in the region: highway facilities; transit service and facilities; bicycle routes and support facilities; goods movement routes and support facilities; intermodal passenger and freight facilities; rail, aviation, maritime, and pipeline systems; pedestrian facilities; and efficiency management strategies and programs. (The latter include demand management activities such as ridesharing, carpooling, parking management, bicycling enhancements, and pedestrian amenities that promote alternatives to the use of the single-occupant vehicle; localized facility treatments such as channelization and access management, which can improve facility performance in a cost-effective manner; and transportation-related land use actions such as density increases, mixed-use developments, and building design and orientation requirements that accommodate modes other than the automobile);

- There is a desire for, and a need to provide, a transportation system that offers viable choices among alternative modes of travel to increase our trip-making options; and

- There are cost, efficiency, and convenience benefits associated with ensuring systemwide connectivity, coherence, and coordination among the various transportation facilities and services in the region.

Much as the "load bearing" beams and walls of our houses support most of the structure's weight, the regional elements of the transportation system should function as carriers of the heaviest and longest "loads" associated with the travel demand in our area. The SKATS Regional Transportation Systems Plan (RTSP) provides for adequate levels of service for regional travel movements through a balanced and prudent combination of strategic investments in each of the system elements of the overall regional transportation system. This Plan provides a policy framework for the encouragement of the implementation of pedestrian infrastructure improvements and the creation of a "pedestrian-friendly" urban landscape by the responsible local jurisdictions within the region.

Each of these system elements is expected to provide appropriate portions of the total transportation capacity needed to ensure adequate levels of mobility for the "regional" travel demand (see below), which is defined as the longer-distance movement of people and goods associated with the population and employment anticipated in the local comprehensive plans adopted by the jurisdictions in the SKATS area. The critical interdependence of these elements is such that a lack of investment in any individual element—and its consequential failure to carry its portion of the overall transportation "load"—will seriously overburden the remaining elements and result in not only a collapse of levels of service on the regional system, but a significant and inappropriate intrusion of regional trips onto the subregional and local systems, degrading the quality of life in our neighborhoods.

Transportation System of Regional Significance

The SKATS Regional Transportation Systems Plan specifically defines and addresses the transportation system of regional significance in the Salem-Keizer urban area. The regional components of the individual system elements are described in detail in the following chapters of the Plan and represent the transportation facilities and services that function to serve the mobility needs of the relatively longer travel movements of people and goods across, into, out of, and through the SKATS area—trips of a "regional" nature. Since SKATS, as the designated Metropolitan Planning Organization (MPO), does not have jurisdiction over any actual facility, the designation of regional transportation systems and the inclusion of the functional aspects of these systems in both the regional plan and in the transportation systems plans (TSPs) of the local jurisdictions ensures that these travel movements are accommodated in a coordinated, consistent, and connected manner across jurisdictional boundaries. As a result, the regional systems and improvements identified in this Plan must be included in the local TSPs, and the locally designated systems must be consistent with, and adequate to support the functional intent of, the regional systems.

Relevance of the Regional System Designations

The designation of the transportation systems of regional significance in the Plan is important for the following reasons:

- With the requirement that local plans be consistent with the regional functional classifications, a continuous, consistent, and coordinated functional system to accommodate "regional" travel movements of people and goods across jurisdictional boundaries is ensured.

- Levels of service can be differentially established for classes of facilities, particularly for the highway system, that relate directly to their intended function(s).

- Plan policies, improvement strategies, and project designs can be tailored to facility function and the nature of the particular movement of people and/or goods to be emphasized and/or preferentially accommodated.

- For the highway system, rather than associating function solely with current and projected traffic volumes and specific cross-section design, we can rationalize the classification system – and encourage design treatments and the provision of alternative modal opportunities – geared to the specific nature of the predominant intended movement of people and/or goods to be accommodated on the facility.

- The identification of the systems and facilities of "regional significance" are required to adequately comply with federal and state transportation planning and air quality regulations.

Local Transportation Systems Not Included in the Regional Systems

The remainder of the transportation systems in the area are intended to distribute trips from the regional systems, provide connections between and within neighborhoods, and serve direct property access needs.

While these facilities must provide adequate levels of transportation service to ensure that this more localized travel demand does not inappropriately hinder the regional system functions, these systems are addressed in the respective transportation systems plans of the various local jurisdictions in the region and are outside the scope of this regional Plan.

Policy, Planning, and Regulatory Context

There are several federal and state policies and regulations that affect our regional and local transportation planning process. These policies provide guidelines for determining specific issues that need to be addressed in the plan as well as some benchmark targets for evaluating plan performance. Among the more important federal and state policies and regulations are the following.

Federal Policies and Regulations

Intermodal Surface Transportation Efficiency Act, 1991 (ISTEA)
Transportation Equity Act for the 21st Century, 1998 (TEA-21)

TEA-21 is the umbrella federal legislation that affects transportation planning, services, and funding nationwide. TEA-21 continues the policy directions set in the ISTEA legislation. This legislation provides for the expenditure of the federal Highway Trust Fund revenues that represent a large portion of the funding used to sustain and improve the federal and state portions of the regional highway system (see Chapter 5). TEA-21 requires the regional plan to address a series of considerations, including: financial constraint; environmental impacts; socioeconomic impacts; equity; multimodal systems; energy consumption; and consistency with federal, state, and local plans affecting transportation.

Clean Air Act Amendments of 1990

- Projects in the Transportation Plan must not contribute to worsening air quality or violations of standards set by the Environmental Protection Agency.

- Failure to show conformance with the standards will result in withdrawal of federal funds.

Americans with Disabilities Act (ADA) of 1990

- Mandates access of public transportation to persons with disabilities.

- Establishes requirements for paratransit services comparable to mass transit with an annual update of an ADA Paratransit Plan.

- Requires local review and integration of the ADA Paratransit Plan with the Transportation Plan.

State Policies and Regulations

Oregon Transportation Plan

- Sets policies for the state's transportation facilities and services for the next 40 years.

- Outlines the broad strategies the state has developed for implementing federal and state policies.

Oregon Benchmarks

- Establishes benchmarks to measure the state's progress toward the vision outlined in the State's Strategic Plan.

- Measures address air quality, reduced reliance on the single-occupant vehicle for commute trips, commute trip lengths, transit ridership, and roadway and bridge maintenance and preservation.

State Land Use Planning Goals

Oregon has adopted a series of statewide planning goals that are to be implemented through the comprehensive land use plans of each city and county in the state. These goals, and the plans which are adopted to implement these goals, address the manner in which the land, air and water resources of the state will be used and determine the need for improved public facilities. With the Goal 12 Transportation Planning Rule (TPR), SKATS must adopt a transportation systems plan consistent with the state plan (see above) and this rule (see below).

Transportation Planning Rule

- Promotes intent to provide viable alternatives to reduce our reliance on the single-occupant vehicle.

- Targets a reduction in vehicle miles traveled per person by five percent over the next twenty years and ten percent over the next thirty years.

- Targets a reduction in the number of certain types of parking spaces per person by ten percent over the next twenty years.

- Requires local governments to adopt transit, bicycle, and pedestrian "friendly" land development and subdivision ordinances.

State Conformity Rule

- Regional emissions must not contribute to worsening air quality or violations of EPA standards.

- Regionally significant projects must also demonstrate conformity.

Local Plan Consistency Requirements

In addition to the consistency of the Regional Transportation Systems Plan with the above mentioned federal and state policies and regulations, the transportation systems plans (TSPs) produced by each of the local jurisdictions in the region must be consistent with this regional Plan. The TPR also requires that the local jurisdictions adopt the regional Plan as part of their local comprehensive plans. In the SKATS area, the local jurisdictions plan to adopt the regional Plan concurrently with the adoption of the local TSPs, which are scheduled to be completed within one year of the adoption of this Plan by the SKATS Policy Committee.

In addition to the inclusion of the regional Plan in local Comprehensive Plans, the following principles of consistency between the local and regional plans are embodied in the RTSP:

- All transportation projects in the local Public Facility Plans must be consistent with the RTSP and improvements on or significantly affecting the regional systems as defined in this Plan must be included in the RTSP.

- All projects must be shown to demonstrate consistency with the adopted RTSP prior to their inclusion in the region's Transportation Improvement Program (TIP).

- Local jurisdictions within the region must plan their local transportation systems to be consistent with the RTSP requirements and to be sufficient to adequately serve the "nonregional" travel demand so as to not overburden the regional systems with "local" trips.

SKATS will review local transportation systems plans (TSPs) and requests for the inclusion of projects in the regional Plan or Transportation Improvement Program for consistency with the adopted RTSP. Should inconsistencies arise, the SKATS Policy Committee may determine:

- that the inconsistency is significant, and the RTSP should be changed; or

- that the inconsistency is significant, and the local TSP or project inclusion request should be changed; or

- the inconsistency is significant, and direct regional staff to work with the local jurisdiction to identify and implement a process to develop a consensus resolution to the inconsistency; or

- an inconsistency exists, but does not materially affect the integrity of the Plan or TIP and no further action on the part of SKATS or the local jurisdiction is required.

The Organization of the Regional Transportation Plan and Associated Documents

The remaining chapters in the Plan document and the additional materials related to the Plan material are organized as follows:

Chapter 2, Livability, discusses issues related to livability and growth in the region.

Chapter 3, Population and Employment, discusses the increases in population and employment that the region is forecasted to experience over the next 24 years.

Chapter 4, Travel Characteristics, provides an overview of travel into, out of , and through the area, detailing all modes where data is available.

Chapter 5, Finance, presents a financial analysis of the costs and revenues associated with the regional transportation systems and evaluates the ability of the region to

maintain and operate the existing systems and to afford the investments called for in the Plan.

Each of the following 10 chapters of the Plan deals with a specific element of the overall regional transportation system and defines the regionally significant components of that system, examines the current and expected future-year (where possible) performance of that system, and identifies the investments called for in the Plan to provide adequate levels of mobility on that system.

Chapter 6, the Regional Pedestrian System, discusses a regional policy framework for the pedestrian facilities of regional significance.

Chapter 7, the Regional Bicycle System, deals with the bicycle facilities of regional significance.

Chapter 8, the Regional Goods Movement System, addresses issues related to the regionally significant movements of freight on the regional highway, rail, aviation, maritime, pipeline, and intermodal freight system.

Chapter 9, the Regional Aviation System, deals with the aviation services of regional significance.

Chapter 10, the Regional Maritime System, deals with the ferry system in the region.

Chapter 11, the Regional Rail System, discusses the regionally significant rail services and facilities.

Chapter 12, the Regional Intermodal System, deals with issues related to the regionally significant intermodal movements of people and goods in the SKATS area.

Chapter 13, the Regional Transportation System Efficiency Management System, addresses the regionally significant programs and actions to reduce reliance on the single-occupant vehicle, achieve more balance among transportation modes, and improve system efficiency.

Chapter 14, the Regional Public Transportation System, deals with the region's mass transit, ADA/Elderly-related, intercity public transportation, and private-for-hire transportation systems.

Chapter 15, the Regional Roads and Highway System, deals with the roadway system of regional significance.

Chapter 16, Outstanding Issues, describes the regional transportation system problems that remain beyond the implementation of this Plan.

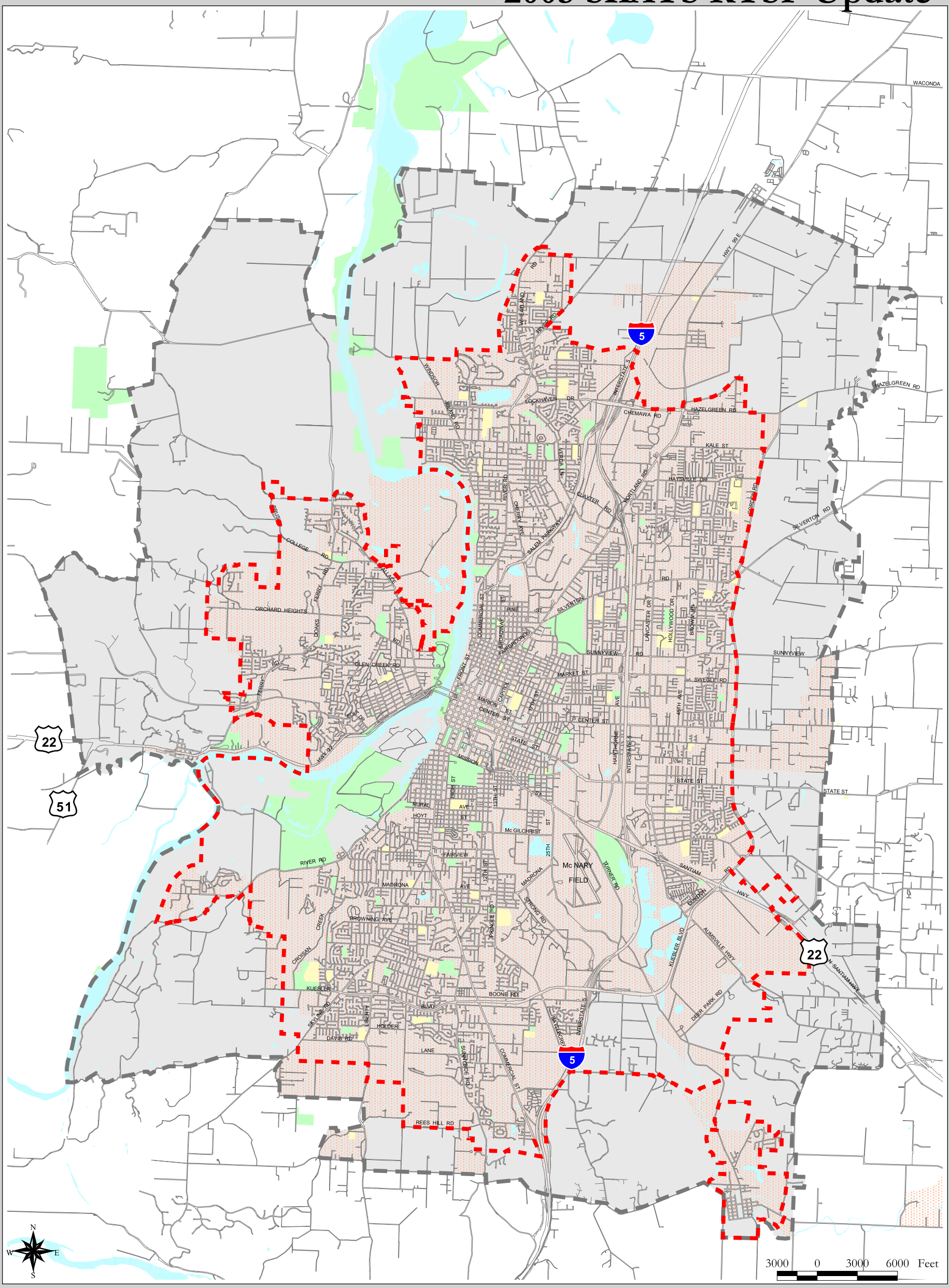
Supporting documents to this Plan, available under separate cover, include:

- *Air Quality Conformity Determination for the SKATS 2002 Regional Transportation Systems Plan Update* (accompanies adoption), which provides the determination that the investments called for in the Plan meet federal and state air quality regulations.

- *Transportation Disadvantaged Populations in the SKATS Region, a Geographic Profile* (1994), which provides the analysis of census data necessary to evaluate equity issues associated with the Plan.

- The *Public Involvement Framework Plan for the Regional Transportation Planning Process in the Salem-Keizer Urban Area* (2001), adopted by the SKATS Policy Committee, which sets forth the guidelines for the public involvement processes associated with the regional transportation planning process activities, including the RTSP, the TIP, and the annual Planning Work Program.

2005 SKATS RTSP Update



SKATS TMA Boundary

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

Map 1-1

- Roads and Highways
- Salem-Keizer, Turner UGB
- Urbanized Area Census 2000
- SKATS Boundary
- Rivers & Creeks
- Parks
- Schools

02/09/05

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2 – Livability

Quality of Life or "Livability" Issues

We hear a lot lately about "livability" and "quality of life," but what does that really mean? Our day-to-day experience of living in the Salem-Keizer region is what truly comprises our sense of "livability" or the "quality of life" that we associate with our community. This experience is made up of many discrete elements that, taken together, provide the overall texture of our daily lives. These elements are interrelated and interdependent; actions taken in one particular arena often have effects in many of the others. For example, the decision to improve or not improve some portion of the transportation system may affect several aspects of "livability" simultaneously: affordability, mobility, the environment, land use, and the level and distribution of public infrastructure. As a result, the overall goal of the Regional Transportation Systems Plan (RTSP), which is "To provide adequate levels of mobility on the regional transportation system while maintaining or improving our overall quality of life," entails choices and trade-offs among many, if not all, of the elements that manifest our core values and comprise our sense of livability. It is critical, therefore, that the community considers an entire range of affected issues in the development of the land use patterns that shape the urban landscape and the transportation systems designed to serve that land use pattern. Specific livability issues that need to be considered as we plan for our future include:

Affordability

- Cost of living (housing, food, clothing, travel, etc.)
- Cost of doing business (wages, benefits, distribution, etc.)
- Cost of providing public services/infrastructure

Mobility

- Access to opportunities (residential, employment, commercial, educational, etc.)
- Convenience of travel
- Safety
- Availability of modal choices
- Cost

Environmental Considerations

- Geography/climate
- Air quality
- Water quality
- Ambient noise quality

Public Services/Infrastructure (Transportation Systems, Schools, Police, Fire, etc.)

- Level of service
- Distribution/availability

Opportunities

- Economic (jobs, markets, suppliers)
- Residential (housing, customer base)
- Commercial (retail, services)
- Social (clubs, organizations)
- Spiritual (churches, synagogues, other places of worship)
- Entertainment (cultural, popular)
- Recreational (open spaces, scenic places, indoor and outdoor activities)
- Educational (schools, colleges, libraries)
- Civic (public services, public spaces, community events)

Community Character

- Urban forms (land use patterns, architectural style)
- Neighborhood characteristics
- Sense of community (interaction, cohesion)
- Security (person, property)

Obviously, many (if not most) of these issues are beyond the scope of a "transportation" plan, and are most appropriately addressed through the community-wide development of a "vision" for the future that can provide a focused overall direction for the individual plans that deal with specific issues. It is essential, however, for those "specific issue" (i.e., transportation) plans to take into account important interrelationships that do directly affect the core concentration area of a given plan.

Issues Addressed by this Plan

The development of the Regional Transportation Systems Plan has attempted to recognize the fundamental relationships between land uses, lifestyles, population and employment growth, and transportation demand. All parts of the region to some degree share common transportation needs for going to work, school, shopping, recreation, etc. The geographic extent of our community, its particular land use pattern, the number and distribution of opportunities for working, shopping, and other activities, the viability of transportation options among modes, and the street system all serve to influence our travel choices and the subsequent transportation demand associated with the movement of people and goods in the region. As new development alters the types and locations of activities we engage in, our daily travel patterns shift and evolve in new directions. Over a 20-year period, the sum of these land use changes can have a significant impact on the aggregate travel patterns in the area and the transportation system necessary to accommodate the travel demand associated with them. It is useful, therefore, to examine the interrelationship between land use patterns, lifestyle

characteristics, demographic trends, and infrastructure systems in the development of the long-range transportation plan.

The Interaction of Land Use, Lifestyle, and Transportation

The overall design of the communities we live in is not accidental. What we see when walking, bicycling, or driving around didn't just "happen" one day, nor is it inevitable that it looks the way it does. It did not occur in a vacuum. It is not solely the result of actions external to ourselves, "growth," "bad" or short-sighted planning, and/or conservative lending practices. Our patterns of land use and travel have been, and continue to be, created and recreated as a simultaneous process and product of our daily choices.

The urban landscape that has grown up around us is the result of technological and cultural seeds that have been sown over the past five decades. Since World War II, our region's population has grown steadily as more people have moved into urban areas. The increasing affordability of home ownership and the concurrent availability and popularity of the automobile have resulted in a dramatic shift of most of our investments in transportation infrastructure into highways and away from mass transit and passenger rail services. The desirability of a more "suburban" lifestyle has brought about continuing land use "sprawl" as residents and businesses moved further and further away from our urban cores. In addition, the amount and complexity of our daily travel has increased over time as our lifestyles have changed. More people are driving. As activities and opportunities have become more geographically dispersed, work, shopping, school, and recreational trips have become more and more dependent on the automobile. As a result, although transportation planning efforts have often concerned themselves with issues related to "mobility," or our ability to move around and get from one place to another, our transportation system and land use actions have more recently tended to combine to create "automobility" and a near total reliance on our cars rather than a generalized mobility using a variety of travel modes.

Over the past several years, there has been a steadily increasing awareness of the critical interdependence among land use and development activities, the provision of public infrastructure (particularly transportation facilities and services) and quality of life issues (such as air and water quality). As a result, governmental entities and the public are being encouraged to develop plans and implementing ordinances that move us away from our traditional approach to the issue of infrastructure and growth – that we could "pave our way out of congestion" – and instead create integrated systems that make more efficient use of the infrastructure investments we have already made. The coordinated, statewide development of land use management plans, such as Oregon's comprehensive planning laws, and the development of viable, multimodal transportation systems can help to prevent the excessive public costs and negative livability impacts associated with "urban sprawl" and an ever-increasing number of single-occupant automobile trips.

The Importance of Land Use and Development Patterns

The arrangement, density, and diversity of land uses contained in the comprehensive plans of the local jurisdictions in the region are the most significant shapers of the travel demand that the transportation systems are expected to serve. Although in very rare situations transportation infrastructure can "create" travel demand, such as building a new highway into an area of vacant, prime, developable land, the ability of transportation systems to significantly alter travel demand is limited to the provision of an adequate balance of infrastructure and services to afford the community viable modal options, such as the automobile, bicycle, walking, public transportation, passenger rail, ferries, air travel, etc. For each of these modes to represent a realistic choice for community members to meet their daily mobility needs, the land use patterns embodied in the local comprehensive plans must be supportive of each mode individually, i.e., mixed land use types located close together for walking, higher densities in transit corridors, etc., as well as the entire range of modes collectively.

Much of our reliance on the automobile stems from historical land use policies that have encouraged the separation of land uses, limited density, and treated developable land as a limitless resource. As a result, our urban landscape has often embodied a pattern of sprawled development which makes most destination points too far apart or too geographically diverse to be within reasonable walking or biking distance or to be effectively served by transit. In addition, land uses have often been designed to specifically accommodate the automobile at the expense of other modes of transportation. As a result, we often feel forced to drive in order to meet our daily travel needs.

Historical development patterns also serve to limit the mobility of particular groups within our society who are unable or cannot afford to drive. These groups include youth, the poor, the elderly, and the disabled. Individuals within these groups are thus dependent on public transportation or other parties for meeting their daily transportation needs.

Although alterations in the land use patterns embodied in the adopted local comprehensive plans of the region are beyond the scope of this Plan, local jurisdictions are encouraged to incorporate the following activities in their next plan review cycles:

- Allow proposals for more compact development. This could shorten distances between opportunities and make walking or bicycling between destinations attractive and possible. It could also promote the higher population densities necessary to support an improved transit system. Specific strategies to increase compact development could include:

    - Emphasizing infill development in the currently developed area instead of new development on the outskirts of the town or city

    - Allowing higher density residential uses such as row houses, apartments, small-lot single family, and cluster developments

- Encourage a proximate mixture of land uses. For example, siting housing within one quarter of a mile of offices and retail opportunities could enable people to work and shop within walking/biking distance of their homes. Aside from the added convenience, this approach could substantially increase the transportation independence of the mobility-limited.

- Increase allowable densities along transit corridors. This could provide a larger potential ridership for improved mass transit systems by making them more efficient and thus more cost effective. Specific strategies include:

  - Increasing housing density along transit corridors

  - Siting transit-oriented commercial and office facilities along transit corridors

- Encourage transit- and pedestrian-sensitive designs for new business and office park developments. These designs make it easier for people to get to these destinations by taking the bus. Specific strategies include:

  - Siting buildings to minimize the walking distance to entrances of office park buildings

  - Providing bus connection points near the front entrances of major buildings

  - Equipping waiting and pedestrian areas with amenities such as benches, lighting, weather protection, and information

- Encourage pedestrian-friendly and bicycle-friendly design considerations for new developments. These considerations facilitate the circulation of pedestrians and cyclists at the site and encourage these modes of transportation. Specific examples include:

  - Providing a separate internal circulation system for pedestrians and cyclists,

  - Developing paths through the site, as opposed to along its perimeter, for direct access and better safety

  - Selecting attractive landscaping, adequate lighting, and amenities to enhance the pedestrian/bicycling environment

  - Providing secure bicycle lockers, storage areas, and other amenities such as showers and changing rooms at worksites

3 - SKATS Population and Employment Forecasts

Introduction

The purpose of a population and employment forecast is to assist in planning for land use, transportation, infrastructure, and other needs of the metropolitan area. Forecasts are as good as the data and assumptions they are based on and require updates as new information becomes available.

Population and employment in the SKATS area has shown cycles of slow and fast growth over the decades. During the 1970s, the population grew by almost 50 percent, while growth slowed considerably in the 1980s. However, the 1990s saw another population surge of over 40,000 persons. Two-thirds of the area's population growth is due to migration to the area and is intertwined with the region's economic health. Trends show an eventual slowing of this growth as the region develops more of the remaining land within the existing urban growth boundary.

This chapter begins with a description of population growth during the last decade for Oregon, Marion and Polk counties, and the cities in the two counties. State population and employment forecasts for Marion and Polk counties, as prepared by Oregon's Office of Economic Analysis (**OEA**) and the Oregon Employment Department (**OED**), are reported. This is followed by a focus on historical population change in the Salem-Keizer Urban Growth Boundary (UGB) and the population and employment forecasts for the UGB and SKATS area, based on the OEA and OED forecasts and coordination between the local jurisdictions of SKATS. These population and employment forecasts will be used as the control totals to be allocated within the Salem-Keizer UGB and SKATS area. The process used to allocate housing and employment forecasts to taxlots within Salem, Keizer, Turner and the remaining areas of SKATS is also summarized in this chapter.

SKATS Boundary Expansion

Results of the 2000 Census affected the SKATS planning area in two significant ways. First, it became necessary to expand the SKATS planning boundary to include additional urbanized areas outside the previous SKATS boundary. Second, the Salem-Keizer urbanized area surpassed a critical population plateau of 200,000 persons, which re-designated it as a Transportation Management Area (TMA**).**

In the May 1, 2002 Federal Register, the U.S. Bureau of the Census issued the designations of urbanized areas (UZA) and urban clusters (UC) based on the 2000 Census. In the Salem-Keizer area, the UZA and UC extended south of the Salem-Keizer UGB and connected to the city of

Turner. The urbanized area also included some properties south of Highway 22 in Polk County and to the south of Salem that were previously outside the SKATS boundary.

The Federal Highway Department's requirement to expand the SKATS boundary states:

> "The planning area boundaries must include the existing urbanized area and extend to the contiguous area expected to become urbanized within 20 years." (Source: FHWA FAQ on 2000 Census p.5 www.fhwa.dot.gov/planning/census/faqa2cdt.htm)

The SKATS Technical Advisory Committee and SKATS Policy Committee held meetings in 2002 to discuss how to expand the SKATS boundary to include the new urbanized area, as well as any additional areas in the counties that were expected to become urbanized within 20 years. Modifications to the SKATS TMA boundary do not impact the air quality boundaries or the UGBs for any of the cities.

Based on the new boundaries adopted by the Policy Committee, the updated SKATS 2000 population and employment and 2030 forecasts are given in **Table 3-1**. Changes in population for each jurisdiction's urban growth boundary are shown in the table. The methodology for the 2030 forecasts are described later in this chapter

Table 3-1
Summary of SKATS 2000 Population and Employment and 2030 Forecast

Population

	2000	2030	Increase	Percent Increase
Salem UGB	171,072	242,761	71,689	42%
Keizer UGB	32,203	39,994	7,791	24%
Salem-Keizer UGB	203,275	282,755	79,480	39%
Turner UGB	1,199	2,933	1,734	145%
Remainder of SKATS	10,109	11,920	1,811	18%
Total SKATS	**214,583**	**297,608**	**83,025**	**39%**

Employment

	2000	2030	Increase	Percent Increase
Salem UGB	85,309	115,932	30,623	36%
Keizer UGB	3,972	8,864	4,892	123%
Salem-Keizer UGB	89,281	124,796	35,515	40%
Turner UGB	321	426	105	33%
Remainder of SKATS	2,286	2,386	100	4%
Total SKATS	**91,888**	**127,608**	**35,720**	**39%**

State and County Population Growth, 1990 to 2000

The 1990 and 2000 Census data for Marion and Polk counties and the state of Oregon is illustrated in **Table 3-2**. The two-county population increased about 25 percent from 1990 to 2000, compared to the state's growth of about 20 percent. Net migration accounted for 69 percent of the two counties' population growth compared to 73 percent for the state.

Table 3-2
1990 to 2000 Census Population Growth

	July 1, 2003 Population Estimate (PSU)	April 1, 2000 Census Population	April 1, 1990 Census Population	Population Change 1990-2000	Percentage Change 1990-2000	Births 1990-2000	Deaths 1990-2000	Natural Increase 1990-2000	Net Migration 1990-2000
Marion	295,900	284,834	228,483	56,351	**24.7%**	41,955	22,777	19,178	37,173
Polk	64,000	62,380	49,541	12,839	**25.9%**	6,653	4,706	1,947	10,892
Total	359,900	347,214	278,024	69,190	**24.9%**	48,608	27,483	21,125	48,065
State	3,541,500	3,421,399	2,842,321	579,078	**20.4%**	430,949	273,323	157,626	421,452

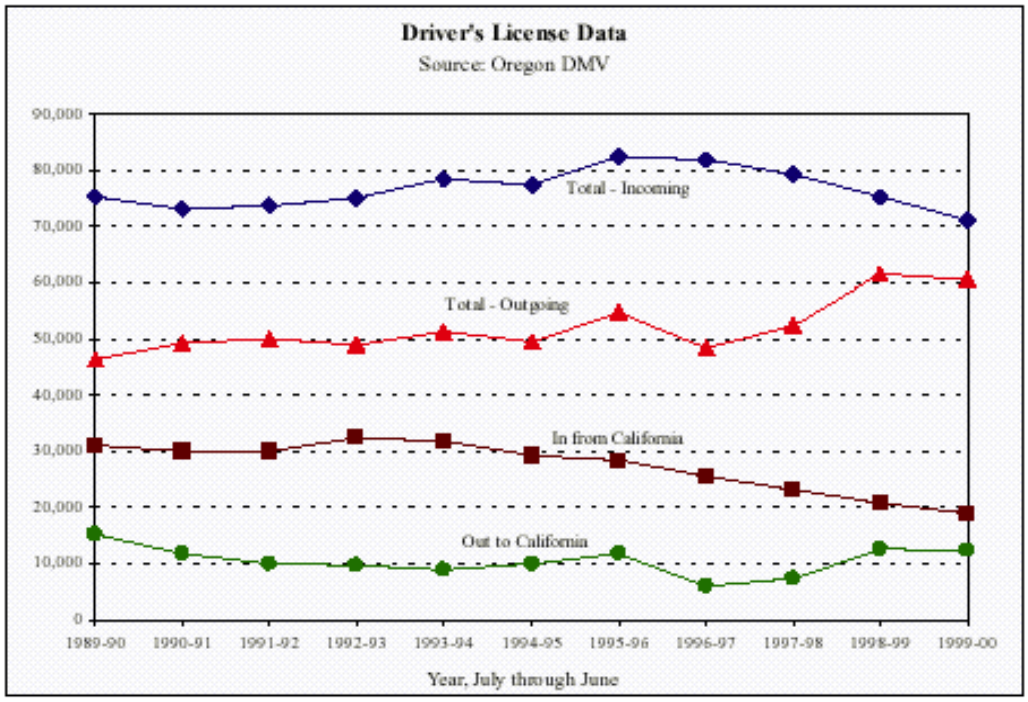
	Percent Increase by Natural Increase	Percent Increase by Net Migration
Marion	34%	66%
Polk	15%	85%
Total	31%	69%
State	27%	73%

Source: Office of Economic Analysis, 2000; Portland State University Population Center

Historical information about migration into and out of Oregon is illustrated in **Figure 3-1** based on DMV data of new and surrendered driver's licenses. During the 1990s, total in-migration to Oregon surpassed out-migration, although the gap has narrowed since 1998. The graph also shows that California migration was around 35 percent of total migration, and the difference between in-migration and out-migration with California has narrowed since 1994.

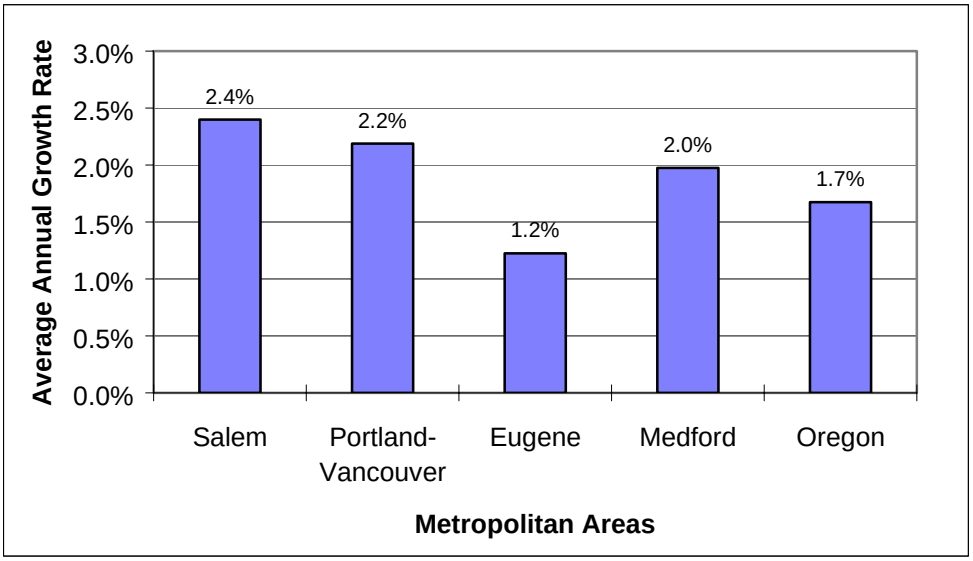
Over the last ten years, the population of the Salem-Keizer metropolitan area has consistently grown as fast or faster than the other metropolitan areas in the Willamette Valley. Comparison of population growth rates during the 1990s for the Salem metropolitan statistical areas (Marion and Polk counties) with those of the Portland-Vancouver, Eugene, and Medford metropolitan statistical areas is illustrated in **Figure 3-2**.

Figure 3-1
Population Migration in Oregon



Office of Economic Analysis, DAS, State of Oregon

Figure 3-2
Comparison of Population Average Annual Growth Rate of Oregon Metropolitan Areas, 1990 to 1999



Salem MSA consists of Marion and Polk counties
Eugene MSA consists of Lane County
Medford MSA consists of Jackson County

Comparison of the 1990 to 2000 population growth of the major cities and census designated places (CDPs) in Marion and Polk counties is illustrated in **Figure 3-3** and **Table 3-3**. The Hayesville and Four Corners CDPs are located in the Salem Urban Growth Boundary (UGB) east of Interstate 5.

The Salem-Keizer UGB area grew 27 percent from 1990 to 2000, which was a little more than the Marion and Polk County growth of 25 percent. Most of the other cities in the two counties had a higher percentage population than the Salem-Keizer UGB, as illustrated in the chart in **Figure 3-3** and **Table 3-3**.

Figure 3-3
Percent Population Increase in Selected Marion County and Polk County Cities, 1990 to 2000

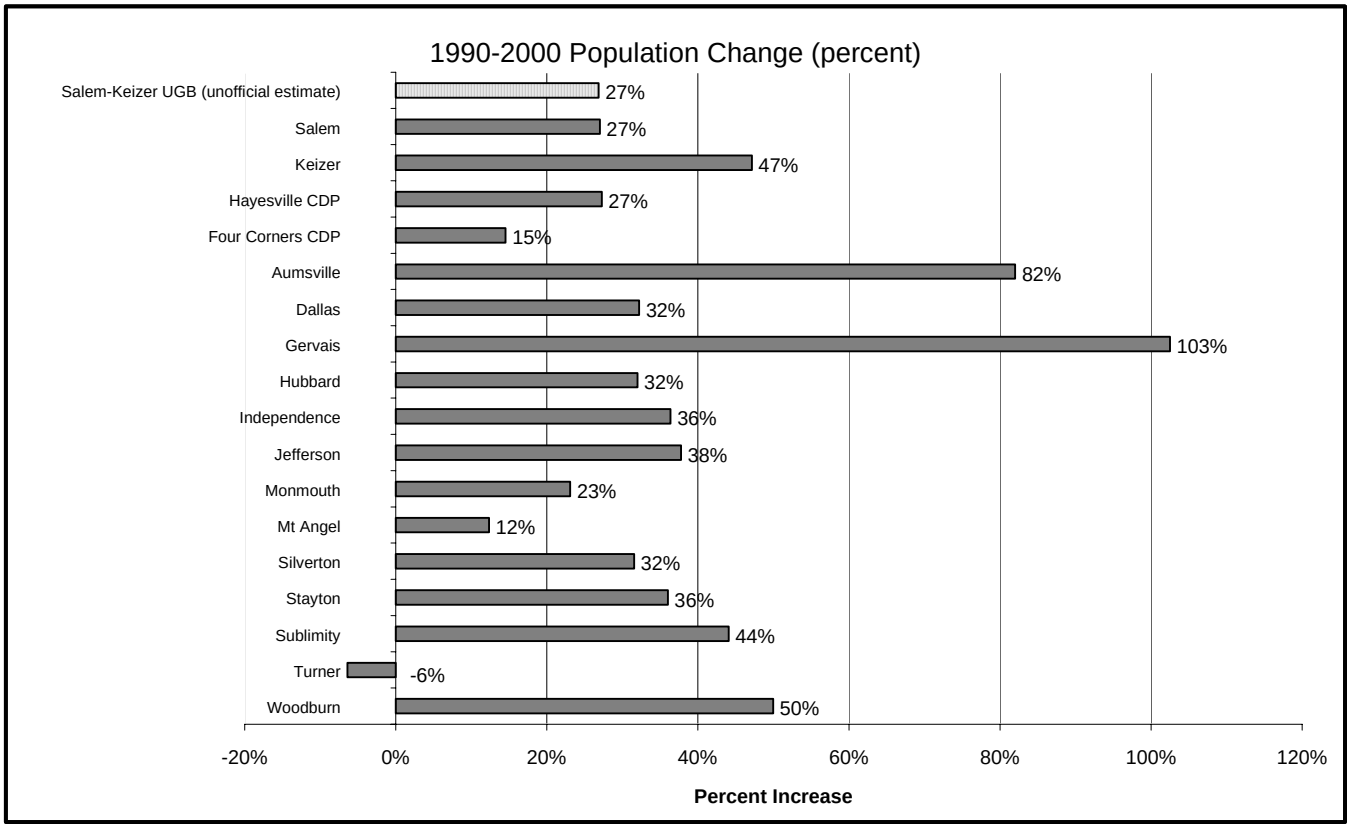


Table 3-3
Population Increase in Selected Marion County and Polk County Cities

City	1990 Population	2000 Population	Increase	Percent Increase, 1990-2000	AAGR
Aumsville	1,650	3,003	1,353	82%	6.17%
Dallas	9,422	12,459	3,037	32%	2.83%
Gervais	992	2,009	1,017	103%	7.31%
Hubbard	1,881	2,483	602	32%	2.82%
Independence	4,425	6,035	1,610	36%	3.15%
Jefferson	1,805	2,487	682	38%	3.26%
Monmouth	6,288	7,741	1,453	23%	2.10%
Mt Angel	2,778	3,121	343	12%	1.17%
Silverton	5,635	7,414	1,779	32%	2.78%
Stayton	5,011	6,816	1,805	36%	3.12%
Sublimity	1,491	2,148	657	44%	3.72%
Turner	1,281	1,199	(82)	-6%	-0.66%
Woodburn	13,404	20,100	6,696	50%	4.13%
Total	**56,063**	**77,015**	**20,952**	**37%**	**3.23%**
Salem	107,786	136,924	29,138	27%	2.42%
Keizer	21,884	32,203	10,319	47%	3.94%
Four Corners CDP	12,156	13,922	1,766	15%	1.37%
Hayesville CDP	14,318	18,222	3,904	27%	2.44%
Total	**156,144**	**201,271**	**45,127**	**29%**	**2.57%**
Salem-Keizer UGB (unofficial estimate)	160,230	203,275	43,045	27%	2.41%
Marion & Polk Counties	278,024	347,214	69,190	25%	2.25%

Source: 1990 and 2000 Census data

County Population Forecasts to 2040

In 1997, the Office of Economic Analysis (**OEA**) of Oregon's Department of Administrative Services released their long-term population and non-agricultural payroll employment forecasts. The statewide population forecasts are linked to the national projections of population growth, but with a slightly higher rate for Oregon than the nation as a whole. The 1997 county-level population forecasts were calculated using weighted average historical growth rates for the counties and the statewide forecasts. The initial population forecasts were reviewed with city and county input, with OEA being the final arbiter in the process.

In May 2003, OEA distributed preliminary updates to the long-term county population forecasts. Polk and Marion county staff reviewed these forecasts, and in April 2003 recommended keeping the two-county population totals, but adjusting the distribution between the two counties. OEA revised their projections based on these recommendations and in May 2004, OEA distributed the revised long-term forecasts (see **Table 3-4**.)

Table 3-4
Population Forecast for Marion and Polk Counties, OEA 2004

Year	Source	Marion Co.	Polk Co.	Total	Percent Increase	AAGR
1990	Census	228,483	49,541	278,024		
2000	Census	284,834	62,380	347,214		
2005	OEA	302,913	65,434	368,347	6.1%	1.2%
2010	OEA	323,128	72,845	395,973	7.5%	1.5%
2015	OEA	344,443	83,338	427,781	8.0%	1.6%
2020	OEA	367,018	95,594	462,611	8.1%	1.6%
2025	OEA	388,898	107,118	496,017	7.2%	1.4%
2030	OEA	410,022	117,557	527,579	6.4%	1.2%
2035	OEA	429,824	127,019	556,843	5.5%	1.1%
2040	OEA	448,671	135,937	584,607	5.0%	1.0%

Source: Office of Economic Analysis, Dept. of Administrative Services, 2004

The 1997 OEA statewide forecasts included population by age and sex (**Table 3-5**). The median age of the population is forecast to increase from 37.1 years to 41.1 years in 2030. An update of this information was not provided in 2004.

Table 3-5
Median Age Population Forecast for Oregon

Year	Male	Female	Total
1980	29.5	31.0	30.3
1985	31.6	33.4	32.5
1990	33.5	35.5	34.5
1995	34.9	37.0	35.9
2000	35.9	38.3	37.1
2005	36.7	39.2	37.9
2010	37.6	39.8	38.7
2015	38.2	40.3	39.2
2020	39.0	40.9	39.9
2025	39.7	41.6	40.6
2030	40.1	42.1	41.1
2035	40.3	42.3	41.3
2040	40.1	42.1	41.1

Source: Office of Economic Analysis, Oregon D.A.S., Jan. 1997

Salem–Keizer-Turner UGB Population Growth

Historical population growth in the Salem-Keizer Urban Growth Boundary (UGB) from 1950 to 2000 is illustrated in **Table 3-6**. Prior to the creation of SKATS and the UGBs in the 1970s, planning studies discussed the population of the Salem urbanized area, which included the city of Salem plus the surrounding closely settled unincorporated areas that meet certain criteria of population size and density. Planning documents from the 1970s and 1980s were reviewed for historical population values. The Salem urbanized area population numbers illustrated in **Table 3-6** are a reasonable equivalent to the current Salem-Keizer UGB. The 2000 population estimate for the Salem-Keizer UGB was calculated in May 2001 using data from 2000 Census block data.

During the economic recession in the 1980s, Salem's annual average population growth rate dropped to 1.5 percent, mirroring a similar drop in the population growth rate for Marion County, Polk County, and Oregon (**Table 3-6**). During the 1990s, however, the Salem-Keizer population average growth rate increased to 2.4 percent per year, which was higher than the state's rate of growth.

Table 3-6 Salem-Keizer UGB Population Growth

Historical Population Growth - UGB						
Year	**1950**	**1960**	**1970**	**1980**	**1990**	**2000**
Geography[1]	Salem UA	Salem UA	Salem UA	UGB	UGB	UGB
Population	45,800	70,600	93,000	138,700	160,230	203,275
Decade	**1940-50**	**1950-1960**	**1960-70**	**1970-80**	**1980-90**	**1990-2000**
Growth	48%	54%	32%	49%	16%	27%
Salem UGB AAGR[2]	4.0%	4.4%	2.8%	4.1%	1.5%	2.4%
M&P AAGR[3]	--	--	--	3.0%	1.1%	2.2%
Oregon AAGR	3.4%	1.5%	1.7%	2.3%	0.8%	1.9%
Historical Population Growth - Cities						
Year	**1950**	**1960**	**1970**	**1980**	**1990**	**2000**
City of Salem	43,140	49,142	68,296	89,233	107,786	136,924
City of Keizer[4]		5,288	11,405	18,592	21,884	32,203
City of Turner	610	770	846	1,116	1,281	1,199

[1] Salem UA = Salem Urbanized Area, UGB = Salem-Keizer Urban Growth Boundary
[2] AAGR = Average Annual Growth Rate
[3] Marion and Polk counties Average Annual Growth Rate
[4] Keizer incorporated in 1982. Earlier years are Keizer CDP.

The city of Turner was added to the SKATS planning area as part of the TMA boundary expansion adopted by the SKATS Policy Committee in 2002. **Table 3-6** shows Turner's population from 1950 to 2000. Turner experienced a decrease in population from 1990 to 2000. However, since the construction of the city's sanitary sewage system in June 2000, Turner has

experienced seen an increase in population, with several recent subdivisions completed and others on the horizon. The Portland State University July 2003 population estimate for Turner is 1,480 persons, a 280-person (23%) increase since the year 2000.

Building permit activity in the Salem-Keizer UGB from 1980 to 2003 is illustrated in **Table 3-7**. From a low of 129 building permits in 1985, construction peaked in the mid-1990s. Development plateaued to about 1,000 new housing units per year during the last five years. In particular, multi-family development has decreased substantially since the early 1990s.

Table 3-7
Building Permit Data, Salem-Keizer UGB

Year	Single Family	Duplex	Multi Family	Total
1980	1,006	100	207	1,313
1981	450	68	173	691
1982	213	2	0	215
1983	194	4	2	200
1984	193	14	13	220
1985	111	10	8	129
1986	267	-2	189	454
1987	511	22	138	671
1988	759	14	803	1,576
1989	743	30	769	1,542
1990	760	38	930	1,728
1991	744	68	482	1,294
1992	962	54	748	1,764
1993	862	96	876	1,834
1994	910	68	243	1,221
1995	874	138	508	1,520
1996	1,082	122	735	1,939
1997	957	50	479	1,486
1998	1,030	70	247	1,347
1999	794	58	131	983
2000	765	28	211	1,004
2001	755	22	307	1,084
2002	840	18	166	1,024
2003	864	34	102	1,000
Total	**16,646**	**1,126**	**8,467**	**26,239**
Percents	63.4%	4.3%	32.3%	

Salem-Keizer Group Quarters Population

The Salem-Keizer area has a relatively large share of its population in group-quarters (4.7%), compared to the two counties (3.6%) or the state (2.3%). The primary reason is the presence of several state and county correctional facilities. The 1990 and 2000 Census group-quarters population by type of quarters is illustrated in **Tables 3-8** and **3-9**, and group quarters as a percent of total population are illustrated in **Table 3-9**. While the total number of people in group quarters stayed relatively constant between 1990 and 2000, the number of institutionalized persons decreased (mostly with the closing of Fairview Hospital), while persons in non-institutional group quarters increased.

Table 3-8
1990 Census, Persons in Group Quarters

Institutionalized persons (00I-99I):	Salem	Keizer	Four Corners	Hayesville	Total
Correctional institutions	4,612	0	0	0	**4,612**
Nursing homes	998	277	0	0	**1,275**
Mental (Psychiatric) hospitals	753	0	0	0	**753**
Juvenile institutions	165	0	0	0	**165**
Other institutions	713	0	0	0	**713**
Subtotal	**7,241**	**277**	**0**	**0**	**7,518**
Other persons in group quarters (00N-99N):					
College dormitories	1,329	0	0	0	**1,329**
Military quarters	0	0	0	0	**0**
Emergency shelters for homeless persons	178	0	0	0	**178**
Visible in street locations	19	2	0	0	**21**
Other noninstitutional group quarters	442	33	20	12	**507**
Subtotal	**1,968**	**35**	**20**	**12**	**2,035**
Total	**9,209**	**312**	**20**	**12**	**9,553**

1990 GROUP QUARTERS P028 STF1A
Universe: Persons in group quarters

Table 3-9
2000 Census, Persons in Group Quarters

		Group Quarters Population			
	Total Population	**Institutional**	**Non-institutional**	**Total**	**% of Total Population**
Salem	136,924	6,360	2,524	8,884	6.5%
Keizer	32,203	233	47	280	0.9%
Four Corners	13,922	0	39	39	0.3%
Hayesville	18,222	0	180	180	1.0%
Total	**201,271**	**6,593**	**2,790**	**9,383**	**4.7%**

Source: 2000 Census

Salem-Keizer UGB Population Forecast Methodology and Control Total

In 1998, representatives from the Mid-Willamette Valley Council of Governments, Marion and Polk counties, the city of Salem, the city of Keizer, and the Department of Land Conservation and Development (DLCD) met to coordinate the 2020 population forecast for the combined Salem and Keizer UGB area. This coordination was initiated by Marion and Polk counties following the passage of House Bill 2709, which updated the Oregon Revised Statutes to require counties to establish and maintain population forecasts for the entire area within their boundaries for use in maintaining and updating their comprehensive plans. The 2020 coordinated population forecast was extended to the year 2025 for the 2002 RTSP update.

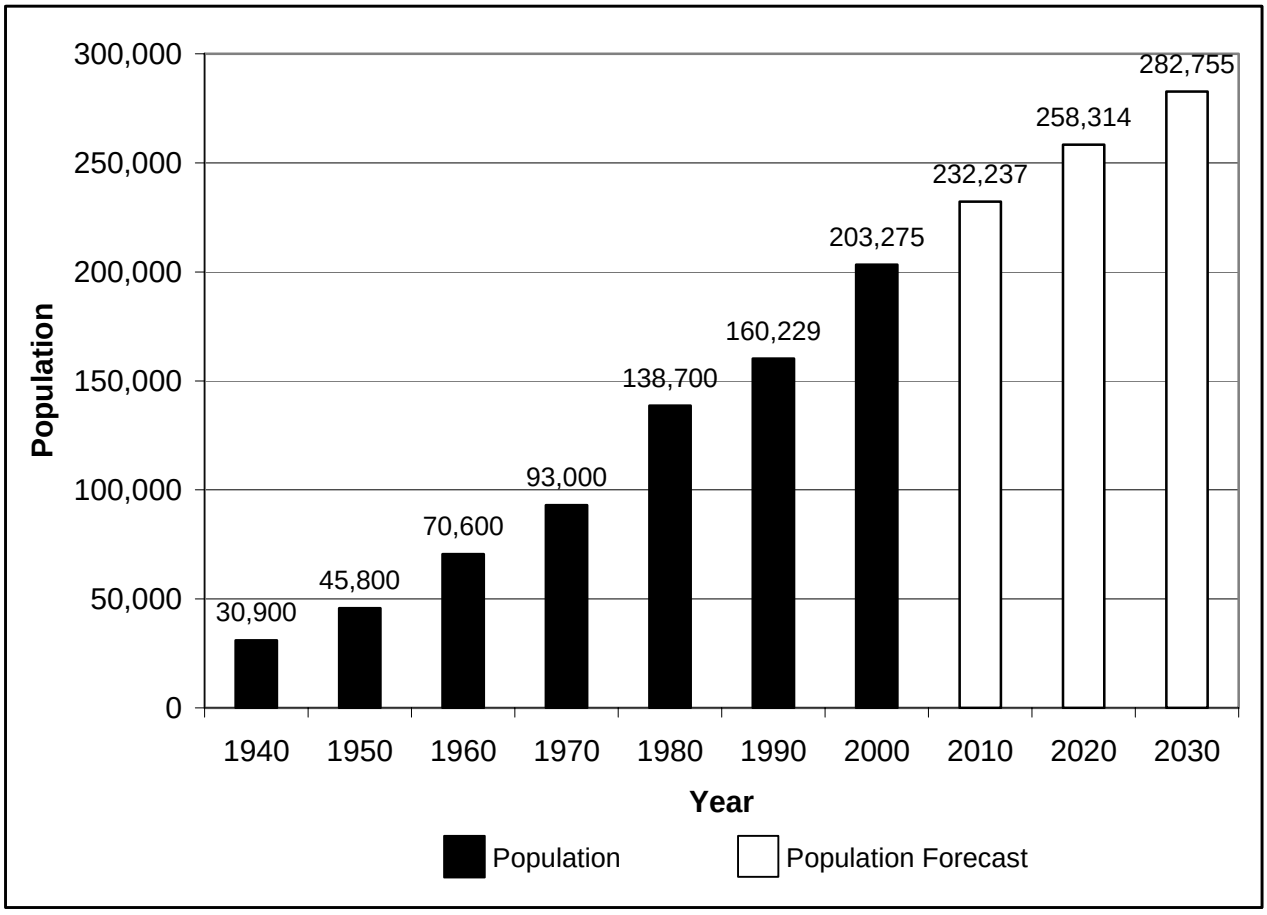
In 2003, a SKATS Land Use Subcommittee was formed to help coordinate and update the 2030 population and employment forecasts and allocations. Using the long-range forecasts from OEA, the subcommittee began a process of developing a Salem-Keizer UGB population forecast. Starting with the 2025 Salem-Keizer UGB population forecast of 270,458 (from the 2002 RTSP Interim Update), the subcommittee agreed to an initial population target of 282,000 for the year 2030. With this initial target, work began on allocating the population within Salem and Keizer.

Using 2000 Census data, the total population within SKATS is estimated to be 203,275. Based on the land use, housing, and persons per unit data describe later in this chapter, the new forecasts for SKATS and the jurisdictions within SKATS are shown in **Table 3-10.** The last column of Table 3-10 shows the population within SKATS, as a percent of the two-county population forecast, is forecast to decrease over time from 62 percent to 56 percent. **Figure 3-4** shows the increase in the Salem-Keizer UGB population.

Table 3-10
UGB and SKATS Population Forecast, 2000 to 2030

Year	Total Salem UGB	Total Keizer UGB	Total Salem-Keizer UGB	Total Turner UGB	Remaining SKATS areas	Total SKATS Population	Combined Marion and Polk County Population Forecast	SKATS Population as a Percent of Marion and Polk Population
2000	171,072	32,203	203,275	1,199	10,109	214,583	347,214	62%
2005	183,497	35,364	218,861	1,480	10,530	230,871	368,347	63%
2010	194,929	37,308	232,237	1,665	10,926	244,828	395,973	62%
2015	205,863	38,404	244,268	2,087	11,203	257,558	427,781	60%
2020	218,976	39,338	258,314	2,363	11,480	272,157	462,611	59%
2025	231,985	39,767	271,752	2,661	11,736	286,149	496,017	58%
2030	242,761	39,994	282,755	2,933	11,920	297,608	527,579	56%

Figure 3-4
Salem-Keizer UGB Population Growth and Forecast, 1940-2030



Housing and Population Forecast for the City of Keizer

The city of Keizer's population grew from 21,884 persons in 1990 to 32,203 in 2000, according to Census data. However, by the end of the year 2001, the amount of all vacant residential land (single-family, multi-family, and mixed use) had been reduced to only about 140 acres. The majority of future residential development in Keizer will occur on underutilized lots. Recognizing this, the city of Keizer initiated an Infill Master Plan Study, which identified the location and amount of buildable vacant and underutilized lots in Keizer, as well as design recommendations for infill development.

Before beginning Keizer's forecast, the land use and housing data in SKATS' Geographic Information System (GIS) was updated and compared to the 2000 Census data for Keizer. Both the Census and the GIS counted approximately 12,800 housing units in Keizer for the year 2000, and the population for both was about 32,200.

Establishing the year 2000 as a base in the Keizer GIS, taxlots in the GIS were identified and categorized as either fully developed, vacant as of 2000, vacant as of 2000 but the number of housing units known from building permits or recent subdivision maps, underutilized, or underutilized but known number of housing units from permits or subdivision maps.[1] Taxlots that allowed mixed use (housing and/or employment) were individually selected for the forecast for either future housing or future employment.

The process in Keizer was to develop a full build-out projection of the vacant, underutilized, and mixed-used taxlots, then to coordinate with city of Keizer staff to determine a rate of development to the year 2030. **Table 3-11** shows the number of "potential" housing units based on build-out, and the number of units forecast to develop by the year 2030.

Table 3-11
City of Keizer Housing Forecast, 2000 to 2030

2000 Land Use Category	Total Potential Units	Units Developed by 2030
Vacant	1,084	1,066
Underutilized	2,701	1,703
Mixed Use	601	468
Total	**4,386**	**3,236**

Details of the housing forecast include the following:

1. 145 taxlots are in the category of "vacant as of 2000 but the number of housing units known from building permits or recent subdivision maps". Based on recorded information, **the forecast is for 610 new housing units on these lots**.

2. 103 taxlots are in the category of "vacant taxlots with no building permits or subdivision information." Most of these taxlots are small: 85 are less than one acre, and of those 46 are less than 0.3 acres. The lots under 0.3 acres with a Comprehensive Plan designation of Low Density Residential (LDR) were assigned a forecast of one new single-family unit. For larger lots, densities of 5.0 units per acre for LDR and 21 units per acre for Medium High Density Residential (MHDR) were used. Some adjustments were made for lots near the floodplain or for the smaller lot MHDR. **The forecast is for 474 new housing units on these lots.**

3. Underutilized lots are those that had a residential development as of the year 2000, but because of their size have the potential for additional single-family or multi-family dwelling units if the lot is partitioned or subdivided sometime in the future. Larger underutilized lots occur on the north, west, and east edges of the city. In the central part of Keizer (surrounding River Road and south of Lockhaven), most of the homes were built in the 1930s to the 1970s, and these lots are often deep but narrow. Homes on

[1] Details are available in a separate document "Keizer Residential Forecast Methodology"

these lots are often at the street-side or at the back of the lot, and partitioning the lot is not difficult if they meet the infill standards of the city. There are also many instances throughout Keizer where adjacent underutilized lots are assembled and either re-partitioned or, if large enough, are developed into new subdivisions (e.g. the new subdivision on Lucinda Ave.)

The forecast takes into account information on all the recent partitions and subdivisions on underutilized lots (2000 to 2003) and assumes that most of the large underutilized lots (i.e., over one acre) will eventually be partitioned or subdivided by the year 2030. For underutilized lots less than one acre, city of Keizer staff recommended that 0.3 acres (13,000 square feet) was a reasonable minimum size lot to be considered "underutilized" with the potential for a partition. This size allows suitable vehicle access to partitioned properties. However, other considerations were taken into account to identify or reduced the pool of potential underutilized lots, which are detailed in the Keizer Residential Forecast methodology report.

The methodology resulted in a potential of 2,700 housing units (1,550 on small lots, 1,150 on large lots). The 2030 forecast assumes that most of the large underutilized lots (i.e., over one acre) will eventually be partitioned by the year 2030, but far fewer of the smaller underutilized lots will be partitioned by 2030. **The total number of new housing units built on underutilized lots is forecast to be 1,703 between the years 2000 and 2030**.

4. There are six general areas in Keizer that have Mixed Use Comprehensive Plan designations. The allocation for each was developed with the direction of Keizer staff. Some were developed as a mixture of residential and commercial, and others treated as only one or the other development type. Details are described in the Keizer Residential Forecast Methodology report. **A total of 610 housing units were assumed as the potential buildout, with 468 occurring by 2030**.

After calculating the potential units, the next task was to assign development years to the taxlots with potential new housing. Using building permit data (**Table 3-12**) from the city of Keizer as a guide, and noting the general decline in single-family homes, assumptions were made for the rate of future development of single-family homes. Based on these rates, the forecast for Keizer assumes **a target of around 1,900 single-family homes would be built between 2000 and 2030.**

Multi-family dwellings (apartments) do not show a clear trend in **Table 3-12**, although the average from 1996 to 2002 is 55 new apartments per year. For the 2030 forecast, it was assumed that 50 apartment units and duplex units per year will be constructed between the years 2000 and 2020, and 40 per year for the next five years, and 25 per year for the final five years. This drop over the years is based on the decreasing amount of MDR and MHDR land that would remain after the year 2020, plus the uncertainty of how the mixed-use land will be actually developed. Using these assumptions, the forecast assumes that **a target of around 1,325 multi-family apartment and duplex units homes would be built between 2000 and 2030.**

Table 3-12
Keizer Building Permit and Land Use Data, 1996 through 2003

	SINGLE-FAMILY	DUPLEXES		OTHER PLEXES		APT BLDGS		SUBDIVISIONS		PARTITIONS	
	Number & Units	Number	New Units	Number	New Units	Number	New Units	Number	Lots	Number	Lots
2003	154	6	12	2	8	7	72	3	56	12	27
2002	198	3	6	0	0	8	64	4	38	13	33
2001	100	3	6	0	0	1	8	3	30	9	22
2000	240	7	14	0	0	7	52	10	183	11	22
1999	241	9	18	0	0	0	0	6	199	11	27
1998	296	11	22	12	48	18	148	4	35	18	42
1997	259	12	24			6	44	10	306	22	52
1996	277	22	44			12	Unit data not available	4	157	16	42
Average	**221**	**9**	**18**	**2**	**9**	**7**	**55**	**6**	**126**	**14**	**33**

The final step for the Keizer housing forecast was to assign development years to individual taxlots in the GIS and try to match the single-family and duplex/multi-family targets described above. **Table 3-13** shows the final allocation to taxlots, summarized by type of structure and year of assumed development. **A total of 3,236 dwelling units are forecast for Keizer between 2000 and 2030. This 30-year allocation includes 1,919 single-family homes, 164 duplex units, and 1,153 apartment units.** The split between single-family, duplex, and apartments is 59%, 5%, and 36% respectively, with the latter years having a higher multi-family percentage of new housing.

Using the persons per housing unit rates[2] shown in **Table 3-13**, Keizer's 2030 population forecast is 39,994. That is a 7,791-person increase (24%) from the year 2000 population of 32,203.

[2] Rates from 2000 Census Salem Urbanized Area (which includes both Salem, Keizer, and the urbanized areas inside the Salem/Keizer UGB)

Table 3-13
2000-2030 Keizer Housing & Population Forecast by Type and Year

Housing Growth 2000 - 2030

	Total	2005	2010	2015	2020	2025	2030
SF	1919	867	490	260	156	93	53
Duplex	164	138	26	0	0	0	0
Apartments	1153	276	289	200	256	89	43
Total	**3236**	**1281**	**805**	**460**	**412**	**182**	**96**
SF	59%	68%	61%	57%	38%	51%	55%
Duplex	5%	11%	3%	0%	0%	0%	0%
Apartments	36%	22%	36%	43%	62%	49%	45%

Population Growth 2000 - 2030

	New Dwellings	Persons/hh	Population Increase
SF	1,919	2.663	5,110
Duplex	164	2.129	349
Apartments	1,153	2.022	2,331
	3,236		7,791

Keizer Population Forecast		
2000 Census	32,203	
2030 Forecast	39,994	
	7,791	24% increase

Housing and Population Forecast for the City of Salem

The official 2000 Census population for the Salem City Limits was 136,924. The Salem UGB includes the Salem city limits plus adjacent urban areas of Marion and Polk counties. Using Census data, the estimated 2000 population within the Salem UGB was 171,072 persons. The interagency population coordination initially estimated that the Salem UGB's population should be approximately 242,000 by the year 2030. With that initial target, city of Salem and SKATS staff worked on allocating the housing and population within the Salem UGB.

The first task was for city of Salem staff to update their base-year GIS to better match the 2000 Census housing totals for the Salem UGB planning area. Next, taxlots with a residential Comprehensive Plan were classified as developed, vacant, underutilized, or redevelopable as of the year 2000. Information about development after the year 2000 (building permits and recorded subdivisions) was included in the forecast of total residential growth. Assumptions were made for currently developed lots that might partition in the future. Reductions to potential residential development were made to account for future parks and schools. Some special categories were added to account for planned residential development at Sustainable Fairview, the Illahee area, and the North Downtown area. The PictSweet property west of Cordon Road is assumed to have housing in the future. In addition, 130 acres of additional multi-family housing (required in West Salem as part of Salem's Periodic Review) were included in the forecast.

Once the taxlots and parameters for future residential growth were identified, the potential number of housing units was calculated using the densities in **Table 3-14**. For special areas such as Sustainable Fairview and others noted above, City of Salem staff estimated the number of potential housing units. The total potential housing units and those allocated for the 2030 forecast are shown in **Table 3-15**.

Table 3-14
Housing Densities (Units per acre) Used for Salem Forecast

Category ("Devcode_cp")	Comprehensive Plan	Assumed Density	Note
Vacant or underutilized	Single Family or Developing Residential	4.64 units/acre	Underutilized land subtracts the acres used by the existing housing before calculating new units on the remaining acres
Vacant	Multi-family	21 units/acre	
Redeveloped	Multi-family	21 units/acre	Calculation will use 21 units/acre and subtract existing units to avoid double counting when growth is added to existing housing

Table 3-15
Forecast of Potential and Allocated Housing Units for Salem UGB Forecast, by Development Category

Development Category "Devcode_cp"	Potential Number of Housing Units	Housing Units Allocated between 2000 and 2030
Known Development after year 2000 ("lots & committed")	5,710	5,710
Vacant Residential	15,629	11,558
Underutilized Residential	11,696	7,129
Redevelopment	12,866	1,736
Partitions	915	915
Sustainable Fairview Forecast	1,781	1,781
Illahee Forecast	167	167
Pictsweet Special Forecast	369	369
N Downtown Forecast	302	302
Total	**49,433**	**29,666**

Table 3-16 is the final housing forecast for the Salem UGB. The table shows the forecast of new single family and multi-family housing units, for the Salem UGB east and west of the Willamette River. Using the same persons per housing unit rates used in Keizer, the population increases are for each five year period is forecast. **For the 2000 to 2030 period, this forecast has an increase of 18,261 single family homes (61.6% of total), 11,405 multi-family units (38.4% of total), 29,666 housing units total, and a total population increase of 71,689 persons**.

Table 3-16
Forecast of New Housing Units and Population Increase in Salem UGB, in 5-year increments

	Salem UGB (East of River)			Salem UGB (West of River)			Total		
Year	SF units	MF Units	Population Increase	SF units	MF Units	Population Increase	SF Units	MF Units	Population Increase
2005	2,285	1,303	8,720	1,161	303	3,705	3,447	1,606	12,425
2010	1,712	1,560	7,714	888	669	3,718	2,600	2,229	11,432
2015	1,963	1,511	8,282	700	390	2,652	2,662	1,901	10,934
2020	2,454	845	8,244	738	1,435	4,868	3,193	2,280	13,112
2025	2,359	808	7,916	245	2,197	5,094	2,604	3,005	13,010
2030	3,214	55	8,671	541	329	2,105	3,755	384	10,776
Total	**13,988**	**6,082**	**49,548**	**4,273**	**5,323**	**22,142**	**18,261**	**11,405**	**71,689**
							61.6%	38.4%	

Note: Rounded to nearest integer

Based on the above forecast and the forecast for the city of Keizer, the Salem-Keizer UGB population would increase as shown in **Table 3-17**.

Table 3-17
Forecast of Salem-Keizer UGB Population Growth, in 5-year Increments

	Keizer	West Salem	East Salem	Total Salem UGB	Total Salem-Keizer UGB
2000	32,203	19,883	151,189	171,072	203,275
2005	35,364	23,588	159,909	183,497	218,861
2010	37,308	27,306	167,623	194,929	232,237
2015	38,404	29,958	175,906	205,863	244,268
2020	39,338	34,826	184,149	218,976	258,314
2025	39,767	39,920	192,066	231,985	271,752
2030	39,994	42,025	200,737	242,761	282,755

Housing and Population Forecast for the City of Turner

Turner updated its Comprehensive Plan in June 2001, projecting a 2020 population of 2,363 persons (Source: Chapter 3, Table 9.3 C, of the Turner Comprehensive Plan). This forecast is based on an annual population growth of 2.4%. Using this growth rate, and making small adjustments to account for available residential land, results in a 2025 population forecast of 2,661, and a 2030 population forecast of 2,933. The population forecast for Turner is shown in **Table 3-10**.

According to the Growth Management section of the 2001 Turner Comprehensive Plan (page 9.800-8):

> The City's 1980 Turner Comprehensive Plan previously committed itself to revise the City's Urban Growth Boundary (UGB) to accommodate the needs of 3,500 people should a commitment to a sewer system be made by the time of the next Plan update. In the summer of the year 2000, a sanitary sewage collection system was completed. With the introduction of municipal sanitary sewers, the city's growth potential has increased substantially over the rural capacity that was dependent upon septic system feasibility and may exceed the adopted [2020] population projection of 2,363 approved by the County and State.

Chapter 4 of Turner's Plan (Housing and Buildable Lands Analysis) concluded that 99 acres of buildable land was needed to accommodate the city's 2020 population. The Plan estimates that there is approximately 157 acres of buildable residential land (Table 9.500 I in Plan). The Plan's land use goals and policies encourage compact residential development, infill development of oversized lots, and higher density multi-family development in the downtown core area.

Not included in the inventory of 99 acres of currently zoned and buildable residential land is the residential redevelopment potential within the city's 169 acres of MAR (Mineral and Aggregate Resource District) land. The MAR district is an aggregate extraction site established in 1995. It is located at the north end of the city and is owned by River Bend Sand and Gravel. Upon completion of the extraction process and city approval of a final redevelopment plan, this land will become available for development, most likely between 2010 and 2020. Presently, the preliminary redevelopment plan anticipates a 90-acre lake, 47 acres of residential redevelopment, 24 acres for commercial or public use, and 8 acres of protective landscape buffers.

Outside the Turner UGB, the city has an agreement with Marion County regarding the 439 acres removed from the original Turner UGB. This area, known as the Urban Growth Notification Area (UGNA), was established in 1982 between the city and county to accommodate future urban growth of the city when needed. Further information can be found in Chapter 9 of the Turner Plan.

Population Forecast for the Area Outside the UGB

The relationship between the Salem-Keizer Urban Growth Boundary (UGB) and the SKATS boundary is illustrated in **Map 3-1**. Except for a section in the southeast, the SKATS boundary is about one to four miles larger than the UGB.

In 1990, approximately 6,430 people were living in the area between the UGB and SKATS boundary. The 2000 Census estimates the population of this area (i.e., before the SKATS boundary was expanded in 2002) was 8,230 people: a 28% increase, similar to the UGB population increase. With the expansion of the SKATS boundary, the population was re-calculated to be 10,109 persons in the year 2000.

A forecast for the SKATS area outside the UGB was prepared with the assistance of Marion and Polk counties' planning staff. Zoning data was used for the forecast, which included staff's suggestions on where to limit development due to slope and water restrictions. Between 2000 and 2030, the forecast is for **168 new units on 120 parcels in Polk County** and **512 new units on 399 parcels in Marion County**, for a combined total of 680 new units. Assuming 2.7 persons per household, this is an increase of 1,836 persons. Most of the new housing will be single-family dwelling units on residential lots currently vacant. Only about a quarter of the housing would result from new partitions or subdivisions.

Using this allocation, the total population outside the UGBs would increase from 10,109 in the year 2000 to 11,920 by 2030, an 18% increase for the thirty-year period. Adding this population to the 2030 population forecasts for the Salem-Keizer UGB (282,755) and Turner UGB (2,933) **results in a total of 297,608 for the SKATS boundary** (**Table 3-10**).

Marion and Polk County Employment

County employment data is available from the Oregon Employment Department's (**OED**) Oregon Labor Market Information System (OLMIS) website. **Table 3-18** shows the year 2000 employment in each county, categorized by their major SIC groups and government sectors.

Table 3-18
2000 Marion and Polk County Employment

SIC Group	Industry Group	Marion Co.	Polk Co	Total
01-09	Agriculture, Forestry and Fishing	8,829	1,163	9,992
10-14	Mining	220	56	276
15-17	Construction	6,678	791	7,469
20-39	Manufacturing	14,606	3,192	17,798
40-49	Trans., Comm., and Utilities	4,159	289	4,448
50-51	Wholesale Trade	3,981	422	4,403
52-59	Retail Trade	22,513	2,393	24,906
60-69	Finance, Insurance and Real Estate	5,598	284	5,882
70-89	Services	28,942	4,624	33,566
99	Nonclassifiable/all others	48	13	61
federal	Total Federal Government	1,578	137	1,715
state	Total State Government	16,965	990	17,955
local	Total Local Government	13,420	1,649	15,069
	Total	**127,537**	**16,003**	**143,540**

Source: OLMIS, 2004

The OLMIS website contains the ES-202 data of "covered" employment (workers covered by unemployment insurance) by industry for all counties in the state[3]. The employment data comes from the unemployment insurance tax reports submitted quarterly by employers subject to Employment Department Law. Since 1980, the ratio of covered employment to total employment, expressed as a percentage, has varied between a low of 78.6 % (in 1983) and a high of 95% (in 1999). In 2000, the ratio dropped to 93.7%, in 2001 it was 93.6%, in 2002 it was 92.5% and in 2003 it was 91.6% [4]

The OLMIS Covered Employment and Wages tool allows searches and summaries of industry employment, wages, and number of business establishments. Historical data are available back to 1976; but beginning in 2001, data is reported using the North American Industry

[3] Non-covered employment includes the self-employed; services performed by a person in the employ of a son, daughter, or spouse; realtors and insurance sales employment that are based solely on commission; service performed by certain part-time, irregular, and emergency employees of state or local government; service performed by elected officials; certain categories of agricultural workers; and other specialized employment. See OLMIS for more info.

[4] Source: 10/25/04 e-mail from Ken Lux, Covered Employment and Wages program, OED

Classification System (NAICS)[5]. Prior data are organized by Standard Industrial Classification (SIC), which is used in this analysis in order to compared changes from 1990 to 2000.

Employment for 1990 and 2000 in the Salem MSA (Marion and Polk counties) are shown in **Table 3-19**. Between 1990 and 2000, employment in the MSA increased 28 percent, coinciding with the growing overall economy in Oregon. The service sector had the largest increase in jobs (almost 12,000 new jobs), but there were other significant increases in agriculture/forestry/fishing, construction, transportation/communication/utilities, retail, and government.

Table 3-19
Salem MSA (Marion and Polk Counties) Employment (1990 to 2000) by SIC Categories

	Year →	1990	2000		
SIC Group	Industry Group	MSA	MSA	MSA 1990-2000 Change	MSA 1990-2000 % increase
01-09	Agriculture, Forestry and Fishing	7,520	9,992	2,472	33%
10-14	Mining	73	276	203	278%
15-17	Construction	4,714	7,469	2,755	58%
20-39	Manufacturing	16,000	17,798	1,798	11%
40-49	Trans., Comm., and Utilities	2,896	4,448	1,552	54%
50-51	Wholesale Trade	4,086	4,403	317	8%
52-59	Retail Trade	19,730	24,906	5,176	26%
60-69	Finance, Insurance and Real Estate	5,029	5,882	853	17%
70-89	Services (& Miscellaneous SIC=99)	21,780	33,627	11,847	54%
fed	Total Federal Government	1,826	1,715	(111)	-6%
state	Total State Government	16,950	17,955	1,005	6%
local	Total Local Government (includes schools)	11,250	15,069	3,819	34%
	Total Government	30,026	34,739	4,713	16%
	Total	**111,854**	**143,540**	**31,686**	**28%**

5 Beginning with January 2003 data, the Oregon Employment Department will be reporting industry data in North American Industry Classification System (NAICS) format in order to be comparable to industry data for the U.S. and both Mexico and Canada.

Figure 3-5 shows the 25-year growth in employment in Marion and Polk counties. **Figure 3-6** shows the variation in employment during a typical year in the manufacturing sector, due to the fact that a large percentage of the manufacturing employment in the SKATS area is in the food-processing sector. Employment in food processing is highly seasonal, as large canneries (Truitt, Norpac, etc.) almost double their employment during August to October.

Figure 3-5
Marion and Polk County Historic Employment

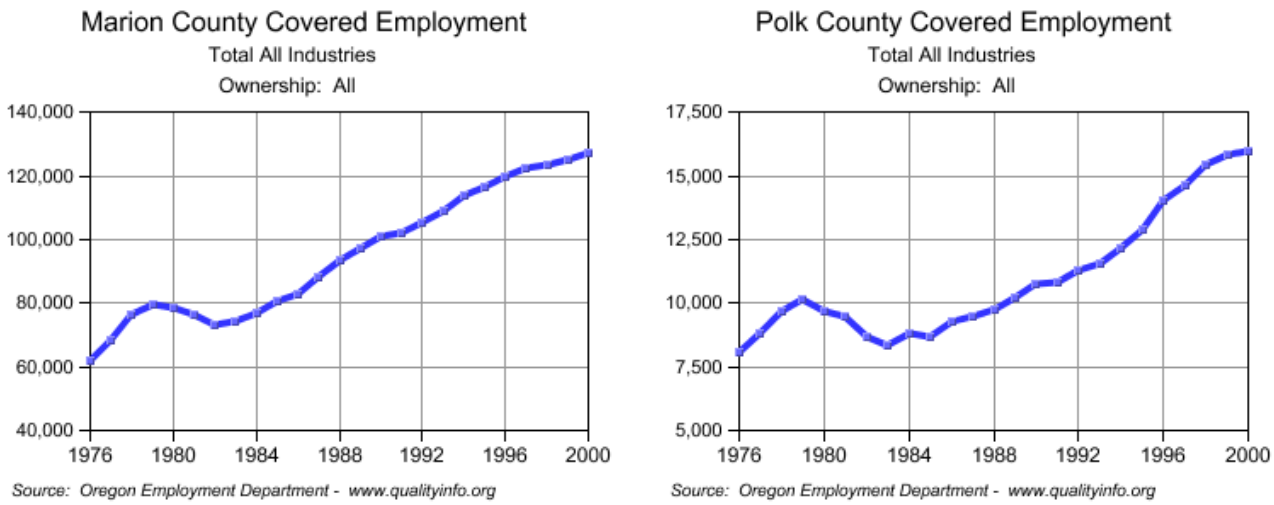
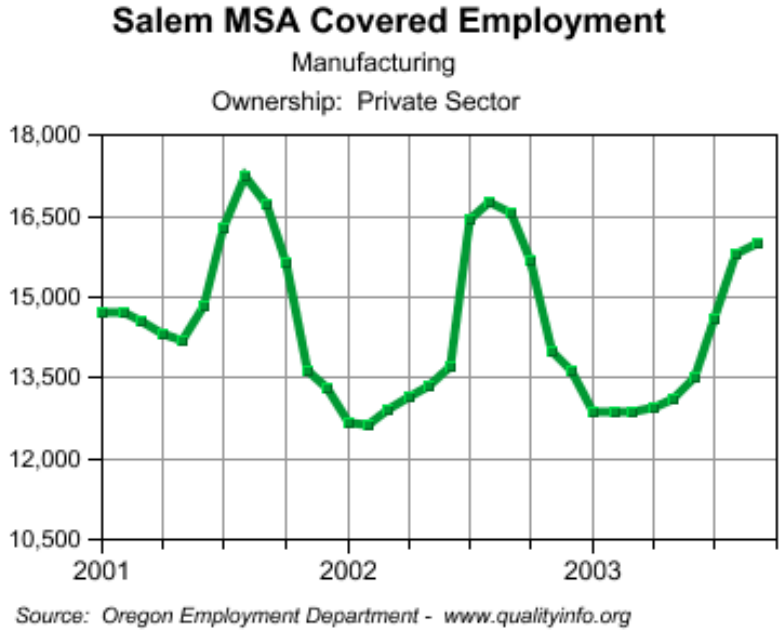


Figure 3-6
Salem MSA Seasonal Manufacturing Employment



Employment Forecasts - 2012 Forecast for Marion and Polk Counties

In July 2003, the Oregon Employment Department (**OED**) released a report titled, "Employment Projections By Industry, 2002-2012." This document reports that between 1992 and 2002, employment increased 24 percent for the entire state (over 300,000 jobs). For the years 2002 to 2012, OED forecasts a 13.7 percent employment increase statewide (215,000 jobs). For Region 3 (Marion, Polk, and Yamhill) this report forecasts a 13.5 percent increase (22,000 more jobs). OED was able to provide the 2002-2012 forecasts for just Marion and Polk counties, which are shown in **Table 3-20.**

Highlights of the statewide forecast include the following:

1. The state has added jobs in *every* 10-year increment since the state began tracking non-farm employment in 1947.
2. Population growth (13 percent between 2000 and 2010) will increase demand for goods and services.
3. Service industries are likely to account for nearly half of the state's job growth, in particular the health, business, social, and professional (i.e., engineering and management) services.
4. Trade industries (retail and wholesale together) will account for more than one in four new jobs. Retail trade historically tracks closely with population growth. Wholesale trade is affected by broader industry and economic trends.
5. Finance, insurance, and real estate industries (FIRE) are also likely to grow with the state's population.
6. Construction is likely to see considerably slower growth over the forecast period compared to the 1990s.
7. Manufacturing employment in the state is forecast for slow job growth. Some manufacturing industries are currently thought to be at a cyclical low point (high tech, transportation equipment, fabricated metals, printing and publishing); each of these industries is expected to rebound with the overall economy. Several others are expected to continue a long-run decline (lumber and wood products, food products, paper products)
8. Although government employment is currently declining, it is expected to resume its long-term trend, growing more slowly than the overall economy.

Table 3-20
OED Employment Forecasts

OED Region 3 Forecast - Marion and Polk and Counties from Employment Projections by Industry (July 2003)					
Broad Industry	**2002**	**2012**	**Projected Change**	**Percent Change**	**Percent Increase Adjusted for a 15-year Growth Period**
Total Nonfarm Payroll Employment	137,837	156,035	18,198	13.2%	20.4%
Mining	268	281	13	4.9%	7.4%
Construction	6,463	7,245	782	12.1%	18.7%
Manufacturing	15,911	16,338	427	2.7%	4.1%
Transportation and Public Utilities	4,883	5,343	460	9.4%	14.5%
Wholesale Trade	4,113	4,810	697	16.9%	26.5%
Retail Trade	25,542	29,453	3,911	15.3%	23.8%
Finance, Insurance, and Real Estate	6,906	7,933	1,027	14.9%	23.1%
Services	34,771	43,078	8,307	23.9%	37.9%
Government	38,980	41,554	2,574	6.6%	10.1%

SKATS Employment Forecast to 2015 and 2030

"Covered" employment data for the SKATS area for 2000 was obtained from the Oregon Employment Department, which tracks the employment of workers who are covered by the state's unemployment insurance program.

Employment totals in Salem are seasonal, due to increased employment at the local canneries during the late summer and fall, and at retailers during the Christmas holidays. For that reason, employment for each employer in SKATS was averaged over the twelve months to report the annual average employment. **Table 3-21** shows 1991 and 2000 covered employment by major employment sectors inside SKATS. Between 1991 and 2000, employment in SKATS increased by over 11,000 jobs, a 14 percent increase. The table shows how each segment of employment changed between 1991 and 2000. **Table 3-21** also shows the amount of covered employment in Keizer UGB, Salem UGB, and the remainder of SKATS. The last column of **Table 3-21** shows the employment inside SKATS as a percentage of the Marion/Polk MSA 2000 employment. Finally, the 91,888 jobs in SKATS represents 64 percent of all covered employment within Marion and Polk counties in the year 2000.

Table 3-21
SKATS Employment 1991 and 2000, by SIC Categories

	Year →	1991	2000			2000	2000	2000	
SIC Group	Industry Group	SKATS Total	SKATS Total	SKATS 1991-2000 Change	SKATS 1991-2000 % Increase	Keizer UGB	Salem UGB	Remainder of SKATS TMA area	SKATS Employment as % of MSA Employment
01-09	Agriculture, Forestry and Fishing	3,557	1,993	(1,564)	-44%	101	1,109	783	20%
10-14	Mining	65	160	95	146%	-	121	39	58%
15-17	Construction	3,484	4,173	689	20%	351	3,465	357	56%
20-39	Manufacturing	8,269	8,746	477	6%	40	8,487	219	49%
40-49	Trans., Comm., and Utilities	1,985	2,775	790	40%	46	2,639	90	62%
50-51	Wholesale Trade	3,254	2,638	(617)	-19%	69	2,288	281	60%
52-59	Retail Trade	14,373	17,505	3,132	22%	1,152	16,188	165	70%
60-69	Finance, Insurance and Real Estate	5,241	4,712	(529)	-10%	245	4,433	35	80%
70-89	Services (& Miscellaneous SIC=99)	17,807	23,100	5,293	30%	1,369	21,486	245	69%
fed	Total Federal Government		999			6	958	35	58%
local	Total State Government		15,676			-	15,676	0	87%
state	Total Local Government **(includes schools)**		9,413			594	8,460	359	62%
	Total Government	22,531	26,087	3,556	16%	600	25,093	394	75%
Total		**80,566**	**91,888**	**11,322**	**14%**	**3,972**	**85,309**	**2,608**	**64%**

The SKATS Land Use Subcommittee looked at several methods for forecasting future employment for 2015 and 2030. This included using the OEA growth rates for the Salem MSA, combined with several variations of shift-share analysis between local growth and MSA growth.

The subcommittee first focused on a 2015 forecast. This recommended forecast used a combination of growth rates from the OEA plus adjustments to account for planned growth in retail, manufacturing, and transportation due, in part, to two projects: Keizer Station and the Salem Regional Employment Center (SREC). Keizer Station is estimated to add 2,195 jobs (mostly retail and service) by 2015. SREC is estimated to add 5,400 jobs (mostly manufacturing and distribution), and the forecast assumed that 2,760 of these jobs will occur by 2015. Employment decreases due to recent business closures and announced reductions (e.g., SUMCO and State Farm) are also factored in the 2015 forecast.

Table 3-22 shows the recommended 2015 forecast for SKATS, showing a 16,000 job increase (17%) from the year 2000. Retail and service jobs will be the leading sectors of new jobs, similar to the forecast developed at the state and Salem MSA level. In the government sector, it was estimated that state government would grow by 1,800 jobs, federal government by 115 jobs, local government by 230 jobs, and school employment by 850 jobs.[6] Increases in manufacturing and TCU (transportation, communications, utilities) will be due in large part to the SREC development, as well as recent and expected employment increases by businesses in the communication sector (i.e., T-Mobile and Wachovia).

As shown in **Table 3-22,** the ratio of population to employment for 2015 (2.35) stays about the same as the ratio in 2000 (2.34)

[6] Since the base year is 2000, some of this school employment has occurred with the opening of a new West Salem high school, and several middle and elementary schools since 2000.

Table 3-22
SKATS 2015 Employment Targets

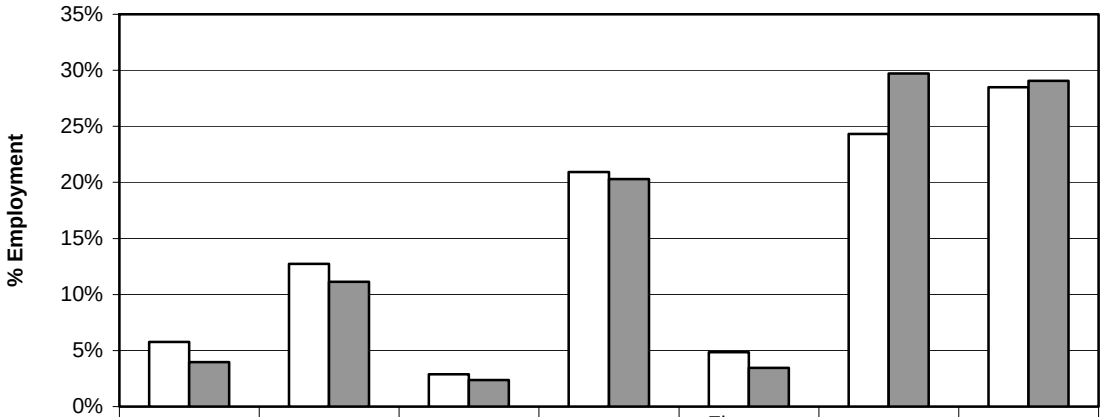
	Employment Sector	SKATS 1991 Employment	SKATS 1997 Employment	SKATS 2000 Employment	SKATS 2015 Employment Target	Increase/ Decrease from Year 2000	Percent Change
1	Agriculture, Forestry and Fishing	3,557	1,844	1,993	1,600	-393	-20%
2	Mining	65	165	160	160	0	0%
3	Construction	3,484	4,375	4,173	4,954	781	19%
4	Manufacturing	8,269	8,553	8,746	10,000	1,254	14%
5	Trans., Comm., and Utilities	1,985	1,964	2,775	4,352	1,577	57%
6	Wholesale Trade	3,254	2,454	2,638	2,813	176	7%
7	Retail Trade	14,373	17,573	17,505	21,676	4,171	24%
8	Finance, Insurance and Real Estate	5,241	4,510	4,712	4,891	179	4%
9	Services	17,807	20,662	23,100	28,377	5,277	23%
10	Total Government	22,531	25,788	26,087	29,104	3,017	12%
	Total Employment	80,566	87,888	91,888	107,927	16,039	17%
	SKATS Population Estimate	170,800	197,200	214,583	257,588		
	Population: Employment Ratio	2.12	2.24	2.34	2.35		

Developing a 2030 employment forecast is more challenging than the 2015 forecast, due to the increased uncertainty with longer-term forecasts. The only local source of information that might be used is Portland Metro's Regional Economic Model, which includes a 2025 employment forecast for the Salem MSA.

Metro's model is made up of a series of simultaneous equations relating the various sectors of the economy to one another, including consumption, investment, production, and wage and price determination. Metro's econometric model also includes an input/output model. Metro uses their econometric model with their land allocation software (Metroscope) to create future year land scenarios.

The chart below shows the 2025 employment sector forecast for the Salem MSA based on Metro's econometric model. As shown in the chart, service and government employment increase as a percentage of the total employment, while the other sectors decrease as a percentage of total employment.

Salem MSA by Industry Sector, 2000 and 2025
(Source: Metro)



	Constr. and Mining	Manuf.	Transp. Com. & Utilities	Whsle. & Retail Trade	Finance, Insur., & Real E.	Service	Fed. Civ., State & Local
2000	6%	13%	3%	21%	5%	24%	29%
2025	4%	11%	2%	20%	3%	30%	29%

One reason that Metro's 2025 forecast of total employment in the Salem MSA might be too high is its forecast of government employment. **Table 3-23** compares the Portland MSA and Salem MSA 2000-2025 forecast in three broad employment sectors. The growth rates for Construction, Mining, Manufacturing, and Transportation/Communications/Utilities sectors differ by eight percent. The growth rates for the Wholesale, Retail, FIRE, and Service sectors are very similar. However, the government sector's growth rate for Salem is much higher than Portland's. While Salem does have a large percentage of its 2000 employment in government, it's hard to imagine that government jobs will increase by 64% in 25 years. **Table 3-22** shows that there are about

26,000 government jobs in SKATS in the year 2000. If that number increased by 64%, it would be about 43,000 government workers in the year 2025, an increase of 17,000 workers. In contrast, **Table 3-22** forecasts an increase of only 3,000 government jobs between 2000 and 2015. In summary, the government job increase from the Metro model appears very overestimated.

Table 3-23
Comparison of Metro Forecast for Salem MSA and Portland MSA

	Portland MSA			Salem MSA		
	2000	2025	**Increase**	2000	2025	**Increase**
Construction, Mining, Manf, TCU	254,040	304,050	**20%**	29,356	37,528	**28%**
Wholesale, Retail, FIRE, Services	579,040	998,040	**72%**	68,804	120,380	**75%**
Government	126,640	166,220	**31%**	39,132	64,332	**64%**
Total	959,720	1,468,310	**53%**	137,291	222,240	**62%**

Table 3-24 shows three methods for estimating a 2030 forecast and the recommended forecast.

- Option 1 simply doubles the increase or decrease in employment for each sector, based on the 2000 to 2015 forecast. For example, the Manufacturing sector is forecast to increase by 1,254 jobs between 2000 and 2015. This method would add 1,254 more manufacturing jobs between 2015 and 2030.

- Option 2 uses the percentage change between 2000 and 2015 for each sector, and applies that percent change to the 2015 forecast. For example, the Manufacturing sector is forecast to increase by 14% between 2000 and 2015. This option would increase manufacturing by 14%(1,434 jobs) between 2015 and 2030. This option results in higher forecast results compared to option 1.

- Option 3 uses a growth rate of the Salem MSA as calculated by Portland's econometric Model. For some sectors, the results are not too different from the option 1 and option 2 results. There are bigger differences occurring in the Services, Transportation/Communication/Utilities, and the Government sectors

- The recommended forecast uses option 2 for most of the employment sectors. The two exceptions are the 2030 forecasts for the Manufacturing and TCU sectors. Due to the large initial increase in employment due to the SREC development at Mill Creek, it would seem unlikely to have a similar large expansion of manufacturing and TCU after 2015. Therefore, the manufacturing sector use option 1, and TCU uses a forecast between options 1 and 2.

- Total SKATS employment growth from 2015 to 2030 for the recommended forecast is 18 percent, which is slightly higher than the 17 percent in the 2000 to 2015 forecast.

Table 3-24
2015 to 2030 SKATS Employment Forecast Options and Recommended Targets

Sector	2000	2015	Option 1 Double Employment Growth/ Decline	Option 2 Use the 2000-2015 Growth Rate	Option 3 Use Metro's 2015-2025 Rate	Recommended Forecast	2015-2030 Change	Percent change
Agriculture	1,993	1,600	1,207	1,284	1,200	1,284	(316)	-20%
Mining	160	160	160	160	193	160	-	0%
Construction	4,173	4,954	5,735	5,882	5,975	5,882	928	19%
Manufacturing	8,746	10,000	11,254	11,434	11,978	11,254	1,254	13%
Trans., Comm., and Utilities	2,775	4,352	5,929	6,824	4,960	6,626	2,274	52%
Wholesale Trade	2,638	2,813	2,989	3,000	3,534	3,000	187	7%
Retail Trade	17,505	21,676	25,847	26,841	27,229	26,841	5,165	24%
Finance, Insurance and Real Estate	4,712	4,891	5,070	5,077	5,530	5,077	186	4%
Services	23,100	28,377	33,654	34,859	42,976	34,859	6,482	23%
Total Government	26,087	29,104	32,121	32,470	38,430	32,470	3,366	12%
Total SKATS	91,888	107,927	123,966	127,832	142,005	127,454	19,527	18%

Allocation of Employment in Keizer

A detailed analysis was performed to allocate employment in Keizer. Details of the forecast include:

1. Preliminary estimates of Keizer's employment growth were first estimated based on vacant and underutilized commercial land and special employment areas. The initial employment growth target was 4,150 new jobs by the year 2015 (including 2,195 jobs at Keizer Station and 300 jobs at Chemawa Station). Between the years 2015 and 2030, the forecast adds another 761 jobs throughout the city.

2. An inventory of existing land uses, including digital photos, was completed and the Keizer GIS was updated.

3. Based on the data and photo survey, commercial taxlots were categorized for potential development. For example, "VAC-HI" means that the parcel is vacant with a high probability of being developed in the near future.

4. For most taxlots, the estimate of future employment is based on the taxlot size and the

assumed density of employment. However, in Keizer there are special forecasts for a significant number of taxlots, as described below.

a. Forecasts for Keizer Station (2,195 jobs) and Chemawa Station (300 jobs) are estimated based on Master Plan maps that identify building square footage and use, with concurrence of Keizer staff.
b. Other special areas, including:
    i. Sports area north of Keizer Station. Keizer staff recommends that the forecast include a future co-generation plant, aquatic center, movie theatre, and limited retail. The forecast assumes 120 jobs for these developments.
    ii. Keizer Station Area B. A special area because new road to access Keizer Village will bisect some these properties. Keizer staff recommends adding 261 employees to the forecast.
    iii. Keizer Village (site of Gold's Gym, Goodwill, and others). The redevelopment of this shopping center made it a special area. The forecast estimates a total of 149 jobs once the redevelopment is completed.
    iv. The site on north end of Wheatland, including the Marion Rural fire district.
c. Employment in residential areas.
    i. In the year 2000, there were approximately 650 jobs in the residential areas of Keizer, excluding the schools and their employment. Services make up about half of these jobs, followed by construction jobs, some retail, and some small manufacturing. The forecast adds 126 residential jobs to a random selection of residential taxlots.
d. Employment in Mixed Use areas (including Staats Lake, River Road north of Lockhaven, Area C of Keizer Station Plan, and along Cherry Avenue). About 600 of the estimated 800 potential jobs were allocated by 2030.

5. The last step of Keizer employment forecast was adding the expected year the employment increases would occur. Projects completed since the year 2000 or currently under construction (e.g., Keizer Village) were assumed completed by 2005. Taxlots that Keizer staff had expectations for development in the next few years, plus some other taxlots with a high probability to develop, were assumed completed by 2010.[7] Development beyond 2010 was based on consultation with Keizer staff, and with the attempt to "smooth-out" the employment between the years 2015 and 2030. The employment forecast by year is shown in **Table 3-25**. In summary, employment in Keizer is forecast to grow from 3,972 to 8,864 by 2030, with most of that increase occurring by 2015.

1. [7] Keizer Station and Chemawa Station were assigned year 2010, even though both projects may start construction in 2005 or 2006. In the case of Keizer Station, it's reasonable to assume it may take several years –up to the year 2010 – to be fully developed.

Table 3-25
Keizer Employment Forecast, 2000 to 2030

Year	Total Employment	Increase
2000	3,972	
2005	4,802	830
2010	7,318	2,517
2015	8,155	837
2020	8,428	273
2025	8,670	242
2030	8,864	194

Allocation of Employment in Salem

In the Salem UGB, Salem staff updated their non-residential land use inventory for a year 2000 base. Using this inventory, taxlots were classified as vacant, underutilized, or available for redevelopment. Special forecasts were prepared for Sustainable Fairview and the Mill Creek area (Salem Regional Employment Center (SREC)). Information about recent changes (new firms, closures, job increases and decreases) -- such as SUMCO and Wachovia -- were factored into the employment forecast.

After classifying the land uses, Salem and SKATS staff developed employment densities to use for the forecast. These densities were applied to vacant and underutilized taxlots based on the Comprehensive Plan of the taxlot. **Table 3-26** lists the employment types and densities for vacant and underutilized lots. Employment for taxlots using one the "mix" categories are later broken down into employment sectors (retail, services, etc.). For example, vacant taxlots in the downtown central business district are assumed to develop at a higher density (72.8 jobs per acre) than other commercial areas. This "central area business mix" of new jobs is split into 52 percent retail jobs, 40 percent service jobs, and eight percent finance, insurance and real estate (F.I.R.E.) jobs, which was based on year 2000 employment in the Central Business area. Each mix has a unique distribution of employment sectors.

Table 3-26
Employment Densities used for Salem Forecast

ASSUMED EMPLOYMENT DENSITIES		
Employment Types	**Density for vacant lots**	**Density of underutilized lots**
Central Business Area Mix	72.8	48.5
Commercial Mix	27.1	18.1
Government Mix	35	23
Industrial Mix	12.8	8.5
Ind-Comm. Mix	15.4	10.3
Office	35	23
Retail	27	18
Service	31	21
F.I.R.E.	35	23
Residential Mix	0.5	n/a

Using the land inventory, employment densities, and employment targets for the Salem Keizer UGB in **Tables 3-22 and 3-24,** Salem staff developed an employment forecast for the Salem UGB area. The five-year increases in employment for the Salem UGB are shown in **Table 3-27**.

Table 3-27: Salem UGB Employment Forecast

Year	Total Employment	Increase
2000	85,309	
2005	89,895	4,586
2010	94,199	4,304
2015	99,404	5,205
2020	105,324	5,920
2025	110,297	4,973
2030	115,932	5,635

Employment Allocation for Turner and Remainder of SKATS

Year 2000 Oregon ES-202 employment data was examined for the city of Turner, showing a total of 321 employees. The 2000 Census indicates a total of 489 employed residents living in Turner, but does not give the number of jobs within Turner.

Turner city staff notes the difficulty the city has with generating job growth. Job growth is limited primarily due to Turner's close proximity to Salem, as well as limited commercial land (only 7.5 acres of the city's 34 acres are vacant, 16 acres are in residential use) and development restrictions on industrial land (flooding, wetlands, riparian corridors).

The City Manager of Turner and Turner's Downtown Development Advisory Committee recommended an increase of 50 employees by 2010, another 25 by 2020 and 30 more by 2030. Most of it would be services and retail.

The SKATS area outside the Salem-Keizer UGB has recently seen some declines in employment, notably among the businesses along Highway 22 in Polk County. The assumption for the forecast is that employment will eventually return to the year 2000 levels plus a small increase of 100 jobs, although many of those will be home-based businesses.

Summary of SKATS Employment Forecast and Allocation

The final employment allocations, in five-year increments, for all the jurisdictions in SKATS are shown in **Table 3-28**. **Table 3-29** shows the final 2030 employment allocation by jurisdiction and employment sector. This allocation was a little higher than the year 2030 target employment forecast of **Table 3-24,** and the final forecast differed by only a few hundred at most for any sector.

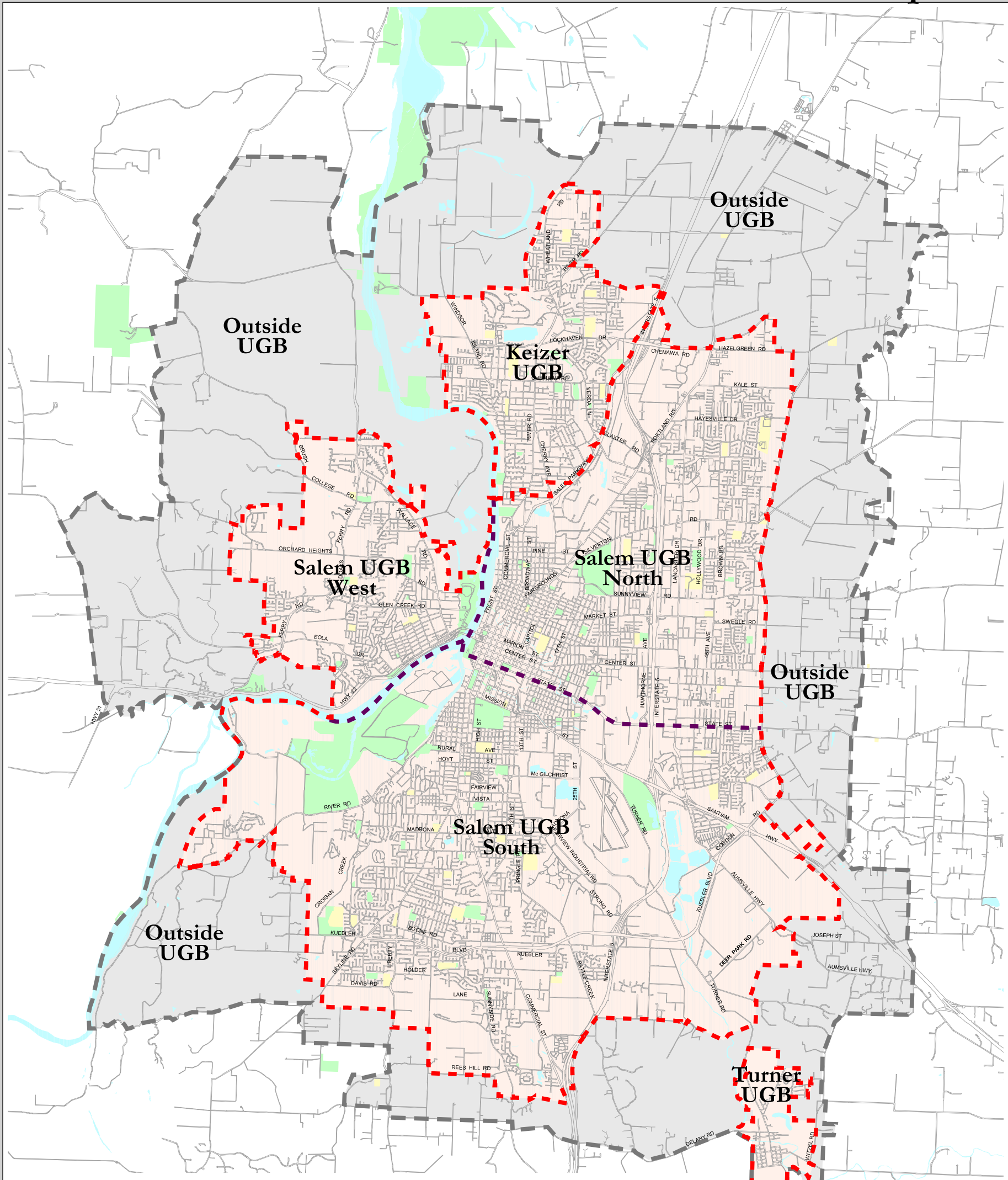
Table 3-28
Summary of Employment Forecast by Year and Jurisdiction

	2000	2005	2010	2015	2020	2025	2030
Salem UGB	85,309	89,894	94,199	99,403	105,323	110,296	115,932
Keizer UGB	3,972	4,801	7,318	8,155	8,428	8,670	8,864
Turner UGB	321	346	371	384	396	411	426
Remainder of SKATS in Marion & Polk Counties	2,286	2,301	2,316	2,331	2,351	2,366	2,386
Total SKATS	**91,888**	**97,342**	**104,204**	**110,273**	**116,498**	**121,743**	**127,608**

Table 3-29
Summary of 2030 Employment Forecast by Sector

Sector	Salem UGB	Keizer UGB	Turner & Counties	2030 Final Employment Total	SKATS 2030 employment targets (from Table 3-24)	Difference
Agriculture, Forestry and Fishing	735	101	818	**1,654**	1,284	(370)
Mining	121	-	39	**160**	160	-
Construction	4,994	480	357	**5,830**	5,882	52
Manufacturing	10,989	130	266	**11,385**	11,254	(131)
Trans., Comm., and Utilities	6,532	92	115	**6,739**	6,626	(113)
Wholesale Trade	2,612	89	281	**2,983**	3,000	17
Retail Trade	22,588	3,818	196	**26,602**	26,841	239
Finance, Insurance and Real Estate	4,657	378	35	**5,070**	5,077	7
Services	31,391	3,018	312	**34,721**	34,859	138
Total Government (includes schools)	31,312	759	394	**32,465**	32,470	5
Total	**115,932**	**8,864**	**2,813**	**127,608**	**127,454**	**(154)**

2005 SKATS RTSP Update



Study Area	Population 2000	Population 2030	Employment 2000	Employment 2030
Salem UGB - West	19,883	42,025	3,451	4,338
Salem UGB - North	76,379	92,203	59,253	74,289
Salem UGB - South	74,810	108,534	22,615	37,305
Keizer UGB	32,203	39,994	3,972	8,864
Turner UGB	1,199	2,933	321	426
Outside UGB	10,109	11,920	2,286	2,386
SKATS Area Totals	**214,583**	**297,608**	**91,888**	**127,608**

Population (2000), Employment (2000) and Forecasts for 2030

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

Map 3-1

Roads & Highways
Rivers & Creeks
Parks
Schools
Salem-Keizer Area Transportation Study (SKATS) Boundary
Salem-Keizer, Turner UGB

3000 0 3000 6000 Feet

N W E S

01/13/05

Mid-Willamette Valley Council of Governments, 105 High Street SE, Salem OR 97301 ◆ (503) 588-6177 ◆ mwvcog@open.org ◆ www.mwvcog.org

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4 - Travel Characteristics of the Salem-Keizer Region

Mobility is essential for a person to meet many of life's requirements from shopping for food, to going to work, or for recreational purposes. Trips can be described with a how, why, and where. How relates to the mode that is used for a trip. This may be walking or biking; taking a bus; or in an auto either as the driver, the passenger, or driving with others. The why describes the purpose of the trip: is it a trip to work, to the shops, to drop the kids off at school, or for recreation? The where involves the origin and destination for the trip and the route followed.

Numerous factors influence the decisions made for each trip. If an automobile is not available for a trip, whether due to lack of a driver's license, more drivers in a household than autos, or not owning a car, then the selection of how a trip is made is limited to those other modes that are available. The time of day when a trip is made is often associated with a particular type of trip. Travel in the morning is usually a person going to work, to drop off a child at school, or to do both. The length of the trip plays a part in the mode used. Long trips will more than likely be via a motorized mode, either public or private, while short trips have a higher likelihood of being made by a person walking or biking to their destination.

How much travel occurs in an area will depend on many factors: available infrastructure; number of persons in the households; number of workers; where jobs, housing, and recreational opportunities are located relative to each other; and the time it takes to go between the origin and destination via the modes available.

This chapter presents information on the current travel characteristics of the residents of the Salem-Keizer area. It is based on the information from the 2000 U.S. Census, the 1994-95 Salem-Keizer Household Survey, the 1994 SKATS Origin-Destination Study, outputs from the SKATS travel demand model for the base year of 2000, and data from other agencies such as Salem Area Mass Transit District and Amtrak. The data presented will allow the reader to gain an understanding into the recent patterns that have characterized travel in the Salem-Keizer area. All modes are represented. A reminder to the reader: the data used in this document represents, in some cases, conditions that existed five or ten years ago. In those cases, although some households and businesses have relocated and there have been some changes to the street and transit system over the last ten years, many of the overall trends are likely to be similar.

Characteristics of the Area

Over the last 30 years, the Salem-Keizer area has experienced considerable growth in both population and jobs. During this time, the annual average growth rate has been three percent, with the decades of 1970 to 1980 and 1990 to 2000 each adding over 40,000 people. Due primarily to the economic conditions the area and the state experienced from 1980 to 1990, population and employment growth rates were considerably lower during that decade (**Table 4-1**).

In the Salem-Keizer area, 73 percent of the households have at least one worker. The overwhelming majority of households own at least one vehicle, with most owning two or more. Trends nationwide show that during the decade between 1990 and 2000, the percent of households owning three or more vehicles has increased. Of the households with no workers, only 20 percent do not own a vehicle of any kind. Nationwide, this percentage dropped during the 1990s, as it did for the Salem-Keizer-Turner area, from 20 percent to slightly over 18 percent.

Table 4-1
Population and Employment in Salem-Keizer, 1970-2000

Population Salem-Keizer UGB			Employment Salem Urbanized Area		
Year	**Population**	**Rate**	**Year**	**Employment**	**Rate**
1970	93,000		1970	45,450	
1980	138,700	4.1%	1980	58,454	2.5%
1990	160,229	1.5%	1990	70,578	1.9%
2000	214,538	3.0%	2000	91,888	2.7%

The following data is from the 2000 U.S. Census. It shows the relationship between household size and the number of workers (**Table 4-2**) household size and the number of vehicles (**Table 4-3**) and the number of workers in a household and the number vehicles owned by the household (**Table 4-4**).

Table 4-2
Household Size by Number of Workers in Household (2000 Census)

	Household Size (persons)					
Workers	**1**	**2**	**3**	**4+**	**Total**	**Percent**
0	10,000	7,670	1,305	1,640	20,615	26.8%
1	10,110	7,945	4,165	5,865	28,085	36.6%
2	0	10,415	4,860	8,015	23,290	30.3%
3	0	0	1,510	2,305	3,815	5.0%
4+	0	0	0	1,000	1,000	1.3%
Total	**20,110**	**26,030**	**11,840**	**18,825**	**76,805**	
Percent	**26.2%**	**33.9%**	**15.4%**	**24.5%**		

Table 4-3
Household Size by Number of Vehicles in Household (2000 Census)

	Household Size					
Vehicles	**1**	**2**	**3**	**4+**	**Total**	**Percent**
None	3,645	1,180	700	745	6,270	8.2%
1	13,625	7,245	3,030	3,670	27,570	35.9%
2	2,305	14,100	5,015	8,970	30,390	39.6%
3	470	2,915	2,625	3,815	9,825	12.8%
4	65	585	470	1,620	2,740	3.6%
Total	**20,110**	**26,025**	**11,840**	**18,820**	**76,795**	
Percent	**26.2%**	**33.9%**	**15.4%**	**24.5%**		

Table 4-4
Number of Workers in Household by Number of Vehicles Available (2000 Census)

	Number of Workers in Household						
Vehicles	**0**	**1**	**2**	**3**	**4+**	**Total**	**Percent**
None	3,790	1,690	665	110	20	6,275	8.2%
1	10,275	13,705	3,140	350	100	27,570	35.9%
2	5,410	9,630	14,150	1,020	180	30,390	39.6%
3	985	2,510	4,305	1,725	300	9,825	12.8%
4	160	550	1,025	605	400	2,740	3.6%
Total	**20,620**	**28,085**	**23,285**	**3,810**	**1,000**	**76,800**	
Percent	**26.8%**	**36.6%**	**30.3%**	**5.0%**	**1.3%**		

Aviation

Table 4-5
Flights Using McNary Field

Year	Total	Growth
1992	61,754	
1993	56,630	-8.3%
1994	57,455	1.5%
1995	57,790	0.6%
1996	58,556	1.3%
1997	56,289	-3.9%
1998	52,022	-7.6%
1999	50,112	-3.7%
2000	49,241	-1.7%
2001	48,985	-0.5%
2002	50,497	3.1%
2003	48,857	-3.2%
2004	43,920	-10.1%
2005	10,596	-75.9%

As shown in **Table 4-5**, the total number of flights out of McNary field has been decreasing steadily over the past five years with a downward trend extending back eight years. This can be attributed to two events. First, regularly scheduled commercial passenger flights ended in 1994. Second, 1998 was the last year of operation for the gambling excursion charter flights that had been flying to the Nevada casinos. There are no known plans by any commercial airline to resume service to Salem within the planning horizon of the RTSP (2025). Currently, airport operations are dominated by flights by private business jets, personal aircraft, and military airplanes.

Rail

Table 4-6
Amtrak Station Boardings

Year	Passengers	Growth
FY 1985	28,996	
FY 1986	29,201	0.7%
FY 1987	27,360	-6.3%
FY 1988	26,986	-1.4%
FY 1989	24,714	-8.4%
FY 1990	25,155	1.8%
FY 1991	26,391	4.9%
FY 1992	25,480	-3.5%
FY 1993	21,959	-13.8%
FY 1994	20,005	-8.9%
FY 1995	32,779	63.9%
FY 1996	32,409	-1.1%
FY 1997	37,249	14.9%
FY 1998	41,963	12.7%
FY 1999	45,839	9.2%
FY 2000	47,576	3.8%
FY 2001	58,860	23.70%
FY 2002	52,375	-11.0%
FY 2003	60,500 (est.)	

Salem is located in the Cascadia Corridor, a federally recognized high-speed rail corridor that extends from Eugene, Oregon to Vancouver, British Columbia. As illustrated in **Table 4-6**, passenger boardings at the Salem Amtrak Station steadily decreased between 1984 and 1994 due to funding issues and lack of equipment. Since 1994, passenger boardings at the Salem Amtrak Station have more than doubled. Since 1985, the average annual growth rate seen at the station has been three percent, while in the last decade it has been six percent. The driving force has been the addition of new equipment and revised service on the corridor beginning in 1994. As one of the nation's high-speed rail corridors, it is anticipated that travel will further increase as service improvements are made and the tracks are built to allow faster service along the corridor. The numbers also account for travel on Amtrak's long distance train, the Coast Starlight, which travels from Seattle to Los Angeles and for boardings on the Thruway buses, which also travel in the I-5 corridor between Portland and Eugene. The Amtrak station is currently accessible to people via bike lanes, taxis, and automobile, with a Cherriots stop nearby.

Transit

Table 4-7
Cherriots Transit Ridership

Year	Yearly	Average Daily
1991	2,882,512	N/A
1992	3,059,723	N/A
1993	3,148,726	N/A
1994	3,115,611	N/A
1995	2,965,656	N/A
1996	3,166,305	11,058
1997	3,839,972	13,325
1998	3,941,948	13,800
1999	4,157,421	13,725
2000	4,194,574	14,412
2001	4,622,046	N/A
2002	4,933,000	N/A
2003	5,225,000	N/A
2004	5,426,000 (est.)	N/A

Yearly ridership on Cherriots has been increasing since 1995, with an overall upward trend since 1991, as shown in **Table 4-7**. In the decade since 1991, the average annual growth rate is 3.8 percent, although it has slowed as of late. Numerous expansions in service have occurred during this decade from extending bus routes into new areas of the urbanized area to running the buses more frequently. Additionally, during the decade, the inception of service on weekends and in the evening hours allowed more people the option of using transit as it's availability and convenience increased. Programs designed to encourage people to take transit to work, such as employers providing reduced or free bus passes, have also contributed to the increasing ridership.

Table 4-8
CARTS Ridership

	Number of Riders		
Route	**2001-2002**	**2002-2003**	**2003-2004**
North County	19,558	17,898	16,082
North County Dial A Ride	9,694	6,969	6,029
Polk County	53,060	51,093	43,196
Polk County Dial A Ride	8,163	4,314	4,230
South Canyon Connector	6,655	6,486	7,738
South Dial A Ride	9,105	4,844	3,865
Silverton Trolley	9,054	8,622	9,252
City of Woodburn	37,493	38,337	44,810
Salem/Keizer Urban Dial A Ride	68,913	68,221	60,185
Cherrylift (ADA)	62,059	73,573	89,124
Totals	**283,754**	**280,357**	**284,511**

The Chemeketa Area Regional Transportation System (CARTS) is a recently formed ORS 190 agency. It provides regional planning and support of transportation services for elderly/disabled persons as well as the general public in a three-county area (**Table 4-8**). The North County route connects Salem, Brooks, Gervais, Woodburn, and Hubbard. The Canyon Connector links Salem with Turner, Aumsville, Stayton, Sublimity, Mehama, Lyons, Mill City, and Gates. Polk County communities are served by one route with buses starting in Dallas and following either Highway 22 to Rickreall and Salem or traveling through Monmouth and Independence to Salem.

Carpool / Vanpool / Commuter Bus

Table 4-9
Rideshare Database

Fiscal Year	Applications	Updates	Totals	No. in DB at end of Year
1998-9	520	359	879	NA
1999-0	603	428	1031	NA
2000-1	602	372	974	NA
2001-2	308	460	768	NA
2002-3	916	632	1548	1193
2003-4	670	649	1319	1549
2004-5*	420	251	671	1774

*Half fiscal year: July to December

Beginning in 1997, the Regional Rideshare Program was initiated to provide a central repository of information for commuters in and coming to the Salem-Keizer area. Services provided by the program include matching prospective carpool riders with drivers, listing the vanpools and commuter buses that service the area, and signing on businesses to provide transit passes and other incentives to their employees for commuting via a mode other than driving alone. The numbers in **Table 4-9** represent carpool applicants that used the Regional Rideshare to find a ride or rider, and do not represent actual formed carpools. It likely understates the number of people carpooling, as it is not necessary to register a carpool. As an incentive to encourage carpools, the city of Salem provides 328 on-street parking spaces for carpools and six spaces for vanpools. The Regional Rideshare Program tracks eighteen vanpools and eight commuter buses. These carry an average of 515 passengers per day. For those that commute via a shared ride, the average daily round trip distance is 60 miles.

In the Salem-Keizer urban area, twelve park-and-ride lots provide approximately 675 parking spaces. Three of the park-and-ride sites are served by Salem Mass Transit District express buses (Wallace Road, Market Street, and South Commercial), which links them with the employment areas in the downtown and Capitol Mall area. There are four additional Park and Ride lots located outside of the metropolitan area, with one of the lots served by a CARTS route. These lots can hold approximately 144 vehicles. During a recent count, the park-and-ride lots in the urbanized area had 304 cars, while 30 vehicles were parked at the rural lots.

Bicycle

Table 4-10
Bike Locker Rentals

Year	Rented	Total
1997	7	26
1998	11	26
1999	13	26
2000	17	26
2001	15	26
2002	15	30
2003*	13	32
2004-half	12	32

*2003: 6 lockers unrentable due to construction at Chemeketa Parkade

Since the adoption of the 1996 RTSP, 26 bicycle lockers and at least 109 bike racks have been installed in downtown Salem. Bike lockers provide the commuting cyclist with a secure location to park their bike and other equipment while they are downtown (**Table 4-10**). These lockers are rented for a nominal fee through the Regional Rideshare Program. Bike lockers and racks are one part of a system to encourage people to bicycle to work or the store. Safe and convenient routes are also necessary. When built out, the regional bicycle system will be composed of 174 miles of bike lanes, bike routes, and off-road bike paths linking the regional employment and shopping areas with the residential areas. Progress on completing the bike system is being steadily made as roads are built or modified to include bike lanes on arterials and collectors that are part of the regional road network. Currently, SKATS has no means of ascertaining the usage of the existing bike lanes and bike racks, nor to track the installation of bike racks outside of downtown Salem. The travel demand model provides the only estimates and forecasts of bicycle usage in the area.

Table 4-11
Bikes on Buses

Year / Season	Average Bikes
1994 Summer	18
1995 Winter	11
1995 Summer	25
1996 Winter	19
1996 Summer	32
1997 Winter	46
1997 Summer	66
1998 Winter	49
1998 Summer	79

In 1994, Salem Area Mass Transit District (Cherriots) began installing bike racks on their buses. Racks on buses allow travelers to bicycle to a bus stop, travel a longer distance via bus, and then be able to bike to their destination, or have the bike available during the day. Use of this feature

has increased over the years as more people became aware of the program and more of bus fleet has been outfitted with the racks (**Table 4-11**). Data for years after 1998 is not available due to limitations in the fare boxes used on the buses.

Automobile

Table 4-12
Traffic on Willamette River Bridges

Year	Average Daily Traffic	Growth Rate
1981	44,898	
1982	45,250	0.8%
1983	46,500	2.8%
1984	47,250	1.6%
1985	47,658	0.9%
1986	51,486	8.0%
1987	54,790	6.4%
1988	57,375	4.7%
1989	58,003	1.1%
1990	61,280	5.6%
1991	62,634	2.2%
1992	65,976	5.3%
1993	68,179	3.3%
1994	70,590	3.5%
1995	73,509	4.1%
1996	75,605	2.9%
1997	78,016	3.2%
1998	79,677	2.1%
1999	81,402	2.2%
2000	80,956	-0.5%
2001	82,600	2.0%
2002	84,900	2.8%
2003	85,000	0.1%

Growth Rate	
1981-1985	
1985-1990	4.1%
1990-1995	3.8%
1995-2000	3.0%

One of the measures of automobile usage in the Salem-Keizer area is the travel over the Willamette River bridges. The bridges link not only the two parts of Salem but also provide a route between the coast and Polk and Yamhill county communities with the eastern side of the valley and the Cascades. Travel on the bridges had been increasing until 2000, when the automatic traffic counters recorded a slight decrease. As can be seen in **Table 4-12** above, the average annual growth rate for travel over bridges peaked in 1986 and has ranged from two percent to five percent since 1990.

Table 4-13
Survey Results --- 1994/1995 Daily Trip Percent by Mode and Purpose

	Home-Work	Home-Other	Home-Rec.	Home-Shop	NonHomeWork	NonHomeOther
Drive Alone	72.3	35.4	31.0	43.6	68.8	32.9
Drive w/ Rider	11.4	25.8	15.8	21.2	6.8	28.6
Passenger in Car	7.1	30.7	37.7	27.2	9.2	30.7
Bus	4.6	0.7	1.0	2.2	0.6	0.04
Bike	1.6	1.1	2.1	0.7	0.4	0.2
Walk	3.0	6.3	12.4	5.1	14.2	7.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

Table 4-13 above shows the results from the 1994-1995 Household Activity Survey. During a two-day period, 1,520 households were asked to record any activity performed by any member of the household that lasted more than 30 minutes. The results show that the majority of trips taken by the survey respondents, regardless of purpose, were via private vehicles and usually were drive-alone trips.

Table 4-14
2000 Mode Choice by Time of Day

	AM Peak		PM Peak		Daily	
Drive Alone	39,226	58.8%	41,843	50.4%	381,747	47.2%
Drive w/ Passenger	12,382	18.6%	15,518	18.7%	159,920	19.8%
Passenger in Car	8,058	12.1%	17,516	21.1%	186,047	23.0%
Transit	3,912	5.9%	1,680	2.0%	15,028	1.9%
Bike	457	0.7%	698	0.8%	6,534	0.8%
Walk	2,635	4.0%	5,698	6.9%	59,528	7.4%

The a.m. peak hour (7-8:00 a.m.) represents the classic home-to-work trip. The majority of these trips are carried out via the automobile, with drive alone as the dominant mode. The p.m. peak has a wider variety of trip purposes, from work to home, shopping, and recreational trips (**Table 4-14**). For weekdays, the percent of trips by purpose for the peak periods and daily is shown in **Table 4-15** below. This shows that work trips make up 16.5 percent of the total trips in the A.M. peak period. This data is derived from the 1994-1995 Household Activity Survey. Note that while the percentage of school and university trips is high in the a.m. period, the total number of trips for these two purposes is still less than the number of work trips.

Table 4-15
Percent of Home Based Trips by Time Period

	AM	PM	Daily
Work	16.48	14.3	17.7
Shop	0.69	10.4	12.6
Recreation	2.59	9.35	16.9
Other	3.76	9.79	17.7
School	19.49	2.71	11.8
University	11.05	7.18	1
Percent of Daily	6.77	9.51	

The journey to work, and the congestion usually associated during the morning and evening commute hours, has typically been one of the leading factors driving the expansion of the road network and the provision of transit service. In **Table 4-16** below, you can see that the percent of home-to-work trips that are made by the private vehicle has increased since 1980.

Table 4-16
Travel to Work

	Census Results				Model
	1970	**1980**	**1990**	**2000**	**2000**
Drive Alone	75	65.9	73.3	73.8	75.4
Carpool	10	19.5	15.2	14.6	18
Motorcycle	N/A	0.9	0.3	0.1	n.a.
Bus	2	3	1.4	1.9	3.7
Bike	N/A	1.1	0.8	0.7	1.1
Walk	9	5.8	4	3.3	1.8
Work at home	N/A	3.1	4.2	4.9	n.a.
Other	4	0.7	0.8	0.6	n.a.

Also presented in the table are SKATS travel demand model results for the year 2000. This model is calibrated to the 1994-1995 Salem-Keizer Household Activity Survey data. There is a caveat to keep in mind when comparing data from the Census with survey and model results. First, the data for the survey and the model represent internal trips only; that is, trips that begin and end within the Salem-Keizer urban area. Extensive analysis of data from the survey revealed that the majority of carpools are composed of family members going to two employment locations. Nationwide trends based on the 2000 U.S. Census show that carpool use decreased from 13 percent in 1990 to 11.4 percent in 2000.

5 - Finance

Introduction

The financial situation that faces the SKATS area is one of constant flux. The year 2004 was when the US Congress was to reauthorize the transportation bill, as it's six-year life span came to an end. This did not happen. Instead a number of continuing resolutions were passed that extended the funding as specified in TEA-21, but did not provide any direction regarding the level of funding that would be available to the region over the life of the plan. With this uncertainty in the funding it was felt that it was not prudent to embark on a full update of the current Plan, but instead to bring in only those projects that are necessary and that have funding identified, and to extend the current funding projections out another five years from 2025 to 2030. This chapter reflects this cautious approach to the financial situation. The revenue and project costs have been updated minimally, while the sections covering the operating and maintenance, and the situation facing the transit district are the same as in the 2002 Plan.

Financial Constraint

Fiscal responsibility, as well as federal and state regulations, requires that the Plan exhibit "financial constraint," which means that prior to calling for the expenditure of resources to expand the regional transportation systems, it must be demonstrated that adequate funding is expected to be available to adequately maintain and operate the existing transportation facilities and services. If new revenue sources are required, the Plan must present the actions to be taken to acquire the new funding. In addition to demonstrating that the existing transportation systems are being adequately maintained and operated, the financial plan must also identify which Plan improvements can be implemented using current and committed revenues and funding sources, which investments would be implemented using "reasonably anticipated" resources, and which projects would require the development of new revenue sources.

Adequate Maintenance and Operation of the Existing System

The preservation of the existing transportation infrastructure is a regional priority. As a consequence, in order to produce a financial plan that demonstrates that the necessary resources are reasonably available to implement the improvements called for in the Plan, the responsible operating agencies (i.e., City of Salem, Salem Area Mass Transit District, etc.) must have the financial capacity to finance the maintenance, operations, and capital replacements required to preserve the existing transportation system. Although SKATS, as the MPO for the Salem-Keizer urban area, has no direct maintenance or operation authority, its responsibilities involve the cooperative development of a financial plan indicating the ability of the various operating jurisdictions to adequately maintain, operate, and provide for the capital replacement of their existing transportation facilities.

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. "Currently available funds" means those funds derived from an existing source dedicated to or historically used for transportation purposes. "Committed funds" are those which are included in the region's adopted Transportation Improvement Program (TIP) or are specifically identified in local Capital Improvement Programs (CIPs) or other programming documents such as bond issue descriptions.

Funding for improvements identified in the RTSP may also be shown to be "reasonably anticipated" if they are not currently available or committed but a successful past experience with obtaining this type of funding (e.g., success in obtaining legislative and/or voter approval for new bond issues, tax increases, special appropriations, etc.) can be demonstrated. New funding sources that may require some steps (legal, executive, legislative, voter approval, etc.) before a jurisdiction, agency, or private party can commit such revenues to transportation projects can also be considered as appropriate to offset the cost of Plan improvements. However, the financial plan must identify the steps that will be taken to ensure the availability of these funding sources within the timeframe shown in the plan, such as how the support of the public, elected officials, the business community, and special interests will be obtained. New funding beyond that which is demonstrated to be "reasonably anticipated" or likely to be available because of a commitment to a specific course of action must be regarded as speculative and any improvements to be implemented using this type of funding are regarded as "desirable," but not formally included in the Plan, per se.

The following describes the funding categories identified in the Regional Transportation Systems Financial Element:

1) **Currently Available Funds:** Funds derived from an existing or ongoing source of funds dedicated to or historically used for transportation purposes which the region expects to continue to be available to fund projects (e.g., authorized federal funds, local tax revenues, etc.).

2) **Committed Funds:** Funds derived from an existing or ongoing source that have been committed to specific improvements in the region's TIP, local CIPs, or local bond issues.

3) **Reasonably Anticipated:** Funds that are likely to be available in light of historical evidence (e.g., future federal authorizations that do not exceed previous federal authorizations; local bond issues with a history of successful passage by voters).

4) **New Funding Sources:** New funding sources that do not currently exist or require some steps (e.g., legal, executive, legislative) before a jurisdiction, agency, or private party can commit such revenues to transportation projects but which are affirmatively supported by the MPO as part of the Plan. If required to implement an improvement called for in the RTSP, the Plan must include a specific plan of action

that describes the steps that will be taken to ensure that the funds will be available within the time frame shown in the financial plan.

5) **Funds Not Expected to be Reasonably Available:**

   a) Past efforts to enact new revenue sources have generally not been successful;

   b) The extent of current support by the public, elected officials, business community, and/or special interests indicates passage of a pending funding measure is doubtful;

   c) No specific plan of action exists for securing the funding source, and/or no other information exists that demonstrates a strong likelihood that funding will become available.

Two tiers of transportation systems improvements are called for in the RTSP. The first tier—all of the identified highway capital projects and basic maintenance activities; transit capital projects and maintaining existing levels of service; and bicycle lane, transportation system efficiency management, goods movement and intermodal freight highway system improvements in the RTSP—is expected to be implemented using currently available, committed, or reasonably anticipated revenues. Improvements to the regional rail (freight), aviation, pipeline, maritime, and pedestrian systems are likely to be funded using federal, local, and/or private resources that are outside the scope of this Plan.

The second tier—desirable investments identified in the Plan but which do not, as of yet, have reasonably anticipate funding—includes improved levels of transit operations, enhanced Amtrak passenger rail service, and trackage improvements required for the development of high speed rail service in the Willamette Valley. Unidentified highway improvements associated with outstanding issue areas, such as the Willamette River bridges, are not predicted to be affordable without new revenues.

Regional Nontransit Systems Capital Cost and Revenue Analysis

Estimated Revenues

In order to develop a financially constrained long-range transportation plan, the estimated revenue sources expected to be used to pay for identified transportation system improvements should be reasonably available in order to successfully implement the plan. In the SKATS region, the projected revenues that are expected to be reasonably available during the 25-year planning period for non-transit regional capital projects is estimated at $242.5 million (expressed in 2000 dollars). The estimated 25-year revenues available for nontransit regional capital projects are illustrated in **Figure 5-1**.

Transportation funding sources that are available and the types of projects that the funds may be used on are illustrated in **Table 5-1.** As will be discussed later in this chapter, there are few

sources of federal funds that can be "flexed" for either transit operations or roadway maintenance and operations. Some local sources of funds (such as systems development charges, bond issues, and urban renewal funds) are also limited to capital improvements.

Figure 5-1.
Estimated 25-Year Nontransit Capital Revenues and Costs, 2005 - 2030

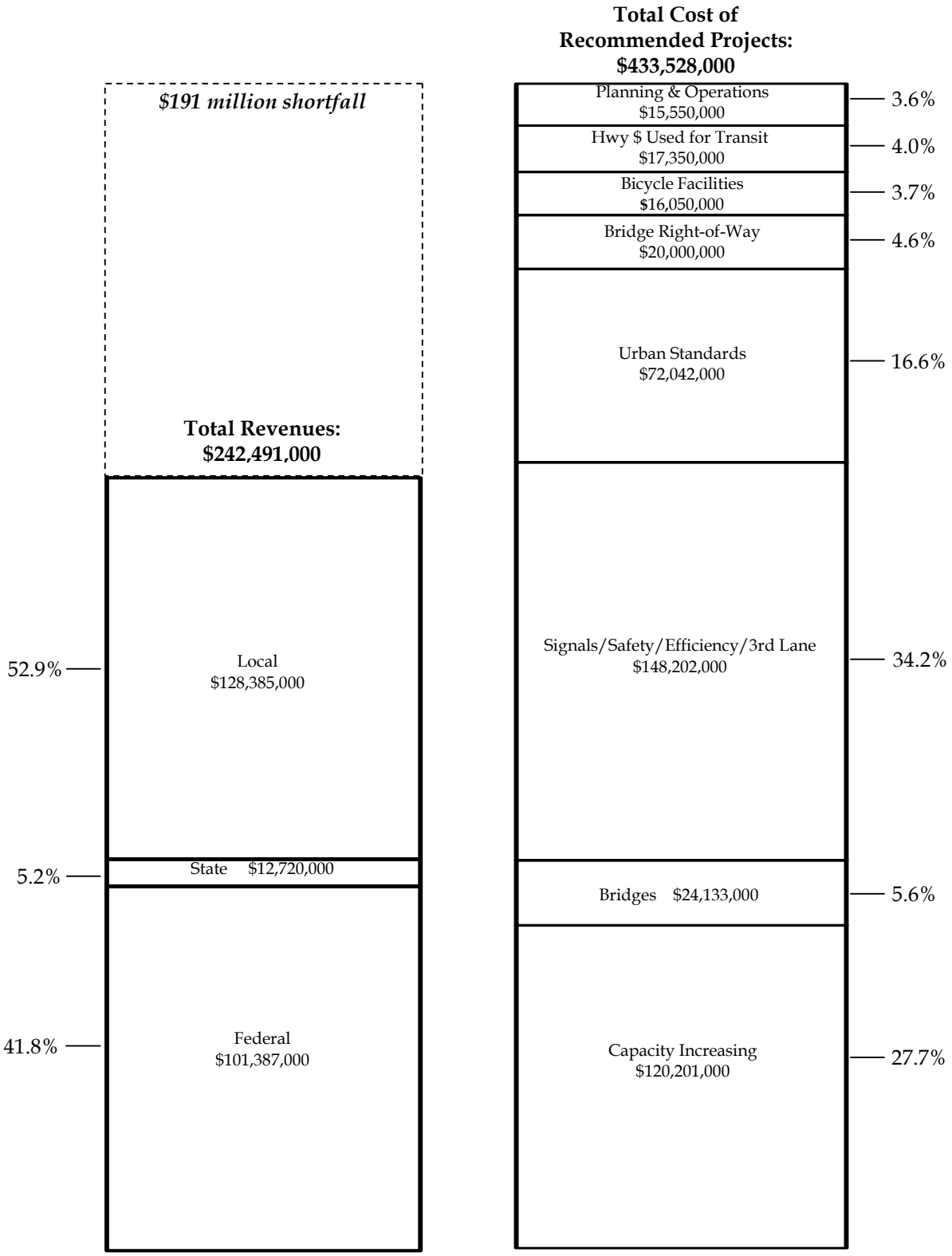


Table 5-1
Funding Sources and Their Uses

POTENTIAL USES	TRANSIT		HIGHWAY				
	Transit Operations	Capital Improvements	General Maintenance	Roadway Capacity	Bicycle	Pedestrian	Rideshare/ TDM
FUNDING SOURCES							
Federal							
[a] National Hwy System (NHS)	no	no	yes	yes	yes	yes	no
STP	no	yes	no	yes	yes	yes	yes
FTA Section 5307 (formerly Section 9)	yes*	yes	no	no	no	no	no
FTA Section 5309 (formerly Section 3)	no	yes	no	no	no	no	no
[b] Marion County Nat'l Forest Revenues	no	no	no	yes	yes	yes	no
State							
Gas Tax Revenues	no	no	yes	yes	yes	yes	[d]
[c] Special Transportation Fund (STF)	yes	yes	no	no	no	no	no
Transit in Lieu Payments	yes	yes	no	no	no	no	no
Local							
Salem G.O. Bonds	no	yes	no	yes	yes	yes	no
[e] Salem SDC	no	yes	no	yes	yes	yes	no
Urban Renewal	no	yes	no	yes	yes	yes	no

[a] Up to 50% of NHS funds can be transferred to STP funds; 100% if approved by U.S. Secretary of Transportation.
[b] National Forest Revenues are allocated for roads (75%) and schools (25%).
[c] May be used for transit capital improvements and ADA/elderly and handicapped operations; cannot be used for transit system operations.
[d] Potential uses may include park-and-ride facilities only as part of eligible highway improvement projects.
[e] Limited to roadway capacity projects. Bicycle and pedestrian facilities improvements may be included as part of roadway capacity projects.

* For areas under 200,000 population

NHS & STP-Earmark: $187,900,000

Revenues for the projects identified on the National Highway System (NHS), such as Phase IIIb and IV of the Interstate 5 project, will use funds from the NHS and/or STP Enhancement programs. These programs will pay for the these projects, less any local share match required, with the timing dependent on appropriation by the US Congress. Previous appropriations paid for Phases I through IIIb of the Interstate 5 project in sums of $6.65 million in 1992 (Market Street Interchange), $40 million in 1994 (Silverton to State), $36.58 million in 1996 (Phase II SPRR-Silverton, Hayesville Interchange), $23.97 million in 1997 (State St to Highway 22) and $62 million in 2005 (Highway 22 to Kuebler). As such, it can be reasonably anticipated that this funding source will be available in the future.

Federal Revenue Sources: $101.4 Million

- **SKATS TMA Funds**
  Currently, SKATS receives approximately $2,400,000 in Surface Transportation Program (STP) funds from the federal government via ODOT a year as a Transportation Management Area (TMA). Current estimates indicate that the yearly value of these funds will rise to $4,900,000 in 2030 based on the current trend. The total for 2005-2030 is estimated at $94,900,000. This is a reduction from the previous estimate, which set the starting year fund allocation at $3 million. The STP program began with the authorization of ISTEA and was renewed with the passage of TEA-21. As such, the funding can be considered to be a relatively secure source. In addition, it is one of the few sources of revenue that are flexible in the types of programs that can be funded by it. While the source is secure, the amount available to SKATS is likely to change with reauthorization of the transportation bill in 2005.

- **STP Enhancement Funds**
  Each state must set aside 10 percent of its yearly STP revenues for Transportation Enhancements Activities. Enhancement funds are allocated to the local jurisdictions through the state on a competitive basis. The estimated revenues from STP Enhancement Funds for the SKATS region are based on: 1) the continuation of the enhancement program during the 25-year planning period; and 2) the five-year average of enhancement funds programmed in the SKATS TIP for FY 1995 through 2000. A total of $1,107,400 in enhancement funds have been programmed for capital improvement projects in the SKATS TIP for FY's 1995 through 2000. The City of Turner received $900,000 in TE funds in 2003. The potential 25-year revenues from STP Enhancement Funds available to the SKATS region is a minimum of $5,698,700.

- **Marion County National Forest Revenues (NFR)**
  In the past, Marion County has used revenue from the National Forest Reserve to fund transportation projects within their boundaries, including projects in the SKATS area. Countywide, it is estimated that $2.5 million will be available yearly, with total revenue in the period 2005 to 2030 expected to be $72,500,000. This is a change from the estimate in the 2002 RTSP Update after consultation with Marion County staff. Based on the percentage of Marion County projects that are within the

Salem-Keizer-Turner urbanized area, the amount that is reasonably anticipated to be available for projects in the Salem-Keizer-Turner urban area is $787,800. The methodology to arrive at this value is presented in more detail in the Marion County Gas Tax discussion.

State Revenue Source: $12.7 Million

- **Gas Tax Revenues**
  The distribution formula of state highway fund (gas tax) revenues is established by the Oregon legislature. Currently, 60.05 percent is dedicated to state highway programs, 24.38 percent is dedicated to county road programs, and 15.57 percent is dedicated to city road programs. The county share is proportionately distributed based on vehicle registrations and the city share is based on population. Oregon statute (ORS 366.514) requires that cities and counties expend a minimum of one percent of their state gas tax revenues to provide and maintain walkways and bikeways.

  Total gas tax revenues from the three jurisdictions that will be available for capital projects on the regional transportation system during the 25-year planning horizon is estimated to be $12,720,000. This value is less than half of the value estimated for the 1996 RTSP. Several factors can be attributed to this decline. First, the assumptions made in the revenue projections at the state level have turned out to be rather optimistic. In particular, the rate of increase of the fuel tax has not been meet. In light of this, in 1998 ODOT convened another committee to revise the revenue projections based on changes at the federal level, specifically the authorization of TEA-21, and to revisit the assumptions that were made in regards to the likely increases in the state fuel tax. The assumptions that were adopted by the ODOT committee, and reported in the document *Financial Assumptions for the Development of Metropolitan Transportation Plans*[1] (May 1998, with April 2000 revisions to account for the passage of TEA-21) include:

  - Fuel tax rates increase at a rate of $0.01 per gallon per year, with another $0.01 per gallon every fourth year. The increases would not start until 2002.
  - An increase in vehicle registration fees of $10 per year in 2002 and $15 per year in 2012.
  - Assume revenues would reflect halfway meeting the Transportation Planning Rule (TPR). While progress is made toward these goals, it was felt that full compliance would take longer than anticipated. {It is not clear from the report whether this reflects the revised TPR regulation of 1998 or the original version}
  - Assume that the current 60.05-24.38-15.57 split of fuel tax revenues between the state, counties and cities would be modified to 50-30-20. This change would also begin in 2002.

[1] A revised document was being prepared for adoption by ODOT in early 2005. The results of that document were not used in the 2005 update to the RTSP.

These assumptions were used by ODOT as parameters in an econometric model that included inflation, fuel price and efficiency, population, employment, vehicle registration and other variables to determine the amount of revenue that could be expected through 2030.

Estimates for the cities and county were prepared by SKATS based on the ODOT document and recent gas tax funds received by Keizer, Salem, and Marion County. One assumption used for each of the jurisdictions was to hold the share that each city and the county received from the state as constant based on their 2000 value. This assumption means that, for the cities, their population stays the same percentage-wise in regard to the state's total population, and for Marion County the number of vehicle registrations stays constant vis-a-vis the other counties in the state.

City of Salem: Except for the minimum of one percent dedicated to pedestrian and bicycle system improvements and maintenance (approximately $2 million), it is anticipated that no gas tax revenues from the city of Salem will be spent on regional capital improvement projects.

City of Keizer: For the city of Keizer, an estimated five percent of total gas tax revenues will be available for projects involving the regional transportation system. The estimated 25-year revenue is $2,400,000.

Marion County: The estimated regional share of Marion County's allocation of state gas tax revenue is based on: 1) the proportion (15 percent) of capital transportation project located in the SKATS area that are listed in the Marion County CIP for 1995-1999; and 2) the proportion (12 percent) of reported county disbursements allocated to roadway construction and expansion projects during 1991 through 1994. The estimated regional share of Marion County's state gas tax revenues available for capital projects during the 25-year planning period is $8,320,000.

Local Revenue Sources: $128,385,000 (min)

- **City of Salem General Obligation Bonds**
  The city of Salem uses voter-approved general obligation bonds to fund street improvement and expansion projects. The taxing authority of the city is pledged to pay interest and principal to retire the debt. These bonds are backed by the city's full faith and credit, and in Salem's case, are repaid by property tax revenues. Since May 1974, there have been six successful and one unsuccessful street-related bond issues.

  Based on estimates from Salem Public Works, three bond measures for transportation will be offered during the time frame of the RTSP. Each bond will be worth $40,000,000 (2000 dollars), totaling $120,000,000. Using the existing assumption that 59.3 percent of the total bond revenues will be used on the regional transportation system, passage of all three of the measures will result in $71,160,000 for regional non-transit transportation projects. These funds are categorized as "reasonably anticipated." While the bond measure of November 2000 failed to pass, the city does have a history of passing transportation bonds. Compared with the

1996 RTSP, this is considerably less than what was anticipated for that plan, $101,320,000 (adjusted to 2000 dollars).

- **City of Salem Transportation System Development Charge (TSDC)**
  In 1995, the Salem City Council adopted a Transportation System Development Charge (SDC) to help fund identified transportation system deficiencies that are expected to be created by future growth and development. Under Oregon law (ORS 223.297 through 223.314), only a portion of roadway improvement costs is eligible for funding through SDCs. Improvement costs to maintain or improve the structure of an existing roadway that do not provide significant capacity increases are not eligible for funding through SDCs. An estimated $72.8 million (in 2000 dollars) in SDC revenue is projected to be available for roadway capacity projects through 2030. The estimated amount of SDC revenues available for funding regional highway projects is based on the percentage of regional projects (75 percent) recommended in a report prepared for the city of Salem by Kittelson & Associates: *Transportation Systems Development Charges*, August 1994. The estimated TSDC revenues available for regional transportation projects are $43,170,400. Salem updated their TSDCs last in 2002.

- **Marion County Transportation System Development Charge**
  Marion County enacted a Transportation System Development Charge for the unincorporated portions of the county within the Urban Growth Boundaries of Salem, Silverton, and Woodburn in 1995. This SDC is identical to the one adopted by the city of Salem, with the exception of the amount of funding that will be generated. The estimated revenue from the TSDC during the time frame of this plan is $3.38 million. As with Salem's TSDC, these funds may only be used for significant capacity improvements to a road, or for constructing new roads. Marion County updated their TSDCs in 2002. Also available are funds from the Marion County Rural System Develop Change. This is anticipated to bring $1,560,000 in revenue to projects inside the SKATS boundary that are outside the UGB of Salem-Keizer and Turner. The total TSDC funds anticipated to be available is approximately $4,940,000.

- **Other Marion County Funds**
  Marion County receives contributions from developers for some road projects. In addition they have a history of receiving grant money from the State for safety related projects. It is anticipate that these funding streams will bring in $4,850,000 over the next 25 years.

- **City of Keizer Urban Renewal District Financing**
  The city of Keizer relies on Urban Renewal District financing to help pay for public infrastructure improvements, which may include transportation system improvements. Between 1998 and 2002, approximately $1,250,000 in urban renewal funds per year were used on regional transportation system projects. Based on the information provided by the city of Keizer, an estimated $4.265 million in regional transportation system improvements are scheduled for construction within the urban renewal areas between 2002 and 2010. It is anticipated that any projects

located within an urban renewal district can be funded with future revenue from the district.

- **City of Salem Urban Renewal District Financing**
  The city of Salem uses Urban Renewal District financing to help pay for public infrastructure improvements, which may include transportation system improvements. It is anticipated that any project located within an urban renewal district can be funded with future revenue from that district.

Estimated Costs

This section of the Regional Transportation Systems Financial Element provides a brief overview of the estimated 25-year capital costs for the nontransit regional capital projects recommended in the RTSP update. The estimated total capital costs are illustrated both with and without the inclusion of National Highway System (NHS) and state highway system projects. A more detailed description of the recommended regional transportation system projects are provided in the specific RTSP elements referenced below.

Nontransit regional capital projects include: 1) NHS, state, and regional highway capacity and safety improvement projects (i.e., widening, signalization, intersection improvements); 2) bicycle and roadway improvement-related pedestrian facility improvements; 3) continued implementation of the regional Rideshare and TDM programs. The estimated 25-year capital costs and the percentage of total cost for these recommended projects are illustrated in **Figure 5-1**.

Regional Rideshare Program: $4,500,600
The estimated costs for funding the Regional Rideshare Program during the 25-year planning period is $4.5 million ($173,100 a year for the period 2005-30). The Regional Rideshare Program includes carpool matching, vanpool, and buspool referral services, employee/employer community outreach, and program development and coordination (described in chapter 13).

Regional TDM Program: $1,872,000
The Regional TDM Program will cost an estimated $1.87 million ($72,000 per year x 25 years) to continue to operate at the current level during the 25-year planning period. This program is designed to work with employers to coordinate alternative transportation programs and also to complement the efforts of the Regional Rideshare Program, described above (also described in chapter 13).

Regional Signal Program: $1,820,000
Operation of the Regional Signal Program is estimated at $1.82 million ($70,000 per year for 25 years). This program supports the operation of the existing transportation system to a higher degree of efficiency by coordinating the traffic signals on the regional street system.

Regional System Monitoring Program: $1,625,000
The Regional System Monitoring Program is a necessary component to the successful implementation of the Congestion Management System. It will provide data on the operational characteristics of all modes on the regional transportation system. Currently, the cost estimate for the yearly operation of this program is $62,500, resulting in a total of $1.625 million over the 25 years of the Plan. [Note: There could be cost savings by combining this program with the Regional Signal Program.]

MPO Support: $3,120,000
Enhanced support of MPO planning, coordination, and administration will be required as a result of additional requirements associated with becoming a TMA and the recent trend of reduced support from ODOT. This is estimated at approximately $120,000 per year for the life of the Plan.

Regional Modeling Program: $2,613,000
Supporting the Regional Modeling Program will cost $2.6 million ($100,500 per year for 24 years). The modeling program is used for transportation studies in the region and for ascertaining air quality compliance of the region during the TIP updates.

Regional Two Bus-a-Year Program: $15,600,000
This program provides support to the Salem Area Mass Transit District in the form of $600,000 per year for the purchase of two replacement buses to modernize their fleet. Over the 25-year period of the Plan this totals $15.6 million. This program began with the 2002 Update, specifying at that time one bus-a-year. Since 2002 funds have actually been allocated for two buses each year in the TIP.

Regional Bicycle System: $16,050,000
The 25-year costs for the recommended regional bicycle system projects, excluding those sections that are included as part of the regional highway system improvement projects identified below, are estimated at $16 million (see the Regional Bicycle System Plan).

Regional Highway System
The projects on the Regional Highway System are broken down into four categories: Bridge Replacement, modifying roads to Urban Standards, Capacity Increasing projects and Signals / System Efficiency. Together they address the needs of the Regional System as identified for either safety, capacity deficiency, or lack of standards reasons.

Regional Highway System, Urban Standards: $72,042,000
Projects in this category are focused on bringing existing roads up to urban standards. Urban standards are defined as roads with sidewalks and curbs. In many instances, bike lanes are also included. The projected cost during the time period of the Plan is $72.0 million.

Regional Highway System, Bridge Modernization: $24,133,000
Bridge modernization projects replace or repair existing bridges to bring the structures into compliance with the requirements of modern travel and seismic codes. Also, for bridges over streams identified as possible travel paths for spawning endangered fish,

the bridge or culvert will be built in a way to allow easy passage for the fish. The estimated 25-year cost for these projects on the Regional System is $24.1 million.

Regional Highway System, Signals/Efficiency/Safety: $148,202,000
This category includes projects for constructing new signals or modifying current signals to connect to the Regional Signal Control Center, addressing safety issues such as providing dedicated left turn lanes, and efficiency such as channelization of approaches to intersections. The 25-year cost for the recommended projects of this type is estimated at $148.2 Million.

Regional Highway System, Capacity Increases: $120,201,000
Capacity Increasing projects are defined as providing additional travel lanes on a road or multiple turn lanes at an intersection. These projects may also include elements of the other categories listed above. The costs for the recommended projects are estimated at $120.2 million over the 25-year period of this Plan. [Note: This value does not include several projects that are listed, but the value of the project is unknown at this time, or that are to be paid by the developer.]

Regional Bridge System: $20,000,000
To prepare for the eventual construction of the Tryon corridor bridge, right-of-way needs to be acquired. For the time period of this Plan, the estimated cost for acquiring the land is $20,000,000.

NHS and State Highway System: $212.9 Million
The estimated costs for the identified NHS and state highway system projects are $212.9 million. This is for Phase IIIb and IV of the Interstate 5 project, State Highway 22 improvements and the improvements identified in the Bridgehead Engineering Study. Of the total, $187.4 million are for the Interstate 5 projects. The majority of projects in this category will be funded with NHS funds or by appropriation by the US Congress.

Undefined Regional Transportation System Improvements: (Undefined Project Costs)
There are a number of recognized transportation needs in the SKATS area that currently require further study in order to recommend potential system improvements and to be able to make reasonable project cost estimates. In addition, there are programs that need to be implemented to meet the federal regulations that the area is subjected to as a TMA. Consequently, these "outstanding issues" will be addressed in subsequent RTSP updates including any recommended facility improvements or system alternatives, as well as their estimated costs. Some of the transportation system needs and outstanding issues that require further study include: 1) Highway 22 Corridor Refinement Plan; 2) Willamette River Crossing EIS; 3) the Chemawa Interchange; and 4) identification of a long-range strategic vision of the urban form and supportive transportation structure, to include the development of an integrated long-range land use and transportation plan and system performance measures related to reducing reliance upon the automobile.

Capital Costs and Revenues Comparison

Figure 5-1 shows a comparison of the total estimated 25-year capital revenues available for the recommended regional transportation system improvements with the total estimated 25-year capital costs for the nontransit portion of the regional transportation system. The estimated available revenues for nontransit regional capital projects (excluding NHS and state highway system projects) are $242.5 million, in 2000 dollars. Total capital revenues, which include the estimated $187.9 million for NHS and state highway system projects, is estimated at $430.4 million during the 25-year planning period. The estimated 25-year capital costs for nontransit capital projects (excluding NHS and state highway system projects) are $433.5 million in 2000 dollars. Total regional nontransit capital costs associated with the RTSP, which also include $187.9 million for NHS and state highway system projects, are estimated at $621.4 million over the 25-year planning period.

For NHS and state highway system projects in the SKATS area, available funding will be provided in equal proportion to project cost by the agencies responsible for upgrading and maintaining these facilities. In other words, these projects will be constructed only if sufficient revenue is available to offset project costs. Consequently, the estimated 25-year costs and revenues associated with NHS and state highway system projects will, in effect, "cancel each other out" when comparing total revenues to total costs. Therefore, subtracting the estimated nontransit regional capital costs, excluding NHS and state highway system costs ($433.5 million), from the available nontransit regional capital revenues ($242.5 million) leaves an estimated deficit of $191 million. As a result, projects must be removed from the financially constrained project list and deferred to a later date. A list of all projects identified as necessary for providing an adequate level of mobility to the residents of Salem-Keizer is shown in **Table 15-1a** in Chapter 15, Roads and Highways. A list of the projects that are not included in the financially constrained Plan is shown in **Table 15-1b**. Projects that are unfunded are for illustrative purposes only, and are not part of the adopted Plan, and thus are not included in any Air Quality or other System modeling. Before any of the unfunded projects could be built, the Plan would need to be amended. The cost by category for the financially constrained Plan is shown in the **Table 5-2** below.

Table 5-2
Project Category by Funding Status

	Committed	Funded	Unfunded	ODOT Rec.	ODOT Com.	Total	Total w/o ODOT
Signals/Safety/ Efficiency	6,755,000	84,481,000	56,966,000	530,000		148,732,000	148,202,000
Urban Standards	17,473,000	11,871,000	42,698,000			72,042,000	72,042,000
Capacity Increasing	8,050,000	28,952,000	83,199,000	120,000,000	67,400,000	307,601,000	120,201,000
Transit Supportive in road		1,750,000				1,750,000	1,750,000
Bridges	9,033,000	8,651,000	6,449,000			24,133,000	24,133,000
Right-of-way		20,000,000				20,000,000	20,000,000
Fixed Programs		31,150,000				31,150,000	31,150,000
Bike / Pedestrian		14,750,000	1,300,000			16,050,000	16,050,000
Total	**$41,311,000**	**$219,605,000**	**$190,612,000**	**$120,530,000**	**$67,400,000**	**$621,458,000**	**$433,528,000**

In addition, there are many undefined transportation system improvements that do not have an identified revenue source. The undefined transportation system improvements, such as those expected to result from the upcoming Willamette River Crossing EIS, will probably require major capital investments for the region that will exacerbate the financial deficit. As a result, additional revenue sources beyond those identified in this plan update will most likely be required for subsequent RTSPs to be "financially constrained."

Regional (Nontransit) Maintenance and Operations Costs and Revenues

Overview

The preservation of the existing transportation infrastructure is a regional priority. Consequently, before calling for the implementation of new capital projects, the Plan should demonstrate that the region has financial capacity to finance the operations and maintenance activities required to preserve the existing transportation system. These activities include basic maintenance of the streets, transportation system operations, and engineering/planning support. This section of the Regional Transportation Systems Financial Element identifies the estimated aggregate cost for maintaining and operating the nontransit portion of the region's transportation system and the funding considered available for those activities over the 20-year planning period.

Assumptions

A number of key assumptions provided the basis for estimating nontransit maintenance and operating costs for the SKATS area during the 24-year planning period. A summary of those assumptions follows:

- The estimated nontransit maintenance and operating costs for the SKATS area are based on aggregate costs for the region and are not separated into "regional" and "local" highway system components.

- The local jurisdictions within the SKATS area (Marion and Polk counties, and the cities of Salem and Keizer) have committed to provide acceptable systemwide levels of facility maintenance. This analysis uses the findings of the Salem City Council's Transportation Impact Task Force from 1996, which has estimated the yearly maintenance needs, available funding, and the identified funding shortfall for the 24-year planning period in 2000 dollars. Keizer and Marion County Public Works Departments provided estimates for the cost of operating and maintaining their roads in the urban area. Polk County has jurisdiction over only one roadway in the SKATS region and can reasonably be expected to provide adequate maintenance on that facility.

  The Oregon Transportation Commission (OTC) has adopted a policy that preservation of the existing transportation system is its first priority and has directed the increase in funds to that purpose statewide. Therefore, for state owned and

operated highway facilities—which includes Interstate 5, Highway 22, and Highway 221 (Wallace Road)— it is assumed that the state will allocate the necessary financial resources to adequately maintain and operate these facilities based on the highway preservation policies established by the OTC. As a result, no attempt to quantify the costs associated with state roadway maintenance was made in this analysis.

- Estimated maintenance and operating costs are expressed in constant dollars unless otherwise noted and, for the purposes of this aggregate analysis, it is assumed that future-year revenues will keep pace with the rate of inflation.

Estimated Aggregate Maintenance and Operating Costs

City of Salem: The city of Salem has estimated annual revenues of $7 million currently available for transportation operations and maintenance through a combination of state motor fuel tax revenues, franchise fees, grants, and other.

The city has also estimated that approximately $6 million in additional expenditures are needed each year to reach a "perpetual life" level of maintenance. Perpetual life maintenance programs strive to keep a facility in its peak operating capacity longer by performing repairs before large problems develop. The total cost over the next 24 years for the basic level of maintenance to Salem's transportation facilities is estimated to be $168 million. Expanding to maintain the facilities at a "perpetual life" level of maintenance would cost an estimated $312 million during the 24 years of this Plan.

Marion County: Marion County's Public Works Department reports that it spends $700,000 per year on operating and maintenance projects within the Salem-Keizer urban area. It is assumed that that value stays constant, resulting in $16.8 million spent during the time period of this Plan.

City of Keizer: Keizer's reported maintenance and operating disbursements also vary from year to year. Consequently, an average of the reported disbursements was used to estimate the average yearly maintenance and operating needs for the city. This average cost is $500,000 per year, or an estimated $12 million in constant dollars for the 24-year planning period (2002 through 2025).

The information provided in **Table 5-3** summarizes the average yearly costs and the estimated 24-year costs both with and without the implementation of "perpetual life" maintenance for the city of Salem. An estimated $14.2 million per year will be needed to maintain and operate the nontransit portion of the transportation system in the SKATS area and an estimated $8.2 million without "perpetual life." The total 24-year maintenance and operating costs for the SKATS area is estimated at $340.8 million with "perpetual life" and $196.8 million with the continuation of the existing levels of maintenance and operation for the city of Salem.

Table 5-3
Estimated Nontransit Maintenance and Operating Costs

Jurisdiction	Average Yearly Costs	24-Year Costs
City of Salem (with/without perpetual life)	13/7 million	312/168 million
City of Keizer	0.5 million	12 million
Marion County	0.7 million	16.8 million
Total:	$14.2/$8.2 million	$340.8/$196.8 million

Source: ODOT, Marion County, City of Salem, and City of Keizer.

Estimate of Reasonably Anticipated Revenues for Maintenance and Operating Needs

Revenues from the state gasoline tax provide a major funding source for maintenance and operating needs for jurisdictions in the SKATS area. The projected 24-year revenues from the state gasoline tax that are considered to be "reasonably anticipated" to offset maintenance and operations cost are based on the ODOT ad-hoc committee report *Financial Assumptions for the Development of Metropolitan Transportation Plans*, described earlier in this document. The following summarizes the projected state gas tax revenues that are expected to become available during the 24-year planning period:

City of Keizer: Based on the ODOT ad-hoc committee report, an estimated $48.8 million (in 2000 dollars) will be allocated to the city of Keizer during the 24-year planning period. The city of Keizer has estimated that approximately 5 percent of their projected state gas tax revenues ($2.44 million) will be available for funding regional transportation system improvements. As a result, an estimated $46.36 million ($48.8 million - $2.44 million = $46.36 million) will be available for nonregional transportation capital projects, including identified roadway maintenance and operating needs.

Marion County: An estimated $311.7 million will be allocated to Marion County during the 24-year planning period. The estimated SKATS portion of gas tax revenues available for regional capital projects is $5.6 million. This leaves an estimated $306.1 million available countywide for nonregional transportation capital projects and maintenance and operating needs.

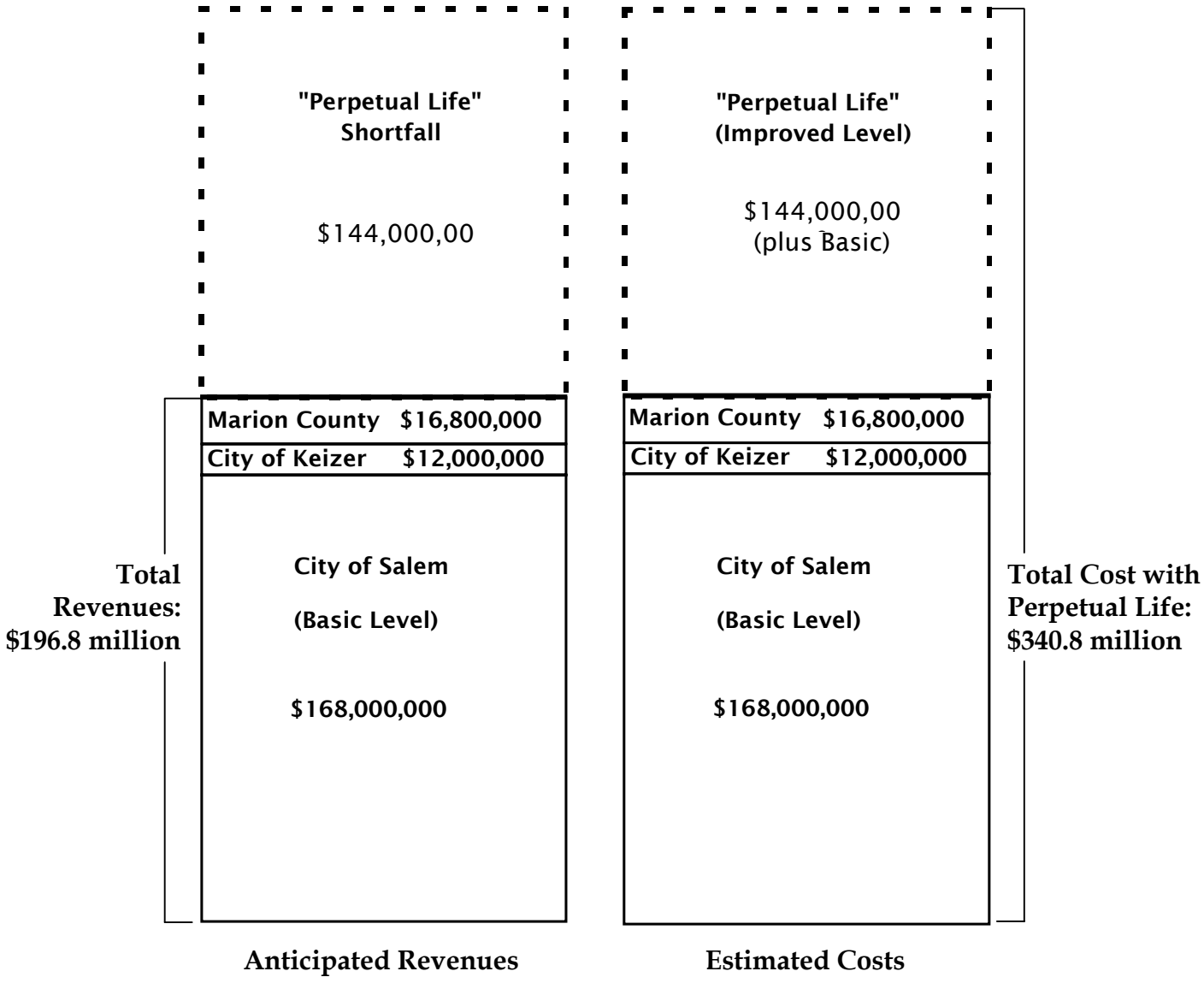
City of Salem: Most of the city of Salem's state gas tax revenues, except for the one percent minimum allocated to bicycle and pedestrian improvement projects, will be allocated to roadway maintenance and operating needs. Although the city has identified a funding shortfall for the enhanced levels of maintenance associated with a "perpetual life" program, it is assumed that the city will be able to provide at least the basic level of maintenance that is currently being undertaken if additional revenue sources are not made available to fund a higher level of maintenance. An estimated $203.5 million in gas tax revenue will be available to cover road maintenance and operating costs during the 24-year span of 2002 to 2025.

Maintenance and Operations Cost and Revenue Comparison

Figure 5-2 shows a comparison of the total estimated 24-year maintenance and operating costs and revenues for the nontransit portion of the local and regional transportation systems. The estimated total maintenance and operating costs of the local and regional transportation systems is $340.8 million including "perpetual life" maintenance in the city of Salem and $196.8 million if assuming the basic levels of maintenance that the city has been using. The anticipated revenues available for maintenance and operations during the 24-year planning period are expected to be sufficient to cover basic costs for the facilities in Keizer, Salem and Marion County. Funding to implement Salem's preferred "perpetual life" level of maintenance will require new sources of revenue.

Based on: 1) the projected state gas tax revenues identified in the ODOT's ad-hoc committee report; 2) the existing and projected levels of maintenance and operating expenditures for the city of Keizer and Marion County; and 3) the city of Salem's capacity to sustain, at a minimum, a basic level of maintenance, the Plan assumes sufficient revenues are expected to be available in order to fund the identified nontransit maintenance and operating needs in the SKATS region during the 24-year planning period.

Figure 5-2.
Estimated 24-Year Nontransit Maintenance and Operating Revenues and Costs, 2002-2025



Regional Public Transportation System Funding Analysis

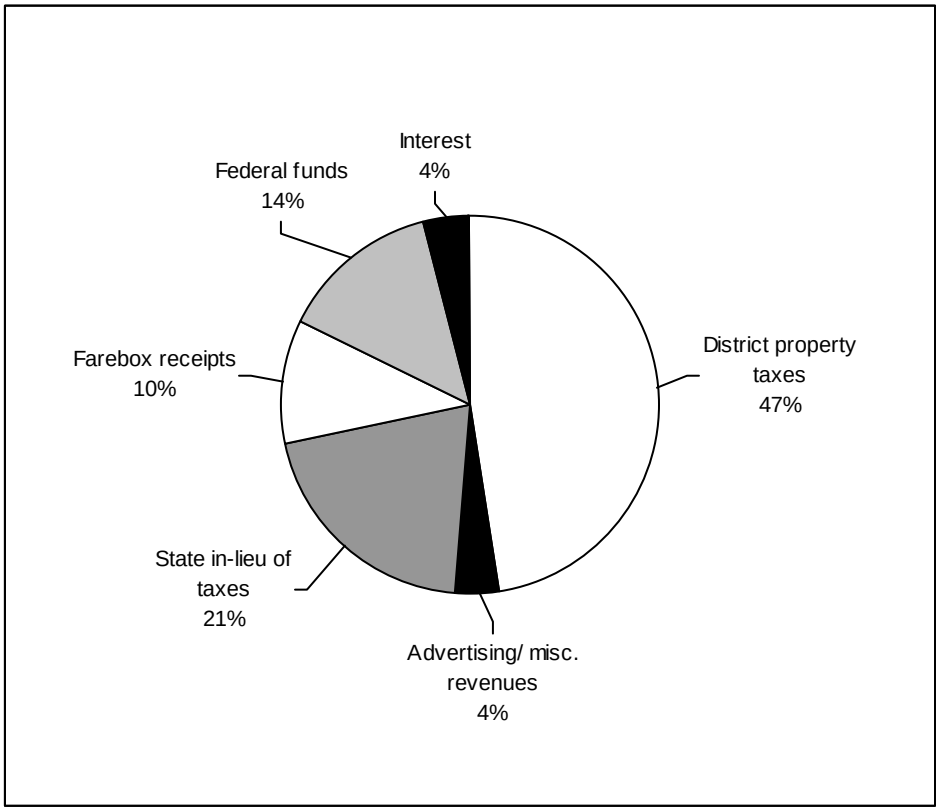
Mass Transit

Unlike some other transit systems in Oregon, such as TriMet in Portland and Lane Transit in Eugene, the Salem Area Mass Transit District does not have a dedicated funding source established in state statutes. The district must go before the voters on a periodic basis and compete with other public services for funds.

As reported in the transit district's FY 2002 budget, a total of $13,748,500 in operating revenues, other than carryover funds, for the fiscal year came from five major sources (**Figure 5-3**):

- District property taxes ($6,540,000, 47%)
- State in-lieu of taxes ($2,836,000, 21%)
- Farebox receipts ($1,425,000, 10%)
- Federal funds ($1,944,500, 14%)
- Interest ($516,000, 4%)
- Advertising/Miscellaneous revenues ($487,000, 4%)

Figure 5-3
FY 2002 Transit Operating Revenue Sources



The district's source of local voter-approved funding—its property tax base—was approved in 1996, and comprises over one-third of the district's total operating revenues. That funding base provided the local resources needed to create a 7 to 10 year financial plan. The plan included a number of service improvements, including night service, frequency improvements, and park & ride routes. These services have been implemented, with a resulting large increase in transit ridership.

The district is approaching the final couple of years in which the 1996 tax base will provide adequate funding to maintain the transit service, and the Cherriots board of directors is currently looking at funding options to carry the district into the future. New funds will be needed to both maintain the present level of service, as well as provide for the development of new services that will generate higher numbers of riders. The district is evaluating the feasibility of a Fall 2006 or 2008 tax base measure to take a new financial plan before the voters.

Capital Revenue Projections

Capital revenue projections for the transit system are illustrated in **Table 5-4**. There are unusual circumstances at play this year, which make it very difficult to project capital funds accurately. The Salem-Keizer area has, with the year 2000 census, passed the 200,000 population figure, which moves transit into a transportation management area (TMA). Technically, the federal operating dollars the district receives under section 5307 may no longer be used for operating purposes, but after 2003-04 will be dedicated to capital use and certain elements of fleet maintenance only.

Tables 5-4 and **5-5** reflect this change in the use of federal funds, removing section 5307 funds from the operating revenues and increasing the capital balance. There are legislative changes being sought, however, which could return some or all of the 5307 funds to the operating side of the ledger, and the financial element of the RTSP may need to be amended at a future date to reflect any changes that may occur.

The section 5307 dollars in **Table 5-4** are proposed to be used for eligible fleet maintenance costs each year, and would not be available for traditional capital uses such as buses and facilities. The section 5309 amounts in each year reflect two ongoing capital costs—fleet replacement of approximately six buses per year, and cyclical investments for other capital needs such as facility repairs, development of transit centers, and fleet enhancements such as ITS equipment. The six annual bus replacements are estimated at $1.5 million a year in federal funds, and the other section 5309 costs are packaged in five-year increments of $1.0 million each.

Table 5-4
Transit Capital Revenue Projections

Fiscal Year	Section 5307	Section 5309	Yearly Total
2005	2,000,000	1,500,000	3,500,000
2006	2,000,000	2,500,000	4,500,000
2007	2,000,000	1,500,000	3,500,000
2008	2,000,000	1,500,000	3,500,000
2009	2,000,000	1,500,000	3,500,000
2010	2,000,000	1,500,000	3,500,000
2011	2,000,000	2,500,000	4,500,000
2012	2,000,000	1,500,000	3,500,000
2013	2,000,000	1,500,000	3,500,000
2014	2,000,000	1,500,000	3,500,000
2015	2,000,000	1,500,000	3,500,000
2016	2,000,000	2,500,000	4,500,000
2017	2,000,000	1,500,000	3,500,000
2018	2,000,000	1,500,000	3,500,000
2019	2,000,000	1,500,000	3,500,000
2020	2,000,000	1,500,000	3,500,000
2021	2,000,000	2,500,000	4,500,000
2022	2,000,000	1,500,000	3,500,000
2023	2,000,000	1,500,000	3,500,000
2024	2,000,000	1,500,000	3,500,000
2025	2,000,000	1,500,000	3,500,000
2026	2,000,000	1,500,000	3,500,000
2027	2,000,000	2,500,000	4,500,000
2028	2,000,000	1,500,000	3,500,000
2029	2,000,000	1,500,000	3,500,000
2030	2,000,000	1,500,000	3,500,000
TOTAL	**$52,000,000**	**$44,000,000**	**$96,000,000**

Section 5309 resources are discretionary or "earmark" funds for which the district must compete on an annual basis. The funds projected in **Table 5-4** reflect the assumption that the District can receive $1.5 million per year on a continuing basis, with an additional $1.0 million every five years for non-bus related capital needs. Failure to earmark funds in the amounts needed would have the result of slowing down bus replacements and would lead to an aging fleet and elevated maintenance costs.

Operating Revenue Projections

Operating revenue projections are shown in **Table 5-5**. Property tax revenues remain the primary source of district funds. The amounts shown in the table reflect the current base only. They do not include any additional levies that may be passed to allow for continued operation of existing services or any service expansion.

Table 5-5
Transit Operating Revenue Projections

Year	Property Taxes (+3% per year)	State in-lieu of taxes (+2% per year)	Fares (+2% per year)	Federal Funds (held constant)	Advertising/ Miscellaneous (held constant)	Interest (held constant)	TOTAL
2005	7,146,435	3,009,586	1,512,221	45,000	487,000	100,000	12,300,242
2006	7,360,828	3,069,778	1,542,466	45,000	487,000	100,000	12,605,071
2007	7,581,652	3,131,173	1,573,315	45,000	487,000	100,000	12,918,141
2008	7,809,102	3,193,797	1,604,781	45,000	487,000	100,000	13,239,680
2009	8,043,375	3,257,673	1,636,877	45,000	487,000	100,000	13,569,925
2010	8,284,676	3,322,826	1,669,615	45,000	487,000	100,000	13,909,117
2011	8,533,217	3,389,283	1,703,007	45,000	487,000	100,000	14,257,506
2012	8,789,213	3,457,068	1,737,067	45,000	487,000	100,000	14,615,348
2013	9,052,890	3,526,210	1,771,808	45,000	487,000	100,000	14,982,907
2014	9,324,476	3,596,734	1,807,245	45,000	487,000	100,000	15,360,454
2015	9,604,210	3,668,668	1,843,389	45,000	487,000	100,000	15,748,268
2016	9,892,337	3,742,042	1,880,257	45,000	487,000	100,000	16,146,636
2017	10,189,107	3,816,883	1,917,862	45,000	487,000	100,000	16,555,852
2018	10,494,780	3,893,220	1,956,220	45,000	487,000	100,000	16,976,220
2019	10,809,624	3,971,085	1,995,344	45,000	487,000	100,000	17,408,052
2020	11,133,912	4,050,506	2,035,251	45,000	487,000	100,000	17,851,669
2021	11,467,930	4,131,516	2,075,956	45,000	487,000	100,000	18,307,402
2022	11,811,967	4,214,147	2,117,475	45,000	487,000	100,000	18,775,589
2023	12,166,326	4,298,430	2,159,825	45,000	487,000	100,000	19,256,581
2024	12,531,316	4,384,398	2,203,021	45,000	487,000	100,000	19,750,736
2025	12,907,256	4,472,086	2,247,081	45,000	487,000	100,000	20,258,424
2026	13,294,474	4,561,528	2,292,023	45,000	487,000	100,000	20,780,024
2027	13,693,308	4,652,758	2,337,863	45,000	487,000	100,000	21,315,929
2028	14,104,107	4,745,813	2,384,620	45,000	487,000	100,000	21,866,541
2029	14,527,230	4,840,730	2,432,313	45,000	487,000	100,000	22,432,273
2030	14,963,047	4,937,544	2,480,959	45,000	487,000	100,000	23,013,551
TOTAL	**$275,516,795**	**$98,335,483**	**$50,917,861**	**$1,170,000**	**$12,662,000**	**$2,600,000**	**$441,202,139**

State resources have been allowed to increase at 2% annually, although this resource could flatten out or be reduced over time (these funds come from the State's general fund). Fares have been expanded at a 2% per year rate, reflecting actual results over the past few years. Fare revenue grows at a slower rate than ridership, due to heavy discounts in the pricing of bus passes. It has been the district's practice to keep fares low, in order to attract as many riders as possible. Fare increases have the potential to add small amounts of revenue to the system, but also lead to decreases in ridership.

The federal funds reflects the transition of section 5307 funding from operations to capital, as the Salem area becomes classified as a TMA with over 200,000 in population. The remaining amount of $45,000 is Section 5303 planning funds, which are projected to remain constant.

Capital Expenditure Projections

It is projected that capital expenditures for the transit system over the next 24 years will be approximately $50 million. The major capital expenses will be bus replacement ($315,000 per bus) and development of outlying transit centers in south Salem, east Salem, and Keizer.

Other capital expenses will include bus shelter maintenance and expansion, transit facility maintenance, and intelligent transportation system (ITS) development.

Operating Expenditure Projections

As presented in **Table 5-6**, it is expected that it will cost an average of nearly $26 million a year to operate the current level of transit service over the next 25 years. It is important to note that this estimate represents costs to maintain the existing level of service only. The transportation plans of Salem and Keizer call for a significant increase in transit ridership as one means of reducing congestion and vehicle miles traveled (VMT) on local streets. To accomplish significant ridership increases, the district will have to expand the number of routes and frequency of service, which will have cost impacts. Even to just keep pace with population growth and increases in VMT, it is not unreasonable to expect a doubling or more of transit service levels.

Table 5-6
Transit Operating Expenditures

Fiscal Year	Operating Expenditures (+4% per year)
2005	15,465,193
2006	16,083,800
2007	16,727,152
2008	17,396,239
2009	18,092,088
2010	18,815,772
2011	19,568,402
2012	20,351,139
2013	21,165,184
2014	22,011,791
2015	22,892,263
2016	23,807,954
2017	24,760,272
2018	25,750,683
2019	26,780,710
2020	27,851,938
2021	28,966,016
2022	30,124,657
2023	31,329,643
2024	32,582,829
2025	33,886,142
2026	35,241,588
2027	36,651,251
2028	38,117,301
2029	39,641,993
2030	41,227,673
TOTAL	**685,289,672**

Maintaining Existing Levels of Transit Service

- Operating Cost/Revenue Comparison

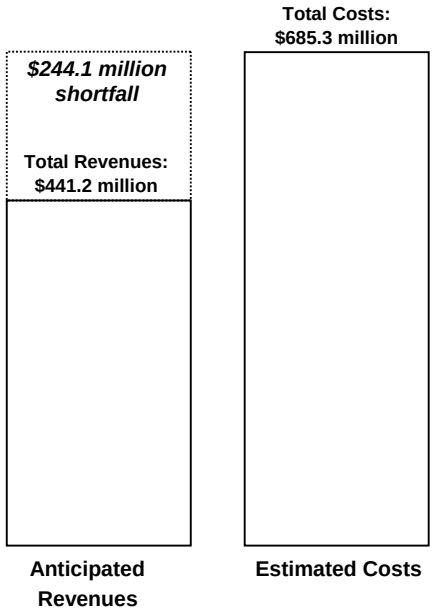
  Operating expenditures are compared to operating revenues over the 25-year plan horizon in **Figure 5-4.** The forecast of anticipated funds available to the projected revenue stream leaves an estimated shortfall of approximately $244.1 million of the cost to maintain the existing level of transit service over the plan horizon period. One of the priorities of the district and political Salem-Keizer area jurisdictions must be to deal with the impacts of this deficit, and determine how to fund transit and other transportation needs.

  It is difficult to estimate how quickly or successfully transit operating revenues can be enhanced. State and federal dollars comprise about 30% of the total operations, but are subject to increasing or decreasing beyond the District's control. The District's tax base is limited to 3% growth annually. Additional tax measures are limited to five years in length, and are subject to voter approval.

- Capital Cost/Revenue Comparison

  It appears that the District is fairly close to meeting its capital needs, if Section 5309 discretionary grants are available over the planning horizon. The no-growth capital costs include fleet replacement and routine maintenance of other district equipment and facilities. It is estimated that these expenses may total $50 million over the 24-year timeframe of the RTSP, and Section 5309 revenues are shown at about $44 million projected. The additional Section 5307 resources that the District hopes to direct toward operating needs, or at least toward preventive maintenance, could perhaps make up the $10 million difference between the anticipated 5309 funding and the expected capital needs.

Figure 5-4. Estimated 25-Year Transit Operating Revenues and Costs, 2005-2030



Transit Service Improvements

- Operating Cost/Revenue Comparison

There are several major service improvements that the district is currently evaluating as part of its strategic planning process. It is too early in the process to state with certainty what changes might occur in the time frame of the RTSP. The changes under consideration include the addition of Sunday bus service, improved frequency of service on several of the heaviest transit routes, construction of outlying transit centers in Keizer, south Salem, and east Salem, and the development of trunk line/feeder service throughout the area. These changes would be needed to absorb the trips that are projected to occur as Salem-Keizer grows.

It is clear that there is a very large gap between projected revenues for transit service and the added expenses of service expansion. That gap is on top of the deficit that already exists between anticipated revenues and maintenance of existing transit service. How this gap is bridged will be a fundamental policy issue that the district and all the local jurisdictions will need to consider and resolve.

- Capital Cost/Revenue Comparison

Capital expenses for increased services are estimated to be approximately $30 million over the 24-year period. Meeting the capital needs that are generated by growth in transit services may be the easiest part of the transportation equation to solve, as federal funding for capital purchases historically has been easier to access than operating funds. If the projections in **Table 5-4** hold true, and subtracting for the capital needs for maintaining existing services, there would appear to be a reasonable chance for meeting the capital needs of system growth. Again, this depends on how the District's Section 5307 funds can be used.

The chance for meeting capital needs depends upon continued federal support for transit, at a high level. The $44 million in section 5309 funds over a 25-year period represents a higher level of investment than has existed in the past.

ADA/Elderly and Handicapped Transportation Services

The cost of providing CherryLift ADA paratransit service is an ever-increasing component of the transit district's operating and capital costs. Provided under contract, the service carries about 1.3% of the district's total ridership, and accounts for 4.5% of the total operating cost. Ridership on the paratransit van system has risen quickly over the first five years of service, resulting in the steep increase in expenses for the service. District staff believes that the rapid growth is beginning to slow down, and that ridership will reach a peak within the next several years and then grow at a similar rate to the fixed-route bus system. Costs for the ADA service, however, are expected to continue to increase disproportionately, as paratransit services are much more labor-intensive and costly to provide than fixed route transit service.

6 - Regional Pedestrian System

Introduction

Why are pedestrian trips important? Because every trip—whether by automobile, public transit, or bicycle—begins and ends with a pedestrian movement. In addition, we can no longer afford, either monetarily or environmentally, to continue our recent practice of building our way to mobility solely via highway construction. A pedestrian-friendly environment, on the other hand, can be cost effective, reduce our reliance on the automobile, and support the use of other transportation modes.

Creating a pedestrian-friendly environment, however, poses some problems. The air quality, traffic congestion, and financing problems that we now face have evolved, to a large degree, from decades of public policies and investments that have heavily favored the automobile, often at the expense of other modes of transportation. To accommodate our increased use of the automobile, streets and building setbacks which allow convenient parking have increased, travel lanes are wider, and vehicle speeds are faster. All of these "automobility" improvements serve to discourage the pedestrian.

It has been traditionally assumed that if a basic "walking infrastructure," such as sidewalks, were provided, pedestrian activity would be encouraged. What we have seen is that while simply building sidewalks may facilitate pedestrian *movement*, truly encouraging pedestrian *activity* requires a broader effort. In addition to making appropriate improvements to the physical infrastructure, an environment must be created that is both convenient and comfortable for the walker to effectively promote pedestrian activity. Making pedestrians comfortable means creating development at a human scale, enabling individuals to better relate to, and feel a part of, that environment. Urban landscapes that embody this concept tend to make a pedestrian feel secure and more involved with his or her surroundings and provide a more interesting and accessible environment.

Until relatively recently, the main concern of most transportation planning related to the pedestrian was to attempt to avoid conflicts with the dominant mode, the automobile. Specific policies in this Plan designed to encourage walking, bicycling, and transit as an alternative to driving mark a distinct departure from past practices. This Plan recognizes that a significant relationship exists between land use patterns and densities and transportation systems that contributes to particular travel behavior choices. As a result, this Plan recognizes the important role of adequate pedestrian facilities in our overall mobility system.

Walking in the Salem-Keizer Area

Walking has become a popular activity for recreation, exercise, or simply for relaxation and enjoyment of the outdoors. However, its potential as a viable mode of "transportation" is just beginning to be realized. According to the 1990 Nationwide Personal Transportation Survey

(NPTS), 7.2 percent of all travel trips are currently made by walking. Approximately one-third of all walking trips were for social or recreational purposes.

The 1990 Census "Journey to Work" data indicates that 2,403 workers (3.5 percent) out of 69,333 workers in the SKATS area walked to work. The census data was collected during a one-week period in March, making it likely that walking trips were somewhat underreported for many parts of the country (like Salem) due to cold weather. Moreover, walking trips made to access transit or other modes were not recorded.

Some cities in Oregon, such as Portland and Ashland, demonstrate even greater levels of walking (15 percent of work trips, 1990 census). Furthermore, census data only measure work trips; more information needs to be collected to determine what share of our total trips are made by walking.

As expected, a greater number of walk trips occur in the central business district areas, like downtown Salem, where there are adequate sidewalks and awnings, higher densities, and mixed land uses. Convenient pedestrian facilities, along with closely linked destination points, make walking a highly efficient way to cover short distances. As a consequence, most walking trips are relatively short: the NPTS indicates that the average length of a walk trip is 0.6 miles. With an appropriate infrastructure, pedestrian-friendly design, and a supportive land use pattern, walking can be a realistic and enjoyable alternative for short trips and can be coupled with public transit for longer trips.

Benefits of Increasing Walking Trips

Increasing the share of overall trips made by walking can provide us significant benefits in terms of health and physical fitness, the environment, and transportation-related effects.

Promotes Health

Increased levels of walking can result in significant benefits in health and physical fitness. Research has shown that even low to moderate levels of exercise, such as regular walking or bicycling, can: (1) reduce the risk of coronary heart diseases, stroke, and other chronic diseases; (2) help reduce our personal and societal health care costs; and (3) contribute to greater functional independence in the later years of our lives.

Improves Public Transit and Reduces Traffic Congestion

Investments in pedestrian improvements can not only increase the number of walking trips, but can also increase the cost effectiveness of existing public investments in the transit system. By improving pedestrian accessibility, pedestrian-friendly street design and land use patterns can contribute to higher rates of transit ridership. Conversely, an effective transit system extends the mobility of the pedestrian, allowing more people to commute and meet other transportation needs without the use of the automobile.

Improves Air Quality

Although air quality in the SKATS area is expected to improve with the implementation of this Plan significant increases in the use of the automobile will degrade our air. Promoting pedestrian travel can be one of the most cost-effective pollution reduction strategies because walking displaces shorter auto trips that are the most polluting on a per-mile basis.

Public Cost Savings

Many public costs associated with automobiles are not borne by actual vehicle user fees, such as fuel taxes and license fees. As a result, the general public indirectly subsidizes vehicle travel by paying some of the costs for road construction and maintenance, police and ambulance services, and uninsured medical costs, among others. Increasing the overall share of trips made by pedestrians can serve to contain these costs, reduce wear and tear on our roads, and enable more efficient investment of public monies.

Energy Efficiency

Walking is an extremely efficient means of transportation relative to motor vehicles. Increasing pedestrian travel reduces the need to import and consume petroleum fuels. Heavy reliance on petroleum fuels has a variety of environmental consequences including greenhouse gas emissions, urban air pollution, oil spills, and impacts of drilling operations. In addition, such imports contribute to a trade imbalance and have negative effects on the overall economy.

SKATS' Role in Pedestrian Planning

The primary role of SKATS (the local MPO) in pedestrian planning is to establish a series of regional policies that embody goals and objectives related to the pedestrian systems of regional significance to ensure that walking is a viable transportation option for meeting mobility needs in the Salem-Keizer area. As a consequence, the regional Plan deals specifically with only those issues related to accessibility to and within regional activity centers and major transit transfer stations. The actual network of pedestrian facilities in the SKATS area is planned, funded, constructed, and maintained by the area's jurisdictions (ODOT, Marion and Polk counties, and the cities of Salem and Keizer). SKATS cooperates with these local jurisdictions to identify and implement priority pedestrian projects that improve the pedestrian environment in the areas and corridors of regional interest. Through policies identified in this Plan, pedestrian issues will also be considered in the planning and programming of multimodal projects for the regional transportation system.

The Regional Pedestrian System

The regional pedestrian system comprises those pedestrian facilities that serve a regional function, meaning that they serve the region's major activity centers and the major transit

transfer center. Major activity centers are focused concentrations of activities of regional significance. In the Salem-Keizer area the current major regional activity centers are:

- The Salem Central Business District (CBD)
- The Capitol Mall
- Willamette University
- Lancaster Mall
- Chemeketa Community College

Future activity centers are the focus of the Salem Futures study. This study is looking at land use and transportation issues for 50 years in the future, to define how the City of Salem wants to accommodate population and employment growth. The plan has defined several centers and mixed use transit oriented centers in addition to the ones listed above. These include:

- The West Salem transfer station
- Keizer transfer station
- South Salem Mixed Use Transit Oriented Center

The regional transportation policies contained in this plan element are focused on access within and to these activity centers. At the present time, direct pedestrian connections from the adjacent portions of the regional highway system to these major activity centers and the downtown Salem transit transfer center already exist and require no major additional improvements at the regionally significant level. Pedestrian networks and connections that serve other parts of the region are considered to be of local rather than regional significance and are addressed in the local transportation plans being prepared by the respective local jurisdictions within the region.

Goals, Objectives, and Policies

Goal 1: A continuous network of safe, convenient, and accessible pedestrian facilities to and within regional activity centers and major transit facilities.

Objective: *To ensure a viable system of pedestrian facilities of regional significance.*

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

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

Policy: Encourage the timely repair and maintenance of existing pedestrian facilities in regionally significant settings.

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

Goal 2: **A substantial increase in the percentage of trips made by walking for all trip purposes in the region**.

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

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

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

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

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

Recommended Improvements

Given supportive facilities and land use patterns, pedestrian travel can replace a significant number of auto trips. The following actions are necessary to facilitate walking as a viable mode of transportation. Local jurisdictions in the region are encouraged to incorporate these actions into their respective local transportation system plans and their land use, zoning, and building regulations, and implement them when feasible, appropriate, and practicable:

- Construction of new sidewalks and pedestrian facilities
- Creation of pedestrian-friendly environments
- Promotional campaigns to encourage walking

Construction of New Sidewalks and Pedestrian Facilities

There is a direct correlation between the provision of good walkway networks and their use. All things being equal, the construction of missing links in pedestrian facilities serving regional activity centers or major transit facilities should be prioritized over new facilities that have no immediate linkage in the overall circulation system. Regional pedestrian facilities comprise only a small fraction of all pedestrian facilities in the urban area, the majority of which serve a local function. For the facilities at the local level, providing a safe and convenient connection to schools, parks, shopping and transit stops are the priorities as defined by the local jurisdictions.

The projects listed in **Table 6-1**, either provide the linkages between regional centers that are necessary to support pedestrian movement, or address issues that are detrimental to the safe and convenient movement of pedestrians. Several of the proposed projects utilize railway

right-of-ways that have either been or are likely to be abandoned in the near future. These off-street paths will provide pedestrians and bicyclists a safe and attractive route to travel between regional activity centers.

One project that characterizes this is the 12th Street Promenade (see **Map 6-1**). The 12th Street Promenade project was developed to address the safety issue surrounding the Union Pacific rail line. The majority of collisions between trains and pedestrians have occurred on this stretch of track. In addition to improving the aesthetics of the environment for walkers, it will provide a connection between the Capitol Mall area and the Amtrak Station, facilitating the intermodal nature of the Station.

Creation of Pedestrian-Friendly Environments

Drawn from the handbook, *A New Way to Grow*, by Clark County Transit in Washington State, the following discussion identifies three primary factors common to a pedestrian-friendly environment:

- *design* for the needs of the pedestrian and transit rider;
- create a *density* of services, businesses, and other destinations that can be accessed without an automobile; and
- plan for a *diversity* of land uses that encompass many different, but mutually supportive, activities and needs.

There are several ways in which portions of our major corridors could become safer and more pleasant environments for pedestrians and transit riders. These strategies include pedestrian and transit rider amenities, accessibility improvements in building and site design, and complementary clustering of destination land uses.

The principles of design, density, and diversity must be applied together to be effective. Higher density without supporting land uses will worsen traffic congestion rather than improve it, because people will still be forced to drive everywhere. If there is a grocery store next to a residential complex, but the two are separated by a continuous brick wall or freeway, they might as well be miles apart. There must be pedestrian connections in place for people to take advantage of proximity.

Table 6-1. RTSP Committed and Planned Pedestrian Improvements

These projects address safety, connectivity, and multimodal mobility issues faced by pedestrians in the Salem-Keizer area.

Project Location	Project Priority (in years)
Committed Projects: City of Keizer	
Verda (South of Dearborn)	0 to 5
Alder Drive	0 to 5
Committed Projects: City of Salem	
12th Street Pedestrian Promenade	
Core Area Pedestrian Improvements	
Front Street ByPass	
U.P./Union Street Railroad Bridge Conversion	0 to 5
Recommended Improvements: City of Keizer	
Chemawa: N.River Rd. to Rickman Rd.	0 to 5
Chemawa: Verda to Lockhaven Drive	5 to 20
Keizer Rapids Park Trail Connection	5 to 20
Lockhaven Drive: I-5 to McLeod Ln.	5 to 20
North River Road: Country Glen to City Limits	
Verda Lane: Chemawa Rd. to Salem Parkway	5 to 20
Wheatland Road: N. River Rd. to Clearlake Dr.	5 to 20
Recommended Improvements: Marion County	
Center St: Cordon to 63rd Ave (Combined with Bicycle)	
Cordon Rd: Caplinger Rd to Center St (multi-use path w/ road improvements)	
Cordon Rd: Center St to Silverton Rd (multi-use path w/ road improvements)	
Cordon Rd: Silverton to Kale (multi-use path)	
Lancaster Dr: State St to Center St (bike/ped improvements)	
Sidewalk improvements in various locations	
Recommended Improvements: City of Salem	
12th Street SE:Ibsen Street SE to Commercial St. SE	
Airport Road SE: Misc. Sections: State St. to Hwy. 22	
Battle Creek Road SE: Pringle to Kuebler & Tahoe to Brentwood	
Center Street NE: Concord St. NE to Cordon Rd. NE	
Commercial Street SE: Vista to Ratcliff	
Commercial Street SE: Winding Way to Landsford & Fabry to I-5	
Connecticut Ave SE overpass of Hwy 22	
Croisan Creek Road S: River Rd. S to Kuebler Blvd. S	
Doaks Ferry: Mogul St. to Glenn Ck.	
Edgewater District Pedestrian Improvements	5 to 15
Front Street North: N. River Rd. to Division	
Hawthorne Avenue NE: Sunnyview Rd. NE to Portland Rd. NE	
Kuebler Road S: Liberty Rd. S to Skyline Rd. S	
Lancaster Drive SE: Hwy. 22 to Kuebler Blvd. SE	
Madrona Avenue S: Crestview Dr. S to Croisan Creek Rd. S	
Madrona Avenue SE: Edward Ave. SE to 25th St. SE	

Project Location	Project Priority (in years)
Market Street NE: Lancaster Dr. NE to 45th Ave. NE	
McGilchrist Street SE: Pringle Road SE to 25th St. SE	
Minto-Brown Island Connection (multi-use)	
North Downtown Plan Pedestrian Improvements	
Skyline Road S: Joseph St. S to Kuebler Blvd. S	
South River Road: Owens St. S to Croisan Creek Rd. S	
State Street: 40th Pl. NE to Cordon Rd. NE	
Sunnyview Road NE: Evergreen Ave. NE to Byram Ave. NE	
Turner Road SE: Hwy. 22 to UGB	

Applying these principles to properties along the major corridors will allow us to both retain the high quality of life that attracted us to the area in the first place, as well as increase our transportation options.

Design for the Pedestrian and Transit Rider

If walking and riding the bus are to be considered viable transportation options in the corridor, the basic facilities necessary to support these mode choices must be available. Often, it's not the distance that prevents us from walking, but what lies between us and where we want to go. Currently, driving is the only practical way to get around in most of the major corridors, because destinations are separated by distance and segregated by discrete uses. Even short trips by any other mode seem uncomfortable in corridors designed primarily for the automobile.

In terms of building orientation and design, a clear, direct pedestrian access to the front entrance of a building is the easiest way to encourage pedestrians to enter a building. Other strategies include reducing building setbacks and placing parking areas in the rear of the building sites. Obviously, to achieve maximum advantage from such an orientation, there needs to be a basic pedestrian infrastructure available that provides safe, convenient, and direct access from the sidewalk system, the bus stop, and/or the central parking lot.

Density and Connectivity of Services and Destinations

According to the projections developed for this Plan, much of the anticipated retail growth in the SKATS area over the next twenty years will occur along the existing commercial corridors. This anticipated growth will necessitate more compact development of housing, employment, and services that can be reached by transit and that have good pedestrian access. When many stores, businesses, and other services are near each other and conveniently connected, the likelihood that people will walk between them increases. For people arriving at an area by transit or walking, a concentration of services is vital. Even if it is necessary to drive to the area, it may be possible to park once and combine trips if many destinations are within walking distance of each other. Combining trips helps to reduce traffic congestion and air pollution, and the only way to encourage the combining of trips is to put destinations close enough together to

walk between them and to provide the connecting pedestrian infrastructure to do so. People who choose to live or work within these areas will be able to walk to services they need.

More compact development and higher densities will bring both challenges and opportunities for landowners, residents, and the local government in the major corridors. Growth pressure, combined with a fixed urban growth boundary, may result in higher land prices in certain areas. This will speed and encourage the redevelopment of properties that are currently underutilized, as mixed-use and multi-story projects only make sense economically on land that has higher value. Higher densities will result in less miles driven on average and will help meet the goals of the state Transportation Planning Rule (TPR), which seeks to increase carpooling, walking, biking, and transit.

Diversity of Proximate Land Uses

There seem to be an increasing number and variety of things we have to do on a daily basis. We go to work, drop off the kids at day care, go out to eat for lunch, pick up groceries for dinner, and more. Unfortunately, most of these activities currently require an automobile because everything is situated in a distinctly different location. We live in strictly residential neighborhoods, we work in an office complex, and we buy food in a shopping center. For families with children, the prospect of spending hours out of an average day driving from place to place is all too common.

Having a diversity of proximate land uses means having a balanced mix of the types of land uses that support pedestrian travel, such as retail, office services, and multi-family, located near to each other and readily accessible from each other. In other words, all the things we need in our daily lives should be conveniently located near each other rather than scattered all over the area. While it makes intuitive sense, it is unfortunately not very typical in the region's major corridors.

Consider a typical work environment, for example, the office building surrounded by parking. It's probably difficult to consistently walk anywhere during lunch because of the lack, or limitation, of destinations within walking distance. There might not even be much within a short driving distance, making it especially difficult for those who need to run errands during lunch or before or after work. The dearth of practical destinations conveniently accessible by walking often makes people feel they must have unrestricted access to a car and discourages them from using other modes of transportation, including carpools, for their work trips.

On the other hand, consider a diverse working environment that includes offices as well as stores and restaurants. Getting a birthday card or picking up dry cleaning may become less of a burden if all it takes is simply walking next door. A variety of nearby restaurants can provide a range of interesting options for lunch. If housing were located near this development, the residents would patronize the stores and restaurants in the evening. The result is a diverse environment where people can actually choose to walk rather than drive. By providing options, a diverse and compact environment benefits both the people who work there and the people who live there.

Diversity can be planned into a single building, among several buildings within a project site, or among several projects in a small area. An important consideration is the quality of pedestrian connections between the different land uses and the different modes of transportation.

Promotional Campaigns

Regardless of the commitment of state, regional, and local governments to view walking as a transportation mode, and regardless of the "walkability" of our communities, the full potential of walking will not be realized if the public is unwilling to recognize and embrace it as a viable transportation option. We can play a key role here by working to increase public awareness of walking and actively promoting its use. Programs to increase employee use of nonmotorized transportation, including transportation demand management and health awareness programs, can help to legitimize walking as an alternative mode. Successful campaigns will depend on portraying a positive image of walkers, emphasizing the benefits of walking and informing people of the drawbacks to over-reliance of the automobile.

Outstanding Issues

Providing safe and convenient pedestrian links along and across the regional road system is one of the policies of this Plan. Currently there are several areas in the Salem-Keizer area where this is not being met. One such area is along Highway 22 between Lancaster and Cordon Road. On the south side of the highway is located a housing development with few to no stores or other amenities. On the north side is located a new elementary school and numerous retail and food stores. Due to the poor pedestrian linkages, and the circuitous route that walkers face, many people walk to the stores by crossing Highway 22, cutting through the fences that were erected along the right-of-way. Due to the high traffic volume and lack of any pedestrian accommodations along the highway, this current situation has the potential for pedestrian fatalities and injuries. This area needs attention in the near-term to engage the public, and determine a solution that meets the needs of the residents of the area, those of ODOT and the people using Highway 22.

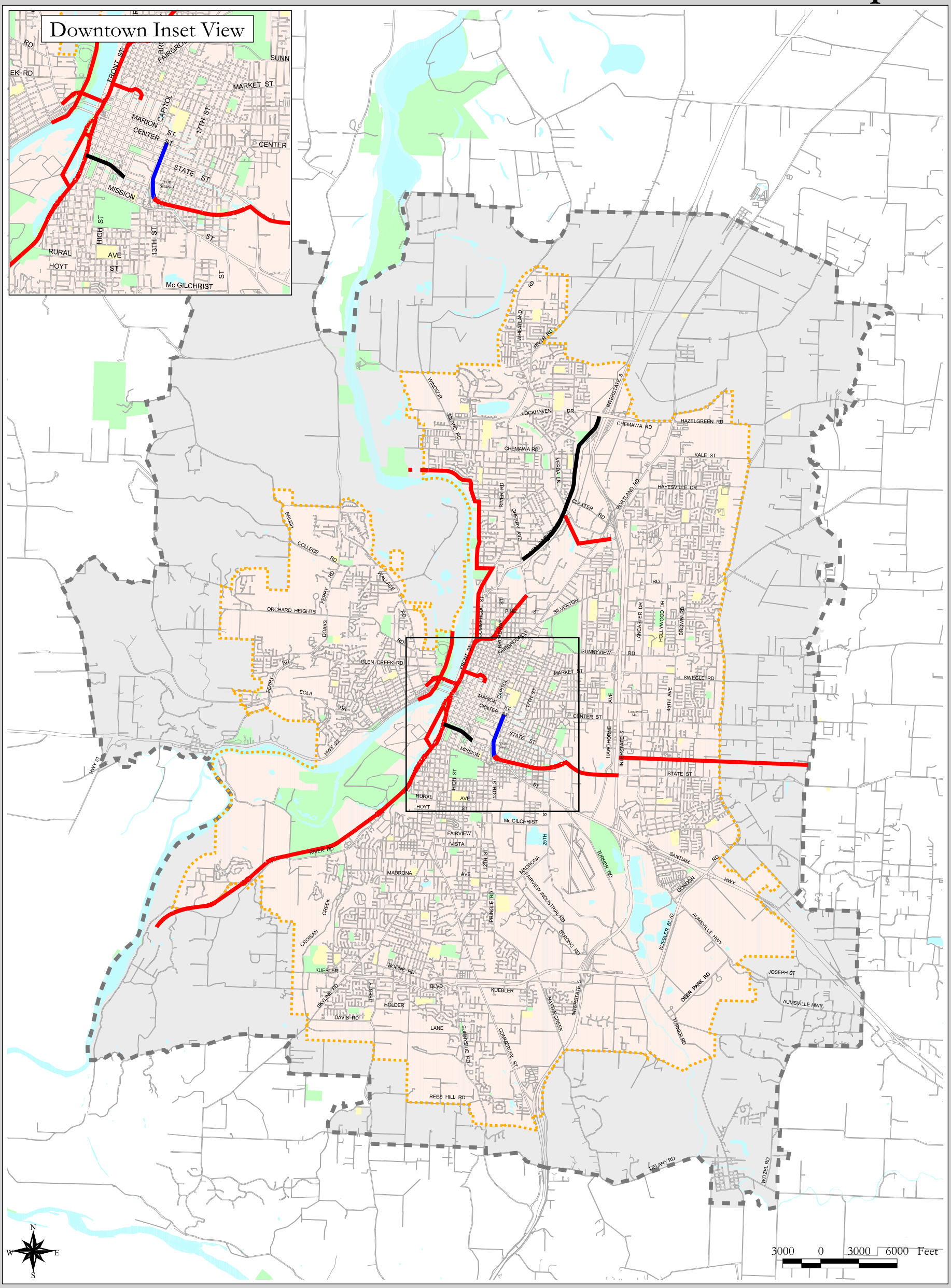
Facilitating the linkage between downtown and both Riverfront Park and the Union Street RR Bridge, which is planned for conversion to a bicycle and pedestrian facility, while at the same time maintaining adequate operational functioning of Front Street as a portion of the designated National Highway System is currently an outstanding issue. While several solutions have been proposed, this issue will require additional study and public deliberation and input before a preferred alternative can be identified and included in the Plan

Ensuring connectivity between Keizer and Salem for all modes is a continuing aim for the Regional Transportation Systems Plan. One option to address this situation would be the development of a multi-use path along the Willamette River, providing access for the residents of Keizer west of North River Road to downtown Salem. This path would be part of the larger Willamette Restoration Initiative (WRI) plan to link cities along the Willamette River together via a multi-use path. Currently, this proposal is still in the conceptual stages, with no specific routes through Salem-Keizer identified. The completion of a path as envisioned by the WRI is compatible with the goals of the RTSP to provide residents of Salem-Keizer with multiple mode and route options when traveling between origin and destination.

Financial Analysis

The pedestrian-supportive actions envisioned in this Plan are local in nature. As a result, the funding for sidewalks and related amenities will most likely come from local jurisdictions and private developers. The ability of the various local jurisdictions to provide an adequate pedestrian infrastructure will be addressed as part of the development of their respective transportation systems plans.

2005 SKATS RTSP Update



Recommended Multi-Use Facilities

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

Map 6-1

Multi-Use Path Facilities
- Recommended
- Existing
- Committed
- Recommended (location approximate)

- Roads & Highways
- Rivers & Creeks
- Parks
- Schools

- Salem-Keizer Area Transportation Study (SKATS) Boundary
- Salem-Keizer UGB

01/07/05

Mid-Willamette Valley Council of Governments, 105 High Street SE, Salem OR 97301 ◆ (503) 588-6177 ◆ mwvcog@open.org ◆ www.mwvcog.org

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7 - Regional Bicycle System Element

Introduction

Bicycles offer a viable and economical mode of transportation with fewer negative impacts on air quality and finite land resources than those associated with the automobile. The Bicycle System Element of the SKATS Regional Transportation Systems Plan (RTSP) addresses issues associated with our need to provide an adequate network of facilities to accommodate regional bicycle trip demand.

By improving the efficiency of our existing transportation system, we can move more people and goods on the facilities we already have in place. The development of a balanced, multimodal transportation system provides us with more mode choices than just the single-occupant vehicle. By creating additional realistic travel options, such as bicycling, we can expand our transportation flexibility and improve our overall community mobility.

The bicycle is a tremendously efficient form of transportation. It burns no fossil fuels and requires very little road space. Bicycles can quickly transport people over distances of up to five miles (or even more) and do not use up significant amounts of our urban land resource for parking. Since many travel trips in the SKATS area are under five miles, there is a potential for shifting some car trips onto bicycles. For this reason, promoting the use of bicycles is an important strategy to reduce traffic congestion and air pollution and make more effective use of our existing transportation infrastructure.

Historically, one of the main barriers to increased bicycle use in the Salem-Keizer urbanized area is the lack of a direct, continuous, convenient, and safe system of bicycle facilities. A major result of recent transportation improvement efforts in the area has been to successfully plan and implement missing portions of the region's bicycle system. The Bicycle System Element provides an adequate system of bicycle facilities in the Salem-Keizer area that will serve to facilitate our increased use of bicycles to meet our daily transportation needs. Significant increases in the use of bicycles requires that:

- an appropriate infrastructure of regional and local bicycle systems is in place; and
- adequate supporting facilities such as bicycle parking, storage, etc., are provided at key locations.

To this end, the Bicycle System Plan Element:

1) identifies the bicycle system of regional significance and defines the Regional Bicycle System facilities;

2) inventories the current bicycle infrastructure and describes its service area;

3) establishes the goals, objectives, and policies related to the Regional Bicycle System;

4) identifies the facility and financial needs associated with completing the Regional Bicycle System over the next 20 years; and

5) identifies the regional strategies and specific improvements required to meet the goals and objectives of the Plan related to bicycle travel.

Regional Bicycle System (RBS) and Function

The designated RBS (**Map 7-1**) identifies the interconnected network of bicycle facilities that form the primary structure of the Salem-Keizer area's transportation system specifically designed to accommodate longer-length, "regional" bicycle trips. This system is intended to provide a safe and efficient bicycle network across and around the urban area and direct bicycle access to regional activity centers such as Salem's Central Business District, the Capitol Mall, Lancaster Mall, Chemeketa Community College, Salem Airport/Fairview Industrial Park, the State Fairgrounds, Salem Industrial/Cherry Business Park, Wallace Marine Park, and Minto-Brown Island Park.

SKATS "owns" none of the roadways in the area. Rather, the facilities that comprise the Regional Bicycle System are owned and operated by a number of different jurisdictions in the SKATS region: the city of Salem, the city of Keizer, Marion and Polk counties, and the Oregon Department of Transportation (ODOT). Each of these entities is responsible for planning, implementing, operating, and maintaining some portion of the overall Regional Bicycle System. Actual bicycle trips will probably use a mix of regional and local facilities. The "regional" system consists of a coordinated network of bicycle facilities on city streets, county roads, and state highways. The emphasis on "regional" bicycle travel characterizes the functional difference between the regional system and the local systems. The underlying function of the regional system is to accommodate longer distance bicycle trips and provide bicycle access to regional activity centers. The local bicycle systems are designed to accommodate shorter, more localized trips and provide connections to and from the regional facilities. For example, someone commuting by bicycle from a residence in the city of Keizer to a place of employment in the Capitol Mall area would be considered to be making a regional bicycle commute trip, while someone riding their bicycle to the corner store to buy a loaf of bread would be making a "local" trip. In general, regional bicycle trips normally seek the shortest and most direct route available. A person making a typical bicycle commute trip between East Salem and the Capitol Mall area would likely use one of the major east-west travel corridors on the regional system, such as State or Market Streets, which provide the fastest and most direct travel route with the minimum amount of delay (from stop signs and intersections). The regional system identified

in this Plan complements the local bicycle system (which consists primarily of collector and local service facilities intended for shorter trips and more localized travel demand), and is either coincident with, or accessible to, the region's transit system (Cherriots) routes. This provides the bicyclist a greater opportunity for connectivity between bikes and buses and effectively expands the coverage and extent of the regional bicycle system.

Regional Bicycle System Facilities

"Bicycle facility" is a general term used to denote physical improvements and provisions designed to accommodate and encourage the use of bicycles as a viable and practical mode of transportation. The SKATS Regional Bicycle System has two classes of facilities: the routes that bicyclists take between origin and destination, and the supporting facilities that exist at the destination.

The SKATS Regional Bicycle System envisioned in this Plan contains approximately 174 miles of bicycle routes, consisting of bicycle lanes, multi-use paths, shoulder bikeways, and wide outside lanes and alternative bicycle routes. These routes are generally associated with the highway system of regional significance and provide access to major employment, shopping, business, and educational centers and major transportation connections in the Salem-Keizer area. The bicycle facilities identified in this plan are located within the SKATS boundary. Facilities located outside of this area are addressed in the transportation plans of the respective responsible jurisdiction.

Facilities to support the use of bicycles include racks on buses, provision of bicycle parking and signage. These facilities are an important part of the regional bicycle system, supporting the use of the bicycle as a practical means of transportation.

There are five basic types of bicycle routes on the Regional Bicycle System. A brief description of each type of bicycle route is provided below in descending order of classification.

Bicycle Lanes: A portion of a roadway that has been designated for the preferential or exclusive use of bicyclists. The standard width for bicycle lanes is six feet with a minimum of four feet (five-foot minimum if adjacent to a curb, parking, or guardrail). Bicycle lanes should be marked with an eight-inch white stripe and pavement stencils. If parking is permitted, a five-foot wide bike lane should be placed between the parking space and the travel lane.

Shoulder Bikeway: A type of bikeway where bicycle travel is provided on the paved shoulder of the roadway. Shoulder bikeways are most common on rural roads. The standard width for a shoulder bikeway is six feet. A five-foot minimum can be used if adjacent to a curb, parking, or guardrail. If there are severe physical limitations, a four-foot wide shoulder is regarded as minimally acceptable.

Wide Outside Lane (formerly called Shared Roadway): Bicyclists and motorists share the same travel lanes which are at least 14 feet wide, but no greater than 16 feet wide. On wide outside lanes, bicyclists and motorists have equal status as vehicles occupying the travel lane. This type of facility is often the only alternative when there is inadequate right-of-way available for

bicycle lanes without creating undesirable impacts. Wide outside lanes are the minimally acceptable type of bicycle facilities on the RBS and should be considered for upgrading where feasible. Existing wide outside lane segments of the RBS will be re-examined in subsequent Plan updates to determine whether sufficient changes in limiting conditions have occurred to warrant further consideration for eventual upgrading to a higher class of facility.

Multi-Use Path: Multi-use paths are physically separated from motor vehicle traffic and are normally two-way facilities, and shared with bicycles, pedestrians, joggers, and skaters. The standard width is 10 feet for a two-way multi-use path.

Shared Roadway: There are no specific bicycle standards for shared roadways. They are simply the roads as constructed. Shared roadways function well on local streets, collectors, and rural roadways where traffic volumes and speeds are low. On urban arterials, roads should be widened to include shoulder bikeways or bicycle lanes.

Facilities for bicycle parking include bike racks, bike lockers, and bike stations or garages. Each of the facilities provides the bicyclist a means of securing their bike when they reach their destination.

Bike racks: The most common of the parking facilities for bicycles, these allow the bicyclist a convenient and temporarily safe spot for parking their bicycle while shopping or eating at an establishment. Typical bike racks include inverted U bars allowing two bikes to be locked to them. Usually these are uncovered and located on the sidewalk.

Bike lockers: These are enclosed lockable boxes, large enough to place a bicycle and a few bags. Lockers are typically located in the downtown area, or where there is a need for long-term safe parking of a bicycle. More expensive than bike racks, they provide protection from the elements and possible vandalism to the bike. Bike lockers are rented from a central authority for set periods of the year.

Bike stations/garages: For areas with high bicycle usage and storage needs, these types of facilities provide the highest degree of security and protection for the bicycle. Bike garages provide an enclosed, lockable storage area for many bikes. These are typically unattended, with the user renting a key from a central authority. The bike station takes this concept and adds amenities that make commuting by bike more attractive, such as showers, changing rooms and on-site service for the bicycle. Occasionally these facilities include a complete bicycle store, or provide rentals.

The Regional Bicycle System envisioned in this Plan embodies a combination of existing and committed bicycle facilities and recommended system improvements, which are described in the following sections of this document.

The Existing Regional Bicycle System

Considerable progress has been made to date by affected jurisdictions in the SKATS area toward completing the bicycle facilities identified as part of the Regional Bicycle System. Several on-street bicycle lanes and other related facilities that encourage bicycle travel have been constructed in recent years. Where they exist, these bike lanes provide a designated, safe space for the bicyclist on the roadway surface and respond to the fact that bicyclists generally wish to travel in patterns similar to motorists and want to take the most direct and safest route possible.

Unfortunately, however, significant portions of the Regional Bicycle System have yet to be completed. On the whole, we still lack a seamless network of bicycle facilities with which to serve the regional trip-making needs of urban residents who choose to travel by bicycle. The existing network of bicycle facilities is still somewhat disjointed, with many important links missing. System continuity is vital if bicycling is to become a convenient, safe, and attractive transportation alternative in the region. Although a number of important segments of the Regional Bicycle System are already in place, under construction, or committed to be built in the near term, the "matter-of-course" provision of roadway bicycle facilities has not always been easy in the past, due in part to a lack of community consensus, insufficient funding, and the perceived high costs of displacing other uses. One alternative to costly right-of-way acquisition, the removal of on-street parking, can impact convenient automobile accessibility to nearby commercial businesses. Other low-impact bicycle facility alternatives, such as wide outside lane treatments, may not provide the level of safety, continuity, or directness necessary to significantly encourage bicycle use as a viable alternative to the use of the automobile.

As of the end of 2002, approximately 110 miles (63 percent of the total system) of the RBS are existing facilities, which include all roadway bicycle facilities scheduled to be constructed through that year (**Map 7-2**). As more facilities are added to the region's bicycle system, it is expected that the level of bicycle usage in the SKATS area will increase.

Despite this progress, there are still a significant number of "missing" and/or incomplete segments of the system, with few continuous linkages to regional activity centers and other major destinations. As a result, many bicyclists are often forced to share the road with automobiles without a designated space to ride safely; or they must go out of direction on the local street system in order to reach their destination.

As of 2004, bike lockers are located only in the downtown area (**Map 7-1**), with the more ubiquitous bike racks located throughout the Salem-Keizer area. Since the lockers were introduced in 1997, the number rented increased yearly until 2000, at which point a decrease has occurred yearly (**Table 7-1**). Zoning codes for the city of Salem prescribe the number of bike racks necessary in combination with business development.

Currently, all Salem Area Mass Transit buses are equipped with bike racks, allowing two bicycles on each bus. Future buses will also be equipped with bike racks.

Table 7-1. Yearly Bicycle Locker Rentals, 1997 to 2004

	AVERAGE NUMBER OF LOCKERS RENTED	NUMBER OF LOCKERS	PERCENT RENTED
1997	7	26	27%
1998	11	26	42%
1999	13	26	50%
2000	17	26	65%
2001	15	26	58%
2002	15	30	50%
2003*	13*	32	41%
2004-half	12	32	38%

* 2003: 6 lockers unrentable due to construction at Chemeketa Parkade

Goals, Objectives, and Policies

The Bicycle System Element is a blueprint for developing a safe, seamless, and efficient system of bicycle facilities in the SKATS area. Since SKATS does not actually build, maintain, or operate any portion of the facilities comprising the system, the Bicycle System Element of the RTSP is implemented through the cooperative adoption of regional goals, objectives, and policies. The local bicycle system plans must be consistent with the adopted goals, objectives, and policies contained in the regional Plan. In turn, the regional Plan must be consistent with state and federal plans, policies, and mandates.

The Bicycle System Element goals, objectives, policies, and recommendations were formulated through an extensive development and review process with the SKATS Bicycle Advisory Committee (BAC) during the 1996 update, and are intended to address the major regional issues affecting bicycling needs that were identified in the public process. All of the goals, objectives, and policies contained in the Bicycle Element are geared toward promoting the increased use of bicycles as a means of meeting the transportation needs of the citizens of the region.

Goal 1: An identified system of regional bicycle facilities within the Salem-Keizer urban area.

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

Policy 1: The Bicycle System Element of the Regional Transportation Systems Plan shall designate the bicycle system of regional significance the Regional Bicycle System (RBS) within the Salem-Keizer urban area.

Objective 2: *Develop and maintain an accurate and up-to-date inventory of the RBS in order to respond to the changing needs of the bicycling public in the region.*

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

Goal 2: A safe system of regional bicycle facilities within the Salem-Keizer urban area.

Objective 1: *Design a system of regional bicycle facilities that enhances safety by improving compatibility among bicycling and other transportation modes.*

Policy 1: All bicycle facilities on the Regional 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 Regional Bicycle System where practicable.

Objective 2: *Provide for well maintained Regional Bicycle System facilities that afford a safe environment and reduce potential hazards to the traveler.*

Policy 1: Jurisdictions are encouraged to adopt routine maintenance standards and practices that ensure smooth, clean, and safe conditions on the RBS facilities.

Policy 2: Local jurisdictional support of volunteer community services and programs that assist in the provision of adequate maintenance service on Regional Bicycle System facilities.

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

Objective 3: *Achieve greater public awareness of safe bicycling and motoring practices, procedures, and skills.*

Policy 1: The development and implementation of regionwide 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 in the region.

Policy 2: Encourage jurisdictions to monitor and analyze bicycle accident data to formulate ways to improve bicycle safety.

Goal 3: A continuous and direct system of regional bicycle facilities in the Salem-Keizer urban area that adequately responds to the transportation needs and desires of bicyclists.

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

Policy 1: Designate a continuous and direct system of regional bicycle facilities in the Bicycle System Element of the SKATS Regional Transportation Systems Plan.

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

Objective 2: *Establish a Regional Bicycle System that provides access to regional activity centers and other major destinations.*

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

Policy 2: Identify necessary facility improvements on the Regional Bicycle System to ensure adequate bicycle access to regional activity centers and other major destinations.

Goal 4: A constructed system of regional bicycle facilities within the Salem-Keizer urban area.

Objective 1: *Construct the bicycle facilities necessary to implement the established Regional Bicycle System by the year 2030.*

Policy 1: Affected jurisdictions shall include bicycle facilities on all newly constructed regional arterials.

Policy 2: Affected jurisdictions shall include bicycle facilities as part of major improvement projects on roadways identified as part of the Regional Bicycle System unless significant constraints can be demonstrated. In such cases, viable alternatives shall be provided.

Objective 2: *Adequately fund the construction of the bicycle infrastructure and supporting facilities necessary to complete the established Regional Bicycle System by the year 2030.*

Policy 1: Support continuation of current (or equivalent) federal, state, and local funding mechanisms to implement regional and local bicycle facilities and amenities within the Salem-Keizer urban area.

Policy 2: SKATS and local jurisdictions shall cooperatively seek additional revenue sources as necessary to ensure timely completion of the bicycle facilities that comprise the RBS.

Objective 3: *Ensure multimodal equity by incorporating bicycle facilities into the planning, design, construction, and maintenance activities associated with roadways identified as part of the RBS.*

Policy 1: Needed projects on the RBS shall be fully integrated into the evaluation and selection process associated with the development of the Region's Transportation Improvement Program (TIP).

Goal 5: A coordinated system of regional bicycle facilities in the SKATS area.

Objective 1: *Integrate the Regional Bicycle System facilities with other transportation modes.*

Policy 1: The Regional Bicycle System shall provide bicycle access to public transit transfer node(s), park-and-ride sites, and other major transportation centers such as regional airport terminals and passenger railroad stations.

Policy 2: Regional bicycle planning efforts shall be coordinated with other transportation service providers to assure the opportunity for intermodal connectivity.

Policy 3: Support the continuation of the "Bikes On Buses" Program for all public transit routes.

Objective 2: *Ensure a continuing, comprehensive, and cooperative planning process that provides for the efficient and timely implementation of the Regional Bicycle System Plan.*

Policy 1: Coordinate bicycle system planning and development efforts in the Salem-Keizer urban area with federal, state, and local agencies, as well as other public and private transportation providers.

Policy 2: Prepare, adopt, and update a Bicycle System Element of the Regional Transportation Systems Plan that is consistent with federal and state guidelines and developed through a continuous, comprehensive, and cooperative transportation planning process, including thorough public review.

Policy 3: Ensure that the portions of the Local Transportation Systems Plans dealing with bicycling are consistent with the Regional Bicycle System Plan through recurring Plan review.

Policy 4: Coordinate roadway improvement projects in the region with recommended bicycle system needs to take advantage of cost sharing opportunities (i.e., resurfacing, widening, upgrading, etc.).

Objective 3: *Provide for an open and ongoing public involvement process that ensures full participation and input into the planning process associated with the development of the Bicycle System Element of the Regional Transportation Systems Plan.*

Policy 1: Establish a regionwide public participation process that ensures timely public notice, adequate information and appropriate opportunities for public input regarding all improvement projects affecting the Regional Bicycle System.

Objective 4: *Provide a network of supporting facilities and amenities designed to enhance the Regional Bicycle System and encourage the use of bicycling as a practical transportation mode.*

Policy 1: Encourage the development and implementation of a system of supportive bicycle facilities and amenities (i.e., bicycle parking, storage, showers, system maps, etc.) within the Salem-Keizer urban area.

Policy 2: Encourage the development of adequate internal bicycle circulation systems at major regional activity centers.

Policy 3: Encourage the implementation of consistent bicycle signage throughout the SKATS area.

Recommended Improvements

Some of the needed improvements to the Regional Bicycle System are committed bicycle projects that are already scheduled for construction and have their funding obligated in the SKATS Regional Transportation Improvement Program (TIP) or other acknowledged public facilities plan. We are scheduled to add approximately three miles of bike lanes by the end of 2004. At that time, 65 percent of the system will be completed (**Map 7-1**). Many, if not all, of the bicycle lanes added in the past and to be added in the future are the result of street projects, typically to bring the street up to urban standards, rather than projects that specifically add bike lanes. A detailed list of committed RBS facilities is listed in **Table 7-2**.

Even with the committed projects in the SKATS TIP, there will continue to be significant segments of the RBS missing, precluding convenient access to many regional destinations. As a result, many regional-length bicycle trips will still have to be made in circuitous or out-of-direction fashion on the local street system in order to reach their destination. Approximately 61 miles (35 percent of the total system) of additional recommended system improvements are needed beyond those already existing and committed (see above) to complete the RBS (**Map 7-2**). A detailed list of recommended improvements in addressing these needs are listed in **Table 7-2**.

The current level of utilization of existing bicycle lockers indicates that there is a meaningful demand for long-term, safe, and convenient bicycle parking in downtown Salem. Additional bicycle storage facilities are needed throughout the Salem-Keizer area to support the increasing use of bicycles as a means of commuting to work or to the store. In particular, this plan recommends adding, at a minimum, bicycle racks at all current and future transit centers and transfer stations. The provision of bicycle racks addresses the short-term parking needs of bicyclists, and provides a method to gauge demand at the individual transit transfer stations. As demand for longer-term bicycle parking solutions grows, bicycle lockers will be provided for the extra level of security and weather protection they provide.

Outstanding Issues

Several portions of the designated Regional Bicycle System in the SKATS area cannot accommodate the addition of dedicated bike lanes or even widened outside lanes. Two examples are North River Road from Lockhaven Road to the Salem Parkway and Liberty Road South, from Commercial Street to Browning Avenue. Impediments to the addition of bicycle facilities on these segments range from safety concerns to the financial cost of acquiring the necessary right-of-way to outright community opposition. Finding a satisfactory solution to these problem areas will require additional time and effort and remain an outstanding issue in the regional transportation planning process.

Connecting Keizer and Salem is a near-term goal for the Regional Bicycle System. Currently, Commercial and Liberty streets have bike lanes, as does Cherry Avenue. Broadway and North River Road do not have bike lanes, nor is there room in the current right-of-way of either street to expand them to include a bike lane. One option to address this situation would be the development of a bike path along the Willamette River, providing access for the residents of Keizer west of North River Road to downtown Salem. This path would be part of the larger Willamette Restoration Initiative (WRI) plan to link cities along the Willamette River together via a multi-use path. Currently this proposal is still in the conceptual stages, with no specific routes through Salem-Keizer identified. The completion of a path as envisioned by the WRI is compatible with the goals of the RTSP to provide residents of Salem-Keizer with multiple mode and route options when traveling between origin and destination.

These issues will require additional study and public deliberation and input before a preferred alternative can be identified and included in the Plan.

Regional Bicycle System Financial Analysis

Since 1996, when the SKATS Regional Transportation Plan was last updated, state, regional, and local governments in the urban area have worked cooperatively to seek funding for bicycle facility improvements from a variety of federal, state, and local sources. This effort has been relatively successful and has enabled us to make progress in constructing portions of the identified Regional Bicycle System. Currently, more than half of the total bicycle facility miles required on the regional system are constructed and in use. Projects currently committed will make it 65 percent complete by FY 2004.

The aggregate capital cost of the Plan's recommended bicycle facility improvements on the regional system is estimated to be approximately $14,500,000 over the life of the Plan. When annualized over the Plan's time frame (to 2030), the annual estimated capital cost to complete the system averages roughly $580,000 per year in constant dollars. It must be emphasized that this estimate is very general and is solely intended to provide context for the amount of money required to build the approximately 61 miles of proposed bicycle facilities needed to complete the regional system. Bicycle projects considered for inclusion in the Transportation Improvement Program (TIP) for near-term implementation will require additional preliminary engineering and a more detailed cost estimate will be developed at that time.

Based on historical levels of expenditure, the "most likely" forecast of reasonably anticipated revenues that might be used for Regional Bicycle System capital improvements indicates that approximately $14,500,000 will probably be available during the period 2005 to 2030. This would fully fund the recommended Regional Bicycle System improvements over the 25-year Plan time frame.

The anticipated adequacy of our financial condition is predicated upon the success of the region in maintaining and applying levels of funding similar to those expended in recent years over the life of the Plan. This assumption implies the continuation of current (or equivalent) funding programs for bicycle system improvements on the Regional Bicycle System. If such funding proves to be unavailable (either in whole or in part) or costs are driven significantly upwards, the region must identify, evaluate, and pursue substitute and/or additional funding sources to implement the improvements and facilities required to complete the system.

Table 7-2. RTSP Committed and Planned Bicycle Improvements
These projects are for multimodal mobility and completion of the regional bicycle system.
Projects not shown on this list but that were in the previous RTSP were completed.

Project Location	Priority (in years)
Committed Projects: City of Keizer	
Chemawa: North River Rd. to Verda	0 to 5
Verda: South of Dearborn	0 to 5
Alder Drive	0 to 5
Committed Projects: City of Salem	
Portland Rd: Claxter to Sunnyview	0 to 5
U.P/Union Street Railroad Bridge Conversion	
Planned Improvements: City of Keizer	
North River Road: S. City Limits to North City Limits (or alternate route)	0 to 5
Lockhaven: McCloud to Ridge	5 to 15
Verda Lane: Chemawa to Dearborn	5 to 15
Verda Lane: Dearborn to City Limits	5 to 15
Chemawa: Verda to Lockhaven	5 to 20
Wheatland Road: N. River Rd. to N. City Limits	5 to 20
Keizer Rapids Park Connector	5 to 20
Planned Improvements: Marion County	
Center St: Cordon to 63rd Ave	
Cordon Rd: Caplinger Rd to Center St (multi-use path w/ road improvements)	
Cordon Rd: Center St to Silverton Rd (multi-use path w/ road improvements)	
Cordon Rd: Silverton to Kale (multi-use path)	
Lancaster Dr: State St to Center St (bike/ped improvements)	
Planned Improvements: City of Salem	
Broadway Street NE: Liberty St. NE to Salem Parkway NE	0 to 10
Center Street NE: Commercial St. NE to 17th St. NE	0 to 10
Commercial Street NE: D St. NE to Union St. NE	0 to 10
Commercial Street SE: Ferry St. SE to Trade St. SE	0 to 10
Commercial Street SE: Mission St. SE to Superior St. SE	0 to 10
✸ Doaks Ferry Road NW: Brush College Rd. NW to Hwy.22	0 to 10

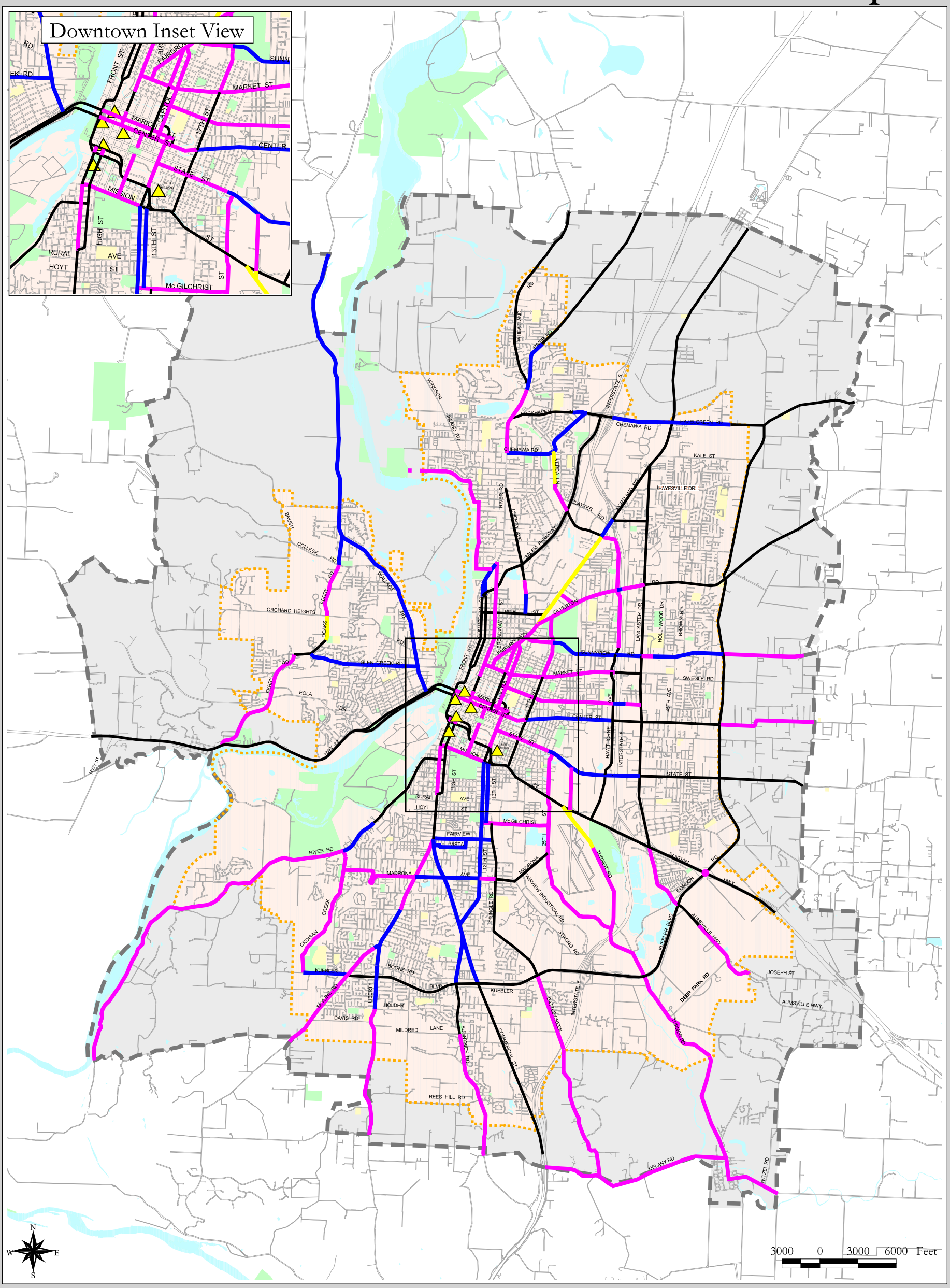
Project Location	Priority (in years)
✸ Hawthorne Ave. NE: Portland Rd. NE to Sunnyview Rd. NE	0 to 10
✸ Lancaster Drive SE: Kuebler Blvd. SE to Hwy. 22	0 to 10
Liberty Road S: Vista Ave SE to Browning Ave. S	0 to 10
Liberty Street SE: Trade St. SE to Ferry St. SE	0 to 10
Marion Street NE: 13th St. NE to Commercial St. NE	0 to 10
Market Street NE: Commercial St. NE to Hawthorne Ave. NE	0 to 10
◆ Market Street: Lancaster to Swegle, Swegle to Royalty (Potential Bond)	0 to 10
Marion Street NE: 13th St. NE to Commercial St. NE	0 to 10
Madrona Avenue SE: Liberty Rd. S to Commercial St. SE	0 to 10
Mission Street SE: 12th St. SE to Commercial St. SE	0 to 10
Portland Road NE: Silverton Rd. NE to Lana Ave. NE	0 to 10
Silverton Road NE: Fairgrounds Rd. NE to Lancaster Dr. NE	0 to 10
State Street: 12th St SE to 25th St. SE	0 to 10
Turner Road SE: Mission St.SE to Kuebler Blvd. SE	0 to 10
12th Street NE: Union St. NE to Pringle Parkway SE	0 to 10
17th Street NE: Market St NE to Silverton Road NE	0 to 10
25th Street SE: Mission St SE to Madrona Ave. SE	0 to 10
✸ Sunnyview Road: Lancaster to Brown	0 to 20
Sunnyview Road: Walker to Cordon	0 to 20
◆ Aumsville Highway SE: Prison to UGB	10 to 15
Battle Creek Road SE: Kuebler Blvd. SE to I-5	10 to 15
Broadway Street NE: Salem Parkway NE to River Rd. N	10 to 15
D Street NE: Lancaster Dr. NE to Summer St. NE	10 to 15
Fairgrounds Road NE/Hood Street NE: Summer St. NE to Commercial St. NE	10 to 15
Fairgrounds Road NE: Portland Rd. NE to Summer St. NE	10 to 15
Fairview Avenue SE: Pringle Rd. SE to Commercial St. SE	10 to 15
◆ Kuebler Boulevard S: Croisan Creek Rd. S to Viewcrest Rd. S	10 to 15
Lana Avenue NE: Portland Rd. NE to Chemeketa College	10 to 15
Madrona Avenue S: Liberty Rd. S to Croisan Creek Rd. S	10 to 15
Madrona Avenue SE: Pringle Rd. SE to Commercial St. SE	10 to 15
✸ McGilchrist Street SE: 12th St. SE to 25th St. SE	10 to 15
River Road S: Owens St S-Minto Island Rd. S	10 to 15
River Road S: Croisan Creek Rd. S to UGB	10 to 15
Skyline Road S: Liberty Rd. S to Davis Rd. S	10 to 15
25th Street SE: State St to Mission St. SE	10 to 15
25th Street SE/Airway Drive SE: Madrona Ave. SE to Turner Rd. SE	10 to 15
◆ Airport Road SE: Mission St. SE to State St.	10 to 20
✸ Capitol Street: Marion to Market	10 to 20
◆ Center Street: Greencrest to Cordon	15 to 20
Croisan Creek Road S: River Rd. S to Kuebler Blvd. S	15 to 20
Sunnyview Road NE: 17th St. NE to Fairgrounds Rd. NE	15 to 20
Turner Road SE: Kuebler Blvd. SE to UGB	15 to 20
◆ 13th Street: McGilchrist to Mission	15 to 20
Hawthorne Ave. NE: 0.1 south of Monroe to Mill Ck. Crossing	Unknown
✸ Liberty Street: Holder to south UGB	Unknown
Minto-Brown Island Connection (multi-use)	Unknown

Last Revised: 12/04

◆ Unfunded: projects are NOT included in the financially constrained road system.

✸ Project is also part of the financially constrained road system and is listed in Table 15-1, Committed and Recommended Projects.

2005 SKATS RTSP Update



Existing & Committed Regional Bicycle Facilities

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

Map 7-1

- Existing Bicycle Lockers
- Existing & Committed Bicycle Facilities
  - Regional Bicycle System
  - Constructed 1996-2000
  - Bicycle Facilities constructed prior to 1996
  - Committed Bicycle Facilities
- Roads & Highways
- Rivers & Creeks
- Parks
- Schools
- Salem-Keizer Area Transportation Study (SKATS) Boundary
- Salem-Keizer UGB

01/24/05

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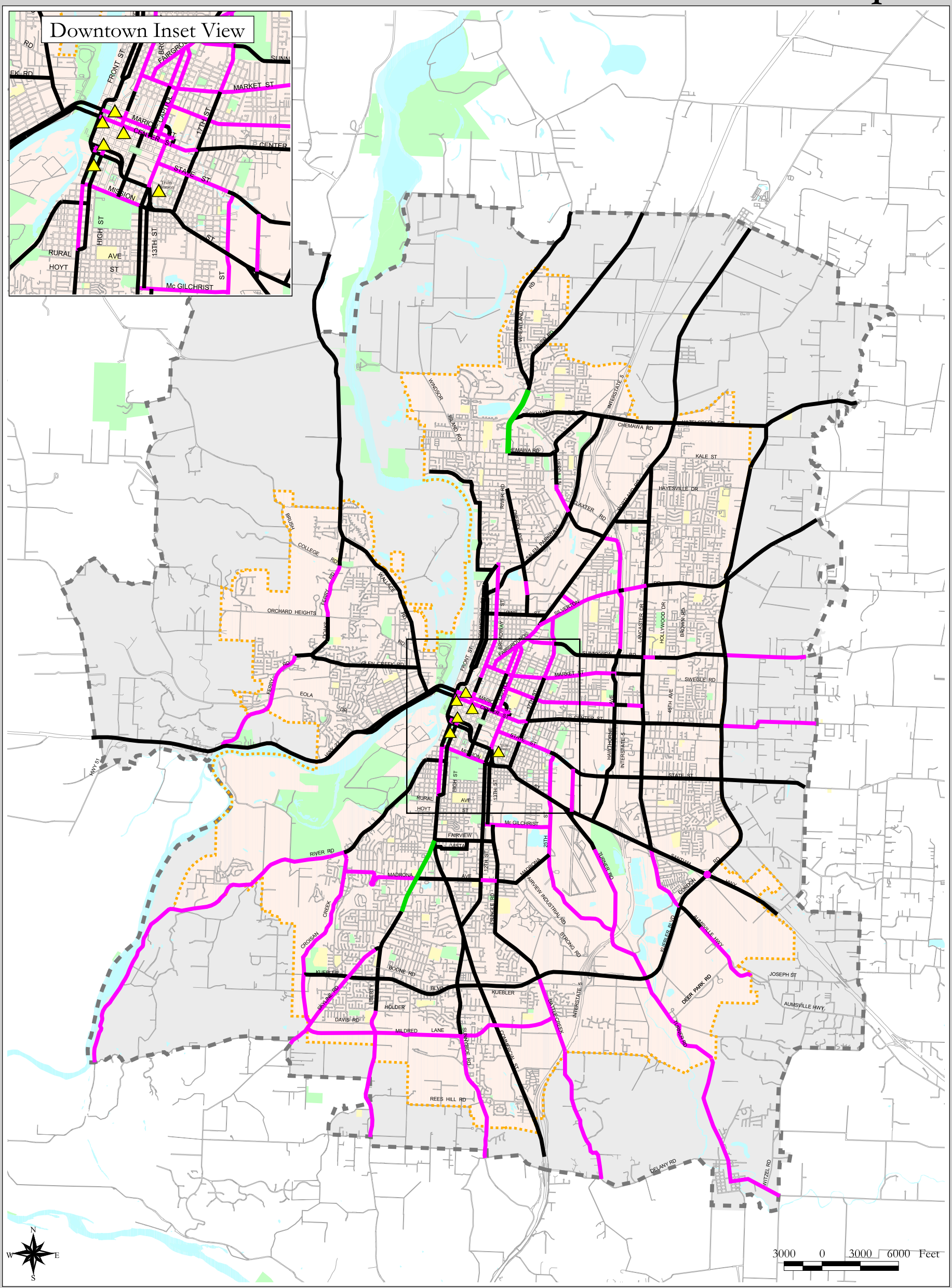
2005 SKATS RTSP Update



Recommended Improvements to the Regional Bicycle System

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

Map 7-2

- Existing Bicycle Lockers
- Existing & Recommended Bicycle System
  - Recommended Improvements
  - Regional Bicycle System
  - Recommended improvements with outstanding issues
- Roads & Highways
- Rivers & Creeks
- Parks
- Schools
- Salem-Keizer Area Transportation Study (SKATS) Boundary
- Salem-Keizer UGB

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8 - Regional Goods Movement System

Introduction

Freight and commodities movements of all types are extremely important to the health of the SKATS area economy and, as such, they represent an essential element in maintaining our overall quality of life. The region's goods movement system is comprised of several elements. Truck routes, rail corridors, aviation facilities, pipelines, and inter- and intra-modal facilities must all function cohesively if the region's goods movement system is to operate efficiently. The linkages that allow for access between these elements are also vitally important to the commercial well being of our community. With the widespread prevalence of "just-in-time" production and inventory control techniques, America's warehouse is now "on the road" with goods from all sectors of the economy being shipped on an as, when, and where needed basis. As a result, disruptions in the flow of goods and services increasingly lead to significant negative impacts for manufacturers, distributors, retailers, and consumers.

The purpose of the SKATS Goods Movement System Element of the Regional Transportation Systems Plan (RTSP) is to describe the problems associated with the movement of freight and commodities into, out of, within, and through the SKATS area and identify appropriate solutions for those problems. Through the implementation of the recommendations embodied in this plan, a regional goods movement system that adequately responds to the unique transportation requirements of the industries within the SKATS area can be ensured.

The Regional Goods Movement System

Efficient goods movement into and out of the SKATS area from the region's industrial and commercial areas is essential if area commerce is to continue to grow and thrive. The SKATS area's Regional Goods Movement System consists of pipeline, maritime, aviation, railroad, and highway elements (**Map 8-1**).

Pipelines

There are three regional pipeline systems located within or near the SKATS area. Kinder Morgan Energy Partners (KMEP) transports petroleum products through the Willamette Valley in their pipeline, which traverses the southeast corner of the SKATS area. The Northwest Pipeline Corporation (NWP) operates an interstate natural gas pipeline that passes just east of the SKATS area as it makes its way through the Willamette Valley. Northwest Natural Gas (NWNG) operates a system of high pressure natural gas feeder pipelines that serve the SKATS area and several communities to the west of the SKATS area. **Map 8-2** identifies the Regional Pipeline System in the SKATS area and depicts the alignments of the pipeline facilities in the

area. There are several smaller natural gas feeder pipelines serving residential and commercial users that are not shown on the Regional Pipeline System map.

Pipelines transport natural gas and petroleum products within and through the SKATS area. KMEP ships an average of 42,000 barrels of petroleum products through the SKATS area daily. NWP transports an average of 60 million cubic feet of wholesale natural gas to and through the SKATS area annually. NWNG distributes the natural gas brought to the area via the NWP pipeline. NWNG estimates that it distributes 10 million cubic feet of natural gas annually to customers throughout the SKATS planning area. The pipeline facilities operating within the SKATS area have an excellent safety record and have operated without incident.

Regional Pipeline System Inventory

Kinder Morgan Energy Partners, L.P. (KMEP) Facilities in the SKATS Area

Kinder Morgan Energy Partners, L.P. (KMEP), formerly Santa Fe Pacific Pipelines, owns and operates a petroleum products pipeline from Portland to Eugene, Oregon through the Willamette Valley.

The KMEP system collects refined petroleum products such as gasoline and diesel fuel from oil company terminals in northwest Portland. Some of the companies shipping products through the pipeline include Chevron, Exxon, Arco, Texaco, Tosco, and Tesoro. The products are pumped from various terminals in Portland to the KMEP pump station in Portland and then into the eight-inch diameter pipeline that extends 115 miles from Portland to Eugene. The amount of product carried through the pipeline averages 42,000 barrels per day (1 barrel = 42 gallons). In the SKATS area, the pipeline route is generally parallel to, and east of, Interstate 5 and is buried approximately three feet underground. The pipeline route traverses the southeast corner of the SKATS area (**Map 8-2**). One of three booster stations is located near the intersection of Kuebler Boulevard and Turner Road.

Northwest Pipeline Corporation (NWP) Facilities in the SKATS Area

The Northwest Pipeline Corporation is a wholesale natural gas supplier. It owns and operates an interstate natural gas pipeline system that begins in Colorado, Utah, and New Mexico (location of gathering basins) and extends west through Utah, Idaho, and then into Oregon along the Interstate 84 corridor. The Northwest Pipeline facility merges in Portland with another natural gas line from Canada and then continues south serving the Willamette Valley down to Grants Pass. The two 12- to 20-inch diameter pipelines are generally located parallel to Interstate 5 in a 60-foot easement, approximately three to five feet underground, one to five miles east of the SKATS area (**Map 8-2**). NWP transports an average of 60 million cubic feet of wholesale natural gas to and through the SKATS area annually. There are three gate stations (locations at which feeder gas lines tap into the interstate pipeline) located just east of the SKATS area. A boost compression station located in the Silverton area is used to increase velocity of the natural gas.

Northwest Natural Gas (NWNG) Regional Pipelines in the SKATS Area

Northwest Natural Gas is a retail natural gas distribution company that serves most of the state west of the Cascade Mountain Range. The regional NWNG facilities in the SKATS area consist of five natural gas high pressure feeder pipelines. Each of these feeder pipelines consists of a single 8- to 12-inch diameter pipe located in a 40-foot right-of-way or easement, approximately three feet underground. NWNG estimates that it distributes 10 million cubic feet of natural gas annually to customers in the SKATS planning area. Local natural gas service lines are not included in this inventory because they are not considered regional facilities.

The first feeder pipeline generally travels south along Highway 99E, Dietz Avenue, and River Road through downtown Salem, where it merges with the third feeder pipeline near the intersection of Front and Marion Streets (**Map 8-2**).

The second feeder pipeline starts at the gate station in the Silverton area and generally travels west traversing the northern section of the SKATS area near Brooks and continues west to Lincoln City.

A third feeder pipeline begins at a gate station in Geer, generally traveling west along State Street and Pringle Parkway, merging with the second feeder pipeline near the intersection of Front and Marion Streets.

The fourth feeder pipeline begins at the gate station in Turner, generally traveling northwest along Turner Road, Kuebler Boulevard and Battle Creek Road, merging with the third feeder pipeline near the Pringle Parkway.

The fifth feeder pipeline begins near the intersection of Front and Marion Streets (where it merges with the first and third feeder pipelines) and travels west along Highway 22 to Dallas, Lincoln City, and Newport.

City of Salem Water Transmission Pipelines

The city of Salem owns and maintains two water transmission lines that traverse the city of Turner from the southeast to the northwest. A 54" – 46 " pipeline enters town near Marion Road and runs northwest up to and under 3rd Street. The second pipeline is a 36" pipeline that crosses Witzel Road north of Marion Road and runs northwest in a similar alignment with the first pipeline. These pipelines supply Salem and Turner with drinking water.

Maritime

Currently, there are no maritime port or navigation facilities within the SKATS area. Barging activity on the Willamette River diminished in importance as a means of transporting goods to and from the SKATS area as rail and road access improved. No commercial barge traffic currently serves the river as far south as Salem. The Wheatland and Buena Vista ferries provide vehicular and passenger services across the Willamette River just north and south of the SKATS area, respectively. Either of the ferries can carry only one tractor-trailer at a time. While commercial vehicles can, and occasionally do, use the ferries, it is uncommon for them to do so.

Between July 1, 1993 and June 30, 1995, commercial vehicle movements on area ferries amounted to approximately 479 vehicles for the Buena Vista Ferry and 8,823 vehicles for the Wheatland Ferry. Precise classification of these vehicle counts is difficult due to counting methodology, but these figures can be considered representative.

A more detailed discussion of this system is presented in the Regional Maritime System Element.

Aviation

McNary Field is the SKATS area's only aviation facility. It is located four miles southeast of the downtown core in the city of Salem. In a broader context, the airport is located 55 miles south of the Portland International Airport and 65 miles north of Mahlon Sweet Airport in Eugene. McNary Field comprises about 749 acres and is owned and operated by the city of Salem. The airport serves as a General Aviation Transport airport at this time, meaning that the primary airport activity is neither military nor conducted by regularly scheduled air carriers. Federal Express operates a facility at the airport with airside access, and United Parcel Service (UPS) ships air cargo from Salem via Sports Air, a contract air freight carrier based out of the Troutdale airport.

McNary Field provides the facilities for one daily air freight operation (Sports Air, a UPS contract carrier) and also provides for occasional use by a second air freight operation (FEDEX).

Responses from electronic component manufacturers to the Goods Movement Survey indicate that the majority of their finished products are currently shipped via air freight. This can be attributed to the high value and relatively light weight of their finished products and the time-sensitive nature of the electronics industry in general.

A more detailed discussion of this system is presented in the Regional Aviation System Element.

Railroads

The SKATS region is served by one of the major (Class I) railroad company that operate in the state of Oregon: the Union Pacific (UP). The UP operate in primarily north-south rail corridors that traverse the length of the SKATS region. The Willamette Valley Railway (WVRY) has abandoned their line from the city line to 14th Street SE, with their track east of Cordon Road currently serving as storage for rail cars. The area's second Class III carrier, Portland & Western, began operating former BNSF track from Norris Road, north of Keizer to Portland in 1998. In 2002 they acquired the track from Keizer to Eugene from BNSF.

There are approximately 35.6 miles of trackage (not counting spurs and/or sidings) in the SKATS region associated with these three principal rail corridors. Approximately 25 miles (70%) of this infrastructure is located inside the Urban Growth Boundary (UGB); 10.6 miles (30%) are located outside the UGB.

The region's major rail spur, the P&W/UP interchange track, is currently classified as yard trackage and runs just north of Johnson Street NE through the Cherry Avenue Industrial Area. This trackage is now used as the principal interchange between the UP and P&W mainlines through the Willamette Valley. Forty-three SKATS area business addresses are also currently served by active rail sidings.

The UP operates a rail yard bordered by Cross Street SE to the north, Vista Avenue SE to the south, Pringle Road SE to the west, and 14th Street to the east.

As of 2004, up to twenty-four UP through trains and up to six P&W through trains pass through the Salem-Keizer area daily. This number does not take into consideration the locally generated "switch jobs" that occur daily. In addition, six Amtrak trains move through the Salem-Keizer area daily. The number of Amtrak passenger trains moving through the SKATS area is expected to increase as the High Speed Rail program becomes a reality. This is not expected to affect overall rail traffic, as advances in Positive Train Identification will allow for increased train traffic levels, while maintaining operational safety. A typical freight train consists of 60 to 100 rail cars and can extend up to a mile in length.

In 1999, the area was served by two Class 1 railroads which transported an estimated 30 million gross tons of cargo through the Salem-Keizer area. The region's two Class 1 railroads carried a total of 11,388 rail car loads of hazardous materials, of all hazard classes, through the SKATS area during 1994.

The UP Valley Mainline crosses twelve regionally significant roadways at grade. The projected 2000 average daily traffic (ADT) is 130,000 vehicles. The 2025 forecasted traffic level estimates that 167,000 vehicles per day will pass over these rail crossings. Conflicts between existing and projected traffic levels and the likelihood of increased passenger and freight train traffic frequencies must be considered in the future.

The P&W Oregon Electric line crosses six regionally significant roadways as it passes through the SKATS area. The total ADT passing over these crossings in 2000 amounted to 106,440 vehicles. The 2025 traffic forecasts estimate that 145,000 vehicles will pass over these six crossings. It should be noted that P&W rail traffic, both through and local, moves through the SKATS area at a far lower speed than a typical UP through train, and that P&W operates fewer through trains than UP does.

A more detailed discussion of this system is presented in the Regional Rail System Element.

Highways

The vast majority of freight movements have a truck modal component somewhere in the process. Even when trucks are not physically used to transport a particular item, they are often used in a supporting role, as in the case of power or telephone utility repair vehicles. Given the importance that adequate truck access plays in movement of goods, the servicing of critical utilities, and the movement of public safety equipment in the SKATS area, it quickly becomes clear that a well-developed truck circulation system is extremely important to the SKATS area.

The interstate and state highways passing through, and the major arterials within, the SKATS area form the backbone of SKATS area truck movement infrastructure. Currently, no need for a defined system of truck routes has been established within the Salem-Keizer area. However, a regional freight roadway network has been identified (**Map 8-3**) that links the SKATS region's principal industrial and commercial areas regionally and nationally. The primary corridors of this system include I-5, Oregon Highway 22, Salem Parkway, Portland Road, Lancaster Drive, and Commercial Street; and portions of 25th, Hawthorne, Liberty, Market, Madrona, Pine, and State Streets. In addition, Cherry Avenue, Chemawa, Hazelgreen, and Indian School Roads and Blossom Drive; and portions of Hyacinth Street, Salem Industrial Drive, Cordon Road, and Kuebler Boulevard are also included in this regional network. In addition, ODOT has designated I-5 between Oregon Highways 22 and 214 as a Truck Safety Corridor.

Generally, while truck freight moves through the Salem-Keizer area safely and efficiently, higher traffic levels are resulting in increasing levels of delay. While truck freight constitutes a relatively small percentage (two to seven percent) of the overall traffic flows on the freight-supportive roadways, the importance of moving such vehicles through the roadway system efficiently should not be understated. Freight tonnages transported into, out of, within, and through the SKATS area continue to increase annually as the SKATS area economy grows. Private sector expansion in the food processing, semiconductor, and retail sectors of the SKATS area economy will continue to add significantly to existing levels of commercial traffic.

A Goods Movement Survey of 11 goods-producing and freight-shipping companies was conducted in October 1995 by SKATS staff. The results indicated that these firms generated approximately 825 tractor-trailer trips per day and that these trips were responsible for nearly 62 million gross pounds of freight *per day*. This amount of weight is equivalent to approximately four 90-car freight trains.

A more detailed discussion of this system is presented in the Regional Highway System Element.

Principal Industrial Areas

Most freight shipments generated in the area come from firms located within the SKATS area's industrial areas (**Map 8-1**). Access to these industrial areas is generally good, although some improvements are needed (see Recommended Improvements).

The Northgate Industrial Area includes both the Salem and Cherry Avenue Industrial Parks. Cascade Warehouse, UPS, Morse Brothers, Siltec, Viking Freight System, Roadway Package System, Blue Diamond, Columbia Distributors, Coast Distributors, Western Beverage, Capital City Transfer, The Garten Foundation, White's Farms, the State of Oregon General Services Warehouse, and other major shippers operate facilities in this industrial area. Other firms within the general vicinity of this industrial area include Stark Trucking. The approximate boundary of this area comprises Blossom Drive to the north, Salem Parkway to the west, Portland Road to the east, and Pine Street to the south. Primary roadway access to this industrial area is provided by Blossom Drive, Portland Road, Salem Parkway, and Pine Street. Secondary roadway access from the Salem Parkway is provided via Cherry Avenue NE, Hyacinth Street, and Mainline Drive. This is the only area within SKATS served by both of the region's Class 1 railroads, and an interchange between the two railroads exists within the boundaries of the Cherry Avenue Industrial Park.

The South Salem Industrial Area includes several industrial sites surrounding Salem's McNary Field, the Fairview Industrial Park, NORPAC and Boise Cascade facilities, and several industrially zoned vacant parcels. This area is divided by I-5, with the eastern portion bordered by Highway 22 to the north and Kuebler Boulevard and Lancaster Drive to the south and east; and the western portion bordered by Highway 22 and Hines Street SE to the north, 13th Street and Strong Road SE to the west, and Marrietta Street SE to the south. Major access routes into the area from I-5 include Highway 22 to the north and Kuebler Boulevard to the south. Access to the interior of this industrial area is provided by 25th Street and Airway Drive SE (south of Highway 22), Turner Road, Lancaster Drive SE, and McGilchrist Street and Madrona Avenue SE. The western edge of this area is crossed from north to south by the UP's Valley Mainline, and the UP's Salem rail yard is located just south and east of Mission and 13th Streets, respectively.

The Front Street Industrial Area is situated primarily between Commercial Street and the Willamette River to the area's east and west, and Locust and Union Streets to the north and south. It is one of the oldest industrial areas in Salem, serving firms such as Truitt Bros., Stewart Stiles, Cascade Warehouse, Liquid Sugar, and United Transfer. Road access to the area is gained via Highway 99E (Business), which is comprised of Commercial and Liberty Streets NE in this part of Salem. Rail service is provided by the BNSF's mainline Willamette Valley trackage, which runs along Front Street through the area.

Transitional urban lands slated for eventual industrial development are widely dispersed along the entire length of Cordon Road. Access to the northernmost of these sites, located at the southwestern corner of the intersection of Hazelgreen and Cordon Roads, is quite good. The site can be reached from I-5 or Highway 99E via Hazelgreen Road. The next transitional site identified for industrial development is located at the northwestern corner of the intersection of State Street and Cordon Roads. The third transitional site is located both east and west of Cordon Road just north of Highway 22.

Goals, Objectives, and Policies

Goal 1: **Efficient and coordinated transport of goods into, out of, within, and through the SKATS area.**

Objective: *Provide a system of efficient and coordinated transport of goods into, out of, within, and through the region.*

Policy: Support continued public and private efforts to develop and enhance the efficiency of the SKATS area's goods movement transportation systems.

Goal 2: Safe transport of goods into, out of, within, and through the SKATS area.

Objective: *Reduce the number and severity of commercial transportation-related accidents.*

Policy: Support private, ODOT, PUC, and law enforcement commercial vehicle safety programs (all modes).

Goal 3: **A goods movement system that provides a competitive advantage for SKATS area shippers whenever possible.**

Objective: *Maximize modal options that facilitate nonpredatory competition between SKATS area commercial transportation providers.*

Policy: Identify and support appropriate development and expansion in services offered by commercial transportation providers.

Goal 4: **Maximize access to viable, economical, alternative modes for SKATS area shippers.**

Objective: *Provide efficient access to a range of viable, economical, alternative modes of transportation for SKATS area commercial needs.*

Policy: Ensure adequate goods movement system carrying capacities to adequately serve current and future needs of SKATS area shippers and transportation providers.

Goal 5: **Maximize SKATS area's exposure to international marketplace.**

Objective: *Improve SKATS area's global goods movement capability.*

Policy: Support efforts to increase the range and breadth of transportation services offered in the SKATS area that have, or directly connect to, an international component.

Goal 6: Minimize negative impacts associated with the regional goods movement system.

Objective: *Reduce negative noise, emission, and safety impacts associated with goods movement related activities within the SKATS area.*

Policy: Encourage use of noise overlay zones in areas adjacent to air and ground transportation corridors.

Policy: Clearly identify, and enforce the use of, truck routes within the SKATS area.

Policy: Control, where appropriate, the operations of commercial activities so as to minimize disruption to residential land uses and peak hour arterial flows.

Recommended Improvements

While we experience high levels of service from the majority of our goods movement system, mobility to and from certain industrial areas is currently deficient while other areas are expected to experience deficiencies in the future. Much of the non-roadway portions of the goods movement infrastructure is privately owned, and as such, local government can only play a supportive role. Several improvements to the various modes comprising our regional goods movement system are illustrated in **Map 8-4** and detailed below.

Pipelines

Currently, pipeline facilities that serve customers within the SKATS area are considered adequate for the area's foreseeable future. Pipeline facilities operating in or near the SKATS area are privately owned and improvements are privately financed. Improvements to these systems being considered may include:

- Kinder Morgan Energy Partners' system
  - Increasing the use of a drag reducing agent in the pipeline
  - Increase use and / or installation of additional horsepower at the three booster pump stations
  - Installing an additional larger diameter pipeline along the current route
- Northwest Natural Gas system
  - Increasing the operating pressure
  - Increasing the diameter of the feeder pipelines in the current system
- Within the next five to ten years, the city of Salem plans to build a water transmission pipeline through Turner. The new pipeline is planned to follow an alignment similar to the location of the city of Salem's existing water pipelines running through Turner (see p. 8-3).

Maritime

The Mid-Willamette Valley Council of Government's Economic Development District completed a study in 1996 to determine the feasibility of reinstating commercial traffic on the Willamette River. The study concluded that dredging the river to allow for the movement of goods on the river is no longer feasible due to economic and environmental reasons. The study did support the use of the river for recreational and commercial ventures such as the tourist oriented Riverboat. Ferry services should continue for the foreseeable future, as long as the system can maintain or expand its base of patrons.

Aviation

The most recent Airport Master Plan (AMP) for McNary Field was completed in 1997. Short-term needs identified include concrete overlays for both runways, and an extension of the parallel taxiway to the main runway. Terminal repairs are taking place as part of an ongoing city of Salem maintenance program.

Longer term improvements call for lengthening the primary runway and eventual replacement of the airport terminal. Staged expansion of the airport's general aviation facilities is also being contemplated.

Railroads

All rail infrastructure within the SKATS area is privately owned and maintained by the railroads. Improvements are often made at the discretion of the railroads, with the Oregon Department of Transportation (ODOT) involvement occurring whenever there are safety or capacity concerns, or potential conflicts with other modes of transportation.

Most of the publicly funded rail infrastructure improvements proposed for the SKATS area are associated with the Enhanced Passenger Rail Service (EPRS) program. Improvements to the carrying capacity of the local rail system, along with refinements to safety devices installed at area grade crossings, are the state's primary focus in funding system improvements within the SKATS area. Upgrades that would dramatically increase speed are not considered of the utmost importance along the section of the corridor that passes through the SKATS area.

According to the *2000 Pacific Northwest Rail Corridor, Oregon Segment Operating / Capital Facilities Plan*, the Oregon Department of Transportation has identified $1.1 million in improvements along an approximately four mile stretch within the Salem-Keizer urban area. These improvements include upgrading the track and crossing signals along the Union Pacific mainline to allow the passenger trains to operate at a faster speed.

Oregon Operation Lifesaver, a joint rail safety program between the railroads and the Oregon Department of Transportation, Rail Division, should be continued, its message honed, and its audience clearly targeted. It is especially important that this message reach the children of the SKATS area most directly affected by train traffic. The 12th Street Pedestrian Promenade is currently under construction to address safety issues that were identified in the 1996 RTSP

Update. The 12th Street corridor between Marion Street and the Salem Railroad Station was the location of nineteen train-pedestrian incidents between 1993 and 2000, many resulting in the loss of life for the pedestrian. The Pedestrian Promenade provides an attractive and safe walking facility, separating the UP rail line from walkers by a four-foot handrail. However, since its construction, an additional nine people have lost their lives along the UP line between Market Street and the Salem Railroad Station.

Highways

Improving commercial vehicle access to the SKATS area's primary industrial areas and commercial corridors to the local, intrastate, and interstate highway systems, as well as the area's intermodal and intramodal facilities, was considered of paramount importance to this plan element. The regional network of freight roadways (**Map 8-3**) was used as a basis to establish a list of freight-supportive roadway projects from the projects proposed in the SKATS TIP. Two of the largest industrial areas in the SKATS region have very specific access improvement needs that are widely supported by the firms in these areas.

The Cherry Avenue Industrial Park has operated with a single access road, Salem Industrial Drive, since its inception. This access road is bisected by Burlington Northern Santa Fe's mainline valley route, formerly the Northgate Urban Renewal District has already begun to acquire the right-of-way needed to carry out this project.

As a developing industrial area of regional significance, the Fairview Industrial Park would benefit from enhanced access to the south Oregon Electric route. Train operations at this location frequently result in commercial vehicles being delayed and can limit access to public safety vehicles as well. The Northgate Extension project seeks to address this shortfall by connecting Salem Industrial Drive with Portland Road, which will allow an alternative ingress and egress to this portion of the industrial area. Possible alignments for such access are currently the focus of a study effort and are listed in the project descriptions portion of this section.

Of the urban transitional sites located on Cordon Road, Long-Term Urban Transitional Area "b" and Short-Term Urban Transitional Area "a" currently have the poorest access to both the regional and national freight transportation network. Access to I-5 from the previous two sites is generally via Cordon Road or Lancaster Drive, and they do not feature direct rail service. Both of these sites would benefit from enhanced access, in the form of a highway interchange, at the location of the Cordon Road overpass of Highway 22. However, such an intersection should be considered a long-term improvement.

The following project descriptions are taken directly from the RTSP's Highway Element. None of the projects listed are "dedicated" freight roadway system projects, but instead are existing project proposals that would also benefit the freight roadway system. Several of these projects extend beyond the identified regional network of freight-supportive roadways, but **Map 8-4** illustrates just those sections affecting the network. Many of the roadway projects included in the Highway Element are designed to improve mobility at locations expected to be Approaching Capacity Deficient or Capacity Deficient by 2025. Specifically, a road Approaching Capacity Deficient status is characterized as being on the verge of using 90% of its

available capacity during peak travel times. A road that is Capacity Deficient is at or above its roadway capacity during peak travel times and is experiencing unacceptable levels of service. Additional information on the current and projected performance of the regional highway system is presented in Chapter 15.

The following freight-related highway improvement projects are recommended for implementation in this Plan. More detailed project descriptions, cost estimates, and other information on the improvements is presented in Chapter 15 of this Plan.

McGilchrist Street SE from 12th Street to 25th Street
Lancaster Drive from North Santiam Highway to Kuebler Boulevard
Madrona Avenue realignment at 25th Street
Traffic Signal Interconnects (Throughout Salem)
Commercial Street NE at Division Street
Commercial Street SE at Madrona Avenue
Commercial Street SE from Baxter Road to I-5
Ferry Street from Church Street to Liberty Street
Kuebler Boulevard from Commercial Street to I-5
Market Street at Lancaster Drive
25th Street, Mission to McGilchrist
Fairview Industrial Drive Extension (for access to I-5)
Northgate Extension from Salem Industrial Drive to Portland Road
Salem Industrial Drive
Blossom Drive/Indian School Road
State Street and Lancaster Drive
Lancaster Drive and Silverton Road Intersection
Cordon Road from State Street to Center Street
Cordon Road and Pennsylvania Avenue Intersection
Portland Road/Lancaster Drive Intersection
Chemawa Road/Lockhaven Drive Reconfiguration

Priority Regional Freight Roadway Improvements

While all the highway projects previously mentioned are of benefit to the regional freight roadway system, the Goods Movement Advisory Committee, appointed to advise SKATS staff on freight matters, chose the following eight freight-related roadway projects most critical to the movement of freight into, out of, within, and through the SKATS area. This prioritized list represents a ranked average of the respondents' replies:

(1) Northgate Extension from Salem Industrial Drive to Portland Road
(2) Traffic signal interconnects (throughout Salem)
(3) Kuebler Boulevard from Commercial Street to I-5
(4) McGilchrist Street SE from 12th Street to 25th Street
(5) Kuebler Boulevard from I-5 to Highway 22
(6) Lancaster Drive and Silverton Road Intersection
(7) Cordon Road from State Street to Center Street
(8) Ferry Street from Church Street to Liberty Street

Additional Improvements

Although not included in the Plan update, several additional areas of concern have been identified by the goods movement community for careful monitoring of conditions to determine if projects need to be developed for problems at these locations:

Cherry Avenue, Pine Street to Salem Parkway
Kuebler Boulevard from I-5 to Highway 22
Madrona Avenue from 25th Street to Union Pacific Rail Line
25th Street, McGilchrist Street to Madrona Avenue

Outstanding Issues

Several issues have been identified in the process of updating the plan that have not been resolved or adequately addressed in this plan for a variety of reasons. One of these is the need for additional information regarding the quantity and type of goods being moved in and around the SKATS area, as well as a more thorough identification of particular freight-critical routes and associated problem areas.

ODOT has completed the Freight Route Analysis Project (FRAP), which included a recommendation for changes to the designation of several segments of facilities in the SKATS area. As a consequence of their designation as "Oregon Freight Routes," it is possible that these facility segments would also be subject to the provisions of as-yet-to-be-defined "management plans." Inasmuch as the ultimate effects on the responsible jurisdictions of the interaction of these designations, management plans, local land use plans, STA requirements, etc., is uncertain, the affected jurisdictions have requested a delay in the OTC adoption of the Freight Route redesignations until such time as all the associated impacts can be meaningfully evaluated.

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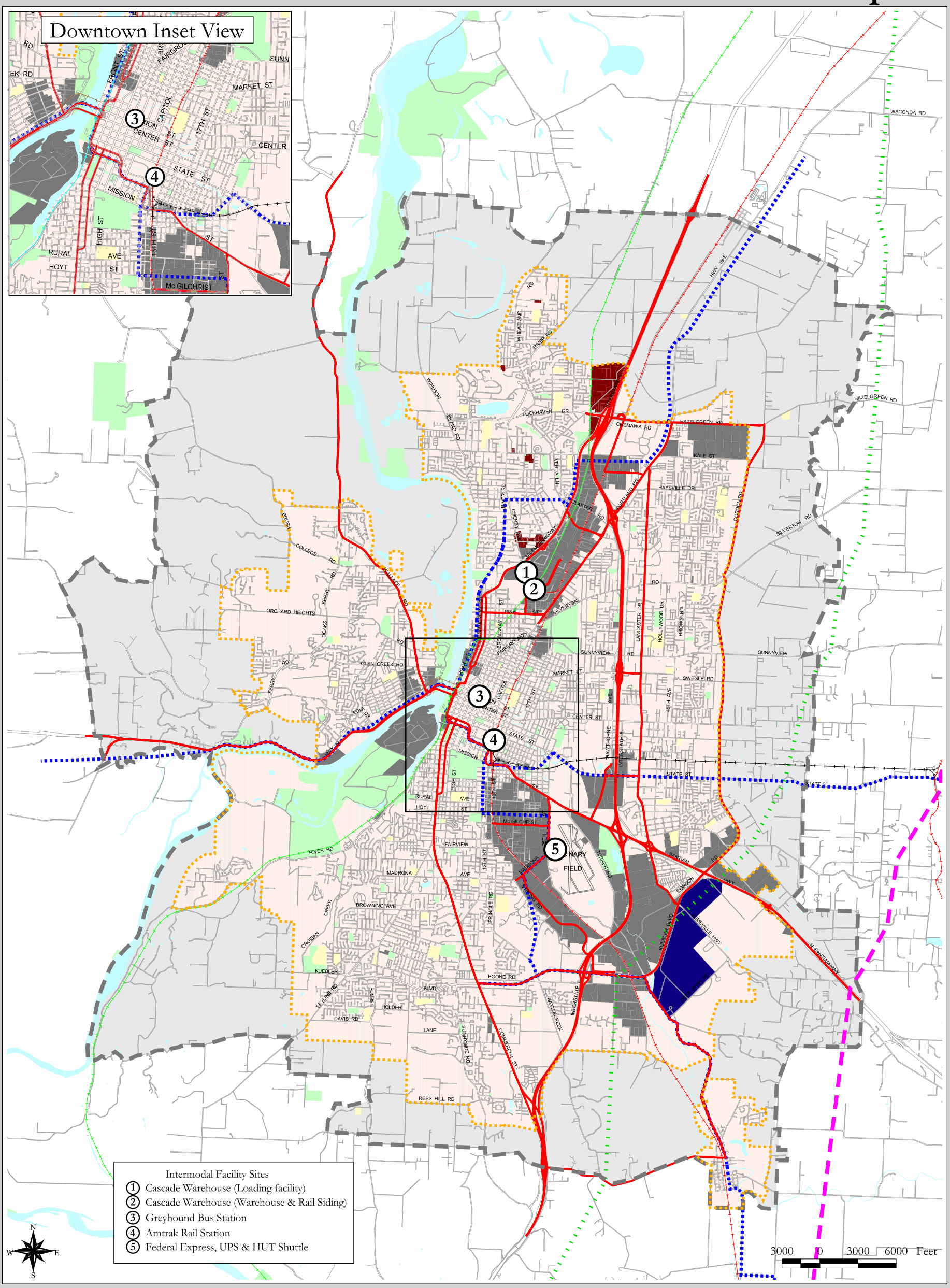

Regional Goods Movement Network

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

Map 8-1

Existing Freight-Supportive Roadways

Industrial Areas based upon Salem and Keizer Comprehensive Planning Designations (1997)

Minto Brown Island Note: The Island is currently designated "industrial", however it is anticipated that there will not be future industrial uses.

- City of Salem Industrial (IC, IND)
- City of Keizer (CI, CLI, GI, IBP)
- City of Salem "Employment Center"

Existing Regional Railroad System

- Union Pacific Railroad
- Portland & Western Railroads
- Union Pacific (Abandoned)
- Willamette Valley Railway (Abandoned)

Existing Regional Pipelines

- Northwest Natural Gas
- Northwest Pipeline
- Kinder Morgan Energy Partners

- Roads & Highways
- Rivers & Creeks
- Parks
- Schools
- Salem-Keizer Area Transportation Study (SKATS) Boundary
- Salem-Keizer, Turner UGB

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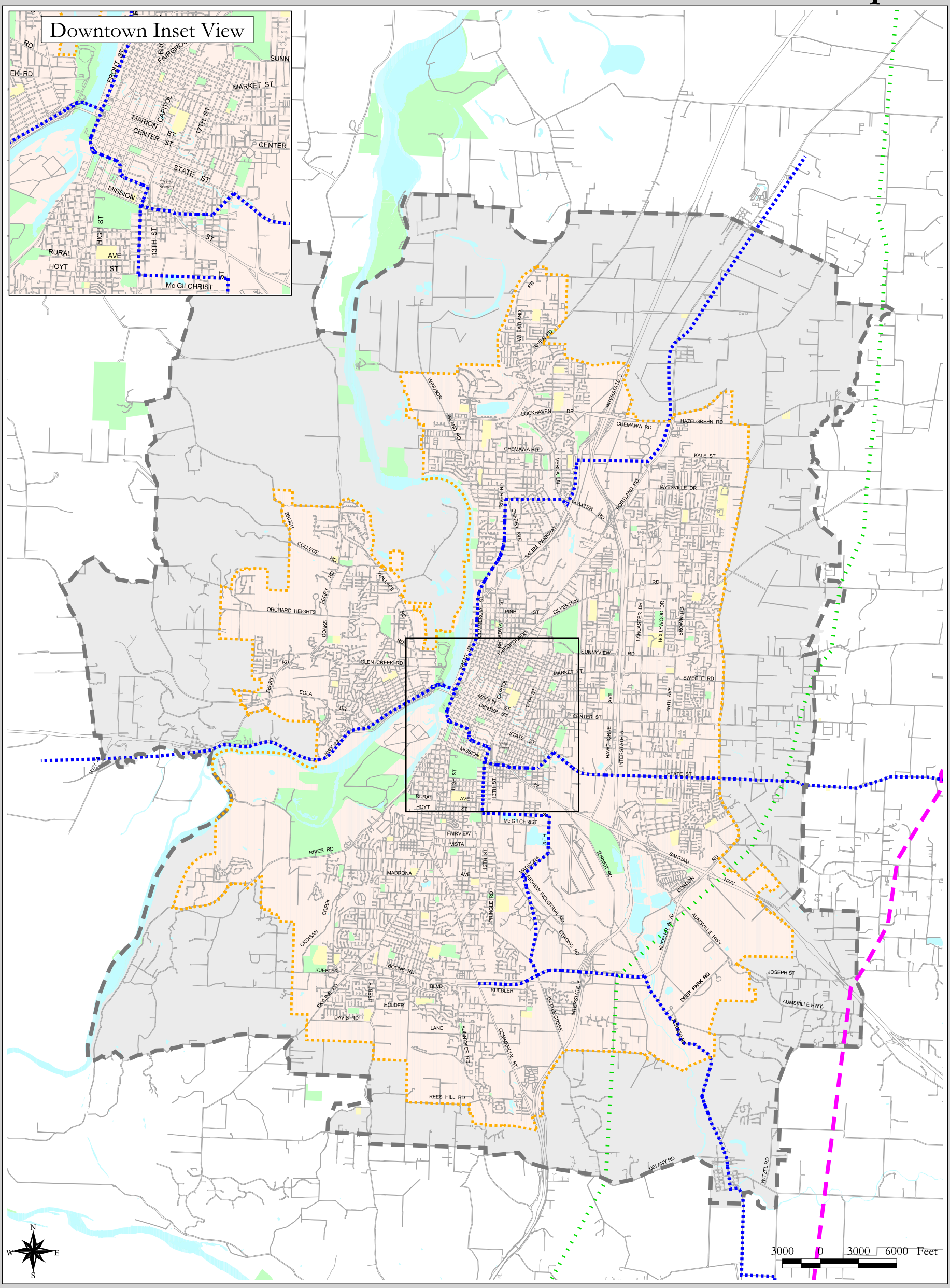

Regional Pipeline System

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

Map 8-2

Existing Regional Pipelines
- Northwest Natural Gas
- Northwest Pipeline
- Kinder Morgan Energy Partners

Roads & Highways
Rivers & Creeks
Parks
Schools

Salem-Keizer Area Transportation Study (SKATS) Boundary
Salem-Keizer UGB

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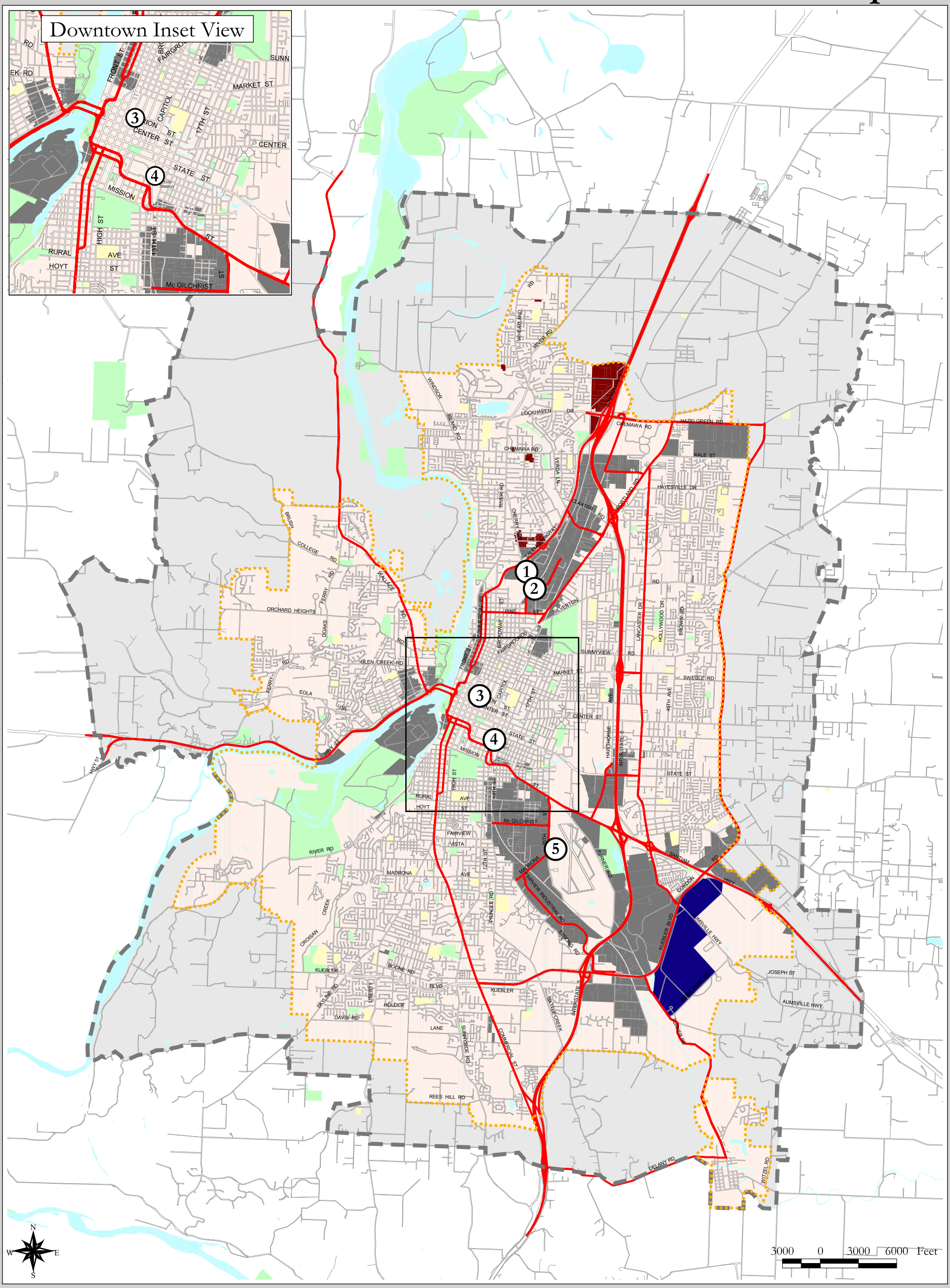

Existing Regional Freight-Supportive Roadways

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

Map 8-3

Existing Freight-Supportive Roadways

Intermodal Facility Sites
1. Cascade Warehouse (Loading facility)
2. Cascade Warehouse (Warehouse & Rail Siding)
3. Greyhound Bus Station
4. Amtrak Rail Station
5. Federal Express, UPS & HUT Shuttle

Industrial Areas based upon Salem and Keizer Comprehensive Planning Designations (1997)

Minto Brown Island Note: The Island is currently designated "industrial", however it is anticipated that there will not be future industrial uses.

- City of Salem Industrial (IC, IND)
- City of Keizer (CI, CLI, GI, IBP)
- City of Salem "Employment Center"

Roads & Highways
Rivers & Creeks
Parks
Schools

Salem-Keizer Area Transportation Study (SKATS) Boundary
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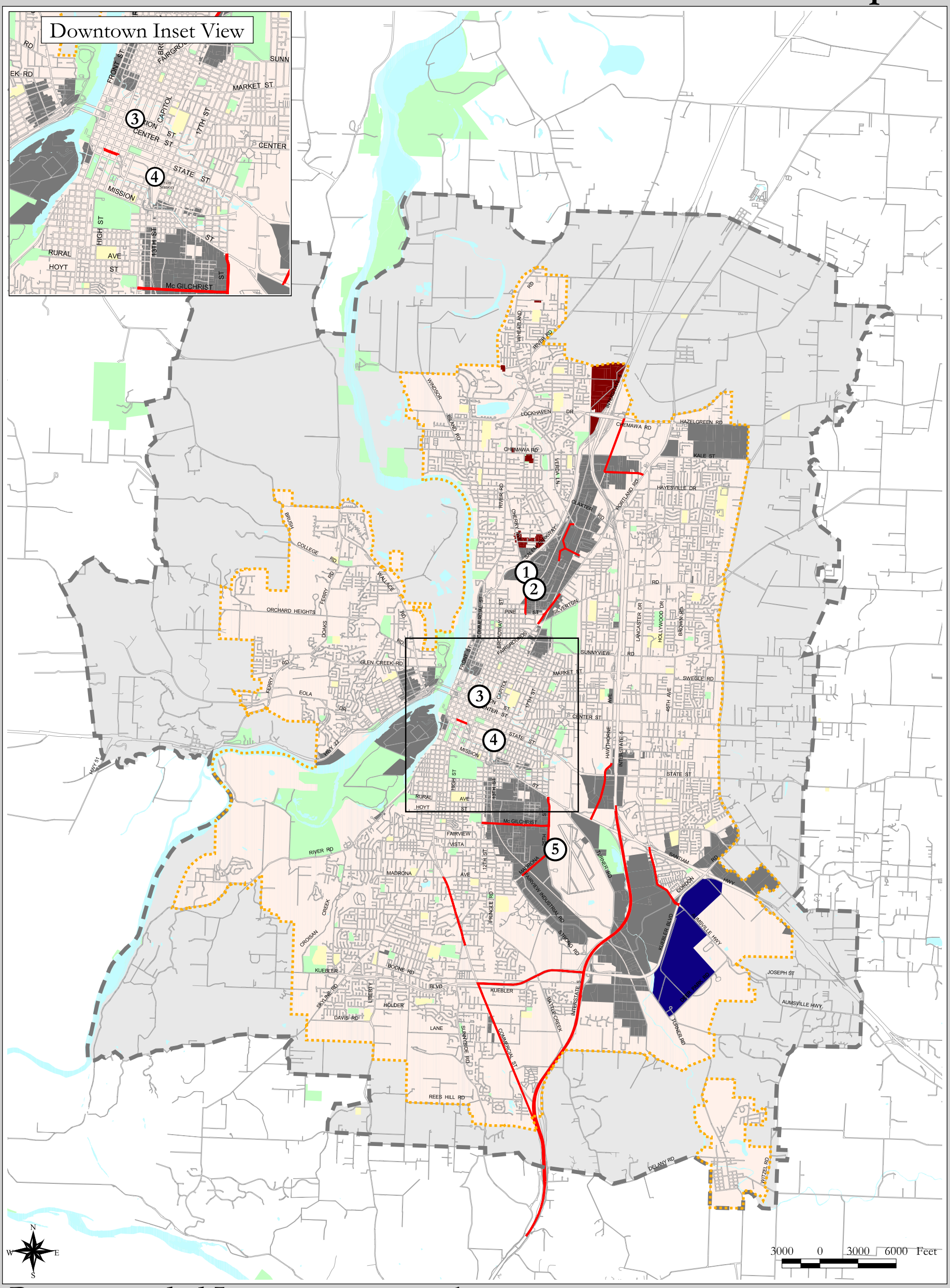

Recommended Improvements to the Freight-Supportive Roadways

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

Map 8-4

Recommended Improvements to the Freight-Supportive Roadways (widenings, signals etc.)

Intermodal Facility Sites
1. Cascade Warehouse (Loading facility)
2. Cascade Warehouse (Warehouse & Rail Siding)
3. Greyhound Bus Station
4. Amtrak Rail Station
5. Federal Express, UPS & HUT Shuttle

Industrial Areas based upon Salem and Keizer Comprehensive Planning Designations (1997)

Minto Brown Island Note: The Island is currently designated "industrial", however it is anticipated that there will not be future industrial uses.

- City of Salem Industrial (IC, IND)
- City of Keizer (CI, CLI, GI, IBP)
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9 - Regional Aviation System Element

Introduction

The Regional Aviation System Element of the Regional Transportation Systems Plan includes:

- a general inventory of the regionally significant aviation service and facilities in the SKATS area;
- an estimation of the transportation demand associated with the aviation system;
- a list of the regional goals, objectives, and policies established for the Regional Aviation System;
- recommended service and facility improvements needed on the aviation system in the area; and
- a general picture of funding sources for the potential improvements.

The Regional Aviation System Inventory

McNary Field

McNary Field is the only regional aviation facility in the SKATS area. It is located four miles south of the downtown core in the city of Salem. In a broader context, the airport is located 55 miles south of the Portland International Airport and 65 miles north of Mahlon Sweet Airport in Eugene. McNary Field comprises about 749 acres and is owned and operated by the city of Salem (see Site #5 on Map 8-1 of the Goods Movement chapter).

The primary function of the airport at this time is as a General Aviation Transport airport, meaning that the airport activity is neither primarily military nor conducted by regularly scheduled air carriers. The Federal Aviation Administration has classified it as an air carrier basic transport category airport. Most users of the airport come from Marion and Polk counties, with several corporate aircraft based there. However, corporate aircraft also operate at Aurora State, Independence State, Albany Municipal, and other public-use airports in the general area. The airport is currently a joint-use facility with the Oregon National Guard. In general, the airport is in very good condition and is well operated and maintained. Currently, there is no commercial air passenger service at the airport, but Hut Limousine Service provides regularly scheduled ground transportation between McNary Field and Portland International Airport (PDX). There is also a Federal Express office and package reload facility at the airport.

Airport Classification

The airport has been defined as an air carrier basic transport category airport by the Federal Aviation Administration (FAA) in the National Plan of Integrated Airport Systems (NPIAS), and by ODOT's Aeronautics Section in the Oregon Continuous Aviation System Plan (OCASP). This classification identifies the airport (by means of its runway length, width, and pavement bearing capacity) as a commercial aviation airport. The city of Salem, although not required to do so, has maintained the airport in accordance with federal certification standards. This status is maintained in order to facilitate air carrier service when such opportunities become available.

Airfield Description

McNary Field comprises approximately 749 acres and is located in southeast Salem. It is bordered by Mission Street to the north, Turner Road to the east, and Airway Drive SE and 25th Street to the west. The compatibility of existing and planned land uses in the vicinity of an airport is generally a function of the level of noise impacts related to the airport. Properties surrounding the McNary Field Airport have been designated as industrial, commercial, and government land uses in the Salem Area Comprehensive Plan. These designations are compatible with airport activities.

It should be noted that current zoning and land use to the southeast of the airport property is residential, which is not generally considered compatible with airport activities without mitigating measures. In the event commercial airline service returns to the SKATS area, long-term noise impacts could make these residential properties incompatible with the airport's expanded operations. In 1978, the city of Salem adopted the "Airport Clear Zones and Approach Surfaces." Additionally, an "Airport Overlay Zone" has been established to ensure that new development does not interfere with aircraft operations.

Airfield infrastructure consists of Runways 13-31 (the primary runway) and 16-34, a partial parallel taxiway, and miscellaneous taxiways providing access to both runways and apron areas. The primary runway is 5,811 feet long and 150 feet wide. Runway 16-34 is 5,145 feet long and 140 feet wide.

The primary runway is lighted with High Intensity Runway Lights and has a Medium Intensity Approach Lighting System with Runway Alignment Indicator Lights (MALSR). This runway also has a full instrument landing system (ILS), including a localizer, guide slope, and locator markers. Additionally, it has an omnidirectional approach lighting system (ODALS). Runway 13-31 also has nonprecision approaches; Visual Approach Slope Indicators (VASI) exist on both runways. Runway 16-34 has Medium Intensity Runway Lights (MIRL).

Terminal Areas

The terminal building is located on the west side of the airport off 25th Street and is in good condition. The primary tenant of the terminal at the present time is Hut Limousine Service. The automobile parking lot is marked to hold 48 cars. The terminal building includes ticket counter space, a baggage claim counter, waiting area, and rest rooms. Other buildings in the

terminal area include the FAA Air Traffic Control Tower (which operates 14 hours a day), an Oregon Aeronautics Section office building, and the National Weather Service building. A city-owned and operated fire station is also located in the north terminal area. An airport restaurant is located approximately 1,000 feet south of the terminal.

General Aviation Area

The general aviation area of the airport includes three conventional hangars housing a variety of aircraft service companies. These businesses provide maintenance service, charter service, a flight school, and aircraft refueling operations.

Aircraft parking is separated into two distinct areas. The terminal apron includes approximately 260,000 square feet of pavement with adequate parking for 737 and MD-80 type aircraft. The southernmost area of the airline apron is reserved primarily for the larger-type aircraft and helicopter parking. The second aircraft parking area is devoted to general aviation aircraft with tie-downs for over 200 aircraft, including both transient and long-term rental spaces.

Located on airport property and directly adjacent to the airfield are several other businesses, such as II Morrow, West Coast Fastener, Microflect, and Federal Express. Some of these firms are aviation related, but do not actively participate in aviation-related operations at McNary field. The Fairview Industrial Park is located west of 25th Street and south of Madrona Avenue.

Air Trade Area

The area served by an airport is commonly designated as its "air trade area" and may have its limits fixed by the proximity of other airports offering comparable types of service. It is important to determine the approximate boundaries of an air trade area because the demand for aviation services depends, to a large extent, upon the socioeconomic characteristics of the trade area. The air trade area for an airport typically encompasses the location of 80 to 90 percent of the facility's users, airline passengers, or the owners of general aviation aircraft based at the airport. The precise shape of the air trade area is dependent on cost, type, and availability of desired services; population density; and ground transportation facilities. In the case of McNary Field, the size of the air trade area is substantially impacted by the air trade areas of the Portland and Eugene airports. In Eugene, Mahlon Sweet Airport currently provides commercial air service through United Airlines and Horizon Air, while PDX provides service via many of the major airlines.

Air trade areas are defined in two ways—commercial service air trade area and general aviation air trade area. The NPIAS defines air trade areas in terms of "reasonable access" which exists relative to scheduled air service and the community's CBD or center of user population. The NPIAS suggest that "reasonable access" (also called door-to-door travel time) to general aviation facilities is 30 minutes' surface travel time. For commercial service airports, 60 minutes' surface travel time is more appropriate. The commercial aviation air trade area for McNary Field is estimated to be bordered by Woodburn to the north, Lincoln City to the west, Corvallis to the south, and Detroit to the east. The general aviation air trade area for McNary Field is estimated to be similar to the commercial aviation air trade area, with the exception that the southern

boundary would be north of Albany, creating a horseshoe-like contour.

Other public aviation facilities within McNary Field's air trade area include Independence and Aurora State Airports and Albany Municipal Airport. These facilities, while sharing a portion of McNary's air trade area, do not seriously impinge upon its market or operations. These fields are best suited to private and commercial training operations of single engine aircraft and some helicopter activity.

Airport Access

Currently, nearly all Salem area commercial air passengers depart from Portland International Airport. Many passengers travel to Portland International Airport via the Hut Airport Limousine Service, which provides 18 regularly scheduled round trips daily between McNary Field in Salem and Portland. Style and Presidential Limousine Services also offer limousine service to Portland International Airport.

Transit service to McNary Field is provided by Cherriots, via the "State and Fairview" 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. Bus service is hourly during off-peak times and is provided on the half hour before 9:00 a.m. and after 3:00 p.m. Connections to Salem's Greyhound bus or Amtrak passenger rail depots, the former located approximately five miles from the airport's terminal and the latter being approximately four miles away, require transferring at the downtown "pulse" center for "door-to-door" service if area transit services are used. The Chemeketa Area Regional Transit System (CARTS) stops at the airport four times a day on weekdays via the Canyon Connector route. Area taxicab companies offer true on-call "door-to-door" service to the airport's facilities.

Access from the airport to area highways via 25th Street allows direct access to Mission Street/Oregon Highway 22 and indirect access via Oregon Highway 22 to Interstate 5, Oregon Highway 213, Oregon Highway 219, Oregon Highway 221, and Oregon Highways 99E and 99W. The distance to Interstate 5 from the terminal at McNary Field via Oregon Highway 22 is approximately 2.5 miles.

Air Freight Services and Facilities

Aviation-related reload facilities are limited within the SKATS area. Most of these facilities are operated by companies that operate primarily as air freighters or that have air freight operations as part of their larger freight business. The U.S. Postal Service "Express Mail" service, United Parcel Service (UPS), Federal Express (FEDEX), and Jet Delivery Service all offer air freight services. All of these are private concerns and all operate package reload facilities in Salem. The majority are truck-to-truck reload facilities, forming collection points at which their package collection cars (parcel vans) unload and their line haul trucks reload. From the reload facility the line haul trucks generally make their way to Portland International Airport, where the cargo is trans-loaded for air shipment. With the exception of UPS' contract carrier, Sports Air, no freight aircraft currently stop in Salem, as the truck service to Portland adequately meets the needs of most of the air freight companies. However, Federal Express also operates aircraft from McNary Field on occasion if warranted.

Transportation Demand on the Regional Aviation System

Operations

Aircraft operations (takeoffs or landings) are divided into two categories: local and itinerant operations. Local operations are primarily general aviation activities while itinerant operations are all operations other than local. Examples of itinerant operations would be business flights and personal recreational flights.

Table 9-1
Number of Operations at McNary Field, 1992 to 2000

	Itinerant	Local	Total
1992	40,081	21,673	61,754
1993	35,995	20,635	56,630
1994	36,595	20,860	57,455
1995	41,151	16,639	57,790
1996	40,227	18,329	58,556
1997	38,897	17,392	56,289
1998	35,588	16,434	52,022
1999	35,485	14,627	50,112
2000	35,379	13,862	49,241

As shown in **Table 9-1**, the number of operations at McNary Field has been decreasing since 1996. In 1998, gambling excursion charter flights to Nevada casinos ended, further reducing the flight activity. The majority of aircraft operations are civilian in nature, and itinerant.

Most of the aircraft currently flown at McNary Airfield are single-engine aircraft such as the Piper Cherokee, Piper Tri-Pacer, and Cessna 172. Other aircraft types that use the airport facilities include light twin-engine piston aircraft, turboprop aircraft, and some jet aircraft. The airport is capable of serving aircraft as large as Boeing's 757.

Goals, Objectives, and Policies

Goal 1: **A regional aviation system that provides an adequate level of facilities and services to meet the needs of the residents and businesses in the SKATS area.**

Objective: Encourage the provision of appropriate regional aviation system operations and facilities adequate to serve the demand associated with the residents and businesses of the SKATS area in a cost-effective manner.

Policy: Support appropriate, cost-effective improvements to the region's aviation and

related facilities based on sound economic analysis.

Policy: Support efforts to renew commercial airline service for the SKATS area as demand and financial considerations warrant.

Goal 2: A regional aviation facility that can accommodate commercial operations as passenger demand increases.

Objective: *Retain the capability to support commercial airline operations as potential ridership increases.*

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

Goal 3: A regional aviation facility with adequate multimodal access.

Objective: *Ensure adequate multimodal access to the regional aviation facility.*

Policy: Support development of an appropriate multimodal transportation infrastructure that provides adequate access to the regional aviation facility.

Potential System Improvements

The responsibility for planning improvements to the Regional Aviation System lies with the City of Salem's Operations Coordinator. The existing Airport Master Plan for McNary Field Airport was completed in 1997. The major capital improvements to the identified as necessary in the new plan include:

Short-Term Needs

- Porous friction concrete overlay of the primary runway
- Terminal building improvements

Long-Term Needs

- Extension of the primary runway
- Demolition and replacement of the airline terminal
- Staged expansion of general aviation facilities
- Commercial/business development

Short-term needs identified in the existing Airport Master Plan terminal include building improvements and repairs. The FAA does not view extension of the primary runway as a priority at this time, given the current lack of commercial airline activity at the airport.

The terminal building, built in 1952, is generally considered to be in good condition, but requires repairs if it is to continue being functional. Limited repairs to the terminal were made during 1995. Long-term plans for the terminal building call for its eventual demolition and replacement with a new terminal structure.

10 - Regional Maritime System Element

The Regional Maritime System Element of the Regional Transportation Systems Plan (RTSP):

- identifies where river navigation facilities are located or planned in the SKATS area;
- provides an inventory of the regional ferry service and facilities in the SKATS area;
- establishes the regional goals, objectives, and policies for the Regional Maritime System;
- estimates the vehicle and passenger movements associated with the ferry systems;
- identifies committed and recommended service and infrastructure improvements needed on the ferry system in the area; and
- provides a general assessment of costs and revenues associated with maintaining existing services and recommended improvements.

Geographical Setting

The Willamette River lies in the Willamette Valley between the crests of the Cascade and Coast Ranges in northwest Oregon. The river forms at the confluence of its Coast and Middle Forks near Eugene-Springfield and flows north to its mouth at Portland with a total length of 187 miles. In its upper 133 miles, from Eugene to Newberg, the Willamette River flows northward in a braided, meandering channel. Through most of the remaining 54 miles, it flows between higher and more well defined banks, unhindered by falls or rapids, except for Willamette Falls at Oregon City, where the river drops 40 feet to tidewater. The average depth and flow rate of the river varies, depending on precipitation and the amount of water released at the 13 reservoirs behind dams in the Willamette River and its tributaries.

The Willamette River in the SKATS Area

The SKATS area is located in the midsection of the Willamette River and encompasses approximately 12 miles of the river, which flows from the southwest corner of the study area to the northwest corner. The river meanders through the SKATS area forming the boundary between Marion County on the east bank and Polk County (West Salem) on the west bank. The central business district of the Salem area is located at River Mile (RM) 85, which is 85 river miles upstream of the river's mouth. The average width of the Willamette River through the SKATS area is approximately 500 feet. The channel depth normally varies from 4 to 16 feet through the SKATS area depending on the time of year.

Overview of Facilities and Services

Currently, there are no commercial port or navigation facilities within the SKATS area. However, local efforts to pursue the dredging of the Willamette River for waterborne commerce through Salem resurface periodically. During 1996, a Riverine Goods Movement Study took place to measure the demand for commercial marine services on the upper Willamette River. The study concluded that currently it is more appropriate to use the river for recreational and commercial boating activities such as the River Queen. There is regular passenger and vehicle ferry service across the Willamette River at two locations near the SKATS area.

Commercial Navigation on the Willamette River in the SKATS Area

Background

During the mid-1970s, waterborne commerce on the Willamette River between Portland and the Yamhill River (RM 56) increased, particularly below Oregon City, while traffic above the Yamhill River through the SKATS region decreased significantly.[1] As a result, in 1973, the U.S. Army Corps of Engineers reduced dredging activity above the Yamhill River to minimal maintenance dredging and commercial traffic has not moved above the Yamhill River since that time. There has been no maintenance dredging above the Yamhill River since 1977.

There is currently an authorized Federal Navigation Channel in the upper Willamette River to Corvallis (RM 130). According to the Corps, the authorized channel has prescribed depths but no specified channel width. From Oregon City (RM 28) to the mouth of the Santiam River (RM 108) the prescribed depth is six feet. The location of the authorized channel is not specified.

Marine Transport System Requirements

Unique to regions with significant navigable waterways is the movement of goods via barge. However, in order for waterborne commerce to be a viable component of the overall transportation system in the region, a marine transport system must be in place that facilitates the movement of goods and is cost effective and competitive with rail and highway transport. Commercial barges need a channel depth of at least six feet and require at least 50 feet of channel width. Channel width in excess of 50 feet is preferable as most barges are 36 feet wide. Water transport is typically most competitive for long distance movements and bulky items or where other modes are not available. Some materials and products are more economically moved by barge than by truck or train. These products consist primarily of agricultural products, pulp and paper products, and sand and gravel. However, in order to be competitive economically, transfer and/or production facilities need to be in place near the river and an

[1] The terms "above" and "below" are used to describe the relative position of a place or activity on the river. "Above" is used to describe positions that are away from the mouth of the Willamette River at the Columbia River. "Below" is used to describe positions that are toward the mouth of the Willamette River. For example, Salem is "above" Portland.

adequate distribution infrastructure must exist to serve those facilities. Currently, there are no such facilities in the SKATS area.

Past Attempts to Re-initiate Dredging

In 1979, the U.S. Army Corps of Engineers prepared a Reconnaissance Report to determine the feasibility of dredging a 3.5-foot deep channel above the Yamhill River (RM 56) to Corvallis (RM 130) through the SKATS region. The annual cost of dredging this section of the river was estimated by the Corps to be $1.2 million. However, the Corps did not fund the project because it was determined that this activity would not produce a net national benefit.[2] The primary factor in determining that there is a national benefit is the level of commercial traffic. In most cases, there must be at least 25,000 tons of commercial traffic per year currently moving on the waterway before the Corps will consider funding a project.

In both 1985 and 1987, state legislation was proposed calling for channel maintenance of the upper Willamette River, but failed to pass.

Barriers to Dredging

Even if the 25,000 tons per year threshold were met, the Corps would not automatically resume dredging; a favorable benefit/cost ratio and funding priorities would remain as significant issues.

There are also environmental concerns regarding the impact that dredging might have on steelhead and salmon habitat and spawning areas in the river. Other potential environmental impacts include damage to wetlands, disturbance to other wildlife, and water turbidity. The regulatory agencies such as the Oregon Department of Fish and Wildlife, the Environmental Protection Agency, and the Corps of Engineers will require a comprehensive study of the cumulative impacts of gravel removal before any large-scale dredging operation is considered.

According to the Port of Portland and ODOT, there are no long-term or foreseeable plans to use the upper Willamette River (from the Yamhill River to Corvallis) for commercial navigation. Although the Oregon Transportation Plan (OTP) emphasizes a multimodal system, the viability of water transport is limited to the lower Willamette River below the Yamhill River, the Columbia River and Pacific coastal ports.

Potential Demand for Commercial (Freight) River Transportation

Maritime goods movement systems are typically most competitive in the transportation of bulk shipments over long distances. In 1994, the Mid-Willamette Valley Council of Governments (MWVCOG) Economic Development Section conducted a survey of 66 of the region's largest industrial and commercial firms to gauge the level of interest for utilizing the Willamette River for the transportation of goods. The firms who were surveyed were manufacturing companies that are most likely to either ship or receive cargo in bulk or very large form either to or from

[2] The term "net national benefit" means that the benefit to the federal government, as calculated in dollars, is greater than the dollar cost to the federal government.

the Portland Area. Five companies indicated a strong interest in utilizing barge transportation. They included a sand and gravel company (100,000 tons annually), a grass straw exporter (15,000 tons annually) and a fertilizer firm (2,000 tons annually).

The 100,000 tons of potential barge product from the sand and gravel company would represent an expansion of existing operations and a mode shift. The 15,000 tons of product from the grass straw exporter would not be the result of an increase in production, but a mode shift away from trucking. The fertilizer company indicates that they are currently using both trucks and rail, trucks to bring in the raw materials and rail to ship the final product out to markets. The 2,000 tons of fertilizer would be an expansion of existing operations.

It is unknown at this time if a commercial navigation channel in the Willamette River will ever be restored. Before proceeding with attempts to revive commercial navigation, more complete information needs to be developed about both the environmental impacts of such an attempt (i.e., dredging on the salmonid fish habitat), as well as the need in terms of potential usage. Should sufficient political and commercial interest in restoring commercial navigation in this portion of the Willamette River arise, studies of the outstanding issues will likely be performed by the appropriate parties.

Ferry (Passenger and Vehicle) Transportation

Facility and Service Inventory

The Wheatland Ferry and the Buena Vista Ferry are both currently providing shuttle service across the Willamette River near the SKATS area. A general description of each ferry operation is followed by a financial plan, committed and recommended improvements, and goals, objectives, and polices.

Wheatland Ferry

The Wheatland Ferry, the larger and busier of the two ferries, is mutually owned by Marion and Yamhill counties and is operated by Marion County. The ferry is located about two miles north of the SKATS area near the Willamette Mission State Park.

The ferry mechanical system consists of two on-board electric motors that drive two propellers. Electrical lines suspended across the river connect to the ferry providing the needed electricity. A separate steel cable system suspended overhead is used to keep the ferry in its appropriate travel path.

The Wheatland Ferry can carry a maximum of six automobiles and 30 passengers at a time and operates seven days a week. A new vessel, scheduled to begin service before summer 2002, will carry nine vehicles and approximately 42 passengers per trip. The maximum wait time for the ferry is 10 to 15 minutes, depending on the number and types of vehicles to be loaded off and onto the ferry. In fiscal year 1994, the ferry transported an average of 610 vehicles per day across the river. Using fiscal year 1999 data, and based on 328 operating days, the ferry

transported an average of 447 vehicles per day across the river. The ferry is in service all year long depending on the weather and equipment conditions.

Buena Vista Ferry

The Buena Vista Ferry is located about five miles south of the SKATS area, just north of where the Santiam River flows into the Willamette River. The ferry is owned and operated by Marion County.

The ferry mechanical system consists of an on-board diesel generator that provides the electricity needed to run the on-board electric motors. The electric motors drive the propellers, and overhead suspended steel cables are used to keep the ferry in its appropriate travel path.

The Buena Vista Ferry can carry a maximum of four automobiles and 29 passengers per trip, and operates five days a week from May through September. The maximum wait time for the ferry is 10 to 15 minutes depending on the number and types of vehicles to be loaded off and onto the ferry. This ferry does not operate between the months of October and April. In fiscal year 1994, the ferry transported an average of 56 vehicles per day during the days it was open. For the 1999 fiscal year, and based on 131 operating days, the ferry transported an average of 65 vehicles per day across the river.

Improvements to the Regional Ferry System

Committed Improvements

Wheatland Ferry

A new ferry holding nine automobiles and 42 passengers has been ordered and will be placed into service before the summer of 2002.

Buena Vista Ferry

In early 1995, a complete rehabilitation of the Buena Vista Ferry took place. The improvements included an enclosure system, new operator cabin, new controls, and a new generator. This restoration project was funded by the ISTEA Ferry Boat Discretionary Program in the amount of $231,000. Marion County provided the required 20 percent local match plus additional funds totalling approximately $60,000 to $80,000, which came from the County's Road Maintenance Dedicated Funds.

Additional Improvements Needed or Recommended

Wheatland Ferry

The west side landing ramp is made out of concrete and is badly deteriorating. The structure needs to be rebuilt within the next five years. Marion County Public Works staff estimates the

cost of this project to be roughly $115,000. Although this structure is located in Yamhill County, the county does not have any plans to rebuild this ramp.

In approximately 10 to 15 years, the mainline poles located near each landing ramp will need replacing. These poles are used to support the cable and electricity lines across the river and to the ferry. It is estimated that this project will cost approximately $80,000. Funding for this project has not been identified at this time.

Buena Vista Ferry

No further improvements beyond those listed under Committed Improvements have been identified at this time.

Financial Analysis

Ferry Operational Costs

Major expenses identified with the operation of the two ferries include ferry operator and toll taker wages, maintenance and repair, insurance, and general administration. Total annual operational expenses for fiscal year 1999 were approximately $259,000 for the Wheatland Ferry and roughly $123,000 for the Buena Vista Ferry.

Wheatland Ferry Funding Sources

Revenue to fund the daily operation of the Wheatland Ferry consists of monies received from three different sources: Marion County, Yamhill County, and farebox revenues. An agreement between Marion County and Yamhill County splits the operating costs remaining after farebox revenues.

Marion County Funds

Marion County funds half of the operating cost remaining after farebox revenues with the County's Road Maintenance Dedicated Funds. In fiscal year 1994, it is estimated that the county allocated approximately $40,000 of its Road Maintenance Dedicated Funds for its share of the ferry's operating costs.

Revenue for the Road Maintenance Dedicated Funds is derived from timber receipts and county shares of the State Highway Fund (gas tax money). When timber on federal lands within Marion County is harvested, the county receives 25 percent of the timber sales, which are known as timber receipts. Approximately 75 percent of this revenue is allocated to the County Public Works Department's Road Maintenance Dedicated Funds. Marion County Road Maintenance Dedicated Funds are considered a relatively secure source of funding over time, although subject to variations (currently downward) based on the volume of timber harvested.

Yamhill County Funds

Yamhill County funds half of the operating costs remaining after farebox revenues with the County's Road Funds. In fiscal year 1994, it is estimated that the county allocated approximately $40,000 of its Road Funds for its share of the ferry's operating costs. The Wheatland Ferry is mutually supported by Yamhill County. In fiscal year 1999, it is estimated that the county allocated approximately $26,000 for its share of the operating costs. Like Marion County, Yamhill County derives its revenue for the Road Fund from timber receipts and county shares of the State Highway Fund (gas tax money).

At this time, it is unclear how long Yamhill County will be able to maintain funding for its share of the ferry's operating costs. According to Public Works staff, timber receipts have been going down over the last few years and if they continue to dwindle, continued funding of the ferry is uncertain.

Farebox Revenues

Over the last four years, farebox revenues for the Wheatland Ferry have been generating approximately 68 percent ($176,000) of the annual operating costs. The annual operating costs for the 1999-2000 fiscal year was approximately $207,000. There are five classes for the new fares for the ferry, ranging from $0.75 for a motorcycle to $6.00 for a vehicle that takes up the entire ferry (such as a farm tractor with a trailer). There is no charge to pedestrians and bicyclists using the ferry. The fares were recently increased by nearly 35 percent across the board. Staff at Marion County Public Works predicts that increased farebox revenues will generate approximately 89 percent of the actual operating cost.

Buena Vista Ferry Funding Sources

The daily operation of the Buena Vista Ferry is funded by monies received from three different sources: Marion County, ODOT, and farebox revenues. An agreement in place since 1990 between ODOT and Marion County splits the operating costs remaining after farebox revenues.

Marion County Funds

Marion County funds half of the operating costs remaining after farebox revenues with its Road Maintenance Dedicated Funds. In fiscal year 1994, it is estimated that the county allocated approximately $37,000 of Road Maintenance Dedicated Funds for its share of the ferry's operating costs. Road Maintenance Dedicated Funds are generally described above in the Wheatland Ferry funding sources.

ODOT Funds

The other half of the operating costs remaining after farebox revenues is funded by ODOT. ODOT funds their share of the Buena Vista Ferry's operating costs with Highway Fund monies. In fiscal year 1994, it is estimated that ODOT appropriated approximately $37,000 to Marion County for its share of the operating costs. In fiscal year 1999, it was estimated that ODOT appropriated approximately $61,000 to Marion County for its share of the operating costs. The

operating cost sharing agreement with Marion County is open ended and has no termination date. This revenue is regarded as a relatively secure source of funding.

Farebox Revenues

Over the last four years, farebox revenues for the Buena Vista Ferry have been generating approximately 8 percent ($7,000) of the annual operating costs. The annual operating cost for the 1999 fiscal year was approximately $8,600. There are five new classes of fares for the ferry, ranging from $0.75 for a motorcycle to $6.00 for a vehicle that takes up the entire ferry (such as a farm tractor with a trailer). There is no charge to pedestrians and bicyclists using the ferry. The fares were recently increased by nearly 35 percent across the board. Staff at Marion County Public Works predicts that now farebox revenues will generate approximately 10 percent to 12 percent of the actual operating cost.

Outstanding Issues

In this Plan and the city of Salem's TSP, the Union Street Railroad bridge is identified for conversion into to a pedestrian / bicycle facility, to link Riverfront Park on the east with Wallace Marine Park on the west. Currently, the bridge is abandoned for railroad uses, and the City is looking to buy the structure. At issue is the federal requirement that the bridge be functionally operable to the extent that the center section can be raised in the event that a marine vessel needs to pass under, due to the height of the vessel, or the water level. Currently (2001) there are two businesses in the Salem-Keizer area that have status with the U.S. Coast Guard for commercial operation on the River.

11 - Regional Rail System Element

Introduction

The Regional Rail System Element of the SKATS Regional Transportation Systems Plan (RTSP) includes:

- a list of the regional goals, objectives, and policies established for the Regional Rail System;
- a general inventory of the regionally significant rail service and facilities in the SKATS area;
- an estimation of the major freight and passenger movements associated with the rail system;
- an analysis of problems and issues identified on the regional rail system;
- recommended service and infrastructure improvements needed on the rail system in the area; and
- a general picture of costs and revenues associated with the recommended improvements.

The infrastructure of the region's rail system, unlike most of the highway, transit, bicycle, and pedestrian facilities in the region, is generally privately owned and operated. As a result, capital investment by the rail industry is much more directly driven by market forces than by policy initiatives at the state, regional, and/or local levels. Coordination and cooperative efforts between the public and private sectors, however, can be mutually beneficial and serve to increase the efficiency of both the rail and nonrail elements of the region's transportation system.

The Regional Rail System

Rail Infrastructure and Service Levels

Overview

Although subsequent mergers may affect service levels, at the present time the Salem-Keizer area is served by one major (Class I) railroad companies, the Union Pacific (UP), and two

shortline (Class III) carriers, the Willamette Valley Railway (WVRY) and Portland & Western Railroad (P&W).

Both the UP and P&W operate in primarily north-south rail corridors that traverse the length of the region (**Map 11-1**). The WVRY operates the former SP Geer Branch in an east-west corridor running from Cordon Road in Salem to Geer where it connects to the WVRY West Stayton Branch. The line is currently used for the storage of railroad cars. P&W acquired the track structure of the BNSF line north of Perkins Road outside of Keizer to Beaverton in 1998, and have permanent and exclusive operational easement over this right-of-way, which is owned by ODOT. The acquired the rest of the BNSF line to Eugene in 2002. There are approximately 35.6 rail route miles (not counting spurs and/or sidings) in the SKATS region associated with the two principal rail corridors. Approximately 25 rail route miles (70% of the total) of this infrastructure are located inside the Urban Growth Boundary (UGB); 10.6 miles (30%) are located outside the UGB.

Significant rail spurs in the region include the P&W/UP connecting track running just north of Johnson Street NE in the Cherry Avenue Industrial Area.

Union Pacific (UP) Lines

The Union Pacific (UP) "Valley Mainline" route through the SKATS area consists of 14.4 rail route miles and runs in a corridor roughly parallel to I-5. In northern Marion County, the UP mainline is located east of I-5. At a point just north of the Portland Road/I-5 Interchange, the line crosses below the freeway and traverses the eastern edge of the Downtown/Capitol Mall area. Just north of the Kuebler Boulevard/I-5 Interchange, the line re-crosses to the east of the freeway and continues into the community of Turner. The UP also operates a rail yard bounded by Hines Street to the north, Vista Avenue to the south, 14th and 16th Streets to the east, and 13th Street and Pringle Road to the west.

This "Valley Mainline" is a part of the UP north-south mainline extending from Portland to Eugene. From Eugene, the "Cascade Line" continues south, providing service to California via Chemult and Klamath Falls. The UP line represents the main west coast rail line providing a link to Canada and Mexico. Through its connection with UP's east-west mainline in Portland, it offers shippers in the Salem-Keizer area access to markets throughout the U.S., Canada, and Mexico.

The UP Mainline also provides the route for rail passenger service, providing station access in Salem and direct southbound service to Albany/Corvallis; Eugene; Klamath Falls; and Los Angeles, California; as well as direct northbound service to Portland and Seattle, Washington.

An east-west connecting track through the Cherry Avenue industrial area connects the UP "Valley Mainline" to the P&W line in the region (see below).

Portland & Western Railroad (P&W) Lines

In 1998, P&W acquired from BNSF the Oregon Electric Branch line's track structure running from north of Keizer at Perkins Road to the Portland metropolitan area, parallel and to the west

of the I-5 corridor. The right-of-way for this line is owned by ODOT, and P&W has a permanent and exclusive operating easement on this line. This route is mainly outside the SKATS area. In 2002, the parent company of the P&W, the Genesee & Wyoming Inc., located in Connecticut with operations worldwide, acquired the remainder of this line, from just north of Keizer to Eugene, running along the east side of the Willamette River.

Willamette Valley Railway (WVRY) Lines

The rail lines in the SKATS area associated with the Willamette Valley Railway have either been abandoned (from 14th Street SE to Lancaster Drive), are currently embargoed (east of Lancaster Drive to Cordon Road), or are being used for storing railroad cars (east of Cordon Road).

Amtrak

Although Amtrak does not own any right-of-way, they provide passenger rail service through the Willamette Valley, connecting Salem with Portland and Seattle to the north, and Eugene, Medford, San Francisco, and Los Angeles to the south. In addition, Portland, Seattle, and Los Angeles provide links with Amtrak's transcontinental trains, providing service to cities in the Midwest and East. Service is run over UP's Valley Mainline in the Willamette Valley, with the Salem Railroad Station as the passenger station for Salem.

Intermodal Rail Facilities

Intermodal Freight Rail Facilities

Currently, the SKATS area's largest intermodal freight rail facility is a private lumber reload (break-bulk) operation. The firm, Cascade Warehouse, operates three facilities within the city of Salem: one located on Industrial Way NE, one located on Cherry Avenue, and one located on Front Street. This firm has access to both of the railways serving the Salem-Keizer area. Additional information on this system is presented in the Regional Goods Movement Element, Chapter 8.

Intermodal Passenger Rail Facilities

The SKATS area has one intermodal passenger rail facility. It is the Salem Railroad Station, located at the corner of Mill Street SE and 12th Street SE. The Salem Railroad Station offers travelers both intercity train and bus service. The facility's principal assets include a terminal building that was remodeled in 1999, a historic "freight shed" that is in need of structural and cosmetic repair, a concrete passenger platform that is in very good condition, and a paved parking lot that is in new condition.

The existing Salem passenger rail station site is roughly rectangular in shape, being approximately 1,220 feet in length from north to south, and ranging from approximately 85 feet to 138 feet in width from east to west. This site also has an uninterrupted platform length of more than 1,100 feet, well in excess of the 800-foot minimum required for a facility of this type.

The northern half of the site contains a paved parking lot and half of the depot's passenger platform. The parking lot currently has a capacity of up to 150 cars. At the present time, parking spaces in the lot are not clearly marked, nor are there any clearly defined areas set aside for vehicle movements, taxi queuing areas, or intercity bus staging.

The southern half of the site contains the Salem Railroad Station structure that dates from 1918, an 1880's "freight shed" that is no longer in use, the southern half of the passenger platform, a Union Pacific microwave communications tower, and a small wooded area that slopes down toward the Shelton Ditch. There is no vehicular circulation on the southern portion of the site.

The 1918 station structure is approximately 150 feet by 40 feet in size. The station has a current passenger capacity of approximately 160 people.

This facility 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 station is within a half-mile distance of Willamette University, Tokyo International University, and the Capitol Mall. Most of the sidewalk and bicycle lanes surrounding the existing station site were installed as part of the Oregon Highway 22 overpass project and connect to existing bicycle facilities on the Pringle Parkway. The 12th Street Pedestrian Promenade, which is described in the Pedestrian chapter of this document, will provide a safe, convenient, and attractive walking path from the station to the Capitol Mall and downtown areas.

SAMTD serves the Amtrak Station with route number 7, “State and Fairview.” This route stops on Mill Street along the north side of Amtrak’s north end parking lot on both the inbound and outbound trips. Route number 15, "Laurel Spring," goes through the area, stopping at the corner of 12th Street and Pringle Parkway as it leaves downtown. This bus stop requires potential passengers traveling from downtown to cross the intersection of 12th and 13th streets, and Oregon Highway 22, to reach the Amtrak terminal. Route number 6, the "12th & Sunnyside," and number 15, the "Laurel Spring," both pass directly in front of the Amtrak station on 13th Street when traveling towards the downtown Transit Center, but due to a very difficult street network and traffic pattern, does not have a designated stop at or near the station. Additionally, the CARTS “Canyon Connector” route travels on 12th Street near the station and will stop at the station as requested by passengers onboard, providing service from communities in the Santiam Canyon.

With the financial backing of ODOT's High Speed Rail Project, Amtrak Thruway motor coach service stops at this facility, providing connections with Portland, Eugene, Central Oregon, and the Coast.

Rail System Support Facilities

Freight Rail Support Facilities

Freight rail support facilities within the SKATS area are privately owned and operated. Cascade Warehouse operates three break-bulk (lumber) reload facilities within the boundary of SKATS that also offer a warehousing function. Currently, no Trailer on Flatcar (TOFC) or Container on Flatcar (COFC) reloading facility exists within the SKATS boundary.

Approximately 45 separate addresses within the SKATS area are equipped with railroad sidings and most are associated with various industrial uses.

Passenger Rail Support Facilities

Passenger rail service support facilities within the SKATS area consist of Salem's Railroad Station, which is served by Amtrak. This facility is described in detail in the previous section.

Transportation Demand on the Regional Rail System

Freight Movements

Regional Rail Corridor Commodity Flows

There are two principal rail corridors located in the SKATS region. According to the data contained in the *2001 Oregon Rail Plan*, the total freight commodity flow associated with these corridors amounts to approximately 31 million tons per year.

The portion of the UP mainline between Eugene and Portland is the most heavily used rail line for freight in the Willamette Valley, with more than 30 million gross tons being shipped over it on an annual basis. According to 2000 data obtained from the state, 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.

A survey of six SKATS area firms conducted in the mid-1990s indicated combined annual rail shipments of over 300,000 gross tons. Several firms are choosing instead to ship their products in containers via truck to Portland area rail or marine terminals for reloading.

Amtrak also offers freight delivery service to the SKATS area via its Amtrak Express service, which is accessed at the Salem Railroad Station. This service can ship packages from 1 to 2,000 pounds from the SKATS area to anywhere in the nation that Amtrak serves.

Intermodal Freight Transfers

Intermodal freight movements involve the transportation of container encapsulated or trailer encapsulated cargo, while using two or more modes of transportation to ship the cargo from its origin to its destination. The movement of bulk and break-bulk cargos, both into and out of the SKATS area, is also frequently intermodal in nature. Advantages inherent to intermodal shipment of goods include increased modal options for those shipping goods, the potential for reduced costs, and a potential increase in the size of the market the shipper can reach cost effectively. According to the *2001 Oregon Rail Freight Plan*, intermodal freight movements involving rail account for a large percentage of the total freight transported within the United States and account for nearly 17% of all rail revenue, second only to coal shipments.

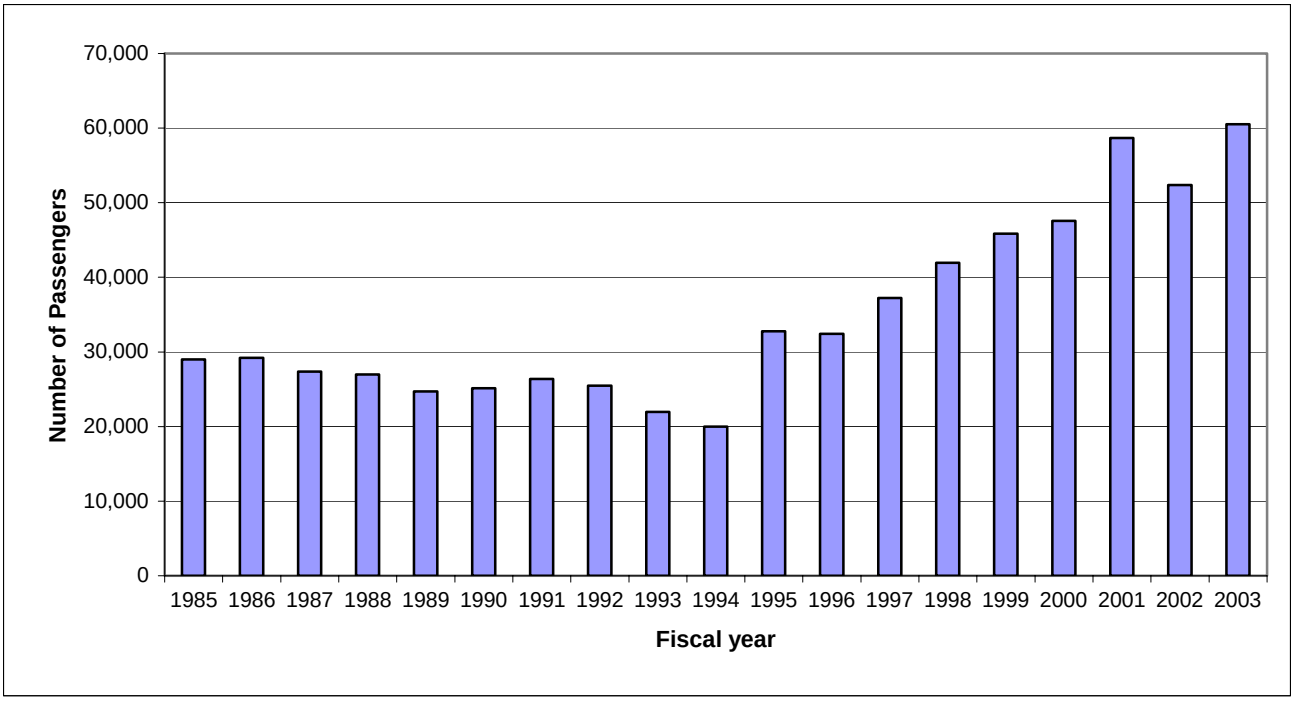
Currently, the SKATS area's largest intermodal rail activity within the city of Salem is a lumber reload (break-bulk) operation. The firm operates three facilities, one located on Industrial Way NE, one located on Cherry Avenue, and the other located on Front Street. These facilities reload approximately 200,000 tons of wood products annually. While other opportunities for increased intermodal activities appear to exist within the SKATS area, potential users would have to be identified and their needs assessed before any additional actions could be taken.

Passenger Movements

Regional Rail Corridor Passenger Demand

Amtrak provides the SKATS area with two service options for passenger rail service, the *Coast Starlight* and *Cascades* trains, with station access at the Salem Railroad Station. For fiscal year 2000, just over 47,500 passengers used the Salem station. The growth in passenger use of the Salem Railroad Station can be seen in **Figure 11-1**, where the number of passengers boarding and detraining in Salem has increased significantly since 1996. This increase can be traced to improvements that have been made in the service and equipment used in the Pacific Northwest High Speed Corridor. The Pacific Northwest High Speed Corridor is one of the nine currently federally designated High Speed Rail (HSR) corridors. The corridor extends from Eugene through Salem to Portland, and then to Seattle and finally to Vancouver, British Columbia. Trains operating in this corridor are marketed as the *Cascades*, thus lending the corridor a second name, the Cascade Corridor. In 1994, Amtrak expanded the service in the Willamette valley by extending a Cascade Corridor train to Eugene from Seattle, via Portland. The introduction of Talgo trainsets in 1995, bringing a definite European flavor to the corridor trains, provided a higher level of comfort for passenger travel. These trainsets tilt when entering curves, allowing the train to maintain a higher speed, and thus reduce the running time between stations. In 2000, Amtrak introduced a second train running between Eugene to Seattle.

Figure 11-1. Salem Railroad Station Boardings and Detraining, 1985 to 2003



The *Coast Starlight* service (serving the entire west coast corridor) provides direct southbound service to Albany, Eugene, 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. According to information developed for the ODOT *1994 Oregon Rail Freight Plan*, total Oregon ridership on the *Coast Starlight* route reached a peak of over 591,000 passengers in 1981. From 1985 till 1992, passenger activity through the Salem Railroad Station remained basically flat on an annual basis, with a cumulative total for the eight-year period of 1985-1992 amounting to 182,871 boarding and deboarding passengers, an average of 26,785 passengers per year.

Enhanced Passenger Rail Service (EPRS)

In 1992, ODOT completed the *Oregon Transportation Plan* and a *Rail Passenger Policy and Plan,* which called for the eventual development of High Speed Rail (HSR) services from Eugene, Oregon to Vancouver, British Columbia, Canada. That same year, the states of Oregon and Washington applied for and received "corridor status" from the U.S. Federal Railroad Administration (FRA) to be part of the Federal High Speed Rail Program, one of only five such corridor designations nationwide at that time. Trains running over this corridor are marketed as the *Cascades*.

The long-range Enhanced Passenger Rail Service (EPRS) goal is reduce the running time between Portland and Eugene to 2 hours, and the travel time between Salem and Portland to 45 minutes in the corridor for intercity passenger service. This service would be provided by up to six round trips daily between Portland and Eugene, via Salem and Albany, nine round trips daily between Portland and Seattle, and four round trips per day between Seattle and Vancouver, B.C.

Interim, short-term goals for corridor rail passenger service include more frequent service between Eugene and Seattle and track improvements to allow maximum train speeds of 79 mph over longer portions of the line, which would aid in increasing train speeds in the corridor from the current average speed of 47 mph.

Feeder bus service to several communities east and west of the UP mainline, as well as Amtrak Thruway bus service along the length of the EPRS corridor, are already being offered in an effort to increase ridership on Amtrak's existing passenger rail service.

In addition to the High Speed Rail Task Force, the Mid-Willamette Area Commission on Transportation (MWACT) has been established by ODOT to oversee the coordinated efforts of valley and state jurisdictions to study, design, and recommend implementation of EPRS, as well as a comprehensive system of both passenger and freight transportation improvements (such as intercity bus service and intermodal facilities) in the corridor.

Goals, Objectives, and Policies

The Regional Rail System Element of the Regional Transportation Systems Plan (RTSP) provides a blueprint for development of an adequate, efficient, and safe system of rail facilities into and through the SKATS area. Since SKATS does not actually build, maintain, or operate any portion of the facilities comprising this system, the Regional Rail System Element is implemented through the cooperative adoption of regional goals, objectives, and policies contained in the regional Plan. In turn, the regional Plan must be consistent with the state and federal plans, policies, and mandates.

Goal 1: A regional rail system that provides an adequate level of service to passenger and freight rail consumers within the SKATS area.

Objective: *Support the provision of rail service within the SKATS area that adequately addresses service demands of both passengers and freight.*

Policy: Encourage continued and improved rail service to and from the SKATS area.

Policy: Promote the enhancement of intercity passenger rail service to provide an option to workers commuting along the I-5 corridor.

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

Policy 1: Encourage 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 regional rail transport serving the SKATS area.

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

Policy: 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 regional rail transportation infrastructure.

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

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

Goal 4: Staged infrastructure upgrades as part of the High Speed Rail Corridor Project.

Objective: *Support provision of rail-related infrastructure upgrades as part of the High Speed Rail Corridor Project.*

Policy: Encourage infrastructure upgrades needed for the successful implementation of the High Speed Rail Project.

Goal 5: Preserve rail rights-of-way that may be abandoned for future transportation-related uses.

Objective: *Reserve all regional rail corridor rights-of-way for transportation-related uses where viable.*

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

Goal 6: Multimodal connectivity to regional passenger rail terminal.

Objective: *Support improved multimodal access to regional passenger rail terminal.*

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

Policy 2: Develop and promote intercity and intracity public transportation system connections to the regional passenger rail terminal.

Recommended Improvements

Rail Infrastructure Improvements

It should be noted that the rail infrastructure within the SKATS area is privately owned and maintained by the railroads. Improvements are often made at the discretion of the railroads, with Oregon Department of Transportation (ODOT) involvement occurring whenever there are safety or capacity concerns or potential conflicts with other modes of transportation.

According to the *2000 Pacific Northwest Rail Corridor, Oregon Segment Operating / Capital Facilities Plan*, the Oregon Department of Transportation has identified $1.1 million in needed improvements along an approximately four-mile stretch within the Salem-Keizer urban area. These improvements include upgrading the track and crossing signals along the Union Pacific mainline to allow the passenger trains to operate at a faster speed.

Service Improvements

Freight Rail Service Improvements

Due to mergers and a change in marketing strategies, many of the nation's largest railroads, UP and BNSF 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 increasingly deployed on longer nonstop routes between major cities. Allocating equipment to address the switching needs of local sidings users, and to make up local trains, has become less of a priority. Several SKATS area corporations who ship by rail and operate sidings have experienced this difficulty.

Passenger Rail Service Improvements

The *Cascades* service (serving the Pacific Northwest corridor) was expanded in October of 1994 to include the Willamette Valley corridor. It provides direct southbound service to Albany and Eugene and direct northbound service to Portland and Seattle, Washington. It was further expanded in 2000, adding a second daily train between Portland and Eugene in each direction. The utility of this service for local commuters is problematic because the arrival and departure hours do not coincide with normal work schedules. Amtrak, with ODOT funding and support, is operating Amtrak Thruway motor coach services north to Portland and south to Eugene in an effort to build the passenger base for future expansions of rail service, and to provide mobility options in the time periods when a train is not available for travel in the corridor.

Ultimately, with a fully upgraded trackage, the running time between Portland and Eugene would be 120 minutes, with trains expected to reach speeds of up to 110 miles per hour. This would represent reducing the current Amtrak running time between the two cities of 155 minutes by 23 percent. Up to six round trips daily would be provided between Portland and Eugene, via Salem and Albany. There would also be nine round trips daily between Portland and Seattle and four round trips per day between Seattle and Vancouver, B.C. The estimated cost for the EPRS improvements required for full system build-out in Oregon has been estimated at roughly $450 million in 1994 dollars.

Along with the High Speed Rail Task Force, the Mid-Willamette Area Commission on Transportation (MWACT) has been attempting to the coordinate the efforts of valley and state jurisdictions to study, design, and recommend implementation of EPRS.

Support Facilities

Freight Rail Support Facilities

Additional improvements needed to these facilities will be identified as they arise by the owners and users of the facilities.

Passenger Rail Support Facilities

With the recent renovation of the Salem Railroad Station, and the funding for the 12th Street Pedestrian Promenade to connect it with the downtown Capitol area, the major need is to provide adequate transit service to the station to ensure that users of the station and rail service are afforded the widest possible range of modes.

Outstanding Issues

The principal outstanding issues for the Regional Rail System involve the uncertainty of available funding for the recommended trackage improvements and the lack of identified funding for expanding the service as envisioned in the *Oregon Rail Plan* (2001).

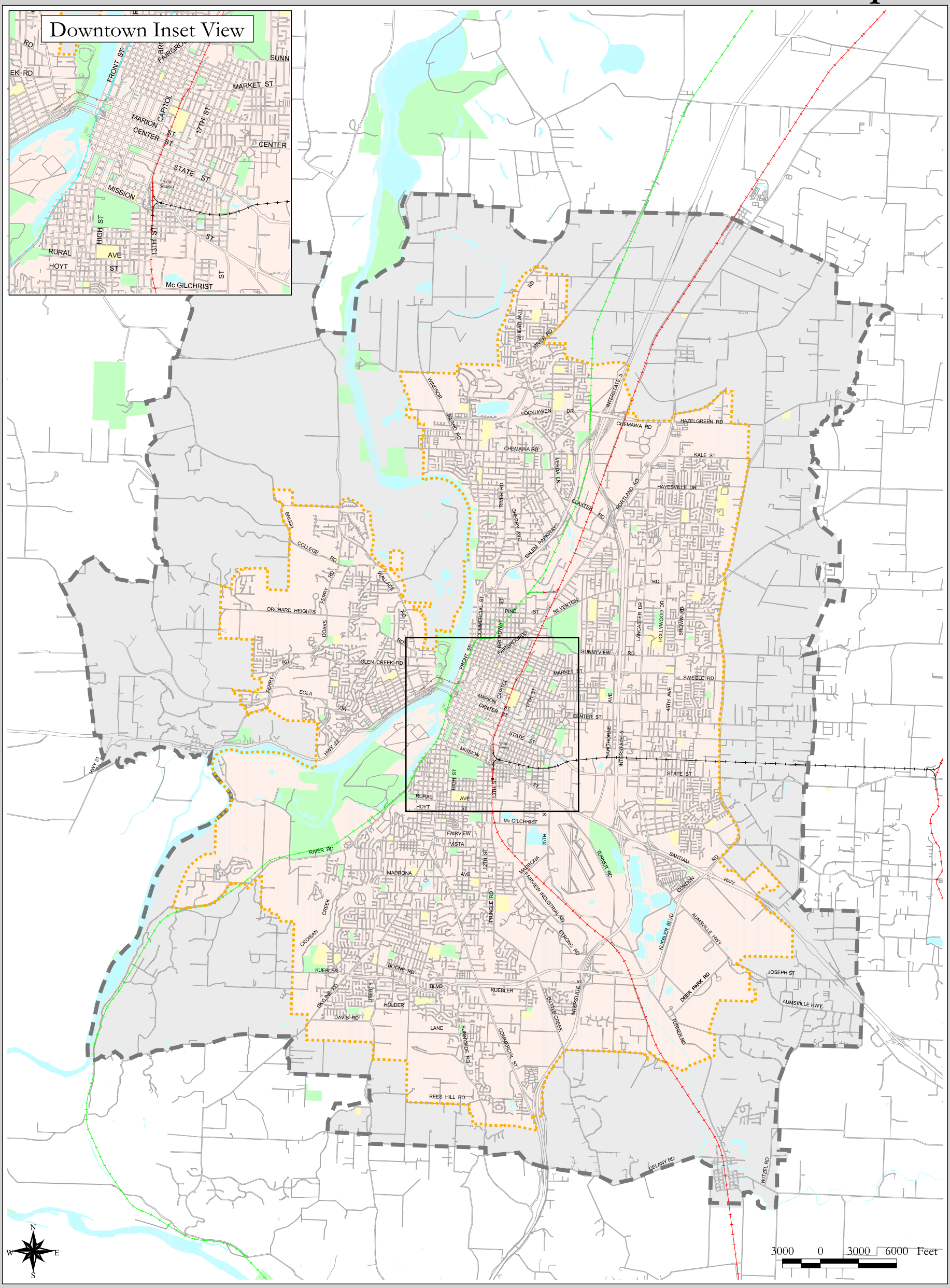
Long-term operations and maintenance of the Salem Railroad Station is another outstanding issue, as the Salem station is the only one in the valley to be owned by ODOT and not local jurisdiction(s).

Intercity rail service can provide a viable alternative to long-haul automobile travel, be it for commuting or for shopping/recreation trips. The potential and feasibility of additional intercity rail service along the I-5 corridor between the Salem-Keizer area and the Portland Metropolitan area to the north, and Corvallis/Albany to the south, is an issue that needs further study. Two routes are available to the north. One follows the route of Amtrak's passenger trains by using the UP line to the east of I-5 to Oregon City and then to Union Station in Portland. The second option is to use the P&W line that runs to the west of I-5 from Keizer to Wilsonville, where it would connect with Washington County's soon to be implemented commuter rail service linking Wilsonville and Beaverton.

Another continuing issue is the safety of railroad crossings. In the 1996 RTSP, a number of crossings were identified as needing improvement to reduce the possibility of serious collisions between trains and autos. These improvements have been completed and the 12th Street Pedestrian Promenade is currently under construction to address the safety concerns facing pedestrians in the 12th Street corridor. However, increases in the number and/or speed of trains along either of the rail corridors in the SKATS area should be tied with a reexamination of the safety of the crossings.

Other outstanding issues that cannot be fully addressed by this document include the preservation of land that is currently capable of being served by rail, and the reduction of land-use conflicts near existing rail lines.

2005 SKATS RTSP Update



Regional Railroad System

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

Map 11-1

Existing Regional Railroad System

- Union Pacific Railroad
- Portland & Western Railroads
- Union Pacific (Abandoned)
- Willamette Valley Railway (Abandoned &/or embargoed)

- Roads & Highways
- Rivers & Creeks
- Parks
- Schools

- Salem-Keizer Area Transportation Study (SKATS) Boundary
- Salem-Keizer UGB

01/07/05

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12 - Regional Intermodal Systems (Freight and Passenger)

Intermodal Freight Movement

Intermodal freight movements involve the transfer of cargo between two or more modes of transportation. This form of transportation can serve to reduce shipping costs and increase a shipper's mobility options, while using the existing transportation infrastructure in the most efficient manner possible. Intermodal freight movements increasingly involve the transfer of container encapsulated cargo or trailer encapsulated cargo between two or more modes of transportation. Container freight movements can include truck, rail, ship, or barge. A cargo container freight movement utilizing rail during a portion of its trip is referred to as a container on flatcar (COFC) movement. Trailer cargo employing an intermodal exchange between truck and rail modes are referred to as a trailer on flatcar (TOFC) movement.

The movement of bulk and break-bulk cargoes, such as petroleum and finished wood products, are also frequently intermodal, with goods being transferred between modes for shipment both into and out of the SKATS area. Intermodal bulk and break-bulk freight movements can use a combination of pipeline, truck, ship, barge, rail, or air modes to complete. Additionally, most air freight shipments and many parcel shipments are handled intermodally, relying on an air to truck, or truck to rail, interface.

Advantages associated with the intermodal shipment of freight can include: increased modal options for shippers, the potential for reduced costs, and a potential increase in the size of the market the shipper can reach cost effectively. The overall goal of the Intermodal Freight Movement System Element of the Regional Transportation Systems Plan (RTSP) is to ensure the safe, economical, and efficient transfer of freight between modes in the region.

This plan element:

- Identifies the key facilities and locations within the SKATS area where freight is either directly transferred from one mode (such as truck, rail, pipeline, aircraft, or barge) to another or loaded for intermodal transfer somewhere else (but within 50 miles);

- Defines the scope of intermodal freight operations within the SKATS area and indicates the impact of intermodal activities on SKATS area commerce.

- Establishes regional policies related to the safe, economical, and efficient transfer of goods between modes; and

- Identifies improvements to the regional intermodal freight movement system necessary over the next 20 years to achieve the established goals.

Intermodal freight is increasingly seen as a panacea by many shippers for their freight movement needs while transportation providers also realize numerous benefits from intermodal freight movement. The efficiency with which a shipment can be transported across the continent when trans-shipped between truck and rail modes has increased dramatically. Even more dramatic results are achieved when this technology is applied to intercontinental shipments, an especially important consideration given the potential Pacific Rim trading opportunities SKATS area firms enjoy.

However, as railroads attempt to centralize operations, including the on- and off-loading of rail cars, and "making-up" of trains, some SKATS area rail shippers are experiencing a decline in the frequency of direct rail service. A number of shippers are finding it more expeditious to containerize their former rail cargo and truck it 50 miles to the nearest intermodal rail yards (located in Portland) for trans-shipment. Air freight carriers already operate in a similar manner, as they trans-ship from truck to truck in Salem and transfer the cargo again from truck to airplane in Portland, some 50 miles away. Air freight carriers, however, typically transport cargo with a considerably higher unit value than goods transported by rail shippers. As such, the overall shipment costs for an air freight shipment make up a smaller portion of the product's as-delivered per unit cost. Conversely, products typically shipped by rail are frequently sensitive to increases in per unit shipping costs, with increases in these costs potentially placing the goods producer at a competitive disadvantage.

The Regional Intermodal Freight System

The SKATS area has several facilities that generate intermodal freight movements, ranging in size from those of statewide significance to those that are primarily of local importance (**Map 12-1**). SKATS area freight movements (including intramodal freight movements) that generate intermodal freight movements originating or terminating within 50 miles of SKATS area are addressed by this plan element.

The SKATS area's largest intermodal facility is a private operation specializing in lumber reloading. As such, it is also referred to as a "break-bulk" reload facility. The firm operates three facilities in Salem, one on Industrial Way NE, another on Cherry Avenue, and the third located on Front Street. These facilities reload approximately 200,000 tons of wood products annually, valued at approximately $55 million (1995 figure). The Cherry Avenue facility is served directly by the BNSF, but the firm ships its cars out of the area over both the BNSF and UP rail systems. Access to these lumber reload facilities can be problematic for large commercial vehicles, as inadequate turning radii and at-grade railroad crossings leading to these facilities reduce safety margins and operating efficiencies.

Two unused "circus ramps" exist in the SKATS area, one located on a spur track adjacent to the Salem Fairgrounds and another located at the southern end of UP's Salem rail yard. Both have been used to load trailers onto flatcars in the past, but are now in disrepair. While neither is advantageously located from a commercial access standpoint, they do retain value due to their

rail accessibility. No facilities for the reloading of intermodal freight containers currently exist within the Salem-Keizer area.

Other area intermodal freight operations primarily offering priority parcel delivery services include Amtrak (via the Salem Railroad Station) and the Salem Greyhound Bus Depot. Both of these facilities currently have limited cargo handling capabilities, and they are not optimized for freight transfer activities. Amtrak, however, does have the ability to handle palletized cargo with unit weights of up to 2,000 pounds, but must be notified in advance if a cargo of this weight is to be shipped.

Amtrak offers very competitive freight rates, and offers several scheduled trips per day between Eugene and Seattle to potential freight customers. In 1996, the Salem Railroad Station was dispatching well over 2,000 pounds of cargo per month.

The Salem Greyhound Bus Terminal processes over 400 pounds of cargo a day (1996 figure). While no dollar value is available for this cargo, it is often freight that is shipped "next bus out," allowing for same day delivery from other west coast cities.

Air freight operations are intermodal by their very nature. Among the approximately thirteen air freight and package express providers serving the SKATS area, only a handful maintain local facilities within the region. The balance of these firms provide local services from bases in Portland. Currently, only a limited amount of air freight is shipped directly to and from Salem's McNary Field via UPS through their contractor Sports Air and occasionally FedEx. FedEx is the only SKATS area air freight provider that maintains an intermodal facility with direct airside access to McNary Field. Although the exact quantities vary from day to day, an average of over 200 pounds of cargo are transferred daily. While the market for air freight services in Salem and Keizer is expanding, the existing method of intermodal transfer from truck to plane will likely remain adequate for the foreseeable future.

Several SKATS area goods producing firms that relied heavily on direct rail service in the past have begun to load their finished products into containers for trans-shipment to rail or marine transport in the Portland area. Much of this tonnage was shipped from the Salem area via refrigerated or standard boxcar, but the increased convenience, reliability, and flexibility offered by containers is gradually shifting traffic away from using direct rail service. No modern intermodal facilities that would allow for safe and efficient transfer of containers or trailers onto flatcars currently exist in the SKATS area. The Class 1 railroads serving the SKATS area believe that existing intermodal facilities in Eugene and Portland will continue to provide sufficient intermodal trailer and container capacity for SKATS area shippers for the foreseeable future.

Area shippers, however, have raised concerns that current updates to intermodal reload facilities in the Portland area, at both the UP's Brooklyn and Albina Yards, may not be sufficient for serving the long-term Willamette Valley intermodal transfer demands. This potential problem is exacerbated by the absence of any intermodal container or trailer reload facilities in the mid-Willamette Valley between Eugene and Portland.

Goals, Objectives, and Policies

Goal 1: An integrated regional system of intermodal transportation options for SKATS area shippers.

Objective: *Ensure adequate intermodal opportunities to SKATS area shippers as part of the of the regional transportation system.*

Policy 1: Support continued improvements to provide efficient access to intermodal facilities servicing SKATS area shippers.

Policy 2: Encourage efforts to maximize intermodal goods movement routing options within the region.

Goal 2: Maximize SKATS area intermodal efficiency.

Objective: *Provide enhanced intermodal efficiency within the region.*

Policy: Support appropriate development of needed intermodal freight transfer facilities in the SKATS area.

Recommended Improvements

The intermodal concept has garnered considerable interest from area shippers, though research to assess market demand and private sector interest in the development, use, and operation of any new public/private regional intermodal facility located within the Salem-Keizer area is necessary to determine the appropriate levels of improvements needed in the areawide intermodal system. Although opportunities for increased intermodal freight activities clearly exist within the SKATS area, potential users would have to be identified, and their specific needs assessed, before any additional actions are considered. The two primary intermodal freight transfer improvements that the SKATS area could potentially consider include improved truck-to-air connections and the creation of an additional truck-to-rail intermodal transfer facility capable of loading intermodal containers and trailers onto flatcars. The concept of an intermodal container and/or trailer reload facility in the SKATS area is not endorsed at this time by the Class 1 railroads serving the area, but they would, as common carriers, be required to provide service to such a facility's rail spur.

Intermodal links between various modes of transportation serving our communities should continue to receive consideration in both short and long term planning efforts. Continued development of an efficient and accessible intermodal system is crucial to the SKATS region's future economic vitality.

Freight Roadway Connections to Regionally Significant Intermodal Freight Facilities

Several highway improvements identified in the Regional Highway System Element would improve access to the two highest volume intermodal facilities in the SKATS area. Detailed descriptions of the individual projects can be found in chapters 8 and 15. Benefits to the Regional Intermodal Freight System facilities and their associated roadway improvements are briefly described below.

McNary Field

McNary Field's intermodal activities occur primarily in the terminal area, which is located at the intersection of 25th Street SE and Madrona Avenue SE. Several of these projects would also improve access to the UP's rail yard, in the event that "Road Railer" service became available to SKATS area shippers. The following projects would enhance access to the airport's terminal and, in most cases, improve safety in the process:

- McGilchrist Street SE from 12th Street to 25th Street
- Madrona Avenue realignment at 25th Street
- Madrona Avenue from 25th Street to Union Pacific Rail Line
- 25th Street, Mission to McGilchrist
- 25th Street, McGilchrist Street to Madrona Avenue

Cherry Avenue Industrial Park

The Cherry Avenue Industrial Park is home to the Cascade Warehouse intermodal lumber reload operation, and is also home to the local "cross-dock" freight transfer facilities of UPS, Viking Freight, and Roadway Express. The following projects would facilitate access to the Cherry Avenue Industrial Park area, and in so doing, would promote more efficient operations at all of the freight operations previously mentioned:

- Northgate Extension from Salem Industrial Drive to Portland Road
- Salem Industrial Drive

Intermodal Passenger System

Intermodal passenger facilities and services provide a convenient connection for people between various transportation modes, such as bus, carpool, vanpool, bicycle, walking, single-occupant vehicles (SOV), rail, and air. The improved interconnectivity between modes at these facilities greatly expands the universe of possible modal options and destinations readily

available to the traveler. Attractive intermodal passenger facilities also improve traveler convenience, comfort, and safety, and assist in creating a perception of seamless interconnection between modes.

Salem has a limited number of intermodal transfer facilities, yet they perform a vital function in our overall mobility. These facilities often serve as the primary passenger access points to the statewide and national intercity transportation network by providing intercity bus, train, and airport connections, while typically maintaining links with local transit and taxicab providers.

Intermodal Passenger Facilities Inventory

The SKATS area offers travelers three intercity intermodal transportation facilities. These facilities provide connectivity among airplane, intercity bus, and intercity rail transportation in the region. All are served by the local mass transit system. However, the ease of access to these facilities by modes other than the private automobile, such as walking or bicycling, varies greatly.

McNary Field

McNary Field, host to Salem's Hut Airport Shuttle Bus service, is located in southeast Salem. The airfield is roughly triangular in shape and is bordered by Mission Street to the north, Airway Drive and 25th Street to the west, and Turner Road to the east. The airport is approximately 749 acres in size.

The airport's terminal building is located on the west side of the airport, just east of the 25th Street and Madrona Avenue intersection. The terminal structure, built in 1952, is in generally good condition. The terminal building includes ticket counter space, a baggage claim counter, waiting area, and rest rooms. The primary tenants of this structure at the present time are Hut Limousine and a travel agent's office. The terminal's primary parking lot incorporates 88 paved parking spaces, with a graveled reserve lot providing an additional 60 spaces, for a total of 148 spaces. These spaces are pay-to-park, with a single computerized pay point located at the terminal door. An airport restaurant is approximately 1,000 feet south of the terminal, but access is circuitous, doubling the effective distance that must be traveled to reach the restaurant.

The airport terminal is located approximately four miles southeast of the Capitol Mall. Vehicular access to both Oregon Highway 22 and Interstate 5 is very good. Pedestrian access, in the form of sidewalks, is not adequate. However, due to the remoteness of the site from core residential and employment areas, it is unlikely that many passengers would choose to walk to McNary Field. Bicycle access, at present, is also inadequate, as there are no bike lanes along the portion of 25th Street that serves the terminal. Bicycle lanes are provided on Madrona Avenue between 25th Street and Commercial Street.

Transit service to McNary Field is provided via Salem Area Mass Transit District's (SAMTD) "State and Fairview" bus route number 7. Although the bus no longer provides direct access to the terminal, it does stop near the intersection of 25th Street and Madrona Avenue, approximately 600 feet from the terminal building. Direct terminal transit service is considered to be cost prohibitive at this time, but will continue to be evaluated in relation to anticipated

demand in downtown Salem. Additionally, CARTS "Canyon Connector" route stops at the 25th and Madrona intersection, providing service from communities in the Santiam canyon.

Greyhound Station

The Greyhound Bus Station is located on Church Street, between Marion and Center Streets. It occupies approximately one quarter of a city block. The terminal itself features a large waiting area, with a "crush" capacity of over 130 people. Four retail storefronts are located in the portion of the structure facing the street.

The intercity buses serving this facility enter via an alley located midway between Church and Cottage Streets on Marion Street and exit the facility onto Center Street. There is parking space for a maximum of six intercity buses to park on the site behind the terminal. There are also four additional parking spaces behind the terminal for individuals in private vehicles picking up express freight.

There are three dedicated taxi parking spaces located directly in front of the terminal's entrance, two of which are metered. Six additional metered spaces are located directly in front of the terminal building for private vehicles.

Seven SAMTD transit bus routes serve the Greyhound Station area: number 2 "Jan Ree"; number 3 "Capitola"; number 4 "Keizer East"; number 5a "Lancaster Mall"; number 5 "Royal Oaks"; number 17 "Haysville"; and number 25 "West Salem to Downtown". There is a SAMTD bus stop at the Greyhound Station location, located at the corner of Center and Church St, served by route number 17. The Courthouse Square Transit Center is one and a half blocks south of the Greyhound Station. This station, bounded by Chemeketa Street on the north, Church Street on the east, Court Street on the south and High Street on the west, has 19 of the 26 fixed routes operating through it on a pulse system.

Salem Railroad Station

The Salem Railroad Station offers travelers both intercity train and bus service. The existing Salem passenger rail station site is roughly rectangular in shape, being approximately 1,220 feet in length from north to south, and ranging from approximately 85 feet to 138 feet in width from east to west. This site also has an uninterrupted platform length of more than 1,100 feet, well in excess of the 800-foot minimum required for a facility of this type.

The northern half of the site contains a paved parking lot and half of the depot's passenger platform. The parking lot currently has a capacity of up to 150 cars.

The southern half of the site contains the Salem Railroad Station structure that dates from 1918, an 1880's "freight shed" that is no longer in use, the southern half of the passenger platform, a Union Pacific microwave communications tower, and a small wooded area that slopes down toward the Shelton Ditch. There is no vehicular circulation on the southern portion of the site.

The 1918 station structure is approximately 150 feet by 40 feet in size. The station has a current passenger capacity of approximately 160 people.

This facility 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 station is within a half-mile distance of Willamette University, Tokyo International University, and the Capitol Mall. Most of the sidewalk and bicycle lanes surrounding the existing depot site were installed as part of the Oregon Highway 22 overpass project and connect to existing bicycle facilities on the Pringle Parkway. The 12th Street Pedestrian Promenade, which is described in the Pedestrian chapter of this document, will provide a safe, convenient and attractive walking path from the station to the Capitol Mall and downtown areas.

SAMTD serves the Amtrak Station with route number 7, "State and Fairview." This route stops on Mill Street along the north side of Amtrak's north end parking lot on both the inbound and outbound trips. Route number 15, "Laurel Spring," goes through the area, stopping at the corner of 12th Street and Pringle Parkway as it leaves downtown. This bus stop requires potential passengers traveling from downtown to cross the intersection of 12th and 13th streets, and Oregon Highway 22, to reach the Amtrak terminal. Route number 6, the "12th & Sunnyside," and number 15, the "Laurel Spring," both pass directly in front of the Amtrak station on 13th Street when traveling towards the downtown Transit Center, but due to a very difficult street network and traffic pattern, does not have a designated stop at or near the station. Additionally, the CARTS "Canyon Connector" route travels on 12th Street near the station and will stop at the station as requested by passengers onboard, providing service from communities in the Santiam Canyon.

Amtrak, with the financial backing of ODOT's High Speed Rail Project, is also operating Amtrak Thruway motor coach services north to Portland and south to Eugene from this facility.

Courthouse Square Transit Center

Courthouse Square is the central hub for the SAMTD transit network, acting as the downtown terminus to allow passengers to transfer among most of the bus routes in the system. Nineteen of SAMTDs 26 bus routes operate through this transit center. In addition, CARTS (Chemeketa Area Regional Transportation System) and SMART (South Metro Area Rapid Transit, based in Wilsonville) make stops at Courthouse Square, providing a connection to communities outside of the Salem-Keizer area.

This facility opened in 2000 as a replacement for the on-street transit center that was located on High Street between Court and State. Courthouse Square is located on the block bounded by Court Street to the south, Church Street to the east, Chemeketa Street to the north and High Street to the west. Providing an attractive and convenient location for transit users, the site currently houses an office building on the southern part of the block, with room on the northern section of the block for another building potentially offering space for retail establishments.

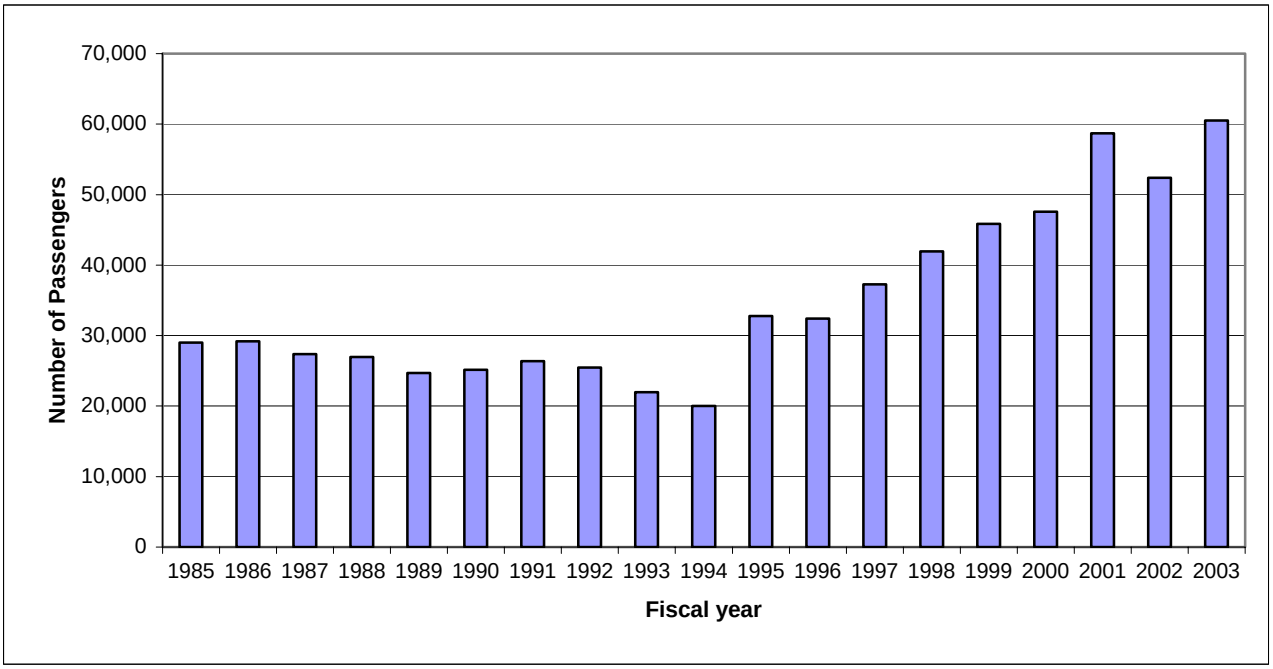
Intermodal Passenger Facility Demand

Current Demand

While many subjective observations can be used in the evaluation of an intermodal facility, the primary quantitative observation usually centers on the number of passengers served by the

facility. While numbers are available for use of the Salem Railroad Station, Greyhound and HUT Shuttle consider their ridership counts proprietary information and thus are not available for publication. **Figure 12-1** shows the growth in use of the Salem Railroad Station, which can be attributable to the increased service provided by the Cascades intercity corridor trains and the Oregon Thruway buses, funded by ODOT.

Figure 12-1
Salem Railroad Station Boardings and Detraining, 1985 to 2003



Future Demand

The ability to develop estimates for future passenger use of two of the Salem-Keizer area intermodal passenger facilities is problematic at this time. Current and future passenger use of McNary Field's Terminal will likely be limited to HUT Airport Shuttle passengers. Such future passenger estimates are considered proprietary by the company. Additionally, the situation for regularly scheduled passenger flights using the Airport is remote. Future passenger use estimates for the Greyhound Bus Station are dependent upon ridership estimates which are considered proprietary.

Estimates of future passenger levels at the Salem Railroad Station have been developed, based upon several key assumptions. These assumptions include the 2015 service level called for in the Plan of four round trip trains per day operating at 79 mph for the majority of their routes and a "natural" growth in ridership due to SKATS area population growth. Given these factors, passenger volumes through the Salem multimodal rail passenger facility in 2015 were estimated to be approximately 205,600.

Goals, Objectives, and Policies

Goal 1: An integrated regional system of intermodal transportation options for SKATS area passengers.

Objective: *Ensure adequate intermodal opportunities to SKATS area travelers as part of the regional transportation system.*

Policy 1: Promote efficient and convenient access to intermodal facilities servicing SKATS area passengers.

Policy 2: Maximize connectivity of intermodal travel options within the region.

Goal 2: Maximization of SKATS area intermodal efficiency.

Objective: *Provide enhanced intermodal efficiency within the region.*

Policy: Encourage development of consolidated intermodal passenger facilities in the SKATS area.

Recommended Improvements

All of the SKATS area's intermodal facilities are over 30 years old, with structural conditions varying greatly. Access to these facilities could also be improved. Convenience and ease of use are paramount to the success of intermodal facilities, and efforts to improve these qualities in our local facilities should also be considered.

McNary Field

McNary Field needs access improvements for modes other than single-occupant vehicles. Current transit access is reasonable given the demand, however, it could be improved to facilitate access to the site. At the very least, an "on demand" SAMTD transit stop on airport grounds nearer the terminal should be reinstated. The proposed addition of bicycle lanes on 25th Street SE between Madrona Avenue and Mission Street would also improve nonvehicular access to this site.

The terminal at McNary Field has sufficient capacity to operate effectively for the foreseeable future, and ongoing scheduled maintenance on the structure should be conducted. However, the costs of these maintenance efforts can be expected to rise over time as the existing structure ages.

Greyhound Station

A privately owned building, the Greyhound Bus Station generally appears to be in good condition structurally. The interior of the facility is well kept, as is the exterior. Other than

continued maintenance of the existing structure, there are no recommended improvements to the station.

Salem Railroad Station

Work on rehabilitating the Salem Railroad Station was completed in 1999 based on the recommendations presented in the 1995 *Salem Passenger Rail Station Study*. Funding was obtained by ODOT from ISTEA sources to complete the work including seismic upgrades, restoring the building of many of its original design features, and improving the circulation of the building and outdoor areas to facilitate an increase in ridership as forecast in *the Pacific Northwest Rail Corridor, Oregon Segment (2000)*. Recommended improvements are to increase the service to the station by SAMTD and CARTS, with the preferred option of locating a bus stop next to the Station itself. Further, coordinating the buses with the scheduled arrival times of the passenger trains will make transit a more attractive option for travel to the Railroad Station.

Courthouse Square Transit Center

This facility opened in 2000 and provides a convenient and attractive location for transferring to, or catching a bus. The southern part of the block includes a five-story building housing the offices of SAMTD in addition to several Marion County departmental offices. Future development of the northern part of the block to provide retail at the pedestrian level is encouraged.

Financial Analysis

A principal goal of any intermodal passenger facility, public or private, has to be that it is as self-supporting an operation as possible. Methods of generating revenues to support individual facilities may vary, but certain revenue streams, such as rent, concessions, and parking revenues, are common to all such facilities.

McNary Field

The terminal at McNary Field is supported by lease revenues from Hut Limousine and a resident travel agent, and limited concessions revenue. Fees collected by occasional terminal users also help support terminal operations. Parking revenues are applied toward general terminal area maintenance. Monies from the City of Salem's General Fund are also used to help pay for terminal maintenance.

The Federal Aviation Administration (FAA) sponsors the Airport Improvement Program (AIP). These funds could also be used for terminal improvements if local match funds can be located. One possibility for raising these local matching funds could be the implementation of a nominal facilities user charge, to be paid by passengers arriving from, or departing on, a journey from the terminal.

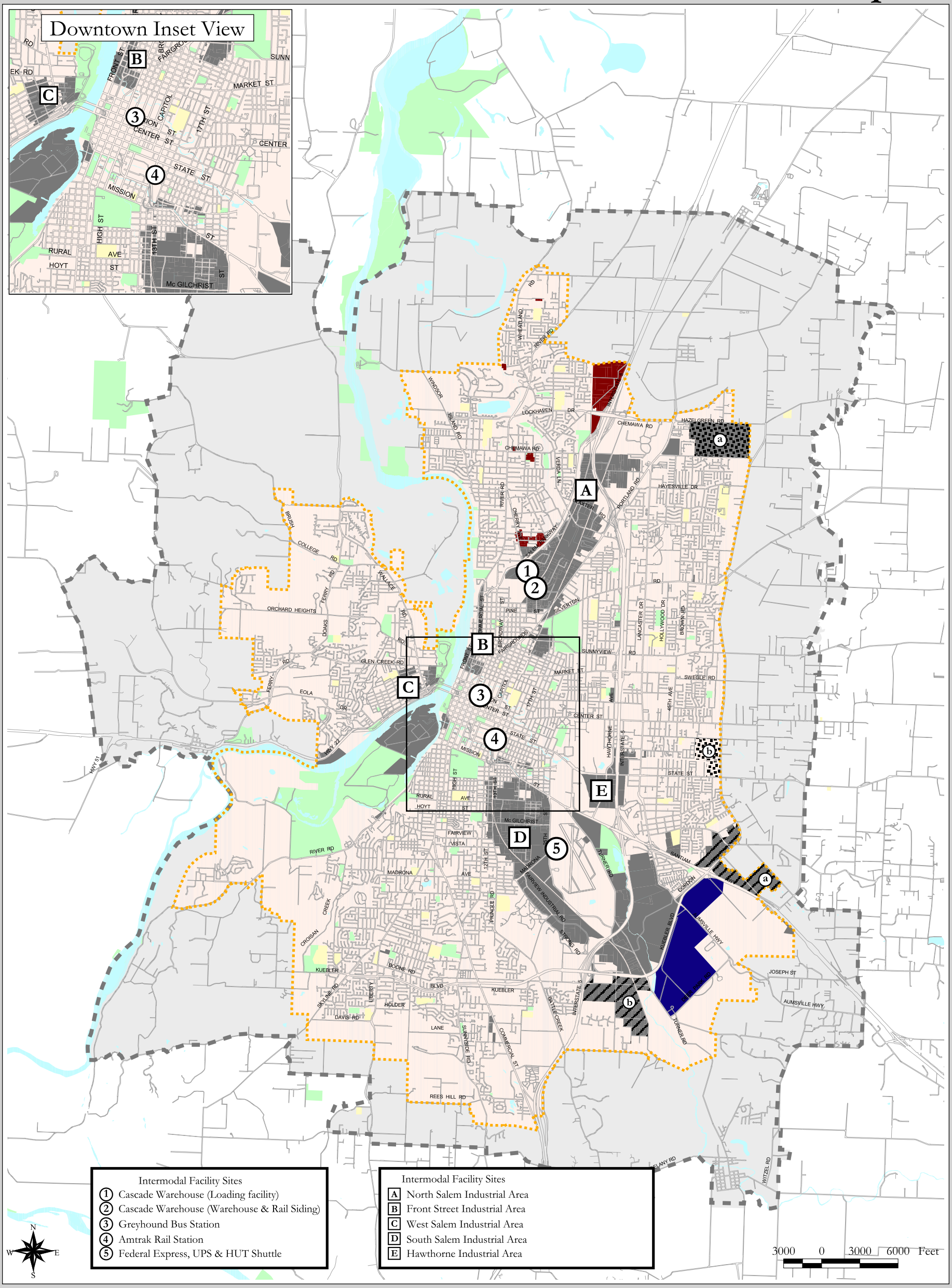
Greyhound Station

As a privately held facility, the Greyhound bus station does not receive any public funding for either construction/rehabilitation or maintenance.

Salem Railroad Station

Operational and maintenance funds for staffing the Salem Railroad Station come from ODOT. Long-term funding is not guaranteed, and a funding source will likely be necessary within the time frame of this plan to ensure that the Station is maintained adequately.

2005 SKATS RTSP Update



Intermodal Facility Sites & Industrial Areas

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

Map 12-1

Industrial Areas based upon Salem and Keizer Comprehensive Planning Designations (1997)

Minto Brown Island Note:
The Island is currently designated "industrial", however it is anticipated that there will not be future industrial uses.

- City of Salem Industrial (IC, IND)
- City of Keizer (CI, CLI, GI, IBP)
- City of Salem "Employment Center"
- Roads & Highways
- Rivers & Creeks
- Parks
- Schools
- Salem-Keizer Area Transportation Study (SKATS) Boundary
- Salem-Keizer UGB

01/24/05

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13 - Transportation System Efficiency Management

Introduction

Over the years, our reliance on the private automobile as our primary mode of transportation has grown substantially. Our dependence on the automobile in the region is evidenced by continual increases in automobile ownership, the number of drivers, the length and number of auto trips, and, as a result, a rise in vehicle miles of travel (VMT) per person (see Chapter 4). This trend of increased automobile use has led to mounting traffic congestion, spiraling transportation costs, potentially worsened air quality, and increasing numbers of traffic accidents. In addition, future projections indicate an ever-widening gap between vehicular travel demand and the physical capability of our existing transportation system to provide adequate levels of mobility (see Chapter 4). If we continue to rely almost totally on the automobile for our daily transportation needs, we will reduce our ability to get where we want to go, as well as degrade the overall quality of life in our community.

Adding auto travel lanes and constructing new roads has been the traditional approach to addressing increased transportation demand by attempting to "pave our way" out of congestion. However, at this point in time there are several reasons why merely adding additional highway capacity may not be the most efficient way of meeting our increasing mobility needs. First, highway construction is very expensive, and there are limited and dwindling sources of funding to finance those costs. Second, there are significant constraints associated with constructing new and widened highways, as well as growing citizen resistance to converting more and more of our urban land resource to pavement. Third, the negative impacts on our neighborhoods and communities associated with the disruption, fragmentation, air pollution, and danger that new and expanded highway facilities entail are often unacceptable. Finally, merely increasing the ability of the system to serve single-occupant vehicle (SOV) trips is not the most efficient use of our existing transportation infrastructure.

This Plan, therefore, seeks to provide more creative solutions than "business as usual" approaches in order to meet our future transportation needs. Steps need to be taken now to make more efficient use of our existing facilities and increase their overall capacity to move people and goods, and not merely vehicles.

There are several effective options besides highway construction for relieving traffic congestion and meeting increased travel demand. These include a wide variety of Transportation Systems Efficiency Management (TSEM) activities and programs designed to increase the efficiency of existing facilities and promote alternatives to the use of the single-occupant vehicle (SOV) without large-scale roadway construction. Congestion Management Systems (CMS), Transportation Demand Management (TDM), Transportation Systems Management (TSM), and

Intelligent Transportation Systems (ITS) are components of strategies designed to improve system efficiency, modify travel demand, and expand our options for travel behavior choices.

CMS is a systematic process to monitor and analyze congestion in major travel corridors and develop and implement strategies (e.g., TDM/TSM) that alleviate congestion and enhance system performance. CMS also includes actions such as parking management and spreading demand away from the peak periods.

TDM actions increase system efficiency by managing and reducing automobile trip demand and maximizing the movement of people and goods, not just vehicles. Typical TDM strategies include ridesharing programs, vanpooling, buspooling, promoting alternative work schedules, travel-time shifting (out of the peak period), telecommuting, and increasing bicycle, pedestrian, and transit use.

TSM actions increase system efficiency by improving flows and removing bottlenecks on existing transportation facilities. Typical TSM strategies include improving traffic signalization, adding turn lane and intersection improvements, removing on-street parking (sometimes only during peak hours), adding transit turnouts and signal pre-emption, and constructing bicycle and pedestrian facilities.

ITS actions increase system efficiency by providing the infrastructure to support several of the TDM and TSM strategies mentioned above, such as improving traffic signalization, signal pre-emption, facilitating the dispersal of information to the traveler for better route selection, and informing agencies and travelers of incidents occurring on the regional transportation system.

Vehicle Hours of Travel (VHT) and Vehicle Miles of Travel (VMT) Reduction Measures are typically modifications to SOV travel demand and trip length and can involve changes in land use patterns coupled with TDM and CMS programs and strategies that serve to reduce daily VMT. These measures can employ both "carrots," such as incentives and subsidies for using a mode other than the automobile, and "sticks," such as disincentives to automobile use, such as parking surcharges or congestion pricing.

Purpose of the Regional Transportation Systems Efficiency Management Chapter

One of the goals of the Plan is to ensure a balanced transportation system that provides viable alternatives to the single-occupant vehicle and makes more efficient use of our existing infrastructure. To that end, the Regional Transportation Systems Efficiency Management Element of the RTSP is designed to:

- establish a regional policy framework to ensure a balanced transportation system and to make the most efficient use of our existing transportation facilities;

- inventory regionally significant Transportation Systems Efficiency Management (TSEM) activities and programs that are currently in place and identify opportunities for

expanding, improving, and/or creating effective regional efficiency management programs and activities;

- identify and evaluate a "tool box" of TSEM alternatives and strategies to provide information to providers, business and community leaders, citizens, and other interested parties on specific strategies and programs to reduce VMT and increase the efficiency of our regional transportation system; and

- identify an appropriate package of recommended TSEM actions to ensure a balanced and efficient regional transportation system.

Implementing Transportation Systems Efficiency Management Strategies and Programs

The 1992 Oregon Department of Transportation interagency working group developed a listing of key findings and necessary, supportive actions to ensure the successful application and implementation of Transportation Systems Efficiency Management (TSEM) strategies. The SKATS/City of Salem TDM/Transit Subcommittee evaluated these findings for suitability and appropriateness in relation to the Salem-Keizer Urban Area and identified a series of general characteristics and supportive conditions for successful applications of TSEM improvements and actions.

General Characteristics for Successful TSEM Applications

- Moderate to heavily congested commute corridors

- Well defined, concentrated residence-to-work-site travel patterns with identifiable trip origin and destination points

- Major employment destination sites or defined clusters of smaller employment sites

Supportive Conditions for Successful TSEM Applications

- Constrained parking at the work site

- Employee residences and personal activity opportunities (retail, service, professional office, etc.) within five miles of work site (potential bicycle trips)

- Employee residences and personal activity opportunities within 1/4 mile of work site (potential walk trips)

- Residences, employment sites, and personal activity opportunities clustered at nodes or located along corridors with transit and pedestrian-supportive urban designs (potential transit trips)

Scenarios for the Successful Implementation of TSEM Strategies

- Strategies are more effective if coupled with complementary strategies (e.g., park-and-ride facilities are more likely to be successful if linked to express or limited stop transit service).

- An efficient Demand Management/Rideshare program should offer the potential user some combination of the following:

    - improved transportation alternatives (e.g., increased bus service);
    - incentives to use alternative modes (e.g., discount transit fares);
    - disincentives to single-occupant vehicle travel (e.g., parking fees);
    - removal of impediments to using alternative transportation modes (e.g., guaranteed ride home programs); and
    - employer support for Demand Management/Rideshare options identified as useful by employees (e.g., creation of a company TDM program).

- Demand Management/Rideshare programs are most likely to be successful where there are financial incentives to encourage commuter participation (e.g., transportation allowances).

- Congestion, parking costs, etc., often need to be perceived as unacceptable before voluntary Demand Management/Rideshare options become widely attractive to commuters.

- Marketing efforts should target those commuters who are interested in or open to altering their commute pattern (e.g., market segmentation). Time and resources may not be best used in trying to change the minds of those who are committed drive-alone commuters.

- The target area for a TDM program should be clearly defined (e.g., the Downtown/Capitol Mall area). The largest scale Demand Management/Rideshare experiments have been at the subarea level and have been characterized by significant reductions in certain types of vehicle trip rates.

- The larger the scope of the program, the more important it is that there is cooperation among jurisdictions, private employers, and the public. Coordinated efforts among agencies and transportation providers are more likely to succeed than overlapping efforts.

- Demand Management/Rideshare Programs should have strong local financial support to ensure that jurisdictions and private employers support the program (e.g., local matching funds and employer subsidies to supplement state and federal funds).

Regional Transportation Systems Efficiency Management (TSEM) Programs and Activities

This section presents a detailed description of the existing "regionally significant" TSEM programs and activities in the region, such as TDM and TSM activities, including the regionally significant park-and-ride/pool facilities that serve the residents of the SKATS area. It should be noted, however, that the status of the programs and activities described in this section are subject to change. Consequently, any relevant changes will be reflected in periodic updates to this Plan.

TDM Programs

Transportation Demand Management programs increase the efficiency of the existing and future transportation system by managing and reducing the number of automobile trips and maximizing the movement of people and goods. Of the many strategies that are associated with TDM programs in general, discussion of the Regional TDM Program and the Regional Rideshare Program are presented below.

Regional TDM Program

The Regional TDM Program is designed to complement and enhance the efforts that began with the Regional Rideshare Program in 1975 (described in detail below). The TDM program started in 1994 and is funded through the federal Surface Transportation Program as well as local funding sources. The program currently includes four components, listed below, which are described in the following paragraphs.

- Employer / Employee and Community Outreach
- TDM Program Development and Evaluation
- TDM Program Coordination with Other Agencies
- Regional Rideshare Program

<u>Employee / Employer and Community Outreach</u>

An essential part of the TDM program is informing employers and employees that there are options available for the commute to work. The overall goal of this service is to coordinate the development and implementation of transportation alternative programs, activities, and incentives in the Salem-Keizer area. Currently, 90 worksites work with Mid-Valley Rideshare to offer Employee Transportation Programs. These programs usually have multiple elements to them, to allow the employer the opportunity to tailor the choices to meet the needs of the employees. Possible components of an Employee Transportation Program include:

- New employee introduction package: Includes two free bus passes and a form to enroll in the carpool matching program.
- Reduced price bus passes: Monthly passes on Cherriots at a discount.

- Preferential / Reduced Carpool Parking: For those employees joining or starting a carpool, the city of Salem has designated parking spaces for carpools. In addition, some area businesses and agencies offer a similar service in their private parking lots.
- Bicycle and Pedestrian Incentives: Designed to encourage employees to walk or bike to work. Several companies in the area offer on-site bicycle lockers for their workers. In addition, the City of Salem has a number of lockers for rent in downtown.
- Flexible work hours.
- Teleworking.
- Emergency Ride Home program: For employees enrolled in the program who have an emergency that requires the employee to leave immediately, this program would pay for the taxi fare.

In addition, another part of the TDM program's outreach is to inform employers, employees and the public of the benefits and possibilities that are part of Employee Transportation Programs specifically and TDM strategies in general. These tasks include:

- Assist major employers to develop and establish a comprehensive employee transportation program.
- Explore the feasibility of developing a Transportation Management Association.
- Promote incentives and disincentives for the use of rideshare, transit, bicycling, and walking by employees and the community.
- Assist in the development and establishment of telecommuting programs.
- Promote alternative work hours.
- Participate in community activities to promote TDM strategies where appropriate.

In addition, on a regular basis, the TDM staff meets with public and private sector employers and employees to develop transportation programs and provide information on transportation alternatives.

TDM Program Development and Evaluation

TDM Program Development and Evaluation includes:

- Research TDM strategy related incentives/disincentives and programs elsewhere in the nation for potential applicability for the region. Determine implementation process for these incentives/disincentives to employers and employees.
- Develop marketing promotions.
- Produce newsletter to promote carpool/vanpool use and other transportation alternatives to the single-occupant vehicle, energy conservation and air quality for distribution to policy makers, local communities, businesses and the public.
- Retain existing "public" carpool parking and locate additional "on-street" carpool parking spaces in the Downtown/Capitol Mall area, as the demand warrants.
- Develop and implement a Park-and-Ride plan in coordination with Salem Area Mass Transit District for the Salem-Keizer Urban Area.

- Identify and develop potential park-and-ride sites within Marion and Polk counties and coordinate the designation and/or construction of these sites with the appropriate jurisdictions.
- Continue to improve the current computer matching program in order to meet the needs of prospective clients and cost effectiveness of the program.
- Improve program monitoring and evaluation procedures to assess the overall effectiveness of the program and the special marketing promotions.
- Develop ordinances to require TDM strategies in lieu of other mitigation measures in Traffic Impact Analysis.

TDM Program Coordination with Other Agencies

The Regional TDM Program coordinates transportation related activities with various other state, regional, and local transportation agencies and committees. The intent of this program is not to duplicate efforts of other agencies or committees. The activities include:

- Coordinate with TDM programs throughout Oregon and Washington to share information and coordinate programs and promotional activities.
- Assist Salem Area Mass Transit District with improvements in transit services and park-and-ride facilities
- Participate with other TDM professionals throughout the state to educate and promote transportation alternatives to the business community, the pubic and state and local policy makers.

Regional Rideshare Program

The main program offered under the Regional TDM umbrella is the Regional Rideshare Program. 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 program objective was to alleviate parking demand in the Central Business District (CBD) and Capitol Mall area by providing transportation alternatives to driving alone to work. By the end of 1977, the program had expanded to include a regionwide carpool matching service, preferential parking and reduced parking fees for carpools, park-and-ride facilities connecting to Cherriots bus service, the Cherriots 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 administrated by the MWVCOG until July 1979. In July 1979, the city of Salem Public Works Department assumed responsibility for administration of the program. The Regional Rideshare Program is funded through the federal Surface Transportation Program of the Transportation Equity Act for the 21st Century (TEA-21) and local funding sources.

Currently, the Regional Rideshare Program's major components are the Carpool Matching Services and the Vanpool/Buspool Referral Services, described in detail below.

Carpool Matching Service and Participation. Carpooling involves the use of an employees' private vehicle to carry fellow employees to work, either using one car and sharing expenses, or rotating vehicle use so that no money changes hands. The city of Salem provides a computerized carpool matching service and offers a 24-hour Rideshare Hotline for potential carpool participants within an 80-mile radius of the Salem-Keizer Urban Area. Applicants are matched with those individuals commuting in the same direction and receive a computer printout or e-mail containing names and addresses of other participants. The average daily round trip commute for carpool participants was approximately 77 miles in 2003-2004.

The city of Salem processes approximately 60 potential carpool applications a month. As of February 2005, there were 2,236 applicants in the rideshare database.

Vanpool/Buspool Referral Service. Vanpools and buspools can be company sponsored, third-party, or owner operated. The city of Salem provides a referral service to bring commuters and van and buspool providers together. Currently, there are 20 vanpools and two buspools registered with the Mid-Valley Rideshare program and available to the public. The number of vanpools and buspools operating in the region at any one time tends to fluctuate based upon demand. Vanpools typically carry eight to 15 passengers and buspools carry 45 to 55 passengers; both usually operate at or near capacity. As of February 2005, there were approximately 370 commuters who participated in vanpools and buspools.

Preferential Parking for Carpools and Vanpools. Complementary to the carpool/vanpool referral service, the city of Salem currently gives carpools priority for use of over 300 on-street parking spaces for carpools and reserves ten parking spaces for vanpools. The preferential on-street parking spaces are indicated by signs and are located in the Downtown/Capitol Mall area (see **Map 13-1**).

Participants of the carpool/vanpool referral service can also apply for reserved parking spaces located in one of the city's three downtown parking structures (Pringle, Marion Parkade and Liberty Square). Currently, carpool and vanpool participants can obtain reduced parking fees for reserved carpool/vanpool parking spaces in the Pringle Parking Structure.

Regional TSM Programs

Transportation System Management strategies aim to increase the efficiency of the transportation system by addressing bottlenecks and flow problems inherent in the built facilities. Three current and continuing strategies pursued in the Salem-Keizer area are the Regional Parking Management System, the Regional Park-and-Ride/Pool System, and the Regional Traffic Signal Coordination and Control System. Additional TSM methods are used on a case-by-case basis to address issues that arise along a given corridor, or that impact a

certain intersection. These strategies are discussed in detail in the following sections, with the Regional Traffic Signal Coordination and Control System discussed in the ITS section of this chapter.

Regional Parking Management System

Introduction

The appropriate management of the region's parking supply can be a useful tool in the effort to effectively balance the regional transportation system among the various modes of travel. Too abundant a supply of free parking can contribute to creating a demand for automobile trips that both exceeds the ability of the region to provide adequate roadway capacity and causes a degradation in our air quality and overall livability. Too limited a supply of parking can cause perceptions of inconvenience and lack of accessibility to homes and businesses. The challenge is to manage the overall parking supply and demand in such a way that adequate levels of parking are available to prevent detrimental impacts on the economic health of the community, while at the same time not "over building" the supply of parking such that it fosters an increased demand for automobile trips and consumes too much valuable urban land that could be put to other uses.

As the MPO for the Salem-Keizer urban area, SKATS does not directly construct, plan for, or control the parking supply in the region. Those activities are the responsibility of the individual local jurisdictions. The Regional Transportation Systems Plan can, however, promote a regionwide strategy for the management of the regional parking supply and establish policies that support the overall parking management strategy.

Current Parking Supply

The last survey of the parking supply in the Salem-Keizer area was completed in 1995. At that time there were an estimated 153,393 parking spaces available in the region associated with the Salem CBD, commercial, industrial, educational, government, and health-related land uses (**Table 13-1**). This parking supply translates into approximately 0.84 parking spaces per capita for 1995.

Table 13-1
Parking Supply Calculations

Land Use Designation	1995		2015	
	Percent Developed	Est. Parking Spaces	Percent Developed	Est. Parking Spaces
CBD	100%	12,050	100%	14,050
Commercial	85%	69,686	100%	81,894
Industrial-Commercial	79%	7,266	100%	9,197
Industrial	61%	27,315	82%	36,719
Education	70%	9,739	90%	12,522
Government	32%	25,043	52%	27,547
Health	50%	2,294	70%	3,212
Total		**153,393**		**185,141**
Population		182,000		242,700
Parking per Capita		0.84		0.76

Source: Kimley-Horn and Associates, Inc., Parking Management and Conversion Plan, June 1995

Regional Parking Management Strategy and Policies

The overall parking management strategy for the SKATS area is to ensure an appropriate supply of parking opportunities in the region that:

- maintains and promotes economic vitality and neighborhood livability within the region; and

- contributes to the balancing of travel demand within the region among the various modes of transportation available.

Changes in the Regional Parking Supply

As a result of the implementation by the local jurisdictions within the region of parking management policies consistent with those contained in this Plan, as well as specific code reductions related to the level of parking required for new development, the regional parking supply can be successfully managed so that an adequate, but not overstocked, supply of parking would exist in the region. It is estimated that 185,141 parking spaces associated with the Salem CBD, commercial, industrial, educational, government, and health-related land uses will be available in 2015 (**Table 13-1**). This parking supply translates into approximately 0.76 parking spaces per capita reduction in the overall regional parking supply that complies with the Oregon Transportation Planning Rule (TPR) requirement of a 5 percent reduction in certain types of parking per capita over the next twenty years.

Regional Park-and-Ride/Pool System

Overview

Park-and-ride/pool facilities serve as collection points where individuals can park their vehicle or be dropped off and then transfer to a multi-occupant vehicle or another mode of transportation (usually transit) in order to reach their trip destination. These facilities typically provide access to public transportation, such as bus or rail, and may also serve as staging areas for carpools, vanpools, or other ridesharing services (park and pools). Park-and-ride/pool facilities can either be designated or informal sites on public property or joint-use portions of lots on privately owned property, such as shopping centers and churches. Designated sites are signed, indicating the location of the site and, in the case of joint-use facilities, the portion of the site set aside for parking use. Some designated sites operate under a cooperative agreement between the owner of the site (e.g., Fred Meyer Store) and an administrative agency (e.g., Salem Area Transit District). Informal sites are not signed and operate under an informal agreement with the property owner who allows use of a portion of the site for parking, as long as it does not interfere with the daily function of the site. The size of a park-and-ride/pool facility may vary from only a few spaces in sparsely populated or less heavily traveled corridors to hundreds of spaces in lots served by major transit routes.

Park-and-ride/pool facilities serve various functions depending on their location and the type of connection provided. Lots located outside of the central business district (CBD) are often referred to as "fringe" or "peripheral" facilities. These lots typically serve downtown commuters and are usually served by public transportation. Fringe parking can help reduce parking and SOV travel demand within the CBD or other areas where demand for parking and roadway space is generally high. Other types of park-and-ride/pool facilities collect long distance commuters near the origin of the trip and, by eliminating much of the SOV trip length, are more effective at reducing the number of vehicle miles of travel (VMT). These facilities are typically located near the intersections of freeways or other major roads and provide a convenient transfer point for carpools, vanpools, and buspools.

A variety of supporting facilities and services, such as signing and marketing, promote park-and-ride/pool lot use. Sites can be developed to facilitate access by walking and bicycling by providing connecting sidewalks, access paths and bicycle lanes, and bicycle parking and storage facilities. A variety of personal services can also be provided at major lot locations (e.g., convenience stores, day care, banks, dry cleaning services).

Regional Park-and-Ride/Pool System Facility Inventory

During August 1994, SKATS staff conducted a field survey of regionally significant park-and-ride/pool facilities. This inventory is depicted in **Table 13-2**. The regional park-and-ride/pool system consists of 17 sites (designated and informal) that are located in and around the SKATS area. Twelve sites are located within SKATS (**Map 13-2**) and five are located outside the SKATS boundary (**Map 13-3**). The park-and-pool facilities that are located outside of the SKATS area generally serve as staging areas for carpool and vanpool commuters who live outside and are employed within the SKATS area.

Table 13-2
Park and Ride Locations in the Salem-Keizer Area

Site Name	Address/Location	Spaces	# Parked Vehicles	Signed	Striped	Paved	Lighting	Classification
West Salem								
Wallace Road/Brush College Road	Northwest corner of Wallace Road @ Brush College Road.	50	23	yes	yes	yes	yes	Designated
Rickreall	9 miles west of Salem on Rickreall Road, 0.2 miles west of Hwy. 99W	20	5	no	no	no	no	Designated
Kings Valley Hwy./Hwy. 22	13 miles west of Salem, southeast corner of Hwy. 22 @ Hwy. 223	15	7	no	no	no	no	Informal
East Salem								
Christ Lutheran Church	4440 State Street @ 44th Place intersection.	15	2	no	yes	yes	no	Informal
Grace Baptist Church	4197 State Street @ Elma Street intersection.	20	2	no	no	no	yes	Informal
State Motor Pool Express bus service	1100 Airport Road @ Ryan Drive intersection	110	93	yes	yes	yes	yes	Designated
Market Street Express bus service	Northwest corner of Market Street @ Hawthorne Avenue	180	75	no	yes	yes	yes	Designated
Stayton Road/Hwy. 22	12 miles east of Salem, southeast corner of Hwy. 22 @ Cascade Hwy.	94	18	yes	yes	yes	yes	Designated
Silver Falls Hwy./Hwy. 22	5 miles east of Salem, northeast corner of Hwy. 22 @ Hwy. 214	15	0	no	no	yes	no	Informal
North Salem								
Fred Meyer North	2855 Broadway Street NE @ Salem Parkway intersection	20	15	yes	yes	yes	yes	Designated
People's Church	4500 Lancaster Drive NE @ Jade Road intersection	20	1	no	yes	yes	yes	Informal
North Salem Baptist Church	4290 Portland Road NE, north of Hyacinth Street intersection	approx. 25	5	no	yes	yes	no	Informal
Safeway	4990 North River Road @ Chemawa Road intersection	25	3	no	yes	yes	yes	Informal
South Salem								
Sunnyside/Turner Road Interchange	Southeast corner of Delaney Road @ Squirrel Hill Road.	60	18	yes	yes	yes	nearby	Designated
Fred Meyer South	3450 Commercial Street SE @ Madrona Avenue intersection	approx. 30	9	no	yes	yes	yes	Informal
Walmart Express bus service	5250 Commercial Street SE @ Baxter Road intersection	approx. 70	30	no	yes	yes	yes	Designated
Rite Aid/Albertson's Express bus service	4450 Commercial Street SE @ Hilfiker Road intersection	approx. 50	28	yes	yes	yes	yes	Designated

Goals, Objectives, and Policies

The Regional Transportation Systems Efficiency Management Element (RTSEME) of the Regional Transportation Systems Plan (RTSP) provides a framework for developing an efficient and balanced regional transportation system for the SKATS area. Since SKATS does not actually build, maintain, or operate any portion of the facilities and services comprising this system, the RTSEME of the RTSP is implemented through the cooperative adoption of regional goals, objectives, and policies contained in the regional Plan. In turn, the regional Plan must be consistent with state and federal plans, policies, and mandates. The goals, objectives, and policies contained in the RTSEME of the RTSP are geared toward meeting the long-term mobility needs of the citizens and businesses in the SKATS area by promoting an increased variety of viable travel choice options in the region and making the most efficient use of existing transportation capacity and infrastructure.

Goal 1: A program of transportation systems efficiency management strategies and actions implemented on the regional transportation system in the Salem-Keizer urban area.

Objective 1: *Establish a program of transportation systems efficiency management strategies and actions to be implemented on the regional transportation system.*

Policy 1: The Regional Transportation Systems Efficiency Management Element (RTSEME) of the Regional Transportation Systems Plan (RTSP) shall establish a program of transportation systems efficiency management strategies and actions to be implemented incrementally on the regional transportation system over the 20-year planning horizon.

Policy 2: The strategies and actions contained in the RTSEME shall be evaluated and updated on a recurring basis in order to respond to the changing mobility needs of residents and businesses in the Salem-Keizer area.

Objective 2: *Support Transportation Systems Efficiency Management (TSEM) strategies and actions on the regional transportation system that provide the greatest level of mobility for residents and businesses in the Salem-Keizer area.*

Policy 1: Support the continued allocation of regional funds to successfully implement the Regional Rideshare Program.

Policy 2: Cooperatively seek additional revenue sources to ensure the development and implementation of TSEM strategies and actions that provide cost-effective transportation alternatives to the single-occupant vehicle and peak period travel demand.

Goal 2: A regional transportation system that maximizes the safe and efficient utilization of existing and planned transportation capacity and infrastructure.

Objective 1: *Maximize the efficient use of existing and planned regional transportation capacity and infrastructure.*

Policy 1: Promote the implementation of Transportation Demand Management (TDM) strategies and programs in the Salem-Keizer area to reduce both reliance on the single-occupant vehicle as well as peak period vehicle demand on the regional transportation system.

Policy 2: Promote the implementation of Transportation Systems Management (TSM) and Congestion Management System (CMS) strategies and actions to improve the operating efficiency of the existing regional transportation infrastructure in the Salem-Keizer area.

Policy 3: Implement TSEM strategies and actions in lieu of major widening projects on roadways identified as part of the regional transportation system unless significant constraints or insufficient improvements in service levels can be demonstrated.

Policy 4: Support the efforts of implementing jurisdictions to adequately maintain and maximize the useful service life of the existing regional transportation infrastructure.

Goal 3: A balanced regional transportation system that affords the residents and businesses in the Salem-Keizer area a range of viable modal options for the movement of people and goods.

Objective 1: ***Provide a regional transportation system that employs a variety of viable modes to facilitate options in personal and commercial travel choices.***

Policy 1: Promote the design and development of a regional transportation system infrastructure that incorporates vehicle, transit, walking, bicycling, and rideshare modes.

Policy 2: Promote the development of land use patterns and architectural designs that facilitate multimodal travel options.

Policy 3: Identify transportation system improvements that effectively accommodate and enhance the use of a variety of modal options.

Goal 4: A public well informed about the availability, cost, and tradeoffs of transportation and travel behavior choices in the Salem-Keizer area.

Objective 1: *Encourage public education and information programs and activities that increase public awareness of the available transportation and travel choice options in the Salem-Keizer area.*

Policy 1: Support the development and provision of public educational opportunities and informational materials in order to increase public awareness of transportation efficiency and travel choice options available in the SKATS region

Policies for the Regional Parking Supply

Policy 1: Where practicable, existing on-street parking will be removed from the regional system in preference to acquiring new rights-of-way for the addition of travel lanes. Efforts shall be made to mitigate the impacts of such removals in those areas where abutting properties have no ability to provide their own supply of adequate off-street parking or where on-street parking is needed to support an existing business district.

Policy 2: An adequate supply of carpool and vanpool parking spaces should be provided in the region to accommodate the demand for such parking. The provision of these spaces shall have preference over those intended for general purpose uses.

Policy 3: Jurisdictions within the region should provide for the restriction of overflow parking impacts in residential areas through the use of residential parking permit programs and other means as appropriate.

Policy 4: New development in the region should provide sufficient access to an appropriate supply of off-street parking subject to the standards established by the local jurisdictions within the region. Those jurisdictions are encouraged to develop parking maximums that clearly reflect an intent to effectively manage the overall parking supply.

Policy 5: Major regional activity centers should be effectively accessible by transit, bicycles, and pedestrians; should provide priority spaces for carpools when practicable; and should meet their parking requirements through a combination of shared, leased and new off-street parking opportunities, as well as automobile demand reduction strategies.

Policy 6: Local jurisdictions within the region are encouraged to allow owners and lessees of nonresidential properties to satisfy off-street parking requirements by implementing plans that provide for and promote the increased use of modes of travel other than the automobile by both employees and customers.

Recommended Improvements

Specific TSEM improvement projects and activities associated with the regional transportation systems called for in this Plan address all four of the system efficiency methodologies identified in this chapter, including Congestion Management Systems (CMS), Transportation Demand Management Systems (TDM), Transportation Supply Management Systems (TSM) and Intelligent Transportation System (ITS) facilities. Several of these methodologies are new additions to the toolbox of strategies that the region will use now and in the future to ensure

that the existing and future regional transportation system operates in an efficient manner; both from a user's perspective and from a financial one. In particular, the strategies proposed for the CMS and ITS programs are presented in greater detail, encompassing not only the basics of the programs, but the rationale for each as well.

Regional CMS Program

Introduction

This Plan establishes Regional Congestion Management System (CMS) for the SKATS area in order to facilitate the monitoring, analysis and reduction of congestion in the major regional travel corridors. Elements of the overall Regional CMS will be phased in over the next several years as the infrastructure for data collection and the organizational structure to analyze and disseminate the data is designed and implemented.

Why a CMS?

For metropolitan areas with a population over 200,000, a Congestion Management System is required by federal regulations to be part of the planning process for the transportation system. Further, for ozone and carbon monoxide nonattainment TMAs, such as SKATS, successful completion of the CMS process is necessary before federal funds may be programmed to any project in the TIP

> "...that will result in a significant increase in carrying capacity for single occupant vehicles (a new general purpose highway on a new location or adding general purpose lanes, with the exception of safety improvements or the elimination of bottlenecks) ..." [23 CFR Section 1410.302 (a)]

Many of the steps required of a CMS are already performed by SKATS when projects are considered for inclusion in the RTSP and TIP. The CMS merely codifies the procedure and allows for a more systematic analysis of the alternatives available to address congestion. The Regional CMS established in this Plan addresses three issues:

- First, it meets the federal requirements that the area implement a CMS that includes all federally-funded capacity increasing projects;
- Second, it lays the foundation for the evolving systematic data collection, analysis, and interpretation activities that comprise the backbone of the Regional CMS; and
- Third, it establishes an evaluation process that ensures that proposed improvements are designed and located in such a way as to solve congestion problems and be cost-effective over time.

As the Regional CMS is refined it will in future Plan Updates, provide ever more detailed pictures of the operational characteristics of the major travel corridors in the region and serve as a basis for the selection of improvements designed to effectively address the identified problems.

The SKATS Regional Congestion Management System (CMS) is a three-layered process

designed to ensure that federally funded SOV capacity is added to the transportation system appropriately, and, once added, that it is managed and protected effectively.

Regional CMS Consistency

System level components of the Regional CMS occur with the development and adoption of the RTSP; project specific elements of the Regional CMS occur during project selection for the TIP.

The adopted SKATS RTSP identifies the facilities that are considered part of the regional CMS system (**Map 13-4**) as well as the congestion problems on the regional system. Note that these congested segments are expected to occur even with the aggressive program of reasonable and affordable alternative modal strategies and actions embodied in the adopted RTSP, such as:

- major transit service and equipment improvements;
- continual expansion of the regional rideshare, TDM and vanpool programs;
- major additions to the regional bicycle system;
- completion of the regional traffic interconnect system and other operational and TSM improvements;
- significant expansion of the regional signal ITS system, including development of an automated traffic reporting system, improved real-time transit utilization reporting;
- ongoing support for the integration of transportation and land use and the development of a less auto-reliant urban form.

After the determination that a given proposed improvement will result in the *addition or subtraction of at least ½ mile of general purpose travel lane capacity* to the transportation system, the first layer of the SKATS CMS process is used to determine the *eligibility* of the proposed improvement for inclusion into the SKATS MTIP (and subsequently, into the ODOT STIP).

If the proposed improvement is deemed to constitute the addition or subtraction of *significant SOV capacity* to the region's transportation system, to be *eligible* for inclusion into the SKATS TIP the project must *either* address a congestion problem identified in the adopted SKATS CMS *or* be developed as the result of a planning effort called for in the adopted RTSP to resolve an Outstanding Issue specifically identified in the Plan.

Project Specific CMS Consistency

When a general purpose capacity adding project has been demonstrated to be consistent with the SKATS CMS system on a regional level, the second tier of the SKATS CMS process (**Figure 13-1**) ensures that specific other, non-SOV capacity adding solutions to the identified problem have been considered and evaluated. When a capacity adding project has been demonstrated to be consistent with the regional CMS system, it must also show that a wide range of alternative, non-SOV capacity solutions have been examined to solve the identified problem and that none of these was found to be effective, feasible, or neither. A checklist must be completed by the sponsoring agency and included with the request to program funds for the project in the SKATS TIP or AQCD that specifically documents the evaluation of each non-SOV alternative. Only when it can be demonstrated that no effective and feasible non-SOV capacity adding solutions can be implemented will the project be considered for funding in the SKATS TIP.

Capacity Maintenance and Protection

Finally, if general-purpose SOV capacity has been shown to be the most effective solution to a problem identified in the SKATS CMS, then the design and implementation of that project must consider, and include where appropriate, specific actions or design features to *maintain* the capacity/operation of the segment and to *protect* it from returning to a congested state. Such protection could take the form of access control or other similar strategy.

Components of a CMS

The facets of the initial SKATS Regional CMS are outlined below and are presented in more specific detail in the following sections. **Figure 13-1** illustrates the project evaluation process. It should be noted that the items presented below will evolve over time as experience is gained in actually implementing the CMS system and analyzing the resultant data.

- Develop a set of congestion identification measures for the region.
- Establish a framework for gathering and analyzing the data necessary to determine how the transportation system is functioning, what might be causing congestion on the system, what actions might be appropriate to address the congestion, and how effective given solutions might be in solving the problem.
- Ensure the evaluation of alternatives to address the problem, both for the present and the future transportation system.
- Plan how and who will implement the preferred solution, and how it would be funded.
- Provide for a mechanism to monitor the performance of the system to ascertain the continued effectiveness of the implemented solution.

Congestion Identification Measures

The development of performance measures to identify congestions is the first step in defining a CMS. For many applications, the traditional measure has been the volume-to-capacity ratio (v/c). However, part of the focus of a CMS is to expand the consideration of solutions to include alternative modes and innovative solutions. As such, while the use of v/c as a congestions identification measure is appropriate in the short term while the CMS is being developed and refined, more sophisticated measures that address the multi-modal aspect of the transportation system will be required in the future.

The Regional CMS will initially employ measures that track auto and transit usage within a specific corridor. Existing traffic counts and transit ridership reports will form the basis of the congestion identification measures. These initial measures will be v/c for automobiles and peak period transit v/c. Peak period transit v/c is defined as the number of riders during the peak period on a route divided by the total capacity of the buses running on that route. One variation would be to also use seated capacity in addition to total capacity to reflect the desire of transit riders to have their own seat on the bus.

Insert Fig 13-1 11 x 17 flow chart

Additional measures can be added after the basic data collection and analysis process is in place. The regional traffic count program and the implementation of some ITS infrastructure is already in place. Projects to increase these data sources and to develop additional ones will be proposed as part of future TIPs.

Data Framework

Currently, the framework for gathering the data needed by the CMS is not fully developed. While individual jurisdictions do perform traffic counts on the region's arterials and the transit district does have ridership reports, there is no current process for the automated gathering of this data as it is produced, nor are the tools in place to automatically perform the analysis of the data.

These tools and processes will need to be developed over the next year through a cooperative procedure between the MPO, the cities, state and transit district, to ensure that the data gathered will not only meet the needs of the CMS requirements, but will satisfy the needs of the individual agencies.

While in the short-term, these data collection techniques will suffice, as additional performance measures are introduced new methods to collect the requisite data will be required. It is anticipated that several of the solutions will be implemented using the techniques and methodologies discussed in the ITS section that follows.

Analysis of Alternatives

Before any additional federally-funded general-capacity –increasing or -decreasing travel lanes can be programmed in the SKATS TIP the sponsor must show that every other alternative has been seriously considered and found ineffective to sufficiently reduce congestion sufficiently. The alternatives should be considered individually and in concert with others. The alternatives to be considered include:

- Transportation Demand Management strategies
- Traffic System Management Improvements
- Transit Improvements
- Intelligent Transportation Systems
- Addition of general purpose lanes

Additionally, when SOV lanes are the only recourse for a project, they must include measures to ensure that the facility performance does not degrade after completion of the project. These measures would address operational management and/or travel demand reduction strategies.

Periodic Review

The final requirement for a CMS is that it provide an ongoing review of the regional system as the alternatives are brought online, to determine how effective the solution is working. This review forms a type of feedback to the planning process, to inform and direct the decision makers as to the potential effectiveness of future projects. It is anticipated that this review would be conducted during the RTSP update process.

CMS Corridors

The corridors selected for the initial regional CMS will be the Regional Road System (**Map 13-4**). This definition provides a reasonable coverage of the regional roads in the SKATS area, captures the majority of the transit routes and ridership, and represents the main trucking routes through the area. The corridors are listed below. As can be seen from the list, the corridors do not necessarily include the entire facility, rather the road is typically split into several sections, representing places where the operational characteristics of the route change. One example is Commercial Street South. Instead of including this street from Mission to Kuebler as one congested corridor, it is rather split into two segments: Commercial from Downtown to where the Commercial/Liberty couplet starts, and from the couplet past Kuebler to the interchange with I-5 near the southern limits of Salem's boundary.

CMS Corridors

- 12th/13th: Downtown to Commercial St S
- 17th: Silverton to Highway 22 E
- 25th: Madrona to State St.
- Broadway: Downtown to River Rd.
- Center: 12th to Cordon
- Chemawa: River Road to Portland Rd
- Cherry: River Road to Pine St.
- Commercial S: Couplet Split to I-5
- Commercial/Liberty N: Division to Salem Parkway
- Commercial/Liberty S: Downtown to the Couplet Split
- Cordon: Kuebler to Chemawa
- Doaks Ferry: Highway 22 to Wallace Rd
- Fairgrounds: Portland Rd to Hood St.
- Glen Creek: Wallace Rd to Doaks Ferry
- Hawthorne: Hyacinth to Highway 22 E
- Hazelgreen: Portland Rd to Cordon
- Highway 22 W: Bridges to UGB
- Hyacinth: Hawthorne to Salem Parkway
- I-5: Brooks Lake Road to Delaney
- Kuebler: Skyline to Cordon
- Lancaster: Kuebler to Portland Rd
- Liberty Rd S: Fairview to Davis Rd/Mildred Ln
- Lockhaven: Windsor Island Rd to Chemawa
- Madrona: 25th to Liberty
- Market: Capital/Summer to 45th

- Mission St: Commercial/Liberty to East UGB
- Orchard Hts: Wallace Rd to Doaks Ferry
- Portland Rd: Fairgrounds to Hazelgreen
- Pringle/Battle Creek: McGilchrist to Kuebler
- River Rd N: Commercial/Liberty N to Wheatland
- River Rd S: Commercial/Liberty to Viewcrest
- Salem Parkway: Commercial/Liberty N to I-5
- Silverton Rd: Fairgrounds/Portland Rd to Cordon
- Sunnyside: Commercial to Mildred Lane
- Sunnyview: Fairgrounds to Cordon
- State: 12th to Lancaster
- Turner Road: Highway 22 to South UGB
- Verda: Salem Parkway to Lockhaven
- Wallace Rd: Highway 22 to UGB

Regional TDM Program

Improvements and programs called for related to the Regional TDM program include the following:

- Continued regional and local support of the TDM program and its components, including the Regional Rideshare Program.
- Provision of bicycle racks and lockers as necessary at all existing and proposed Cherriots transit centers and transfer centers.
- Other TSEM projects recommended for implementation on the Regional Public Transportation System as identified in Chapter 14, the Regional Public Transportation System Element.
- Continued provision of bicycle racks on all Cherriots buses.
- Continued regional support for the development of Regional Bicycle System facilities as identified in Chapter 7, the Regional Bicycle System Element.

Regional TSM Program

Improvements and continuation of current work called for related to the Regional TSM program include the following projects:

- Continued regional support for the development and maintenance of existing facilities related to the Regional Park-and-Ride/Pool System.
- Continuation of cooperative agreements for designated, joint-use park-and-ride/pool facilities located in the Salem-Keizer Urban Area.
- Identify and encourage the development of potential joint-use park-and-ride/pool facilities in the SKATS area in cooperation with the Salem Mass Transit District.
- Development and continued support of a coordinated system of peak hour express bus service serving park-and-ride/pool facilities located near the major corridor entry points to the region.

- Specific TSEM roadway projects recommended for implementation affecting the Regional Goods Movement System as identified in Chapter 8, Regional Goods Movement System Element.
- Specific TSEM roadway projects recommended for implementation affecting the Regional Highway System as identified in Chapter 15, Regional Highway System Element.

Regional ITS Program

Intelligent Transportation Systems (ITS) refers to a myriad of technological activities that involve the collection, storage, processing and distribution of information related to the movement of people and goods in ways that serve to improve both the overall operation of the transportation system and the experience of the traveler.

Central concepts related to the ITS are:

- there is information that, when gathered and distributed in a timely way, can positively effect the operation and safety of the transportation system; and

- this information can be a benefit to one or all of the managers and users of the transportation infrastructure.

General examples of ITS activities include technologies to: help smooth out traffic flows, manage the operation of buses along transit routes, expedite emergency response times, provide useful system conditions information to the traveler, and improve railroad grade crossing safety.

Specific examples of ITS technologies include the following systems: traffic signal coordination and control; multi-modal traveler information; transit management; freeway management; electronic toll collection; railroad grade crossing safety/warning; emergency response management; electronic fare payment; and incident management.

Although many of these technologies are already in everyday use, it is highly likely that as time goes on, more increasingly useful technologies will emerge in the transportation arena. As these technologies become standardized and affordable, they will be incorporated into the evolving ITS network.

Current and Planned ITS Improvements

Traffic Signal Coordination and Control System

For the past several years, the SKATS area has been investing in the upgrading of the traffic signal control and coordination apparatus in the urban area. Currently, the SKATS adopted Transportation Improvement Program (TIP) annually allocates the funding necessary to operate the Regional Traffic Signal Control Operations Center (RTCOC) housed at the city of Salem.

In conjunction with activities described in the Congestion Management System portion of the Plan, the RTSP calls for the eventual interconnection of the traffic signals associated with specific corridors of the Regional Highway System. To date, signal system interconnects in the following regional corridor segments have been completed:

- 12th/13th (Mission to Hoyt)
- Broadway (Liberty to Hood)
- Commercial Street (Madrona to Hilfiker)
- Commercial Street S (Fabry to Robins Lane/Fairway Dr)
- Liberty Road (Salem Heights to Kuebler)
- Market Street (Capitol to Hawthorne)
- Portland Road (Erixon to Lana)
- Silverton Road (Lana to Hawthorne)

Committed regional corridor signal system interconnect projects include:

- 12th/13th (Mission to Hoyt) (interconnect completed; project consists of an operational upgrade to actuate all pedestrian movements and side street approaches)
- 17th Street (State to D Street)
- 25th Street (Mission to McGilchrist)
- Broadway (Fred Meyer to Shangri La)
- Center Street (12th to Hawthorne)
- Edgewater (Wallace to Rosemont)
- Kuebler Blvd (Commercial to Stroh)
- Lancaster (Hagers Grove Rd to Cordon Rd)
- Madrona (Pringle to Fairview Industrial Drive)
- State Street (12th to 24th)

Longer term regional corridor signal interconnect improvements called for in the Plan include:

- 12th/13th (Hoyt to Madrona)
- Center Street (17th to 24th Street)
- Chemawa / Hazelgreen at Portland Rd
- Cordon Road (State to Silverton)
- Liberty Road (Browning to Madrona)
- Lockhaven Drive (North River Road to I-5)
- North River Road (Lockhaven to Manzanita)
- Silverton Road (Fairgrounds to Lana, Lancaster to 45th, Brown to Cordon)
- Wallace Road (Edgewater to Glen Creek)

The following ITS investment (both near- and long -term) is also called for in this RTSP:

- continued operation and improvement of the RTCOC component of the urban area ITS.

Longer-term, as funds become available, the Plan calls for the incorporation of some sensing technology (i.e. loops or cameras) into the regional corridor traffic control system to provide real-time information on traffic flows for use in by the RTCOC and for traffic counting purposes.

Multi-modal Traveler Information System

At this time the only application of this technology in the SKATS area is the ODOT website, www.TripCheck.com, which is intended to offer the traveler information regarding the conditions on the facilities of the state highway system in and around the Salem/Keizer area. One CCTV camera is located in the area at the I-5 @ Hayesville Interchange.

Variable message signs, either permanent or mobile, could also be considered a form of ITS technology. Generally, these signs are used to warn motorists of a significant delay and to indicate alternative routes. For these signs to be effective and practical, there must be an alternative available for the traveler to use. In the SKATS area, the most obvious place for the installation of a permanent variable message sign is along Highway 22 west of Highway 51 outside the SKATS area. In this location, should there be a blockage of the only bridges across the Willamette River in the SKATS area, approaching travelers could be directed to the Independence Bridge. All of the other high volume corridors in the SKATS area have easily accessible parallel routes, so advance warnings, while convenient, are not critical.

An outstanding issue at this point is what form, if any, of the traveler information type of technology should be employed relative to the transit system (see Transit portion of the Plan). This type of ITS will also be examined as part of SKATS' high capacity transit corridor planning efforts.

Transit

Transit ITS applications, e.g., transit managements systems and electronic fare payment systems, may have some promise in terms of increasing the efficiency of transit operations and customer confidence in the transit system. Improving mobility in regional transportation corridors where the physical and political impediments to adding right-of-way are high is identified as an "outstanding issue" in this RTSP Update. As part of the implementation of the recommendations adopted as a result of the High Priority Transportation Corridor study, transit ITS applications will be examined as part of an overall recommended strategy to improve mobilty in the Broadway/No. River Road corridor. It is expected that ITS applications employed in the HPTC Corridor will also be used in other appropriate locations.

Freeway Management System

The I-5 freeway running north/south is the only freeway in the SKATS area. At the present time and in the foreseeable future, it is not believed that ramp metering will be required to manage the freeway flows through the area. If and when such

improvements should be deemed necessary and the funds become available, they would be incorporated into the regional ITS.

Electronic Toll Collection System

The only imaginable application of this ITS technology in the SKATS area would be in conjunction with the construction of a new bridge across the Willamette River in the SKATS area. As part of the planning process associated with that new bridge, the issue of tolls and the means to collect them will be examined.

Railroad Grade Crossing Safety/Warning System

The Federal Rail Administration's (FRA) strategic plan for Highway-Rail Intersections (HRI) is currently being developed. Among the issues to be considered in this plan are the establishment of design standards for HRIs and the potential uses of AVL and GPS ITS systems in the control of the safety devices at the crossing. As this strategic plan is developed and implemented, relevant portions of it will be considered for inclusion in future updates of the RTSP.

Emergency Response Management System

The emergency response providers in the Salem/Keizer area meet periodically to ensure the coordination and effective integration of their operations and technologies. At this point in time, no specific additional application has been identified as a priority need for regionwide implementation.

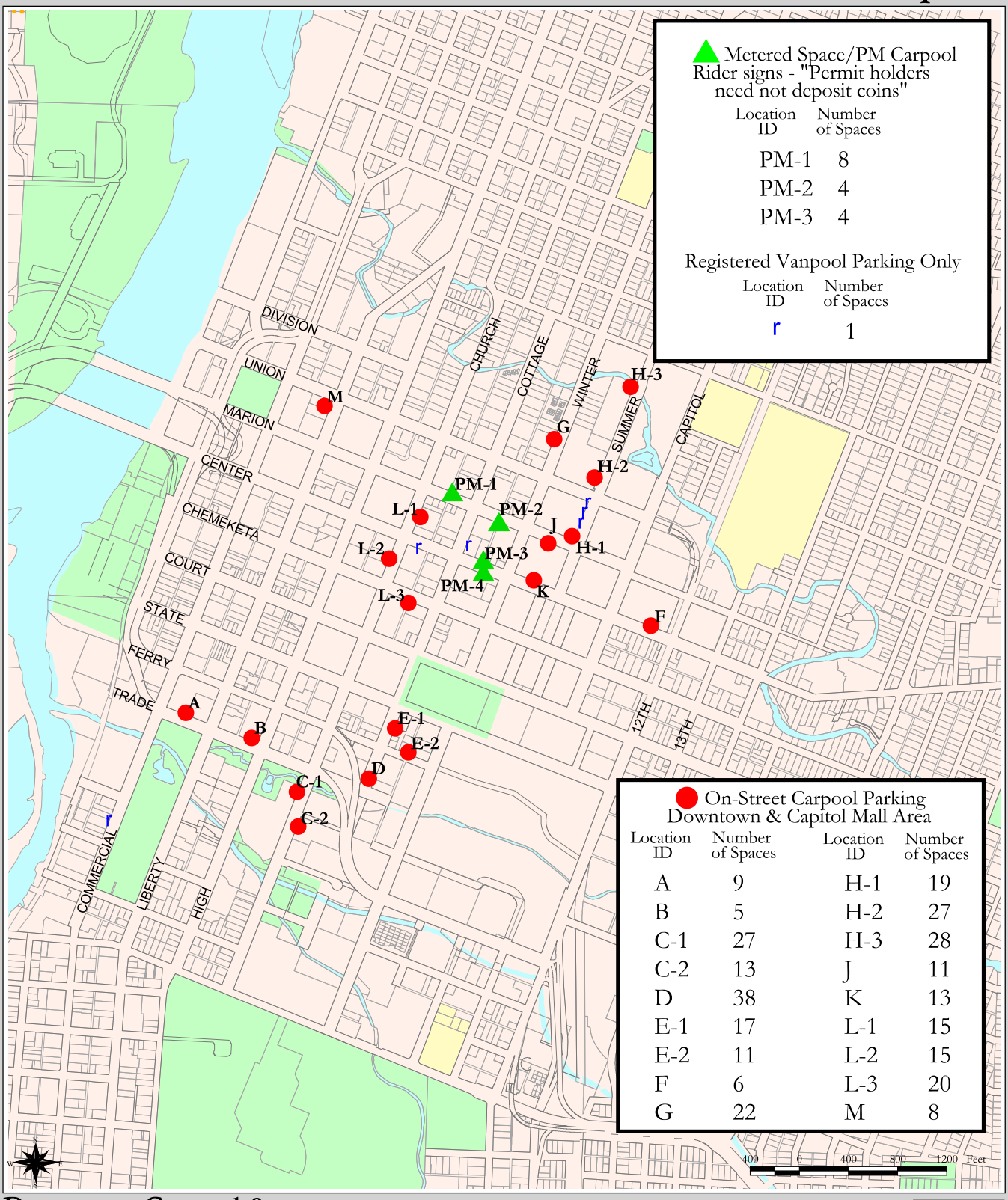
Incident Management System

The jurisdictions in the Salem/Keizer area responsible for incident management meet periodically to ensure the coordination and effective integration of their operations and technologies. At this point in time, no specific additional application has been identified as a priority need for regionwide implementation.

Consistency with Established Architecture

All of the existing and planned ITS improvements contained in this Plan are consistent with the established Regional ITS architecture jointly developed by ODOT and the city of Salem Public Works Department. Currently (December 2004) ODOT has retained a consultant to develop a Regional ITS Architecture Plan for the Salem-Keizer area. Completion of the ITS plan is scheduled for August 2005. The next (2008) update for the RTSP will include the recommendations from the Regional ITS plan.

2005 SKATS RTSP Update



Metered Space/PM Carpool Rider signs - "Permit holders need not deposit coins"

Location ID	Number of Spaces
PM-1	8
PM-2	4
PM-3	4

Registered Vanpool Parking Only

Location ID	Number of Spaces
r	1

On-Street Carpool Parking
Downtown & Capitol Mall Area

Location ID	Number of Spaces	Location ID	Number of Spaces
A	9	H-1	19
B	5	H-2	27
C-1	27	H-3	28
C-2	13	J	11
D	38	K	13
E-1	17	L-1	15
E-2	11	L-2	15
F	6	L-3	20
G	22	M	8

Downtown Carpool & Vanpool Locations

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

Roads & Highways
Rivers & Creeks
Parks
Schools
Salem-Keizer Area Transportation Study (SKATS) Boundary
Salem-Keizer UGB

Map 13-1

01/07/05

Mid-Willamette Valley Council of Governments, 105 High Street SE, Salem OR 97301 (503) 588-6177 mwvcog@open.org www.mwvcog.org

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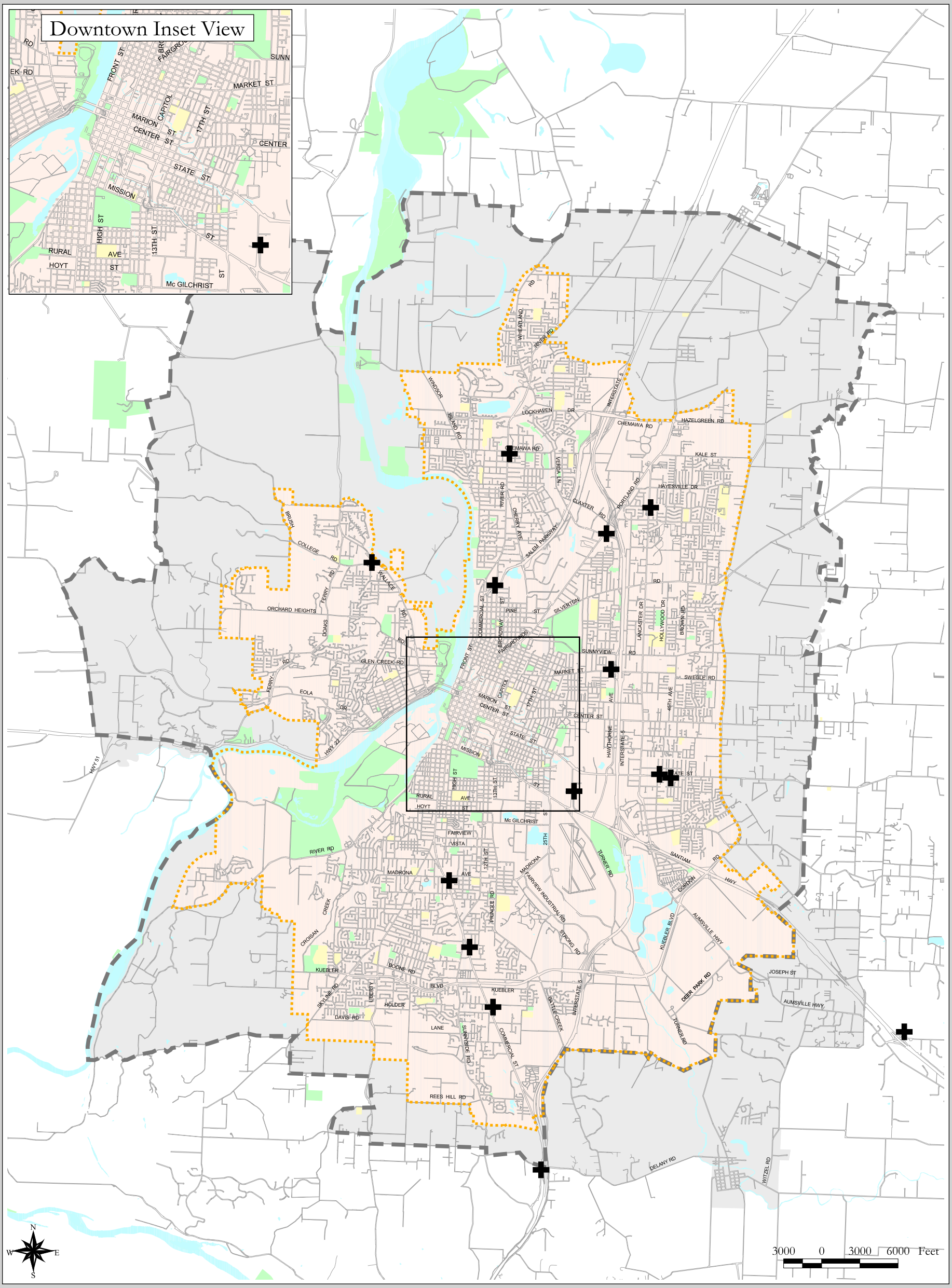
2005 SKATS RTSP Update



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

Park-n-Ride locations

Map 13-2

- Regional Park-n-Ride Facilities
- Roads & Highways
- Rivers & Creeks
- Parks
- Schools
- Salem-Keizer Area Transportation Study (SKATS) Boundary
- Salem-Keizer UGB

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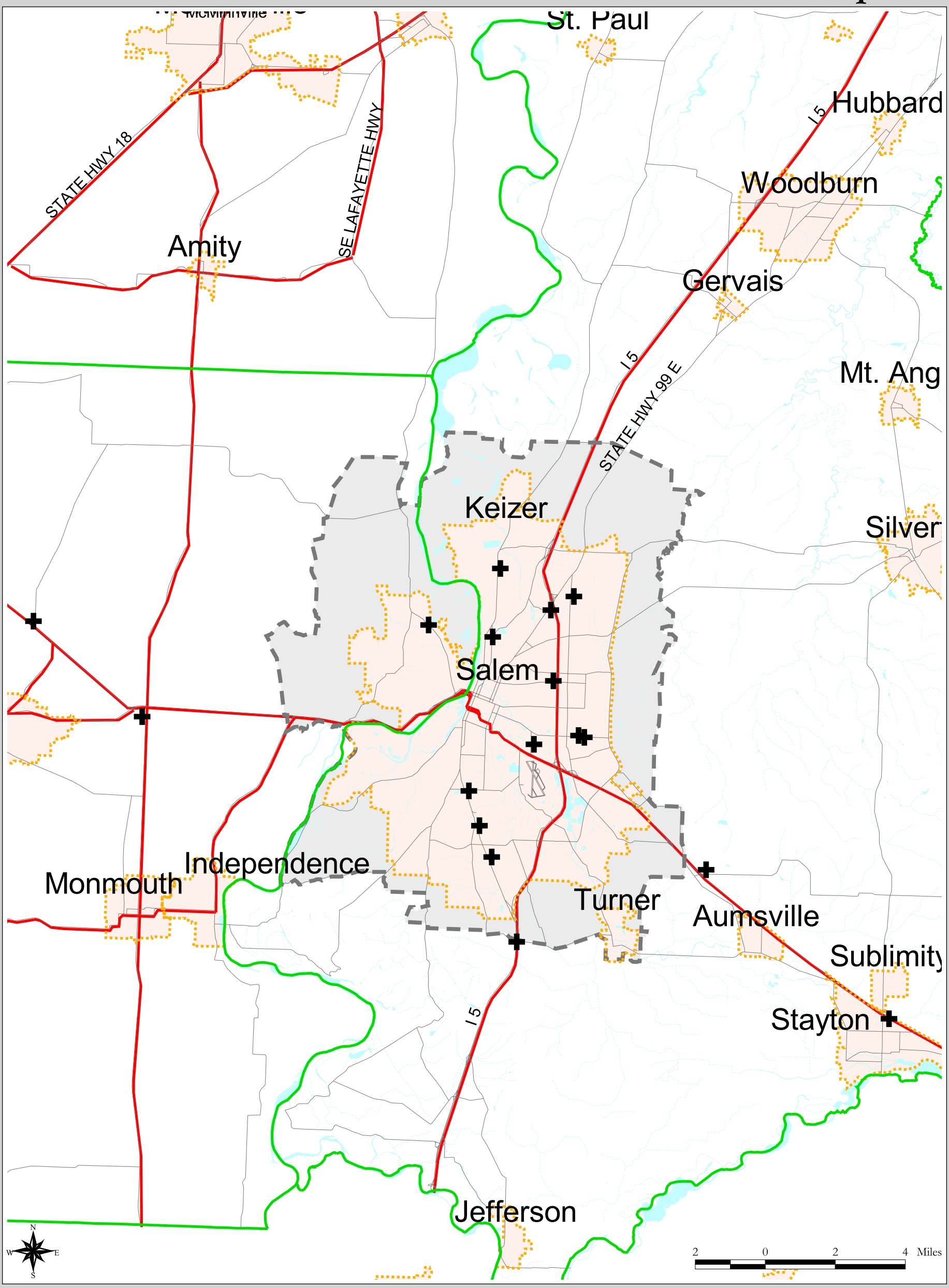

Park-n-Ride Locations: Greater SKATS area

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

Map 13-3

Regional Park-n-Ride Facilities

Roads & Highways
Rivers & Creeks
Parks
Schools
Salem-Keizer Area Transportation Study (SKATS) Boundary
Salem-Keizer UGB
County Boundaries

01/07/05

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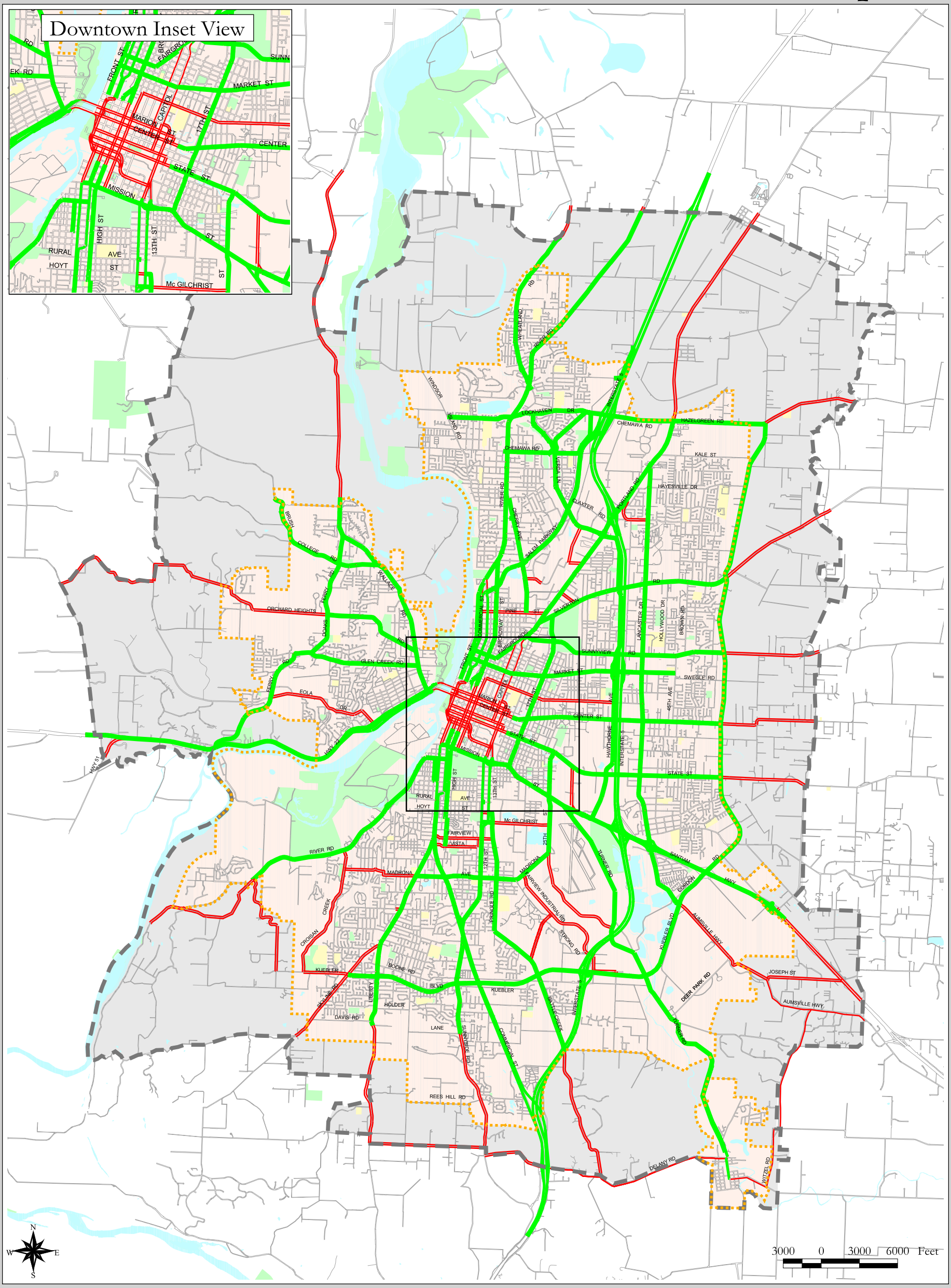
2005 SKATS RTSP Update



Congestion Management System Corridors

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

Map 13-4

Congestion Management System Classification
- CMS Corridors
- Regional System

- Roads & Highways
- Rivers & Creeks
- Parks
- Schools
- Salem-Keizer Area Transportation Study (SKATS) Boundary
- Salem-Keizer, Turner UGB

01/07/05

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14 - Regional Public Transportation System

Introduction

The Regional Public Transportation System Element provides an important means to enhance our mobility and reduce reliance on the single-occupant vehicle (SOV) through improvements to the region's public transportation system. Implementation of the recommendations contained in the Plan will help to create a system of public transportation services that provide expanded transportation options for all urban area residents, not only those whose lack of convenient access to a private automobile severely restricts their mobility.

Investments in the region's public transportation system ensure diversified mobility options within and through the SKATS area and add needed people and goods movement capacity to the regional transportation system without additional costly expansions of the highway infrastructure. Increasing the use of the public transportation system to meet our travel needs helps to maintain and improve our quality of life by reducing the volume of automobile travel and lessening the impact of transportation on air and water quality, the natural environment, and energy consumption. As a result, public transportation services in the SKATS area constitute an important alternative to the single-occupant vehicle and contribute significantly to improving our overall mobility and maintaining our quality of life.

The Regional Public Transportation System

The regional public transportation system consists of all transportation services in the SKATS area generally available to the public. Although rideshare matching and transportation demand management programs could also be considered part of the public transportation system, these two activities are discussed in the Regional Transportation Systems Efficiency Management Element (Chapter 13).

The six major types of transportation systems/services available to the public in the SKATS area addressed in this element involve ground transportation consisting of:

- Mass transit service (Cherriots);
- ADA/elderly-related transportation services;
- intercity bus service;
- intercity rail service;
- regular/shared taxi and limo services; and
- charter bus service.

Mass Transit Service

Overview

The Salem Area Mass Transit District (Cherriots) was established under Oregon Revised Statute 267 by vote on November 6, 1979. The service area for the district is the Salem-Keizer Urban Growth Boundary (which in 2005 has a population of approximately 215,000 residents). The District is governed by a seven-member Board of Directors, which is elected by residents in each of the seven subdistricts.

The Fleet

For the year 2004, the mass transit system employed approximately 222 employees and utilized a fleet of over 83 buses that log roughly 2,700,000 miles and 205,000 total vehicle revenue hours per year. Each bus has a seating capacity of 25 to 45 riders with standing room for up to 30 more passengers. All buses are equipped with front mounted bicycle racks that can carry up to two bicycles. Since 1998, the district has added over 36 low-floor, natural gas powered buses to its fleet. The advantages of these buses are two-fold: they allow easy boarding and alighting for all passengers, including those with physical disabilities, and they reduce the amount of pollution that is typically emitted by traditional diesel powered buses.

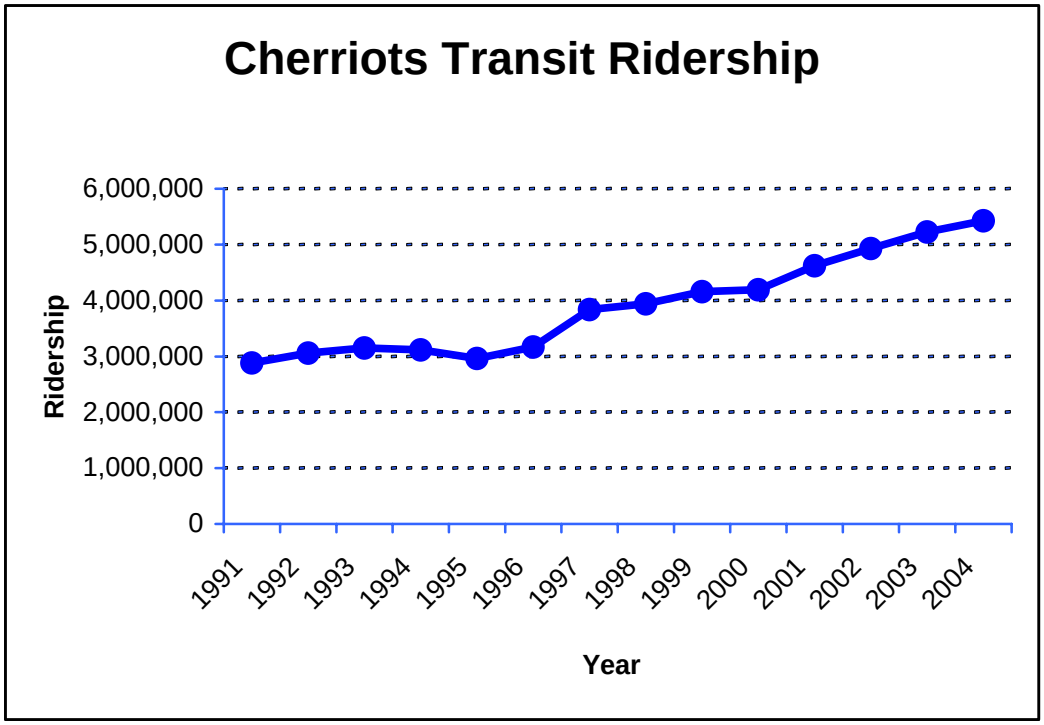
Route System and Ridership

The Cherriots fixed route system is primarily a radial "pulse" route structure in which all but six of the twenty-five routes converge in a timed fashion at the central transit station located in downtown Salem. Five of the six routes that do not come into downtown operate in West Salem as “neighborhood circulators” or “feeder” routes connecting to a “corridor” or “trunk” route that is set up to work with the downtown “pulse.” Passengers traveling between any two points in the service area can reach their destinations by making a timed transfer at the downtown transit station or the West Salem station. The sixth route, a nonradial route, provides "crosstown" service between the city of Keizer and the East Salem and Lancaster Drive area. Lancaster Drive is heavily strip-developed and contains much of the retail and employment activity located outside of the Salem downtown/mall core area. There are also three park-and-ride routes, one through South Salem with park-and-ride lots on South Commercial and one in East Salem with a park-and-ride lot on Hawthorne at Market Street. These two routes operate Monday through Friday from approximately 7:00 a.m. to 8:00 a.m. and from 4:45 p.m. to 5:30 p.m. The third park-and-ride route is on Airport Road south of State Street and operates Monday through Friday from approximately 6:15 a.m. to 6:06 p.m.

Cherriots buses operate from 6:15 a.m. to 10:15 p.m. weekdays and from around 7:00 a.m. to 10:15p.m. on Saturdays. The system operates on frequencies ranging from 15 to 60 minutes. Most of the nineteen “pulse” routes are timed to arrive/depart the downtown transit station at either 15 or 45 after the hour. The five West Salem “feeder” routes arrive/depart the West Salem station around the hour and half-hour. The majority of routes are on half-hour frequency in the peak periods and hit both pulses. In the midday, seven routes drop to hourly frequency, with most of these hitting the :45 pulse. Twelve routes serving the major radial corridors

remain on half-hour service throughout the day. Bus fares as of January 1, 2005 are $.85 for adults, $.60 for children and $.40 for seniors.

As of 2004, the transit system provides approximately 185 transit miles per trip, serving 20,000 average daily riders along 9,200 average daily transit miles. Ridership has been increasing steadily since 1985. Approximately 50 percent of the riders are commuters, the largest segment being state employees, and 25 percent are students ranging from grade school through Chemeteka Community College students. The majority of the remaining 25 percent consists of senior citizens and disabled riders. According to Census data from 2000 for the Salem Urbanized Area, approximately 1.9 percent of the total work trips used public transportation.



The Regional Mass Transit Route System

The Regional Mass Transit System consists of a radial system of regionally significant transit (trunk) routes that provide the backbone of the overall public transit system (**Map 14-1**). All of the streets used by the Regional Transit System routes are also designated as Regional Major Arterials on the Regional Highway Functional Classification System (see Chapter 15). Specific routes have been included as part of the identified Regional Mass Transit System for the following reasons:

- They provide service in the major commercial corridors in the region and carry the highest passenger volumes. These routes generally form a radial system providing a direct path between the downtown transit station and the outlying neighborhoods. Much of the projected employment growth in the SKATS area will occur as infill in downtown Salem and along the existing commercial corridors. In addition to employment activities, these commercial corridors also generate most of the shopping,

errand, and service trips in the region. The nonradial portion of the regional system provides service along Lancaster Drive, the major commercial corridor in the region.

- They provide service to major regional activity centers. These activity centers, such as the Lancaster Mall, are focused concentrations of activities that create substantial transportation demand on the regional transportation system.

- The region's park-and-ride facilities are served by the regional routes, in addition to express buses running in the peak hours that make a minimum number of stops. Park-and-ride facilities need to be located on routes that provide frequent transit service during peak hours and connect to the Downtown/Capitol Mall employment core.

  The Regional Mass Transit System is intended to provide high quality service (i.e., speed, frequency) and carry the highest passenger volumes. Thirteen other, more "local" routes extend from the major trunk route system and serve neighborhood areas. The regional mass transit route system is depicted in **Map 14-1** along with the regional activity centers and park-and-ride lots.

Major Transit Stops

Major transit stops are locations that serve as either an origin or destination for a sizable fraction of a route's riders, or that represent the confluence of several bus routes with the ability to transfer between the routes. These are locations where the amenities, such as covered waiting areas, for riders either already exist or should be provided. The current regional major transit stops are:

Courthouse Square
Glen Creek Transit Station
Chemeketa Community College
Lancaster Mall

Several future regional major transit stops have been identified during the update to the RTSP process by the Transit District and the Salem Futures planning process. These proposed stops are meant to be representational of the location where a future major stop would be located. The list is subject to change to reflect any changes that may occur during the finalization of the Salem Futures project.

South Salem: Madrona at Commercial St S.
Keizer: Chemawa at N. River Rd

Weekday Transit Service

Almost all of the routes in the Regional Transit System have 30-minute headways during the peak hours (6:15 a.m. to 10:15 a.m. and 2:15 p.m. to 6:15 p.m.). Lancaster Drive south of D Street to State Street has 60-minute headways during the peak hours. During the midday (10:15 a.m. to 2:15 p.m.), approximately two-thirds of the regional routes provide 30-minute headways and the other one-third provides 60-minute headways. D Street east of Summer Street and

Lancaster Drive north of D Street has 15-minute service all day connecting Chemeketa Community Collage to downtown Salem. Center Street has 15-minute headways all day because it is served by two routes with offsetting 30-minute headways. Three other routes provide 15-minute headways to the peak hours (6:15 a.m. to 10:15 a.m. and 2:15 p.m. to 6:15 p.m.): Route #1 along South Commercial Street from the Battle Creek area to downtown, Route #9 along Broadway and River Road North connecting Keizer to Salem's downtown, and Route #16 along State Street between downtown and Lancaster Drive and along Lancaster Drive south of State Street.

Weekend Transit Service

Saturday service for most of the Regional Transit System provides 60-minute headways. There is currently no Sunday transit service.

ADA/Elderly-Related Transportation Services

ADA/elderly-related transportation services in the Salem-Keizer area consist of Cherriots fixed route accessible (lift-equipped) service, dial-a-ride service, and other social/health related special transportation services. These services are organized and/or operated by public agencies, social agencies, and private companies. Transportation services like these complement conventional transit service by meeting the needs of special groups of travelers, and helping to make more efficient use of existing transportation resources.

Provision of transportation services for elderly and disabled persons in the Salem-Keizer area is a significant component of the transit district's planning and operating efforts. The District has been operating its ADA paratransit program—CherryLift—since January 1997. Ridership has grown from the 160 trips made in the first month, to an average of 9,000 trips per month today (2004). This program has an operating cost of approximately $1,000,000 annually, and is supported by Salem Transit District general funds.

Cherriots Fixed Route Accessible Service

Seventy-five of the 83 transit buses are lift-equipped and have wheelchair positions and securement systems. Thus, 90 percent of the district's active fleet is accessible to persons in wheelchairs and other mobility devices. Each of the district's 25 routes is assigned at least one lift-equipped bus on the :45-after pulse, so that all routes are accessible to wheelchair riders at the same time. This provides 100 percent accessibility with a timed-transfer between all routes. Several routes which have been identified as most useful for persons with mobility impairments have extra lift vehicles assigned, so that the :15-after pulse is accessible as well. The assignment of accessible vehicles to routes is coordinated with the district's Elderly/Handicapped Transit Advisory Committee. As mentioned earlier, the District has begun to purchase new CNG buses with the low floor design, which eliminates the need for wheelchair lifts. A hydraulic lift can lower the floor to curb level or lower. The Transit District is also developing a grant proposal to retrofit the older inaccessible buses with wheelchair lifts. At that point, the Transit District will have a 100 percent accessible fleet. The fixed-route services carry approximately 60,000 elderly (over 60 years old) or disabled riders annually. No fare is charged for this service, but donations on a per-ride basis are accepted. There is not set

minimum response time. Trips are scheduled on a space-available basis, right up to real-time if possible.

Dial-a-Ride Services

Dial-a-ride services are considered demand-responsive public transportation and offer more freedom from fixed route and schedule constraints. Routes are determined dynamically by current demand with no specific schedule followed. Dial-a-ride services in the Salem-Keizer area are provided for the disabled and elderly. A person or group of people can summon an on-call taxi or van to take them to their destinations with certain hours of the day.

"Wheels" is a nonprofit dial-a-ride program offered by Oregon Housing and Associated Services, Inc. providing paratransit services in the urban portion of the SKATS area. In 2003-04, Wheels operated with fourteen 18-passenger vans, Monday through Friday, from 8:00 a.m. to 5:00 p.m. The service provided 60,185 rides for elderly and disabled people during 2003-04, and is primarily funded through State Special Transportation Funds (STF) from cigarette taxes. Wheels also has a contract with Marion County to provide transportation to work sites and group homes for 140 clients.

In January 1997, the Salem Area Mass Transit District added its ADA "Cherrylift" program. This program provides dial-a-ride services to disabled persons who are unable to use regular Cherriots bus service. Cherrylift gives disabled residents equal access to public transportation. In 2003-04, the service provided 89,124 trips.

Regional Brokerage System (TripLink)

A tri-county Medicaid brokerage was developed and implemented during the summer of 2003. TripLink provides transportation services for Medicaid eligible clients for medical related transportation needs. Approximately 35 private providers, both profit and non-profit offer transportation services using 150 vehicles and 350 drivers. The brokerage currently provides approximately 13,000 trips per month. A regional transportation software program is supplied to the providers, enabling them to capture their daily trip manifests and to bill their trips electronically. Clients from Marion, Polk, and Yamhill counties access the brokerage through the use of a 1-800 phone line. Of the 13,000 trips provided each month, about 2,000 are given fixed route bus passes and an additional 2,000 are provided grouped trips.

Other Social/Health Related Special Transportation Services

Throughout the Salem-Keizer area there are many small, client-oriented nonprofit organizations providing transportation primarily for the disabled and seniors. Some of these organizations and businesses also provide housing and vocational opportunities for their clients such as Catholic Community Services and Shangri-La. Transportation destinations include work sites, home, activities, and errands.

Catholic Community Services provides transportation services for 25 physically and/or mentally disabled clients at six group homes. Currently, they have five vans that can carry four to six passengers. They also provide services in 15 supported living sites, which are housing situations in leased homes or apartments with one or two people. Another five vehicles provide service for these clients. There are four employment sites that use five vehicles for business-related transportation.

Shangri-La provides transportation services for 150 to 200 physically and/or mentally disabled clients at 16 group homes. They have 16 vans each with a capacity of four to six passengers. Shangri-La clients also utilize "Wheels", taxis, and the Cherriots bus.

There are about 20 other nonprofit transportation providers in the Salem-Keizer area that are associated with retirement centers, Boys & Girls Clubs, and hospitals.

Intercity Bus Service

Intercity bus service is an important component of the region's public transportation system and is the principal alternative to the single-occupancy vehicle for regional travel. Many residents unable to drive rely on intercity bus service for travel to destinations outside the SKATS area. Providers of intercity bus travel include both private companies and public agencies. The private companies focus on longer travel, providing either service across state lines, as in the case of Greyhound Lines; or connecting smaller cities with Portland; or linking central Oregon or the Coast with the communities in the Willamette Valley. The intercity bus service providers target people making non-commuting trips between areas or cities. The public agencies usually tailor their service to address the work commuter trip.

Greyhound Lines, the major intercity interstate bus carrier, is the only carrier currently providing this service in the region. Greyhound Lines operates a bus station on Church Street in downtown Salem. As of 2001, there are seven southbound buses departing the station on a daily basis. Some of these buses stop in Albany, Corvallis, Eugene, and other cities along the I-5 corridor. There are seven northbound buses all of which terminate in Portland. At the Portland bus station, patrons can transfer to buses going further north or east. In 2004, Greyhound cut service to many of the smaller communities it served as a cost-cutting measure.

Smaller bus companies are now the exclusive providers of service to some of the smaller cities. Through the use of interline agreements, Greyhound Lines coordinates its service with smaller bus companies. For example, Valley Retriever provides connecting service in Albany for patrons traveling east to Bend. In Corvallis, patrons can transfer to a connecting Valley Retriever bus in order to go west to Newport. As part of the interline agreement, patrons purchase one ticket even though two different bus companies are involved in the journey.

As of 2002, there are several public agencies providing regularly scheduled intercity transit service serving the Salem-Keizer area. The combination of these three providers services enables the majority of communities within Marion and Polk counties, as well as those along the I-5 corridor to the north and south to be connected with the Salem-Keizer area.

CARTS

The Chemeketa Area Regional Transportation System (CARTS) provides the regional planning and support of transportation services for the communities outside the Salem-Keizer urbanized area in Marion and Polk counties. The Board is comprised of commissioners from Marion and Polk counties, and the Salem-Keizer Transit District. CARTS provides weekday public transit for elderly/disabled persons as well as the general public, linking the two counties and their communities with Salem and Keizer. CARTS serves Dallas, Monmouth, Independence,

Rickreall, and Falls City in Polk County. In Marion County, service is divided into a north county area and a south county area, also referred to as the Santiam Canyon. The north county route serves Brooks, Gervais, Woodburn, Hubbard, Mt. Angel, Silverton, Central Howell, and Chemeketa Community College in Salem. The Santiam Canyon route serves Turner, Aumsville, Stayton, Sublimity, Lyons, Mehama, Mill City, and Gates. This route also serves the airport and Amtrak station in Salem. CARTS provided some 12,000 trips per month in 2004.

Two types of services are offered: point-deviated fixed routes and a dial-a-ride service. Point-deviated fixed routes operate on a regular schedule with some additional time added to deviate ¾-mile to pick up clients who are unable to access the regular route stops. The ¾-mile deviations meet the Americans with Disabilities Act requirements. CARTS provides the Dial-A-Ride service throughout rural areas in Marion and Polk counties. Clients can call from one day to two weeks in advance to schedule individual rides and receive curb-to-curb transportation service.

CARTS receives a variety of state and federal transportation funds that support both the capital needs (e.g., purchasing and maintaining vehicles) and the operation of the program. Included are funding sources such as the Special Transportation Fund (STF) and Special Transportation Grant (STG) administered by the state of Oregon, and the Job Access and Reverse Commute (JARC) and FTA programs 5310 and 5311 administered by the federal government. In addition to these and the fares paid by the riders, CARTS is seeking funding from foundations to support the continued running and expansion of this program.

SMART

Service between Wilsonville and Salem is provided by SMART (South Metro Area Rapid Transit) and the transit district. SMART runs two northbound and two southbound buses during the morning peak periods and three southbound and three northbound buses during the afternoon peak period. The transit district operates two buses, both southbound and northbound, in both the morning and afternoon peak periods. Service is available between the Wilsonville city hall and the Courthouse Square transit center. While this service is mainly targeted at workers commuting between Wilsonville and Salem-Keizer, SMART does provide a link to the rest of the Portland Metropolitan area with its service to the Barbur Transit Center in Portland, where it meets several Tri-Met bus routes. The transit district trips, which started in fiscal year 2002-03, target work trips in the opposite direction of the previously existing SMART service and is funded by a JARC (Jobs Access Reverse Commute) grant.

Oregon Thruway Bus

The Oregon Department of Transportation contracts with private companies to provide Amtrak Thruway bus service to connect areas of the State with the Willamette Valley. While the service termination station is in Portland, at Union Station where guaranteed connections to Amtrak trains are provided, many of the buses stop in Salem. The I-5 corridor between Ashland and Portland, stopping in Salem at the Salem Railroad Station, provides service while it is not financially feasible to operate trains. Buses in this corridor are used to supplement the existing *Cascade* passenger train service that is offered. Currently, daily Thruway service is provided for travel on the I-5 corridor by two northbound and two southbound buses. Additional Thruway

service connects Bend and Central and Eastern Oregon with Salem and the I-5 corridor. Several communities on the Coast, including Newport, are also linked with the Salem-Keizer area.

Intercity Rail Service

The Salem Railroad Station is located on 12th Street just north of Mission Street on the downtown fringe. Amtrak provides the SKATS area with two train service options, the *Coast Starlight* and *Cascades* trains. The *Cascades* line offers two daily round-trip trains between Eugene and Seattle. The *Coast Starlight* train operates through the Willamette Valley on a daily basis as part of its Los Angeles-to-Seattle service.

A more detailed report on passenger rail service, including rail and station infrastructure, ridership, planned improvements, and funding can be found in the Regional Rail System Chapter (Chapter 11).

Regular and Shared Taxi/Limo Services

Other passenger transportation services available in the Salem-Keizer area include four taxi companies, an airport shuttle service (shared taxi) and numerous limousine services. The Regional Rideshare Program (and other transportation demand management services) are discussed in the Regional Transportation Systems Efficiency Management Element, Chapter 13.

Regular Taxi

Taxis provide a high degree of passenger flexibility and convenience but at a far higher cost per passenger than traditional transit service. There are four regular taxi services operating in the Salem-Keizer area on a 24-hour basis. Salem-Keizer Yellow Cab Company has a fleet of 20 taxicabs. A-Cab Taxi Transportation Services has a fleet of seven taxicabs and in 2002 served approximately 200 people per day. The Blue Jay Cab Company has a fleet of eight taxicabs and Cherry City Taxi has a fleet of four vehicles.

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 Salem-Keizer area via one of the five 24-passenger buses. As of 2002, the passenger vans are operating 18 trips per day between the two airports.

Within the Salem-Keizer area there are approximately 17 limousine services, most of which operate 24 hours per day, seven days a week. Many of the limousine services offer service to Portland International Airport.

Charter Bus Service

Two charter bus services operating in the region provide commuter transportation service between cities along the I-5 corridor.

Betty's To and Fro provides round-trip service for commuters between Salem and Eugene, and between Salem, Corvallis, and Albany. 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. The bus services two park-and-ride lots in Corvallis and an additional park-and-ride lot in Albany.

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.

Goals, Objectives, and Policies

Public Mass Transit (Cherriots)

Goal 1: **Develop and maintain a public transit system that is conveniently accessible to all Salem-Keizer urban area residents.**

Objective 1: *Provide transit service throughout the urbanized portions of the Salem-Keizer area.*

Policy 1: Ensure, as practicable, that all residents and major employers in the Salem-Keizer area have transit service within 1/4 mile walking distance.

Goal 2: **Develop and maintain a public transportation system that provides convenient access for a variety of trip destinations and purposes.**

Objective 1: Provide a mix of service types that serve a full range of trip needs.

Objective 2: Provide a diverse system of transit routes that ensures convenient accessibility to destinations throughout the urban area with a minimum of transfers.

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

Policy: Support the development and implementation of a public transit route system and support facilities that effectively combine appropriate elements of circulator routes, corridor routes, transit centers, and circumferential service.

Goal 3: **Develop and maintain a public transportation system that serves travel needs over a variety of times of day and days of the week.**

Objective 1: Provide transit service for area residents that operates over an appropriately diverse time frame.

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

Goal 4: 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 needs of transit services in the region.

Policy 2: Include 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 Salem-Keizer area.

Policy: 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 onto the public transportation system.

Goal 5: Develop and maintain a system of public transit routes that provides efficient, competitive service in the regional transit corridors.

Objective 1: Provide 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 6: Develop and maintain affordable transit service throughout the urban area.

Objective 1: Develop and implement 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.

Objective 2: To maintain a system of transit fares that balance the need for passenger revenues with the goal of maximizing ridership.

Policy 1: Support ongoing review and analysis of farebox revenues, ridership levels, and service costs to optimize the transit fare structure.

ADA/Elderly-Related Services

Goal 1: Convenient, economical, and safe transportation services for the disabled and elderly residents of the Salem-Keizer area.

Objective 1: Consistent with the adopted Salem Area Transit District (SATD) Americans With Disabilities Act (ADA) Transit Plan Update, provide transportation services which adequately meet the needs of the elderly and disabled populations in the region.

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

Intercity Bus and Rail Service

Goal 1: An integrated transportation system that provides convenient service in the interregional and interstate corridors.

Policy 1: Support public and private efforts to develop and implement appropriate expansions of bus and rail service, including commuter rail, between the Salem-Keizer area and locations outside the region.

Recommended Improvements to the Regional Public Transportation System

Some of the public transportation services in the Salem-Keizer area, such as intercity bus service, charter bus service, regular and shared taxi service, and most of the social/health related special transportation services, are privately owned and operated. As a result, improvements to these services will likely occur as a result of market forces rather than by government policy initiatives at the regional and/or local levels. Most of the recommended improvements listed below pertain to transportation services owned and operated by public or quasi-public agencies such as the public transit system and intercity rail service.

Mass transit is a critical component of the region's strategy for meeting mobility needs. The transit system cannot accommodate everyone's travel needs, but it is essential to provide service that comprises a viable and effective alternative to single-occupant vehicle travel. Increased use of transit serves to reduce traffic volume, which in turn lessens energy consumption, eases congestion, mitigates the need for roadway expansion projects, and decreases vehicle emissions. Furthermore, transit equalizes travel opportunity by providing an option to those for whom auto use is restricted.

Transit service has long been available in the Salem-Keizer region, but transit use has not been supported by resources comparable to those used to accommodate automobile demand. To develop its potential, we must make additional investments in improved transit service and facilities. In addition, there must be changes in the institutional arrangements that affect transit operation, more incentives to encourage people to travel by transit, and policies that foster "transit-friendly" land use patterns.

The transit improvements called for in the RTSP cannot all be implemented at once. Marketing, education, and incentive programs must also precede and accompany major investments in transit expansion and improvements in order to effectively encourage a shift from the automobile, and expenditures should be predicated on the likelihood of successful operations.

Recommended Improvements to the Regional Mass Transit System

Emerging public policy and increasing demand for transit services support expansion of the mass transit system as the required resources become available. Some of these improvements are aimed at addressing anticipated future demand. As a result, many of these recommendations will not be considered until demand warrants and funding becomes available. These recommendations fall into two basic tiers: continuation of existing services, and service improvements/expansions. The Plan recommendations are as follows:

Continuation of Existing Mass Transit Service Levels

Given the relative importance of *reliability* in transit services when travelers are considering riding a bus to work or school, for example, it is important that current services be continued where demand exists and that equipment be replaced when needed. The following recommendations are aimed at addressing such concerns.

- Maintain existing transit service levels as demand warrants and funding allows.
- Adequately maintain all existing transit vehicles, equipment, and facilities to ensure reliability, convenience, and safety.
- Replace older transit vehicles in a timely manner with clean fuel vehicles.

Transit Service Improvements/Expansions

The following recommendations are aimed at making transit services a realistic alternative to the automobile and attracting additional ridership. Where possible, general estimates of the costs of these improvements are provided.

- Convert the current radial pulse system into a system of neighborhood circulators that feed into outlying transit centers connected by high-frequency corridor routes. This new system, called the "3C" system, allows for greater flexibility and efficiency in matching the mobility needs of the community over the next 20 years.

- Develop transit centers in east and south Salem and in Keizer following the model implemented in west Salem.

- Increase the frequency of service in the regional transit corridors to 15 minutes throughout the day and 30 minutes during the evening and weekend periods as warranted by demand. It is estimated that this improvement will cost approximately $4 million per year above existing operational costs. In addition, approximately 15 more buses will be needed at a cost of almost $5 million. The District has increased headways on four routes and hopes to improve headways on five more by 2010.

- Extend service by providing transit service on Sundays. This improvement will cost approximately $1.1 million per year above current operational costs if provided at the same level as the existing Saturday service.

- Develop express bus service as demand warrants and funding allows. One example could be half-hour arterial park-and-ride express service on five routes during peak hours (6:30 to 8:30 a.m. and 4:00 to 6:00 p.m.) and hourly express service to 9:15 p.m. It is estimated that this improvement will cost approximately $800,000 per year above existing operational costs. In addition, approximately five more buses will be needed at a cost of roughly $1,600,000.

- Develop timed-transfer opportunities, such as mini-hubs, where appropriate to make service more convenient and increase ridership.

- Develop a circulator service in the downtown Salem core area.

- Develop cross-town service, as feasible, to support trips not going through downtown.

- Encourage the placement of passenger amenities at regular intervals, and particularly at regional activity centers. Comfortable waiting areas at transit stops, appropriate for year-round weather conditions, greatly improve the experience of the transit rider. Basic passenger amenities at bus stops include bus stop signs, benches, and lighting. Major transit stops usually are located at higher ridership activity points and additionally should include sheltered areas, bike racks, passenger information displays, telephones, drinking fountains, landscaping, and refuse containers.

- Pursue the full implementation of transit and paratransit services called for in the transit district's ADA plan.

- Continue to support the development and marketing of TDM and public transit services to the community.

- Develop special transit programs and incentives where appropriate to make service more convenient and increase ridership.

- Development of a "High Priority Transportation Corridor" should be considered on segments of the regional route system where practicable.

In addition, transit ITS applications may have some promise in terms of increasing the efficiency of transit operations and customer confidence in the transit system. Improving mobility in regional transportation corridors where the physical and political impediments to adding right-of-way are high is identified as an "outstanding issue" in this RTSP Update. As part of the High Priority Transportation Corridor study, transit ITS applications will be examined as part of an overall recommended strategy to improve mobility in the selected corridor. The results from this study will serve as a template to guide transit ITS and other mobility improvements in other congested and constrained regional transportation corridors.

Recommended Improvements to Other Public Transportation Services

- Support continued funding of the *Cascades* Intercity Amtrak Rail Service and Thruway Bus Service.

- Support the continued funding and operation of CARTS in linking Salem-Keizer with the communities of Marion and Polk counties.

- Support efforts to fund rail improvements outlined in the 1994 Oregon High Speed Rail Capacity Analysis.

- Support efforts to investigate clean air modifications to the Salem-Keizer School District's bus fleet.

- Support efforts to fund acquisition of modern passenger trainsets by ODOT for operation in the Willamette Valley portion of the Eugene to Vancouver, B.C. "Cascadia" corridor.

- 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.

Outstanding Issues

The major difficulty involved in expanding the Public Transportation System is a lack of ongoing, stable funding for significant increases in the level and type of transit services provided in the region. The mass transit system, the passenger rail system, and the ADA/Elderly and Handicapped systems all require additional levels of funding to be maximally effective.

The Union Street Railroad Bridge is currently (2002) a funded and scheduled project to convert the existing structure into a pedestrian and bicycle facility. It will provide a safe and convenient link between Wallace Marine Park and west Salem to the Riverfront Park, the central business district, and the rest of Salem. Possible further conversion of the bridge into one being usable by transit and/or emergency vehicles will require further study and outreach to both the public and the nearby businesses. Such a conversion would likely be made in the long-term, while the bridge would function as a bicycle and pedestrian facility in the near-term.

Mass Transit System Funding Shortfall

The transit district can be expected to be able to afford necessary capital improvements (new buses and equipment) over the next 25 years but cannot afford to provide significant expansions of transit levels of service beyond those called for in this Plan without renewed or additional sources of funding (see Financial Chapter 5). Securing stable and continuing sources of adequate operations funding for the mass transit system is critical to the ability of the overall regional transportation system to function effectively, and is a high regional priority. In the near term, in cooperation with the transit district, SKATS and the other jurisdictions in the region will cooperatively seek to identify, evaluate, and recommend appropriate new funding sources for transit operations to the region's citizenry and businesses.

Regional Passenger Rail Facility and Service Funding

The region will continue to work with ODOT to secure the necessary funding to maintain and improve the Regional Passenger Rail System. Stable, long-term funding for operating and maintaining the Salem Railroad station has not been identified. This is crucial to allow this vital piece of the transportation system infrastructure to function as ridership increases as a result of increased service.

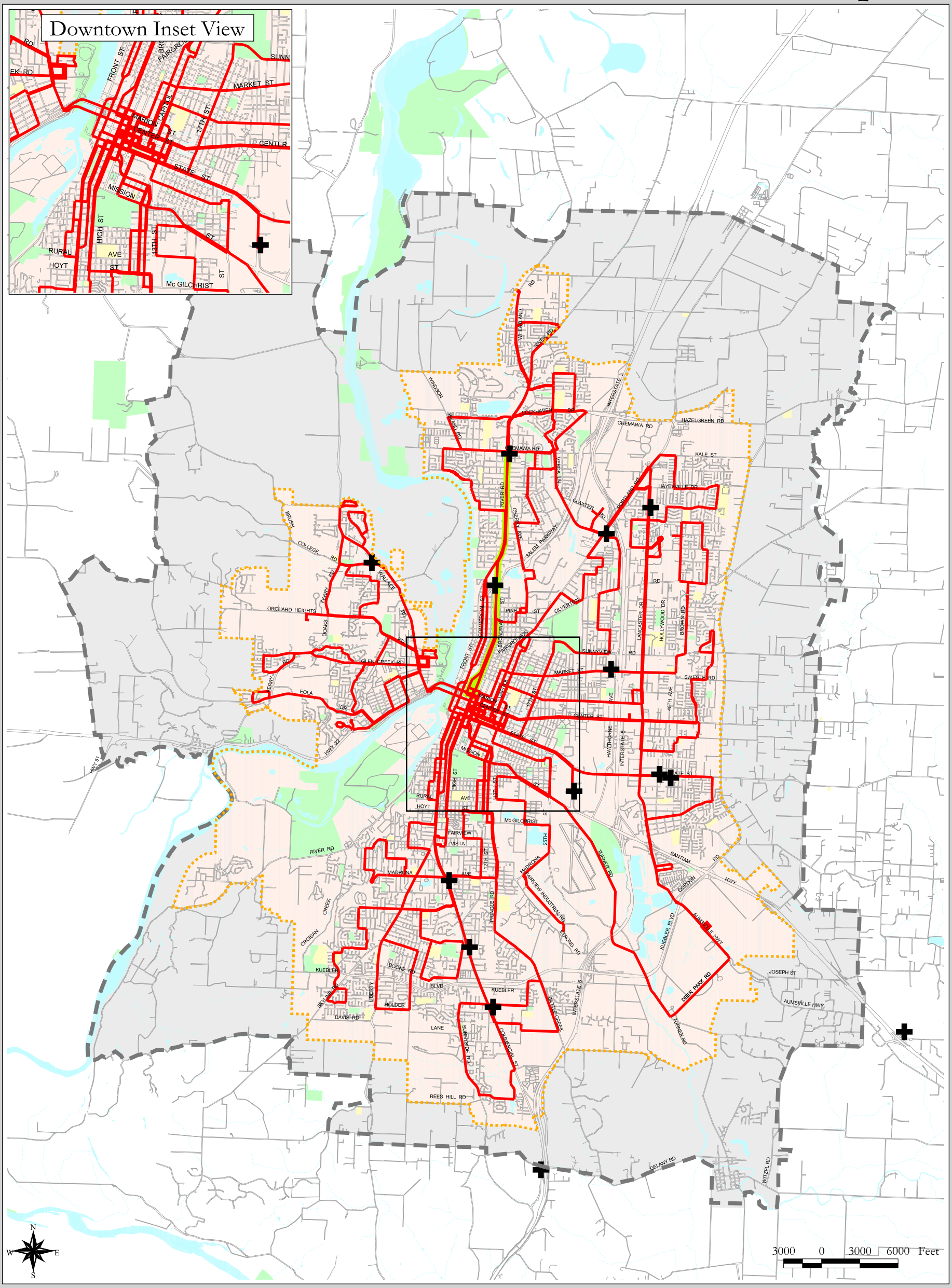
Intercity Bus Service

The feasibility of, and an operating and financial plan for, an ongoing intercity bus service, particularly to the west and east, connecting the Salem-Keizer urban area with cities in Polk and Marion counties, needs to be evaluated. The region will work with county staff to develop and conduct such a feasibility study as funds are available.

ADA/Elderly and Handicapped-Related Services Funding Shortfall

The District is meeting the demand currently. But in the foreseeable future the level of service will grow faster than available funding. As a result of this fact the District will have to pursue additional funding.

2005 SKATS RTSP Update



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

2003 Transit Routes

Map 14-1

2003 Transit Routes
High Priority Transit Corridor
Park-N-Ride Locations

Roads & Highways
Rivers & Creeks
Parks
Schools
Salem-Keizer Area Transportation Study (SKATS) Boundary
Salem-Keizer UGB

01/24/05

Mid-Willamette Valley Council of Governments, 105 High Street SE, Salem OR 97301 ◆ (503) 588-6177 ◆ mwvcog@open.org ◆ www.mwvcog.org

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15 - Roads and Highways

Introduction

The backbone of any regional transportation system is the roadway infrastructure of that system. Regional trips on this system involve automobiles, bicycles, and public transportation, as well as commercial vehicle travel. Meeting the needs of the different users of these facilities, while also meeting the larger livability goals for the region, requires a roadway network that is not weighted toward any one mode to the detriment of the others.

The Regional Road System Element:

- identifies the roadways that comprise the regional highway system in the Salem-Keizer area;
- describes the functional classifications of these facilities;
- lists the goals, objectives and policies for these facilities;
- identifies necessary improvements to increase the safety, efficiency, and capacity of the regional highway system over the next 25 years.

The projects contained in this chapter represent a mix of investments that will ensure that the regional highway system provides adequate levels of mobility for people and goods, while at the same time maintaining the quality of life in the area and meeting the financial constraints that confront the area over the next 25 years.

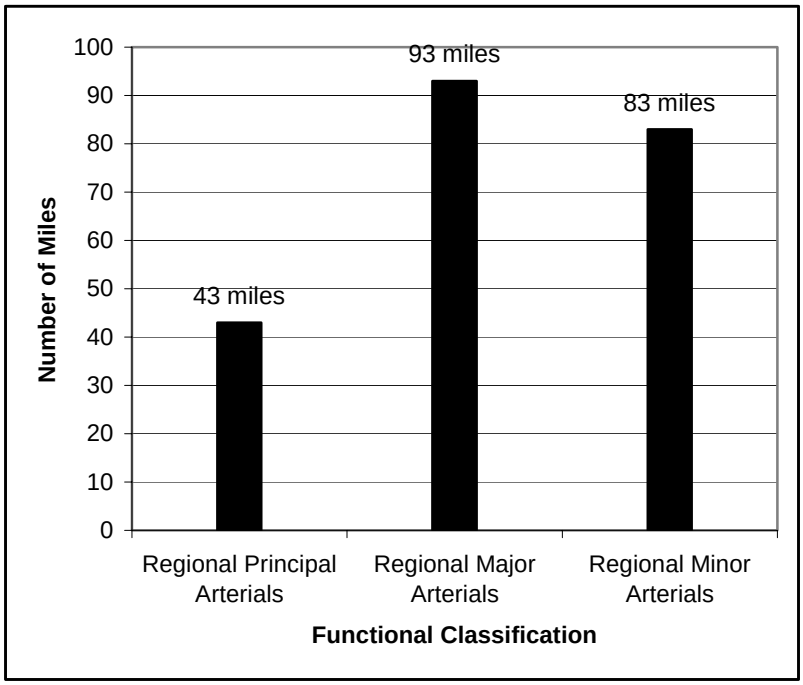
The Road System of Regional Significance

The Regional Road System and Functional Classifications

The Regional Transportation Systems Plan (RTSP) establishes the road system of regional significance (see **Map 15-1**). This system is comprised of facilities that function as Regional Principal Arterials, Regional Major Arterials, and Regional Minor Arterials. These "functional classifications" are useful in ensuring that the "regionally significant" travel movements of people and goods can be adequately and appropriately accommodated by our transportation system. State and local comprehensive plans also contain functional classification systems that apply to the facilities within their jurisdiction, including the types listed above as well as others such as the collectors and local streets designated in local plans. Since SKATS, as the designated Metropolitan Planning Organization (MPO), does not have jurisdiction over any actual facility, it would be inappropriate for this plan to address specific physical aspects of the system such as cross-section design, which, along with traffic volume, is often tied to functional classifications at the local level. Rather, it is the purpose of this plan to identify the "regionally significant" functions necessary to accommodate the travel demand associated with the

movements of people and goods in our area and provide for those functions in the coordinated design of the overall regional transportation system. The regional interest is that these functions be consistent across jurisdictional boundaries, although there may be some variation in local cross-sectional design. The regional functions must, however, be provided for in the local Transportation Systems Plans (TSPs) developed by the local jurisdictions in the region, and the locally designated systems must be consistent with, and adequate to support the functional intent of, the regional system. This approach allows appropriate flexibility in the relationship between intended function and facility design. **Figure 15-1** shows the mileage of the regional road system by functional classification. The functional classifications of the region's roads are reviewed periodically to ensure that their classifications remain appropriate.

Figure 15-1
Regional Road System by Functional Classification (in Miles)



Each of the regional functional classifications is described below and listed in order of decreasing emphasis on longer, through-trip movements (see **Map 15-2, Regional Functional Classification System**). A detailed physical inventory of the regional road system is contained in the SKATS Road Inventory Database.

Regional Principal Arterial

Regional principal arterials provide the primary structural support, "the backbone," of the regional road network. These facilities are intended to function as the carriers of trips of statewide significance entering and leaving the SKATS area, as well as the travel passing through the region destined for other areas. This system includes Interstates, other freeways and expressways, and routes of statewide significance. The SKATS area contains 43 miles of highways and streets that are regional principal arterials.

Regional Major Arterial

Regional major arterials serve as the supporting framework for the regional road network. In combination with the regional principal arterials, the regional major arterials provide for the highest level of mobility into, out of, and within the urban area. The trips that stay within the region, but move across it through a series of adjacent subareas, should be provided for on the regional major arterial system. In addition, movements across the Urban Growth Boundary (UGB) to and from the nearby rural communities surrounding the SKATS area are most appropriately served by this level of facility. Access to regional principal arterials and major regional destinations such as the Capitol Mall area should generally be provided by these types of facilities as well. In the SKATS area, there are currently 93 miles of streets classified as regional major arterials.

Regional Minor Arterial

The regional minor arterial system complements the regional principal and major arterial systems, but primarily functions to accommodate travel moving between broadly defined subareas within the region. An adequate minor arterial system is necessary to prevent these more localized trips from using up the capacity of the principal routes and major arterials and forcing the longer distance, higher speed travel demand off those facilities and into local neighborhoods. Regional minor arterials should also function to provide access to and from the major arterial into individual subareas and to provide community access to significant activity centers, such as the Chemeketa Community College campus. In the SKATS area, there are currently 83 miles of streets classified as regional minor arterials.

Local Classifications Not Included in the Regional System

Local jurisdictional functional classification systems also include collectors and local streets. In general, collectors are contained entirely with communities and provide mobility between adjacent neighborhoods and access to the major arterial and local street system. While individual land uses are often directly accessible, the emphasis of this level of facility is on collection and distribution of trips within the arterial grid. Local streets provide for limited distance local circulation and the highest level of direct property access. This part of the street network generally comprises the vast bulk of the total roadway mileage.

While these facilities must provide adequate levels of transportation service to ensure that this more localized travel demand does not inappropriately burden the regional system functions, it is not within the scope of this plan to address the designation and location of these types of facilities.

Goals, Objectives, and Policies

Goal 1: An adequate system of regional highway facilities to serve the vehicular movements of people and goods into, out of, across, and through the Salem-Keizer urban area.

Objective 1: Establish a system of regional highway facilities within the Salem-Keizer urban area the Regional Road System that adequately serves the "regional" vehicular movements of people and goods.

Policy 1: Identify, designate, and adopt as part of the RTSP the facilities that comprise the highway system of regional significance for the Salem-Keizer Urban area.

Objective 2: Establish and maintain an accurate, up-to-date inventory of the characteristics of the Regional Road System.

Policy 1: The Regional Road System facility inventory shall be updated on an ongoing basis to maintain currency and accuracy.

Goal 2: An adequate level of mobility on the regional highway system for all users.

Objective 1: Ensure adequate levels of service on the Regional Road System for the "regional" movement of people and goods.

Policy 1: Capacity deficiency shall be considered to exist where the Level of Service (LOS) in the peak periods on a regional highway facility exceeds the E/F boundary (volume to capacity ratio > 1.0). Regional highway facilities approaching capacity deficiency shall be defined as those facilities operating within the LOS E range (volume to capacity ratio from 0.88 to 0.99) in the peak periods.

Policy 2: Recognize that the mobility standard for State operated facilities will be held to ODOT standards, as defined in the current Oregon Transportation Plan. As such, these may be different from the standards for the rest of the regional road system.

Policy 3: The RTSP shall identify prudent investments necessary to improve capacity deficient segments of the Regional Road System. Capacity deficient segments for which a preferred solution cannot be identified at this time shall be considered an "outstanding issue" location or area requiring further study. Improvements on facilities that are approaching capacity deficiency that add capacity, improve the safety and/or operation of a facility, or otherwise meet the goals, objectives, and policies of the RTSP may also be recommended in the RTSP.

Policy 4: The improvements of facilities at LOS F should be designed to provide operating characteristics within the LOS D (peak period) range, unless circumstances warrant a lesser degree of improvement.

Policy 5: Improvements that significantly modify capacity on Regional Road System facilities must be consistent with the Congestion Management System (CMS) provisions of the RTSP.

Goal 3: A safe system of regional highway facilities within the Salem-Keizer urban area.

Objective 1: Maximize the safety of the Regional Highway System wherever practicable.

Policy 1: Safety issues shall be considered a priority when comparing alternative projects for inclusion in the RTSP.

Policy 2: Prudent investments necessary to improve current safety problems shall be identified in the regional TIP.

Policy 3: All locations of bicycle and pedestrian accidents on the Regional Road System should be evaluated for potential safety improvements.

Goal 4: Preserve the existing facilities that comprise the regional highway system.

Objective 1: The preservation of the existing Regional Road System should be given priority over building new facilities.

Policy 1: Improvements related to the maintenance and preservation of existing regional facilities shall be considered a high priority.

Policy 2: The costs associated with maintaining the existing Regional Road System at an acceptable condition shall be determined and addressed prior to the allocation of funds for new construction in the RTSP.

Goal 5: An efficient system of regional highway facilities within the Salem-Keizer urban area.

Objective 1: Maximize the efficiency of existing and planned Regional Road System facilities wherever practicable.

Policy 1: The Regional Road System shall utilize existing facilities and rights-of-way, using Transportation System Efficiency Management techniques to improve traffic flows to the extent practicable.

Policy 2: Access management strategies shall be employed where appropriate on major regional arterials and above to improve safety and facilitate through-traffic flow.

Goal 6: A regional highway system that minimizes adverse neighborhood, environmental, and energy impacts associated with regional travel demand.

Objective 1: The Regional Road System should serve to protect and minimize adverse impacts on neighborhoods and environments wherever practicable.

Policy 1: In cooperation with local jurisdictions, actions to provide sufficient mobility on the regional system and/or discourage through trips on local streets will be considered in order to minimize neighborhood infiltration by "regional" travel movements.

Policy 2: The design and construction of new regional transportation facilities shall minimize disruption to neighborhoods.

Objective 2: The projects and programs included in the Regional Transportation Plan should reduce regional ambient air pollutants, as required. Highway projects in the plan should be designed to not increase localized pollutants, as required, and further reduce localized pollutants whenever practicable.

Policy 1: The Regional Road System and recommended improvements included in the Highway Element of the RTSP shall meet the requirements stipulated in the Clean Air Act Amendments (CAAA) of 1990 and the Oregon State Conformity Rule (OAR Section 340-20-700, et. seq.)

Objective 3: The Regional Road System should minimize adverse effects on environmentally sensitive areas such as wetlands and endangered species habitat(s).

Policy 1: Analysis of potential future highway facilities shall consider potential impacts to environmentally sensitive areas. Facilities that avoid those areas shall be encouraged.

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

Policy 3: Facility modernization and construction improvements shall include measures for environmental remediation, where necessary.

Objective 4: The Regional Road System should minimize adverse effects on water quality in the Salem-Keizer urban area.

Policy 1: Potential impacts from increased surface runoff associated with facility modernization and construction improvements shall be evaluated when comparing alternative projects for inclusion in the RTSP.

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

Goal 7: An integrated system of regional highway facilities in the Salem-Keizer area.

Objective 1: Integrate the Regional Road System with other transportation modes.

Policy 1: Improvements to the Regional Road System shall be integrated with other modes where practicable to assure the opportunity for both multi- and inter-modal connectivity and efficiency.

Objective 2: Integrate the Regional Road System with current and projected land uses.

Policy 1: Regional Road System facilities and the land uses they provide access to should be functionally compatible, both currently and in the future.

Objective 3: Ensure the continuity and connectivity of the Regional Road System.

Policy 1: The Regional Road System shall provide connectivity and continuity of travel between regional ingress and egress points and major regional destinations and activity centers to minimize out-of-direction travel and circuitous routing.

Regional Road System Deficiencies and Recommended Improvements

The projects presented in this Plan come from six sources: The 2002 Update to the Regional Transportation Systems Plan (RTSP) with 2003 amendments, Salem's 1998 Transportation Systems Plan (as amended, currently being updated), Keizer's 2000 Transportation Systems Plan, Marion County's 1998 Rural Transportation Systems Plan (currently being updated), Turner's 1999 Transportation System Plan, and ODOT's 2004-2007 State Transportation Improvement Program (STIP). These projects address both near-term and long-term needs of the Salem-Keizer-Turner area to provide the residents and businesses with an adequate level of mobility. The financially constrained portion of the RTSP includes a total of 87 recommended projects and 45 committed projects from these documents. However, due to the financial shortfall facing the area over the next 25 years, as detailed in Chapter 5, there are an additional 69 projects that have been identified as necessary for maintaining the region's mobility but no funding is anticipated for them during the 25-year life of this Plan. These improvements are identified in the RTSP as "illustrative."

Funded projects are those that address the most pressing roadway needs facing the area over the next 25 years. These projects are located throughout the Salem-Keizer area and range from bridge modernization to improving the efficiency of a road to bringing roads up to "urban standards." These projects are part of the federally mandated financially constrained plan.

Unfunded projects are those that, while representing important and needed improvements to address the mobility needs of the area, can be deferred until after the life span of this Plan, or until new funding sources can be identified. They are included to provide an insight into the magnitude of projects that cannot be funded with current resources, and the issues that they address. These projects are not part of the adopted Plan, and thus are not included in any air quality or other system modeling. Before any of the unfunded projects could be built, the Plan would need to be amended.

The projects have been classified into four categories based on the main focus of the roadway improvement: Bridge Modernization, Safety/Signals/Efficiency, Urban Standards, and Capacity Increasing. These categories are discussed in more detail below.

Bridge Modernization

Many of the bridges in the Salem-Keizer area are either reaching the end of their design life or need to be updated to meet new seismic and environmental standards. The projects identified will either replace the existing bridge with a new one, or will reconstruct the necessary parts of the bridge to lengthen its lifetime of service and to meet the newer regulations. Seismic standards are designed to increase the survivability of a bridge in the event of an earthquake. The environmental regulations address the accessibility of streams to spawning fish. In particular, culverts and bridge spans must be designed to allow for fish to swim upstream unimpeded to reach spawning grounds.

There are fourteen bridge modernization projects on the funded list at an estimated cost of $17.7 million over the next 25 years. Three bridge projects are currently unfunded, but these do not address safety or environmental issues.

Safety/Signals/Efficiency

Projects in this category address several aspects related to the operation of the regional road system. Safety projects are targeted at intersections and sections of roads that are hazardous or unsafe to the users of the facility. There are two types of signal projects: new signal installation or interconnecting signals. New signals are installed at intersections where the volume of traffic has grown too large for stop signs to efficiently or safely control. Traffic signal interconnect projects connect existing or new signals in a corridor to the Regional Traffic Control Center, to allow for better control of the timing of the signals to allow traffic to move without the stop-and-go nature that might otherwise result. Efficiency projects cover a wide range of possible improvements. These include providing center turn lanes, modifying the characteristics of an intersection, and providing bus pullouts.

In this Plan, 79 projects included on the funded list are classified under Safety/Signals/ Efficiency. Twenty-three projects have been identified as needed, but remain in the unfunded list due to financial constraints and are included as "illustrative." The total for the funded projects is $91.2 million.

Urban Standards

Urban standards projects improve an existing road to provide for the multimodal nature of the transportation system in a safer, more aesthetically pleasing manner. Many roads are essentially paved walking routes; that is, they support two travel lanes and nothing else. Reconfiguring such a road to meet urban standards would involve retaining the two travel lanes and adding other features to provide for the safe and efficient movement of other modes. Typically, this includes bike lanes, sidewalks with landscaping, and either a center median that is landscaped with left turn pockets or a continuous left turn lane.

Thirteen Urban Standards projects are included in the funded portion of the Plan and represent an investment of $29.3 million over the next 25 years. An additional twenty-two projects were placed on the unfunded list due to financial restrictions.

Capacity Increasing

A capacity increasing project is one where the number of travel lanes is increased, or where a new road is built. New roads of regional significance occur very rarely, in contrast to local roads that are built to service new subdivisions or industrial areas. Projects that increase the number of travel lanes on a road occur more frequently, but are usually done only if no other types of projects can address the mobility needs of the areas residents.

Fourteen capacity increasing projects are included in the funded portion of the Plan, representing a total expenditure of $37 million over the life span of this Plan. Additionally, 16 projects were moved to the unfunded list until sufficient funding is available.

Projects need to conform to the requirements and procedures specified in Chapter 13 relating the Congestion Management System. These procedures dictate the steps required for projects that add or subtract significant capacity to or from an existing road, or construct new roads, to alleviate congestion in a corridor.

In addition, there are four projects included in the funded Plan that support transit on the High Priority Transportation Corridor. The cost of these four projects is $1.75 million.

Table 15-1 lists the projects by jurisdiction and category and delineates the funded projects from the unfunded ones. Unfunded projects are included for illustrative purposes only and are not part of the adopted Plan, and thus are not used for air quality or systems modeling. Before any of the unfunded projects could be built, the Plan would need to be amended. The table also provides a brief description of each project and the estimated cost to complete the project. **Map 15-3** shows the approximate location of these projects to provide an insight into the context each is associated. **Map 15-4** shows the approximate location of committed projects to provide an insight into the context each is associated.

Outstanding Issues

The improvements, both funded and unfunded, called for in this Plan do not solve all our roadway problems. In fact, some of our more obvious problems are not fully addressed by the improvements identified in this Plan. The reasons for this are:

1) The nature of these problems is very complex and further analysis is required to adequately understand the underlying travel demand contributing to the problems;
2) Several potential approaches might be useful, either alone or in combination, to address these problems;
3) No consensus solutions are currently available to address these problems, and additional public deliberation and input is required before a preferred alternative can be selected and included in the Plan; and
4) Several of these problem areas are the subjects of current ongoing planning studies and as such do not have any recommended solutions at this time.

Several areas where outstanding issues have been identified are discussed in more detail below.

River Crossing Capacity

The Willamette River Crossing Capacity Study (2000) identified the Tryon/Pine Corridor as the preferred location for the eastern terminus of a new bridge across the Willamette. The next step is to conduct environmental, design and public involvement activities necessary to prepare an EIS on a project to construct a bridge in this corridor. The EIS will also seek to identify a viable consensus combination of funding sources to construct the preferred alternative. To protect the right-of-way that is identified, $20 million is allocated over the life of this Plan. This is the first step for the region to take to show its commitment to the construction of a new bridge.

In addition, the Willamette River Crossing Capacity Study also recommended further study of an additional bridge in the Kuebler/Doaks Ferry area to the south of the existing bridges and the consideration of a "beltline" highway around the Salem-Keizer area. At this time, there is neither the funding nor consensus regarding a future Kuebler bridge and beltline. For these reasons, they are not included as specific projects in this plan, but are identified as components of a future vision of the area that will continue to draw attention over time.

I-5 Interchanges @ Chemawa Road and Kuebler Boulevard

Both of these facilities are congested and recent developments in the area are expected to place additional demands on the interchanges. Interchange Area Management Plans (IAMPs) are required to identify the severity of the expected problems and to evaluate and recommend preferred solutions.

The interchange connecting I-5 and Kuebler Boulevard is currently undergoing an IAMP. The project is one phase, with the second phase examining the OR 22 E corridor between 25th and Gaffin and the operational characteristics of the current interchanges and a possible future interchange linking OR 22 E with Cordon Road. Results from these IAMPs are expected later in 2005.

Chemawa Interchange

The interchange connecting Chemawa Road and I-5 was identified as an outstanding issue in the 2002 RTSP Update. At that time, work was ongoing on a Traffic Impact Study (TIS) for the proposed Chemawa/Keizer Station development. Improvements to the interchange were identified in that document as being needed to ensure that the operational characteristics of the interchange and that section of Chemawa Road do not degrade in the future. The implementation of the recommendations and their success will be closely watched in the future.

OR 22 E (25th- Gaffin Road)

This is a congested section of a major statewide route and includes several key intersections that are severely congested and expected to worsen considerably in the future. The need for an interchange-type connection between Highway 22 and Cordon Road needs to be examined and environmental analyses need to be performed as part of an Expressway Management Plan (EMP) for this segment of Highway 22.

OR 22 W (OR 51 to Willamette River Bridges)

This section of OR 22 in West Salem is currently congested and quite dangerous. In addition, potential new development in the area can be expected to increase travel demand on this section of Highway 22. The BHES identified a TSM-type improvement at the west Bridgehead that has yet to be scheduled for implementation. An Expressway Management Plan (EMP) for this section of OR 22 is necessary to identify the severity of the problem and recommend a coordinated set of preferred solutions for the area. In preparing this plan, ODOT and the local jurisdictions are working together on a study to identify, analyze, and narrow the number of feasible alternatives that address operational, safety and geometric problems, consistent with the 1999 Oregon Highway Plan. One area of focus is the intersection of Highway 22 and 51, for which Polk County has been able to successfully lobby $3 million in funds from Congress and ODOT has identified environmental document and development work as tasks for the next three years. Results from this study will be included in the next RTSP update.

High Priority Transportation Corridor

Many corridors in the area have reached their ultimate physical width. The area will need to use techniques, other than road widening, to provide for the area's mobility.

The High Priority Transportation Corridor Study commenced in mid-2002, with the report accepted by the SKATS Policy Committee in late 2003. The study investigated and identified methodologies and technologies that relieve congestion experienced by transit vehicles in a corridor. The recommendations from this study will allow transit service to improve to the point of being competitive with automobile travel. Approximately $6.5 million in funds will be allocated to this project over the next several years to implement the proposed solutions along the Broadway/River Road North corridor. Solutions identified in this study will likely be implemented in other transit corridors in the Salem-Keizer area after their effectiveness has been shown in the current corridor.

In addition to those outstanding issues mentioned above, several other problem areas will be the subject of further study as part of the development of local TSPs by jurisdictions in the region, or as part of specific study processes associated with updating local comprehensive land use plans.

Although interrelated packages of improvements for each of these outstanding issue areas will likely be identified as a result of the foregoing study processes, there may be instances where specific projects or actions to preserve right(s)-of-way for eventual improvements are warranted prior to the completion of the entire study. If such actions can successfully demonstrate consensus support and operational separability, i.e., the action or improvement is warranted on its own merits and will not preclude elements of a comprehensive solution, then they may be advanced individually and remain consistent with this Plan without being specifically identified in it.

Table 15-1. Committed and Recommended Projects

RTSP Category	Name	Description
COMMITTED		
Bridge		
KC002	Chemawa Rd: River Rd to Verda	Claggett Creek Bridge Replacement, Urban standards, Bikelanes, Curbs
MC007	Marion Rd: Bridge over Mill Creek (#1501)	Widen and replace bridge (#1501)
MC008	Marion Rd: Bridge over Mill Creek (#1502) (dev)	Widen and replace bridge
PC001	Bridge at Riverbend Rd	Bridge replacement/rehab on Riverbend Rd just outside the Salem UGB
SC027	Liberty St @ Pringle Creek	Replace bridge
SC033	Liberty St NE Bridge @ Mill Creek	Rehab or replace bridge using State funds
SC034	State St Bridge @ Mill Creek	Rehab or replace bridge using State funds
SC035	Turner Rd SE Bridge @ Mill Creek	Rehab or replace bridge using State funds
SC036	25th St SE Bridge @ Shelton Ditch	Rehab or replace bridge using State funds
SC045	Center St. @ Mill Creek	Bridge replacement
SC051	Cottage St @ Mill Creek	Bridge replacement/repair
Capacity Increasing		
OC003	I-5: Kuebler Interchange	Add NB on ramp in NE quadrant of the interchange
OC004	I-5 Phase IIIb: Hwy 22 to Kuebler Interchange	Widen to 6 lanes, replace bridge over Marietta
SC016	Northgate Av. Extension	UP under-crossing, Salem Ind. Dr. to Portland Rd., curbs, sidewalks
SC031	Front St Bypass: Phase II	Ramp widening Center St Bridge to SB Front St, west parking lot, east side esplanade
Signal, Safety, Efficiency, 3rd Lane		
KR007	Chemawa Interchange	Improve intersections w/ additional turn lanes
MC002	Cordon Rd @ Pennsylvania Ave	Add left turn pocket
MC003	Cordon: State to Silverton	Traffic Signal Interconnect
MC004	Lancaster: State to Rickey; Hayesville to Silverton	Traffic Signal Interconnect
MC005	Silverton Rd: Lancaster to 45th; Brown to Cordon	Traffic Signal Interconnect
MC006	Lancaster Dr: Access Management	Access management
SC003	River Road S @ Croisan Creek Road South	Signalize
SC007	Sunnyview Rd.NE @ 45th	Signalize
SC008	Hyacinth @ Salem Industrial Dr.	Signalize
SC011	State St from 12th St to 24th Ave	Traffic signal interconnect
SC012	West Salem: Edgewater from Wallace to Eola	Traffic signal interconnect
SC013	12th/13th St. SE (Hines and Hoyt)	Traffic signal upgrade and interconnect (Hines and Hoyt)
SC019	Eola Dr NW at Edgewater Rd NW	Add a traffic signal
SC032	Liberty Rd S @ Madrona Av	LT lanes on Madrona
SC037	Cordon Rd @ Macleay Rd SE	Install traffic signal and associated intersection improvements
SC040	Sunnyview Av @ Lancaster Dr	Construct RT lanes
SC041	Market St @ Lancaster Dr	Construct RT lanes
SC042	Commercial @ Wiltsey	Add traffic signals at this intersection
SC044	Center St from 12th St to Hawthorne Ave	Traffic signal interconnect
SC046	Kuebler: Commercial to I-5	Traffic Signal Interconnect
SC047	Madrona: Pringle to Fairview Industrial Dr	Traffic Signal Interconnect
SC048	25th: Mission to McGilchrist	Traffic Signal Interconnect
SC050	17th: State to D St	Traffic Signal Interconnect
SR049	Lancaster: Hagers Grove to Cordon Rd	Traffic Signal Interconnect
TC001	3rd / Denver : Turner	Re-route traffic to remove one turning movement
Urban Standards		
MC009	Marion Rd: Mill Creek Rd to Turner (dev)	Pave shoulders
SC001	Portland Rd: Beach to Claxter	Landscaping,median, bikelanes and sidewalks
SC038	Doaks Ferry Rd: Orchard Hts to Chapman Elem	Construct 1600 feet of missing sidewalk
SC039	Orchard Hts: Mousebird Av to West Salem HS	Construct 1500 ft of missing sidewalk
SC043	Doaks Ferry: Brush College to Orchard Heights	Widen to 3 lanes with curbs and sidewalks. Developer paid. $2.498 million estimate.
TC002	3rd St: Val View to Mill Creek Bridge (Turner)	Add sidewalks, bike lanes, curbs & storm drains
TC003	3rd St: Mill Creek Bridge to Denver St (Turner)	Add sidewalks, bike lanes, curbs & storm drains
TC004	Denver St: 3rd St to Mill Creek Bridge (Turner)	Add sidewalks, bike lanes, curbs & storm drains

RTSP Category	Name	Description
RECOMMENDED - Included		
Bridge		
MR025	Delaney Rd. bridge over Battle Creek	Replace bridge, realign intersection
SR012	Capitol Street @ Mill Creek	Bridge Replacement
SR024	Commercial St. @ Pringle Creek	Bridge Rehabilitation
SR062	Liberty St. @ Pringle Creek	Bridge Rehabilitation
SR089	Summer St. @ Mill Creek	Bridge Rehabilitation
Capacity Increasing		
KR002	Lockhaven: McLeod to Ridge	Widen to 4 lanes, add bike lanes and sidewalks
KR003	Verda Ln :Chemawa to Dearborn	Widen to 5 lanes, add bike lanes and sidewalks
KR004	Verda Ln: Dearborn to City Limits	Widen to 5 lanes, add bike lanes and sidewalks
MR014	Lancaster Dr: State St to Center St	Reconstruct road
OR002	I-5 Phase IV: Kuebler Interchange to Delaney Rd.	Widen to 6 lanes
RR001	Tryon Road Bridge Corridor	ROW for Bridge
SR022	Commercial St @ Marion (BHES)	Provide two right turn lanes
SR026	Cordon Rd @ Hwy 22	Construct interchange
SR047	Hilfiker Lane, Commercial St. to Pringle Rd.	Extend Hilfiker to connect to Pringle Rd.
SR055	Kuebler Blvd.: Sunnyside to I-5	Widen to 4 lanes
SR077	Mildred & Fabry: Skyline to Battle Creek	Minor arterial from Battlecreek Rd to Skyline Rd, construct missing segments of minor arterial
SR084	Robins Lane, east of Commercial St. SE	Connect Robins Lane to Battlecreek(Brentwood) Rd and improve Brentwood
SR120	Kuebler: Mill Creek Bridge to Aumsville Hwy - SREC	Add a NB lane to Kuebler from the east side of the Mill Creek bridge to the south side of the Hwy 22 overpass
Pedestrian		
MR016	Sidewalk Construction: Various locations (set 1)	Construct sidewalks
MR022	Sidewalk: Various locations (set 2)	Construct sidewalks at various locations
Signal, Safety, Efficiency, 3rd Lane		
KR001	North River Road	Bus Pullouts
KR005	North River Road: Lockhaven to Manzanita	Traffic signal interconnect
KR006	Lockhaven: North River Road to I-5	Traffic signal interconnect
KR008	Chemawa Rd, Lockhaven Dr, Ridge Dr, Radiant Dr.	Reconfigure streets and intersections and provide access control
KR009	Chemawa Queue Jump - HPTC	Queue jump on Chemawa WB at River Road N as recommended by the HPTC project
MR004	Lancaster: Upgrade Signals	Upgrade Signals at the intersections of Lancaster with Durbin, Macleay, Cooley, Ward, and Hayesville
MR005	Center St., from Lancaster Dr. to Cordon Rd.	Widen to 3 lanes, curbs and sidewalks
MR006	State St., from Lancaster Dr. to Cordon Rd.	Widen to 3 lanes, curbs and sidewalks
MR007	Cordon Rd @ Herrin	Add left turn refuge
MR009	State St.	Traffic Signal Interconnect
MR010	Ward Dr., from Fisher Rd. to Lancaster Dr.	Widen to 3 lanes, curbs and sidewalks
MR011	Cordon Rd @ Auburn Rd	Add traffic signal and turn lanes on Auburn
MR012	Ward Dr @ Fisher Rd	Add traffic signal and turn lanes
MR013	Silverton Rd @ Hollywood Dr	Add traffic signals and turn lanes on ramps
MR015	Brooklake Rd @ Wheatland Rd	Safety Improvement
MR017	Cordon Rd @ Swegle Rd	Add traffic signal and turn lanes on Swegle
MR018	Cordon Rd @ Carolina Ave and Indiana Ave	Add NB LT lane or close side roads
MR019	Lancaster Dr @ Winema Pl	Add traffic signal; realign Winema
MR020	Lancaster Dr @ Ward Dr	Add EB RT lane
MR021	Cordon Rd @ Hayesville Dr	Add NB LT lane
MR023	Cordon Rd @ Ward Dr	Add NB LF lanes
MR026	River Rd NE @ Brooklake Rd	Signalize and realign intersection
MR027	Cordon Rd @ Hazelgreen Rd & 55th Ave	Realign, add turn lanes and signal
OR003	Mission @ 25th	Upgrade Signal
OR004	Chemawa / Hazelgreen @ Portland Road	Upgrade Signal & Interconnect
OR005	Hayesville Drive @ Portland Road	Upgrade Signal
RR002	HPTC Corridor Improvements	Miscellaneous improvements in the HPTC corridor, Salem to Keizer, related to transit.
SR004	25th Street @ McGilchrist St.	Widen intersection for left turn pockets
SR007	Battle Creek: Hillrose to Eastlake	Two lanes plus CTL, bikelanes
SR011	Capitol St/Summer St., from D St. to Fairgrounds Rd.	Additional capacity using parking management/mitigation
SR013	Center St @ 17th	Intersection improvement to add turn lanes
SR021	Commercial SE @ Ratcliff Drive SE	Add left-turn lane @ Ratcliff and install traffic signal
SR027	Cordon Rd. @ Macleay Rd. & Gaffin	Left-turns on all approaches
SR037	Eola Drive Nw: Kingwood to Edgewater	Widen to add turn lanes as needed. Provide bike lanes and sidewalks
SR038	Eola Drive NW: Sunwood Dr to Kingwood Dr	Widen to 3 lanes w/ curbs, bikelanes & sidewalks
SR042	Front St Bypass @ Center Street (BHES)	Replace ramps stop sign with signal
SR046	Hawthorne/Hyacinth: Portland Rd. to Sunnyview Rd.	CTL and add bike lanes and sidewalks
SR056	Lancaster Dr., from Cranston to Kuebler	Realign street; widen to 3 lanes, bikelanes
SR057	Lancaster Drive Access Management	Access Management, State St. to Silverton Rd.
SR066	Madrona Av. @ Commercial St.	Add turn lane
SR069	Madrona Ave @ 25th St	Realign street and airport access, remove parking, restripe bikelanes
SR070	Marietta SE: 27th to 36th/ Kuebler Blvd	Realign curve under I-5 and add bike lanes
SR073	Market St. @ Lancaster Dr	Improve intersection
SR076	McGilchrist St., from 12th St. to 25th St.	Widen to 3 lanes with left turn lanes, bikelanes
SR086	Skyline Rd., from Liberty Rd. to Kuebler Blvd.	Widen to 3 lanes, bikelanes
SR092	Sunnyview Road : Park Ave to Fisher Road	Roundabout at Park, signal at Lansing, signal at Fisher, curbs & sidewalks Evergreen to Byram
SR093	Ten traffic signals at unspecified locations	10 signals in years 0 to 10
SR094	Ten traffic signals at unspecified locations	10 signals in years 10 to 20
SR099	Wallace Rd @ Glen Creek Rd	Widen intersection to add turn lanes
SR100	Wallace Rd: Edgewater to Orchard Hts	Access Management
SR101	Wallace Road @ Edgewater (BHES)	Increase turn radius
SR115	Broadway @ Salem Parkway - HPTC	Add additional turn lanes to three intersections on the HPTC corridor to ensure future mobility
SR117	Broadway @ Market - HPTC	Add turn lanes at Broadway @ Market
SR119	Kale: Portland Rd to Drew St	Bike lanes

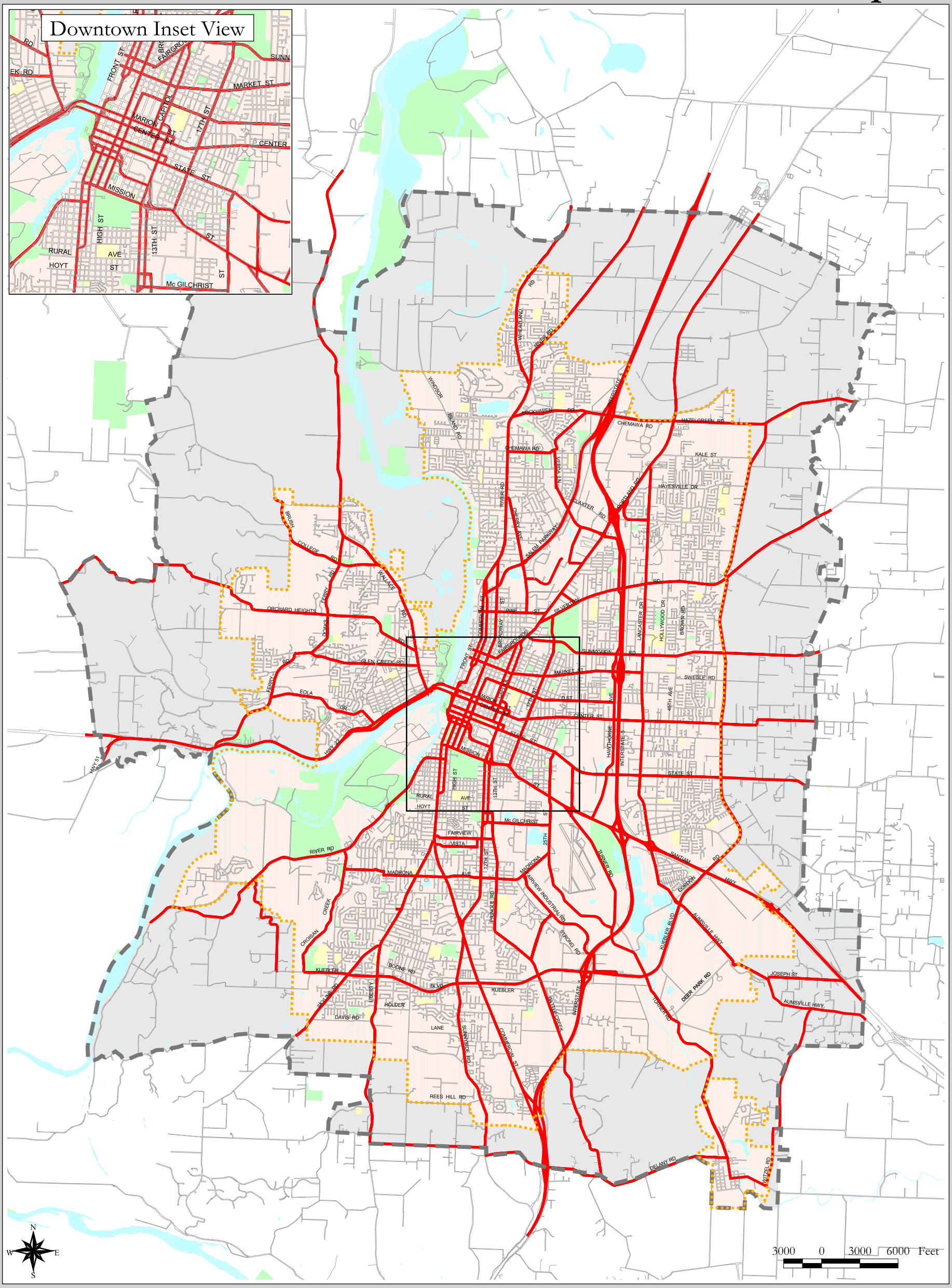
RTSP Category	Name	Description
SR121	Kuebler @ Lancaster - SREC	Improve the intersection of Kuebler/Cordon and Lancaster/Aumsville Hwy to 5 lanes
Transit		
SR111	Shangri La Queue bypass - HPTC	Queue bypass at the intersection of Broadway and Shangri La
SR112	Salem Parkway Queue Jump - HPTC	Queue jump on Broadway NB at Salem Parkway
SR113	Hood to Market Busway - HPTC	Busway between Hood St and Market St on Broadway.
SR114	Gaines St Station - HPTC	Station at the intersection of Gaines St and Broadway as part of the busway.
Urban Standards		
MR024	Delaney Rd: Battle Creek to Turner	Widen road to county arterial standards
MR028	Auburn Rd: Lancaster Dr to Cordon Rd	Widen to collector standards
MR029	Brown Rd: City Limits to Silverton Rd	Widen to collector standards
MR030	Hollywood Dr: City Limits to Silverton Rd	Widen to collector standards
SR029	Croisan Creek Rd. from S. River Rd. to Heath St.	Add curbs & sidewalks
SR096	Turner Rd.: Airway Dr. to South UGB	Upgrade to meet minor arterial standards,bikelanes

RECOMMENDED - Illustrative (Illustrative projects are currently unfunded, and are listed to provide a more complete picture of the mobility needs of the region. Ill projects are not part of the adopted Plan, and thus are not included in any air quality or other system modeling. Before any of the unfunded projects could be built, the Plan wou amended.)

Bicycle		
MR038	Cordon Rd: Silverton to Kale	Separated multi-use path
MR058	Center/Hampden/Fruitland: Cordon to 63rd	Add bike lanes
Bridge		
MR051	Wipper Rd bridge	Replace bridge
MR059	BNRR Bridge over River Rd S	Replace bridge and realign road
SR001	12th St: McGilchrist to Vista	Add turn lanes @ Fairview & widen bridge for 4 lanes
Capacity Increasing		
MR040	Lancaster Dr @ State St	Capacity improvements
MR045	Vitae Springs Rd: River Rd S to Orville Rd	Realign, widen and pave road
OR006	Hwy 22 and 51 interchange	Construct an interchange at the OR22W and OR51 intersection.
SR002	13th Street, from McGilchrist St. to Mission St.	Widen to 3 lanes, with bikelanes
SR018	Chemawa Rd. NE: I-5 to Portland Rd.	Widen to 4 lanes plus CTL, bikelanes
SR019	Cherry: Johnson to Pine	Widen to 4 lanes plus CTL
SR020	Cherry: RR to Salem Parkway	Widen to 4 lanes plus CTL
SR025	Commercial St. SE, from Fabry Rd to I-5	Widen to 4 lanes with CTL and median, keep existing bikelanes
SR031	Croisan Scenic Way: River Rd. S to Skyline	Construct missing segments
SR036	Doaks Ferry: Hwy. 22 to Brush College	Upgrade to meet major arterial standards (5 lanes), bikelanes, sidewalks
SR043	Front St NE (BHES)	Add third northbound lane on Front St for free right turn
SR045	Hawthorne Av., from Market St. to Hwy 22	Widen to 4 lanes, keep existing bikelanes
SR048	Hyacinth: Salem Parkway to Portland Rd	Widen to 5 lanes, keep the bikelanes
SR068	Madrona Av.: UPRR to 25th St.	Widen from 3 to 4 lane with CTL, realign intersections
SR075	Market St.NE: Lancaster to Swegle School, Swegle	Widen, varies from 2 to 5 lane,realign intersections,bikelanes
SR078	Mission St SE: Liberty and Commercial	Improve intersections w/ additional turn lanes
SR110	Kuebler Blvd: Skyline to Sunnyside	Widen to 4 lanes, curbs, sidewalks, bikelanes, CTL or median
Pedestrian		
MR033	Sidewalks: Various locations (set 3)	Construction of sidewalks
MR046	Sidewalks: Various locations (set 5)	Construct sidewalks
Signal, Safety, Efficiency, 3rd Lane		
MR035	Cordon Rd @ Kale St	Add NB LT lane
MR036	Lancaster Dr @ Portland Rd	Safety Improvements and/or signal
MR037	Lancaster Dr @ Monroe Ave	Add traffic signal, line up Monroe approaches
MR047	Center St @ 45th Ave	Install traffic signal
MR049	Cordon Ave @ Pennsylvania Ave	Install traffic signal
MR050	Brooklake Rd @ Huff Ave	Add traffic signal and turn lanes
MR054	Skyline Rd @ Vitae Springs Rd	Realign intersection
MR055	River Rd S. @ Riverdale Rd (Roberts)	Realign intersection (possible developer requirement?)
SR003	25th St., from Mission St. to McGilchrist St.	Widen to 5 lanes w/bikelanes; signalization
SR016	Center St., from 13th St. to Park St	Widen to 3 lanes
SR034	Doaks Ferry: Eola to Hwy 22	Widen to 3 lanes, with bikelanes & sidewalks
SR035	Doaks Ferry: Glen Creek to Eola	Widen to 3 lanes, with bikelanes & sidewalks
SR039	Eola Drive NW: Sunwood to Doaks Ferry	Widen to 3 lanes w/ curbs, bikelanes & sidewalks. Intersection improvements as needed
SR044	Glen Creek Rd., from Doaks Ferry to Alpine	Widen to 3 lanes, keep bikelanes
SR050	Kale: Portland Rd to Cordon Rd	CTL and add bike lanes, curbs and sidewalks
SR060	Liberty Rd.: Commercial St. to Browning	Widen to 4 lanes + CTL. Bike lanes
SR064	Liberty @ Madrona	Widen intersection and add left turn lane
SR065	Liberty @ Salem Heights	Add N & Southbound Left Turn Lanes, bikelanes
SR071	Market St. @ Broadway St.	Add left turn lanes to Market St approaches
SR080	Owens St SE: Liberty & Commercial	Improve intersections
SR087	S. River Rd.: Croisan Creek to Owens	Install left turn lanes at major intersections
SR088	State St., from 13th St to 23rd St	Add continuous left turn lane if warranted by safety problems
SR091	Sunnyview Rd.:Lancaster to Brown	Widen to 4 lanes plus CTL, bikelanes
Urban Standards		
MR031	45th Ave: Ward Dr to Silverton Rd	Widen to Collector Standards
MR032	Blossom Dr: City Limits to Portland Rd	Widen to Collector Standards
MR034	Herrin Rd: Middle Grove to Cordon Rd	Widen to Collector Standard, replace bridge
MR041	Lancaster Dr: State St to Center St	Transportation and bike/ped enhancement
MR042	MacLeay Rd: Arabian Ave to Cordon Rd	Widen to Minor Arterial standards
MR043	Swegle Rd: City limits to Cordon Rd	Widen to Minor Arterial standards
MR044	Cordon Rd: Caplinger Rd to Center St	Construct to Parkway standards with multi-use path
MR048	Turner Rd: Val View Rd to Turner UGB	Improve to arterial standards
MR052	Cordon Rd: Center St to Silverton Rd	Construct to Parkway standards with multi-use path
MR053	Hayesville Dr: Lancaster Dr to Cordon Rd	Widen to collector standards
MR056	Kale St: City limits to Cordon Rd	Widen to Minor Arterial standards
MR057	Fisher Rd: Ward Dr to City limits	Widen to Collector standards (add sidewalks)

RTSP Category	Name	Description
SR005	Airport Rd. State St. to Mission St.	Upgrade to Major Arterial Standards, bikelanes
SR006	Aumsville Hwy.: Deer Park Rd. to UGB	Upgrade 0.5 miles to minor arterial standards
SR017	Center St., from Greencrest to Cordon	Upgrade to Major Arterial Standards, bikelanes
SR051	Kuebler Blvd. : Croisan Creek to Viewcrest Dr S	Construct to urban standards, bikelanes, curbs, sidewalks
SR061	Liberty Rd.: Holder Ln. to South UGB	Upgrade to Minor Arterial Standards, bikelanes
SR081	Pringle/Battle Creek: McGilchrist to Kuebler	Add CTL w/ curbs, sidewalks and bike lanes. Widen to 5 lanes S of Reed Lane
SR082	Reed Ln: Battle Creek to Fairview Industrial	Construct to urban standards, bikelanes, curbs and sidewalks
SR090	Sunnyview Rd.: Walker to Cordon	Upgrade to Minor Arterial Standards, bikelanes
SR095	Turner Rd., Cascade Gateway Park to Airway Dr.	Construct to urban standards, bikelanes, curbs, sidewalks,tile ditch
TR004	Delaney Road: 3rd St to Mill Creek Bridge (Turner)	Add sidewalks, bike lanes, curbs & storm drains

2005 SKATS RTSP Update



Regional Road Network

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

Regional Road Network

Roads & Highways
Rivers & Creeks
Parks
Schools
Salem-Keizer Area Transportation Study (SKATS) Boundary
Salem-Keizer, Turner UGB

01/07/05

Map 15-1

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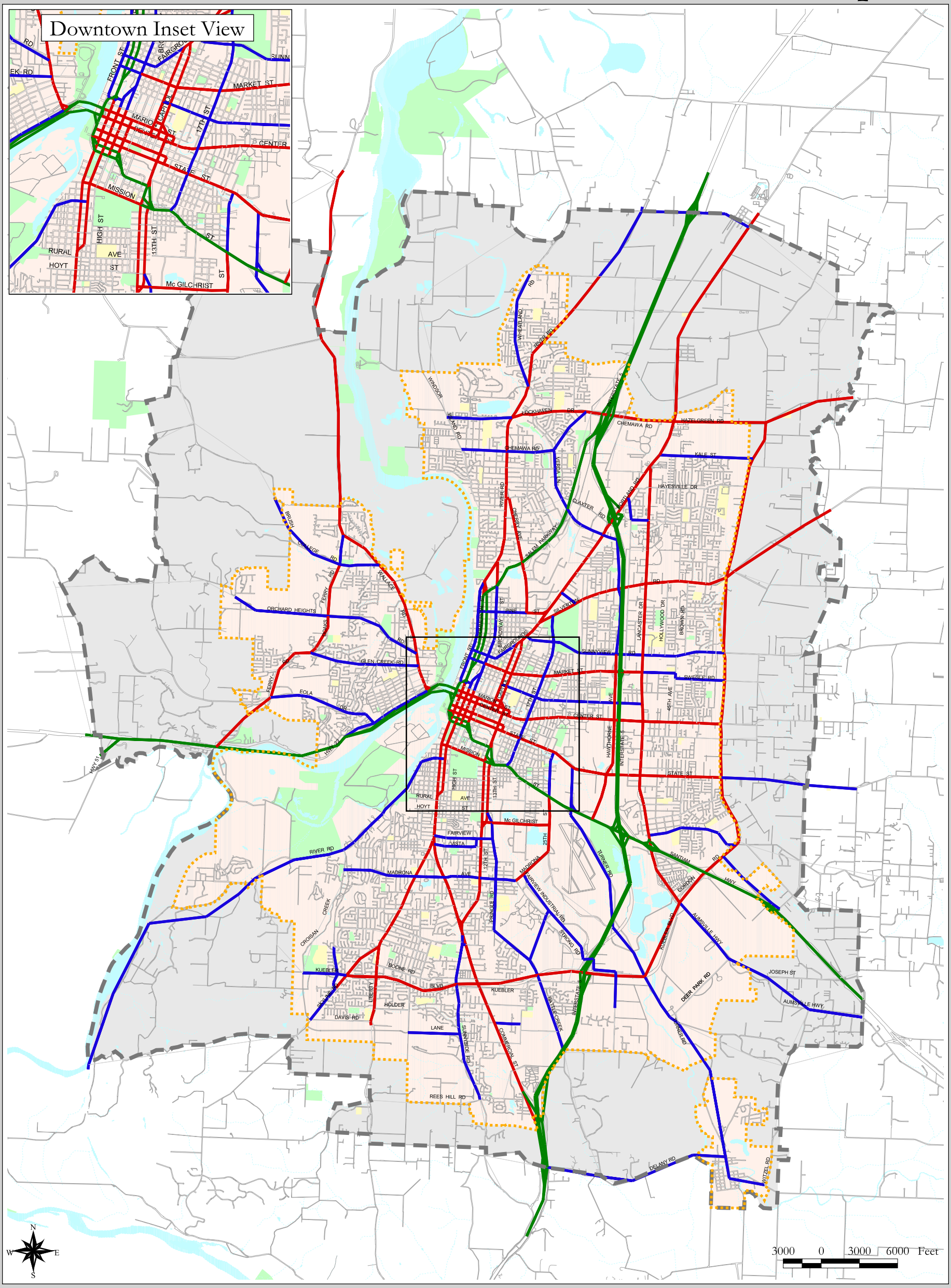
2005 SKATS RTSP Update



Regional Functional Classification System

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

Map 15-2

Functional Classification

- Principal Arterial
- Major Arterial
- Minor Arterial

- Roads & Highways
- Rivers & Creeks
- Parks
- Schools
- Salem-Keizer Area Transportation Study (SKATS) Boundary
- Salem-Keizer, Turner UGB

01/24/05

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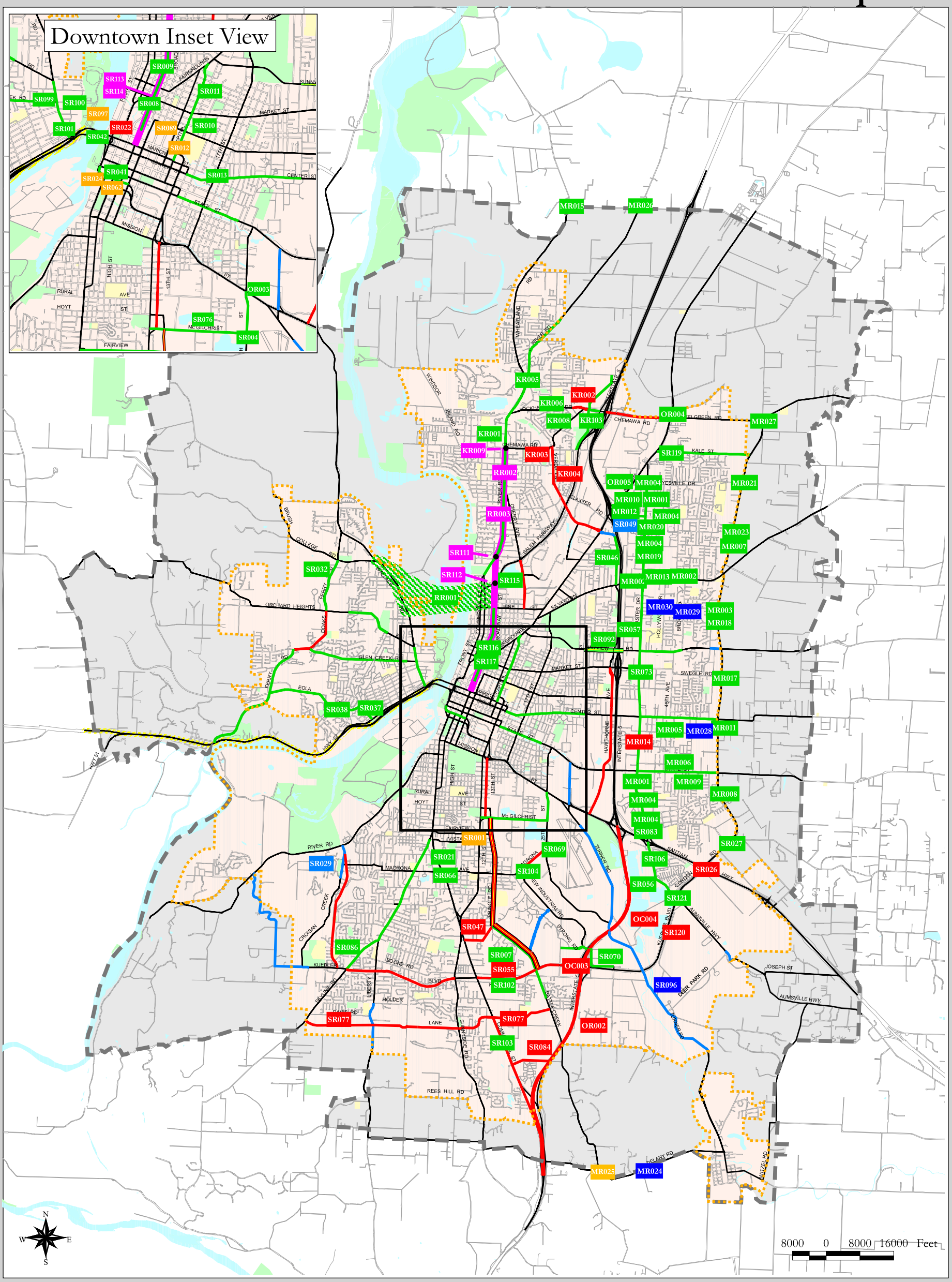

2025 Recommended Project List

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

Map 15-3

Project Type

- Capacity Increasing — XY000
- Signals, Efficiency, Safety, 3rd Lane — XY000
- Urban Standard — XY000
- Bridge — XY000
- Transit — XY000
- Capacity & Signals, Eff., Safety, 3rd Lane
- Signals, Eff., Safety, 3rd Lane & Urban Standard

Project ID Key

XY000

X: Jurisdiction – **S**alem, **K**eizer, Turner, Marion County, **O**DOT, or **R**egional

Y: **C**ommitted or **R**ecommended

000: Project Number

- Hwy 22 Corridor Study Project
- Regional Road Network
- Roads & Highways
- Rivers & Creeks
- Parks
- Schools
- Salem-Keizer Area Transportation Study (SKATS) Boundary
- Salem-Keizer, Turner UGB

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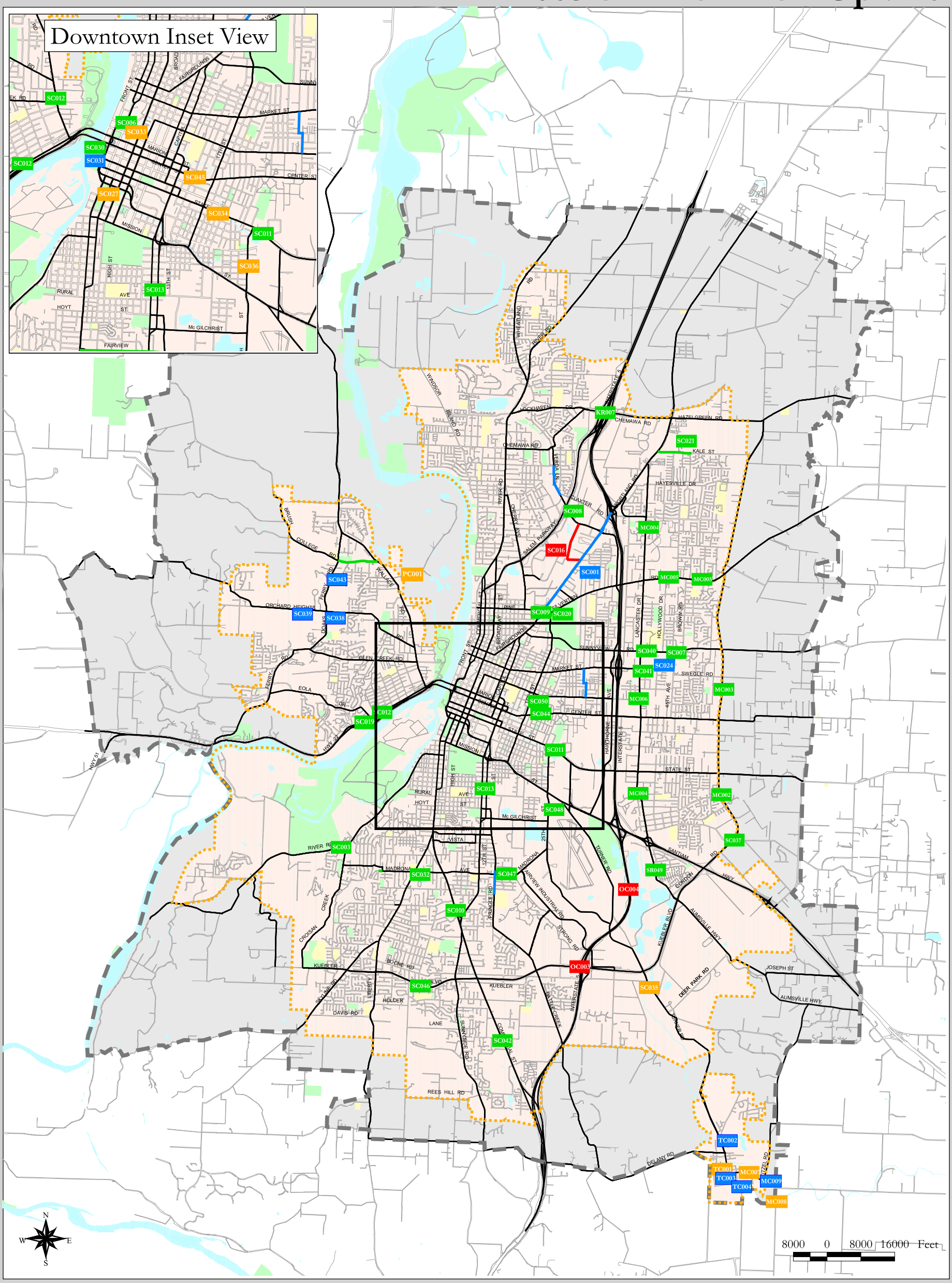

2025 Committed Projects

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

Map 15-4

Project Type (FUNDED)

- Capacity Increasing — XY000
- Signals, Efficiency, Safety, 3rd Lane — XY000
- Urban Standard — XY000
- Bridge — XY000

Project ID Key

XY000

X: Jurisdiction -- Salem, Keizer, Turner, Marion County, ODOT, or Regional

Y: Committed or Recommended

000: Project Number

- Hwy 22 Corridor Study Project
- Regional Road Network
- Roads & Highways
- Rivers & Creeks
- Parks
- Schools
- Salem-Keizer Area Transportation Study (SKATS) Boundary
- Salem-Keizer, Turner UGB

01/26/05

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16 - Outstanding Issues

The improvements, both funded and unfunded, called for in this Plan do not solve all our regional transportation issues. In fact, some of our more obvious issues are not fully addressed by the improvements identified in this Plan. The reasons for this are:

1) The nature of these issues is very complex and further analysis is required to adequately understand the underlying travel demand contributing to the issues;
2) Several potential approaches might be useful, either alone or in combination, to address these issues;
3) The lack of funding available to implement the solutions, or restrictions on the funds available that preclude their use in being applied toward a particular issue;
4) No consensus solutions are currently identified to address these issues, and additional public deliberation and input is required before a preferred alternative can be selected and included in the Plan; and
5) Several of these issues are the subjects of current ongoing planning studies and as such do not have any recommended solutions at this time.

This chapter summarizes the outstanding issues that were identified in the preceding chapters, along with some broader issues facing the region. In addition to those outstanding issues discussed below, other problem areas will likely be the subject of further study as part of the development of local TSPs by jurisdictions in the region, or as part of specific study processes associated with updating local comprehensive land use plans.

Although interrelated packages of improvements for each of these outstanding issues will likely be identified as a result of the ongoing planning studies, there may be instances where specific projects or actions to preserve right(s)-of-way for eventual improvements are warranted prior to the completion of the entire study. If such actions can successfully demonstrate consensus support and operational separability, i.e., the action or improvement is warranted on its own merits and will not preclude elements of a comprehensive solution, then they may be advanced individually and remain consistent with this Plan without being specifically identified in it.

Funding Issues

As can be seen in the preceding chapters and especially in Chapter 5, Finance, the region is facing a shortfall in revenues when compared with the projects that have been identified as being needed and in regards to operating and maintaining the existing system. This shortfall impacts all aspects of the Regional Transportation System, from the roads and highways, to the operation of bus service, to operating the rail station. With no solution to the dilemma of decreasing resources, the area will need to make do with reduced levels of maintenance of roads and bridges, increasing congestion, and constrained transit services.

While the funding situation impacts all the jurisdictions and agencies in the area, it is especially true for the Salem-Keizer Transit District (SKTD). With the area being designated a TMA in 2002, SKTD lost the ability to use a considerable amount of federal funds to support the operation of their buses. That money can now only be spent on capital expenses, such as purchasing new buses or constructing bus stops. SKTD has limited funding sources available to pay for operations and must rely on tax levies and fare box income. SKTD faces the possibility of being in the untenable position of being able to buy new buses but not being able to pay for the operators to drive them.

As shown in the financial chapter of this Plan, there is a considerable difference between the amount of revenues that will be available to the region during the horizon of this Plan and the costs of the improvements necessary to address all the issues that face the Regional Transportation System. The financially constrained selection of projects presented in the previous chapters addresses the federal planning requirements related to financial constraint.

Pedestrian

Providing safe and convenient pedestrian links along and across the regional road system is one of the policies of this Plan. Currently, there are several areas in the Salem-Keizer area where this is not being met. One such area is along Highway 22 between Lancaster and Cordon Road. On the south side of the highway is located a housing development with few to no stores or other amenities. On the north side is located a new elementary school and numerous retail and food stores. Due to the poor pedestrian linkages, and the circuitous route that walkers face, many people walk to the stores by crossing Highway 22, cutting through the fences that were erected along the right-of-way. Due to the high traffic volume and lack of any pedestrian accommodations along the highway, this current situation has the potential for pedestrian fatalities and injuries. This area needs attention in the near term to engage the public, and determine a solution that meets the needs of the residents of the area, those of ODOT, and the people using Highway 22.

Ensuring connectivity between Keizer and Salem for all modes is a continuing aim for the Regional Transportation Systems Plan. One option to address this situation would be the development of a multi-use path either along the Willamette River or in a block or two along existing streets, providing access for the residents of Keizer west of River Road North to downtown Salem. This path would be part of the larger Willamette Restoration Initiative (WRI) plan to link cities along the Willamette River together via a multi-use path stretching from Eugene to Portland. Currently, this proposal is still in the conceptual stages, with no specific routes through Salem-Keizer identified. The completion of a path as envisioned by the WRI is compatible with the goals of the RTSP to provide residents of Salem-Keizer with multiple mode and route options when traveling between origin and destination.

Bicycle

Several portions of the designated Regional Bicycle System in the SKATS area cannot accommodate the addition of dedicated bike lanes or even widened outside travel lanes. Two examples are River Road North from Chemawa Road to Shangri-La Street and Liberty Road South, from Commercial Street to Browning Avenue. Impediments to the addition of bicycle

facilities on these segments range from safety concerns to the financial cost of acquiring the necessary right-of-way to outright community opposition. Finding a satisfactory solution to these problem areas will require additional time and effort and remain an outstanding issue in the regional transportation planning process.

Connecting Keizer and Salem is a near-term goal for the Regional Bicycle System. Currently, Commercial and Liberty streets have bike lanes, as does Cherry Avenue. Broadway and North River Road do not have bike lanes, nor is there room in the current right-of-way of either street to expand them to include a bike lane. One option to address this situation would be the development of a multi-use path along the Willamette River, providing access for the residents of Keizer west of River Road North to downtown Salem. This is described above in the Pedestrian section of this chapter.

Goods Movement

More than any other topic discussed in this Plan, the movement of goods is typically regarded as confidential business information, such that the businesses involved do not share the data with each other or the public agencies. The need for additional information regarding the quantity and type of goods being moved in and around the SKATS area, as well as a more thorough identification of particular freight-critical routes and associated problem areas, is an issue that needs to be addressed in the future to better design solutions to ensure future mobility.

ODOT has completed the Freight Route Analysis Project (FRAP) (winter 2004), which included a recommendation for changes to the designation of several segments of facilities in the SKATS area. As a consequence of their designation as "Oregon Freight Routes," it is possible that these facility segments would also be subject to the provisions of as-yet-to-be-defined "management plans." Inasmuch as the ultimate effects on the responsible jurisdictions of the interaction of these designations, management plans, local land use plans, STA (Special Transportation Area) requirements, etc., is uncertain, the affected jurisdictions have requested a delay in the Oregon Transportation Council (OTC) adoption of the Freight Route redesignations until such time as all the associated impacts can be meaningfully evaluated.

Rail

The principal outstanding issues for the Regional Rail System involve the uncertainty of available funding for the recommended trackage improvements and the lack of identified funding for expanding the service as envisioned in the *Oregon Rail Plan* (2001).

Long-term operations and maintenance of the Salem Railroad Station is another outstanding issue, as the Salem station is the only one in the valley to be owned by ODOT and not the local jurisdiction(s).

Intercity rail service can provide a viable alternative to long-haul automobile travel, be it for commuting or for shopping/recreation trips. The potential and feasibility of additional intercity rail service along the I-5 corridor between the Salem-Keizer area and the Portland Metropolitan

area to the north, and Corvallis/Albany to the south, is an issue that needs further study. Two routes are available to the north. One follows the route of Amtrak's passenger trains by using the UP line to the east of I-5 to Oregon City and then to Union Station in Portland. The second option is to use the P&W (ex-BNSF) line that runs to the west of I-5 from Keizer to Wilsonville, where it would connect with Washington County's soon to be implemented commuter rail service linking Wilsonville and Beaverton.

Another continuing issue is the safety of railroad crossings. In the 1996 RTSP, a number of crossings were identified as needing improvement to reduce the possibility of serious collisions between trains and autos. These improvements have been completed and the 12th Street Pedestrian Promenade was constructed in 2001 and 2002 to address the safety concerns facing pedestrians in the 12th Street corridor, with Phase III of the project scheduled for construction in 2005. However, increases in the number and/or speed of trains along either of the rail corridors in the SKATS area should be tied with a reexamination of the safety of the crossings.

Other outstanding issues that cannot be fully addressed by this document include the preservation of land that is currently capable of being served by rail, and the reduction of land-use conflicts near existing rail lines.

Transportation System Efficiency Management

Transit ITS applications, e.g., transit managements systems and electronic fare payment systems, may have some promise in terms of increasing the efficiency of transit operations and customer confidence in the transit system. Improving mobility in regional transportation corridors where the physical and political impediments to adding right-of-way are high is identified as an "outstanding issue" in this RTSP Update. As part of the implementation of the recommendations adopted as a result of the High Priority Transportation Corridor study, transit ITS applications will be examined as part of an overall recommended strategy to improve mobility in the Broadway/River Road North corridor. It is expected that ITS applications employed in the HPTC Corridor will also be used in other appropriate locations.

Public Transportation

The major difficulty involved in expanding the Public Transportation System is a lack of ongoing, stable funding for significant increases in the level and type of transit services provided in the region. The mass transit system, the passenger rail system, and the ADA/Elderly and Handicapped systems all require additional levels of funding to be maximally effective.

The Union Street Railroad Bridge is currently (2002) a funded and scheduled project to convert the existing structure into a pedestrian and bicycle facility. It will provide a safe and convenient link between Wallace Marine Park and west Salem to the Riverfront Park, the central business district, and the rest of Salem. Possible further conversion of the bridge into one being usable by transit and/or emergency vehicles will require further study and outreach to both the public and the nearby businesses.

Mass Transit System Funding Shortfall

The transit district can be expected to be able to afford necessary capital improvements (new buses and equipment) over the next 25 years but cannot afford to provide significant expansions of transit levels of service beyond those called for in this Plan without renewed or additional sources of funding (see Chapter 5, Finance). Securing stable and continuing sources of adequate operations funding for the mass transit system is critical to the ability of the overall regional transportation system to function effectively, and is a high regional priority. In the near term, in cooperation with the Transit District, SKATS and the other jurisdictions in the region will cooperatively seek to identify, evaluate, and recommend appropriate new funding sources for transit operations to the region's citizenry and businesses.

Regional Passenger Rail Facility and Service Funding

The region will continue to work with ODOT to secure the necessary funding to maintain and improve the Regional Passenger Rail System. Stable, long-term funding for operating and maintaining the Salem Railroad station has not been identified. This is crucial to allow this vital piece of the transportation system infrastructure to function as ridership increases as a result of increased service.

Intercity Bus Service

The feasibility of, and an operating and financial plan for, an ongoing intercity bus service, particularly to the west and east, connecting the Salem-Keizer urban area with cities in Polk and Marion counties, needs to be evaluated. The region will work with county staff to develop and conduct such a feasibility study as funds are available.

ADA/Elderly and Handicapped-Related Services Funding Shortfall

The District is meeting the demand currently. But in the foreseeable future the level of service will grow faster than available funding. As a result of this fact the District will have to pursue additional funding.

Roads

Willamette River Crossing Capacity

The Willamette River Crossing Capacity Study (2000) identified the Tryon/Pine Corridor as the preferred location for the eastern terminus of a new bridge across the Willamette. The next step is to conduct environmental, design and public involvement activities necessary to prepare an EIS on a project to construct a bridge in this corridor. The EIS will also seek to identify a viable consensus combination of funding sources to construct the preferred alternative. To protect the right-of-way that is identified, $20 million is allocated over the life of this Plan. This is the first step for the region to take to show its commitment to the construction of a new bridge.

In addition, the Willamette River Crossing Capacity Study also recommended further study of an additional bridge in the Kuebler/Doaks Ferry area to the south of the existing bridges and

the consideration of a "beltline" highway around the Salem-Keizer area. At this time, there is neither the funding nor consensus regarding a future Kuebler bridge and beltline. For these reasons, they are not included as specific projects in this plan, but are identified as components of a future vision of the area that will continue to draw attention over time.

I-5 Interchanges @ Chemawa Road and Kuebler Boulevard

Both of these facilities are congested and recent developments in the area are expected to place additional demands on the interchanges. Interchange Area Management Plans (IAMPs) are required to identify the severity of the expected problems and to evaluate and recommend preferred solutions.

I-5/Kuebler

The interchange connecting I-5 and Kuebler Boulevard is currently (2005) undergoing an IAMP. The project is one phase, with the second phase examining the OR 22 E corridor between 25th and Gaffin Rd. and the operational characteristics of the current interchanges and a possible future interchange linking OR 22 E with Cordon Road. Results from these studies are expected later in 2005.

I-5/Chemawa

The interchange connecting Chemawa Road and I-5 was designated an outstanding issue in the 2002 RTSP Update. At that time, work was on-going on a Traffic Impact Study (TIS) for the proposed Chemawa/Keizer Station development. Improvements to the interchange were identified in that document as being needed to ensure that the operational characteristics of the interchange and that section of Chemawa Road do not degrade in the future. The implementation of the recommendations and their success will be closely watched in the future.

OR 22 East (25th - Gaffin Road)

This is a congested section of a major statewide route, and includes several key intersections, that are severely congested and expected to worsen considerably in the future. The need for an interchange-type connection between Highway 22 and Cordon Road needs to be examined and environmental analyses need to be performed as part of an Expressway Management Plan (EMP) for this segment of Highway 22.

OR 22 West (OR 51 to Willamette River Bridges)

This section of OR 22 in West Salem is currently congested and quite dangerous. In addition, potential new development in the area can be expected to increase travel demand on this section of Highway 22. The BHES identified a TSM-type improvement at the west Bridgehead that has yet to be scheduled for implementation. An Expressway Management Plan (EMP) for this section of OR 22 is necessary to identify the severity of the problem and recommend a coordinated set of preferred solutions for the area. In preparing this plan, ODOT and the local jurisdictions are working together on a study to identify, analyze, and narrow the number of feasible alternatives that address operational, safety and geometric problems, consistent with

the 1999 Oregon Highway Plan. One area of focus is the intersection of Highway 22 and 51, for which Polk County has been able to successfully lobby $3 million in funds from Congress and ODOT has identified environmental document and development work as tasks for the next three years. Results from this study will be included in the next RTSP update.

High Priority Transportation Corridor

Many corridors in the area have reached their ultimate physical width. The area will need to use techniques, other than road widening, to provide for the area's mobility.

The High Priority Transportation Corridor Study was completed in 2003. The study's objective was to investigate, identify, and implement methodologies and technologies that relieve congestion experienced by transit vehicles in a corridor. The recommendations from this study will allow transit service to improve to the point of being competitive with automobile travel. The study identified projects costing $6.5 million in the Broadway / River Road North corridor linking downtown Salem with Keizer. Solutions identified in this study will likely be implemented in other transit corridors in the Salem-Keizer-Turner area.

Increasing Reliance on Non-Automobile Modes

The Oregon Transportation Planning Rule (TPR) requires that the MPO and the local jurisdictions in the urban area develop measures and benchmarks that will demonstrate that the Salem-Keizer area is increasing its reliance on non-automobile modes. Efforts to date indicate that significant and potentially controversial land use changes will be required in order to facilitate this change from the status quo. Studies are underway to examine the use of mixed land use centers, corridors, and high transit service levels as methods for reducing automobile reliance. These studies are also designed as the basis for meeting the TPR requirement for the area jurisdictions to develop an "integrated land use/transportation plan." The types of measures being considered to demonstrate increased non-auto reliance include: the number of people who live within a ¼-mile walk to a transit stop; non-auto mode share; number of dwellings close to retail services and employment. The need to work with the local jurisdictions to develop a common "future vision" on which to base an Integrated Land Use/Transportation Plan and measures to demonstrate reduced automobile reliance is ongoing. In terms of the development of the RTSP, recent guidance has reinforced the federal mandate that the MPO plan be based upon *currently adopted Local Comprehensive Land Use Plans,* including only those land uses and developments that can be considered likely to occur over the planning horizon. The MPO *can*, however, provide modeling outputs useful in the evaluation of alternative future land use scenarios, *if such outputs are requested and defined by a member jurisdiction, and those LCLUP changes are in the pipeline for adoption by the affected local jurisdiction.*