

SKATS 2023—2050

Metropolitan Transportation Plan



Adopted by the SKATS Policy Committee on
May 23, 2023

Cover Photos:

Upper Left: EV Charging Station, Stock Photo
Upper Middle: Keizer Roundabout, photo by Ron Cooper
Upper Right: Pedestrians, Downtown Salem, photo by Karen Odenthal
Left Middle: Rideshare, photo by Cherriots
Right Middle: Minto Island Pedestrian Bridge, photo by Karen Odenthal
Bottom: Bus and Traffic On Bridge, photo by Cherriots

The maps contained in the RTSP are for planning purposes only and reflect the best information available at the time of publication. They are subject to change and revision.

In memory of our co-worker Denise VanDyke.

SKATS Policy Committee

Cathy Clark, Chair, Mayor of Keizer
Lyle Mordhurst, Vice Chair, Polk County Board of Commissioners
Maria Hinojos-Pressey, Salem-Keizer 24J School District Board
Kevin Cameron, Marion County Board of Commissioner
Trevor Phillips, Salem City Council
Sadie Carney SAMTD Board of Directors
Steve Horning, Mayor of Turner
Anna Henson, ODOT Region 2

SKATS Technical Advisory Committee

Julie Warncke, Chair, Salem Public Works
Lisa Anderson-Ogilvie, Vice Chair, Salem Community Development
Bill Lawyer, Keizer Public Works
Austin McGuigan, Polk County Planning
Chris French, Salem Area Mass Transit District
Dan Fricke, ODOT Region 2
Victor Lippert, Salem-Keizer 24J School District
Melissa Aherns, Oregon DLCD
Austin Barnes, Marion County Planning
Scott McClure, City of Turner
Janelle Shanahan, Marion County Public Works
Nathaniel Price, FHWA
Shane Witham, Keizer Public Works
Todd Whitaker, Polk County Public Works
Oregon DEQ, as needed
ODOT System Studies, as needed

Metropolitan Transportation Plan (MTP) 2023 ~2050

Adopted by the SKATS Policy Committee
on
May 23, 2023



Salem-Keizer Area Transportation Study
100 High St. SE, Suite 200
Salem, OR 97301
503-588-6177

www.mwvcog.org

The Salem-Keizer Area Transportation Study (SKATS) Respects Civil Rights

SKATS fully complies with Title VI of the Civil Rights Act of 1964 that requires that no person be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination on the basis of race, color or national origin under any program or activity for which SKATS receives federal financial assistance.

SKATS fully complies with Title II of the Americans with Disabilities Act and Section 504 of the Rehabilitation Act that requires that no otherwise qualified individual with a disability be excluded from the participation in, be denied the benefits of, or be subjected to discrimination solely by reason of their disability under any program or activity for which SKATS receives federal financial assistance.

If any person believes they have been discriminated against regarding the receipt of the benefits or services because of race, color, national origin, sex, age or disability, they have the right to file a complaint with SKATS. For information on SKATS' civil rights program, or to obtain a discrimination complaint form, visit <http://www.mwvcog.org/programs/transportation-planning/skats/public-participation/title-vi-complaint-process-and-form/> or call 503 588 6177.

SKATS provides services or accommodations upon request to persons with disabilities and people who need an interpreter at public meetings. If you need a sign language interpreter, communication aid or language assistance, call 503 588 1609 or Oregon Telecommunications Relay Service, 711 at least 72 hours before the meeting. All SKATS meetings are wheelchair accessible. For up-to-date public transportation information, visit Cherriots' website at www.cherriots.org.

SKATS is the federally mandated metropolitan planning organization designated by the governor to develop an overall transportation plan and to allocate federal funds for the region.

The Policy Committee (PC) is an 8-member committee that provides a forum for elected officials and representatives of agencies involved in transportation to evaluate transportation needs in the region and make decisions on allocation federal transportation funds.

Project web site: <http://www.mwvcog.org/programs/transportation-planning/skats/planning-programs/regional-transportation-system-plan-rtsp/>

The preparation of this report was financed in part by the U.S. Department of Transportation, the Federal Highway Administration and the Federal Transit Administration. The opinions, findings and conclusions expressed in this report are not necessarily those of the U.S. Department of Transportation, the Federal Highway Administration and the Federal Transit Administration.

Table of Contents

Chapter 1 ~ Introduction.....	1-1
Chapter 2 ~ Policies and Regulations.....	2-1
Chapter 3 ~ Goals.....	3-1
Chapter 4 ~ Existing System.....	4-1
Chapter 5 ~ Needs, Gaps, and Deficiency Analysis and Identification	5-1
Chapter 6 ~ Financial.....	6-1
Chapter 7 ~ Proposed System.....	7-1
Chapter 8 ~ Impacts	8-1
Chapter 9 ~ Outstanding Issues	9-1

Appendices*

Appendix A ~ Population and Employment	A-1
Appendix B ~ Bibliography.....	B-1
Appendix C ~ Project Selection Process	C-1
Appendix D ~ Definitions.....	D-1
Appendix E ~ Environmental Justice.....	E-1
Appendix I ~ Illustrative Projects	I-1
Appendix J ~ Federal, State, and Regional Goals	J-1
Appendix O ~ Outreach and Public Involvement.....	O-1
Appendix P ~ Performance Report.....	P-1
Appendix R ~ Resiliency	R-1
Appendix Y ~ Air Quality Conformity Determination.....	Y-1
Appendix Z ~ Resolutions.....	Z-1

** Letters not currently assigned to appendices are reserved for future MTP updates.*

Chapter 1 - Introduction

How we plan to meet the transportation needs of the residents and businesses of the Salem-Keizer area by mid-century have implications on many facets of life. The appropriate investments can help build and sustain a vibrant economy, provide increased travel options where before they were limited, lead to an environment with clean air and streams, and result in a transportation system that is safe to use by all users. These investments should not negatively impact, nor result in any undue burdens, for any portion of the metropolitan area.

The metropolitan area covered in this Plan includes the cities of Salem, Keizer, and Turner, along with portions of unincorporated Marion and Polk Counties within the planning boundary of the *Salem-Keizer Area Transportation Study* (SKATS). The SKATS planning boundary stretches from Brooklake Road in the north, to Delaney Road in the south, and from approximately Joseph Street in the east to Oak Grove Road in the west (**Map 1-1**). The SKATS Policy Committee is the federally recognized *Metropolitan Planning Organization* (MPO) composed of officials from the jurisdictions listed above, plus the Salem Area Mass Transit District (SAMTD), the Salem-Keizer School District, and the Oregon Department of Transportation (ODOT). The Policy Committee oversees the distribution of federal surface transportation funds to projects and programs within this area. The projects and programs are proposed, owned, and operated by the local jurisdictions, as well as the SAMTD¹ and ODOT.

¹ Providing service as Cherriots within the planning boundary and Cherriots Regional outside it.



Map 1-1: SKATS Planning Boundary

One part of the federal requirements is for SKATS to periodically produce a long-range transportation plan. This update to the Metropolitan Transportation Plan (MTP)² covers a 27-year period, from 2023 until 2050, slightly longer than the usual 20-24 years of previous editions³. Updated every four years⁴, the MTP is based on the currently adopted local comprehensive land use plans⁵ and the most recent forecasts of population and employment. This is the second MTP to fully incorporate the *performance-based* planning paradigm from federal transportation legislation, which links the investments proposed with the regional and national goals⁶.

Perhaps more than in previous plans, we start the process with much uncertainty about what *will* happen and much discussion about what *may* happen. News sources abound with stories of the possible changes that will take place by mid-century, and numerous pieces of legislation, at the national, state, and local level, have set 2050 as a target year. Before considering those possibilities, it is instructive to start the discussion with what has happened in the last twenty years, from the year 2000 onward. This discussion will be focused on changes that are important for decisions on transportation investments. Plus, as observed during the COVID-19 Pandemic, previous established trends can be shown to be not as permanent as once thought, and that many parts of the economy are rather brittle when faced with several shocks at once.

Finally, adding to the uncertainty are a set of federal, state, and local actions that will be adopted during the development of this Plan in 2022 and 2023. Taken as a whole, these regulations and actions could change local, state, and regional land use and transportation planning. But, as will be presented in **Chapter 2**, they will not be taken into full account until the next update to this Plan at the earliest due to time it takes to adopt the regulations, and then modify the existing plans⁷.

A few transportation-related trends over the past 20 years

Between 2000 and 2020, the population in the Salem-Keizer area increased by 55,500, with 32,000 jobs being added⁸. It is estimated that between 2010 and 2020 17,420 people moved into Marion County from other parts of Oregon or from out of state and that 16,365 were born during that period⁹. The average age of a resident is now 38.9 (2019), up from 33.6 (2000). During that time, 19,400 new homes were built, 66 percent as single detached houses and 34 percent as multi-family¹⁰. Most of this development has

² The MTP was previously known as the Regional Transportation Systems Plan or RTSP from 1996 until 2022.

³ Fun fact: The first MTP was adopted in 1996, 27 years ago from the scheduled May 2023 adoption.

⁴ The previous MTP covered the years 2019 to 2043 and was adopted on May 28, 2019.

⁵ The jurisdiction's Transportation System Plan is included as part of their Comprehensive Plan.

⁶ As discussed in Chapter 2, this requirement was introduced with the passage of the Moving Ahead for Progress in the 21st Century (MAP-21) surface transportation act in 2012.

⁷ The next update to this Plan is scheduled for adoption in 2027. Schedules for local plan updates are included in Chapter 2.

⁸ Employment is for 2019 due to data delivery schedules.

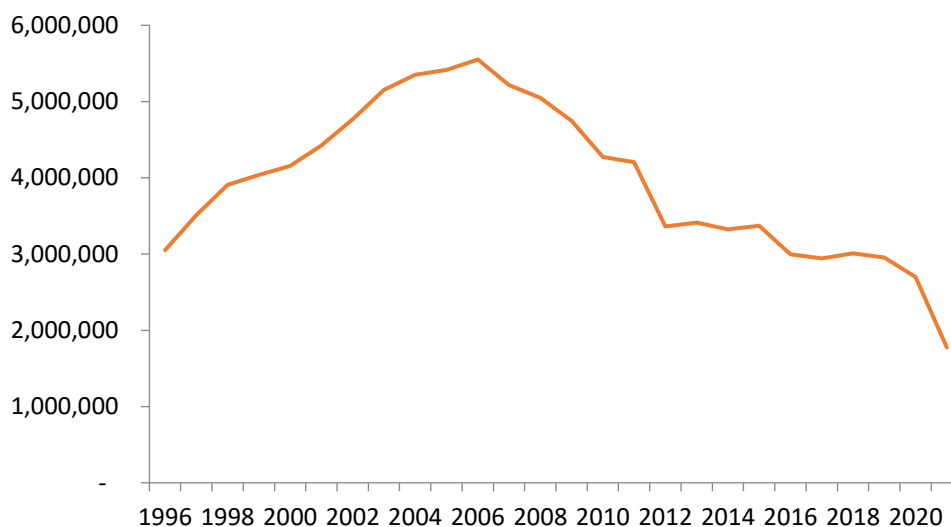
⁹ Note this is for Marion County as a whole.

¹⁰ Search for building reports on the COG website at <https://www.mwvcog.org/Documents>

been located outside of the core areas of Salem, Keizer, and Turner, where larger tracts of undeveloped land exist. Typically, these developments are in areas not currently served by transit and require new, or expanded, road infrastructure. Recent work on updating the land use plans in Salem and Keizer has included a focus on increasing the housing choices and locating more of the new development closer to existing stores and transit routes. These documents will guide development over the coming years.

While only a few new roads were built, mostly in west and south Salem, there were more that were widened and expanded, often bringing the roads up to current design standards¹¹. The decades long process of widening I-5 to six lanes took another step forward with the completion of the section between OR 22E and Kuebler Boulevard. Work has started on the section between Kuebler Boulevard and Delaney Street interchange.

The level of transit ridership on Cherriots increased in the early years of the century, decreased after 2006 (due in part to a bond levy to support operations that did not pass resulting in the end of Saturday service), plummeted during the Pandemic, and is slowly increasing toward pre-Pandemic levels since mid-2021 (even as the post-COVID economy makes staffing a challenge) (**Graph 1-1**)¹². Service levels have changed as well, with a number of routes that run seven days a week, and a core network defined for 15-minute service during most of the day.



Graph 1-1: Yearly Unlinked Transit Trips 1996 - 2020 (Source: FTA National Transit Database)

Home delivery of goods has increased substantially since 2000, whether from online shopping, a grocery store or restaurant. This trend, which had been experiencing steady growth for twenty years, accelerated during the pandemic. The competition from online

¹¹ Which, depending on the right-of-way width and functional classification of the road, could include sidewalks, bike lanes, curbs, and gutters.

¹² The recent upturn in ridership in 2021 and 2022 is not reflected in the graph.

retailers, combined with other factors, has led some retail chains to reduce the number of their physical stores¹³. A number of larger chains have reduced their presence in Salem, including several located in downtown (e.g., Nordstrom, J.C. Penney's, and T.J. Maxx). Some of the companies have left the Salem market entirely, others have moved to a location outside of downtown Salem. These closings have resulted in proposals to redevelop the properties, with some moving from retail only to mixed use. Salem is currently working on defining portions of downtown Salem as a Climate Friendly Area ("Walkable Mixed Use Area") per recent State regulations.

Additional infrastructure for biking and walking has been installed throughout the area, primarily by adding sidewalks and bicycle lanes to existing roads. Two bridges for walkers and bikers now exist, one converted from the ex-Union Pacific Railroad bridge across the Willamette River at Union Street, and the other purpose built to link Minto Brown Island with Riverfront Park.

New travel options have been introduced, such as carsharing, ridesharing and bike sharing options starting in Salem and Keizer during the past 20 years. These have not reached the levels of ridership reported in other urban areas in the country, and there have been stumbles in their continued existence (let alone expansion), as both the initial carsharing and bike sharing operators are no longer offering services in Salem.

In the last 20 years the national economy has experienced the end of the dot com bubble, the Great Recession and subsequent housing bubble, and the COVID-19 pandemic and the recovery from 2021 onward. Along with the recovery have been supply chain issues, labor shortages in certain sectors, and inflation impacting consumer and businesses alike. Each recession has impacted the economy (global, national, state, and local) differently, but with the constants of job losses, businesses failing and added stress on workers and business owners. These have helped shape the retail offerings available, the amount of housing that has been built, and the type and location of jobs.

Finally, in the last twenty years there has been increasing discussion, and occasional action (mostly at the state and local level (e.g., Salem's *Climate Action Plan*), but increasingly at the federal level¹⁴), on the extent of the impact a changing climate will have on the life and livelihood of everyone on the planet. Most of the legislation has been passed in the last several years, with rulemaking still in progress or recently completed. It is too early to discern the effectiveness and impact of these actions.

The employment and population forecasts included in this Plan were made in 2022 and 2021 respectively. For each, there remains questions on how much the pandemic has delayed or accelerated some of the primary trends used in forecasting. For example, for

¹³ But conversely, some online retailers have started to open physical stores, at least in larger metropolitan areas. It is possible this trend will come to Salem in the future.

¹⁴ See: The National Blueprint for Transportation Decarbonization (2023): <https://www.energy.gov/eere/us-national-blueprint-transportation-decarbonization-joint-strategy-transform-transportation>

employment the questions revolve around labor force participation and whether enough workers are available for all the sectors (and how does automation play into this?). For population, it is likely that interstate migration has been affected by the pandemic and the aftermath. How long will that last, and will other events result in greater in-migration (or even outmigration)? The employment and population forecasts are updated regularly to address these and other concerns.

What trends are expected to continue?

The Population Research Center (PRC) at Portland State University provides population forecasts for the counties and cities within Oregon. The latest forecast is for the population in Marion and Polk counties to continue to increase through 2050¹⁵. During this period, the average age of a resident will increase, with implications on future employment levels and travel patterns. However, recent data from the U.S. Census Bureau estimates that the population of Oregon decreased between July 2021 and July 2022, primarily due to fewer people moving to Oregon from other states and thus not offsetting the number of deaths¹⁶. This will be closely watched as it has widespread ramifications.

Estimates of employment are provided by the Oregon Employment Department for the next 10 years and extrapolated out to the horizon year by staff in consultation with local planners. The forecast is for increasing number of workers within SKATS, primarily in the same industry sectors as today¹⁷.

Table 1-1: Population and Employment within SKATS, 2000, 2020 and 2050 (Source: US Census Bureau, Population Research Center at Portland State University, Oregon Employment Department)

Year	Population	Employment
2000	216,195	92,462
2020	271,737	118,347
2050	333,870	149,176

The market share for online shopping is expected to continue increasing, as lower cost, increased selection and ease for the consumer attract more people to shop in this manner. This could provide more free time to people, with many discussions in the planning and economics literature as to how they would use it. At the very least, increased online shopping will lead to increased delivery vehicle travel within the urban area, and more long-haul trucks on the Interstates and highways. This would also likely continue the trend of existing 'brick and mortar' retail spaces being emptied as the businesses go bankrupt or pivots to a more online presence.

Carsharing, ridesharing and bike sharing are forecast to increase in the country as a whole, but how it plays out in Salem-Keizer depends on if and how well the services are

¹⁵ PRC produced the forecasts for Marion and Polk counties in 2021. See **Appendix A** for more details.

¹⁶ See; <https://www.opb.org/article/2022/12/25/oregon-population-declines-state-budget-tax-revenue-concerns/>

¹⁷ See **Appendix A** for details.

offered and the interest of the public (which depends in part on demographics and the built environment). This is anticipated to be a rapidly changing industry, as new offerings and new technology are introduced to make these (or similar) more attractive to more people¹⁸. Reflecting this trend, SAMTD is planning for future multi-mobility hubs to facilitate using these options in conjunction with transit service.

Models of the long-term future climate in the area show an increase of rain in the mountains during winter with less snow and hotter temperatures year-round. The higher temperatures can stress the existing transportation infrastructure leading to increased needs for maintenance, rehabilitation, and earlier replacement, while more rain could lead to an increase in the number of flooding events¹⁹.

These trends and others are interlinked and can either reinforce or inhibit travel decisions made by the public and businesses. Local policies can influence some of these to a degree, but not others. In addition to these, other trends, such as automation, increasing capabilities of computers and internet connections, and where and how people prefer to live (in addition to the cost of housing) will also have ramifications for investment decisions in the transportation infrastructure.

Which trends do we not know enough whether they will continue or not?

Population forecasts are based in part on people in an area having kids, and people outside of the area moving here. The number and age of the people moving into and out of the area is estimated based on historical trends. With the aging of the U.S. population in general, it is reasonable to ask whether the people moving here in the future will be representative of that population, or if they will skew older or younger. In a similar vein, in the U.S. as a whole, the age of childbearing is increasing. And the number of children born per female has been decreasing for decades²⁰. These trends suggest that the population increase in the future will be slower than in the past, and that is reflected in the PRC forecasts post 2040. But it is also possible that in-migration increases due to the attractiveness of Oregon and the Salem area with respect to other parts of the country, or that there is out-migration increases due to the high cost of housing and increased attractiveness of other states.

In part, in-migration is due to the type and number of jobs available within the metropolitan area. These are, for the most part, influenced by state and local policies (both in Oregon and in other states) and investments, and the actions of consumers and businesses. The business sector is still changing and adapting to the COVID-19 pandemic,

¹⁸ Nationally there was a decrease in carsharing and ridesharing during the COVID-19 pandemic due to a combination of lost jobs, closed offices/work-from-home, desire not to be in shared spaces, and at least for carsharing, a decrease in options. It is possible that the pre-pandemic ridership level will not return, or that the services will morph post-pandemic.

¹⁹ Fifth Oregon Climate Assessment, Oregon Climate Change Research Institute.
<https://blogs.oregonstate.edu/occri/oregon-climate-assessments/>

²⁰ Nationally the fertility rate is currently 1.7, which is under the replacement rate of 2.1 (as of 2019
<https://fred.stlouisfed.org/series/SPDYNTFRTINUSA>).

with supply chain constraints, difficulty hiring workers (for some sectors), and changes in demand from consumers. How these modifications to “business as usual” pan out have implications for employment levels, regional (and state) economies, migration, and demand for travel. In particular, the public sector employs approximately 25 percent of all workers in the Salem metropolitan area. While a sizeable fraction of these are teachers that work at locations that are likely to be stable over the next 20+ years, how the various levels of government approach in-office work versus offering hybrid schedules will have an impact on travel demand and subsequently to the prioritization of projects²¹.

Another consideration is the willingness of businesses to substitute capital for labor – along with the difficulty in finding laborers during and after the COVID-19 pandemic, there have been more offerings for automated devices to replace or supplement workers.

Since 2018, the number and variety of electric vehicles (EVs) available for purchase has increased, but still represent a small fraction of the total fleet, both in Oregon and the U.S. The state goal for 50,000 registered EVs within Oregon by 2020 was missed, in part due to a lack of options in all vehicle types, perceived lack of charging infrastructure, and cost²². With the passage of the Infrastructure Investment and Jobs Act of 2021 there is more funding from the Federal government for charging infrastructure. When this is coupled with more options for EV pickups and SUVs (two of the higher selling types of vehicles in the country), it is possible that sales will accelerate in the coming years²³. Whether the State goal of 250,000 registered zero-emission vehicles by 2025, and at least 90 percent of new motor vehicles sold by 2035 will be met remains to be seen²⁴.

Past, Present and Future – Risk Management

The trends discussed above represent just some of the major ones that have and could influence the need for travel. The events that seem likely to occur in the next 20 years (e.g., another economic recession) and those that are possible but with a small probability of happening (e.g., the Cascadia Subduction Zone event) define the need to select projects that are viable under a range of possible futures. As stewards of the public’s funds, it is imperative that they be used in a responsible manner.

Outline of the Plan

The Metropolitan Transportation Plan (MTP) addresses:

²¹ The Oregon Travel Study scheduled to take place in late 2023 to early 2024 will hopefully provide some data on what changes to travel have taken place since the 2020. The information will be used in the next update to this Plan.

²² By December 31, 2020, 33,579 EVs were registered in Oregon. By June 2021 it was 38,482, or approximately 1 percent of passenger vehicles. The goal of 50,000 EVs was reached in April 2022. By September 2022 there were 57,700 registered EV.

²³ Supply chain issues in 2022 likely dampened sales that year, as electronics and batteries were reported in short supply.

²⁴ The State offers tax rebates for EVs priced under \$50,000 and more rebates for lower-income households. No incentives are currently offered for e-bikes or e-scooters.

- the Policies and Regulations (**Chapter 2**) at the Federal and State level that lay the framework for the development of regional transportation infrastructure;
- the Goals and Objectives (**Chapter 3**) of the MTP are presented, as well as the performance measures and indicators that will be used to ascertain the progress toward meeting the goals (with additional information presented in **Appendix P**);
- the Existing System (**Chapter 4**), how it came to be, forces that have acted on the development over time, what it is composed of, and how the system is being used;
- the Needs / Gap Analysis (**Chapter 5**) details the existing gaps and/or needs that exist in the current transportation system. These are what need to be addressed to have a system that meets the goals presented in **Chapter 3**;
- the means and amount of funding (federal, state, and local) forecast to be available over the next 20 years (Financial - **Chapter 6**);
- the Proposed System (**Chapter 7**) that will meet the goals specified in **Chapter 3** while maintaining financial constraint, meeting the needs of the public and businesses in the area, and keeping the degradation of the natural and built environment to a minimum;
- the potential impacts of the proposed system to the natural and built environment (**Chapter 8—Impacts**); and
- the Outstanding Issues (**Chapter 9**) that remain to be addressed in future updates to this Plan.

Finally, the Plan has a number of appendices and companion documents that provide further information or address particular topics in greater detail. These include:

- The methodology and process to forecast Population & Employment (**Appendix A**) for the SKATS area over the next 20+ years;
- The process used to evaluate the projects for inclusion in this Plan is in **Appendix C**;
- The *SKATS Metropolitan Congestion Management Process* has been updated to address the performance-based planning requirements (as a separate document)²⁵;
- *The Salem-Keizer Metropolitan Area ITS Plan (adopted 2005, project list updated 2021, as a separate document)* which details the investments to be made in ITS (Intelligent Transportation System) equipment and procedures to help optimize travel and information sharing in the area; and
- *The SKATS Metropolitan Transportation Improvement Program (MTIP)* that provides the details on the programs and projects that were identified in previous editions to this Plan that have been selected to be implemented in the next four to six years²⁶.

²⁵ Reports available at: <https://skats-mwvcog.hub.arcgis.com/pages/congestion-management>

²⁶ See; <https://www.mwvcog.org/programs/transportation-planning/skats/planning-programs/transportation-improvement-program-tip/>

Chapter 2 – Policies and Regulations

This chapter contains an overview of the federal and state regulations that guide and shape transportation investments. The focus is on the federal regulations that the MPO must follow and the state rules that the member agencies and jurisdictions must abide. The major transportation planning documents are discussed.

Guiding the investments in transportation infrastructure requires a consistent set of policies and objectives to ensure that region-wide goals are met in an efficient and cost-effective manner. These policies and objectives must also take into account the federal, state, and local regulations for transportation that exist.

The Salem-Keizer Area Transportation Study (SKATS) is the designated Metropolitan Planning Organization (MPO) for the Salem urbanized area. The representatives of the cities of Keizer, Salem, and Turner; Marion and Polk Counties; the Oregon Department of Transportation; the Salem-Keizer School District; and the Salem-Keizer Area Mass Transit District comprise the SKATS Policy Committee, which is the decision-making board for the MPO.

The SKATS Metropolitan Transportation Plan (MTP) must be consistent with federal regulations and state transportation plans. The transportation systems plans (TSPs) for the local jurisdictions are also consistent with the state transportation plan, and provide the programs and projects contained in the SKATS MTP. A complete list of local and state plans consulted in preparation for this update are listed in **Appendix B**.

The development of the MTP represents a cooperative effort of the members of SKATS. The Plan currently requires unanimous approval by the SKATS Policy Committee for adoption. 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 20 years;
- Endorsement of a set of 10-year regional priority improvements to the regional transportation system;
- Endorsement of the interrelated roles of the individual modal systems (roads, public transportation, bicycle, and pedestrian) as well as the region-wide 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; and
- Fulfillment of federal and state requirements as a condition for the continued receipt of federal and state transportation funds.

The concept of the regional planning process outlining the “3C” concept is presented in this chapter. The federal, state, and local rules, policies, and regulations that guide and constrain transportation planning in the Salem-Keizer metropolitan area are then discussed.

The Regional Transportation Planning Process: The Three “C’s”

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

Continuing

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

Comprehensive

Together with 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, as well as regional travel that enters and exits the area.

The planning process is both multimodal and intermodal in scope. It addresses concerns related to all the transportation modes—pedestrian, rail, aviation, transit, bicycle, and motorized vehicles—as well as the connectivity between them.

All the jurisdictions, agencies, and the public that own, operate, regulate, and use the various portions of our overall transportation system are included in the process.

The mobility needs of both people and goods on our transportation system are addressed by the planning process.

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 is provided by the process.

Cooperative

The understanding that the region's political jurisdictions, governmental agencies, and the public are working together towards the same goal is embodied in the process. 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.

In addition to the three principles listed above, traditionally an additional four principles have been followed when developing the SKATS regional transportation plans. These are meant to ensure the Plan is consistent, coordinated, coherent, and cost-effective. These are described in more detail below.

Consistent

The regional planning process serves as a 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. This ensures 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. This ensures that we agree on and understand the details it will take to work through to solve the problems needed towards accomplishing the task.

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 prevents situations where one entity seems to have no idea what another entity is doing; for example, a five-lane arterial in one jurisdiction suddenly turning into a two-lane residential street as it crosses the boundary into another jurisdiction.

Coherent

The planning process provides the mechanism by which all the various land use and transportation activities undertaken in the region make sense when seen as a complete whole and 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 by 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 Metropolitan Transportation Plan provides the region with a coordinated blueprint of transportation investments and related activities over the next twenty years that can address the region's accessibility, mobility, and connectivity while also focusing on safety and environmental issues.

Federal Policies and Regulations

The federal government, acting through the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA), provides the basic regulations that direct regional transportation planning in metropolitan areas in 23 CFR 450.300-340 and 49 USC 5303.¹ As part of the federal laws, areas over 50,000 in population are required to have a “Metropolitan Planning Organization” (MPO) to ensure that federal funds are allocated in a manner consistent with the ‘3C’ process detailed above. An area with more than 200,000 in population is designated as a “Transportation Management Area” (TMA) and given additional responsibilities. SKATS was designated a TMA after the 2000 U.S. Decennial Census. Major federal legislation that affects transportation planning is presented in this section.

Federal Surface Transportation Acts

On November 15, 2021, the Infrastructure Investment and Jobs Act of 2021 (IIJA) was signed into law, which contains the Surface Transportation Reauthorization Act of 2021 (STRA21)² updating the previous law FAST (Fixing America’s Surface Transportation) Act. This Act continues many of the programs and concepts that first appeared in the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, and that were extended in TEA-21 (Transportation Equity Act for the 21st Century), SAFETEA-LU (Safe, Accountable, Flexible, Efficient Transportation Equity Act, a Legacy for Users), MAP-21, and FAST (see **Table 2-1** for a complete list).

Table 2-1: Federal Surface Transportation Legislation, 1991 - 2021

Year	Legislation
1991	Intermodal Surface Transportation Efficiency Act (ISTEA)
1998	Transportation Equity Act for the 21 st Century (TEA-21)
2005	Safe, Accountable, Fair, Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU)
2012	Moving Ahead for Progress in the 21 st Century (MAP-21)
2015	Fixing America’s Surface Transportation (FAST)
2021	Surface Transportation Reauthorization Act of 2021 (as part of the Infrastructure Investment and Jobs Act of 2021).

IIJA/STRA21 continues the MAP-21-introduced requirements to develop and track a set of performance measures, followed by rules from FHWA and FTA for implementing these measures.

¹ CFR stands for Code for Federal Regulations, and USC for United States Code.

² This marks the first time since the 1990s that a federal surface transportation act does not have an acronym-friendly name. STRA21 doesn’t roll off the tongue and seems to be used infrequently at best. The IIJA is also referred to as the Bipartisan Infrastructure Law (BIL) or Build a Better America depending on context (not to be confused with *Build Back Better* which is proposed legislation).

Like the previous Acts, IIJA/STRA21 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.³ It also requires the regional plan to address the following considerations:⁴

- Support economic vitality;
- Increase the safety of the transportation system for motorized and non-motorized users;
- Increase the security of the transportation system for motorized and non-motorized users;
- Increase accessibility and mobility of people and freight;
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- Enhance the integration and connectivity of the system, across and between modes, for people and freight;
- Promote efficient system management and operations;
- Emphasize the preservation of the existing transportation system;
- Improve the resiliency and reliability of the system and reduce or mitigate stormwater impacts of surface transportation; and
- Enhance travel and tourism.

The requirement to adopt an outcomes and performance-based planning paradigm was introduced in MAP-21. This continued in FAST Act and IIJA/STRA21. Seven national goals have been identified to drive investment and ensure a national surface transportation system that meets the needs of the country. The national goals are for:

- Safety improvement;
- Infrastructure conditions maintained in a state of good repair;
- Congestion reduction;
- System reliability;
- Freight movement and economic vitality;
- Environmental sustainability; and
- Reduced project delivery delays.

The FHWA and the FTA have developed a set of performance measures to track how State Departments of Transportation (DOT), transit districts, and MPOs are addressing the national goals. The federal regulations require the State DOTs, transit districts, and MPOs to set targets for each of the relevant performance measures. These are discussed in detail in **Chapter 3** and **Appendix P**.

³ See Chapter 6 for a list of federal programs used for funding projects, and a discussion on the financial assumptions used in this Plan.

⁴ From 23 USC 134 (h) (1). See: <https://www.law.cornell.edu/uscode/text/23/134>

In addition, guidance is being developed by both the FHWA and the FTA on the new programs that are included in IIJA, plus the direction the Administration is setting for addressing larger policy goals. Examples include the National Roadway Safety Strategy⁵ and the Justice40 Initiative⁶.

Clean Air Act Amendments of 1990

Currently the SKATS area is designated as in attainment for carbon monoxide (CO) and ozone in relation to the federal NAAQS (National Ambient Air Quality Standards). (There was a time in 1991 when the SKATS area was designated non-attainment for CO and Ozone). The area is operating under a limited maintenance plan for CO that took effect on March 2, 2009. The Limited Maintenance Plan requires SKATS to develop an air quality conformity determination for each Plan and TIP update, but it does not require any regional air quality emissions modeling.

Title VI of the Civil Rights Act of 1964 and Environmental Justice

Title VI of the Civil Rights Act of 1964 prevents discrimination on the grounds of race, color, or national origin by agencies and organizations that receive federal funding.

The need to consider environmental justice is embodied in many laws and regulations including Title VI of the Civil Rights Act of 1964. The federal actions on Environmental Justice serve to reaffirm Title VI responsibilities by directing every Federal agency to “make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations” (Executive Order 12898 signed February 11, 1994).

Americans with Disabilities Act (ADA) of 1990

Prohibiting discrimination against people with disabilities is addressed by the Americans with Disabilities Act (ADA). The guidelines on access to public facilities and public transit are relevant to this Plan. Access to facilities includes the public right-of-way such as intersections, sidewalks, on-street parking, and street crossings. These standards are required for all new construction and alterations. There are also mandates regarding the accessibility of public transportation to persons with disabilities. These establish requirements for paratransit services that are comparable to mass transit service in an area. Local review and integration is required of the ADA Paratransit Plan with the Metropolitan Transportation Plan, as well as an annual update of the ADA Paratransit Plan.

Federal Water Pollution Control Act (aka “Clean Water Act”)

The Clean Water Act is the primary law protecting water quality and the health of the nation’s waterways. It is administered in Oregon by the Department of Environmental Quality (DEQ). Total maximum daily loads (TMDL) of pollutants are established for “impaired” waterways. Stormwater permits to minimize bacteria and other pollutant

⁵ See: <https://www.transportation.gov/nrss/usdot-national-roadway-safety-strategy>

⁶ Executive Order 14008, see: <https://www.transportation.gov/equity-Justice40>

runoff are required.

Endangered Species Act

A process for protecting threatened and endangered species and the habitats on which they depend is provided through this Act. Any activity that results in a 'taking' (killing) of a listed species or that adversely affects its habitat is prohibited. Any action that is expected to result in a taking or habitat destruction requires a permit and mitigation.

National Environmental Policy Act (NEPA)

NEPA applies to all federal agencies and projects or programs using federal funds. It requires the preparation of either Environmental Impact Statements (EIS) or Environmental Assessments (EA) which document the environmental effects of proposed agency actions depending on whether the action will have a significant impact on the environment or not.

National Historic Preservation Act of 1966

Protection and preservation of cultural or historic resources is specified in this law. The State Historic Preservation Office (SHPO) is responsible for administering the regulations associated with this Act in Oregon.

State Policies and Regulations

In addition to the Federal regulations, there are a set of State policies and regulations that address transportation, both directly and indirectly, that are relevant to the development of the SKATS long-range plan. These policies and regulations are for the cities and counties within SKATS, and direct how they will plan for future land uses and transportation systems. In addition, there are a set of State regulations that mirror federal ones, e.g., air quality and water quality.

Oregon Transportation Plan

The policies for the state's transportation facilities and services for the next 40 years are set forth in this document. The broad strategies the state has developed for implementing federal and state policies are outlined. There are separate documents that address individual mobility issues guided by the principles in the Oregon Transportation Plan. Relevant ones include the *Oregon Highway Plan* (last amended in 2015, scheduled for adoption in 2023), the *Oregon Freight Plan* (2017), the *Oregon Rail Plan* (2020), the *Oregon Bicycle and Pedestrian Plan* (2016), the *Transportation Safety Action Plan* (2021), the *Oregon Public Transportation Plan* (2018), and the *Transportation Options Plan* (2015).

Statewide Transportation Strategy

ODOT has examined all components of the transportation system in a state-level scenario planning project called the *Oregon Statewide Transportation Strategy* (2013). This looked at the movement of goods and people in Oregon and developed a set of strategies to reduce greenhouse gas (GHG) emissions. These reductions would be accomplished via a

variety of means including changes in urban land use patterns, vehicle and fuel technologies, and the transportation system. The Oregon Transportation Commission adopted an amendment in 2018 to include this as part of the Oregon Transportation Plan.

Housing Related

In 2019, the Oregon Legislature passed two bills, H.B. 2001 and H.B. 2003, that potentially will impact the future transportation system. H.B. 2001 directed jurisdictions to allow duplexes on existing single-dwelling lots. For larger cities, those with a population over 25,000, this requirement is expanded to include the ‘missing middle’ housing (duplexes, triplexes, quadplexes, cottage clusters, and townhouses) in areas zoned for residential. The changes to cities planning and zoning codes are due by June 30, 2022.

H.B. 2003 requires cities with a population over 10,000 to analyze every eight years the amount of housing needed for current and future residents. This is a Housing Needs Analysis (HNA). The bill also requires adoption of a Housing Production Strategy (HPS), which will detail how the city will promote the development of the needs identified in the HNA.⁷

The modifications to Keizer’s and Salem’s zoning and planning codes are scheduled for adoption in early 2022. It remains to be seen how much market demand there is for these types of development. The next update to this Plan will reflect these regulations more fully after they are adopted into code and implemented by developers in the area in the coming years.

Greenhouse Gas Emissions Related

In addition to the Statewide Transportation Strategy listed above, Oregon has passed several laws as part of the State’s continuing efforts to address Greenhouse Gases (GHG). In 2007, H.B. 3543 was passed defining the statewide greenhouse gas reduction goals, which were codified in ORS 468A.205. The passage of H.B. 2001⁸ and H.B. 2186 in 2009 and S.B. 1059 in 2010, set the direction for the state and metropolitan areas to address GHG reduction. The Department of Land Conservation and Development (DLCD) set GHG reduction targets for all the MPO areas in the state. A revised target for within SKATS was adopted by the Land Conservation and Development Commission (LCDC) in 2017, which is a reduction of 20 percent per capita by 2040 from 2005 levels.⁹

On March 10, 2020, Governor Brown signed Executive Order 20-04 which directed State Agencies to ‘Take Actions to Reduce and Regulate Greenhouse Gas Emissions.’ Most relevant for this Plan, the Departments of Energy, Environmental Quality, Land Conservation and Development, and Transportation were directed to work together to ensure that Oregon meets the greenhouse gas targets. This has resulted in the creation of

⁷ Slight modifications to the HPS are part of the revisions to the 2022 Transportation Planning Rule.

⁸ Not to be confused with H.B. 2001 from 2019 discussed above.

⁹ Values for years beyond 2040 have been proposed by DLCD as part of the update to Division 44 rules on Metropolitan Greenhouse Gases scheduled for adoption in May 2022.

the Climate Office within ODOT and using a ‘climate lens’ in developing project lists for the Statewide Transportation Improvement Program (STIP); and rule-making efforts by the Departments of Energy (ODOE), Environmental Quality (DEQ), and Land Conservation and Development (DLCD) to address aspects of greenhouse gas emissions that are within each departments purview. The modifications to the Transportation Planning Rule (TPR), discussed below, is one such effort. The Climate Protection Plan approved by the Environmental Quality Commission (which oversees DEQ) is meant to reduce greenhouse gas emissions from transportation fuels and natural gas by 90 percent by 2050.¹⁰ These and other rules and regulations potentially will change transportation usage over the coming decades.

State 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.

Goal 1, Public Involvement, specifies that the planning process should be open and accessible to the public.

Transportation Planning Rule

Goal 12 of the Statewide Planning goals (Transportation) is codified in the Transportation Planning Rule (OAR 660 et seq)¹¹. Its intent is to promote viable alternatives to reduce dependency on the single-occupant vehicle. The TPR was substantially revised and expanded in 2020-2022 to reflect Governor Brown’s Executive Order 20-04 to address climate change and provide for equitable communities. The changes to the rule focused on the cities and counties within metropolitan areas. Included are changes or additions to identify ‘climate friendly area,’ revise parking standards, and preparing for a greater percentage of the vehicle fleet to be electric vehicles.

The revised rule was adopted on July 21, 2022, by the Land Conservation and Development Commission, with tasks for the local jurisdictions to meet in the coming years¹². The changes to the TPR will affect future updates to each of the local jurisdiction’s Transportation System Plan (TSP), which could result in modifications to future project lists included in future updates to this Plan. In addition, it is now required that the jurisdictions within SKATS prepare a ‘regional scenario plan’ that shows how they will meet the GHG targets previously set¹³. The local TSPs will need to be updated to reflect these new rules.

¹⁰ See: <https://www.oregon.gov/deq/ghgp/Pages/capandreduce.aspx>

¹¹ https://oregon.public.law/rules/oar_chapter_660_division_12

¹² LCDC partially adopted the rules on May 20, 2022 to allow funding to be made available for the associated planning work.

¹³ These requirements are in the rules for Division 44 on Metropolitan Greenhouse Gas Reduction Targets. See: https://oregon.public.law/rules/oar_chapter_660_division_44

State Conformity Rule

This rule is administered by the Department of Environmental Quality (DEQ). As stated in the rule, regional emissions must not contribute to worsening air quality or violations of EPA standards and that projects of regional significance must also demonstrate conformity. The State Conformity Rule is aligned with the EPA requirements.

While the area is currently designated as being in attainment for ozone and carbon monoxide and is operating under maintenance plans for carbon monoxide, selective individual projects must still undergo ‘hot-spot’ analysis as part of their environmental review process. This analysis is typically performed by the project sponsor or their consultant.

State Endangered Species Act

This is State’s equivalent of the federal Endangered Species Act.

Other Regional Planning

There are other planning documents that guide aspects of the regional system that are either consistent with this Plan, and/or that inform the policies, programs, projects, and proposed expenditures of this Plan. A brief discussion is provided below of the major documents.

SKATS Documents

The *Salem-Keizer Metropolitan Area Intelligent Transportation System (ITS) Plan* was adopted in 2005 to ensure the area has a regional architecture for ITS related equipment. The architecture specifies what components are, or likely to be, implemented, and how they are interconnected with other devices and the various control centers and users of the services offered. The 2005 ITS Plan included a list of projects that the local jurisdictions, SAMTD, and ODOT were planning to implement in the future. Prior to each MTP update since 2009, this list has been reviewed by a working group and brought up-to-date to reflect projects that have been completed and others that are proposed¹⁴. This project list is included in the evaluation of projects for inclusion in this financially constrained Plan.

The *Congestion Management Process (CMP)* was first included in the MTP in 2003. Previously included as an appendix to this Plan, in 2019, it was moved to be a separate document. Included in the CMP are the methods used to identify vehicular congestion on the regional roads, the strategies used to address the congestion, and the evaluation methods to be used. Separately, reports of congestion (primarily travel time and identification of bottlenecks) have been provided in the *Regional Operational Characteristics Report (ROCR)* with revisions in 2022 to better align with the federal performance measures. The CMP and associated reports are available on the MWVCOG’s

¹⁴ Last reviewed in December 2021.

website.¹⁵

SAMTD Documents

- *Transit Asset Management Plan (TAM Plan)* – Documents the assets (fixed and vehicular) owned by Transit District, the metrics used to determine the condition of them, and the targets set to maintain a ‘state of good repair.’ Updated periodically by the Transit District. Most pertinent for this Plan, the TAM Plan is used to determine when vehicles in the fleet need replacement. Required as part of MAP-21 regulations.
- *Public Transportation Agency Safety Plan (PTASP)* – Describes how the Transit District integrates safety into their daily operations. Goal is “... to eliminate the human and fiscal cost of avoidable personal injury and vehicle accidents.” This covers both the employees of SAMTD (drivers, mechanics, etc.) and the public using or interacting with the transit fleet. Targets are set for the federally required safety performance measures.
- *Long-Range Transit Plan (LRTP)* – In 2021, Salem Area Mass Transit District (SAMTD) started their first long-range planning effort to culminate in the *Long-Range Transit Plan (2022)* covering the routes within SKATS and the regional routes connecting to the smaller cities in Marion and Polk counties. Transit staff and SKATS staff have cooperated during the development of the LRTP and this Plan to ensure that they are consistent.
- *Coordinated Human Services – Public Transportation Plan* - This focuses on the programs and services that the Transit District offers for people with disabilities and seniors. Last adopted in 2016, it is scheduled for an update in 2023.

Local Plan Consistency Requirements

Just as the Metropolitan Transportation Plan must be consistent with federal and state policies and regulations, the transportation system plans (TSPs) produced by the local jurisdictions in the region must be consistent with this regional Plan. A list of the relevant locally adopted transportation plans that must be consistent with the SKATS Metropolitan Transportation Plan, and that provide most of the projects included in the MTP is illustrated in **Table 2-2**. While the guidance from the State is for local TSPs to be updated every 10 years, this depends on funding being available.¹⁶ Often the local jurisdictions will apply for grants from the State to complete these updates.

The following principles of consistency between the local and regional plans are embodied in the MTP:

- All transportation projects in the local public facility plans must be consistent with the MTP, and improvements affecting the regional systems as defined in this Plan must be included in the MTP.

¹⁵ See the Congestion Management tab on <https://skats-mwvcog.hub.arcgis.com/>

¹⁶ This will likely change with the amendments to the TPR.

- All projects must demonstrate consistency with the adopted MTP 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 MTP requirements and to adequately serve the non-regional travel demand so as to not overburden the regional systems with local trips.

Local Transportation-Related Plans and Update Cycle

Table 2-2: Local Transportation Plans

Jurisdiction/Agency	Plan	Last Updated	Next Update
Keizer	Keizer Transportation System Plan	Major update: 2009. Revised 2014	2024-2026
Salem	Salem Transportation System Plan	Last amended January 13, 2020	2023-2026
Turner	Turner Transportation System Plan	Section 9.700 of Comprehensive Plan updated in 2011.	2023-2024
Marion County	Rural Transportation System Plan	Last adopted 2005. Partial update 2012.	TBD
Polk County	Transportation System Plan	Last adopted 2009	TBD
Salem Area Mass Transit District	Long-Range Transit Plan	Adopted 2022	TBD (Planned for every 5-7 years)
Salem Area Mass Transit District	Coordinated Human Services Public Transportation Plan	2016	2023

With the passage of revisions to the TPR, cities and counties will need to update their TSPs to address the new and revised requirements. The requirement in the revised TPR is for all local TSPs to be updated by 2029, with some jurisdictions, Keizer and Salem among them, to revise their TSP by June 30, 2027.

Chapter 3 – Goals

The focus in this chapter is on the Goals of the Plan and the relationship between the ten Goals and the federal planning factors, the national goals, and the federal performance measures.

Goals in a long-range plan are used to identify the high-level concepts that the proposed projects and programs are meant to address. The SKATS long-range plan has included a set of Goals for decades. The 1996 Regional Transportation System Plan (RTSP) included Goals, Objectives, and Policies for each of the mode-centric chapters (e.g., roadway, transit, aviation). By 2007 there were 222 Goals, Objectives, and Policies and due to the mode-centric structure of the earlier versions of the Plan, there was substantial redundancy in these statements related to the modes considered. In addition, they did little to help guide project definition and selection or to provide a means to track progress toward the outcomes envisioned by the goals.

With the adoption of the updated Plan in 2011, the existing Goals, Objectives and Policies were revised to simplify and consolidate them to a manageable number.¹ Reflecting the change in format of the long-range plan, these Goals are not specific to a particular mode but address characteristics that are desirable in the regional system as a whole. These Goals are based on the goals and objectives contained in the previous Plan and are influenced by the '3C' planning process and federal planning factors discussed below and in **Chapter 2**.²

Federal Planning Factors

As mentioned in **Chapter 2**, the federal surface transportation legislation, and the related federal planning regulations, contain a set of planning factors that all long-range transportation plans must consider as they are developed. A version of these planning factors has been included in the federal regulations since 1991, and the most recent revisions are:

- Support economic vitality;
- Increase the safety of the transportation system for motorized and non-motorized users;
- Increase the security of the transportation system for motorized and non-motorized users;
- Increase accessibility and mobility of people and freight;
- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- Enhance the integration and connectivity of the system, across and between modes, for people and freight;
- Promote efficient system management and operations;

¹ A tenth goal (Goal 9) was added during the 2019 Update. Explanatory statements were also added at that time.

² The planning factors are part of 23 CFR 450.306 (b), see: <https://www.law.cornell.edu/cfr/text/23/450.306>

- Emphasize the preservation of the existing transportation system;
- Improve the resiliency and reliability of the system and reduce or mitigate stormwater impacts of surface transportation; and
- Enhance travel and tourism.

Due in part to the history of the planning factors, the existing Goals of the MTP align with them to a large degree. This is not a federal requirement, but in part due to the consolidation of goal statements that took place in 2011.

National Goals

With the passage of MAP-21 (Moving Ahead for Progress in the 21st Century) in 2012, the U.S. Department of Transportation (U.S. DOT) signaled a change in how surface transportation planning and programming would be conducted in the future. In an effort toward more transparency and increased accountability, MAP-21 required State DOTs, transit districts, and Metropolitan Planning Organizations (MPOs) to use an outcomes and performance- based planning paradigm when developing long-range plans and programming projects for funding in the TIP/STIP.³ FAST (Fixing America's Surface Transportation) Act (2015) and the Infrastructure Investment and Jobs Act of 2021 (IIJA) continued these requirements. In 2018, the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) provided final rules on the performance measures to be used to show progress toward meeting the national goals. The national goals are:

- Safety – To achieve a significant reduction in traffic fatalities and serious injuries on all public roads;
- Infrastructure condition – To maintain the highway infrastructure asset system in a state of good repair;
- Congestion reduction – To achieve a significant reduction in congestion on the National Highway System (NHS);
- System reliability – To improve the efficiency of the surface transportation system;
- Freight movement and economic vitality – To improve the National Highway Freight Network, strengthen the ability of rural communities to access national and international trade markets, and support regional economic development;
- Environmental sustainability – To enhance the performance of the transportation system while protecting and enhancing the natural environment; and
- Reduced project delivery delays – To reduce project costs, promote jobs and the economy, and expedite the movement of people and goods by accelerating project completion through eliminating delays in the project development and delivery process including reducing regulatory burdens and improving agencies' work practices.⁴

³ See 23 CFR 450.306 (d), 23 CFR 450.324 (g) (3-4) and 23 CFR 450.326 (c-d)).

⁴ See 23 USC 150 (b)

There is substantial overlap between the national goals and the Goals in the MTP, due in part to the national goals being written in consideration of the federal planning factors. The national goal for “Reduced project delivery delays” is more appropriate for consideration at the Transportation Improvement Program (TIP) level than for a document meant to cover 20 years.⁵ Unlike the federal planning factors, there is not a requirement to *directly* integrate the national goals into the MTP. Instead, the national goals are associated with a set of performance measures that State Department of Transportation, Transit Districts, and MPOs must set targets for and document progress toward meeting.

National Goals and the Federal Performance Measures

Starting in 2012, FHWA and FTA were responsible for developing a set of performance measures for the national goals. This was a complex undertaking involving significant outreach and involvement with state DOTs, MPOs, and transit districts across the country as well as advocacy groups and the public. The performance measures have been established for the first six national goals listed above. The categories for the federal performance measures are:

- Road-Related Safety
- Bridge Conditions on the National Highway System (NHS)
- Pavement Conditions on the NHS
- System Performance of the NHS (addressing congestion, reliability, freight, and environmental)
- Transit State of Good Repair
- Transit Safety

ODOT, the Salem Area Mass Transit District (SAMTD), and SKATS established targets for the first reporting period (2018-2022) and are working on targets for the second reporting period (2022-2026).⁶ The road safety, transit safety, and transit state of good repair performance measures require targets to be established each year. Targets for the remaining performance measures are set on a four-year cycle, occurring the year before the scheduled adoption of the MTP.⁷

MPOs such as SKATS can either set a numeric target for each of the performance measures, or they can support the target set by ODOT or SAMTD. SKATS is required to report the progress of these targets every four years as part of the MTP. This is documented in **Appendix P (Performance)**. Under current federal regulations, there are no penalties for the MPO if the target(s) are missed, whether set by the MPO or if supporting a target set by ODOT or SAMTD.

⁵ Subsequently, ODOT and the MPOs have worked out a process for a set of obligation targets with associated penalties and rewards. See the discussion in the Obligation Report available on the MWVCOG website.

⁶ In addition, ODOT and the MPOs have developed a process for how targets will be set and documented this in *ODOT Coordination Process with MPOs in Setting Monitoring, and Reporting State Performance Measure Targets* (July 2020) [currently not available online].

⁷ The timing is just a coincidence.

In addition to the federally required measures, the MTP includes a number of indicators that track the progress of transportation conditions and issues that relate to the goals and objectives of the MTP. This chapter of the MTP provides both an overview of the national and MTP goals, the national performance measures and associated targets, and the regional indicators. The information is also available on the MWVCOG website (search for 'performance measures'). A more detailed discussion is included in **Appendix P (Performance)** which provides a summary of the changes in the measures and indicators over the last four years.

The remainder of the chapter includes each of the Goals with their explanatory statement. Also listed are the associated Objective(s), Criteria(s), federal performance measure(s), regional indicator(s), federal goal, the federal planning factor, and the goal in the 2016 Oregon Transportation Plan (OTP).⁸

Goals provide the direction that the investments included in the Plan are meant to achieve. The Objectives provide a link between the criteria and performance measures that can be directed measured. The Criteria are used with a variety of data sources available to evaluate individual projects for whether they support a Goal or not. Currently the Criteria are evaluated qualitatively not quantitatively. The Federal Performance Measures use data collected by ODOT or SAMTD and are calculated on either a one, two, or four-year cycle depending on the reporting requirements. Regional Indicators were created for the 2011 RTSP and have largely been supplanted by the Federal Performance Measures.

⁸ The Oregon Transportation Plan is currently being updated, with adoption either in late 2022 or 2023.

Goal 1

Accessibility and Mobility

The goals of the MTP are to have a Metropolitan Transportation System that is Designed to allow easy access to people and goods, and meet the mobility needs of the region for the next 20 years.

Accessibility is the ability for people to reach goods and services. Traditionally this would be via a network of roads, sidewalks, bike lanes, and transit routes. Recently, this has expanded to allow people to use telecommunication for similar means. Accessibility is often discussed along with the terms mobility and connectivity. Mobility refers to a person being able to move around the area and the quality of that movement (Are streets congested? Are sidewalks or bike facilities in place and in adequate condition? Is transit available and if so, frequent or infrequent?). Connectivity is how well the parts of the regional system are linked to each other within the system.

Objectives:

- Provide a multi-modal system
- Limits the increase in congestion during the peak hours along the regional corridors

Criteria:

- Enhances transit service of operations
- Reduces a gap in a regional system (bicycle, sidewalk, etc.)
- Increase access to employment center or jobs
- Addresses a bottleneck along a corridor

Federal Performance Measures:

- Truck Travel Time Reliability on the Interstate System
- Percent of Person-Miles traveled on the Interstate System that are reliable
- Percent of Person-Miles traveled on the non-Interstate National Highway System that are reliable
- Annual Hours of Peak Hour Excessive Delay per Capita
- Percent of Non-Single Occupant Vehicle Travel

Federal Goal:

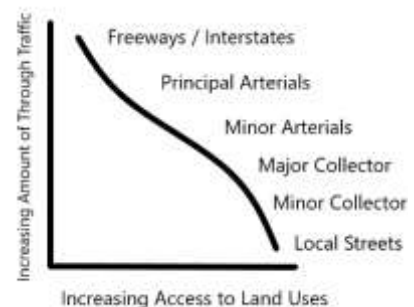
- System Reliability
- Congestion Reduction

Goal in the OTP⁹:

- Mobility and Accessibility

Federal Planning Factor:

- Increase the accessibility and mobility of people and freight.



⁹ OTP is the Oregon Transportation Plan.

Regional Indicators:

- Regional Corridors with Sidewalks (miles, percent of total)
- Regional Corridors with Bicycle Facilities (miles, percent of total)
- Average Weekday (or Annual) Transit Ridership
- Number of Transit Hours of Service
- Regional Funds on Transportation System Management Projects in the last 10 years

Goal 2

Preservation

The goal of the MTP is to have a Metropolitan Transportation System that is preserved in good repair and replaced at the end of their useful life, as necessary, and maintained to be usable to protect the region's investment.

Preserving the system ensures that the funds spent to build it are not wasted. Prudent maintenance and repair extend the useful life, thus, delaying expensive reconstruction of facilities.

Objectives:

- Preserve the existing system

Criteria:

- Increases the miles of pavement in travel lane that are ranked “good”
- Increases the number of bridges that are ranked “good”

Federal Performance Measures:

- Percent of National Highway System (NHS) Bridges classified as in Poor Condition
- Percent of NHS Bridges classified as in Good condition
- Percent of Interstate pavements in Good condition
- Percent of Interstate pavements in Poor condition
- Percent of Non-Interstate NHS pavement in Good condition
- Percent of Non-Interstate NHS pavement in Poor condition
- Percent of revenue vehicles (by type) that exceed the useful life benchmark
- Percent of non-revenue vehicles (by type) that exceed the useful life benchmark
- Percent of facilities (by type) that are rated less than 3 on the TERM scale

Regional Indicators:

- None

Federal Goal:

- Infrastructure Condition

Goal in the OTP:

- Management of the System

Federal Planning Factor:

- Emphasize the preservation of the existing transportation system.

Goal 3

Safety and Security

The goal of the MTP is to have a Metropolitan Transportation System that is developed with the collaboration of state and local governments to enhance the safety and security of the regional system for all users and modes of travel.

Vehicular collisions cost the region in many ways: loss of life or injuries, damage to vehicles and/or infrastructure, time spent clearing the collision, time lost to other travelers. Security of the system includes ensuring there is resiliency to maintain operability during, and after an extreme event.

Objectives:

- Minimize the number of fatalities, injuries, and collisions associated with the regional systems
- Preserve the existing system
- Provide a multi-modal system
- Maximize the efficient use of the existing infrastructure
- Limits the increase in congestion during the peak hours along the regional corridors

Criteria:

- Increases the number of bridges that are ranked “good”
- Enhances transit service or operations
- Reduces a gap in a regional system (bicycle, sidewalk, etc.)
- Addresses freight movement impediment on a designated Critical Urban Freight Corridor
- Addresses a known safety location/issue
- Addresses a bottleneck along a corridor

Federal Performance Measures:

- Number of Fatalities
- Number of Serious Injuries
- Number of Non-motorized serious injuries
- Rate of Fatalities per 100 million Vehicle Miles Traveled (VMT)
- Rate of Serious Injuries per 100 million VMT
- Transit related fatalities
- Transit related injuries
- Transit related safety events

Federal Goal:

- Safety

Goal in the OTP:

- Safety and Security

Federal Planning Factor:

- Increase the Safety and Security of the transportation system for motorized and non-motorized users.
- Increase the Security of the transportation system for motorized and non-motorized users.

- Percentage of NHS Bridges classified as in “Good” condition

Regional Indicators:

- None

Goal 4

Equitable

The goal of the MTP is to have a Metropolitan Transportation System that meets the needs for users of the regional transportation system: that the benefits and burdens of the transportation system are not disproportionately distributed.

In implementing the regional transportation system, no area of the region should receive either more than its fair share of infrastructure or services, nor should an area receive less. Additionally, no one area or population group should bear a disproportionate burden of any resulting negative impacts from infrastructure or services. The regional transportation system is a critical component in ensuring that all residents, regardless of age, sex, gender, income, or race have access to the opportunities and services they need to survive and thrive.

Objectives:

- Provide a multi-modal system
- Maximize the efficient use of the existing infrastructure
- Reduce the impact to the environment and natural systems
- Limits the increase in congestion during the peak hours along the regional corridors

Criteria:

- Increase access to employment center or jobs
- Project is likely to improve facilities in an Environmental Justice area

Federal Performance Measures:

- Total Emission Reduction for all Congestion Mitigation Air Quality (CMAQ) funded projects
- Percent of Non-Single Occupant Vehicle Travel
- Annual Hours of Peak Hour Excessive Delay per Capita

Regional Indicators:

- Regional Corridors with Sidewalks (miles, percent of total)
- Regional Corridors with Bicycle Facilities (miles, percent of total)
- Average Weekday (or Annual) Transit Ridership
- Number of Transit Hours of Service

Federal Goal:

- None

Goal in the OTP:

- None

Federal Planning Factor:

- None

Goal 5

Efficient to Use

The goal of the MTP is to have a Metropolitan Transportation System that is efficient to use: this refers to a system that provides the greatest benefit to the users of the system and does so with projects that are cost appropriate.

Building new roads and widening existing roads is expensive. The region should continue to promote, and fund, travel-demand options, system management techniques, and other cost-effective projects that increase the carrying capacity of the regional system.

Objectives:

- Provide a multi-modal system
- Maximize the efficient use of the existing infrastructure
- Limits the increase in congestion during the peak hours along the regional corridors

Criteria:

- Reduces a gap in a regional system (bicycle, sidewalk, etc.)
- Addresses freight movement impediment on a designated Critical Urban Freight Corridor
- Addresses a bottleneck along a corridor

Federal Performance Measures:

- Percent of Non-Single Occupant Vehicle (SOV) Travel (starts in 2022)
- Annual Hours of Peak Hour Excessive Delay per Capita (starts in 2022)
- Percent of Person-Miles traveled on the Interstate System that are reliable
- Percent of Person-Miles traveled on the non-Interstate National Highway System that are reliable
- Truck Travel Time Reliability Index for Interstate

Federal Goal:

- None

Goal in the OTP:

- None

Federal Planning Factor:

- Promote efficient system management and operation.

Regional Indicators:

- Regional Corridors with Sidewalks (miles, percent of total)
- Regional Corridors with Bicycle Facilities (miles, percent of total)
- Average Weekday (or Annual) Transit Ridership
- Number of Transit Hours of Service
- Regional Funds spent on Transportation Supply Management projects in the last 10 years

Goal 6

Multimodal

The goal of the MTP is to have a Metropolitan Transportation System that is multimodal and comprehensive, supportive of moving goods and people by the mode of their choice.

A multimodal system provides the residents of the area alternatives for their transportation needs, has the potential to decrease overall congestion, and to reduce pollutants. It also provides a measure of resiliency.

Objectives:

- Provide a multi-modal system
- Maximize the efficient use of the existing infrastructure
- Limits the increase in congestion during the peak hours along the regional corridors

Criteria:

- Enhances transit service or operations
- Addresses freight movement impediment on designated Critical Urban Freight Corridor
- Reduces a gap in a regional system (bicycle, sidewalk, etc.)

Federal Performance Measures:

- Percent of Non-Single Occupant Vehicle (SOV) Travel (starts in 2022)
- Annual Hours of Peak Hour Excessive Delay per Capita (starts in 2022)
- Percent of Person-Miles traveled on the Interstate System that are reliable
- Percent of Person-Miles traveled on the non-Interstate National Highway System that are reliable
- Truck Travel Time Reliability Index for Interstate

Regional Indicators:

- Regional Corridors with Sidewalks (miles, percent of total)
- Regional Corridors with Bicycle Facilities (miles, percent of total)
- Average Weekday (or Annual) Transit Ridership

Federal Goal:

- Freight Movement & Economic Vitality

Goal in the OTP:

- Economic Vitality

Federal Planning Factor:

- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight.

- Number of Transit Hours of Service
- Regional Funds spent on Transportation System Management Projects in the last 10 years

Goal 7

Environment

The goal of the MTP is to have a Metropolitan Transportation System that is planned to minimize the impacts to the natural and built environment, including coordination with local government policies and plans.

Consider the impact(s) to the environment, natural systems and built environment to ensure that fresh air and water are available, that endangered and threatened species are able to remain in their habitats, and that historic and cultural resources are preserved for future generations. Consideration should be given to factors that reduce or mitigate the effect of the transportation system on the environment; examples may include air pollution, water pollution, stormwater, greenhouse gases, and noise pollution.

Objectives:

- Provide a multi-modal system
- Reduce the impact to the environment and natural systems
- Limits the increase in congestion during the peak hours along the regional corridors

Criteria:

- None

Federal Performance Measures:

- Total emissions reductions for carbon monoxide (CO)

Regional Indicators:

- Transit ridership
- Transit hours of service

Federal Goal:

- Environmental Sustainability

Goal in the OTP:

- Sustainability

Federal Planning Factor:

- Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.
- Improve the resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts of surface transportation.

Goal 8

Financial

The goal of the MTP is to have a Metropolitan Transportation System that is developed and maintained with the funds available to the region.

The MTP is required by federal law to be financially constrained, meaning that the funds that have been identified as being 'reasonably anticipated' to be available over the next 20 years are what is used to fund the identified projects. It is also good fiscal policy to protect prior investments, meaning operating and maintaining the existing regional system in such a way as to protect the regional investment.

Objectives:

- Preserve the existing system

Criteria:

- None

Federal Performance Measures:

- None

Regional Indicators:

- None

Federal Goal:

- None

Goal in the OTP:

- Funding the
Transportation System

Federal Planning Factor:

- None

Goal 9

Vibrant Regional Economy

The goal of the MTP is to have a Metropolitan Transportation System that invests in transportation infrastructure that supports a vibrant regional economy.

A regional economy requires a robust and comprehensive transportation system to ensure that goods can be delivered, workers can get to their jobs, and people, visitors, and tourists can access the services they need.

Objectives:

- Provide a multi-modal system
- Maximize the efficient use of the existing infrastructure
- Limits the increase in congestion during the peak hours along the regional corridors

Criteria:

- Enhances transit service or operations
- Addresses freight movement impediment on a designated Critical Urban Freight Corridor
- Reduces a gap in a regional system (bicycle, sidewalk, etc.)
- Addresses a bottleneck along a corridor
- Increase access to employment center or jobs

Federal Performance Measures:

- Annual Hours of Peak Hour Excessive Delay per Capita

Regional Indicators:

- None

Federal Goal:

- Freight Movement and Economic Vitality

Goal in the OTP:

- Economic Vitality

Federal Planning Factor:

- Support the Economic Vitality of the metropolitan area, especially by enabling global competitiveness, productivity, and efficiency.
- Enhance Travel and Tourism

Goal 10

Involvement

The goal of the MTP is to have a Metropolitan Transportation System that is based from the result of an open and continuous dialog with the public, other stakeholders, local jurisdictions, and agencies within the SKATS area.

Given the importance of the transportation system on the region's economy and quality of life, it is vital to maintain as an inclusive and transparent dialog as possible amongst the regional partners and with the public. The means and methods of involving the public are documented in the SKATS Public Participation Plan.

Objectives:

- None

Criteria:

- None

Federal Performance Measures:

- None

Regional Indicators:

- None

Federal Goal:

- None

Goal in the OTP:

- Coordination,
Communication and
Cooperation

Federal Planning Factor:

- None

Chapter 4 ~ Existing System

The transportation system in the Salem-Keizer area is discussed in this chapter. A discussion on travel and terminology starts the chapter followed by a brief overview of the non-road modes and some of the general operational characteristics of the system. Five districts are defined to allow for easier presentation and discussion of the existing publicly funded transportation system.

The transportation infrastructure of today represents the investments made over the past 50 to 100 years. These investments are based on decisions made by the public and policymakers on how the area should grow and the transportation technology that was available at the time of the decision. These choices in infrastructure influence not only the travel patterns and modes used by the people and businesses in the Salem-Keizer area but also the investments in housing and business locations, which in turn drives demand for transportation infrastructure. Over time, as these investments are made, it becomes increasingly difficult to make substantial changes in either the location or type of transportation infrastructure or the built environment. Thus, it is important to make decisions based on how the community believes it should grow in the future rather than just react to an issue and provide a short-term solution.

A few terms and concepts that are important to understand travel are defined in the beginning of this chapter. These concepts include the difference between mobility and accessibility, why trips are made, and what constitutes regional travel. This is followed by an overview of the Salem-Keizer area and a discussion of the regional “non-road” (pipelines, railroads, aviation etc.) system and the regional road system. This is presented in two parts: the part of the infrastructure and services that are offered throughout the region and a more focused look at each of the Metropolitan Transportation Plan’s five districts of the metropolitan area:¹

1. Downtown Salem;
2. West Salem;
3. Keizer and North Salem;
4. East Salem; and
5. South Salem and Turner.

It is important to remember that while all modes are discussed, the Salem-Keizer Area Transportation Study (SKATS) has financial influence over only a portion of the infrastructure in the Salem-Keizer area. In particular, the focus for SKATS is on the regional infrastructure for which federal surface transportation funds may be allocated. To date, this has been limited mainly to roads classified as minor collector or above and the mass transit system. Other facilities, such as pipeline and telecommunications, are important to support or supplant travel; but SKATS has no voice in how these pieces of the regional system are expanded or maintained. In addition, **SKATS does not own,**

¹ These districts provide a convenient way of looking at the urban area but are in no means the only way.

operate, or maintain any of the systems discussed in this document. These are operated by the transit district, cities, counties, ODOT, or private businesses. SKATS' role, as discussed in Chapter 2, is to ensure that the regional system is built, operated, and maintained in a comprehensive, continuing, and cooperative manner.

Mobility v. Accessibility

People typically confuse the concepts of mobility and accessibility. Mobility is the ability to move, by any mode, from point A to point B. Accessibility is the “ability to reach goods and services.” An example of a road with more mobility and less accessibility would be an Interstate or similar. A local street represents a road with less mobility and more accessibility (**Figure 4-1**). Many people want accessibility. That is, they want *access* to goods and services but often call for mobility solutions. Accessibility is essential for a person to meet many of life’s requirements such as going to shop, to work, or to recreate. Many of these can be met with little or no mobility on the part of the individual. When mobility is involved, the choice of the mode used (auto, transit, walking, etc.) is influenced, in part, by the services that can be accessed by a particular mode and the amount of time available to the individual².

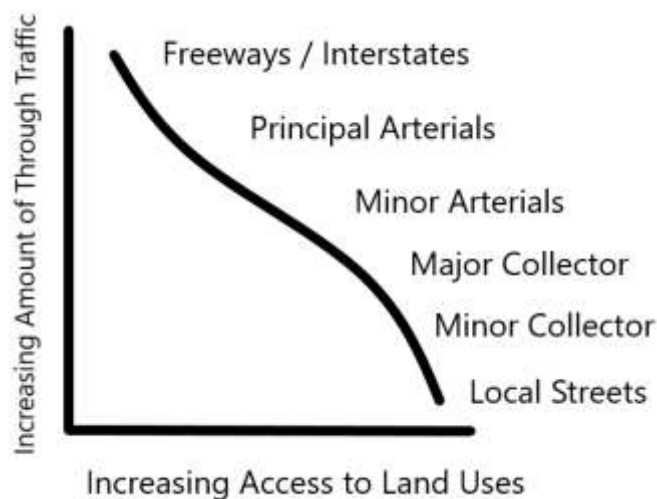


Figure 4-1: Relationship between Accessibility (X-axis) and Mobility (Y-axis)

Why Trips Are Made

When people travel, the resulting trips can be described with how, why, where, and when. “How” relates to the mode that is used for the trip. This may be walking, biking, taking a bus, or riding in a car as either the driver or as a passenger. The “why” describes the purpose of the trip: Is it to go to work, to the store, drop the kids off at school, or for recreational purposes? The “where” addresses the origin and destination for the trip

² And to be sure, there are many influences on how people travel.

along with the route. Finally, the “when” is the day of travel, the time the trip began, and the duration of the trip.

Each trip’s “how, why, where, and when” is influenced by a number of factors including each other. The length of the trip influences the mode selected (the “how”) as well as when the trip is made. How a trip is made reflects the modes available to the user both when the trip begins and when it ends. The time of day when a trip is made is often associated with the “why.” For example, travel to work is often in the morning with a return trip late in the afternoon or early in the evening. Where people or goods are transported to reflects what is located there in addition to how the people or goods can be moved to that location.

And an increasingly popular way of accessing goods is to forego the travel yourself and have the goods travel to you. The rise of e-commerce for goods, foods, and services has been steadily increasing over the past several decades and spiked during the early COVID-19 months in 2020 with a slight reduction in 2021 and 2022 (but still higher than in 2019). This substitution of personal travel has meant a reduction in total trips, but the goods are still being delivered to the person’s home.

Regional Travel

‘Regionally significant’ travel within the Salem-Keizer metropolitan area is addressed in this plan. ‘Regionally significant’ travel in a private vehicle is typically thought of as that occurring on major roads where the highest volumes and largest amount of goods movement takes place. These roads have functional classifications of either principal or minor arterials. While these are sufficient for vehicular travel, for other modes additional streets are included. The regional transit system typically uses the roads classified as minor arterial and above. However, in certain areas collectors may be used to provide a connection to neighborhoods or work locations. For pedestrians, significant travel includes the sidewalk network or other streets around a regional center or major employment or shopping area such as downtown Salem. For bicyclists, regional travel may include a combination of bike lanes on arterials and collectors, separated facilities, and local roads that have been designated as a bicycle boulevard or family-friendly bikeway (even if these do not preclude other modes). In the simplest form, these are streets that form a contiguous link between areas of interest while foregoing the high-speed, high volume vehicular traffic often associated with regional roads.



Map 4-1: SKATS Region

The Salem-Keizer Area³

The area addressed by this plan is illustrated in **Map 4-1**. The Salem-Keizer area is

³ The area is based on the 2010 U.S. Census. Later in 2022 the U.S. Census Bureau will release updated 'urban area' definitions which will define the minimum extent for SKATS.

divided by the Willamette River and ringed by hills to the west and south. Only two bridges for motorized traffic cross the river (at Marion Street and Center Street in downtown Salem) resulting in congestion and significantly reduced connectivity between West Salem and the rest of the metropolitan area. An additional crossing is available for pedestrians and non-motorized vehicles at the Union Street Bridge. The hills traditionally constrained development and defined the transportation infrastructure and built environment that is seen today. Another constraint has been the two Urban Growth Boundaries that define the 20-year supply of buildable land for Salem-Keizer and for Turner. These have helped to limit the sprawl into the surrounding countryside that is so prevalent in other states.

The downtown Salem area is served by three full interchanges with Interstate 5 (Portland Road, Market Street, and Mission Street (Highway 22E)) and one limited interchange (Salem Parkway). The Salem Parkway interchange is about four miles away and is part of the Chemawa Road / Keizer interchange. Portland Road connects Interstate 5 with Highway 99E and provides access to downtown from the northeast. Market Street is at the extreme north edge of the downtown area, and its interchange is about two miles from downtown. Mission Street (Highway 22E) is at the extreme southern edge of the downtown area, and its interchange is about three miles from downtown. No main east-west streets in the downtown Salem area, such as Marion Street, Center Street, or State Street, have interchanges at Interstate 5. Keizer is served by the Chemawa Road, and to a lesser degree, the Brooklake Road interchanges.

Population growth in the Salem area has been constant since the end of the Second World War until the 21st Century, typically growing over 20 percent a decade. Since 2000, the growth rate has moderated to under 15 percent per decade. Growth has occurred mainly in the outer areas of the urbanized area where there is developable land. (For more information, *see Appendix A.*)

Table 4-1: Population and Employment within SKATS (2000, 2010, 2020)

	Population	Employment
2000	214,593	92,462
2010	243,591	104,053
2020	271,737	118,347

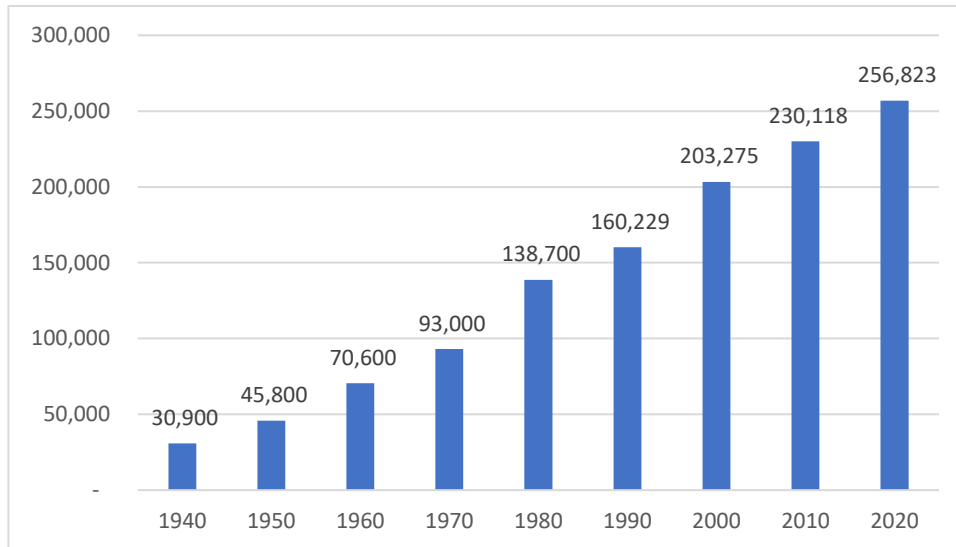


Figure 4-2: Population Growth in the Salem-Keizer urbanized area 1940-2020 (within the UGB since 1980)

The nature of employment (which sector a person is employed in) and the participation in the work force has been changing over the same time period. Decreases over the last 20 years have been noticeable in manufacturing with increases in health care, education, and ‘transportation and warehousing.’ Employment by government has increased, but it has decreased as a percent of the workforce with the retail sector experiencing a similar result.

The COVID-19 pandemic resulted in a large loss of jobs and closure of businesses in Spring of 2020; but since 2021, there has been a rebound and a noticeable lack of workers in many sectors, contributing to supply chain issues that continue into 2022.

One response to the COVID-19 pandemic was the rapid switch from work-at-an-office to work-from-home for many of the workers in sectors that have office workers. For several sectors, including finance, information technology, and government, that switch is morphing into a hybrid model (working from home several days a week) or even permanent work-from-home. The drop in vehicular congestion along the regional roads during the peak hours was noticeable in 2020 and 2021; however, there has been an increase in travel during the non-peak hours likely associated with errand running by the work-from-home workers.

Other changes since the start of COVID-19 have been the reduction in transit ridership (locally and nationally) and the slow recovery (due to multiple factors). As of December 2022, daily ridership on Cherriots is approximately 66 percent of ridership in 2019. Finally, there has been a rise in speeding on the roads in the region and serious injuries or fatalities from the resultant crashes.

It is too early to tell whether these trends, individually or in total, will become permanent

or transitory, fading back to the pre-COVID-19 patterns. They do have important ramifications for how and where investments should be made in the coming years.

Travel and Goods Movement – Regional Non-Road System

Apart from McNary Field, the Salem Railroad Station, the Salem Multimodal Station, and the city of Salem’s water transmission pipelines, the infrastructure described in this section is privately owned, operated, and for the most part, privately funded. While public funds and grants have been used to implement projects on the lines owned by the railroads (primarily via *ConnectOregon*), for the most part, the jurisdictions in the area, as well as the State, had little say over where investment should be directed. The next section (*Regional Road System*) describes the infrastructure that have been traditionally funded with public funds.

Aviation

Aviation is typically used for either passenger travel or freight that has high value, low bulk, and is time dependent. Aviation services are provided at McNary Field in Salem, the Portland International Airport 55 miles to the north, and the Mahon Sweet Field in Eugene 66 miles to the south. Currently, no commercial passenger flights use the Salem airport despite repeated attempts by the city of Salem to attract an airline. The airport authority has reported that since 1948, over \$10 million has been invested by the federal government in McNary Field. Recently, the city of Salem spent \$500,000 for a mobile structure to supplant the current terminal to allow for commercial flights to resume. As part of *ConnectOregon II* (2008), the State provided \$3.8 million for projects to the passenger terminal and runway. In 2023 the city of Salem approved funding to expand the terminal and to make it compliant for commercial passenger service. The Airport Master Plan (AMP) for McNary Field is currently being updated (last updated in 2012).

The total number of flights using McNary Field have been generally decreasing since the mid-1990s. There was a temporary increase between June 2007 and October 2008 when Delta Connection provided commercial passenger service. Flights since the mid-2010s include an increasing number of corporate and private jets using the airport for either business or pleasure trips. Salem is well positioned for easy access to recreational and other tourism-related activities within the mid-Willamette valley.⁴

Maritime

During the development of the Salem area in the 19th Century, the Willamette River allowed for the movement of large amounts of goods in a manner that was quicker and more efficient than that afforded over land. However, the zenith of such movement of goods and people was short lived. Maritime movement of goods and people have long

⁴ See Salem Airport Strategic Business Plan, 2019, available at:
<https://www.cityofsalem.net/home/showpublisheddocument/134/637781816069900000>

been supplanted by other modes that offer quicker service or better access to the developed area. While there have been requests in the past 30 years to dredge the Willamette to allow for commercial vessels to travel between Salem and Oregon City, the U.S. Army Corp of Engineers has not dredged the Willamette River above its confluence with the Yamhill River since 1977. In addition, with the Willamette River listed as critical habitat for Chinook salmon and steelhead trout, it is unlikely that any future proposals for dredging the Willamette River will be implemented.

Pipelines

Pipelines provide an economical way of transporting large quantities of gases or liquids over long distances.

Three regional pipeline systems are located within or near the SKATS planning area, transporting natural gas and petroleum products. Kinder Morgan Energy Partners (KMEP) transports petroleum products through the Willamette Valley in its 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 metropolitan area as it makes its way through the Willamette Valley. Finally, Northwest Natural Gas (NWNNG) operates a system of high-pressure natural gas feeder pipelines that serve Salem-Keizer and several communities to the west. These pipeline facilities have an excellent safety record and have operated without incident. These pipelines are illustrated on **Map 4-2**. There are several smaller natural gas feeder pipelines serving residential and commercial users that are not shown.

The city of Salem owns and maintains two water transmission lines that traverse the city of Turner from the southeast to the northwest. These pipelines supply Salem and Turner with drinking water from the North Santiam River.

Railroads

Development of the railroads in Oregon from the 1880s increasingly supplanted the commercial movement of goods via the river. From the late 1880s until after the Second World War, railroads provided the primary means of moving goods and people into and out of the Salem area. Two north-south lines were constructed linking Salem with Portland and Eugene and thus to the rest of the west coast and the country. Today, these lines are operated by the Union Pacific (UP) Railroad and the Portland & Western (P&W) Railroad.

The UP line through the Salem-Keizer area consists of 14.4 route miles of mainline track and roughly parallels Interstate 5 as it enters from the north. It then runs southwesterly until reaching downtown Salem where the track is located along the eastern edge of downtown along 12th Street before continuing southeasterly toward Turner and out of the area. This is the main west coastline for UP, and, as a result, a significant number of trains (over 20) pass through Salem each day. The rail is in good condition, classified by

the Federal Railway Administration (FRA) as class 4 and allows freight trains to operate at 60 MPH north of Silverton Road and south of McGilchrist Street and 35 MPH between Silverton Road and McGilchrist Street. In addition, UP operates a rail yard to the southeast of downtown Salem.

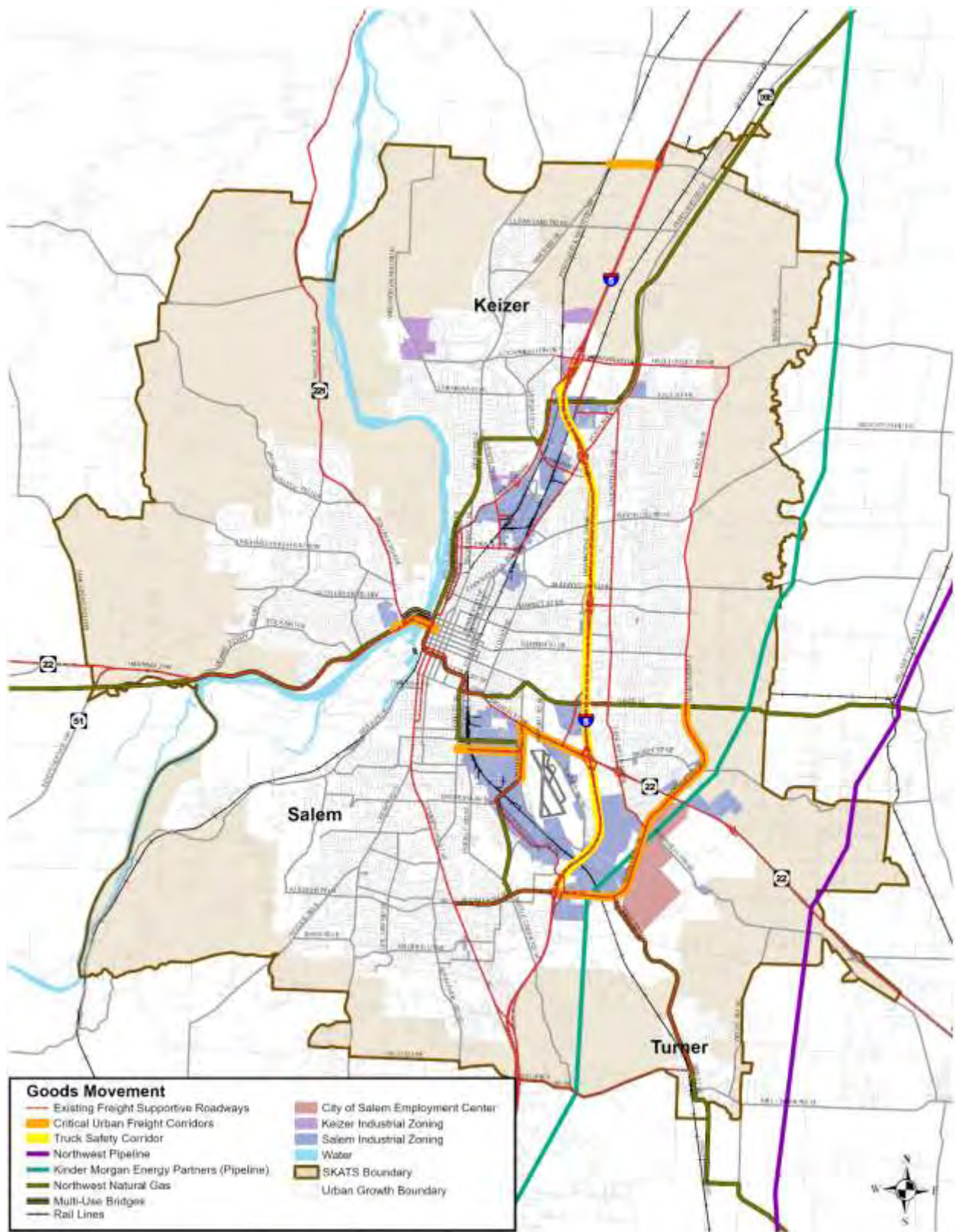
The UP line is also used by two passenger train services, Amtrak's *Coast Starlight* long-distance train and the Oregon- and Washington-funded *Cascades* corridor trains (currently operated by Amtrak). Prior to COVID-19, the *Coast Starlight* operated one train per day in each direction between Seattle and Los Angeles, and the *Cascades* offered two roundtrips per day between Portland and Eugene in Oregon with one train in each direction in the morning and evening. All of the passenger trains stop daily at the Salem Passenger Rail Station. This line is part of the federally designated *Pacific Northwest Rail Corridor*, for high-speed passenger rail. In the mid-1990s, ODOT purchased and renovated the Salem Passenger Rail Station using \$2.4 million in Transportation Enhancement (TE) funding. ODOT also renovated the adjacent historic Salem Baggage Depot for use by Greyhound and other interurban bus service providers as the Salem Multimodal Station. It is no longer used by FlixBus/Greyhound as of October 2022⁵. The station is also served by Cherriots and Tillamook County Transit. Passenger rail service was curtailed during 2020 in response to COVID-19 but was restored by mid-2021. As of June 2022, there are two *Cascades* trains and one *Coast Starlight* each direction each day. Service is supplemented with *POINT* bus service (currently five each direction per day).

The second rail line is to the west of the UP line and runs along the western edge of downtown Salem next to Riverfront Park. Portland & Western's parent company, the Genesee & Wyoming, Inc., purchased the track from Keizer to Eugene from the Burlington Northern Santa Fe Railroad in 2002. The track is classified as class 2 north of Salem Parkway and south of Minto Island Road, and class 1 and 2 between those points by the FRA. These classifications limit the speeds of the P&W trains to 25 MPH north of Salem Parkway and south of Minto Island Road, and 10 MPH between those points. The line operates in the Front Street right-of-way from Norway Street to Division Street. As of 2010, P&W was operating up to six trains a day with more planned in the future as warranted by any expansion in the economy.

ODOT completed the *Oregon Passenger Rail Project* to identify the preferred alignment for future higher-speed passenger rail in the Willamette Valley and allow for projects to be eligible for future federal funds. The preferred alignment is the existing UP line used by the *Cascades* and *Coast Starlight*. The FRA signed a Record of Decision on the completed Tier 1 Final Environmental Impact Statement for this alignment in April 2021. This allows Oregon to compete for federal infrastructure grants to implement the identified projects to increase the capacity of the rail line to allow for additional passenger service in the future and minimize the impacts to UP's freight operations.⁶

⁵ Greyhound was purchased by FlixBus in October 2021.

⁶ See: <https://www.oregon.gov/odot/RPTD/Pages/Passenger-Rail.aspx> for the Final EIS and Oregon Passenger Rail Service Development Plan.



Map 4-2: Goods Movement

Telecommunications

The final piece of infrastructure is the telecommunications network including fiber optics, microwaves, wireless infrastructure, or copper wires.⁷ Telecommunications are increasingly being used to send documents and information over large distances extremely quickly with relatively low cost. The increasing speed and capacity of this network, combined with the expanding capabilities of the computers and other devices using it, have allowed a burgeoning number of people and businesses to replace travel with internet use. Unfortunately, currently no data is available on the number of trips that are not made due to online shopping, telework, teleconference, or social networking.⁸ It is also possible that people are replacing the trip they did not make with another one but for a different purpose such as teleworking during the day and driving out later for an errand.

Travel and Goods Movement – Regional Road System

The component of the regional transportation system that the public is most familiar with is the regional road system. Since the early decades of the 20th century the road system, and the vehicles that use it, has increased in importance for the movement of goods and people in, and through, the area. As the first state in the Union to levy a gasoline tax, Oregon has a long history of publicly funding new roads and modifications to existing ones. Combining “free roads,” inexpensive gasoline, and vehicles that were affordable to many of the residents in the region has resulted in the region being crisscrossed with roads of various ‘functional classifications.’ These roads allowed, and to an extent required, that the land use development be more spread out than it was when automobiles were not the primary means of mobility.

Functional Classification

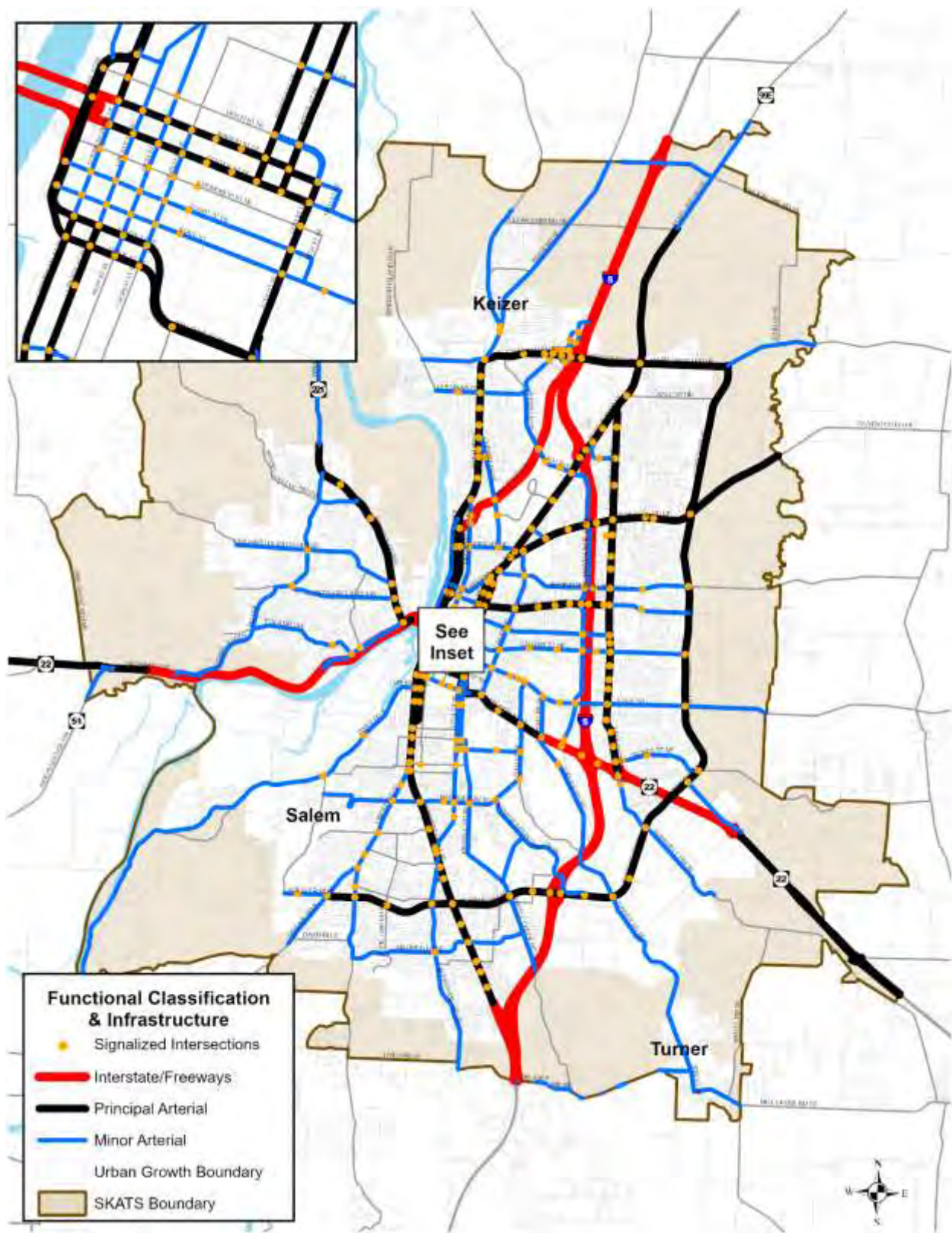
A review of the functional classification of the roads will be completed in 2023 after the U.S. Census Bureau releases the urban area definitions. They will be included in the next update.

For the regional road system (**Map 4-3**) discussed in this plan, the federal functional classification system of principal and minor arterials, major and minor collectors, and local roads is used. The jurisdictions in the area use a slightly different classification scheme in their Transportation System Plans (TSP). Currently, the regional road system is defined by a series of roads classified as minor arterial and above (although federal funds may be used on roads classified as collector or higher). These roads facilitate regional movement that is the longer-distance travel within and through the Salem-

⁷ Broadband internet also is recognized as important infrastructure in the Infrastructure Investment and Jobs Act of 2021.

⁸ Although this is an item that will be explored with the forthcoming Oregon Household Travel Study in 2023.

Keizer area. This includes the state highways and Interstate 5 that connect the region with other parts of the state and the nation. The regional road system carries much of travel by freight, private vehicle, and transit. The Cherriots bus routes operate primarily on these roads. Many regional roads also have facilities to support the movement of bicyclists and pedestrians.



Map 4-3: Functional Classification of the Regional Roads

Not included in the regional system are the local roads, those classified as ‘collector’ and below. These serve mainly to move vehicles between the regional system and homes or individual properties. Typically, these streets are designed for low volumes of traffic moving slowly.

The total lane-miles by functional classification for the regional road system is illustrated in **Table 4-2**. Many of the roads with ‘higher’ functional classifications have been built to be usable by a variety of modes, not just motorized traffic but providing space for people bicycling and walking. However, roads that are below an arterial are more likely not to have sidewalks and bike lanes. This is especially true for roads that were built in the years between 1950 and 1990.

Table 4-2: Lane-Miles of Regional Roads (2014)⁹

	Miles
Interstate	63
Other Principal Arterials	72
Minor Arterials	120

Crashes

According to analysis by the CATT Lab¹⁰, traffic incidents, either solely or in combination with other factors, account for 27 percent of the congestion in Marion and Polk Counties. Understanding where collisions occur, and why, is important not only to address congestion but to increase the safety of the regional system for all those that use it. While there are many factors leading to a collision, several are addressable via projects to alter the existing roadway, that strive to reduce the possibility of operator error or that inform the user of the presence of a collision or slowed/stopped traffic ahead.

ODOT’s Crash Analysis and Reporting Unit provides SKATS with data on reported crashes that have occurred on state highways and local roads¹¹. These data detail where, when, and how crashes occurred. While crash data is limited to those crashes over \$1,500 in property damage value¹² or that involved a fatality or bodily injury, they are the best source currently available for analysis. The data also provides some information on non-injury collisions involving bicyclists and pedestrians; although, often these are not reported as they do not meet the minimum damage value specified in State law. More detailed reports, as well as yearly summaries are available on the web¹³.

⁹ In 2023 the functional classifications of the roads within the SKATS planning boundary will be reviewed as part of the process to use the latest data from the 2020 U.S. Decennial Census (data has been delayed until 2023).

¹⁰ CATT Lab is the Center for Advanced Transportation Technology, located at the University of Maryland.

¹¹ These include vehicle-vehicle, vehicle-bicyclist, and vehicle-pedestrian crashes.

¹² The value was increased in 2017.

¹³ See: <https://www.mwvcog.org>, search for crashes

The locations of the reported crashes, injuries, and fatalities in the SKATS area from 2016 to 2020¹⁴ are illustrated in **Map 4-4**. A total of 17,794 collisions were reported in this time period, resulting in 83 fatalities, up from 17,833 and 61 respectively from 2012 to 2016. This includes seven persons killed while bicycling and 25 while walking, compared to one and 20 in the last period. There is considerable variation in these numbers for any one year, but the trend over the years from 2016 to 2020 has been an increase in crashes, injuries and fatalities, reflecting national trends. There have been 20 fatalities being recorded in 2020 alone. Based on preliminary data, it is expected that the number of fatalities in 2021 will be higher still (and 2022 seems on-track to surpass 2021). Typically, corridors with higher traffic volume have a higher number of crashes. Information for each district is discussed later in this chapter.

Table 4-3: Crashes, Injuries and Fatalities, SKATS Area 2016-2020 (Source: ODOT)

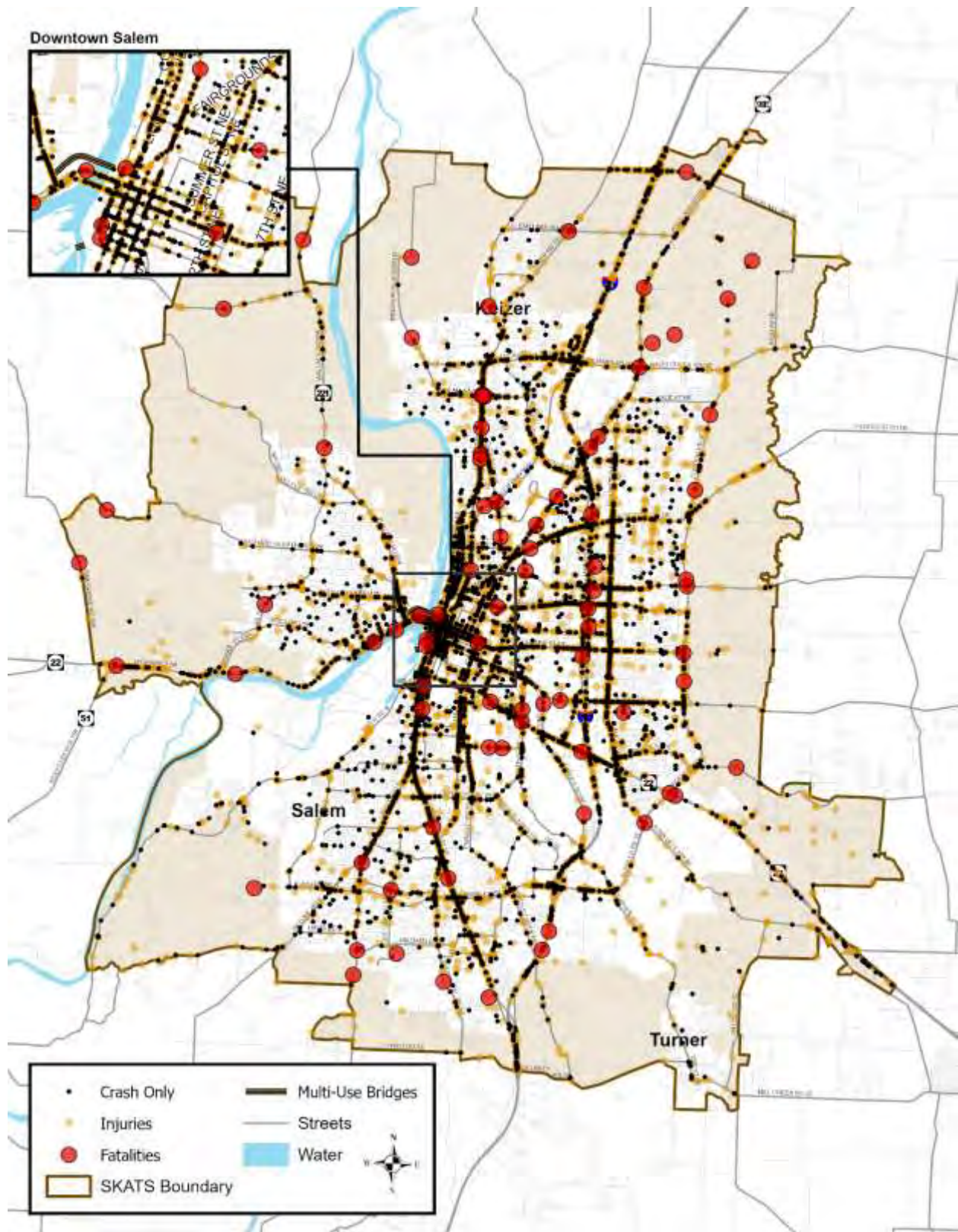
District	Crash Only	Non-Serious Injury Crash	Serious Injury Crash	Fatal Crash	Total Crashes
Downtown Salem	988	1,047	27	3	2,075
West Salem	527	646	35	11	1,219
Keizer	642	841	50	10	1,543
East Salem	3,248	4,848	236	40	8,372
South Salem	2,065	2,384	117	19	4,585
Total	7,481	9,765	465	83	17,794

Table 4-4: Fatalities and Serious Injuries by Mode, SKATS Area 2016-2020 (Source: ODOT)

	Serious Injury	Fatal Crash
Vehicle-Vehicle	408	51
Vehicle-Pedestrian	43	25
Vehicle-Bicyclists	14	7
Total	465	83

Further discussion of safety issues as they pertain to the proposed projects is presented in **Chapter 7** as part of the analysis of possible impacts of the projects.

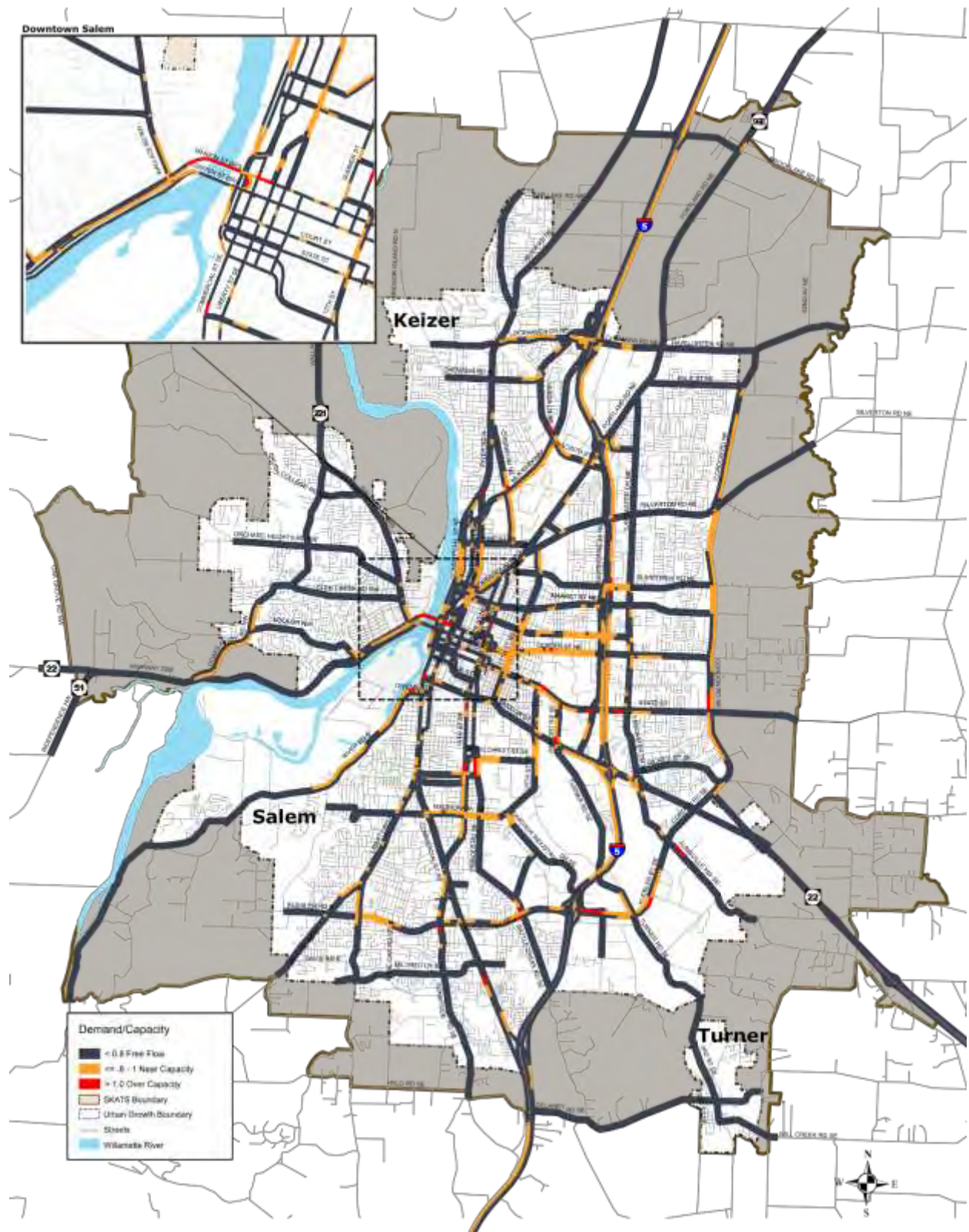
¹⁴ Crash information is presented as 5-year summaries aligning this reporting with the federal safety performance measures.



Map 4-4: Crashes, Injuries, and Fatalities, SKATS 2016-2020 (Source: ODOT)

Vehicular Volume on the Roads

The regional road system is primarily used by privately owned and operated vehicles, i.e., automobiles, SUVs, and pickup trucks. The estimated p.m. peak (5:00-6:00 p.m.) demand to capacity ratio, in 2021, for travel on the regional system, is illustrated in **Map 4-5**. The data for this map is from the SKATS Regional Travel Demand Forecasting Model. As shown on the map, a number of links are congested and approaching their design capacity. This threshold is reached when the demand to travel on the segment is equal to the calculated capacity of the segment. The second threshold, which is defined as “approaching capacity deficient” is when this ratio is greater than 0.8 and less than 1.0. Approximately 16 percent of the road miles are nearing or above the above threshold. It is also apparent that much of the congestion is due to either bottlenecks or lack of parallel facilities (such as crossing the Willamette River).



Map 4-5: Volume to Capacity, 2021 PM Peak (5-6pm)

Transportation System Management

Vehicular congestion has recurring (e.g., bottlenecks) and non-recurring causes (e.g., weather-related). One way to address congestion is by investments in Transportation System Management (TSM) programs. TSM aims to increase the efficiency of the existing transportation system by addressing bottlenecks and flow problems inherent in the built facilities. Three TSM programs are on-going: the Regional Traffic Signal Control Center (described below), the Regional Park-and-Ride/Pool System, and the Regional Parking Management System. Twelve park-and-ride lots are located throughout the Salem-Keizer area in addition to three located outside the SKATS area. The park-and-ride lots within the SKATS boundary are illustrated on the maps that follow later in the chapter. Most of these parking lots are served by Cherriots. Three park-and-ride lots located outside the SKATS boundary serve those working in the SKATS area. The lot in Rickreall is served by Tillamook County Transportation District Route 70x, Cherriots Regional Route 50, and was expanded using *ConnectOregon* 3 funding in 2011.

According to data collected and analyzed by the CATT Lab at the University of Maryland, in Marion and Polk counties in 2019 27 percent of congestion is attributed to poor signal timing¹⁵. The Regional Traffic Signal Control Center (RTSCC) is in Salem City Hall and is operated by the Public Works Department. It is funded in part with federal funds from SKATS. The RTSCC controls most of the traffic signals in the region allowing for timing patterns to be reset from the center in response to traffic or incidents. The signals are connected to the RTSCC via fiber optics, copper wire, and/or wirelessly, called 'signal interconnects.' The signal interconnects also allow video and data from many of the controllers to flow back to the RTSCC for either display or use in analysis. One project implemented over the last decade has been to equip the signal controllers at key intersections with the necessary hardware to count traffic, and in most cases, to determine the classification (car, truck, etc.). This data is useful in understanding how traffic demand changes over time. It is also used in validating the travel demand model and can be used in other analysis such as determining crash rates when used with other data sources.

More information of the TSM (and other) strategies that are used or considered for future use within the Salem-Keizer area may be found in the *Congestion Management Process* document available on the MWVCOG's website.

Transportation Demand Management

Cherriots Transportation Options (previously known as Cherriots Trip Choice) provides

¹⁵ CATT Lab is the Center for Advanced Transportation Technology. Their analysis used data collected by INRIX, a provider of travel time information. The analysis was funded by the Bureau of Transportation Statistics. See: <https://congestion-causes.ritis.org/> For corridor specific results see the SKATS Congestion Management Process page at: <https://skats-mwvcog.hub.arcgis.com/pages/congestion-management>

Transportation Demand Management (TDM) services that assist people in accessing alternatives to driving alone to work. Among the services it provides are a regionwide carpool matching service, a vanpool referral service, and emergency ride home program. In addition, staff conducts outreach to employers to help them access and implement these programs. These programs are designed to inform people of the options that are available for making their daily trips, helping those that participate in them save time and money. The city of Salem supports these programs by offering preferential parking for carpools/vanpools at locations in the Salem downtown core. In 2014, Cherriots Trip Choice developed a master plan to guide their near- and medium-term development.

Transit service requires a network of continuous and comprehensive sidewalks to be effective. These allow for people to access transit. While the provision of sidewalks along the regional arterials is a matter of policy, there are still gaps in the system especially from those segments that were developed after World War II and before the recent policies mandating sidewalks came into effect. In addition, many of the local streets either do not have, or have inadequate, pedestrian infrastructure for the same reasons.

Bicycle

The regional bicycle system (***See Map 4-6***) includes the regional road system, a few off-street paths that provide crucial linkages, and lower-classified roads that support the connectivity for those bicycling. The lower volumes and speeds make local streets attractive to bicyclists, and several have been designated as either bicycle routes or family-friendly bikeways (which were known as 'bicycle boulevards'). While they allow for relatively long-distance travel by bicyclists, they are typically not as direct, and thus, result in longer travel both in distance and time than the bike lanes located along the arterials that are part of the regional system. While 70 percent (206 miles) of the defined network has been built, the remaining sections are those that require costly right-of-way acquisition, removal of on-street parking, or community consensus on the implementation. Filling in these missing sections is crucial to providing a continuous network that serves the same travel corridor used by motorized vehicles.

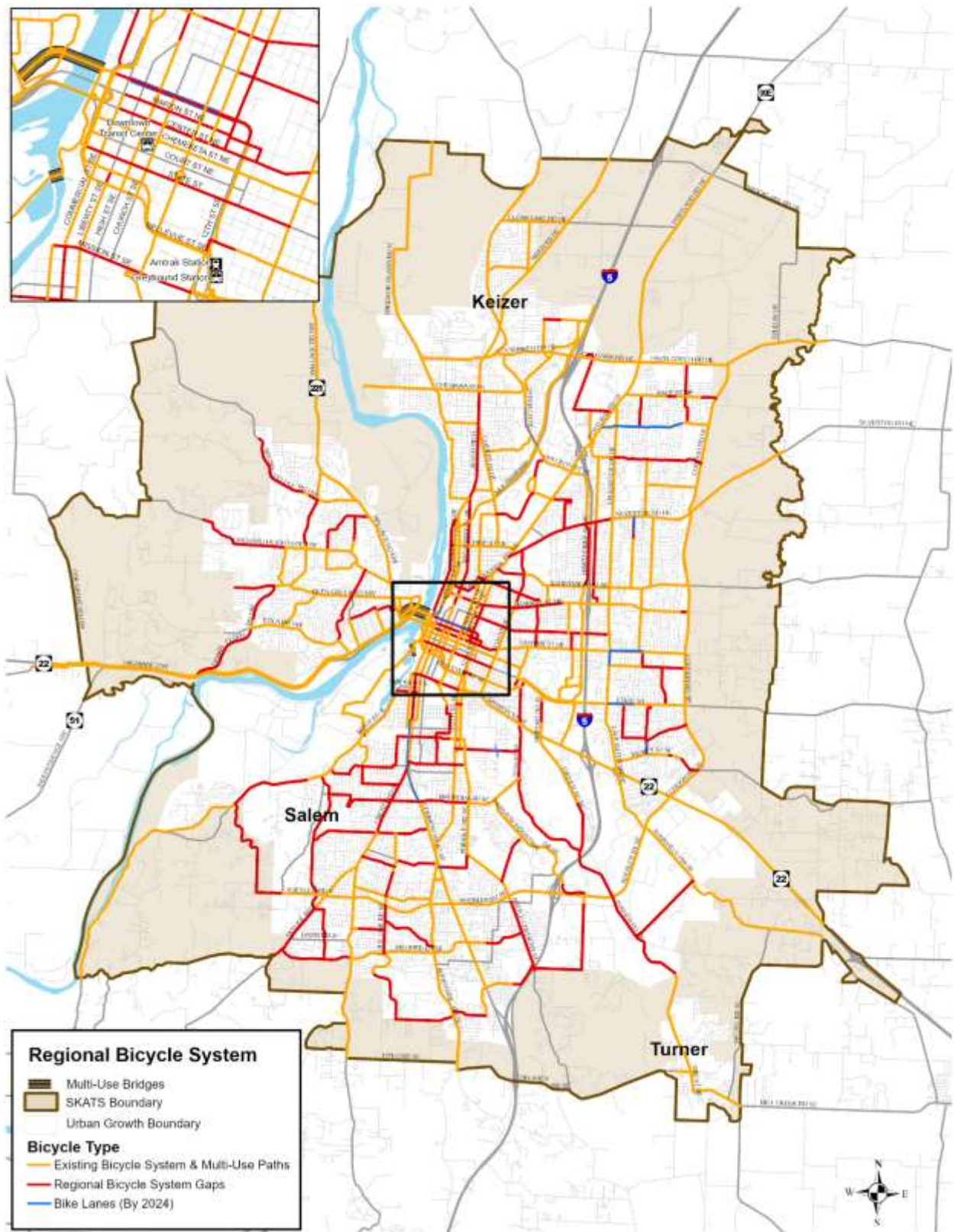
Over time, what has been thought as adequate facilities for bicycling has changed. Current best practice is for separated bike lanes, with a buffer between the bike lane and the rest of traffic. On High and Church Street in downtown Salem, the buffer is denoted only with paint and a few plastic wands at intersections. Other designs use more substantial, and safer, materials for the buffer, such as a concrete curb. These designs are likely to encourage more people to bicycle as they will feel safer.

During the summer of 2010, Salem designated its first 'bicycle boulevard' on Chemeketa Street from 24th Street to Commercial Street. Additional bicycle boulevards, currently referred to as "Family friendly bikeways," are in either the design or implementation stage.

Supportive infrastructure for bicyclists, such as racks and lockers, has been required by

zoning code in Salem and Keizer for some time. Cherriots and the other transit agencies serving Salem-Keizer have equipped their buses with racks that carry at least two bicycles in addition to providing bicycle parking at transit centers.

A bikeshare program (Ride Salem) was in operation in downtown Salem and west Salem until COVID-19 resulted in suspended operations. The firm subsequently shut down in 2022.



Map 4-6: Regional Bicycle System

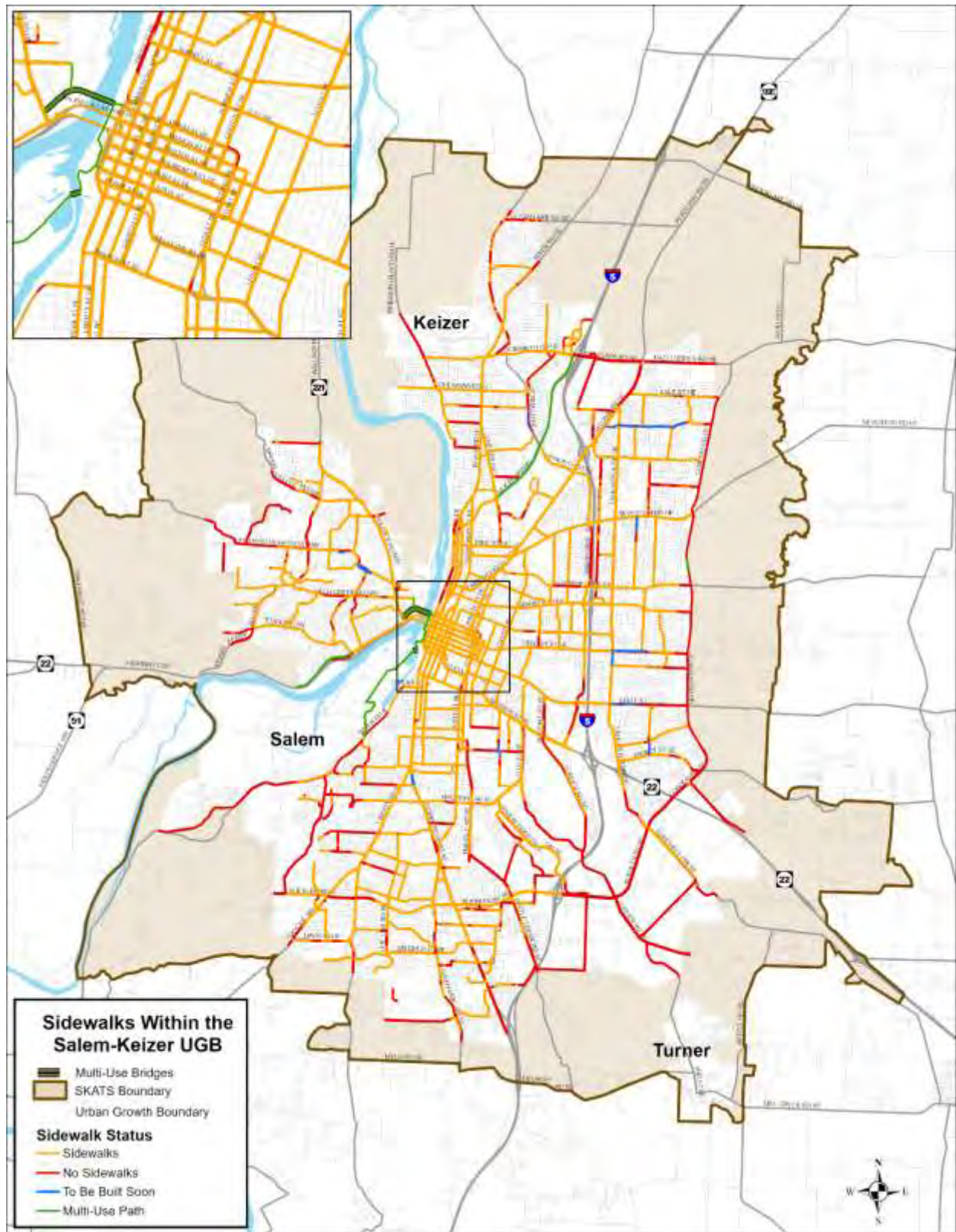
Pedestrian

According to data from the U.S. Census Bureau, six percent of households within SKATS do not have a vehicle¹⁶. An incomplete sidewalk system impacts their ability to conduct their daily business, whether walking to the store, a job, or to access transit. And a complete sidewalk system, with properly constructed ramps compliant with the ADA requirements, allows everyone an opportunity to safely walk out of the flow of traffic.

Initially the 1996 SKATS Regional Transportation Systems Plan defined the Regional Pedestrian System along the roads in the areas with high pedestrian use, such as downtown Salem, the Capitol Mall area, Lancaster Mall (now Willamette Town Center), and around Chemeketa Community College. This system has been updated over time to include the major streets. Other areas are the existing and future transit centers in Keizer and West and South Salem. Design standards for each of the jurisdictions includes sidewalks on all functional classifications of roads.¹⁷ There is approximately 327 miles of sidewalks along roads classified as collector and above within the Salem-Keizer Urban Growth Boundary. While there have been additional sidewalks built in the preceding years, as discussed in **Chapter 5**, there are approximately 143 miles of gaps in the sidewalk network that present challenges to people safely reaching their destinations. Shown in **Map 4-7** are the sidewalks that exist within Salem-Keizer as of 2020, and the projects to be constructed in the near-term that will add sidewalks or multi-use paths.

¹⁶ From the 2021 American Community Survey data, table B08201, five-year summary.

¹⁷ Except in circumstances where that is not possible.



Map 4-7: Sidewalks within Salem-Keizer UGB

Intra-Urban Public Transit

For transit to be considered as a viable option for daily travel, the system needs to offer frequent service (e.g., every 15 minutes or better) over many hours of the day and for (ideally) seven days a week. Reliability, in particular the on-time arrival of buses, is also a critical factor that influences whether a person will consider transit or not. The intra-urban public transit is the service offered within the Salem metropolitan area by the Salem Area Mass Transit District is marketed as *Cherriots*. Over the last ten years, there have been several revisions to the service offered in the Salem area often in response to either the reduction or increase in funding, and to community demand for service delivery modernization. Beginning in 2009, Cherriots has revised their service to increase frequency on the most heavily used routes while removing routes with very low ridership. It was hoped that this would provide a level of service that meets the needs for most of the people using it and would attract new riders.

This revised system is based on the “3C” model. Collector buses operating into the neighborhoods, come into Centers where passengers may transfer to Corridor buses to travel to another center or destination outside that area. Currently transit centers exist in downtown Salem, West Salem, and Keizer. A planned study had identified the location for a fourth center in south Salem, and negotiations with the property owner took place. However, due to being unsuccessful in reaching an agreement with the property owner, in late 2018 or early 2019, the Transit Board decided to reopen the locational analysis to locate an alternative location was in south Salem. Three locations have been identified and the Transit District is proceeding with final site selection and negotiations to be completed by 2023. Other major transit generators include Willamette Town Center, Chemeketa Community College, and the Capitol Mall area.

The Board of the Salem Area Mass Transit District approved the creation of a “Core Network,” defining segments of the Cherriots network where they are committed to providing stable service. This network will be prioritized for frequent weekday service and 30-minute weekend service. The creation was to show the community where resources will be allocated in the event of future funding reductions.

In 2019, Cherriots began implementation of the recommendations from the ‘*A Better Cherriots*’ study, increasing the number of service hours on weekdays and restarting Saturday service. The start of Sunday service was delayed by the COVID-19 pandemic until the Fall of 2021. Funding for these enhancements was made possible by H.B. 2017, which included a small employee payroll tax instituted state-wide. In 2022, with the cooperation of the Salem-Keizer School District, and the cities of Keizer and Salem, funding has been allocated for a pilot program to provide free bus passes to students under the age of 18.

While the introduction of expanded service should result in higher ridership, the COVID-19 pandemic disrupted the rollout, resulting in a pause in service in March and April of 2020, a reduction in frequency (and capacity for a few months as the number allowed on a bus was limited) after service resumed, and a decline in ridership as people either lost

their jobs, began working from home, or avoided enclosed areas (whether a bus or a store).

As shown in **Figure 4-3**, ridership in 2020 decreased substantially from 2019. Since mid-2020, ridership has slowly increased, but is still below the pre-pandemic levels. Shown in **Figure 4-4** is the ridership between 2019 and 2022, providing more detail on the drop and subsequent rebound of ridership. One bright spot is that the ridership on the weekends shows there is an untapped need for travel options on those days.

By the spring of 2023, Cherriots should finalize their e-fare implementation that will allow people to use cash, pre-paid tickets, or their phone/tap-enabled credit card to pay for a ride. Fare capping, which limits the amount a person will spend over a period of time (usually a day or a month), will ensure that people pay no more than what a daily or monthly pass would cost. Also coming in the next two or three years is real-time stop arrival information via an app, the Cherriots webpage, and a phone messaging service.

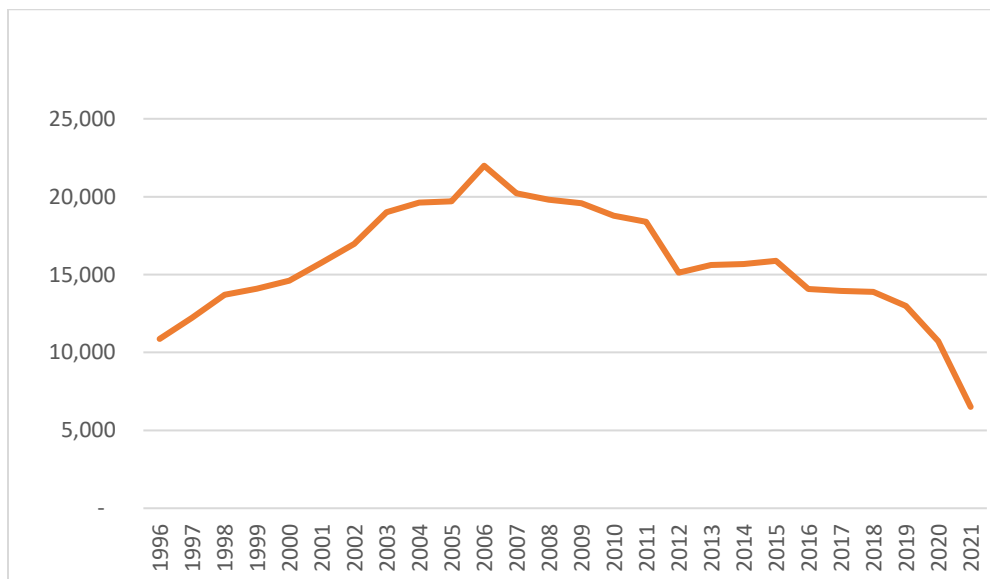


Figure 4-3: Average Weekday Unlinked Trips (Source: SAMTD Entry in the National Transit Database, FTA, 2021)

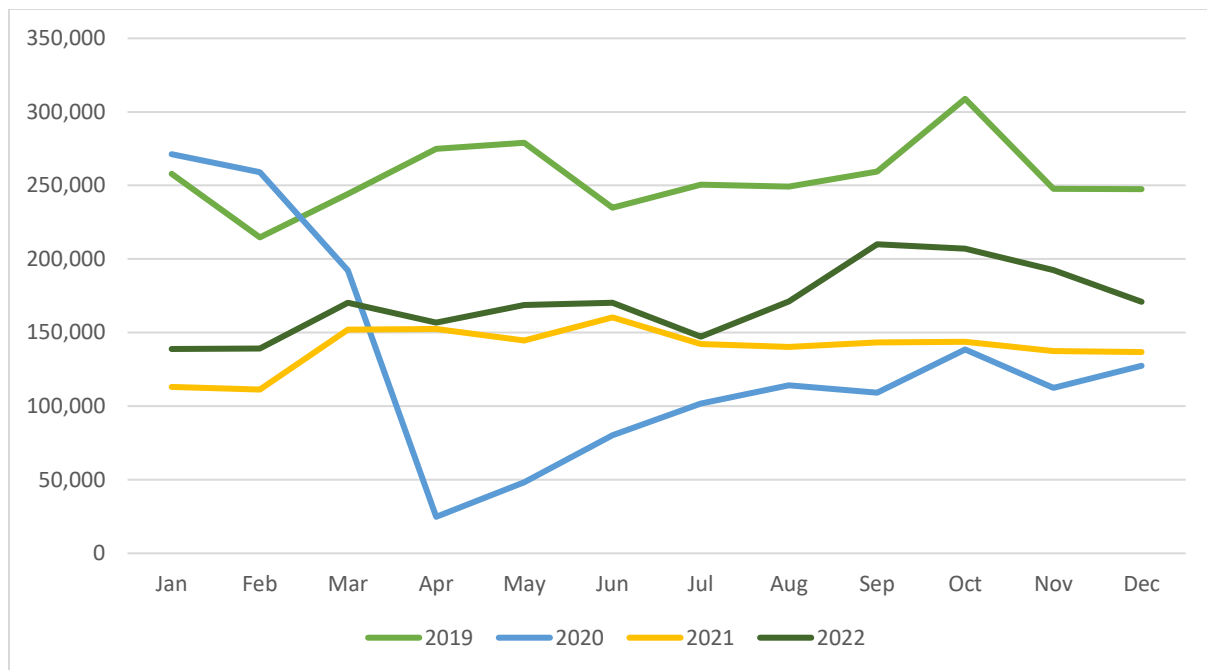
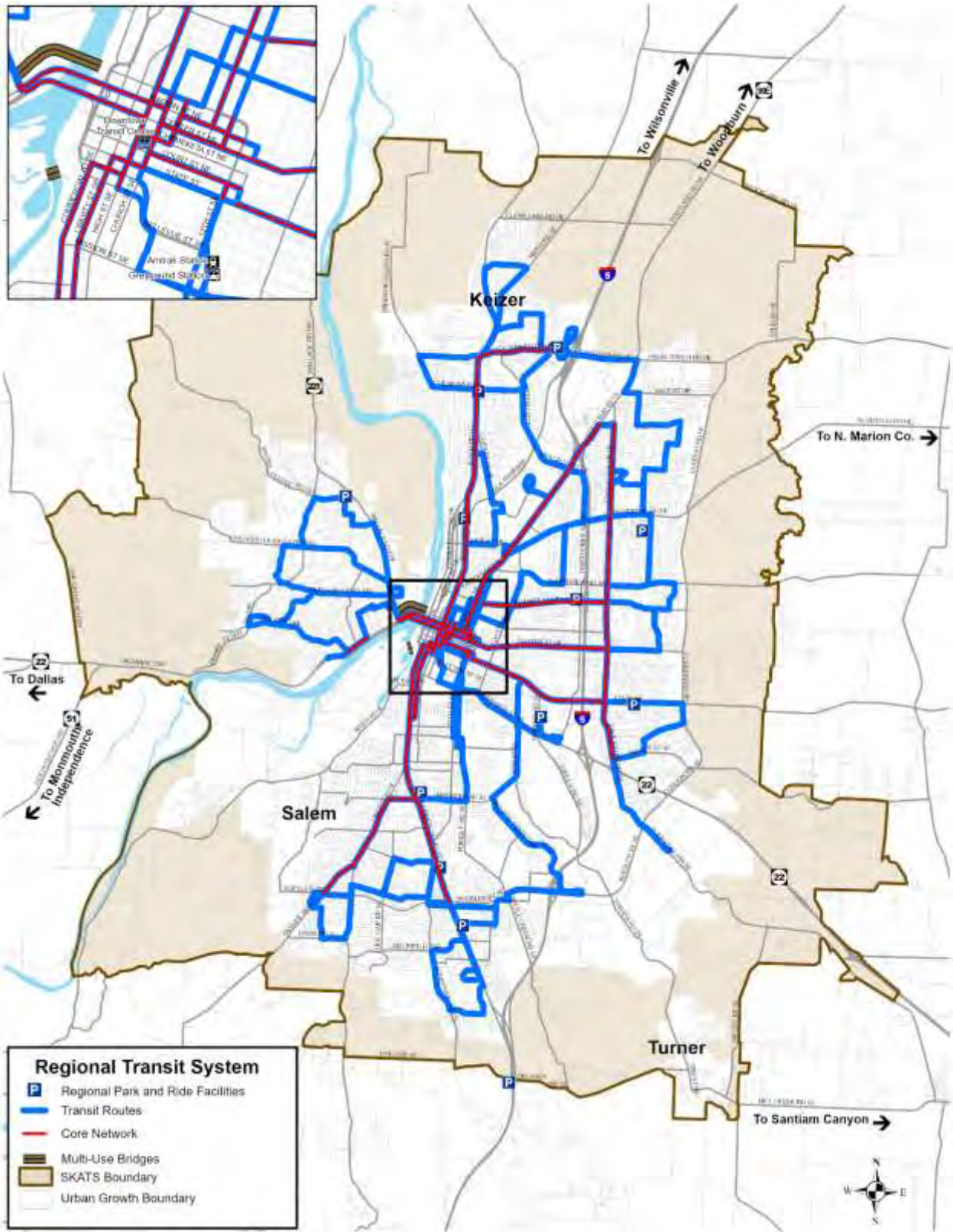


Figure 4-4: Weekday Transit Ridership by Month, 2019-2022 (SAMTD)



Map 4-8: Public Transit in Salem-Keizer as of 2022

The Salem Area Mass Transit District also provides “Cherriots LIFT,” (previously known as CherryLift) which is complementary paratransit required by the Americans with Disabilities Act. Cherriots LIFT is only available within the Salem-Keizer Urban Growth Boundary, with service now available seven days a week. This service provides door-to-door service for people who have a physical or cognitive disability which prevents them from accessing traditional fixed-route bus service. Users must go through an application process to qualify to use the service, and trips must be booked at least 24-hours in advance. The Transit District provides ‘travel training’ to any Cherriots customer, no matter which service they choose to ride, to get them comfortable with how to ride the buses. Travel training reduces costs when a rider is able to use the Cherriots Local system rather than LIFT as Cherriots LIFT is five times more expensive to operate than regular Cherriots Local service. Travel training also increases independence and mobility for passengers. All buses purchased since 2002 are the low-floor variety, which makes access and egress easier and quicker.

In 2009, Cherriots adopted a locally developed Coordinated Public Transit – Human Services Transportation Plan. It contains recommendations for enhancing mobility throughout Marion and Polk counties for all users. The latest update to the document occurred in 2016 and Cherriots staff hope to update it again in fiscal year 2023. A long-range plan for Cherriots Regional, formerly called CARTS (Chemeketa Area Regional Transportation System), was adopted by the SAMTD board in 2013, and a short-range service plan called the “CARTS Redesign” was completed in 2017. This plan for Cherriots Regional included a shift for most bus routes from demand-responsive transportation to fixed-route express service. One demand-responsive bus route remained, and it was redesigned to a deviated-fixed-route service in 2020, which serves three communities in Polk County. SAMTD has adopted (2022) a 20-year Long Range Transit Plan that covers both Cherriots Local and Cherriots Regional services. Recommendations from that planning document are discussed in Chapter 7 as appropriate (***See Chapter 7 – Proposed System***).

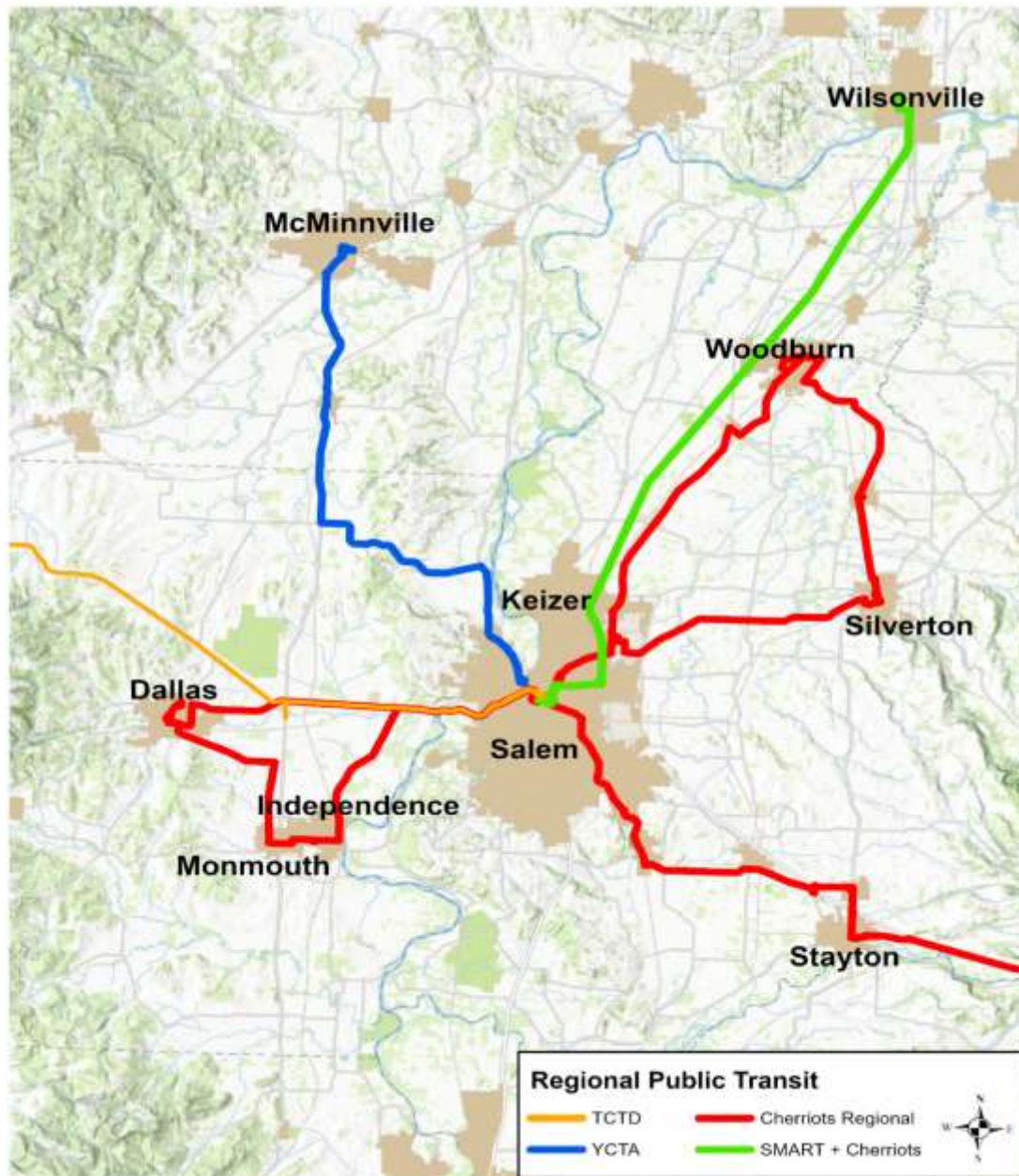
Marion-Polk MedLink is a Medicaid brokerage that was developed and implemented during the summer of 2003 for the residents of Marion and Polk counties. It provides transportation services for Medicaid-eligible clients for medically related transportation needs. Throughout the Salem-Keizer area, there are many small, client-oriented nonprofit organizations that provide transportation primarily for elderly and disabled individuals.

Inter-Urban Public Transit

In addition to the services offered by the Salem Area Mass Transit District, several other transit providers connect Salem with surrounding cities. Wilsonville’s SMART (South Metro Area Regional Transit) provides service in the throughout the day from downtown Salem to the Wilsonville Transit Center. Connections are available to TriMet’s WES (Westside Express Service) commuter rail service to Beaverton, which provides further

connections to other TriMet (the transit provider for the Portland Metropolitan area) bus and light rail services. This complements service that Cherriots offers along the same route for a total of sixteen trips per direction per day. In September 2022 Cherriots began a four-trips a day service from the Keizer Transit Center to Woodburn and on to the Wilsonville Transit Center.

Yamhill County Transit (YCT) connects McMinnville to the West Salem Transit Center with five round trips per day. Cherriots Regional, which is operated by the Salem Area Mass Transit District, has several routes that serve the smaller towns and cities in Marion and Polk Counties including Turner, which is part of the MPO, and connects to Cherriots service at the downtown Transit Center. Finally, a connection to Lincoln City via Spirit Mountain Casino from the Salem Amtrak Station and the Downtown Transit Center is offered by Tillamook County Transportation District (TCTD). The TCTD Route 60X offers three round trips per day from Salem to Lincoln City, seven days a week. Route 70X travels from Salem to the Spirit Mountain Casino and Grand Ronde on weekdays, with four round trips. **Map 4-9** shows these connections. Finally, SAMTD is applying for funding of a pilot project to provide bus service between Salem and Albany via Jefferson and Millersburg beginning in 2024.



Map 4-9: Regional Public Transit Connections (2022)

Long-distance bus service is offered by Flixbus¹⁸, Shuttle Oregon (nee Mt. Hood Teleporter), and Cascades POINT. Flixbus operates eight buses daily along I-5 connecting Salem to Portland and California. Shuttle Oregon runs one round-trip six days a week between Bend/Central Oregon and Portland that stop in Salem. Finally, five weekday round-trip Cascades POINT (nee Amtrak Thruway) buses provide service between Eugene, Salem, and Portland running on I-5 that complements the *Cascade* passenger rail service.¹⁹ All these services (except Shuttle Oregon) stop at the Salem Amtrak Station.

¹⁸ Flixbus purchased Greyhound in October 2021.

¹⁹ This is a reduction in service due to COVID. Prior to March 2020 there were six round-trip Cascade POINT buses.

Flixbus also stops at Chemeketa Street at Liberty Street.

Taxis, Car-share, and TNCs

Beyond the transit providers discussed above, the Salem-Keizer area has four taxi companies, an airport shuttle service, and numerous limousine services that provide the residents of the area with additional mobility options. Many of the latter two services are focused on facilitating travel to and from Portland International Airport (PDX). Since 2017, Transportation Network Companies (TNC), such as Lyft and Uber, have operated legally within Salem. Keizer also permits TNCs to operate within their city limits. Currently Turner, Polk County, and Marion County do not have any regulations on TNC operations in their jurisdictions.

Security and Resiliency²⁰

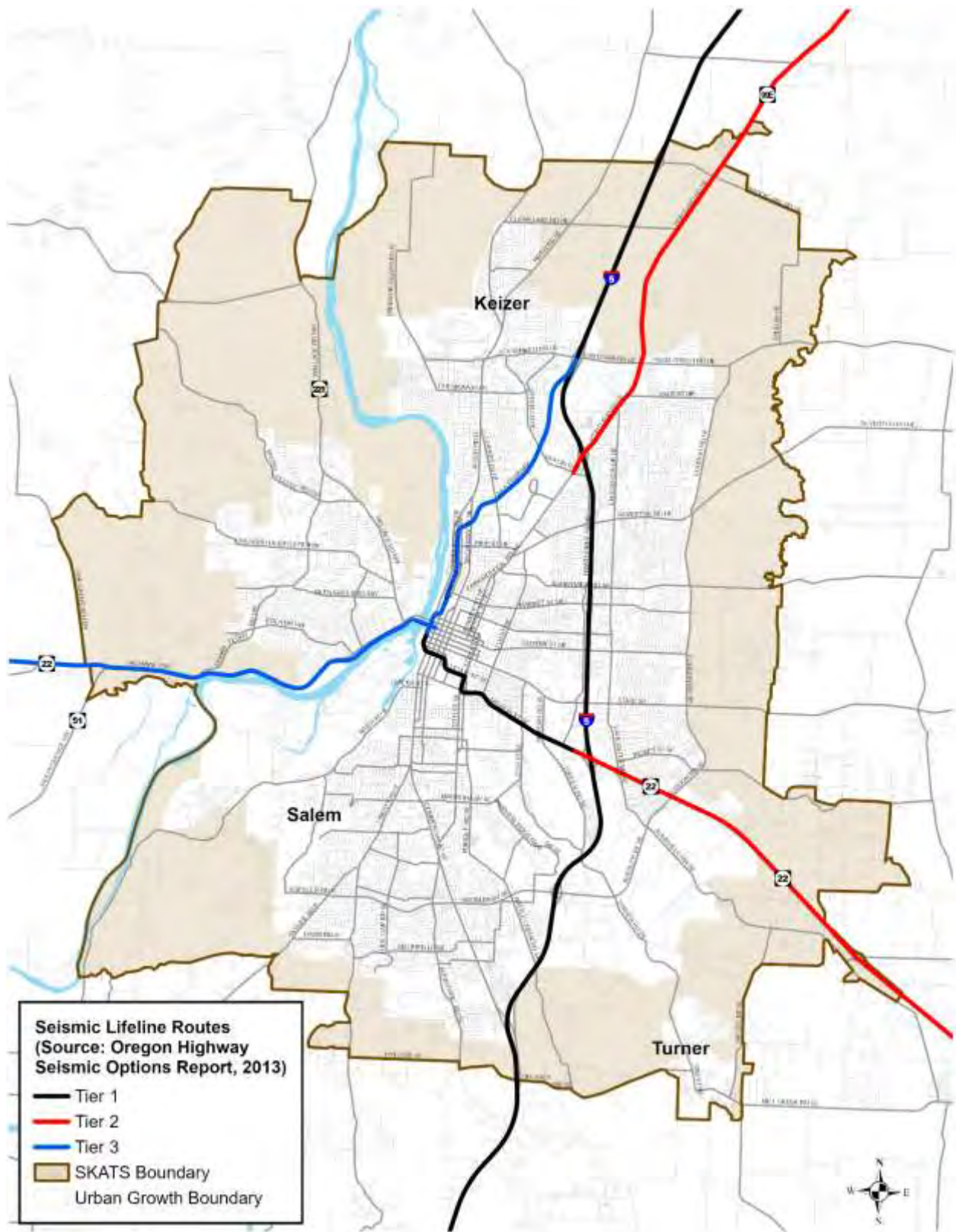
In the event of emergencies or natural disasters, it is important that as much of the transportation infrastructure remain functional to ensure that responders and assistance may reach the affected area. The State of Oregon has defined a number of “lifeline routes” to serve this function. (See, e.g., *Oregon Highways Seismic Options Report*.) The selection was based on the consideration of the likely outcomes from a major earthquake along the Cascadia Subduction Zone off the coast. These routes were assigned one of three tiers with Tier 1 representing those routes of highest importance from a statewide point-of-view to maintain connectivity between the areas. These routes are illustrated in **Map 4-10**. Marion and Center Street bridges are shown as Tier 3 routes. The Marion and Center Street bridges were not designed and constructed, and have not been modified, to survive a major Cascadia Subduction Zone event. In 2018, SKATS provided funding along with the city of Salem for an engineering study for a seismic retrofit of the Center Street bridge, so that it may remain operational after a major earthquake. The study led to construction that is scheduled to start in 2025 and is being paid for by ODOT.

In addition to seismic issues, other disruptions (traffic accidents, flooding, or other emergencies) to the operation of the Center Street or Marion Street bridges have substantial effects to traffic and the economy in the Salem-Keizer area and the mid-Willamette region. The existing two bridges are the only Willamette River crossings within the Salem-Keizer metropolitan area open for vehicular traffic. The next closest bridges are at Independence (approximately 11.5 miles southwest) and Newberg (approximately 23 miles north), with the result that traffic from a large area essentially has only one point to cross the Willamette River. When traffic incidents or other issues require closure of one or both bridges, traffic for emergency vehicles, passenger vehicles, public transportation, and freight is substantially disrupted due to the lack of alternate routes. It is very difficult to convert either of the current one-way bridges into two-way operation because of ramps and street grids on either side of the river. Lastly, in addition to its importance to the Salem-Keizer area, OR22 traffic across the two bridges includes

²⁰ For more on resiliency of the regional system, see Appendix R.

pivotal truck freight between I-5 on the east and the Oregon Coast on the west and provides access to recreational areas including the Oregon Coast, two of the state's major gaming casinos, and a growing number of wineries in Polk and Yamhill Counties.

Other considerations for roadways in the region include flooding due to heavy rain or blocked storm drains. Extreme weather resulting in higher water levels in the waterways in the region increases the scouring of bridge supports. As recently as 2012, a number of roads in downtown Salem had to be closed due to flooding; and the Winter Street bridge over Shelton Ditch was damaged. A replacement for this bridge was constructed in 2016. The flooding in January 2012 resulted in a few other bridges requiring repair or replacement. Increases in the amount and intensity of winter storms that bring rain to the Willamette Valley and the Cascades could result in increased damage to the bridges and roads in the region.



Discussion of Existing System

Following this overview of the major components of the regional transportation system, the next sections will address the specifics as they exist today (2022) in five districts of the region. (**See Map 4-10.**) These districts have been defined for the use in this document and other planning work and do not represent any political or neighborhood boundaries. The maps provided for each district address existing *Bicycle, Transit, and Infrastructure* facilities. The first two show those facilities that support movement by bicycle or transit respectively, as well as some of the uses of the land that generate travel demand. The last one shows the location of the signals, roads, and bridges that provide the underlying base for supporting movement in the area.

Since 2015, a number of projects have been completed increasing the safety, efficiency, and options for the traveling public in the greater Salem area. **Table 4-5** lists a few of these. (**See the Current and Completed Projects in the Maps page of the MWVCOG website²¹.**)

Table 4-5: Major Projects Completed Since 2015

Project	Location	Description
Delaney Road	Turner	Add sidewalks and bike lanes on Delaney Road from 3 rd St. to 7 th St
Liberty Street Interconnects	Salem	Extend signal interconnection north along Liberty St from Market St to Cherry St
Madrona Avenue	Salem	Realign and signalize the Madrona Avenue/Aviation Loop intersection with 25 th Street. Rebuild Madrona Avenue to major arterial standards west of the railroad
Auburn Road	Unincorporated Marion County	Add bike lanes, curbs, and sidewalks from Lancaster Dr to Baldwin Av

²¹ <https://www.mwvcog.org>



Map 4-11: Five Districts of the SKATS

District 1: Downtown Salem

Downtown Salem, which is illustrated in **Maps 4-11** through **4-14**, is the central point where many of the regional corridors converge. Comprised of the oldest parts of the city, it is situated on the Willamette River and is bounded by the two rail lines that transect the region. Many of the regional corridors pass through downtown Salem. Most roads have sidewalks, and several have bike lanes. In addition, the Chemeketa Street bicycle boulevard terminates in downtown. The Union Street Railroad Bridge, which was converted to pedestrian and bicycle use in 2009, links downtown to West Salem. A project is in the works to enhance the bicycling facilities along Union Street from Commercial Street to 12th Street, tying in with the Winter-Maple Family Friendly Bikeway

(which runs north to Salem Parkway and Keizer). The Peter Courtney Bridge which links Riverfront Park with Minto-Brown Island Park was completed in 2017.

Cherriots, SMART, and Cherriots Regional provide transit service to the downtown transit center linking it to other parts of Salem-Keizer, Wilsonville, and the surrounding towns and cities in Marion and Polk Counties. FlixBus stops at Liberty Street at Chemeketa. Service to the Salem Railroad Station is provided by the *Coast Starlight* long-distance train (Seattle to Los Angeles) and *Cascades* corridor service between Eugene and Vancouver, B.C. Both are operated by Amtrak. Daily, there is one round-trip long-distance train, two round-trip *Cascades* trains, and five round-trip *Cascades POINT* (nee Amtrak Thruway) buses.

In downtown, there are 28 bike lockers in six locations. In addition, there are four publicly owned parking garages (“parkades”) with 2,553 parking spaces and three lots with an additional 387 spaces. There are also about 300 carpool and vanpool spaces. Parking is free between Front Street and Church Street and Trade Street to Marion Street in the main shopping area supported by the downtown merchants, and currently consists of 1,106 on-street parking spaces. For parking outside this area, there is a current hourly rate of \$1.50 for on-street locations east of Church Street and west of 12th Street, and for the parkades outside the downtown parking district. The Capitol Mall area has several surface parking lots mainly for use by State employees. The Chemeketa Parkade has been equipped with a system to inform drivers of the number of free parking spaces (**Figure 4-2**). As part of the revisions to the Transportation Planning Rule (TPR), changes to the off-street parking requirements will likely be implemented before the next update to this Plan.

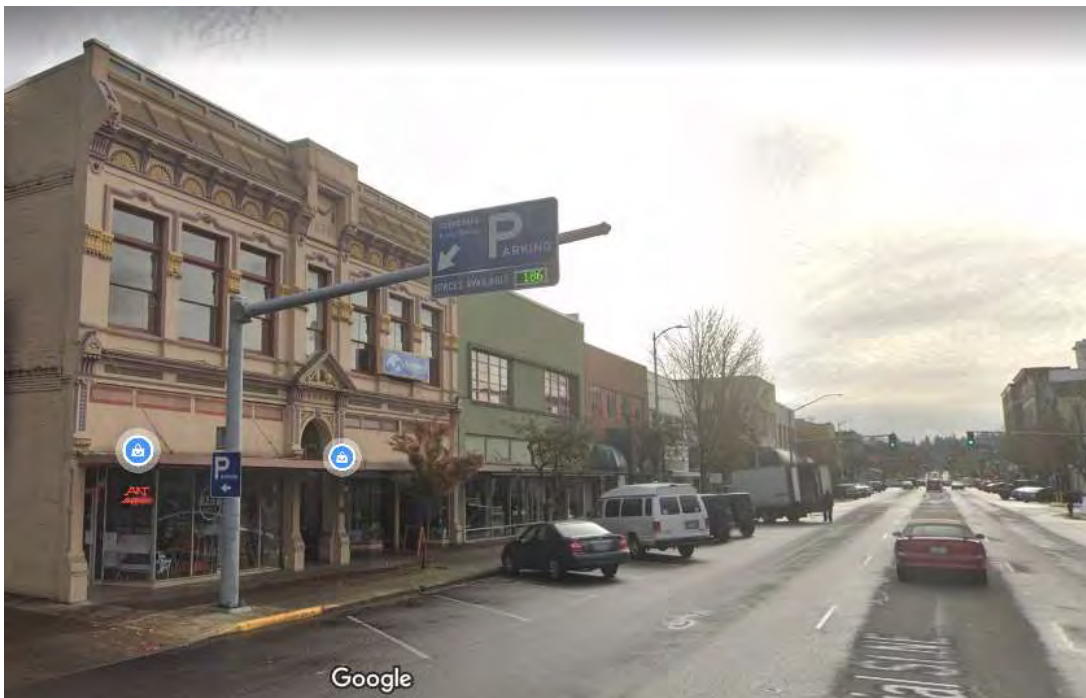


Figure 4-5: Chemeketa Parkade Parking Space Counter Sign (Google, 2020)

Not including the Willamette River Bridges, there are nine bridges along the regional corridors in the downtown area. These cross smaller tributaries of the Willamette River such as Mill Creek or Pringle Creek. In the last fifteen years, a number of these have had work done to repair or replace the bridge deck or scouring among the piers in the water. The latest is the bridge over Shelton Ditch on Winter Street, which was damaged during the flooding that occurred in January 2012.

In 2010, the city of Salem, ODOT Rail, and the Union Pacific Railroad began converting all the intersections along the UP's main line along the east side of downtown Salem to improve safety and be eligible for "quiet zone" designation – this will reduce the use of train horns when operating on that stretch. The quiet zone extends from Mill Street SE to Silverton Road NE. The quiet zone has been extended to three crossings of the Portland & Western Railroad.

Between 2016 and 2020 (the latest year data is available), there were 2,076 vehicle-vehicle crashes, vehicle-pedestrian crashes, and 36 vehicle-bicycle crashes in the downtown Salem area. There were two crash-related fatalities in this time period. The trend over the last five years has been for an increase in crashes with a slight decrease in vehicle-bicycle crashes. The four major streets in the area, (Marion, Center, Commercial, and Liberty) carry the highest volume of traffic in this district and had the highest number of crashes

Traffic congestion occurs in the a.m. and p.m. peaks along the roads leading to and from the Willamette River Bridges. Back-ups can extend on Commercial Street NE from Marion Street past Market Street. Broadway experiences much less frequent backups in the p.m. peak, often associated with a Portland & Western train. Traffic in 2020 and 2021 was reduced from the levels in 2019 due to the COVID-19 pandemic. While the amount of traffic has been trending upwards in 2021 and 2022 (from the 2020 lows), it remains to be seen how this changes as the State of Oregon reopens offices in the downtown/Capital Mall area.

A signal was installed at the intersection of Union Street and Commercial Street in 2017 along with modifications made to facilitate bicycle movement from the Union Street Bridge into downtown.

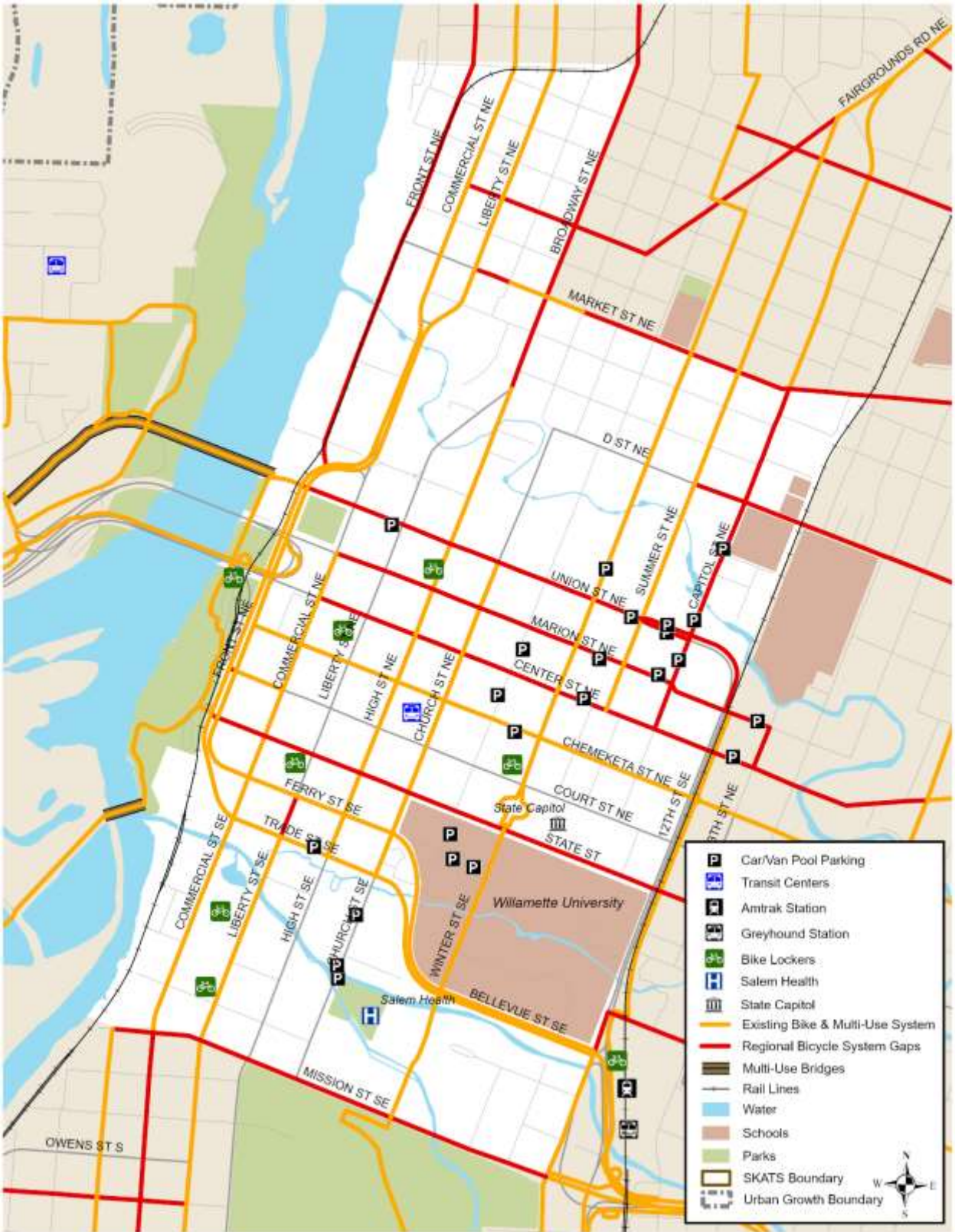
Flooding has occurred in the past in the areas near Mill and Pringle Creeks. In addition, past storms have resulted in scouring of bridge supports, requiring maintenance and sometimes replacement. Many of the locally owned bridges over Mill and Pringle Creeks are listed as vulnerable to seismic events.

The downtown/central business district of Salem is home to several major employers including the Truitt Brothers, State of Oregon, Salem Hospital, city of Salem, Marion County, Willamette University, and SAIF. In addition, there are numerous retail and service establishments catering to this group as well as people who travel to downtown for shopping or entertainment. Recent redevelopment has occurred along Broadway

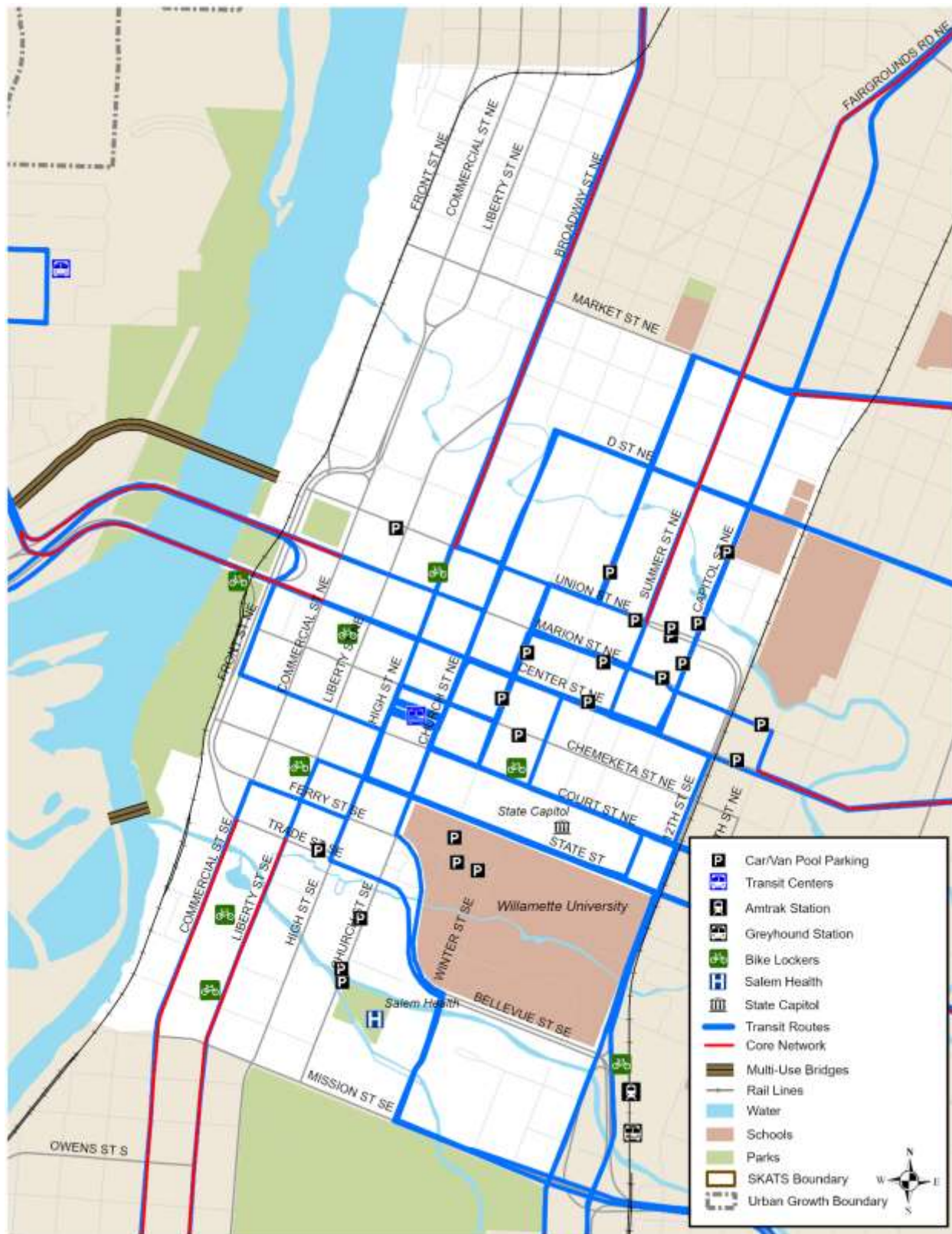
north of downtown. The Boise Cascade site in the southwest corner of downtown is being redeveloped to provide jobs and housing. In addition, the area bounded by Commercial Street, Division Street, and Mill Creek became the new home for the Salem Police Department in fall of 2020.

Table 4-6: Inflow/Outflow Counts of All Jobs in Salem CBD for All Workers in 2019 (U.S. Census Bureau)

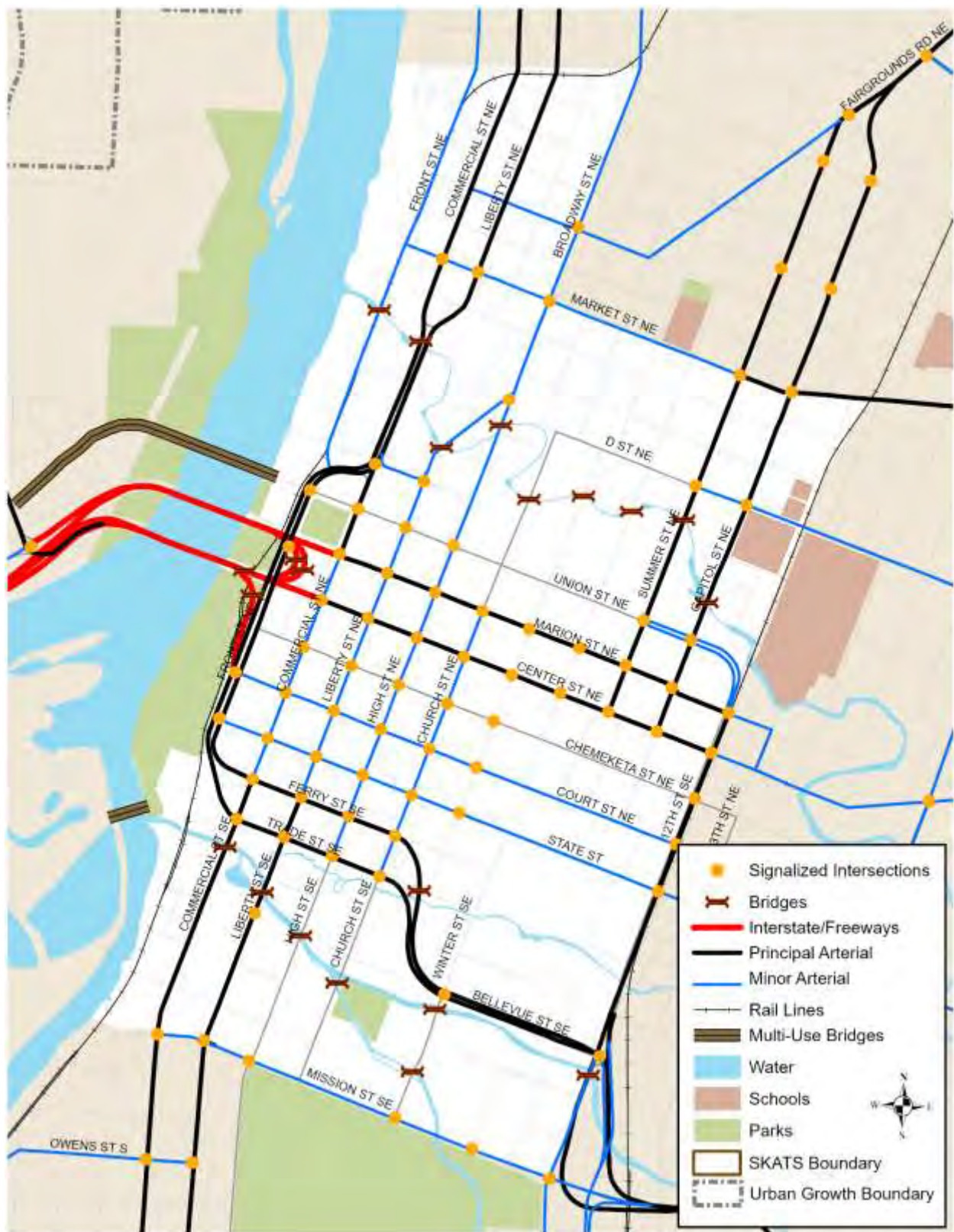
Worker Totals and Flows	Count	Percent
Employed in the Selection Area	33,382	100.0
Employed in the Selection Area but Living Outside	32,963	98.7
Employed and Living in the Selection Area	419	1.3
Living in the Selection Area	1,953	100.0
Living in the Selection Area but Employed Outside	1,534	78.5
Living and Employed in the Selection Area	419	21.5



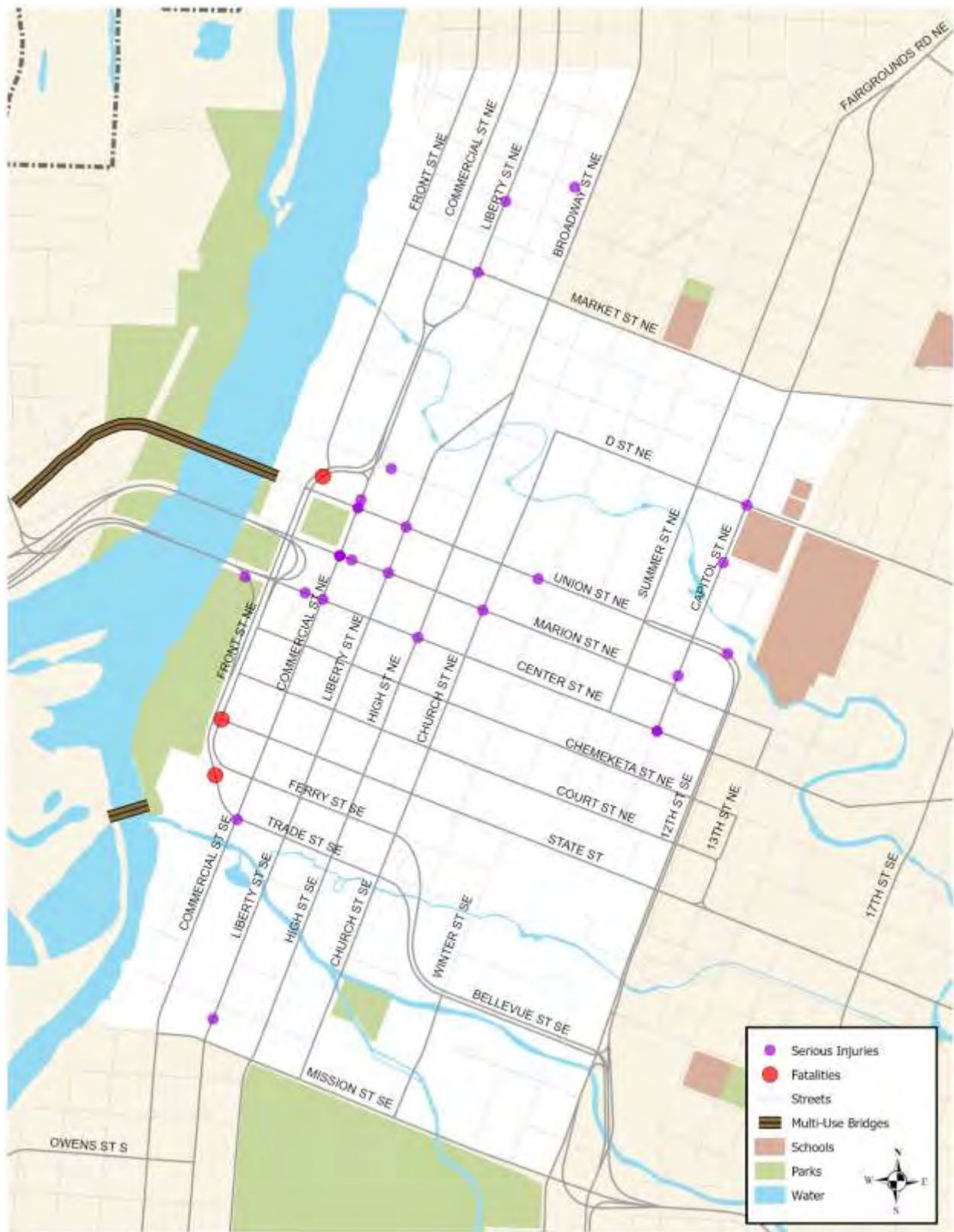
Map 4-12: Downtown Salem Bicycle Facilities



Map 4-13: Downtown Salem Transit Network



Map 4-14: Downtown Salem Infrastructure



Map 4-15: Fatalities and Serious Injuries from Crashes in Downtown Salem, 2016-2020 (Source: ODOT)

District 2: West Salem

Wallace Road acts as the main thoroughfare for west Salem linking the Willamette River Bridges to the roads that access most of the housing in the area. The Rosemont interchange on Highway 22W also allows access to the residential areas and the Edgewater Street commercial district. The area's population of just over 27,888 (2017) works predominately on the eastern side of the Willamette River, whether that is in Salem-Keizer or outside the metropolitan area. As such, the volumes on the Willamette River Bridges are quite high. In 2019, the average daily volume was 95,976, up from 88,808 in 2006. There was a decrease with COVID-19 related stay-at-home orders, but traffic has rebounded in 2021 and 2022. (*See also Figure 5-6 in Chapter 5*) Highway 22 provides for the major east-west movement between the coast, the valley, and central Oregon with around five to six percent of the traffic being trucks carrying goods.

Currently the area is served by four bus routes – three circulating the neighborhood, and one that provides service to downtown from Capitol Manor via the West Salem Transit Center. The West Salem Transit Center provides connection between these routes as well as the Yamhill County Area Transit (YCAT) service to McMinnville that operates ten times a day (five each way). Transit operations in the area are hampered by the topography, settlement patterns (single family dwellings), and a road network that lacks sidewalks and does not provide multiple parallel routes.

Bicycle lanes are on many of the major roads; although, there are significant gaps. The terrain of West Salem results in roads with inclines that can be challenging to novice or occasional riders. An older, multi-use path runs along the northern edge of Highway 22W from Wallace Marine Park past the SKATS boundary west of Highway 51 and provides a connection to Rickreall and Dallas. The Union Street bicycle/pedestrian bridge connects from Wallace Road to downtown via Riverfront Park and provides an environment free from motorized vehicles. While sidewalks are present along segments of the regional roads in the area, they are usually not contiguous. In 2022, ODOT finished a project to upgrade the ramps along Wallace Road from Michigan City Lane to Edgewater Street to the current Americans with Disability (ADA) standards and install rapid rectangular flashing beacons at five crosswalks. Also included were pedestrian countdown signals, reflective back plates for signals, and repaving the road.

Until 2010, Highway 22W from the Willamette River Bridges to Highway 99W was designated by ODOT as a "Safety Corridor." The designation was removed after the number of crashes on that section declined. There were 1,219 total collisions including 11 fatalities between 2016 and 2020 (the latest data that is available) on the roads in this district. The top three crash locations in this time period were Wallace Road at Glen Creek Road, OR 22W at 52nd Avenue, and Wallace Road at Taggard Drive.

Employment in West Salem is concentrated in the southeastern section of the area located along Wallace Road and Edgewater Street. Typical employment is retail or service with some small-scale industrial uses west of Wallace Road and north of Edgewater Avenue. Employment elsewhere is limited with some schools but no large

employment centers. The majority of attached multi-dwelling housing is located along Wallace Road and in the ‘Edgewater’ district generally bounded by Rosemont Avenue, 8th Street, the remainder of the area is primarily single detached dwellings.

As shown in **Table 4-7**, over 93 percent of the people living within this area work in another part of Salem-Keizer or outside the area, and conversely, over 81 percent of those employed within West Salem live elsewhere. The existing orientation of the road network essentially funnels all traffic onto OR 22W or OR 221 (Wallace Road) and then across the Center and Marion Street bridges, resulting in capacity issues during periods of peak demand. Traffic across the bridges was increasing until 2020, when demand was reduced due to COVID-19 and the move to work-from-home for many employees. In 2021 and 2022 there has been an uptick in bridge traffic, but currently still less than in 2019. The Travel Time Index (TTI) between Wallace Road at Michigan City Lane and Marion Street at Summer Street for weekday AM and PM peak periods is shown in **Table 4-8**.²²

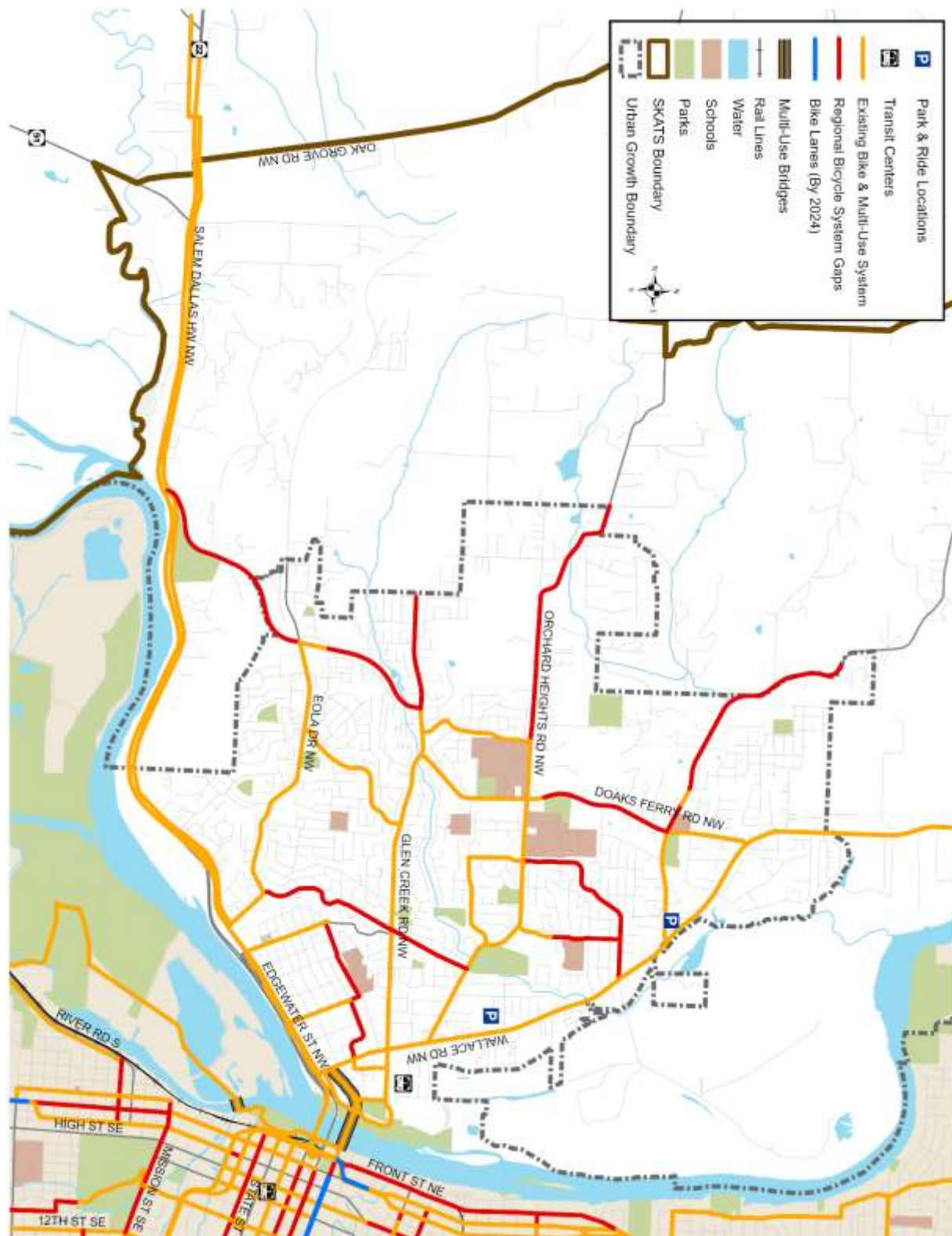
Table 4-7: Inflow/Outflow Counts of All Jobs in West Salem for All Workers in 2019 (U.S. Census Bureau)

Worker Totals and Flows	Count	Percent
Employed in the Selection Area	5,403	100.0
Employed in the Selection Area but Living Outside	4,411	81.6
Employed and Living in the Selection Area	992	18.4
Living in the Selection Area	14,328	100.0
Living in the Selection Area but Employed Outside	13,336	93.1
Living and Employed in the Selection Area	992	6.9

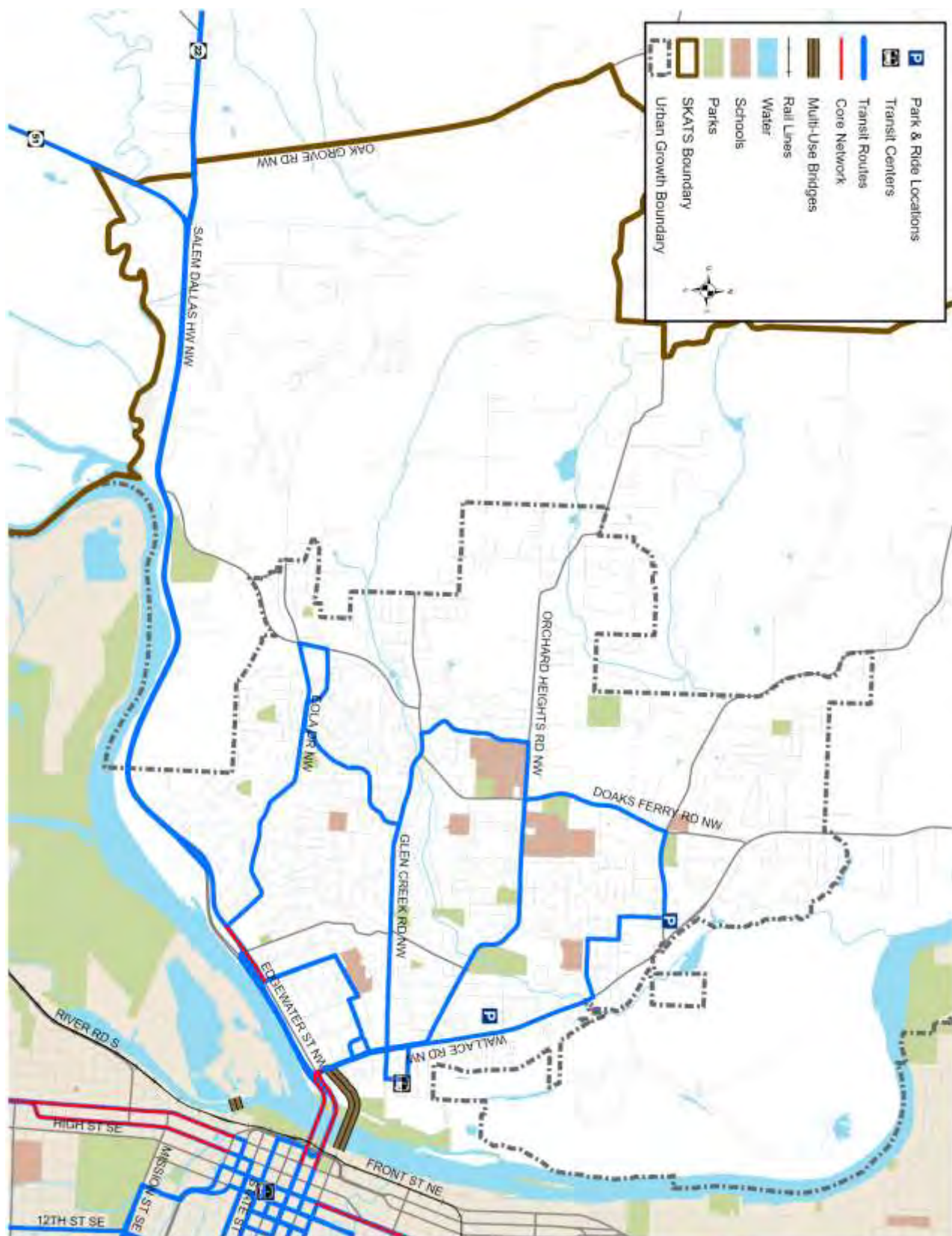
Table 4-8: Travel Time Index on the Wallace-Marion Corridor, Weekdays 2016-2022 (INRIX, RITIS)

Weekdays	2016	2017	2018	2019	2020	2021	2022
To Downtown AM (7a-8a)	1.27	1.3	1.24	1.22	1.06	0.99	0.95
To Downtown PM (5p-7p)	1.17	1.18	1.16	1.18	1.13	1.09	1.04
From Downtown AM (7a-8a)	1.01	0.98	0.98	0.97	0.99	1.01	0.97
From Downtown PM (5p-7p)	1.38	1.34	1.36	1.4	1.24	1.08	1.03

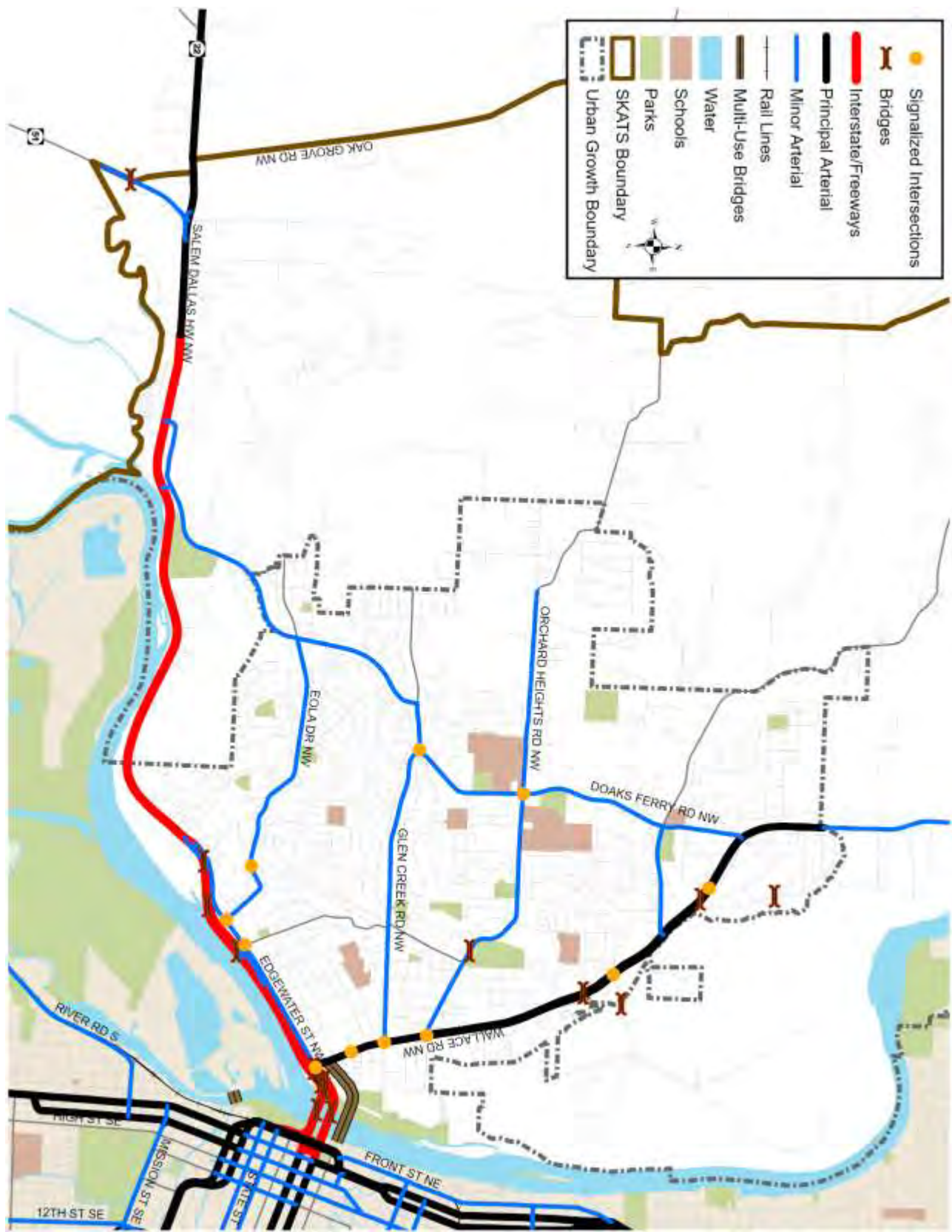
²² Travel Time Index (TTI) is the ratio of peak period travel time to free-flow speeds. If it takes 15 minutes to travel a corridor in free-flow, a TTI of 1.27 means it would take just over 19 minutes. For more information on the TTI and other operational results on this corridor see: <https://skats-mwvcog.hub.arcgis.com/pages/congestion-management>



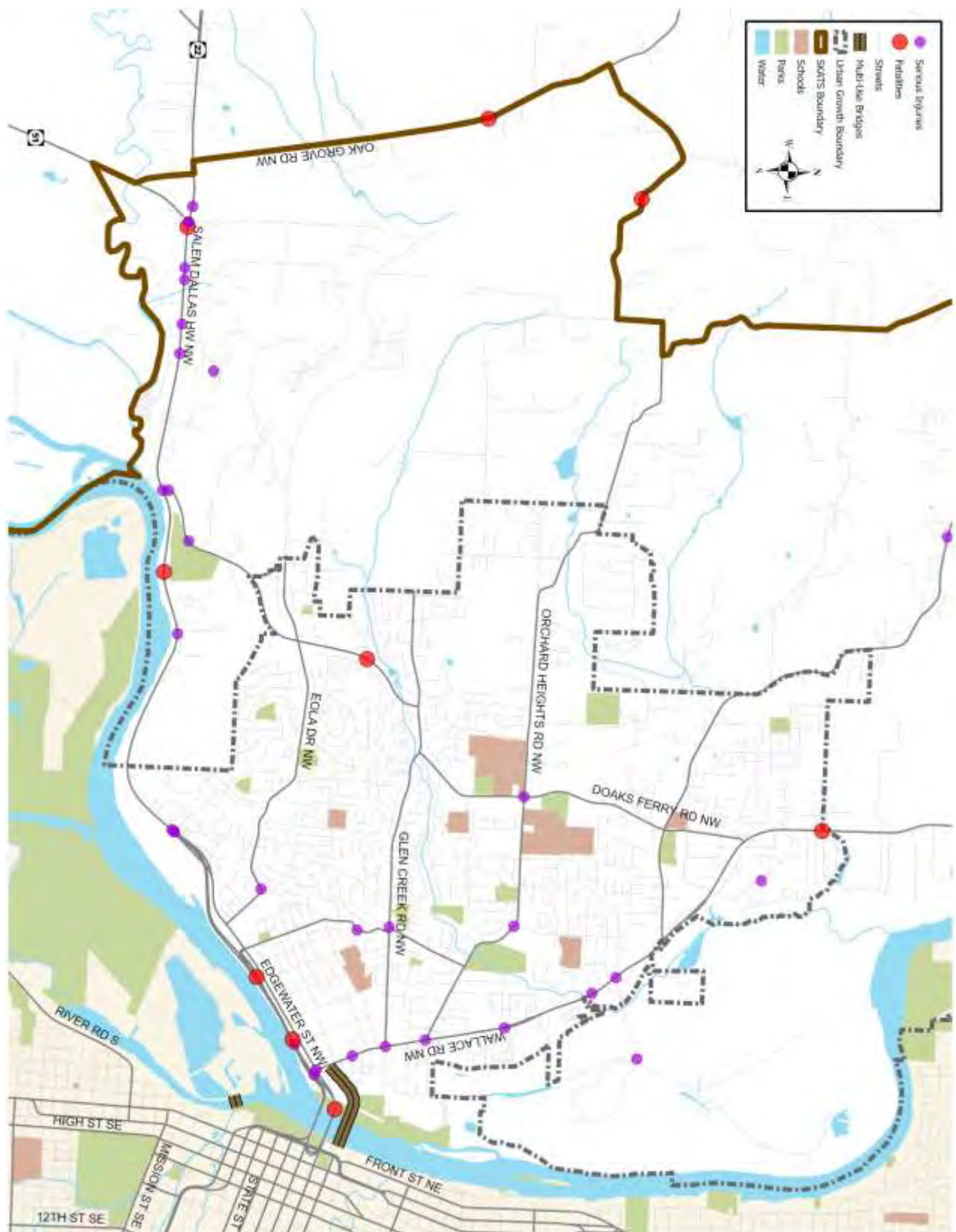
Map 4-16: West Salem Bicycle Facilities



Map 4-17: West Salem Transit Network



Map 4-18: West Salem Infrastructure



Map 4-19: Fatalities and Serious Injuries from Crashes in West Salem, 2016-2020 (Source: ODOT)

District 3: Keizer

River Road North and Cherry Avenue are the major roads connecting Keizer with Salem. Lockhaven Road and Chemawa Road provide for the east-west movement from River Road to an interchange at I-5. Salem Parkway runs northeast to southwest to provide additional capacity linking I-5 to central Salem along the southeastern boundary of Keizer.

Transit service is focused, for the most part, on the arterials. Opened in 2013, the Keizer Transit Center at Keizer Station provides a more customer friendly environment to wait and transfer to the buses. In addition, it includes a park-and-ride lot for commuters. Keizer is served by five routes including two that provide service to eastern Salem, one circulator, and two that go to downtown Salem.

Several roads on the regional system in this area have bike lanes and sidewalks, but there is also a significant gap in bicycle lanes along a crucial section – River Road between Chemawa Road and the southern limits of Keizer. The lack of continuous north-south streets results in bicyclists traveling out-of-direction to continue their journey. The Willamette Valley Scenic Bikeway uses Windsor Island Road, Shoreline Drive, Manbrin Drive, and Cherry Avenue as part of its path between Champoeg State Park (south of Wilsonville) and Eugene. Gaps in the sidewalk network, particularly on collector and local streets, have been identified by Keizer and will be constructed as funds are made available. Keizer also funded a study to determine where missing ADA compliant curb ramps were along the major streets. A study examined access to the Kroc Center in the Salem Industrial area from Keizer and how to safely move pedestrians and bicyclists across Salem Parkway to get there, as well as connecting to the larger bicycle system.

Along the eastern edge of the district is the Portland & Western Railroad. As of 2018, it operates up to six trains per day along the line. No rail sidings exist to service properties along the rail line in Keizer.

Within Keizer, there are no large generators of freight traffic, nor any large concentrations of employment in the area except for Keizer Station. Most of the land within Keizer is devoted to single detached dwellings with a limited industrial area mainly in the southeast quadrant. In 2019 Keizer adopted the River-Cherry Overlay District to create a mix of land uses in close proximity, that supports people walking and biking, as well as driving. There are many smaller businesses and office/retail centers located along River Road while Keizer Station has a number of big box retailers. Keizer Station is also home to the baseball stadium, which has events mainly in the summer months. The Keizer Little League Park generates heavy summer traffic.

Table 4-9: Inflow/Outflow Counts of All Jobs in Keizer for All Workers in 2019 (U.S. Census Bureau)

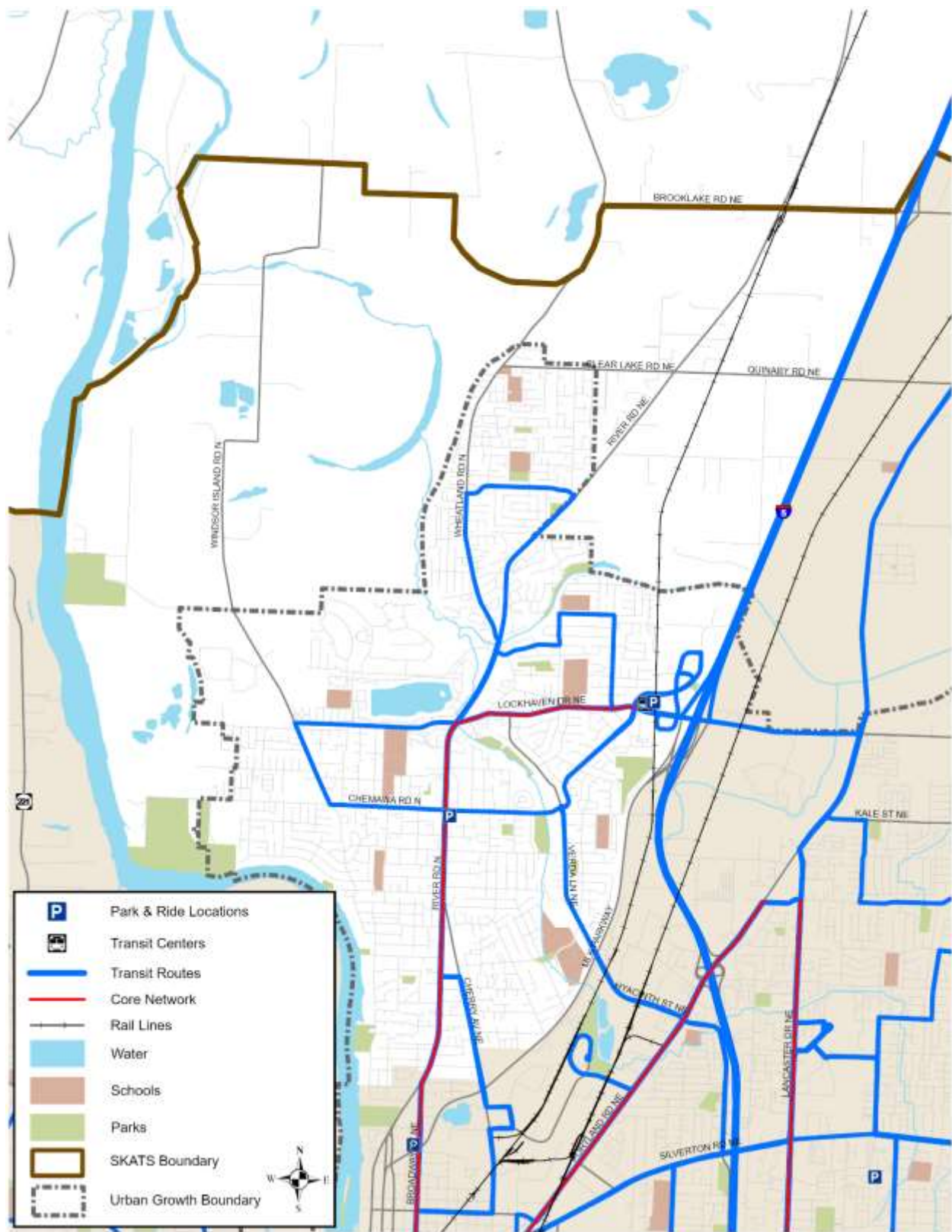
Worker Totals and Flows	Count	Percent
Employed in the Selection Area	8,641	100.0

Employed in the Selection Area but Living Outside	7,118	82.4
Employed and Living in the Selection Area	1,523	17.6
Living in the Selection Area	17,498	100.0
Living in the Selection Area but Employed Outside	15,975	91.3
Living and Employed in the Selection Area	1,523	8.7

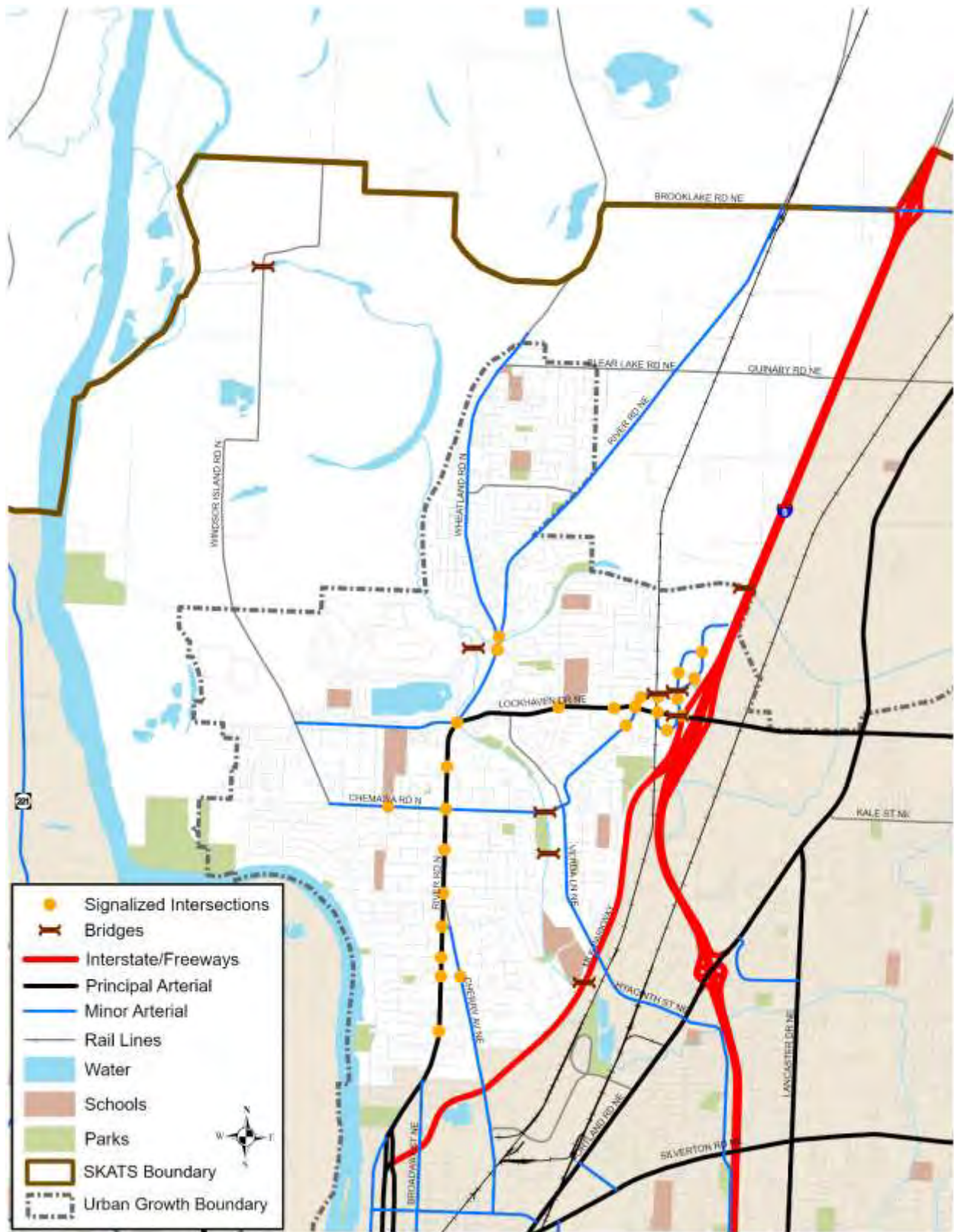
The majority of collisions in this area have been along River Road North from the southern city limits to Lockhaven Drive and along Lockhaven Drive/Chemawa Road between I-5 and River Road. From 2016 to 2020, there were 1,543 collisions, including 10 fatalities.



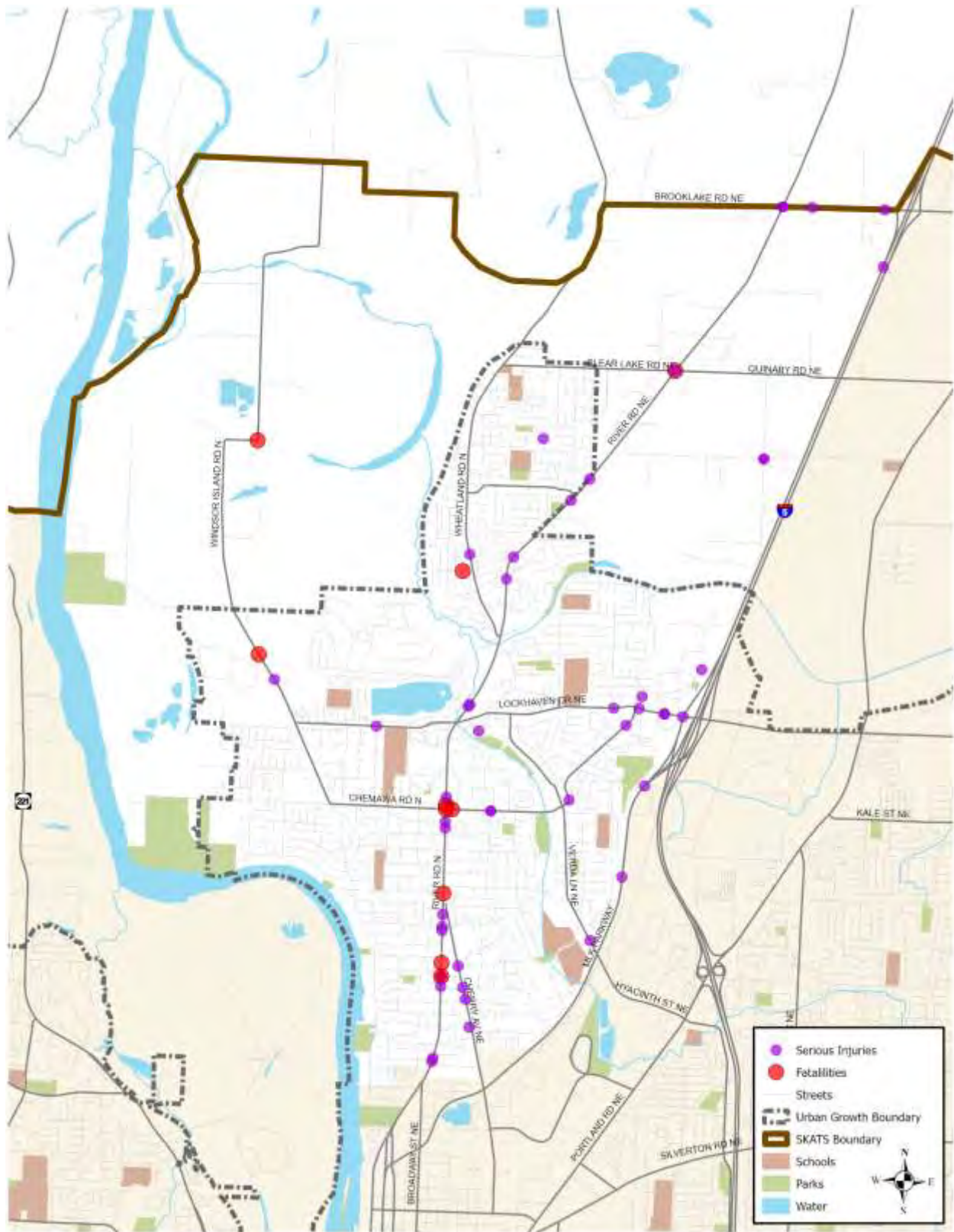
Map 4-20: Keizer Bicycle Facilities



Map 4-21: Keizer Transit Network



Map 4-22: Keizer Infrastructure



Map 4-23: Fatalities and Serious Injuries from Crashes in Keizer, 2016-2020 (Source: ODOT)

District 4: East Salem

There are several important north-south arterials in this district including the Commercial/Liberty couplet north of Division Street, the Summer/Capitol couplet, Hawthorne Avenue, Lancaster Drive, Cordon Road, and I-5. East-west movements are served by Silverton Road, Market Street, Center Street, State Street, and Mission Street/Highway 22E. Portland Road provides southwest to northeast movement. East-west movement is slightly curtailed by the presence of I-5, which limits connectivity for those biking or walking.

The Kuebler Boulevard/Cordon Road/Hazelgreen Road corridor is recognized as a regionally significant circumferential route around the Salem-Keizer Urban Area. The corridor is classified as a Parkway in the Salem Transportation System Plan and an Arterial in the Marion County Rural Transportation System Plan. Marion County has designated the portion of the corridor from State Highway 22E to the intersection with Hazelgreen Road as a Throughway, as provided in Oregon Revised Statute (ORS) 374.420, to facilitate the free flow of traffic around east Salem and Keizer. The corridor has two connections to I-5, at Kuebler Boulevard and Chemawa Road and functions as the emergency detour route when incidents close major regional facilities such as I-5, Portland Road, and Lancaster Drive. It provides a regional alternative to travel on I-5 and provides relief for commercial corridors such as Lancaster Drive.

This district currently is fairly well served by public transit. There are two major generators/attractors of transit trips: Chemeketa Community College and Willamette Town Center. In addition, there are two major park-n-ride locations: one on Airport Road and the other at Market Street and Hawthorne Avenue. The Airport Road facility was developed mainly for State workers to avoid parking in downtown Salem; but with the State not providing subsidized bus passes for employees, it remains to be seen how ridership will be impacted. The Market Street facility serves both downtown workers as well as those traveling north to Wilsonville or the Portland Area either by carpool or by the Cherriots/SMART 1X route. At Chemeketa Community College there is an existing space for several bus routes to meet. Future plans are for developing this, in cooperation with the College, into a facility on the scale of a transit center with the attendant amenities.

While there are roads with marked bicycle lanes and routes, there are also significant gaps in both the north-south and east-west movement. The region's first 'bicycle boulevard,' which extends along Chemeketa Street from 24th Street to 12th Street, provides a route that is slower paced and has less vehicular traffic than either State Street or Center Street to access downtown Salem. An additional bicycle boulevard has been designated following Winter Street north from downtown Salem to Cherry Avenue to provide a route to Keizer.

Both rail lines transect this district. A connection between them exists in the area near Salem Industrial Drive located between Salem Parkway, Portland Road, Cherry Avenue, and Hyacinth Street.

The main industrial sections are located within the Salem Industrial Area, which is bounded by Portland Road, Cherry Avenue, Salem Parkway, and extends north of Hyacinth across I-5 toward Indian School Road. This area has access to the two railroads, I-5 via Salem Parkway and Portland Road, and to the south via Salem Parkway. Additional industrial land is located off Hawthorne Avenue near State Street and in the Salem Business Campus located on Gaffin Road between Highway 22E and Cordon Road.

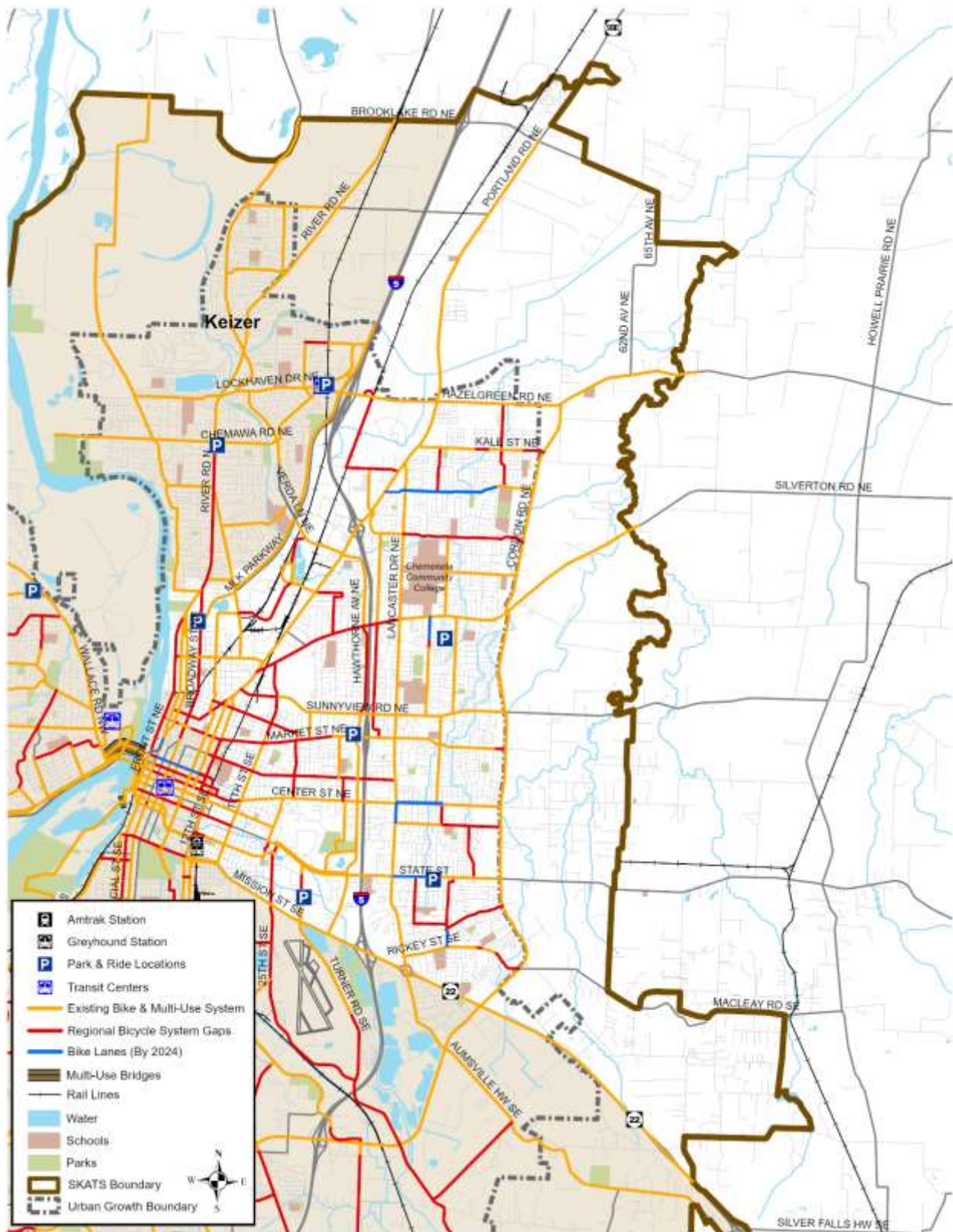
Major employment centers include the Willamette Town Center area, Chemeketa Community College, and the cluster of State offices along Airport Road. There is one correctional institution between State and Center Streets as well as the State Hospital. Lancaster Drive is home to a number of strip malls offering a variety of businesses between Mission Street/Highway 22E and Silverton Road. Lancaster Drive has a large number of curb cuts to allow access to the adjacent businesses. Most of these do not meet current standards and provide a walking environment that is unpleasant and unsafe. Marion County has been working to rebuild their portion of Lancaster Drive (due to the age and condition of the roadway) and is also consolidating curb cuts as feasible and ensuring that current standards are met. The majority of the remaining area is devoted to housing, predominately single detached dwellings.

Table 4-10: Inflow/Outflow Counts of All Jobs in East Salem for All Workers in 2019 (U.S. Census Bureau)

Worker Totals and Flows	Count	Percent
Employed in the Selection Area	45,996	100.0
Employed in the Selection Area but Living Outside	34,757	75.6
Employed and Living in the Selection Area	11,239	24.4
Living in the Selection Area	44,781	100.0
Living in the Selection Area but Employed Outside	33,542	74.9
Living and Employed in the Selection Area	11,239	25.1

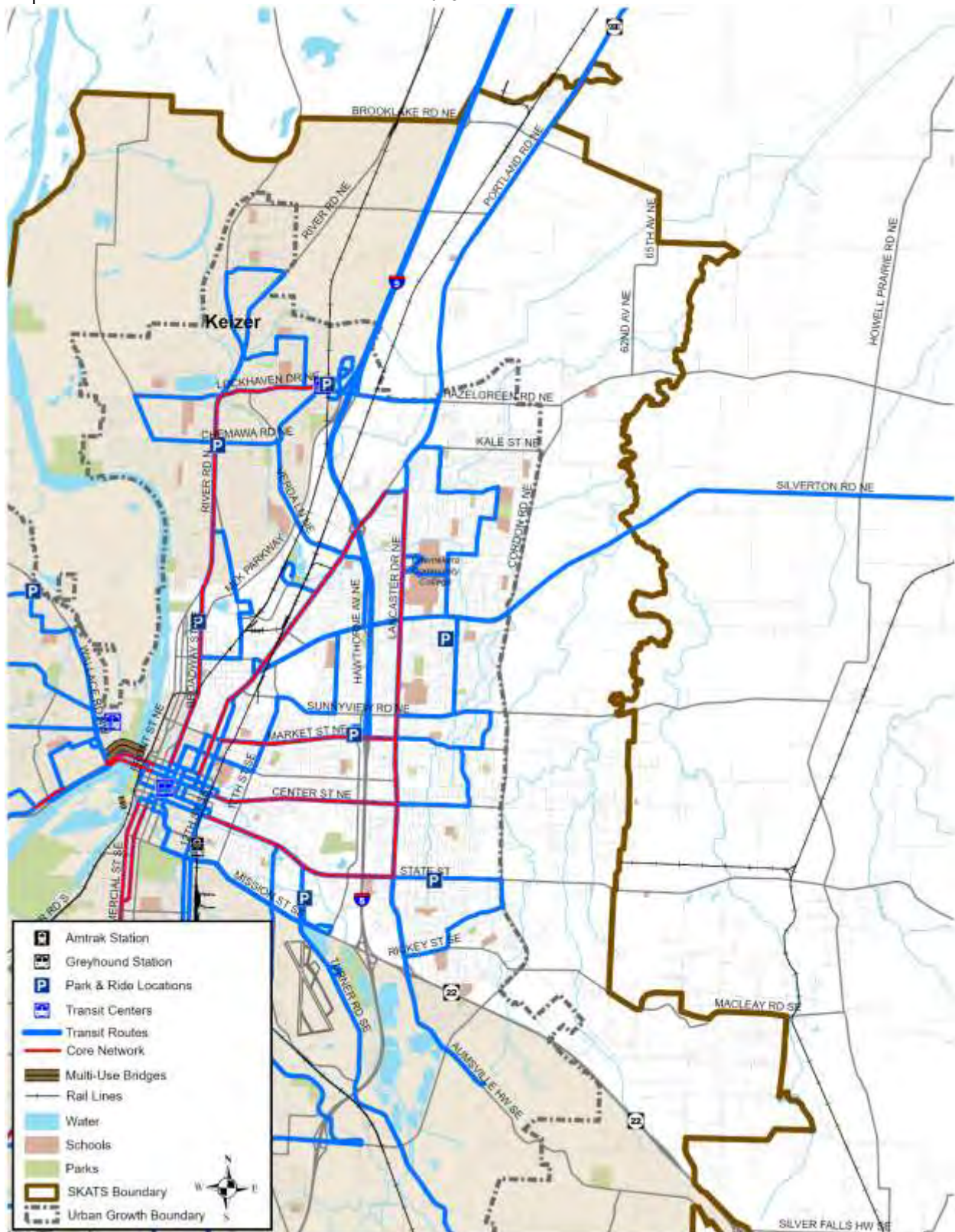
Flooding has occurred in the past in the areas near Mill and Pringle Creeks. In addition, past storms have resulted in scouring of bridge supports, requiring maintenance and sometimes replacement. Many of the locally owned bridges over Mill and Pringle Creeks are listed as vulnerable to seismic events.

This district has the most crashes in the metropolitan area with 8,372 occurring between 2016 and 2020, and 40 fatalities (double the next highest district total). The area has some of the intersections with the highest number of crashes in the region including Lancaster Drive at Sunnyview Road, Lancaster Drive at Market Street, and Lancaster Drive at Silverton Road. As shown in **Map 8-6**, these roads are within an identified Environmental Justice area.

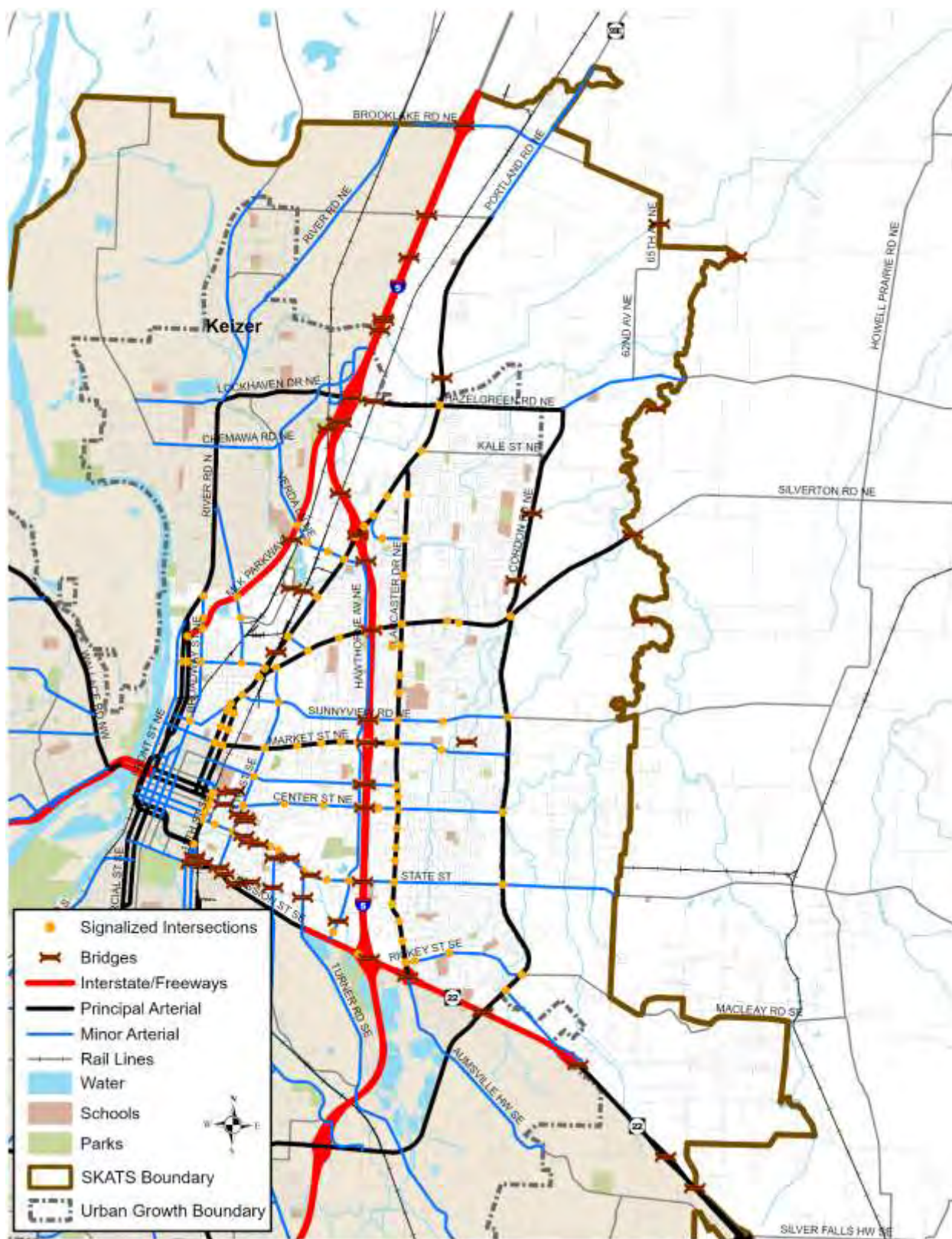


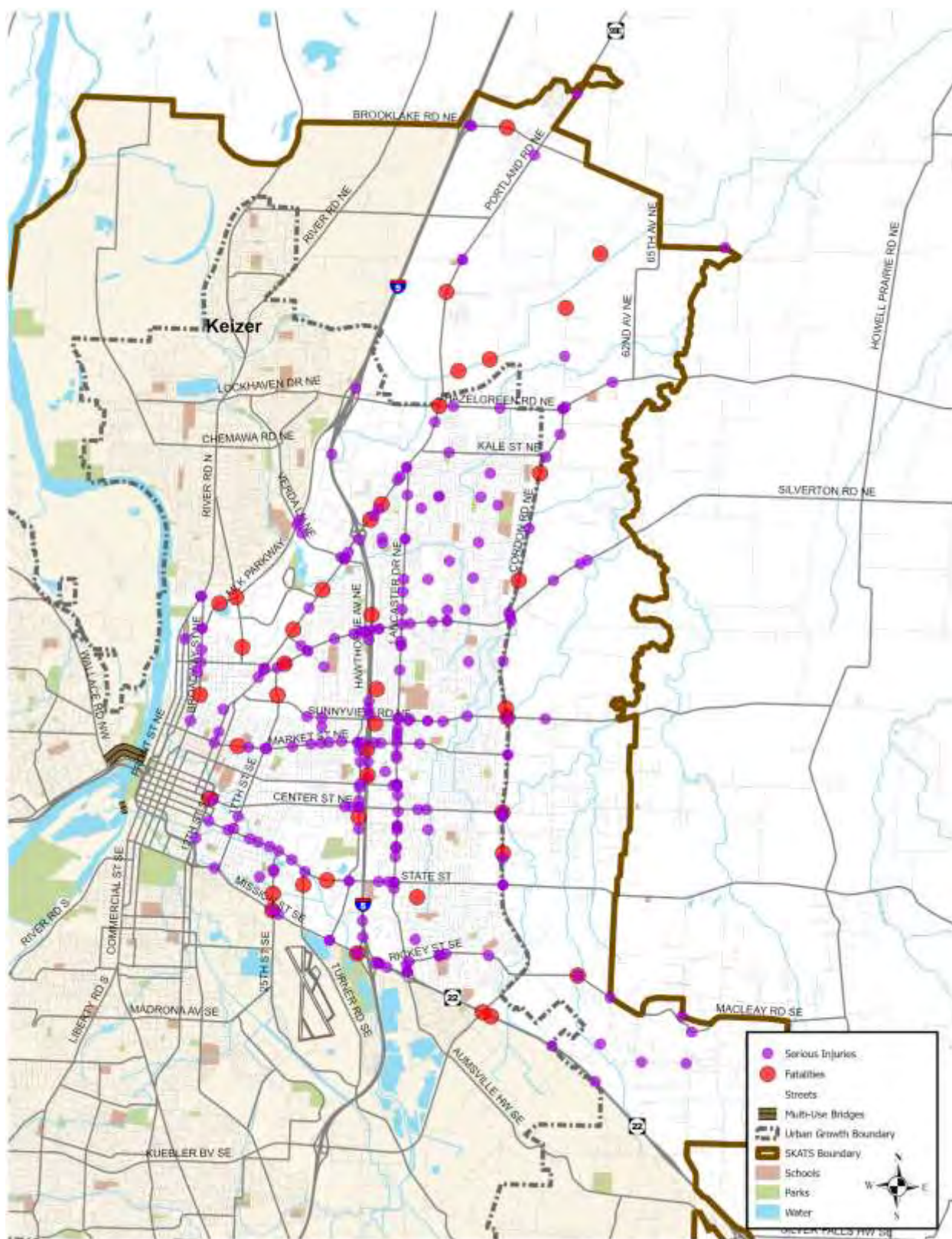
Map 4-24: East Salem Bicycle Facilities

Map shows the transit network in east Salem as of 2018. Shown in red is the "core network".



Map 4-25: East Salem Transit Network





District 5: South Salem and Turner

River Road South, Liberty Street, Commercial Street, 12th/13th Streets, and Turner Road provide for the main north-south movement with 25th Street, I-5, and Cordon Road/Kuebler Boulevard serving traffic further east. Highway 22E, Madrona Avenue, and Kuebler Boulevard are the main east-west routes with the city of Salem slowly building another east-west route as development occurs in the southern part of the city along the Mildred/Fabry alignment. I-5 provides a connection for travel either north into the remainder of the Salem/Keizer area or beyond toward the Portland area or to the south to Albany, Corvallis, or Eugene. The south Salem area is connected to I-5 with interchanges at the south end of Commercial Street with a partial interchange and at Kuebler Boulevard with a full interchange. The city of Turner is connected to Salem via Turner Road and to I-5 via Delaney Road.

The district has several industrial areas including Fairview Industrial Park and the Mill Creek Corporate Center (MCCC), which is planned to mix distribution with industrial uses as it builds out in the future. Fairview Industrial and the MCCC have limited access to I-5 and Highway 22E. In addition, Fairview is adjacent to the Union Pacific Railroad, but like the MCCC, has no rail access. Outside of the MCCC, there are no large concentrations of employment, just smaller establishments located along Commercial Street, Liberty Road, and Mission Street.

Table 4-11: Inflow/Outflow Counts of All Jobs in South Salem for All Workers in 2019 (U.S. Census Bureau)

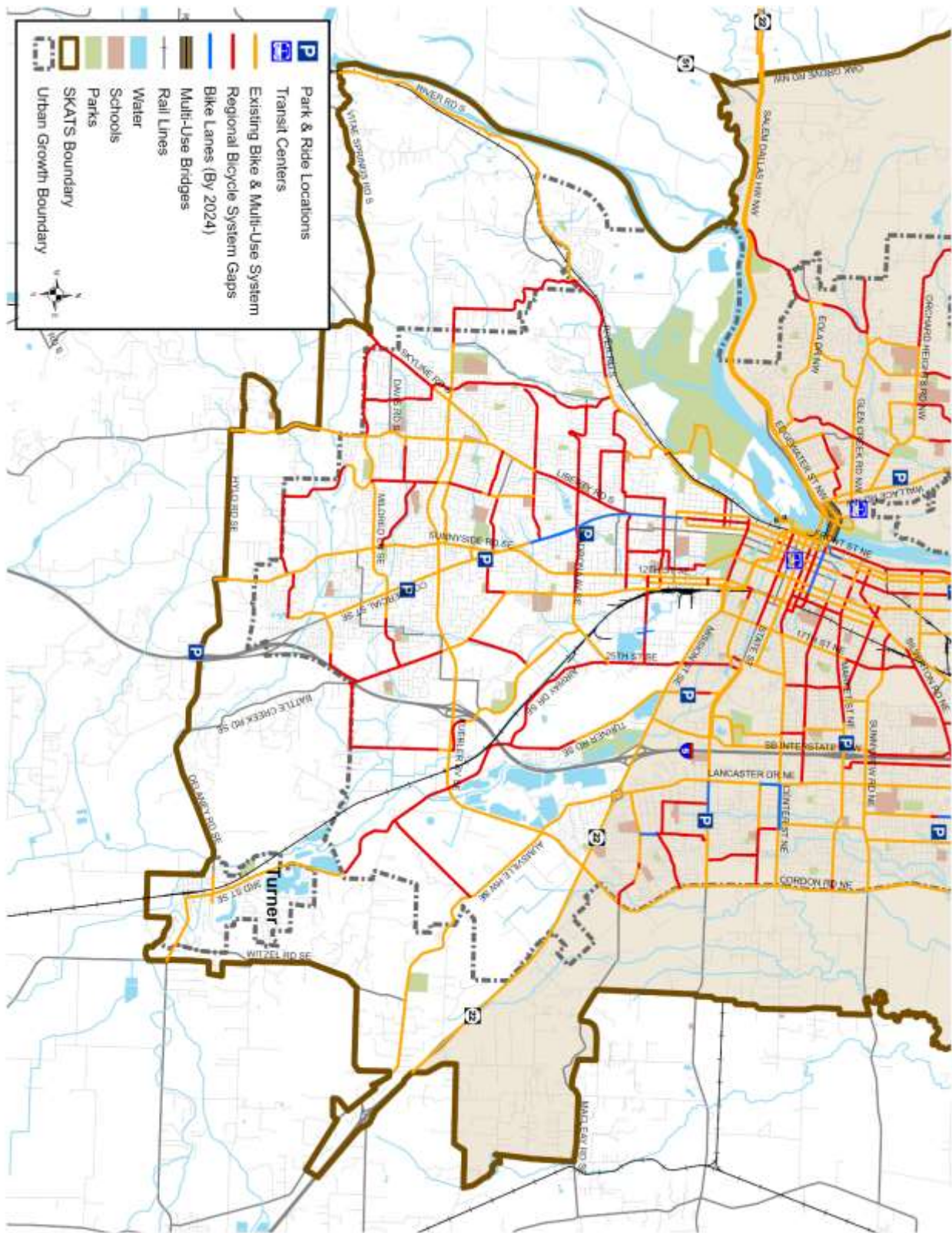
Worker Totals and Flows	Count	Percent
Employed in the Selection Area	36,395	100.0
Employed in the Selection Area but Living Outside	28,499	78.3
Employed and Living in the Selection Area	7,896	21.7
Living in the Selection Area	35,276	100.0
Living in the Selection Area but Employed Outside	27,380	77.6
Living and Employed in the Selection Area	7,896	22.4

The UP and P&W rail lines are in this district. The Union Pacific also has a rail yard located east of 12th Street to serve the needs of the region around Salem. McNary Field is owned and operated by the city of Salem to provide general aviation services. Currently, no commercially scheduled flights operate from the airport.

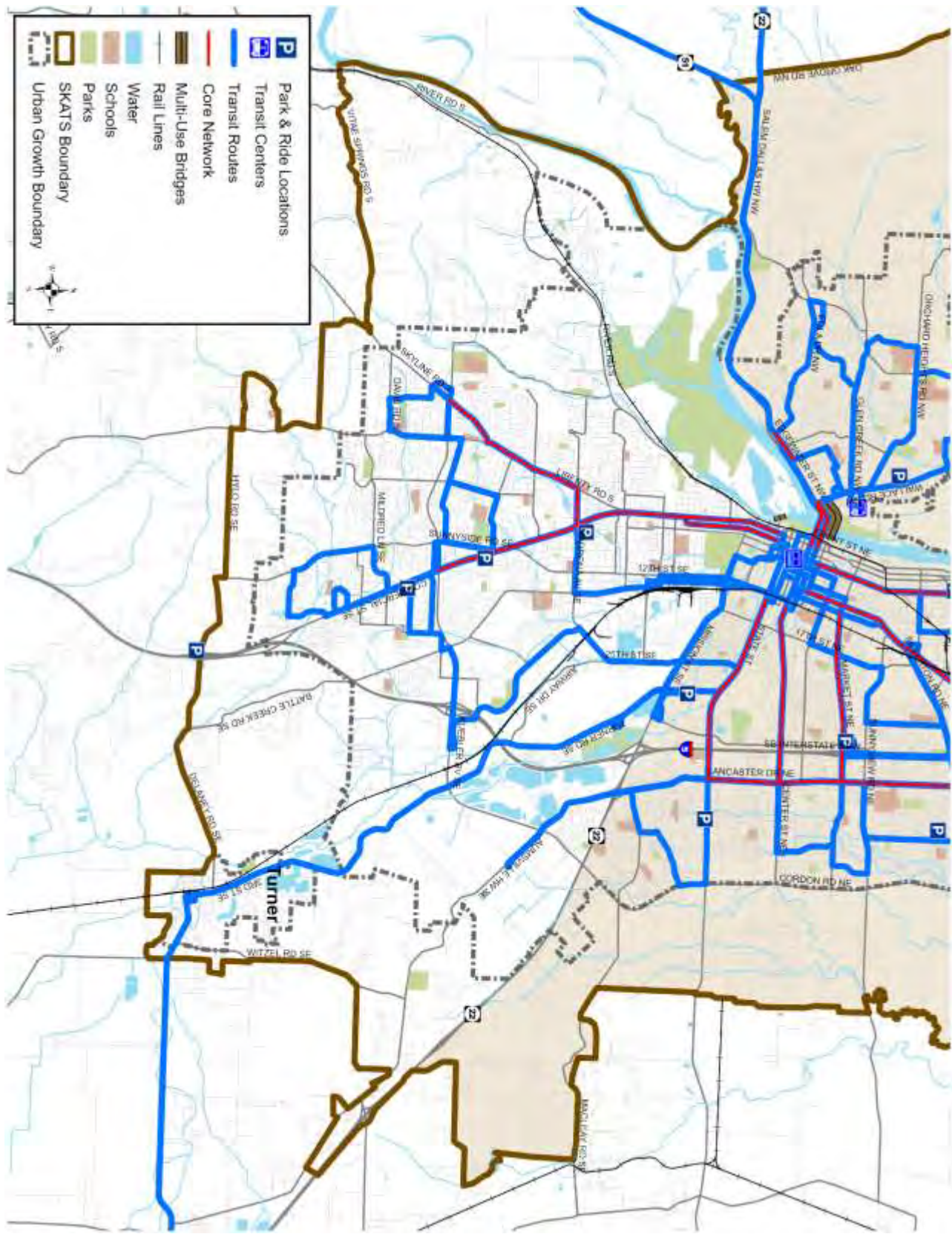
Flooding from major storms has taken place in the past in the area between 25th Street SE and 13th Street SE and McGilchrist Street SE to Mission Street. Landslides have occurred along River Road S that have closed the road for days or weeks.

Two issues reduce the attractiveness of bicycling in this area. First, the hilly terrain, especially in the western portion, inhibits many people from biking to their destination. Second, there is little straight-line connectivity to the road system (regional or not) to allow easy and continuous movement from one end to the other.

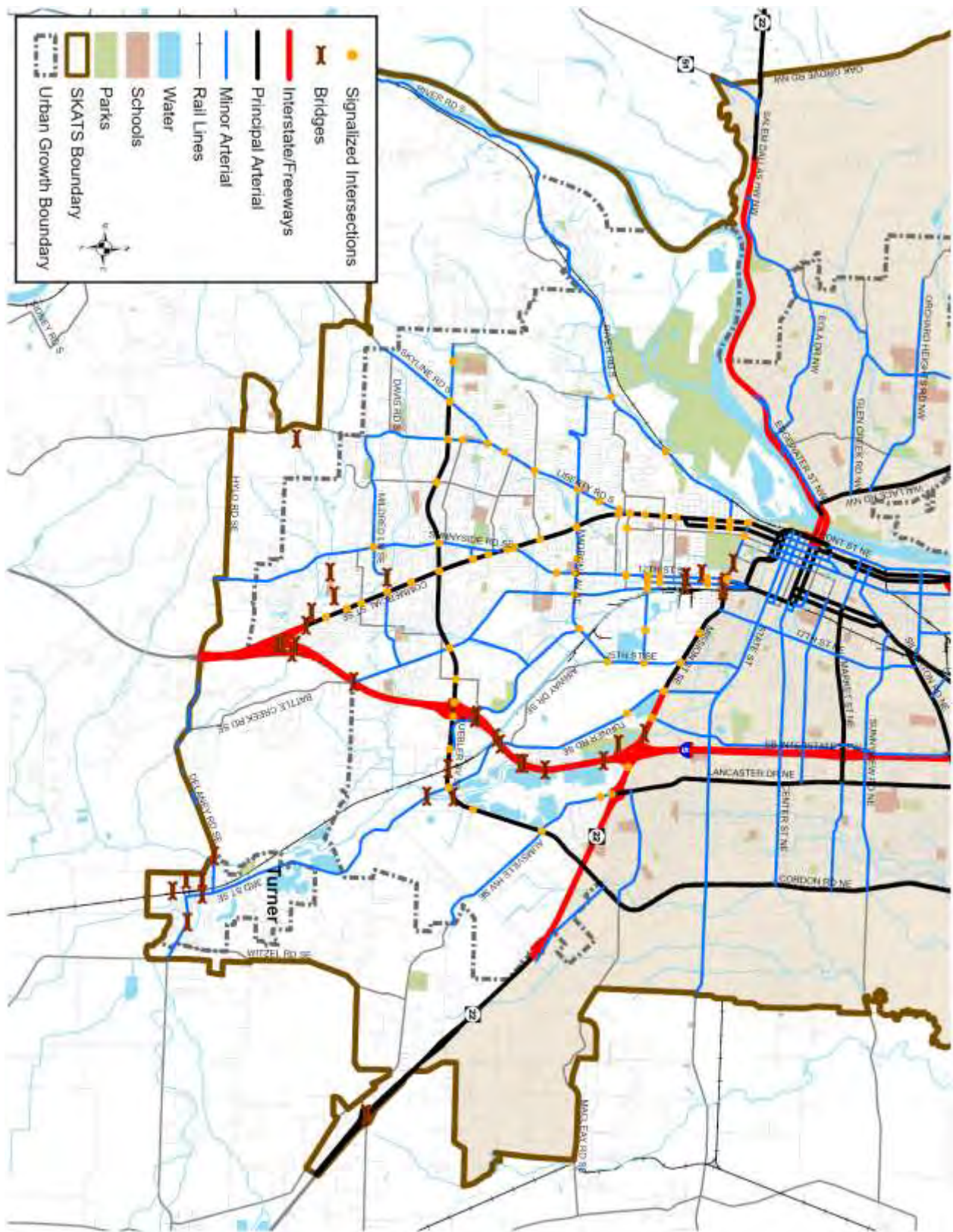
Of the 4,585 collisions between 2016 and 2020, the majority were vehicle-vehicle, and classified as non-serious injury or property damage only. There were 19 fatalities in this area. The top three crash locations were Commercial Street at Kuebler Boulevard, Commercial Street at Madrona Avenue, and Kuebler Boulevard at Turner Road.



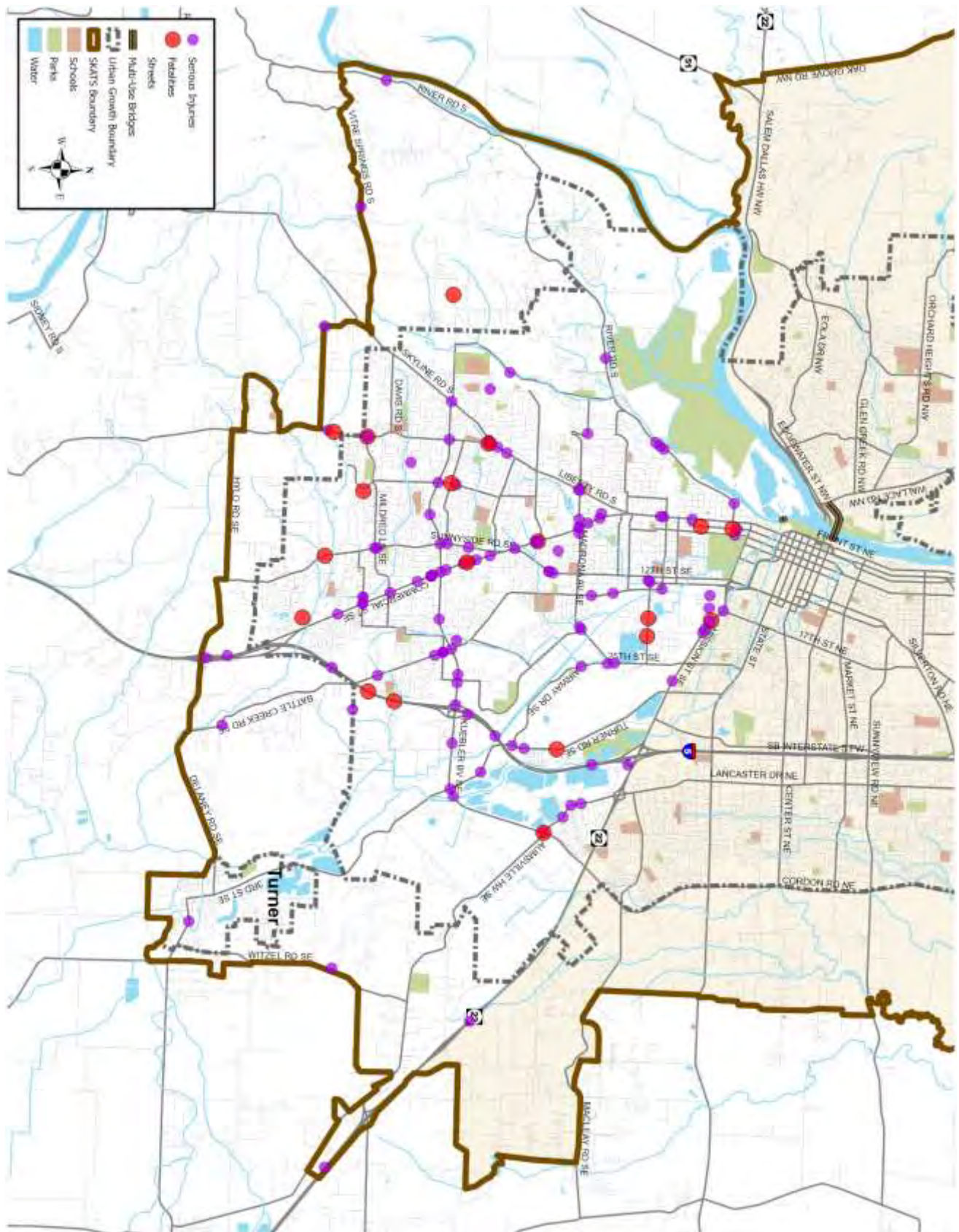
Map 4-28: South Salem Bicycle Facilities



Map 4-29: South Salem Transit Network



Map 4-30: South Salem Infrastructure



Map 4-31: Fatalities and Serious Injuries from Crashes in South Salem, 2016-2020 (Source: ODOT)

Chapter 5 – Needs, Gaps, and Deficiency Analysis and Identification

The transportation system within the Salem-Keizer area is not complete. Identification of the gaps in the system, and the identified needs are presented in this chapter. This will link the existing system with the projects proposed in Chapter 7.

As illustrated in the maps and discussion of **Chapter 4**, there are a variety of gaps and deficiencies in the existing regional system. These preclude the existing regional system from fully meeting the Goals and Objectives that were presented in **Chapter 3**. Identifying these gaps and deficiencies is the first step to addressing them with projects and programs that will allow the future regional system to meet the stated Goals and Objectives. These gaps and deficiencies are discussed in this chapter in preparation for the proposed package of projects and programs that is discussed in **Chapter 7**, linking the program of projects to the identified needs and the Goals of the Plan.

Identification of gaps and deficiencies of the regional transportation system come from many planning efforts. First, there are on-going system monitoring processes (such as the crash reporting, those associated with the Congestion Management Process [CMP], and the reporting required of local governments on road conditions as part of H.B. 2017) in place to identify areas with issues that degrade the safety or ability of the public to use the existing systems. Second, since the adoption of the Regional Transportation Systems Plan (RTSP) in 2019, there have been several planning studies for specific corridors undertaken by either ODOT or a local jurisdiction that examine needs and recommend solutions. Third, building upon the previous work to update the regional bicycle system (which identifies gaps as well as locations that may be hazardous for bicyclists) SKATS has completed an inventory of the presence of sidewalks (and gaps) along the regional corridors and streets served by Cherriots bus service. Fourth, updates to planning documents by other organizations, such as by ODOT to their *Oregon Freight Plan* (2017¹), provide new information and analysis of their facilities and current and future needs. Finally, studies that are not primarily focused on transportation, such as forecasting the impact of seismic events, have been consulted to provide information on possible effects to the regional system. These sources help expand the understanding of the current system and identify the areas where there is either a missing component (such as sidewalk connectivity) or any facilities that may be at risk during an extreme event (such as an earthquake or flood).

Roads – Safety

The safety of all users of the regional transportation system is one of the top Goals of the MTP, especially reducing the number of fatalities and serious injuries. As illustrated in

¹ A small update is currently underway to be completed in late 2022, with a more complete update after adoption of the revised Oregon Transportation Plan and Oregon Highway Plan.

Figure 5-1, the annual number of fatalities from traveling on the region’s roads has varied over the last 24 years, with five to 15 fatalities annually between 1993 and 2013 but increasing to between 16 to 21 annual fatalities from 2014 to 2020. The number of serious injuries per year has generally decreased from 1994 to 2011, increased from 2011 to 2016, and then decreased through 2020. Unofficial numbers for 2021 and mid-way through 2022 suggest an increase in fatalities and serious injuries, particularly for people walking. A similar increase has been noted elsewhere in Oregon and nationwide.

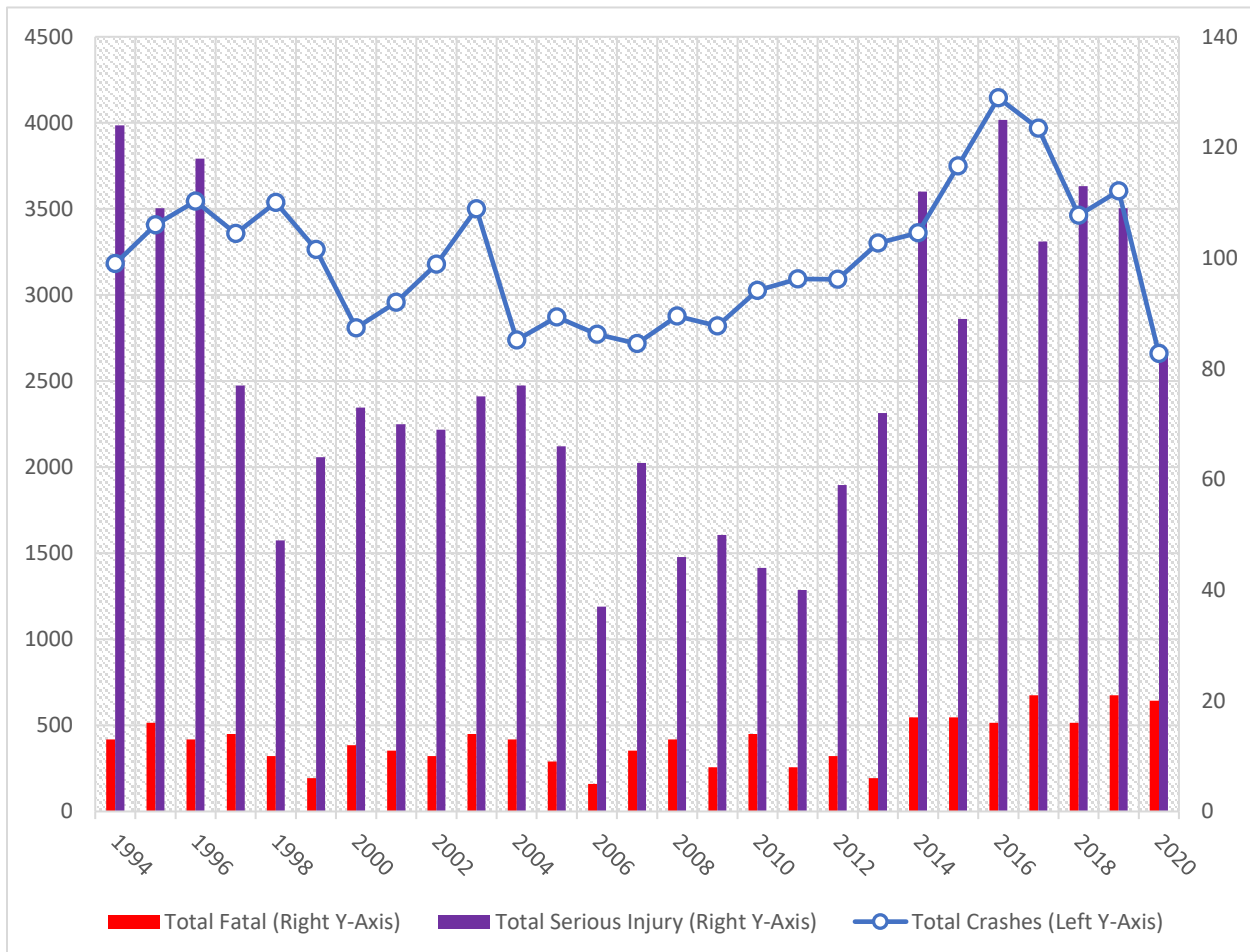


Figure 5-1: Crashes, Fatalities, and Serious Injuries within SKATS: 1994-2020 (Source: ODOT)

Shown in **Figures 5-2** and **5-3** are the fatalities and serious injuries crashes by mode for the same period. Since 2017, decreases in fatalities for people inside a vehicle have been offset by increases in fatalities of people walking or bicycling.

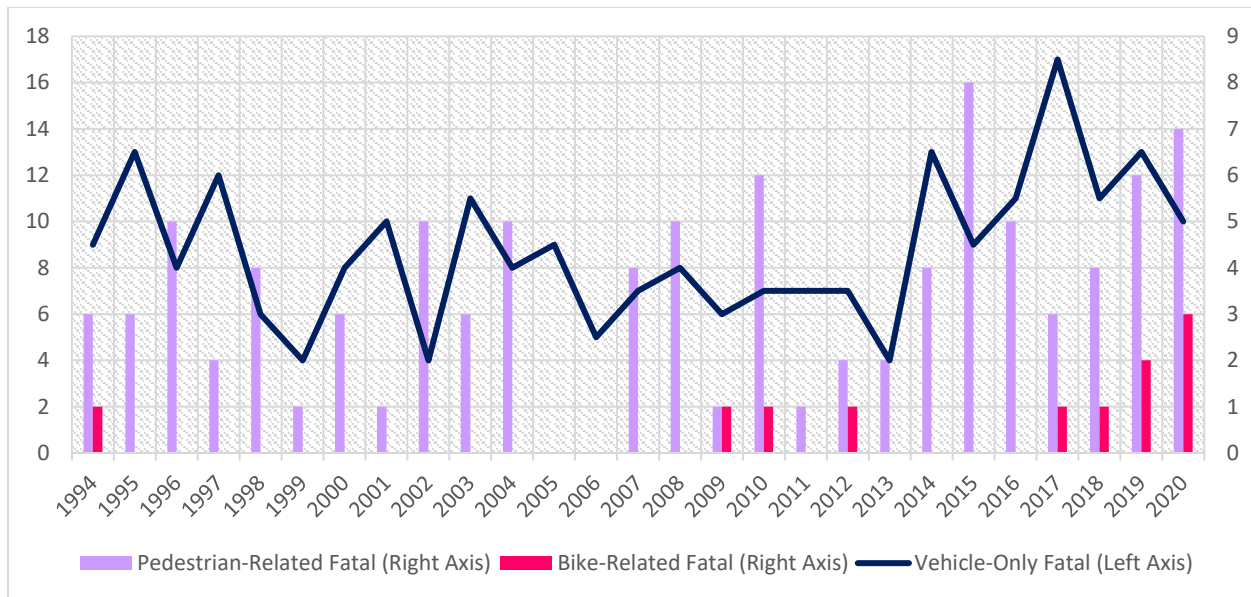


Figure 5-2: Fatalities for Pedestrians, Cyclists, and Drivers within SKATS: 1994-2020 (Source: ODOT)

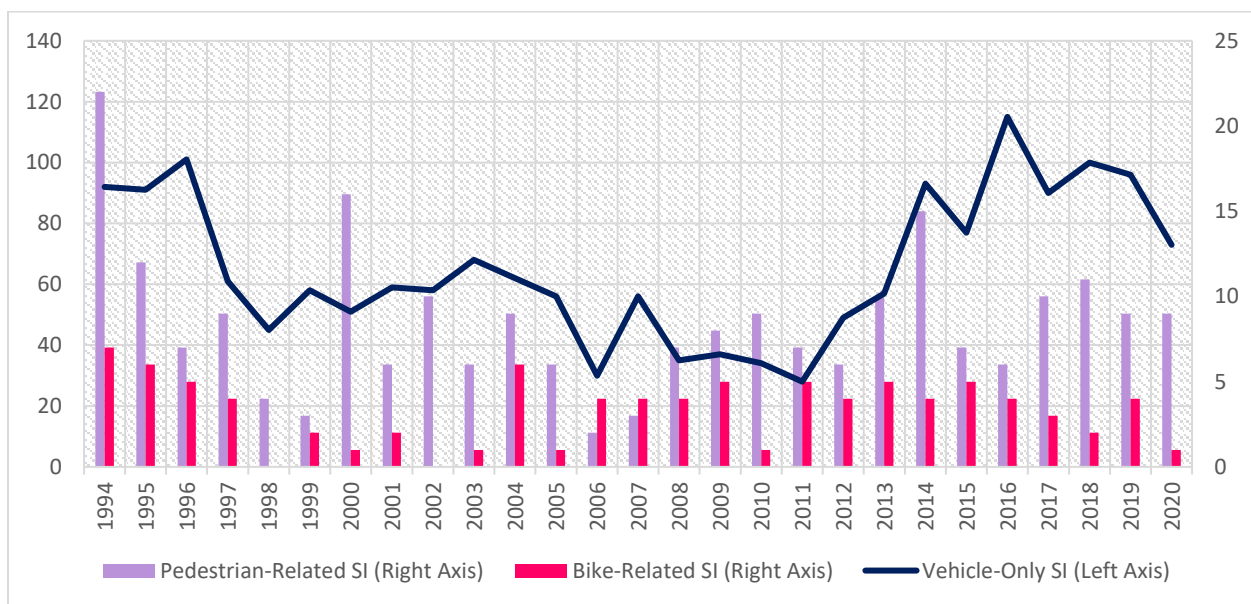


Figure 5-3: Serious Injuries (SI) for Pedestrians, Cyclists, and Drivers within SKATS: 1994-2020 (Source: ODOT)

Recent research on the cause of crashes attributes them primarily to the design of the roadway, and the signals and cues they provide to drivers about what is safe. Roads with wide, straight lanes can be seen by drivers as being more forgiving to errors, often leading to speeding and other risk taking. In addition, many roads have been built with little protection for other users of the facility, in particular bicyclists and pedestrians. The *Oregon Transportation Safety Action Plan* (TSAP) (2021) includes near-term Emphasis Areas to deter risky behaviors (e.g., impaired driving, unbelted, speeding, and distracted driving). Other Emphasis Areas include constructed or retrofitted

infrastructure; protecting vulnerable users (pedestrians, bicyclists, motorcyclists, and older users); improved systems which include law enforcement and emergency response, safety analysis, and education to planners and engineers; and commercial vehicle safety. The 2021 TSAP identifies implementation actions for each of the emphasis areas (see Chapter 6 of the TSAP) and uses the federal performance measures as one way of tracking progress.

ODOT develops an annual Highway Safety Improvement Program (HSIP). A significant program developed by ODOT is the ARTS (All Road Transportation Safety) program. The Oregon Transportation Commission (OTC) has allocated approximately \$31 to \$37 million per year to be used on all public roads (state and local), with projects selected by prioritizing their benefit-cost. ARTS funding has been allocated to numerous projects within SKATS since the inception of the program. In 2017, the Oregon Legislature set in statute the provision of state highway funds for Safe Route to School infrastructure projects.

At SKATS, safety projects have a high priority when considered for inclusion in the long-range plan and the Transportation Improvement Program (TIP). In support of on-going efforts to report and examine crash data supplied by ODOT and determine what efforts need to be emphasized in the future, a SKATS Metropolitan Transportation Safety Action Plan (MTSAP) was started in 2022. Future updates to SKATS MTP will include measures and projects identified in the MTSAP as appropriate.

As discussed in **Chapter 3** and **Appendix P**, SKATS is supporting ODOT's targets for the federal road safety performance measures. These targets are predicated on the assumption that programs such as ARTS and other safety projects will result in a lower number of crashes, especially those that result in a fatality or serious injury.

Crash data is used by the local jurisdictions as they identify areas for planning studies or as part of the work to define countermeasures and projects to reduce the risk of injury or death to the traveling public. Refer to the maps of *Fatalities and Serious Injuries from Crashes* presented in **Chapter 4** for an overview of where the most serious crashes have occurred in the region over the last five years.

Roads and Bridges – Preservation

The Regional Road System is composed of approximately 255 lane-miles of roadways with a functional classification of minor arterial or higher. No official estimate of the replacement value of these roads has been produced; however, protecting this sizeable investment is a goal and objective of this Plan, as it is typically much less costly to maintain a roadway or bridge than to completely replace it.

Each of the jurisdictions are responsible for operating and maintaining the roadways and bridges they own. To do this they primarily rely on State Highway Funds that are distributed by ODOT, but may also use local funds (e.g., transportation bonds funded with property taxes). However, due to the increasing efficiency of vehicles (which decrease

the amount of fuel sold²) and even considering that the state fuel tax has been raised 14 cents since 2009 (and could be raised another two cents by 2024 if ODOT meets the accountability targets, as specified in state law passed in 2017), the costs for preserving the road system continues to rise and use up the majority of fuel taxes received by the local jurisdictions. Add to this the increases in construction costs during periods of economic expansion along with general inflationary increases and the purchasing power available from the funds received from the fuel tax (and other sources) is diminished over time. This results in the jurisdictions either lowering their standards of acceptable conditions, deferring maintenance, or finding additional funds (or some combination of the three). This situation will likely be exacerbated in the future should vehicles become more efficient (if fossil-fuel powered) or not subject to the fuel taxes (in the case of electric vehicles³). ODOT estimates that to maintain current pavement conditions on the state highways and NHS, approximately \$273 million per year is needed. Actual investment is lower, which will slowly reduce the percent of pavement rated as "Good" and increase the percent rated as "Poor". For bridges, to maintain current conditions \$320 million per year is needed, or \$539 million per year to meet the "desire state of good repair".⁴

Roads

Since MAP-21 (Moving Ahead for Progress in the 21st Century) was signed into law in 2012 and codified in the regulations finalized by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) in 2017, states and MPOs must monitor the condition on the bridges and pavement along the Interstate and non-Interstate National Highway System (NHS) and set performance measure targets. ODOT provides SKATS with updates for these values every two to four years, allowing for progress to be tracked over time. There are approximately **87 miles of roads** classified as part of the National Highway System (which includes the Interstate) within SKATS. The percent of the pavement on these roads that have been classified as "Good", "Fair" or "Poor" since 2012 are presented in **Table 5-1** and **Table 5-2**. This rating scheme is the one adopted by the FHWA as part of the regulations on the federal performance measures for pavement quality. This applies only to the through lanes of the NHS and is based on metrics that are captured during the inspection of the road: amount of rutting, amount of faulting, cracking percent and a measure of the roughness of the road⁵. The goal for most agencies that own and operate roads is to keep them in the "Fair" or "Good" categories. Once a road is classified as "Poor", it is more expensive to return it to "Good" or "Fair" as typically substantial reconstruction is required. As shown since 2012, most of Interstate-5 within SKATS is in Fair condition and none in Poor Condition.

² Assuming a constant amount of travel per vehicle per year.

³ As part of H.B. 2017, the State of Oregon is raising the registration fees for electric vehicles in 2019 and 2020 to ensure EV owners pay some fees for the upkeep of the transportation system.

⁴ See Oregon Transportation Asset Management Plan, 2022 Executive Summary page 3 for pavement and page 4 for bridges.

⁵ Note that only the roughness metric is used for the 2018-2022 reporting period and were shown in the tables in the 2019-2043 Regional Transportation Systems Plan. For this Update, the tables reflect the use of all the metrics.

Table 5-1: Pavement Quality of the Roads on the Interstate System in SKATS (2012-2020) Source: ODOT

Classified	2012	2014	2016	2018	2020
Good	42%	29%	31%	30%	59%
Fair	58%	71%	69%	70%	41%
Poor	0	0	0	0	0

Table 5-2: Pavement Quality of the Roads on the Non-Interstate National Highway System in SKATS (2012-2020) Source: ODOT

Classified	2012	2014	2016	2018	2020
Good	29%	21.1%	20.1%	13.2%	11.6%
Fair	71%	77.7%	73.2%	76.5%	76.9%
Poor	0.5%	1.2%	6.7%	10.3%	11.5%

As discussed in **Appendix P**, SKATS adopted a resolution to support ODOT’s statewide targets for pavement condition in 2022. While there is no requirement for SKATS to meet the statewide targets, by agreeing to support ODOT’s targets, the MPO must show how the projects selected for the MTP and the Transportation Improvement Program (TIP) will make progress toward the targets. Essentially, local or state funding spent on maintenance or for projects that involve infrastructure renewal (such as preservation or reconstruction) supports ODOT’s target, should maintain or increase the number of miles of roads that are rated “Good,” and limit the number of miles of roads that decrease to a “Poor” rating.

In addition to pavement conditions on the NHS, the local jurisdictions are required to report the condition of their roads (urban minor collectors and above) to ODOT every two years as part of the accountability requirements in H.B. 2017. The reports have been completed for 2019 and 2021 (**Tables 5-3** and **5-4**)⁶. These reports to ODOT may impact the investment decisions that the cities and counties make for their roads, both on and off the National Highway System.

Table 5-3: Miles of Pavement by Condition by Jurisdiction (2019 Report)

Jurisdiction	Good	Fair	Poor
Keizer	11	13	0
Salem	131	48	6
Turner	3	0	0

Table 5-4: Miles of Pavement by Condition by Jurisdiction (2021 Report)

Jurisdiction	Good	Fair	Poor
Keizer	12	12	0
Salem	129	51	0

⁶ Data for Marion and Polk counties is excluded as they include area outside of SKATS. Summaries are available at: <https://www.oregon.gov/odot/TAP/Pages/LocalAgencyCondition.aspx>

Turner	2	1	0
--------	---	---	---

Bridges

Bridges are also a vital component of the Regional Road System. All the bridges, whether state or locally owned, in Oregon are inspected every two years, providing up-to-date information on how well these resources are aging. Many of the bridges in the state, and within the SKATS area, were built more than 50 years ago and are nearing the end of their design life.

There are three parts to each bridge: the deck area – where vehicles are driven and people walk; the superstructure – which supports the deck and distribute the loads on the bridge to the substructure; and the substructure – which supports the deck area and superstructure and distributing the loads to the ground (see **Figure 5-4**). While all parts are necessary for a bridge to function, only the rating for the deck area is included as part of the new federal performance measures.

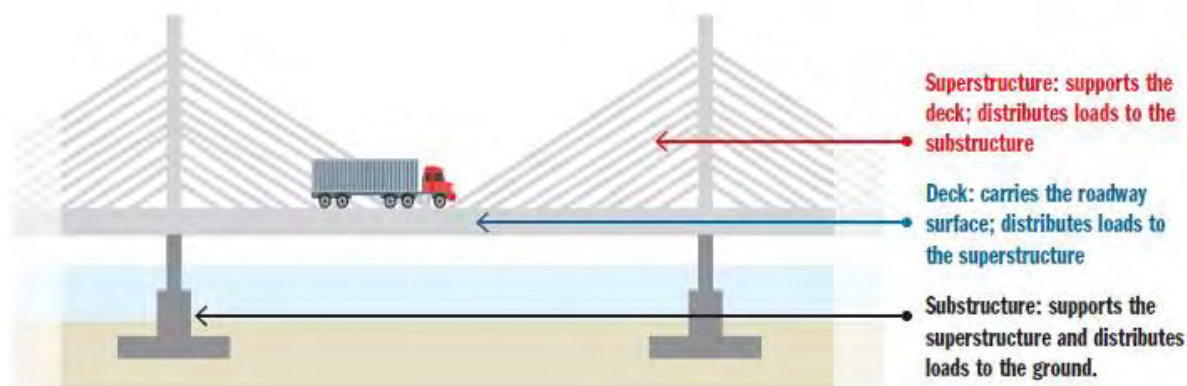


Figure 5-4: Components of a Bridge (Source: ODOT Bridge Condition Report 2017)

Statewide the percent of bridges that are rated as “Poor” is just under two percent, which is well under the threshold that FHWA has set (10 percent) for all bridges in a state not to exceed. However, as shown in **Figure 5-5**, there is a large percent of bridges that are currently rated “Fair” that are at the boundary (those with a National Bridge Inventory score of five) that will need to be maintained so they do not cross over to the “Poor” rating.

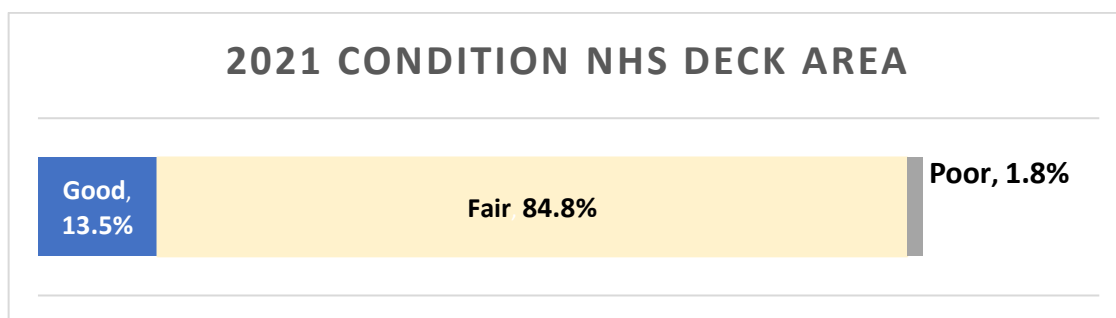


Figure 5-5: Condition of NHS Deck Area (2017) (Source: ODOT)

The data from 2009 to 2017 for all the bridges within SKATS located along NHS routes is illustrated in **Table 5-5**. In 2021, 85 percent of all bridges on NHS routes in SKATS were in “Fair” condition. As with the pavement ratings, the scheme was developed by FHWA as part of the federal performance measures for bridges⁷. Agencies endeavor to maintain the bridge decks at a “Fair” or “Good” rating. Once a bridge deck is rated as “Poor,” it is much more expensive to rehabilitate to either “Good” or “Fair” quality.

Table 5-5: Bridge Deck Rating for All Bridges on NHS Routes in SKATS (2009-2020) Source: ODOT

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Good	29%	25%	25%	22%	22%	22%	12%	11%	8%	8%	8%	8%
Fair	58%	63%	62%	65%	65%	76%	86%	87%	89%	92%	92%	92%
Poor	13%	12%	12%	13%	13%	2%	2%	1%	3%	0.3%	0.3%	0.3%

The locally owned bridges on the NHS and their rating are presented in **Table 5-6**.

Table 5-6: Rating of Locally-owned bridges on the NHS in SKATS (Source: ODOT)

Location	Rating
Capitol/Mill Creek (N. of Union)	Good
Commercial/Pringle Creek (S. of Trade)	Good
Kuebler/Mill Creek (E. of Turner Rd)	Good
Silverton/Little Pudding River	Good
Summer/Mill Creek (S. of D St.)	Fair
Cordon/W. Fork Little Pudding River	Fair
NB 13th/Pringle Creek (Near RR Station)	Fair
SB 13th/Pringle Creek (Near RR Station)	Fair
Liberty/Pringle Creek (S. of Trade)	Fair
Commercial/Battle Creek (Near I-5 Ramps)	Fair
Kuebler/RR Tracks (W. of Turner Rd)	Fair

Again, SKATS has agreed to support ODOT’s statewide targets for bridge condition in 2022, and the local jurisdictions are required to report the condition of their bridges to ODOT every two years as part of the accountability requirements in H.B. 2017. Bridge inspection will be coordinated by ODOT, as part of the existing program that examines each bridge in the state every two years. For bridges, there is a need to keep the bridge deck ratings in the ‘Fair’ category and not deteriorate into being rated ‘Poor’ which would require more costly repairs or replacement. According to ODOT’s *State of the System Report* (2018), about half of the bridges owned by ODOT were built in the 1950s to 1970s, reaching the end of their design life⁸. As bridges near the end of their design life,

⁷ See *FHWA Computation Procedure for the Bridge Condition Measures* FHWA-HIF-18-023 available at: <https://www.fhwa.dot.gov/tpm/guidance/>

⁸ The 2018 edition of the report is the latest. See: <https://www.oregon.gov/ODOT/About/Pages/State-of-the-System.aspx>

more are considered structurally deficient. Shown in **Tables 5-7** and **5-8** are the condition reports for the three cities within SKATS for 2019 and 2021. As the reports for Marion and Polk counties include bridges outside SKATS, they are not listed.

Table 5-7: Bridges by Condition by Jurisdiction (2019 Report)

Jurisdiction	Good	Fair	Poor
Keizer	5	0	0
Salem	17	39	0
Turner	1	0	0

Table 5-8: Bridges by Condition by Jurisdiction (2021 Report)

Jurisdiction	Good	Fair	Poor
Keizer	5	0	0
Salem	15	41	0
Turner	1	0	0

Roads – Efficient Use

As discussed in **Appendix A**, the current forecasts for future population and employment estimates over 59,000 additional people and over 33,000 additional jobs within the SKATS boundary by 2050, which if existing patterns continue will result in an increased demand to travel for all modes of travel. And as more people move to the cities outside Salem and Keizer, we can expect more travel into the metropolitan area as they come for jobs, shopping, or services. To respond to this increased demand on the Regional Transportation System, our roads will need to be designed, operated, and used more efficiently in the future. Because most congestion traditionally occurred during the morning and evening commute times, the region has invested in promoting and encouraging employers and employees to use alternatives to traveling alone in a vehicle. For over 40 years, the Cherriots Transportation Options (nee Trip Choice, nee Cherriots Rideshare) has promoted ridesharing (carpools and vanpools), telework, biking, walking, and taking transit help to reduce the level of system-wide vehicular congestion. Encouraging employers to offer flexible schedules helps not just with the amount of traffic but allows employees to adjust their work times to better fit their daily needs. SKATS will continue to support the Cherriots Transportation Options program and encourage continued coordination with ODOT and the policies in Oregon's *Transportation Options Plan* (2015).

Another on-going investment using SKATS funds is the Regional Traffic Signal Control Center (RTSCC) operated by city of Salem staff. RTSCC staff can monitor the signals in the area and determine if signal timing plans are working or need adjustments. Investments in the RTSCCs over the years include cameras at most traffic signals for monitoring the system and interconnects to synchronize controllers as well as transfer data between signals and the control center. Not all the traffic signals in the Salem metropolitan area

are currently connected to the Regional Traffic Signal Control Center. These gaps have been identified, and projects have been proposed to either link the remaining signals to the center or upgrade the existing interconnects to fiber optic cables (**Table 5-9**). Other additions to the system such as pan-tilt-and-zoom cameras for traffic monitoring, adaptive traffic signal timing, and green-time extensions for buses are either in the Regional Intelligent Transportation System Plan or being discussed for implementation in the near future.

Table 5-9: List of Corridors with Identified Interconnect Projects (Source: Salem, 2017)

Project
Kuebler - Cordon
Salem Pkwy - Portland Rd - Chemawa
Mission - Lancaster - Rickey
Summer - Market - Court - High
12th Street
Liberty - Kuebler
Center - Hawthorne - Market
Wallace Rd
Glen Creek - Doaks Ferry - Orchard Heights

There are additional means to efficiently use the existing system that have not been utilized in the Salem metropolitan area, either at all or to the full extent possible, but that have been used in other urban area to minimize the amount of new roadway construction. Two examples are timed parking restrictions and reversible lanes. Timed parking restrictions would prohibit parking on a street during the rush hours to allow that space to be used by either all traffic or just transit, effectively increasing the capacity of the road without widening. There are operational issues to consider, such as locating the bicycle lane to the right of the parking area, but this could be used along the corridors in the areas around the Salem downtown where parking is permitted along the roads.

The second example is reversible lanes; these allow the existing capacity to be used in the direction of peak travel. Depending on the facility, other urban areas either use movable barricades or simply put lights above the lanes to demark the travel lanes.

Other means that the region can use to improve the efficient use of the regional system include investments in Cherriots transit service (see **Transit** section in this chapter), promoting the use of TripCheck.com to ‘*know before you go*,’ and the use of private providers’ travel information (such as Waze and in-vehicle traffic information) by the traveling public.

However, given the forecasted increase in traffic, the region will need to invest in more of these types of efficient systems. State and local planners will need to find the appropriate

mix of projects and programs, plus identifying others, to ensure that people and goods can efficiently move in, and through, the metropolitan area over the next 20 years.

It should be noted that it is possible that exogenous factors (at the state and national level) will play a larger role in the use of vehicles by the public and the interaction between vehicles and roadways. The development of connected and/or autonomous vehicles could increase the efficiency and carrying capacity of the existing system with moderate investments from the public sector. This is an area of rapid development, some inflated expectations, and will be monitored closely as the situation changes often. In 2018, the Oregon Legislature established an autonomous vehicle task force to develop legislative recommendations regarding testing autonomous vehicles on the roads and highways in Oregon for the 2019 Legislative session⁹. Additional work will be needed at the federal, state, and local levels to ensure the safe integration of autonomous vehicles onto the roadway system.

Roads – Congestion

Congestion along the regional roads decreases the air quality in the adjacent areas, increases the costs to businesses and commuters traveling in or through the area which negatively impacts the economic competitiveness of the Salem-Keizer area. Congestion occurs when the system is not operating efficiently or there are too many vehicles for the road.

SKATS monitors the traffic conditions of the regional system as part of the Congestion Management Process¹⁰. This includes continuously collecting traffic volumes at over 50 locations in the area, analyzing travel time along 15 corridors, and gathering transit ridership from Cherriots. These data streams are used to identify areas where recurring congestion is present. With this information, the owner/operator of the facility (ODOT or one of the local jurisdictions) has the data to conduct an in-depth planning study to further analyze the corridor and develop projects that attempt to address the congestion.

One area and issue within SKATS that has been extensively studied over the years is the high traffic volumes and vehicle congestion on the two state highway bridges that span the Willamette River connecting west Salem to downtown Salem. Related to that are multiple studies and projects to support active transportation and transit as alternatives to vehicles for crossing the river, and traffic analysis and projects to improve traffic flow in the area of the bridges.

Figure 5-6 shows the combined average weekday traffic volumes crossing the Marion Street and Center Street Bridges (which are part of Oregon Highway 22) over the Willamette River between 1980 and 2021. Traffic volumes increased by over 114 percent between 1980 and 2019 as housing and population grew in west Salem (estimated to be over 31,000 persons in 2020) while the majority of jobs and

⁹ Although no legislation seems to have resulted from that session.

¹⁰ The CMP is available as a separate document on the MWVCOG website. See also the congestion management tab on the SKATS Transportation Hub: <https://skats-mwvcog.hub.arcgis.com/>

retail/service opportunities in the area remain on the eastern side of the Willamette River. In addition to west Salem's growth, the population of the other cities in Polk County also substantially increased over the last 30 years; and Census data shows that a large percentage of workers in Polk County cross the bridges as part of their commute to jobs in Salem, Keizer, Marion County, or travel into Salem for shopping and other services. Due to these very high traffic volumes – amongst the highest volumes on any state road or interstate in Oregon, outside the Portland Metro area - traffic congestion, delay, and recurrent bumper-to-bumper traffic during peak traffic periods occur not only on the bridges themselves but also spill back onto arterials and state highways on both sides of the river in downtown Salem and west Salem.

The effect of two major events the past 20 years - the Great Recession (2007 – 2009) where Polk County unemployment was as high as 9 percent and the 2020 COVID-19 pandemic when many businesses closed and more people worked from home or traveled less –illustrate time periods when traffic increased decreased, as illustrated for those years in **Figure 5-6**. Traffic volume on the bridges peaked to a new high of 95,976 average weekday traffic (AWT) in 2019. There was a steep decrease in daily traffic in 2020 due to COVID; and there has been a rebound in 2021 as businesses reopened, vaccines became available, people traveled more, and residential development continued in west Salem.

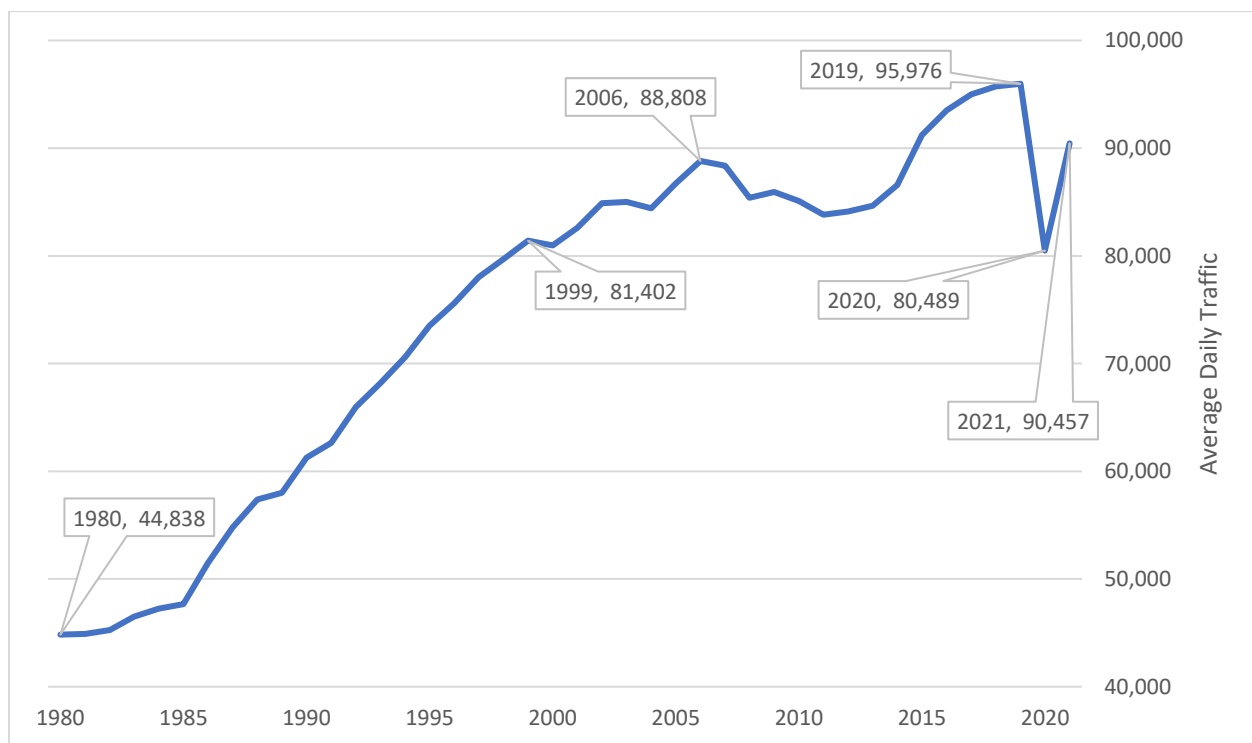


Figure 5-6: Travel Over the Willamette River, 1980-2021 (Average Weekday Traffic) Source: ODOT

Due to increasing traffic congestion on the bridges and their connecting infrastructure and the expectation that residential development in west Salem will continue in the future¹¹ - along with the need for a resilient transportation system¹² in the case of emergency events - multiple studies for adding a new bridge and/or adding capacity over the Willamette River have been undertaken and debated for over 50 years.

Between 1965 and 1988, there were five studies that examined locating a new bridge crossing over the Willamette River,¹³ and each study contained a different recommendation for its location (with two studies recommending both a north and south bridge). The most recent effort to study a new bridge crossing was the *Salem River Crossing Project* and its Environmental Impact Statement (EIS). The draft EIS (2012) examined multiple corridor locations and designs for a new bridge and connecting roads. Work proceeded on refining and gaining consensus on a locally preferred alternative (LPA) for the final EIS that included a new bridge in the Pine Street NE corridor with connections on the west side to both Wallace Road and OR 22W. However, in 2019 the city of Salem determined it would not support the LPA and recommended the choice of the No-Build alternative to ODOT. Federal notice of the Record of Decision (ROD) for a No-Build alternative was published in the Federal Register on November 19, 2019.¹⁴ Additional details about the Salem River Crossing are provided in Chapter 9 (Outstanding Issues) and in the Final EIS and Record of Decision for the *Salem River Crossing Project*.

The Draft EIS is far from the only effort in recent years to identify projects and strategies to reduce traffic demand, improve operations, and relieve congestion in this corridor. Others include:

- The *Bridgehead Engineering Study* (1998) analyzed concepts and alternatives for changes to the Marion Street and Center Street Bridge ramps. Two of those projects on the east side were completed: infrastructure and operation changes to the northbound and southbound Center Street off-ramps to Front Street NE, which has improved eastbound traffic flow on the Center Street Bridge.
- Over the last 20 years, the city of Salem and ODOT both completed multiple projects along Wallace Road NW (State Hwy 221) to improve traffic flow including: infrastructure changes at the Wallace Road and Edgewater Street intersection, construction of new local roads (Taggart Drive and Bartell Drive), access management of driveways (plus a median) along parts of Wallace Road, and widening the Wallace Road at Glen Creek Road intersection (2014).

¹¹ The MTP's 2050 population forecast for west Salem is 40,701

¹² The Marion Street and Center Street bridges require a major seismic retrofit or replacement to withstand a major seismic event. A seismic upgrade for the Center Street bridge is currently under design, with construction scheduled in 2025.

¹³ A summary of those studies is contained in the *Willamette River Crossing Capacity Study: General Corridor Evaluation (2002)* Appendix A (Chronology)

¹⁴ Federal Register 63957, Vol. 84 No. 223 November 19, 2019

- To provide better pedestrian and bike facilities for crossing the river, the Union Street Railroad Bridge was converted to a bicycle and pedestrian bridge in 2009. Connecting paths (to Glen Creek Road and Wallace Road) on the west side were constructed. On the east side, a new traffic signal was constructed at Union Street at Commercial Street to assist pedestrians and bicyclists crossing Commercial Street. In addition, the Union Street Family Friendly Bikeway will begin construction in 2023 to provide safer and more accessible bicycle connections along Union Street to the Capitol Mall.
- The city of Salem’s Urban Renewal Agency (URA) has done land-use studies in west Salem with the objective of increasing commercial development and employment in west Salem. Also, the city’s URA is examined design options and feasibility for a grade-separated crossing of Wallace Road at 2nd Street.
- In 2018, the city of Salem’s Congestion Relief Task Force examined infrastructure, system operations, and travel-demand management strategies to relieve traffic congestion in the core area of downtown Salem and west Salem including the bridges.¹⁵ As of 2022, Salem has not yet implemented the recommendations.
- SAMTD has modified its transit system operations in West Salem including a 2-year pilot of a demand-response service from 2015 to 2017. Ultimately, on-demand service was not cost competitive with fixed-route service; fixed routes were restarted in 2017. Cherriots Regional Service has provided more frequent service between cities in Polk County and downtown Salem
- Salem’s Transportation System Plan and this MTP includes new road (Marine Drive NW) that is parallel to Wallace Road with the objective of that a portion of traffic on Wallace Road will move to Marine Drive, particularly, for short local trips. Marine Drive also includes a separated bike facility. Funding for Marine Drive was approved in city of Salem’s 2022 Capitol Improvement bond measure.

In addition to the crossing studies from 2002 and the Salem River Crossing EIS, there has also been several studies completed (and recommended projects constructed) with the objective of improving operations on Marion and Center Street bridges. The *Bridgehead Engineering Study* (1998) analyzed concepts and alternatives for changes to the bridge ramps. Two of those projects on the east side were completed (changes to the northbound and southbound off-ramps to Front Street). The city of Salem and ODOT worked together on projects along Wallace Road (Hwy 221) including changes to the Wallace Road at Edgewater Street, construction of local roads at Taggart Drive/Bartell Drive, moving signals from 7th Street to Taggart Drive, access management of driveways and medians along Wallace Road, and widening the Wallace Road at Glen Creek Road intersection in 2014. To provide better pedestrian and bike connections in the corridor, the Union Street railroad bridge was converted to a bicycle and pedestrian bridge in 2009, paths on the west side were constructed, and improvements along Union Street on the east side were constructed (new signal at Union Street at Commercial Street) or are

¹⁵ Possible changes to the bridges were considered but not included in the city’s recommendations.

funded (Union Street Family Friendly Bikeway). The city of Salem also examined land use and transportation studies in West Salem that could increase employment in West Salem and provide more local circulation (e.g., a 2nd Street grade-separated crossing).

In 2018, the city of Salem created a Congestion Relief Task Force to look at additional near-term options for reducing traffic congestion on the bridges. The Task Force recommended a list of short-term and medium-term projects, policies, and programs that may provide benefits at specific locations or to a limited number of users. These recommendations will be considered for inclusion in the financially constrained MTP after the city of Salem has adopted specific projects into the Salem Transportation System Plan and identified funding.

Other corridors that are congested include Lancaster Drive, Mission Street, the Trade Street/Ferry Street couplet, the Marion Street/Center Street couplet, River Road North, Commercial Street/Liberty Street couplet, and Wallace Road. The cause of congestion on these corridors is mostly when traffic demand on the system exceeds the road or intersection capacity; although, sometimes the cause is due to bottlenecks such as a reduction in the number of lanes, a change in speed, or a geometric condition (steep grades or an “S” curve). Other times, the cause is likely the lack of parallel facilities and/or adjacent land uses that attract or produce a significant addition of trips. For more information, reports for each of the CMP corridors is available on the SKATS Transportation Hub under the ‘Congestion Management’ tab¹⁶.

The movement of goods and freight in, out of, and through the Salem metropolitan area is dependent on a reliable and efficient regional system. The *Oregon Freight Plan* (2017) identified locations in the Salem metropolitan area where road and rail conditions are detrimental to the efficient and reliable movement of goods and freight. Sections of the regional road system that have freight reliability reduced by delay are summarized in **Table 5-10**. Other areas identified include the Brooklake Interchange on I-5 due to the outdated design and high number of freight vehicles, and the section of I-5 from the Kuebler Interchange south past the SKATS boundary at the Delaney Interchange. ODOT has completed an Interchange Area Management Plan (IAMP) for Brooklake Road at I-5, and the next step is for Marion County to adopt any necessary land use changes (likely to be completed in 2023). The recommendations from the Brooklake at I-5 IAMP are discussed in Chapter 7. To address delays on I-5, ODOT is funding a project to widen I-5 between Kuebler Boulevard and Delaney Road.

¹⁶ <https://skats-mwvcog.hub.arcgis.com/pages/congestion-management>

Table 5-10: Freight Highway Delay Areas (Source: Appendix I – Highway Inventories of Need, Oregon Freight Plan, 2017)¹⁷

Route	Start Milepost	End Milepost	Issue(s)	Tier (1-3)
I-5	244.4	248.6	Unreliability south of Salem	2
Ferry St SE	5.3 (Front St)	5.5 (Liberty St)	Delay on Ferry	3
OR 22 E	1.2 (west end of I-5 interchange)	7.9 (between Shaw Rd and Silver Creek Falls Hwy)	Delay on OR 22 west of I-5	3
OR 99E	4.7 (Hood St)	4.9 (Division St)	Delay on 99E (Commercial St)	3

In early 2017, SKATS identified six segments (shown in **Table 5-11**), totaling a little over 9 miles in length, on the Regional Road System for designation as *Critical Urban Freight Corridors* (CUFC). These corridors are meant to represent near-term opportunities for improving the flow of freight traffic. Identification as a CUFC allows the roadway owner to apply for funds that are specifically set aside by FHWA for freight projects (INFRA – Infrastructure for Rebuilding America, nee FASTLANE). However, funding is competitive at the national level and thus not guaranteed.

Table 5-11: Critical Urban Freight Corridors (Within SKATS as of 2023)

Route	Start Point	End Point	Length (mi)
Center St Bridge	Commercial St	Rosewood Dr	0.70
OR 22E	I-5	25 th St	1.18
25th St	OR 22E	Madrona Av	0.84
McGilchrist St	12 th St	25 th St	1
Kuebler Blvd	I-5	Aumsville Hwy	2.12
Cordon Rd/OR 22E Interchange	Aumsville Hwy	Gaffin Rd	0.97
Cordon Rd	Gaffin Rd	State St	1.34
Brooklake Road	NB I-5 Ramp	River Rd	0.81
Total			8.96

Intermodal facilities are needed to allow for freight to be moved from one mode to another (e.g., from truck to rail) allowing the shipper to utilize the most appropriate and cost-effective option. The *Oregon Freight Plan* (ODOT, 2017) identifies three intermodal connector roads within SKATS. These are illustrated in **Table 5-12**. In late 2022 an intermodal facility opened in Millersburg (located 20 miles south of Salem) to facilitate local businesses putting their products on trains bound for the ports at Seattle-Tacoma for shipment overseas among other locations.

¹⁷ The tiers represent the priorities from highest (1) to lowest (3).

Table 5-12: Intermodal Connectors (Source: Oregon Freight Plan, 2017)

Road Name	Connecting Highway	Tier (1-3)
25 th Street SE	OR 22 E	2
Salem Industrial Drive NE to Cherry Avenue	OR 99E Bus.	2
Brooklake Rd NW	I-5	2

There are four federal performance measures that are applicable to congested roadways:

- Percent of the person-miles traveled on the Interstate that are reliable;
- Percent of the person-miles traveled on the non-Interstate NHS that are reliable;
- Truck Travel Time Reliability Index; and
- Annual Hours of Peak Hour Excessive Delay per Capita (applicable to SKATS in 2022)¹⁸.

Many of the congested locations have been noted, and projects have been proposed. The programs discussed in the *Roads-Efficient Use* section apply here as tools to reduce the amount of traffic on the region's roads at any one-time during the day.

Bicycle

The Regional Bicycle System was first defined in the 1996 RTSP. In many of the updates to the Plan since then additional segments are identified, often to align with changes that were made in a local transportation systems plan (TSP) or to reflect the construction of new roads or bicycle facilities (lanes, paths, and bridges). The original Regional Bicycle System was limited to mainly the arterials in the area. The number of miles designated as part of the Regional Bicycle System over the years are presented in **Table 5-13**.

Table 5-13: Regional Bicycle System - Miles Designated (1994 – 2022)

	1994	2002	2011	2015	2018	2022
Miles Defined	141	174	262.2	309.2	291	291
Miles Existing	72	110	190	197.3	205	206
Percent Realized	51%	63%	73%	64%	70.4%	70.8%

Since 1996, there has also been a change in how people and planners perceive bicycle facilities. Earlier, it was deemed desirable and sufficient to have the bicycle facilities on the major roads, which resulted in the creation of striped bicycle lanes along most of the arterials and some collectors in the area. In the early-2000s, studies were conducted nationally showing that many people felt uncomfortable using these on-street facilities due to the volume and/or speed of the motorized traffic. One solution was to create bicycle routes that used local streets where the volume and/or speed of the motorized traffic is lower. (This is similar, but much less expensive, to an earlier paradigm that advocated for the creation of a bicycle network that was totally separated from motorized vehicles). These have a variety of monikers such as 'bicycle boulevard,' 'family friendly

¹⁸ For a complete discussion, see **Appendix P (Performance)**

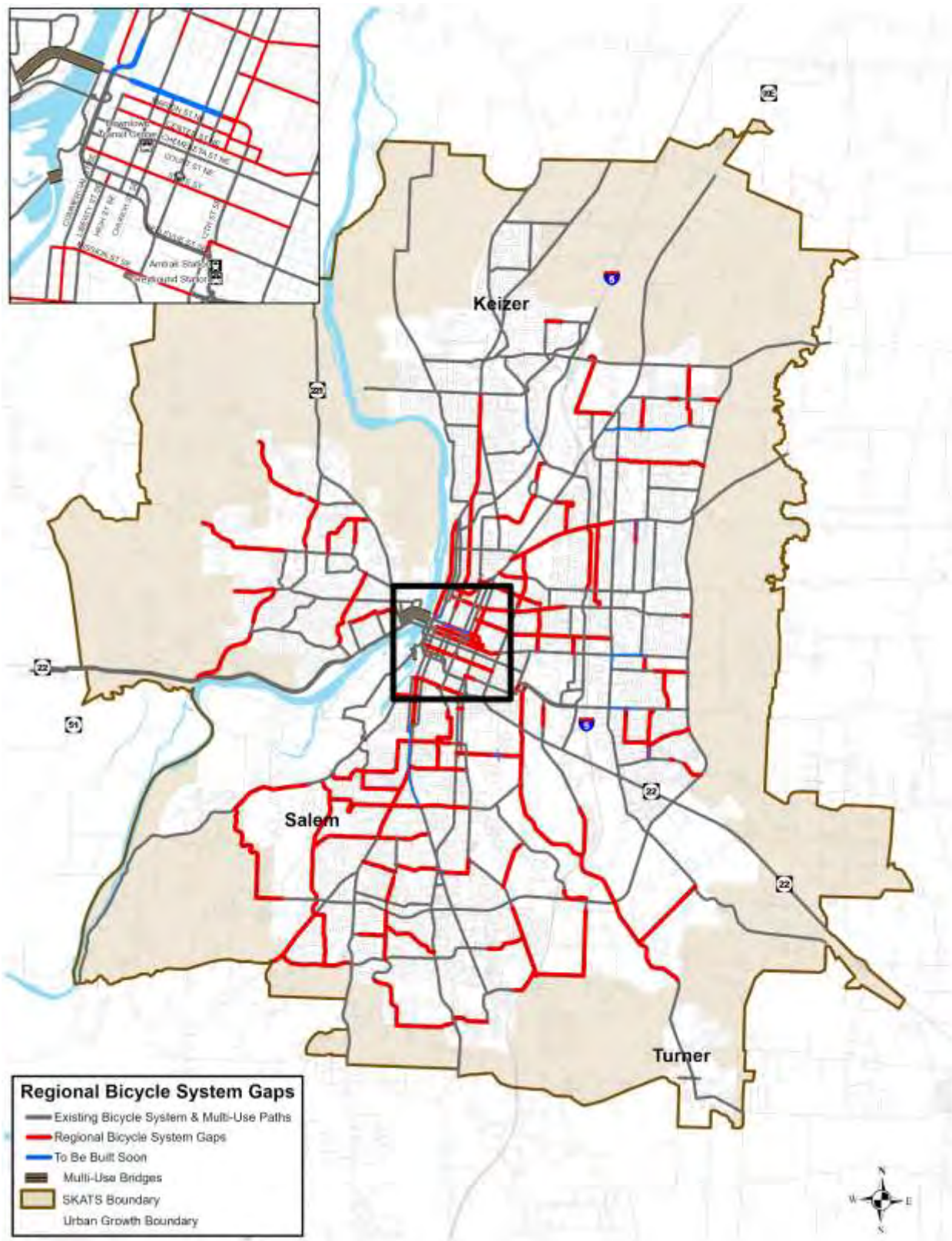
bikeways,’ ‘all ages and abilities (AAA) bikeways,’ and ‘neighborhood greenways. It was recognized that in some areas and locations these could not be implemented, such as in downtowns and along commercially oriented streets.

As many of the destinations people want to go to are located along the major roads (and these are typically the shortest paths between two locations), people who are bicycling need a safe way to reach these destinations. To meet this need, the city of Salem has begun to study and recommended facilities on the major roads that provide a degree of separation from motorized traffic, such as buffered bike lanes and cycle tracks. Salem added buffered bike lanes on High Street and Church Street in downtown Salem. A buffered bike lane is funded for Union Street using funds from SKATS and the city of Salem, and Salem’s Commercial-Vista Corridor Project includes buffered bike lanes that received safety funds from ODOT. The region should continue to look for opportunities where buffered bike lanes meet the needs of bicyclists and fit with the adjacent land uses.

At the regional level, planning studies completed in the region, such as Salem’s *Bike Walk Salem* (2012) and other Transportation System Plans identified locations where facilities are needed. The identified Regional Bicycle System is illustrated in **Map 5-1**, which also highlights gaps where facilities are currently lacking. The miles of gaps by jurisdiction are presented in **Table 5-14**. In addition to these gaps, there are locations where connections need to be improved, such as the crossing of Wallace Road to get to/from the Union Street pedestrian/bicycle bridge. Other barriers include travel along River Road North in Keizer, Lancaster Drive and other major regional roads, and crossing across these same roads as well as Salem Parkway. At many signalized intersections, there are no sensors to detect the presence of bicyclists, which can result in either long waits for the light to change, or risky and unsafe behavior to cross when there is a gap in the traffic flow.

Table 5-14: Regional Bicycle System Gaps (2022 by city limits)

Jurisdiction	Miles Defined	Miles Completed	Miles of Gaps
Salem	195	126	69
Keizer	23	21	2
Turner	2	2	0
Marion County	56	45	12
Polk County	15	12	3
Total	291	206	85



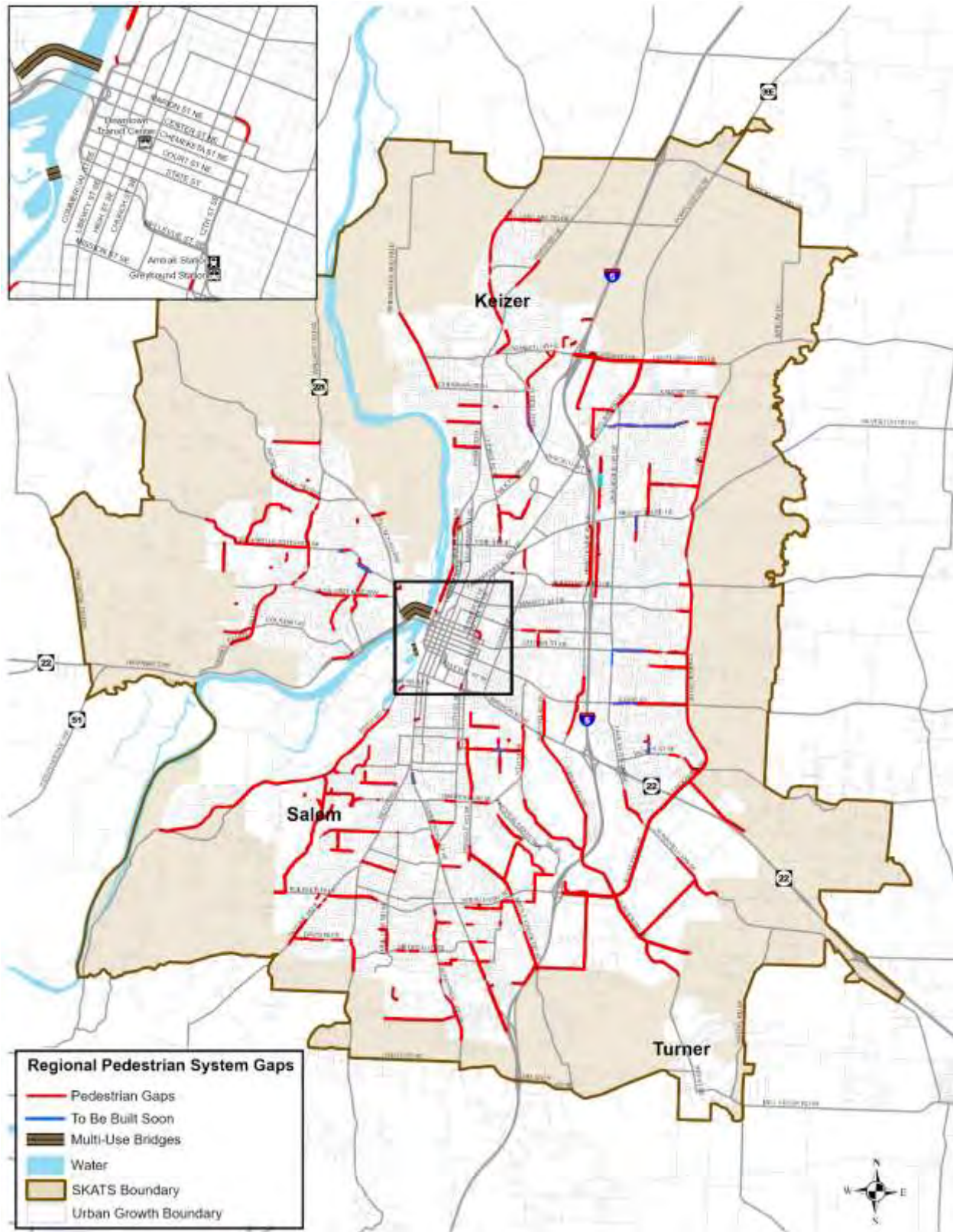
Map 5-1: Regional Bicycle System Gaps (2022)

Pedestrian

Initially the 1996 RTSP defined the Regional Pedestrian System along the roads in the areas with high pedestrian use, such as downtown Salem, the Capitol Mall area, Lancaster Mall (now Willamette Town Center), and around Chemeketa Community College. This system has been updated over time to include the major streets. Other areas included the existing and future transit centers in Keizer, west Salem and south Salem. To ensure accessibility for the public in the Salem metropolitan area, it is important to provide a network of contiguous and maintained sidewalks that link residential, recreational, and commercial areas. Properly constructed and maintained sidewalks also help link land uses to transit stops, which allow people using mobility assistance devices to get to bus stops along the Cherriots fixed-route service instead of calling for Cherriots LIFT.

Walking in a street without sidewalks, especially on medium or higher volume roads, is a safety issue. Many local and collector level roads -- and even arterial roads and sections of the state highway -- were initially built without sidewalks. Using streets without adequate sidewalks makes the journey to work, shopping, school, a transit stop, or anywhere else less convenient and less safe.

Over the last 25 years, sidewalks have been added to many of these roads in the SKATS urban area either as a requirement of adjacent development or using local, state, or federal funds to construct them. However, as of 2022 there are many roads in need of sidewalks; and constructing them usually requires purchasing right-of-way, designing and building storm water facilities along with the construction of curbs, sidewalks and bike facilities. The costs of adding sidewalks to bring roads up to current standards in urban areas is substantial. In 2020, there are complete sidewalks along 74 percent of the regional road system, with an additional 14 percent having partial (only one side) sidewalks. The areas where sidewalks are missing are presented in **Map 5-2**.

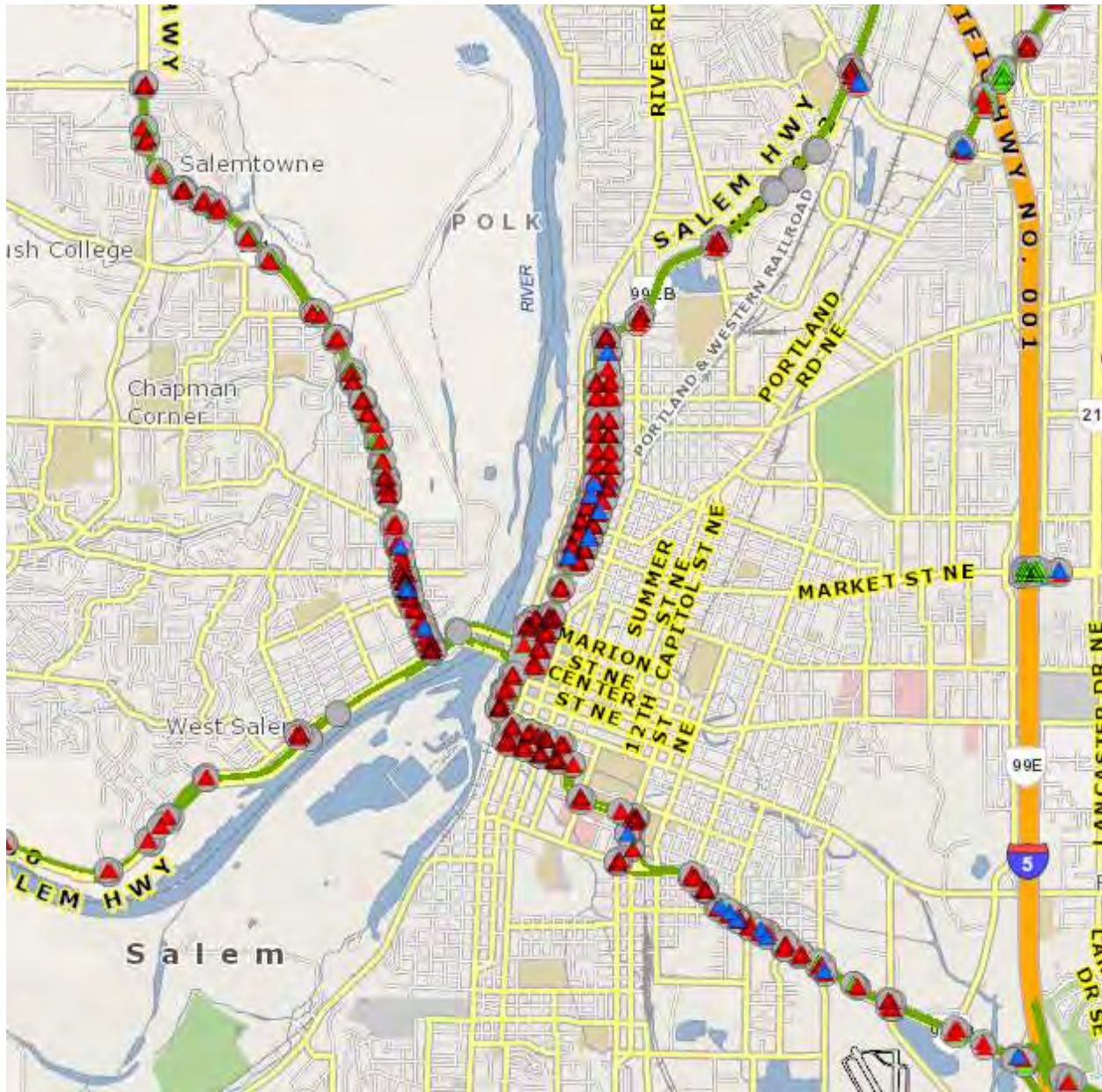


Map 5-2: Regional Pedestrian System Gaps (2020)

The American with Disabilities Act (ADA) was first enacted in 1990 with amendments made in 2008. The purpose of ADA is to ensure that everyone, regardless of capabilities is able “... to fully participate in all aspects of society...”. The ADA is most noticeable in transportation projects with the requirements for properly designed ramps at intersections, driveways with sidewalks designed to work for both vehicles and pedestrians, and pedestrian call buttons within certain height, reach, and level landing standards to make them accessible. Properly designed and built ramps assist the elderly, people with disabilities, and everyone else to comfortably move between home, work, and shopping. SAMTD’s move to a fleet of low-floor buses helps not only those with mobility issues, but those with strollers or wheeled bags.

In 2017, ODOT settled a lawsuit by agreeing to install \$23 million in curb ramps and pedestrian crossing signals along the roads it operates statewide. ODOT has stated it will fix all non-compliant ramps in the state by 2032. In 2022 the Oregon Transportation Commission agreed to allocate \$1 billion to address these needs. The locations where ramps at intersections are either missing or not compliant with the current ADA regulations along ODOT operated facilities in the Salem metropolitan area are illustrated in **Map 5-3**.

The jurisdictions in SKATS are also required to ensure that they update ramps, as necessary, when doing roadwork. In 2018, Marion County completed an inventory of curb ramps in the east Salem area outside the Salem city limits, as well as county-owned roads within other cities in Marion County (including city of Turner). In addition to locations with missing ramps, there were also many ramps that were either not functional or functional but not compliant to the latest ADA standards. The city of Keizer also has an ongoing program in its budget to replace ramps to make them ADA compliant. Work is on-going on the update to the city of Salem’s ADA transition plan.



Map 5-3: Locations of ADA Ramp needs along ODOT Facilities (2022 screen capture from ODOT's TransGIS) Missing Ramps shown as blue triangles, red triangles represent ramps not compliant with ADA. Green triangles show location of ADA Compliant ramps.

Transit

Until 2017, the two main needs in relation to transit service within the Salem-Keizer area were the need to provide service on the weekdays beyond the 6 a.m. to 9 p.m. operating times and, offering service on the weekends and holidays. These two deficiencies made it difficult (or impossible) for many people to use Cherriots as a viable option to owning and operating a vehicle. Second, there are some areas within SKATS that do not have transit service; and it is unlikely that those areas will get service in the future.

As part of H.B. 2017 (which was signed into law in mid-2017), a dedicated stream of funds for operations became available to the transit districts and operators in Oregon. Cherriots has used their share of these funds to offer service on weekends and holidays and to provide additional weekday service earlier and later in the day. The revisions to the transit service began in September 2019, starting with extended weekday and Saturday service. As additional funds from H.B. 2017 were distributed, additional services, such as service on Sundays and holidays, were implemented (with a slight delay due to COVID-19 related issues). It remains to be seen whether the new funds will ensure that these services can be offered for the next 20+ years without additional funding streams.

An ongoing challenge for public transit is the cyclical need to replace significant numbers of their fleet once the vehicles reach the end of their useful life. This is typically 12 to 15 years for the larger buses, less for smaller vehicles used for Cherriots LIFT. Funding programs that are metered in smaller amounts on an annual basis, with the expectation that these funds will be spent within a year or two from allocation, do not provide a single source of funds sufficient to allow the purchase of large numbers of buses every few years. Larger purchases of buses is beneficial to the Transit District as it permits it to negotiate a better price from the vendor(s). Currently the Transit District has 71 buses that are used for Cherriots service, and an additional 42 smaller vehicles that are used for Cherriots LIFT and Cherriots Shop and Ride. As required by Federal regulations, SAMTD has prepared a *Transit Asset Management Plan (latest update in 2022)* that identifies their physical assets, such as buses, support vehicles, transit centers, and maintenance facilities and describes how they will maintain these over their expected lifetime and when they will be replaced (see **Chapters 6 and 7** for discussion on the cost and frequency of replacing buses).

On-time reliability is an issue that could impact ridership of Cherriots with increasing traffic on the region's roads. Currently there are intersections along busy corridors where the volume of traffic is enough to delay left-turns or buses going through an intersection. Solutions to this issue are being discussed with the local jurisdictions, primarily the city of Salem, include exploring the feasibility of implementing green-time extension, moving stops to the far side of an intersection and other methods to increase reliability. SAMTD will be rolling out a suite of ITS (Intelligent Transportation System) devices on their vehicles over the next several years that will make it easier to identify areas where it is difficult to maintain the desired bus schedule. This implementation will also make it possible to provide the rider with real-time information regarding bus arrival.

For several years, the Transit Board has planned for a transit center in South Salem. After a study an initial location was selected, and negotiations started with the property owner. These ended without an agreement and a second location study was undertaken. A new location was identified and negotiations are on-going with the property owner. This transit center would support the circulator and corridor concept that SAMTD has been implementing for some time. SAMTD has previously identified the need for a transit center/station serving East Salem. Currently, they are in discussions with Chemeketa

Community College on expanding and enhancing the collection of stops that serve the campus.

Seismic

Many of the roads, bridges and buildings in the Salem-Keizer area were built before there was an understanding of the geological conditions that exist under our feet. In the event of a major seismic event, many of these structures will be unsafe and/or unusable. The result will be facades or entire buildings and bridges that have collapsed (some into the roadway) and electrical wires that have fallen down and are creating a hazard, rendering the roads unpassable. As part of H.B. 2017, the Oregon Legislature included \$60 million to fund seismic retrofitting of the Center Street bridge (part of Highway 22) over the Willamette River. Construction is slated to start in 2025. Other bridges in the area have been retrofitted as part of projects. ODOT has identified a few bridges on Interstate 5 along important freight corridors in the Salem area that need either retrofitting or rehabilitation. These are shown in **Table 5-15**. Additional information gathered from ODOT and the local jurisdictions provides a better understanding of the bridges in the SKATS area that will need work to meet seismic standards. Shown in **Map 5-4** is the seismic vulnerability of the bridges in the area.

Table 5-15: Bridges on Freight Corridors, Seismic Needs (Source: Oregon Freight Plan, 2017)

Bridge Location	Milepost	Need(s)
I-5 (NB) bridge over Commercial St SE	249.35	Retrofit
I-5 (SB) bridge over Commercial St SE	249.38	Rehabilitation
I-5 bridge over UP RR mail line	259.1	Rehabilitation
I-5 (NB) over Salem Parkway (NB)	259.95	Retrofit
I-5 (SB) over Salem Parkway (SB)	259.95	Retrofit
I-5 (NB) over Labish Bottom	261.12	Retrofit
I-5 (SB) over Labish Bottom	261.12	Retrofit

ODOT has also performed a planning level assessment of the bridges in the area to determine which are either vulnerable or potentially vulnerable to seismic events¹⁹. This did not include all local bridges but focused on those determined to be of highest priority from the point of view of economic recovery and emergency response. The results are presented in **Table 5-16** and **Table 5-17** respectively. These results would need to be confirmed with an engineering analysis of each bridge before any modifications are proposed. The lists are meant to provide an estimate of the magnitude of needs within SKATS.

¹⁹ "Vulnerabilities of individual bridges included in this file are results of a planning level assessment based of an engineering algorithm that takes into account the Peak Ground Acceleration (PGA) from the Cascadia Subduction Zone Earthquake (CSZE) and the most important bridge characteristics (year of built, number of spans, maximum span length, superstructure type, substructure type, etc.)" This analysis is not meant to replace a more complete engineering analysis. ODOT, 2018.

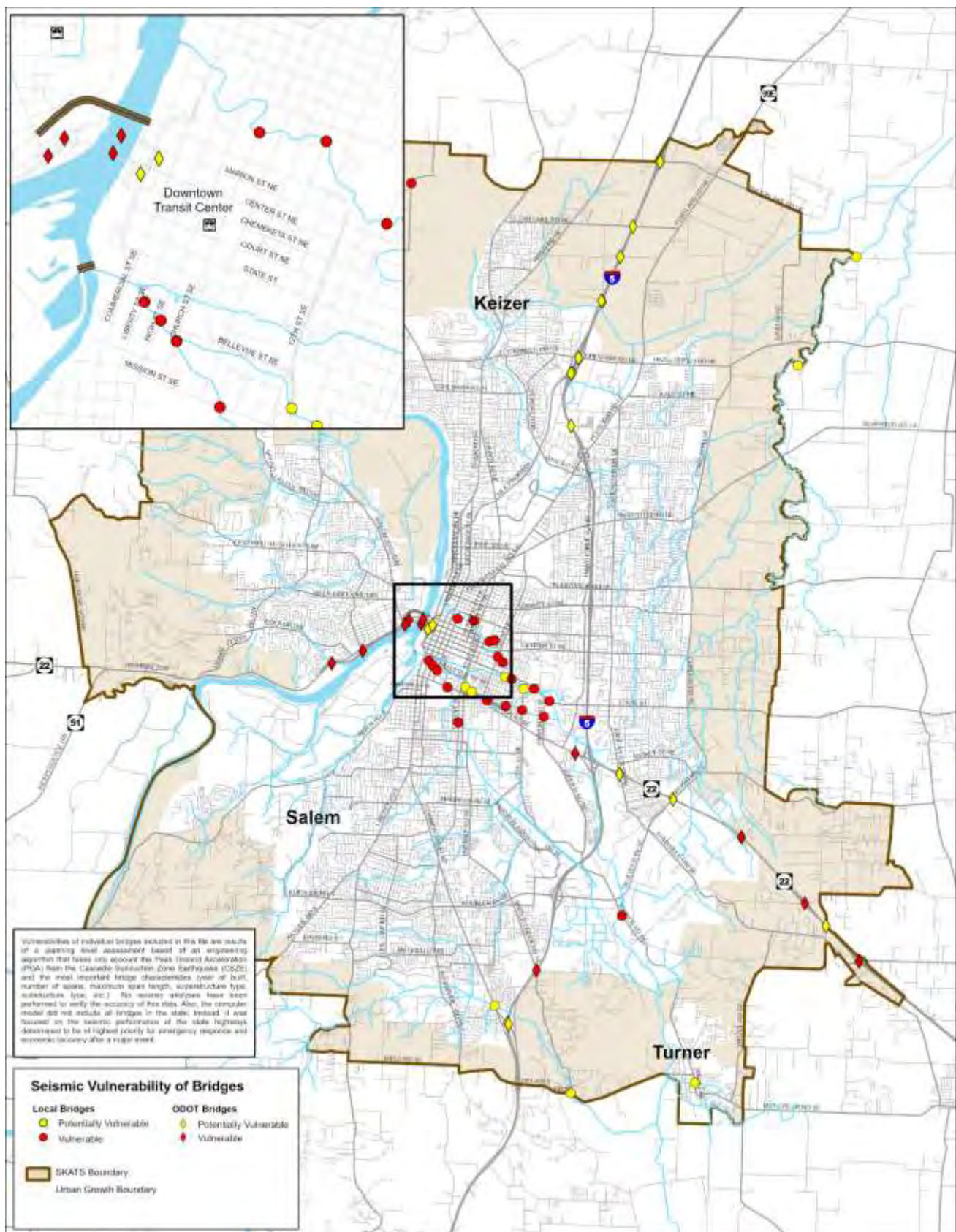
Table 5-16: Bridges that are Vulnerable to Seismic Events (Source: ODOT 2018)²⁰

Carries	Crosses	Owner
12TH ST	PRINGLE CREEK	Local
14TH ST NE	MILL CREEK	Local
15TH ST NE	MILL CREEK	Local
17TH ST NE	MILL CREEK	Local
23RD ST SE	MILL CREEK	Local
25TH ST SE	SHELTON DITCH	Local
AIRPORT RD	SHELTON DITCH	Local
CHEMEKETA ST	MILL CREEK	Local
CHURCH ST NE	MILL CREEK	Local
CHURCH ST SE	PRINGLE CREEK/SHELTON	Local
FORD ST	SHELTON DITCH	Local
HIGH ST SE	PRINGLE CRK	Local
LEE ST	SHELTON DITCH	Local
LIBERTY ST SE	PRINGLE CREEK	Local
MISSION ST	PRINGLE CREEK	Local
RAVENA DRIVE	OVERFLOW CHANNEL	Local
STATE STREET	MILL CREEK	Local
STATE STREET	MILL CREEK	Local
SUMMER STREET NE	MILL CREEK	Local
TURNER RD	MILL CREEK	Local
WINDSOR ISLAND RD	OVERFLOW CHANNEL	Local
BATTLE CREEK ROAD	I-5	ODOT
MISSION ST	MILL CREEK	ODOT
OR 22E	DEER PARK DRIVE SE	ODOT
OR 22E	JOSEPH STREET	ODOT
OR 22E EB	OR 214	ODOT
OR 22W	OR 221	ODOT
OR 22W	OR 221	ODOT
OR 22W CON	WALLACE MARINE PARK	ODOT
OR 22W EB	WILLAMETTE RIVER	ODOT
OR 22W WB	OR 221	ODOT
OR 22W WB	WILLAMETTE RIVER	ODOT

²⁰ Updated to reflect the completion of the Silverton-Little Pudding project in 2022.

Table 5-17: Bridges with Potential Vulnerability to Seismic Events (Source: ODOT 2018)

Carries	Crosses	Owner
13TH ST EAST	SHELTON DITCH	Local
14TH ST SE	SHELTON DITCH	Local
21ST ST SE	MILL CREEK	Local
25TH ST SE	MILL CREEK	Local
66TH AVE	LITTLE PUDDING RIVER	Local
COMMERCIAL ST SE	BATTLE CREEK	Local
DEARBORN AVE N.E.	CLAGGETT CR	Local
DELANEY RD SE	BATTLE CREEK	Local
LABISH CENTER RD.	LITTLE PUDDING RIVER	Local
OAK KNOLL ROAD	SPRING VALLEY CREEK	Local
TURNER RD	MILL CREEK	Local
72nd Ave SE	OR 22E	ODOT
BROOKLAKE ROAD	I-5	ODOT
CHEMAWA ROAD	I-5	ODOT
CORDON ROAD	OR 22E	ODOT
I-5	Union Pacific RR	ODOT
I-5 NB	HWY 72	ODOT
I-5 NB	LABISH BOTTOM	ODOT
I-5 NB	COMMERCIAL STREET SE	ODOT
I-5 SB	OR 99E	ODOT
I-5 SB	HWY 72	ODOT
I-5 SB	LABISH BOTTOM	ODOT
LANCASTER DRIVE	OR 22E	ODOT
OR 22W EB	FRONT STREET	ODOT
PERKINS ROAD	I-5	ODOT
QUINABY ROAD	I-5	ODOT



Map 5-4: Seismic Vulnerability of Bridges within SKATS (Source: ODOT)

Non-Road Systems

Chapter 4 identifies other components of the transportation system, such as aviation, pipelines, and railroads. Gaps and deficiencies in these systems are not included in the discussion presented in this chapter as the funds available to SKATS for the most part cannot be spent on these facilities. Many of these systems are privately owned, and the respective companies are responsible for identifying investments to allow them to meet future needs.

ODOT has funded a study on improvements to passenger rail within the Willamette Valley between Portland and Eugene²¹. The preferred corridor is using the Union Pacific Railroad line through Salem, which is currently used for the *Cascades* corridor and *Coast Starlight* long-distance Amtrak service. As projects are developed from that study they will be included as appropriate in future updates to this Plan.

²¹ See the *Oregon Corridor Investment Plan* on <https://www.oregon.gov/odot/RPTD/Pages/Passenger-Rail.aspx>

Chapter 6 - Financial

Summary

Included in this chapter are the two components of a financially constrained plan. First, a summary of the forecasted financial resources available to the jurisdictions and agencies within SKATS is presented. Following that are the estimated costs to operate, maintain, and preserve the existing system and the projected cost to implement the programs and projects identified (see **Chapter 7**). Financial constraint means that the cost to operate, maintain, and preserve the existing system plus the cost of the identified projects does not exceed the financial resources that are reasonably anticipated to be available to the jurisdictions and agencies in the MPO over the next 27 years. This information is illustrated in **Table 6-14** (page 6-17) for road-related projects and in **Table 6-15** (page 6-18) for transit-related projects. **Financial constraint reflects the projects and cost estimates from the proposed project list as of January 31, 2023.**

Introduction

In the previous two chapters, an overview of the existing system (**Chapter 4**) has been provided along with the gaps and currently identified needs of the existing transportation infrastructure that prevent it from meeting the needs of the people and businesses in the Salem metropolitan area (**Chapter 5**). This chapter, and the next chapter, combine to provide a comprehensive look at what the future system will look like and how it could be funded. Under federal regulations, the long-range plan (i.e., this MTP) must be financially constrained. This means that the cost of the projects and programs proposed in the Plan may not exceed the amount of revenues that are *reasonably anticipated* to be available to the local jurisdictions, ODOT, SAMTD, and SKATS during the time frame of the plan.

SKATS' Role

As mentioned in **Chapter 2**, SKATS does not own, operate, maintain, or have any jurisdiction over any part of the regional transportation system. This is the province of the cities, counties, and other agencies in the area. SKATS' responsibility is limited to coordinated, comprehensive, regional transportation planning activities including development of a long-range regional transportation plan for the MPO area. Financial assumptions in this chapter were developed in cooperation with the local jurisdictions and other affected agencies such as the Oregon Department of Transportation (ODOT) and the Salem Area Mass Transit District (SAMTD).

Overview of Funding Sources

A variety of funding sources are available for the projects and programs identified in this Plan. These range from funds from the Federal government to local sources such as system development charges. These funding sources are typically limited either to a locale or by the type of project. Each of the funding sources available and the type of projects that are eligible will be discussed in this section. An overview of the sources of funding and their allowed uses is presented in **Table 6-1**.

Table 6-1: Funding Flexibility Matrix – General Guides for the Use of Transportation Funding

FUNDING SOURCES	TRANSIT			HIGHWAY					OTHER	
	Transit Operation	Capital Improvements	ADA/Elderly & Handicapped	Maintenance & Operations	Roadway Capacity	Bicycle	Pedestrian	Rideshare/TDM	Passenger Rail & Facilities	Freight Rail and Facilities
Federal										
FHWA-National Highway Performance Program (NHPP)	no	(a)	no	yes	yes	yes	yes	no	no	no
FHWA-National Highway Freight Program (NHFP)	no	no	no	no	yes	no	no	no	no	(j)
FHWA-Highway Safety Improvement Program (HSIP)	no	no	no	no	no	yes	yes	no	no	no
FHWA-Congestion Mitigation and Air Quality (CMAQ)	(h)	yes	no	(e)	(i)	yes	yes	yes	yes	(k)
FHWA – Carbon Reduction Program	no	yes	yes	(l)	(l)	yes	yes	yes	yes	no
FHWA – Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) [Formula funds]	no	yes	no	yes	no	no	no	no	no	no
FHWA-ODOT Surface Transportation Block Grant Program (STBGP)	no	yes	yes	yes	yes	yes	yes	yes	yes	no
FHWA-ODOT Transportation Alternative (TA) Set Aside	no	no	no	no	no	yes	yes	no	no	no
FTA - Metropolitan Transportation Planning (Section 5303)	no	no	no	no	no	no	no	no	no	no
FTA - Urbanized Area Program (Section 5307 and 5340)	yes	yes	yes	no	no	yes (b)	yes (b)	no	yes	no
FTA - Rural Area Program (Section 5311)	yes	yes	yes	no	no	yes (b)	yes (b)	no	no	no
FTA - Enhanced Mobility for Seniors and Individuals with Disabilities (Section 5310)	yes	yes	yes	no	no	yes	yes	no	no	no
FTA - Bus and Bus Facilities (Section 5339)	no	yes	yes	no	no	yes (b)	yes (b)	no	no	no
State										
State Highway Funds	no	no	no	yes	yes	yes	yes	(c)	no	no
Special Transportation Fund (STF) (d)	yes	yes	yes	no	no	no	no	no	no	no
State Transportation Improvement Fund (STIF)	yes	no	yes	no	no	no	no	no	no	no
Transit in Lieu Payments	yes	yes	yes	no	no	no	no	no	no	no
State Transit Tax	yes	yes	yes	no	no	no	no	no	no?	no
Regional										
SKATS STBGP-U	no	yes	yes	(e)	yes	yes	yes	yes	yes	no
SKATS TA-U Set Aside	no	no	no	no	no	yes	yes	no	no	no
Local										
Salem G.O. Bonds	no	no	no	yes	yes	yes	yes	no	no	no
Fuel Tax Revenue	no	no	no	yes	yes	yes	yes	no	no	no
Transportation System Development Charges (f) (g)	no	no	no	no	yes	yes	yes	no	no	no
Urban Renewal	no	yes	no	no	yes	yes	yes	no	no	no
Property Tax	yes	yes	yes	yes	yes	yes	yes	yes	yes	yes
Transit Employer Tax (l)	yes	yes	yes	no	no	no	no	no	no	no

(a) May be used for construction of publicly owned intracity or intercity bus terminals servicing the NHS.

(b) FTA Section 5303 is dedicated for transit planning activities.

(c) Potential uses may include park-and-ride facilities only as part of eligible highway improvements projects.

(d) May be used for transit capital improvements and ADA/elderly & handicapped operations, cannot be used for transit system operations

(e) May be used for operations and infrastructure renewal but not maintenance.

- (f) Limited to roadway capacity projects. Bicycle and pedestrian facility improvements may be included as part of roadway capacity projects.
- (g) TSDCs are currently implemented by the cities of Keizer, Salem and Turner and Marion County.
- (h) Funds may be used to start or expand transit service for the first three years only.
- (i) Capacity projects are limited to HOT/HOV lanes, roundabouts, and left-turn/managed lanes.
- (j) No more than 10 percent of yearly state apportionment may be used for freight intermodal or freight rail projects.
- (k) Retrofit of diesel engines
- (l) Currently not implemented by SAMTD but allowed starting January 2026.

Federal Funds

Federal transportation money distributed to the states comes from the federal Highway Trust Fund (HTF), which receives the federal excise taxes on motor fuels and various heavy truck related taxes. Currently, the taxes are 18.4 cents per gallon for gasoline and 24.4 cents per gallon for diesel. The money in the HTF is currently distributed 86 percent to highway projects and 14 percent to mass transit projects. The federal fuel taxes have not been raised since 1993 and have required Congress to transfer money over twelve times between 2008 and 2021, (totaling \$272 billion) from the General Fund into the HTF to ensure solvency.¹ Additional transfers are likely in the future. Except for a few types of safety projects, all federal funds used in Oregon for roadway projects require a local match of at least 10.27 percent.² For transit projects, the match requirement varies between 10.27 and 50 percent depending on the funding source. Listed below are the major funding programs included in the Surface Transportation Reauthorization Act of 2021 that are likely to be used to fund projects within SKATS.³ Competitive grant programs are not included in this list. The funding programs are split between those administered by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA).

Federal Funds for Highways, Roads, and Bridges

National Highway Performance Program (NHPP) – This program funds the construction of roads on the NHS and replacement or rehabilitation of on-system or off-system bridges. The rehabilitation, restoration, and resurfacing of the Interstate System is also eligible. Reconstruction is eligible if not adding capacity except for HOV lanes. Funds are received and programmed for projects by ODOT. None of the funds are sub-allocated to SKATS.

National Highway Freight Program (NHFP) – established under MAP-21, it aims to ‘... improve the efficient movement of freight on the National Highway Freight Network’ (NHFN). The NHFN consists of the Interstate system, the Critical Urban Freight Corridors, and the Critical Rural Freight Corridors. Note that the *Oregon Freight Plan* has identified the segments of the NHFN that will receive these funds through 2020 and is being updated for adoption in early 2023. Funds are received and programmed by ODOT. None of the funds are sub-allocated to SKATS.

¹ See: <https://www.fhwa.dot.gov/policy/olsp/fundingfederalaid/07.cfm> (this is old pre-IIJA document)

² This is reduced from the national baseline of 20 percent due to the large quantity of federal lands within Oregon.

³ The Surface Transportation Reauthorization Act of 2021 was part of the larger Infrastructure Investment and Jobs Act of 2021.

Highway Safety Improvement Program (HSIP) - Funds may be used for construction and operational projects to address safety issues with the target of reducing traffic fatalities and serious injuries on all public roads. These funds are usable on any public road or publicly owned bicycle or pedestrian pathway, trail, or Safe Routes to School activities. Funds are received and programmed by ODOT; none of the funds are sub-allocated to SKATS. However, ODOT uses a competitive process to award a portion of these funds for safety projects in local jurisdictions.

Surface Transportation Block Group Program (STBGP) - These funds are the most flexible available, as illustrated in **Table 6-1**. Road construction, ITS (Intelligent Transportation System) devices, travel demand management (TDM), and transit capital projects are among the eligible uses. With few exceptions, road-related projects must be located on roads classified as urban minor collector and above or rural major collector and above. SKATS receives a portion of Oregon's STBGP funds according to a formula that is based on population. ODOT's portion of Oregon's STBGP funds can be used anywhere in the state (including within SKATS).

Transportation Alternatives Program (TAP) - This is a set-aside of the STBGP funds. As part of the MAP-21 and FAST Acts, this combines Transportation Enhancements, Safe Routes to Schools, and Recreational Trails programs from SAFETEA-LU into one program. The funds can be used for construction, engineering, educational, or promotional activities. SKATS receives a small portion of Oregon's TAP funds. Received and distributed by ODOT and SKATS.

Congestion Mitigation and Air Quality Improvement Program (CMAQ) - Funds from this program are available for projects in air quality non-attainment or maintenance areas. The funded projects are designed to contribute toward meeting national ambient air quality standards and for projects within SKATS must demonstrate that they will reduce vehicular emissions of carbon monoxide (CO). SKATS began receiving a portion of Oregon's CMAQ funds in 2016 based on a formula approved by the Oregon Transportation Commission (OTC).

Carbon Reduction Program - A new program as of 2021 focused on reducing the amount of carbon dioxide attributable to the surface transportation system. Funding is available for projects and programs from diesel engine retrofit to travel demand programs (e.g., Cherriots Transportation Options) to projects that facilitate and support walking, biking, transit, and shared rides. Funds are distributed via formula similar to STBGP to the three TMA (Transportation Management Areas) in Oregon.

Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation (PROTECT) Program - A new program as of 2021 with both formula and competitive grants available. The focus is on making the transportation infrastructure more resilient, able to continue operating or recovery rapidly from natural disasters and weather events. Within SKATS, the focus will likely be on severe storms and weather, flooding, wildfires, and earthquakes.

The funds received by SKATS are programmed to projects of regional importance via a process developed for the SKATS Transportation Improvement Program (TIP).⁴ Projects are ranked according to how well they address the regional objectives presented in **Chapter 3** (among other considerations). The amount of federal funds that are forecast to be received by SKATS over the period covered by this Plan from STBGP, TAP, Carbon Reduction (CRP), and CMAQ programs is over \$331 million, as illustrated in **Table 6-2**. Funds from the other federal programs (NHPP, NHFP, HSIP) may be used for projects within SKATS (primarily by ODOT), but this forecast does not assume a specific amount for the regional systems. An estimate of the amount of Federal funds received by Marion County that will be used within SKATS are also shown. The distribution of unobligated funds from other states that are received by ODOT is a new funding stream. There is a high variability of the amount distributed to ODOT from FHWA and the subsequent amount provided to SKATS. Estimates for likely future redistribution amounts were provided by ODOT and are included in the SKATS total shown below.

In August 2022, Salem received a federal RAISE (Rebuilding American Infrastructure with Sustainability and Equity) grant worth over \$13.2 million for the McGilchrist project.

Table 6-2: Federal Funds Forecast for SKATS and Marion County 2023-2050

	2023-2033	2033-2050	Total
FHWA – SKATS	\$105,413,300	\$256,279,600	\$361,692,900
FHWA – Marion C.	\$7,749,200	\$18,512,700	\$26,261,900
FHWA – RAISE (Salem)	\$13,229,300	\$0	\$13,229,300

Federally Funded Programs for Public Transit

A smaller portion of the HTF is sent to local transit districts via programmatic and formulaic means overseen by the Federal Transit Administration (FTA). Most of these funds are for capital projects such as purchasing buses and constructing bus stops and maintenance facilities, or maintenance (preventative maintenance of the bus fleet). Because SKATS is designated as a Transportation Management Area (TMA), federal transit funds are restricted in use of operating the transit service. For transit districts in areas with a population of 200,000 or more, but that operate fewer than 100 buses in peak service, most of the operating expenses must come from non-federal sources of revenue, with only a portion of their 5307 Urbanized Area funds available for operations. The federal programs that are available to the Salem Area Mass Transit District (SAMTD) for use within SKATS are discussed below. ODOT Public Transportation division also receives many of these funds, which are distributed to public transit operators within Oregon including SAMTD. In addition, some of the FHWA funding programs discussed above may be used for public transit projects; SKATS has historically programmed some

⁴ For more information, go to www.mwvcog.org and search for “TIP.” An update to the SKATS TIP covering the years 2024 to 2029 will be adopted in May 2023.

of its federal funds for replacement buses, transit shelters, intelligent systems development, and transit planning

Urbanized Area Formula Grant (Section 5307) – Primarily used for capital expenses (including preventative maintenance). A limited percentage may be used for operations. This is largest source of federal transit funds received by SAMTD.

Enhanced Mobility of Seniors and Individuals with Disabilities (Section 5310) - Consolidates Elderly and Disabled and New Freedom programs from SAFETEA-LU. This program provides funds to private non-profit and public organizations that provide transportation services to elderly and/or disabled persons. The funds can be used for capital, mobility management, and operating expenses.

Formula Grant for Rural Areas (Section 5311) - Funds from this program may be used for capital projects, operating, and administrative assistance of public transportation services in rural and small-urban areas.

Bus and Bus Facilities (Section 5339) - Used to fund the replacement, rehabilitation, and purchase of buses, vans, and related equipment and to construct bus-related facilities.

Metropolitan Transportation Planning (Section 5303) - Provides funds for multimodal transportation planning in urban areas.

The amount of federal transit funds forecast to be distributed to SAMTD from FTA that will be used within the SKATS boundary is illustrated in **Table 6-3**.

Table 6-3: Federal Funds Forecast for SAMTD 2023-2050

	2023-2033	2033-2050	Total
Total FTA	\$79,151,300	\$194,138,600	\$273,289,900

State Funds

Funds collected from the State fuel and weight-mile taxes are limited by the Oregon Constitution for use within the road right-of-way. The revenue received is currently divided between the State, counties, and cities in a 60.05–24.38–15.57 split, respectively. Funds are distributed to counties based on vehicle registrations and to cities by their population. The State Constitution mandates that at least one percent of state fuel tax revenues be used by the recipient jurisdiction on bicycle and/or pedestrian projects. For the cities and counties, most of the State Highway Funds they receive is used to preserve, maintain and operate their existing transportation system because maintenance costs have been increasing faster than revenues distributed by the State. This reduces the amount of the State Highway Fund revenue available for capital projects. The amount of state highway funds distributed to the local jurisdictions within SKATS is illustrated in **Table 6-4**.

In 2019, ODOT was directed by the Oregon Legislature to consolidate the State Transportation Improvement Fund (STIF) and the Special Transportation Fund (STF) into one program. The merger of these two funds into the new STIF will be effective on July 1, 2023. Funding comes from a variety of sources, including a payroll tax of one-tenth of one percent on employees in Oregon, fees for ID cards, non-highway gas taxes, and cigarette taxes. The funds are distributed to transit districts and operators within the state primarily via a formula program, with a small percent awarded via a discretionary program. SAMTD also receives additional funds from the State, primarily as “In Lieu” payments, for their buildings and lands that are not subject to local property taxes. The amount that SAMTD is forecast to receive from the State is illustrated in **Table 6-4**.

Table 6-4: Forecast of State Highway and Transit Funds 2023-2050

	2023-2033	2033-2050	Total
State – Highway Funds	\$247,262,900	\$534,741,800	\$782,004,700
State – Transit Funds	\$213,291,100	\$699,320,500	\$911,611,600

Local Funds

In addition to the Highway Funds distributed to the cities and counties by the State, the jurisdictions within the SKATS boundary have other revenue sources to pay for the operation and maintenance of the current system and to fund capital projects to address system needs and gaps. The mix of revenue sources varies for each of the jurisdictions.

Transportation System Development Charges (TSDC) are levied when a residential or commercial development is built. These are used for projects that address the additional demands on the transportation system imposed by new trips generated by the development. By statute, they may not be used to maintain or operate the existing system or to pay for capital needs that pre-date adoption of the TSDC. Typically, the jurisdiction will identify the projects and the amount that can be covered in their TSDC regulations, which are updated periodically.

Developers of properties might be required to put in parts of the transportation infrastructure as a condition for that development. These can include sidewalks, half- or full-street improvements, traffic signals, etc. An estimate of the amount anticipated is included in the total shown below.

Salem has urban renewal districts and has used the revenue collected to fund transportation infrastructure within the districts. These define a specific area(s) within each city and dedicate the tax increment raised in them toward projects located in the district. Projects must be included in the applicable urban renewal plan and are not limited to transportation. Renewal districts are in existence for a limited time (20 years unless renewed) and have a limit on the amount of funds they can raise and spend.

Salem has used voter-approved General Obligation (GO) bonds to periodically fund a mixture of projects within their city limits that repair and expand the road system. These have used a 10-year time span to collect and fund the projects with the bonds being repaid via the property tax collected. The last GO bond was approved in 2022 providing approximately \$150 million in funding for transportation projects. For use in demonstrating financial constraint, the working assumption is there will be two additional bonds during the time frame of this Plan.⁵ Salem restricts the amount of bonds that are 'active' at one time to limit the annual property tax levy for debt not to exceed \$2.42 per \$1000 of assessed value. This necessitates coordination amongst the various city departments (Public Works, Library, Police, etc.). Only a portion of each bond has been used for capital projects on the regional system. The bond is also used to pay for larger maintenance projects and projects off the regional system. The estimate illustrated in **Table 6-5** includes only the portion of the forecasted bond revenues that would be used on roads that are part of the regional systems.

Polk County also has used voter-approved bonds in the past, mainly for maintaining the roads that they own, most of which are outside SKATS.

A significant source of funding for the Salem Area Mass Transit District (SAMTD) for the operation of their fixed-route and demand-response buses is property taxes on land within their service boundary. The last successful vote to increase funding for the district was in 1996, which established a new tax base and will account for less than 50 percent of the operating revenue available to the Transit District. Attempts to increase the base at the 2006 and 2008 elections were unsuccessful. Another local source of funds includes monthly transit passes and fares collected from passengers (**Table 6-5**)⁶. Beginning in 2026, SAMTD will be allowed to levy an employer tax as part of S.B. 1536 which was signed into law in 2018.⁷ This tax is not included in the forecasts for this Plan update but may be included in future updates depending on the direction of the SAMTD Board.

Table 6-5: Local Funding for Roads and Transit 2023-2050

Funding Source	2023-2033	2033-2050	Total
Local – for Regional Roads	\$254,328,900	\$547,114,600	\$801,443,500
Local – Transit	\$257,913,000	\$579,140,100	\$837,053,100

Other Potential Funds Not Included in the Revenue Forecasts

Additional awarded funds periodically become available for projects within SKATS but are difficult to forecast due to their nature; especially, those associated with new or changed policies. This includes Federal earmarks (which were removed as an option with MAP-21 but have returned post-IIJA), competitive grant programs from FHWA or

⁵ Assuming roughly 13 years between GO Bonds, these are in 2036 and 2049, both at \$200 million non-inflated.

⁶ The SAMTD Board recently stopped allowing and advertising on buses and transit stops.

⁷ See: <https://gov.oregonlive.com/bill/2018/SB1536/>

FTA (e.g., RAISE and No-Lo),⁸ and the Oregon Legislature directing funding to specific projects as part of legislative bills (such as H.B. 2001 and H.B. 2017),⁹ or legislation changing the priorities for *Connect Oregon*. Additionally, any future decisions by the Oregon Transportation Commission (for example, where Federal Freight funds received by the Oregon will be spent), and the outcomes of Oregon's competitive programs (such as Safe Routes to School infrastructure and All Roads Transportation Safety (ARTS)) are not forecast beyond those projects that have already been awarded funds. These potential funding sources are not included in the forecasts; although, some of those funds could potentially be used for projects within SKATS. One-time funding increases, such as the American Recovery and Reinvestment Act (ARRA) [2009], are also not part of the future revenue forecast.

Summary of Forecasted Revenue

Summarizing **Tables 6-2** through **6-5**, the funds that are reasonably anticipated to be received by each of the SKATS members is illustrated in **Table 6-6**. This reflects the funding identified, including all grants and earmarks awarded by December 20, 2022.

In addition to these amounts, within the SKATS TMA area ODOT is forecast to have approximately \$140 million available over the next 27 years for capital projects on the state system plus approximately \$85 million for operations, maintenance, and preservation of the current state highway system. The sources for these are a combination of federal and state funds. Larger projects with higher costs, such as the seismic retrofit work on the Center Street Bridge, require direct action of the Oregon Legislature (as when a bill such as H.B. 2001 is signed into law that identifies projects to be funded) or the Oregon Transportation Commission. Funds for these types of projects are from across Oregon and assigned on a basis on a variety of factors.

Table 6-6: Summary of Forecasted Revenues by Funding Source 2023-2050 (Excluding ODOT)

	Reference	2023-2033	2033-2050	Total
FHWA – SKATS	Table 6-2	\$105,413,300	\$256,279,600	\$361,692,900
FHWA – Marion C.	Table 6-2	\$7,749,200	\$18,512,700	\$26,261,900
FHWA – RAISE: Salem	Table 6-2	\$13,229,300	\$0	\$13,229,300
State Highway Funds - Locals	Table 6-4	\$247,262,900	\$534,741,800	\$782,004,700
Local Funds for Regional Roads	Table 6-5	\$254,328,900	\$547,114,600	\$801,443,500
Total - Roads		\$627,983,600	\$1,356,648,700	\$1,984,632,300
FTA – SAMTD	Table 6-3	\$79,151,300	\$194,138,600	\$273,289,900
State Transit Funds	Table 6-4	\$213,291,100	\$699,320,500	\$911,611,600

⁸ RAISE – Rebuilding America's Infrastructure with Sustainability and Equity, No-Lo is for transit purchases of No or Low emission vehicles.

⁹ Specifically, the Oregon Legislature directed \$60 million in funds as part of H.B. 2017 to fund seismic upgrades on the Center Street Bridge. The cost estimate of the upgrades is \$99.7 million (for construction starting in 2025).

Local Funds Transit	Table 6-5	\$257,913,100	\$579,140,100	\$837,053,100
Total - Transit		\$550,355,400	\$1,472,599,200	\$2,022,954,600

Expenditures

The expenditures on the regional system by the local jurisdictions and agencies are for the operations, maintenance, and preservation of the existing system and modernization projects to address system needs and – in the case of transit – to build new facilities or replace their rolling stock that has reached or exceeded the end of their usable life. These are discussed and presented in this section.

Operations, Maintenance, and Preservation

These expenditures cover the day-to-day operations of the regional system, and the maintenance and preservation projects to keep systems in a state of good repair. Reports filed by the cities and counties as part of the requirements of H.B. 2017 provide more information on the condition of the locally owned roads and bridges (see **Chapter 5**). Information on the roads and bridges that are part of the National Highway System is collected by ODOT every two years and are part of the federally required performance measures discussed in **Chapter 3** and **Appendix P**.

SKATS Regional Programs

SKATS currently allocates a portion of the federal funds it receives to several on-going regional operational programs. These programs are the Rideshare and Transportation Demand Management (TDM) program managed by Cherriots Transportation Choice and the Regional Traffic Signal Control Center operated by the city of Salem. These address the efficient operation of the regional system (in concordance with several of the MTP Goals stated in **Chapter 3**). Another regional program that has been more recently added is funding the regional Safe Routes to School program. Additionally, funds are allocated to SAMTD for the replacement of transit buses when they have reached the end of their useful life, per the strategy outlined in SAMTD's *Transit Asset Management Plan* (approximately \$25.6 million). Finally, the operation of the MPO is funded with federal funds, plus state and local match. The amount SKATS is forecast to fund these programs over the next 27 years is illustrated in **Table 6-7**.

Table 6-7: Expected Cost of Regional Programs, 2023-2050

Program	2023-2033	2033-2050	Total
Total	\$26,969,600	\$70,621,200	\$97,580,800

Salem Area Mass Transit District

Operations and maintenance expenses for the Transit District are substantially different than those for the other members of SKATS. Within SKATS are two types of major services: a fixed-route service (“Cherriots”) and a demand-response paratransit service (“Cherriots LIFT”). The Transit District also has a service for seniors and those with disabilities for shopping and medical appointments (“Cherriots Shop and Ride”) and a

Shopper Shuttle for trips to dedicated stores. The Transit District also operates its regional service (“Cherriots Regional”) between cities in Marion and Polk Counties, but funding for this is not included in **Table 6-8**.

The cost for SAMTD to operate their fixed-route Cherriots service and the demand-response Cherriots LIFT (including the costs for fuel, labor, insurance, maintenance, etc.), as well as for the supportive functions of dispatching buses, maintaining, and cleaning stops and buses, customer service, and general administration over the next 27 years, is approximately \$1.88 billion (**Table 6-8**). This estimate is for the level of service offered by the current fixed-route transit system as it exists today. The majority of this will be met with property taxes, STIF distributions from the state, and fare revenues, and to a lesser extent by the other fees collected by the Transit District. After subtracting the estimated cost of providing bus service, SAMTD will have approximately \$145 million available for projects and renewing their bus fleet (plus any grants and/or earmarks they may receive, plus funds available from SKATS).

Table 6-8: Estimated Cost of Cherriots Service, 2023-2050

Program	2023-2033	2033-2050	Total
Bus Service	\$506,758,000	\$1,370,804,800	\$1,877,562,800

ODOT and Local Jurisdictions

ODOT spends approximately \$1,900,000 per year on operation and maintenance of its roadways within SKATS. While the funding is primarily from the State Highway Fund, there are also federal funds used, especially along I-5. Investments are based, in part, on the rankings from ODOT’s management systems (such as pavement) that ODOT uses to track the condition of their facilities and assets. In addition, policy direction set by the Oregon Transportation Commission (OTC) – such as which facilities will be awarded federal Freight Funds – can influence expenditures as can legislative decisions made by the Oregon Legislature.

The OTC has adopted a policy that the preservation of the existing transportation system is its first priority and has directed that the majority of funds be used to that purpose statewide. Therefore, for state owned and operated highway facilities – which include Interstate 5, Highway 22, Highway 221 (Wallace Road), and Salem Parkway – 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. With the full implementation of the performance measures related to MAP-21 and FAST, it is possible that ODOT will need to spend more funds to meet the targets set for the various performance measures.

The cities and counties that own the majority of roads and bridges within SKATS spend their operations, maintenance, and preservation funds primarily on roads that are part of the regional system and to a lesser extent on the local roads that provide the final connection between the regional system and the neighborhoods. The local jurisdictions use State Highway Funds for these tasks. The estimated expenditures for operating,

maintaining, and preserving the regional system are presented in **Table 6-9**.

Table 6-9: Estimated Operations, Maintenance, and Preservation Expenditures on Regional Roads, 2023-2050

	2023-2033	2033-2050	Total
ODOT	\$24,713,500	\$60,616,100	\$85,329,700
Local Jurisdictions	\$226,145,800	\$496,950,700	\$723,096,500

Regional Modernization Projects – Road and Bridge Related

In addition to the cost of operating and maintaining the current system, the projects identified in **Chapter 7** and **Appendix I** are necessary to address some of the gaps in the existing regional system that were discussed in **Chapter 5**. The total estimated cost for the identified regional roadway capital projects (i.e., the project lists in **Chapter 7** and **Appendix I**), is over \$2.2 billion (including ODOT projects). It should be noted that the cost is likely higher as not all projects are included if the planning studies are underway or if the projects have not been added into the appropriate local transportation systems plan. Also, in the last several years construction costs have exceeded general inflation. This introduces a level of uncertainty in the cost estimate.

The projects included in **Chapter 7** meet the fiscal constraint requirement of this plan for two reasons: First, adequate revenues have been identified for the maintenance and preservation of the regional system; and second, the estimated costs (in year of expenditure) for the capital projects included in this Plan are less than the estimated revenues for capital projects (See **Table 6-6** and **Table 6-10**). This project list was developed following the project selection process outlined in **Appendix C**. After subtracting the cost of the programs for operating and maintaining the current regional system and the cost to provide the regional programs that SKATS funds, in total, the agencies and local jurisdictions (excluding ODOT) within SKATS are forecast to have approximately \$1.16 billion for roadway capital projects, as presented in **Table 6-14**

The estimated cost in Year of Expenditure (YoE) dollars by the type of project, and whether it is “committed” (to be built or funded within approximately the next five years) or “included” (to be built within the timeframe of this Plan and has priority to be funded with the money currently forecasted to be available) is presented in **Table 6-10**. The estimated costs (in YoE dollars) of the committed and included projects by jurisdiction are provided in **Table 6-11**. The project categories are described in more detail in **Chapter 7**. A complete list of the projects identified to be constructed over the next 20+ years is presented in **Table 7-2** in **Chapter 7**.

Table 6-10: Project Cost by Project Type and Category (Based on Evaluation Scores and Costs) [Excludes ODOT Projects]¹⁰

	Committed	Included	Subtotal	Illustrative	Total
Road-Bridge	\$195,722,300	\$733,342,000	\$929,064,300	\$436,966,000	\$1,366,030,300
ITS-Signals	\$1,093,000	\$4,765,000	\$5,858,000	\$58,147,000	\$64,005,000
Bicycle-Pedestrian	\$36,647,000	\$165,776,000	\$202,423,000	\$21,001,000	\$223,424,000
Transit	\$12,391,000	\$18,906,000	\$31,297,000		\$31,297,000
Total	\$245,853,300	\$922,789,000	\$1,168,642,300	\$516,114,000	\$1,684,756,300

Table 6-11: Project Cost by Jurisdiction and Category (Based on Evaluation Scores and Costs) [Excludes ODOT Projects]

	Committed	Included	Subtotal	Illustrative	Total
Keizer	\$5,013,300	\$18,885,000	\$23,898,300	\$16,674,000	\$40,572,300
Salem	\$191,089,000	\$765,415,000	\$956,504,000	\$297,088,000	\$1,253,592,000
Turner	\$0	\$1,188,000	\$1,188,000	\$0	\$1,188,000
Marion County	\$37,360,000	\$116,749,000	\$154,109,000	\$202,352,00	\$356,461,000
Polk County					\$0
SAMTD	\$12,391,000	\$20,552,000	\$32,943,000	\$0	\$32,943,000
Grand Total	\$245,853,300	\$922,789,000	\$1,168,642,300	\$516,114,000	\$1,684,756,300

ODOT Funding

Shown in **Table 6-12** are the estimates of project expenditure by Oregon on the state-highway system within SKATS. Determining which ODOT projects will be funded in the future is not as simple as for the local jurisdictions. First, many of the projects identified have current cost estimates in the tens of millions of dollars and compete for funding not just with other ODOT projects within SKATS, but within Region 2 and the rest of Oregon. Second, there is not an equivalent long-range plan that lays out state-wide projects over the next 27 years. Third, projects on the state highway system could be funded by means not available to the local jurisdiction, such as being included by the Oregon Legislature as part of a future transportation funding bill, or more of the funds available to ODOT could be allocated. Given that uncertainty, beyond the immediate next five to ten years the projects are listed as “ODOT TBD”, to designate the possibility of any individual project being funded in the next 27 years, but without the certitude of the local projects. Historically, major projects have been completed over the past 20+ years through a combination of the funding options discussed above.

¹⁰ As the Center Street Seismic Project is an ODOT project, it is not included in the Road-Bridge totals. Full funding is a priority and will be found from a combination of state and federal funds available to ODOT.

Table 6-12: Project Cost for ODOT Projects

Committed	Included	"TBD"	Total
\$206,549,000	\$3,909,000	\$325,953,900	\$536,411,900

Regional Modernization Projects – Transit Related

In addition to projects that are included in the totals shown in **Tables 6-10** and **6-11** (which are for physical structures such as transit centers), the Transit District will spend the remainder of their approximately \$145 million that was identified for capital projects over the next 27 years to replace and expand their fleet of buses and other vehicles (**Table 6-13**). It is anticipated that SAMTD will receive grants and/or earmarks over the next 27 years, plus use approximately \$25.6 million in funding from SKATS to do so.

Table 6-13: Estimated Cost for Transit Fleet Modernization Projects, 2023-2050

	Total
Transit Modernization	\$261,615,000

Identifying Other Potential Funding (Not Included in This Plan)

The discussion in the previous sections of this chapter describes the sources of funds that are reasonably expected to be available to the jurisdictions and agencies in the region over the next 27 years to fund the operations, maintenance, and preservation of the regional system as well as fund capital projects. This results in a system that is presented in **Chapter 7**. As mentioned previously, this group of financially constrained projects does not include all projects that have been identified to address the needs that were discussed in **Chapter 5**. A more complete list of projects that have been identified during planning studies, but for which funding is currently not expected to be available over the next 27 years, which are labeled as “Illustrative”, is provided in **Appendix I**.

To address all these needs, plus other needs that may develop over the next 27 years, additional levels of existing funding sources or new funding sources may be needed. A list of possible revenue sources include, but are not limited to:

- Local income tax
- Local property tax (GO Bonds)
- Local improvement districts
- Utility fees (street, streetlight, sidewalk, etc.)
- VMT (Vehicle Mile Tax) Fees
- Increased taxes on vehicle use (fuel, etc.)
- Increased fees on vehicles (registration, etc.)
- Dedicated Oregon Lottery Funds
- Tax increment financing
- Grants from the Federal or State government (e.g., RAISE)

- FTA 5309 Small Starts (competitive program)
- Tolling (roadway capital projects only)
- Public-Private Partnerships
- Revenues from carbon taxes

Additional transit operating funds could come from one, or more, of the following sources:

- Increased fares
- Employer Payroll tax (as used by TriMet and Lane Transit District, available after January 2026)
- Transit utility fee
- Local income tax
- Increased property tax
- Public-Private Partnerships
- Revenues from carbon taxes

The list of possible funding sources presented above is not meant to be exhaustive. It is possible that there are other solutions that have not been identified. In addition, there are limitations with each of the sources listed, either in the amount of funds that could be raised, in the applicability to within SKATS, or in the likelihood of being approved for implementation. For example, increases in local property taxes for transportation must compete with other services (such as parks and fire departments). VMT taxes (aka road usage charge or mileage collection system) are slowly being implemented in Oregon, and it is unknown whether they will add any revenue to the system. Increasing fuel taxes, whether at the federal, state, or local level tends to be unpopular unless it is dedicated to a defined list of projects. It is unknown how a local fuel tax would be received by those voting on such a proposal, but 14 cities and two counties in Oregon have successfully passed them.

Also, some of the possible funding sources (e.g., certain federal grants) may only be used on projects of a minimum cost, often in the tens of millions of dollars. As such, these sources are not appropriate for all types of projects. Some funds could be used to free up existing money used; for example, a streetlight utility fee would allow gas tax funds currently expended to be used on other projects.

For transit, as part of Senate Bill 1536, SAMTD can enact an employer payroll tax without a vote of the people of the area.¹¹ Local taxes for transit did not pass in the past two attempts that took place in the first decade of the 2000s.

¹¹ This ability will not be available until January 2026. The bill also changed the Transit Board from citizen-elected to Governor-appointed as the existing Board member terms expire. SAMTD has not stated whether they plan to use this option.

No matter the combination of funding sources, the region has a finite capacity to fund projects and operations, while still paying for other non-transportation related services (e.g., police, fire, schools, etc.).

Financial Constraint

Financial constraint reflects the projects and cost estimates from the proposed project list as of January 31, 2023.

Fiscal responsibility, as well as federal and state regulations, requires that the Plan exhibit “financial constraint.” This means that the cost of the identified projects does not exceed the forecasted financial resources available over the period covered by this Plan. Funds from sources that have not been used in the last 20 years are not included in the financial forecasts. Nor are any new sources of funds currently forecast to be available, as these would require policy action by the jurisdiction that would use the funds.

Federal and state regulations additionally require the demonstration that adequate funding is expected to be available to maintain and operate the existing transportation facilities and services during the time frame of this Plan. This will help protect the investments made in previous years.

Projects that do not have reasonably anticipated funding identified or that increase the level of transit operations beyond the level existing in 2023 are not included in the financially constrained portion of this Plan. These projects are categorized as “Illustrative.” While they are presented in **Appendix I**, they are not considered part of this Plan. Before any of the projects listed in **Appendix I** could be built, adequate funding would have to be identified and shown to be reasonably available over the timeframe of this Plan. This could include removing other projects from the “Included” list of projects.

A summary of the funds available and identified expenditures for the road-related projects that are part of the financially constrained Plan are presented in **Table 6-14**. The funds and expenditures for the transit-related projects are illustrated in **Table 6-15**.

Table 6-14: Financial Constraint for Road-related Expenditures (without ODOT projects)

Source	Revenue	Expenditure-O+M & Reg. Programs	Expenditures- Regional Capital	Residual
FHWA – SKATS	\$361,692,900	\$97,580,800	\$264,112,100	\$0
FHWA – MC	\$26,261,900	\$0	\$26,261,900	
FHWA RAISE – CoS	\$13,229,300	\$0	\$13,229,300	0
State Funds – Roads	\$782,004,700	\$723,096,500	\$58,908,200	\$0
Local Funds – Regional Roads	\$801,443,500	\$0	\$801,443,500	\$0
Total-Roads	\$1,984,632,300	\$820,677,300	\$1,163,955,000	\$0

Table 6-15: Financial Constraint for Transit-Related Expenditures

Source	Revenue	Expenditure- O+M	Expenditures- Capital	Residual
FTA – SAMTD	\$273,289,900	Not Available Broken Out by Fund Type and Expenditure		
State Funds – Transit	\$911,611,600			
Local – Transit	\$837,053,100			
Total – Transit	\$2,022,954,600	\$1,877,562,800	\$294,557,700¹²	(\$149,165,900)*

* The revenue does not include the approximately \$25.6 million in funding from SKATS for bus purchases (included in **Table 6-14** under O+M & Regional Programs). For financial constraint, SAMTD needs either to increase the time between bus replacements¹³, reduce service or receive additional funding via a combination of federal grants/earmarks, and additional SKATS or SAMTD funding of roughly \$5.5 million per year which is within the realm of possible given awards in recent years. In addition, there is the option for the employer tax beginning in 2026 to provide additional funding.

¹² This includes the cost of the projects identified (shown in Tables 6-10 and 6-11) and the vehicle replacement costs for the next 27 years.

¹³ It is possible that battery electric buses will require less maintenance and have longer service lives than diesel or CNG powered buses. There has not been enough real-world use to date to determine if this is so.

Chapter 7 ~ Proposed System

The description of the current regional transportation system has been presented (**Chapter 4**), as well as the gaps and identified needs of the current regional transportation system (**Chapter 5**). In the last chapter (**Chapter 6**) a summary of the anticipated revenues available to the jurisdictions within SKATS, describing the amount of funds available for operating and maintaining the current system was presented. Included was a discussion of the amount of funds that could be used for capital improvement projects to provide a regional transportation system that aligns with the goals of this Plan.

The future transportation system needs to build upon the network of facilities that currently exist, reduce the existing gaps, address as many of the identified needs as possible, while providing the necessary infrastructure to support the planned development envisioned in the adopted comprehensive plans of the local jurisdictions. The future transportation system would support and reaffirm the Goals presented in **Chapter 3**, as well as being financially constrained as discussed in **Chapter 6**. Furthermore, as stipulated in the Federal regulations for regional transportation plans, the proposed system needs to be based on the currently adopted comprehensive plan for each of the jurisdictions in SKATS and the agreed upon forecasts for the area's population and employment (detailed in **Appendix A**) over the next 20+ years.

A regional transportation system that addresses these criteria will be discussed in this chapter. The focus will be on the parts of the system that are publicly funded, specifically, the road and public transit portions. Less attention will be paid to the privately funded portions such as pipelines¹. The chapter begins with a brief summary of the population and employment forecast within SKATS. The remainder of the chapter describes the proposed system discussed in terms of four categories (Road-Bridge, Bicycle-Pedestrian, ITS-Signal and Transit) for the five districts introduced in **Chapter 4**.

Salem-Keizer in 2050

Federal regulations require that a long-range transportation plan, such as the SKATS MTP, have a horizon year at least 20 years in the future. The SKATS MTP has traditionally been prepared to cover a period of 24 years, to ensure that if any amendments are necessary before the next scheduled adoption for updating the MTP (which are required by Federal regulations to be completed every four years), that population and employment forecasts would cover a full 20-year timeframe.

Federal regulations further require that forecasts for population and employment in the Salem-Keizer region in 2050 used in this Plan be based on currently adopted comprehensive plans for the local jurisdictions. Population totals are supplied by the Population Research Center at Portland State University, and employment forecasts are

¹ Although portions of the road system within SKATS will be built or modified with private dollars as part of conditions for development.

based on information from the Oregon Employment Department. A forecast working group comprised of members of the SKATS Technical Advisory Committee (particularly land use planning staff from the cities and counties within SKATS) helped coordinate the allocations of the 2050 population and employment forecasts to ensure that they complied to the local Comprehensive Plans. The forecasted population and employment within SKATS for 2050 are illustrated in **Table 7-1**. Information presented in **Appendix A** describes the methods used and other additional details about the forecasts.

Table 7-1: Forecast SKATS Population and Employment (Source: Oregon Employment Department, Population Research Center at Portland State University)

	2020	2050
Population	271,737	333,870
Employment	118,347	149,176

As with any forecast, there is a measure of uncertainty in both the numbers and the timing. Numerous exogenous factors influence the population and amount of employment in the area. As seen during 2020 to early 2022, disruptions can occur swiftly, and the recoveries can be swift but uneven. Also, for this update a number of changes at the State and local level have been taken into account when allocating future population to specific areas. First, at the State level, new regulations require land formerly zone “Single Family” to allow duplexes by right. Also, triplexes, quadplexes, cottage clusters, and townhouses are now allowed in residential areas. Both Keizer and Salem updated their zoning codes by 2022 to address these regulations, but how they will play out is still an open question. Second, the local jurisdictions are working to address the new regulations stemming from the Climate Friendly and Equitable Communities rules that were adopted by the Land Conservation and Development Commission in 2022. As that work is on-going, any changes stemming from it will be reflected in the next update to this MTP.

All this is to say that the numbers presented and used in this Plan are subject to change in future revisions to this Plan. In particular, the Population Research Center will update their forecast for the twelve northwest Oregon counties (including Marion and Polk Counties) in 2025. Therefore, the included forecasts and allocations in this plan represent the best information available at the time they were produced.

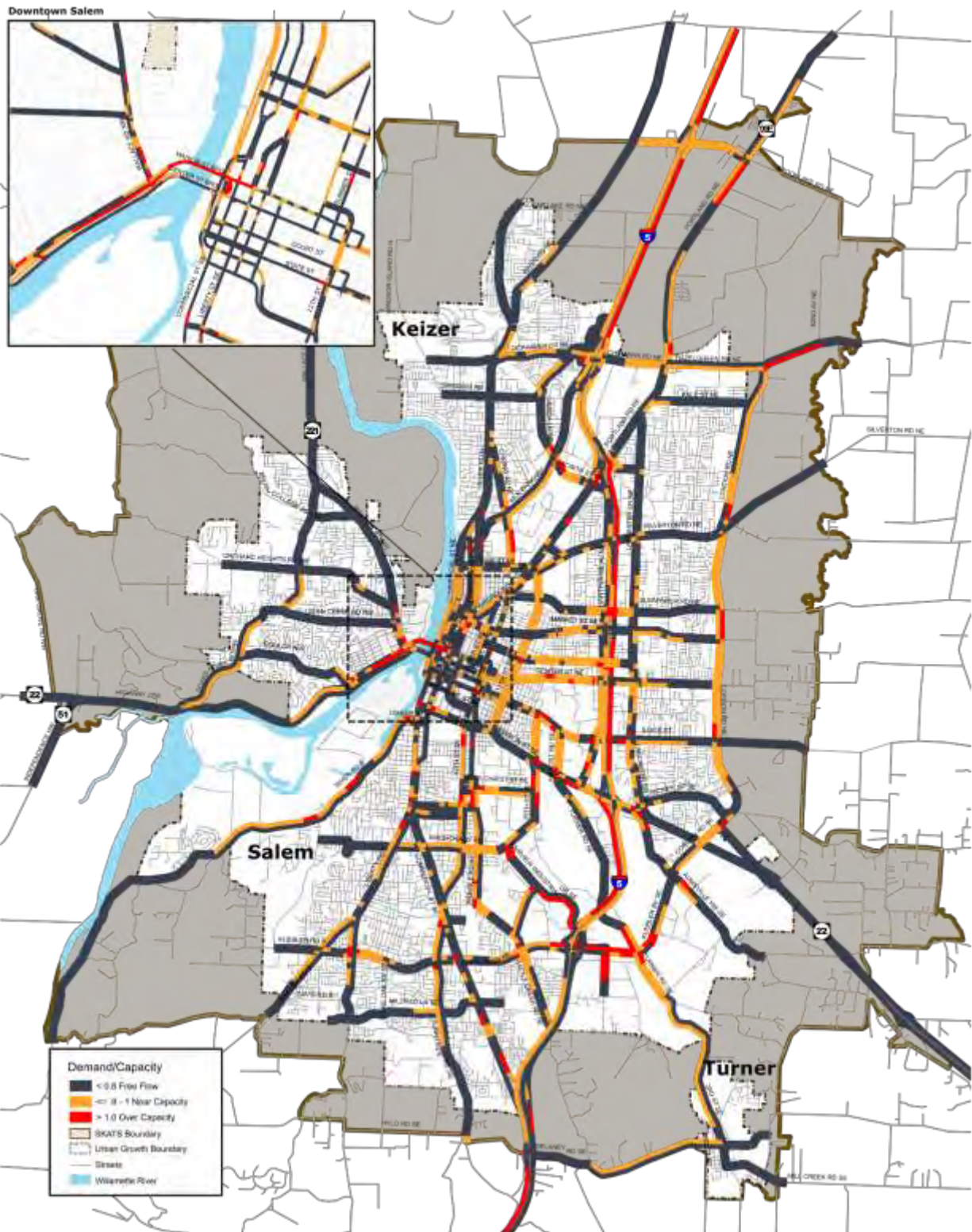
Addressing the Needs, Gaps, and Deficiencies of the Existing System

As discussed in **Chapter 5**, the current regional transportation system has a variety of identified gaps and deficiencies. These need to be addressed in order to improve the efficient movement of people and goods around and through the Salem-Keizer area and to make the system safer and enhance security of the regional system for all users and modes of travel. Finally, gaps (e.g., in the regional bicycle and sidewalk systems) that impede travel were identified. In addition to identifying projects to address these needs and gaps, there is also the requirement to keep the existing system in good repair.

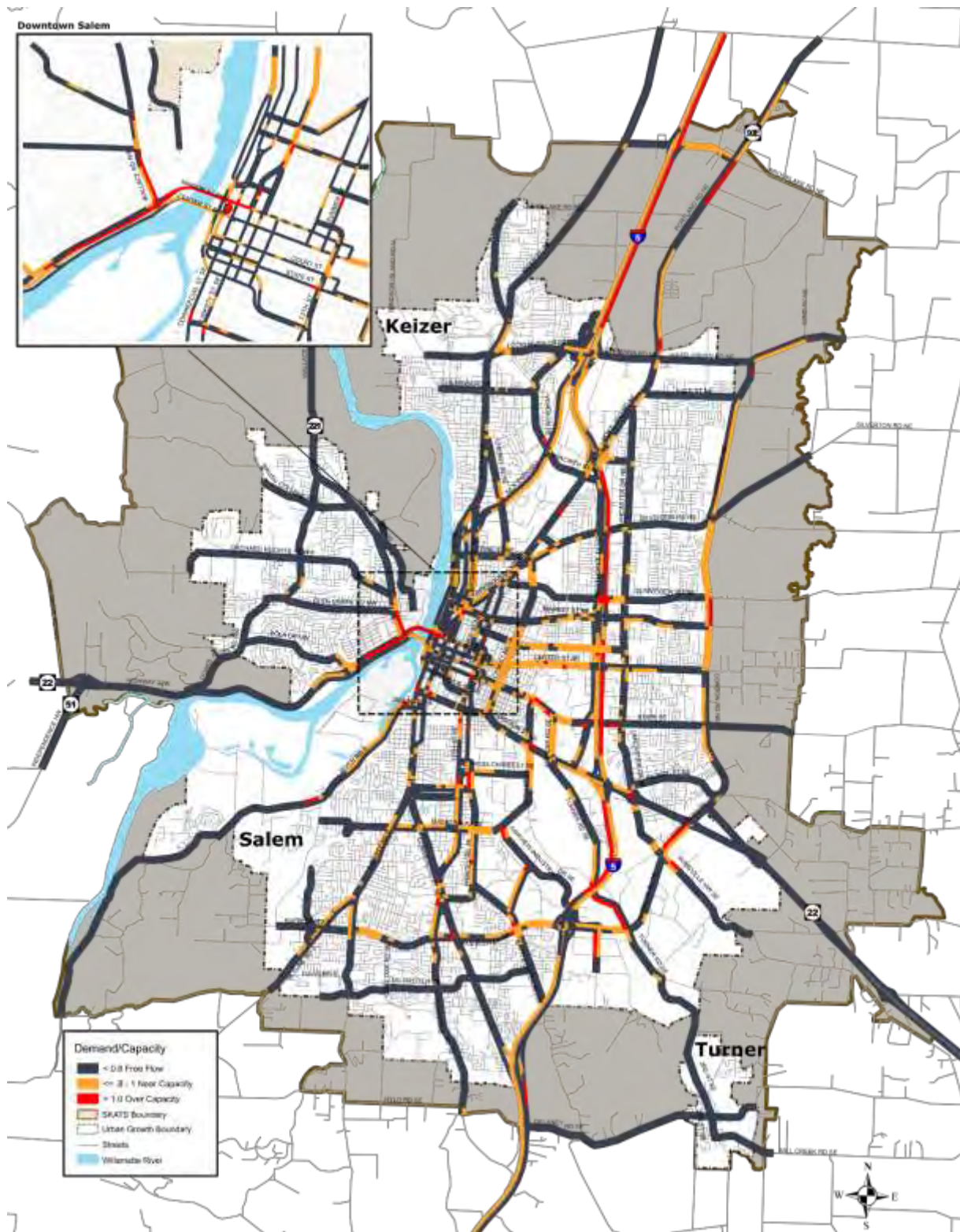
The projects selected and presented in this chapter are meant to address these needs, gaps, and deficiencies and allow for a greater amount of movement by people and goods via the mode that best meets their needs. Unfortunately, it is not always possible to remedy the existing deficiencies and gaps for a variety of reasons: neighborhood concerns about a project, environmental considerations, political issues, or lack of funding. While this plan addresses many of the deficiencies on the regional system, it must be realized that there will always be some gaps or needs that either have no feasible solution or that require further study before determining the appropriate solution(s) (*See Chapter 9 Outstanding Issues* for a discussion on some of the major unresolved issues.).

Two model runs were completed for the 2050 horizon year using the forecasted population and employment shown in **Table 7-1**. The first model run assumes no projects are built, essentially showing how demand in 2050 would operate on the transportation system of today. The results are shown in **Map 7-1**. The second model run combines the 2050 population and employment forecasts with the proposed projects that are listed in **Table 7-3**. The result is illustrated on **Map 7-2**. This travel demand is calculated with the SKATS Regional Travel Demand Forecasting Model. The results shown are for the P.M. peak period (from 5 P.M to 6 P.M.). Comparing the results shown in these maps, with the base year demand shown in **Map 4-4** (page 4-13 of **Chapter 4**), the number of roads where the demand to capacity is above 0.8 is much greater in both future scenarios. But there is a decrease in the number of roads with demand to capacity above 0.8 in the 2050 Build scenario compared to the 2050 No Build scenario. In 2021 base year, approximately 84 percent of the road miles have a demand to capacity ratio of less than 0.8. This number decreases to 66 percent for the 2050 No Build case but is approximately 76 percent for the 2050 Build case (which represents the Committed and Included projects in **Table 7-3**).

The remainder of this chapter is devoted to discussing the future transportation system and presenting the proposed projects that are part of this financially constrained plan.



Map 7-1: Demand to Capacity Ratio on Regional Roads in 2050 with No-Build Network (PM peak)



Map 7-2: Demand to Capacity on Regional Roads in 2050 with Proposed Projects (PM Peak)

Travel and Goods Movements - Future Regional Non-Road System

As discussed in **Chapter 5**, the components of the regional non-road system (i.e., aviation, maritime, pipelines, and railroads) are for the most part funded, operated, and owned by private entities. The expansion, maintenance, and operation of these components will likely be done in reaction to market forces or to meet the long-term strategic needs of the company involved with little to no input from SKATS or any of the local governments.

The portions of the non-road system that receive public funds (such as the airport and occasionally the railroads) do not involve the SKATS Policy Committee in the decision-making process. They typically receive funds from Federal or State agencies that are not required to coordinate or consult with the metropolitan planning organization of the area. Future projects to extend the capabilities of either the airport or the rail system, particularly regarding passenger travel, will be developed by Salem and ODOT, respectively.

The Airport Master Plan (AMP) for McNary Field was last adopted in 2012 and is currently being updated. Longer-term improvements call for lengthening the primary runway and eventual replacement of the airport terminal. Funding for these projects is provided primarily by the Federal Aviation Administration (FAA) with local match provided by the city of Salem. Current projects are to increase the size of the terminal and add features to make it more attractive for potential airlines to use for commercial service.

The *Oregon Rail Study (2010)* identified draft goals for rail service along the *Cascades* corridor to provide up to six round trips daily between Portland and Eugene, increase the on-time performance, increase the average train speed, and reduce the travel time between Portland and Eugene to two hours (comparable to current driving times). In 2013, ODOT received two Talgo trainsets to replace the trainsets on loan from the Washington DOT, which are used on the *Cascades* corridor. ODOT last updated the *State Rail Plan* in 2020, which addresses both freight and passenger rail operations throughout Oregon but does not identify specific projects. ODOT has recently completed a study on passenger rail serving the communities in the Willamette Valley with the final Environmental Impact Statement (EIS) adopted in 2021 along with a Record of Decision (ROD). The *Oregon Passenger Rail EIS* presents the modifications on the preferred alignment (the Union Pacific Railroad line which runs along the east side of downtown Salem) to allow for an increase in passenger rail service in the future.

Increases in passenger service will require more capacity on the Union Pacific rail line to address conflict points and congestions. According to ODOT's *Oregon State Rail Plan (2020)*, the Union Pacific line is expected to grow by 40-50 percent by 2035; and the Portland & Western line is likely to increase from the current six trains a day. Funding for the *Cascades* service is provided by the States of Oregon and Washington, which currently contract with Amtrak to provide the service. In the future, it is possible that

another organization will be selected to run the trains. Providing additional passenger rail service will require additional funding.

Travel and Goods Movement - Future Regional Transit System

In September 2019, Cherriots revised their service within Salem-Keizer by lengthening their operating hours on weekdays and began offering service on Saturdays. Service on Sunday and select holidays started in September 2021, after being delayed due to the COVID-19 pandemic. This expansion in service was made possible by the funds distributed by the State of Oregon that are being collected from the employee tax levied statewide since July 2018.

Several capital projects, such as transit centers and bus purchases, are identified for funding by 2050. Over the next 27 years, it is anticipated that transit centers will be completed in south² and east Salem³, providing equivalent functionality of the transit centers existing in west Salem and Keizer. Finally, during this period the Transit District will be able to maintain their buses and replace them when they are worn out following the targets set in their *Transit Asset Management Plan* (2022).

In December 2022, the first *Long Range Transit Plan* (LRTP) was completed by the Salem Area Mass Transit District. Covering their entire service area (Marion and Polk counties for the Cherriots Regional service, within the Salem-Keizer Urban Growth Boundary for Cherriots Local service), the plan provides an overview of possible service expansions and enhancements over the next 20 years. Within Salem-Keizer, the focus is on increasing frequency on the existing routes, adding more hours of service, and expanding service to areas that currently have no transit service. The factors for considering when to plan for and offer high-capacity transit is also presented, with the focus for this potential service along the defined Core Network (see **Map 7-3**). Additional service, whether for new or current routes, will require additional funding above that assumed available. In particular, as discussed in the LRTP, Cherriots has goals of providing 15-minute service on all the routes that are part of the Core Network, and 30-minute service on the 'standard' routes (see **Map 7-4** for the proposed system if additional funds are available). To provide this level of service will require approximately 13 additional vehicles and adding 91,000 annual service hours, costing \$10 million and \$9 million annually (2022 dollars) respectively⁴. This additional service is forecast to result in higher transit usage by 2050, both as a percent of trips and total number.

² A location for the South Salem Transit Center (project B008) had previously been identified, but in 2019 the SAMTD Board decided to review that decision and restarted the process of selecting a location. After a second locational analysis, a site was selected at Commercial St SE and Wiltsey Rd SE in July 2022. Final negotiations are currently underway.

³ The location for the East Salem Transit Center is likely to be located on the Chemeketa Community College campus. The exact layout and design will be completed at a later date.

⁴ *Long Range Transit Plan*, Salem Area Mass Transit District, 2022 page 27. Currently not available on the Cherriots website. See the December 15, 2022 Board Agenda packet for the final draft.

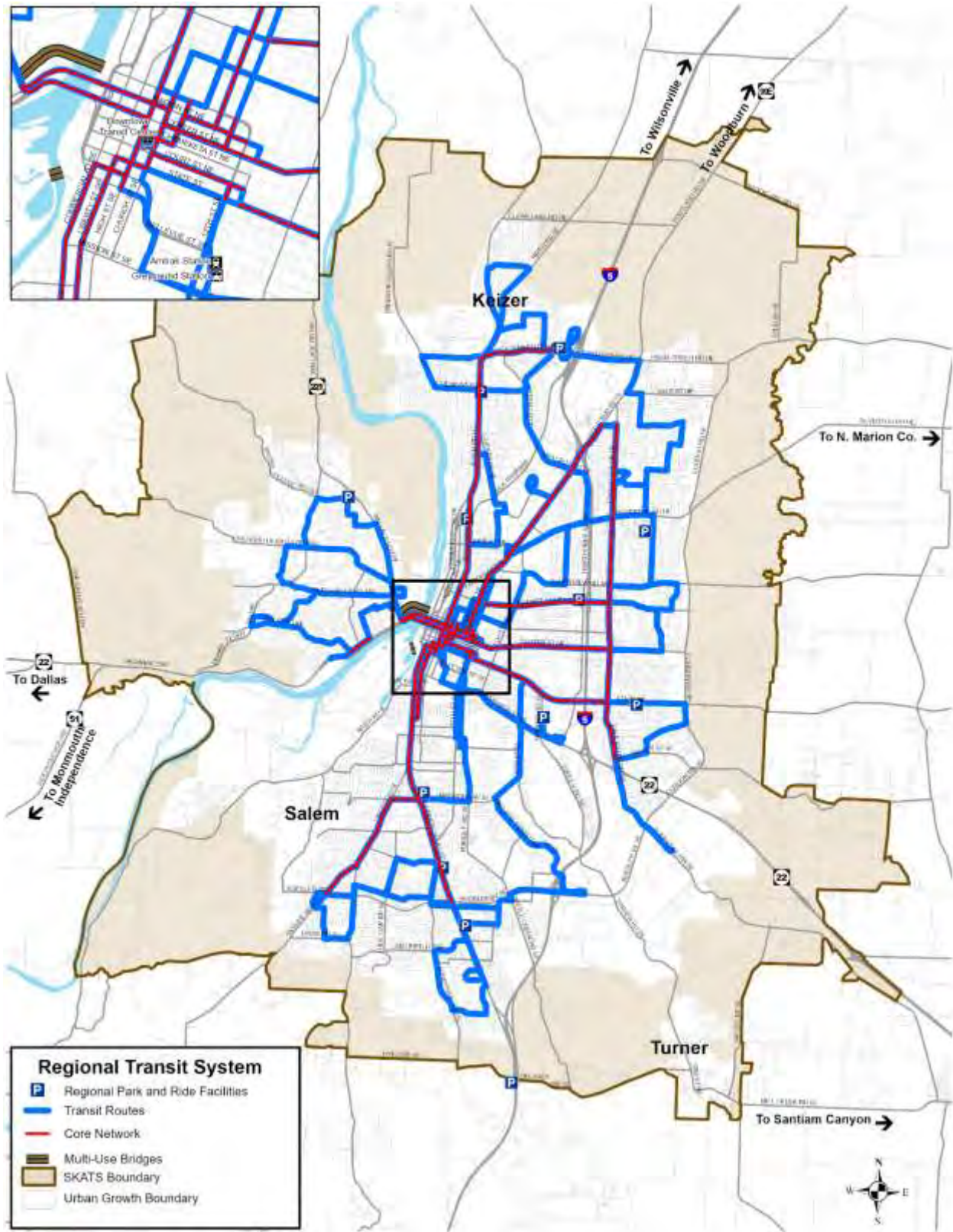
Beginning in 2026 SAMTD will be able to levy an employer-based transit tax (as Lane Transit District and TriMet currently do), but currently the SAMTD Board has not publicly stated whether this will take place or for how much⁵. This issue will be addressed in the 2027 Update to the MTP.

It is anticipated that the regional transit services that link Salem to other cities in the Willamette Valley will continue in the future. This includes services offered by Cherriots and SMART (South Metro Area Regional Transit) to Wilsonville, YCT (Yamhill County Transit) to McMinnville, TCTD (Tillamook County Transit District) to Grand Ronde, Tillamook, and the Coast, and Cherriots Regional (nee CARTS – Chemeketa Area Regional Transit System) service to the communities in Polk and Marion counties. Expanding the amount of service offered by these providers would require additional, and likely new, operating revenue sources. Any changes in the service will be reflected in future updates to this Plan. Intercity bus service offered by FlixBus/Greyhound is likely to remain as it is today and will grow or shrink as the company reacts to larger economic pressures. It is not clear how POINT bus service (previously known as Amtrak Thruway and funded by ODOT) will change over the next 27 years as it is not addressed in the *Oregon Rail Plan* or any other document that was consulted in preparing this Plan.

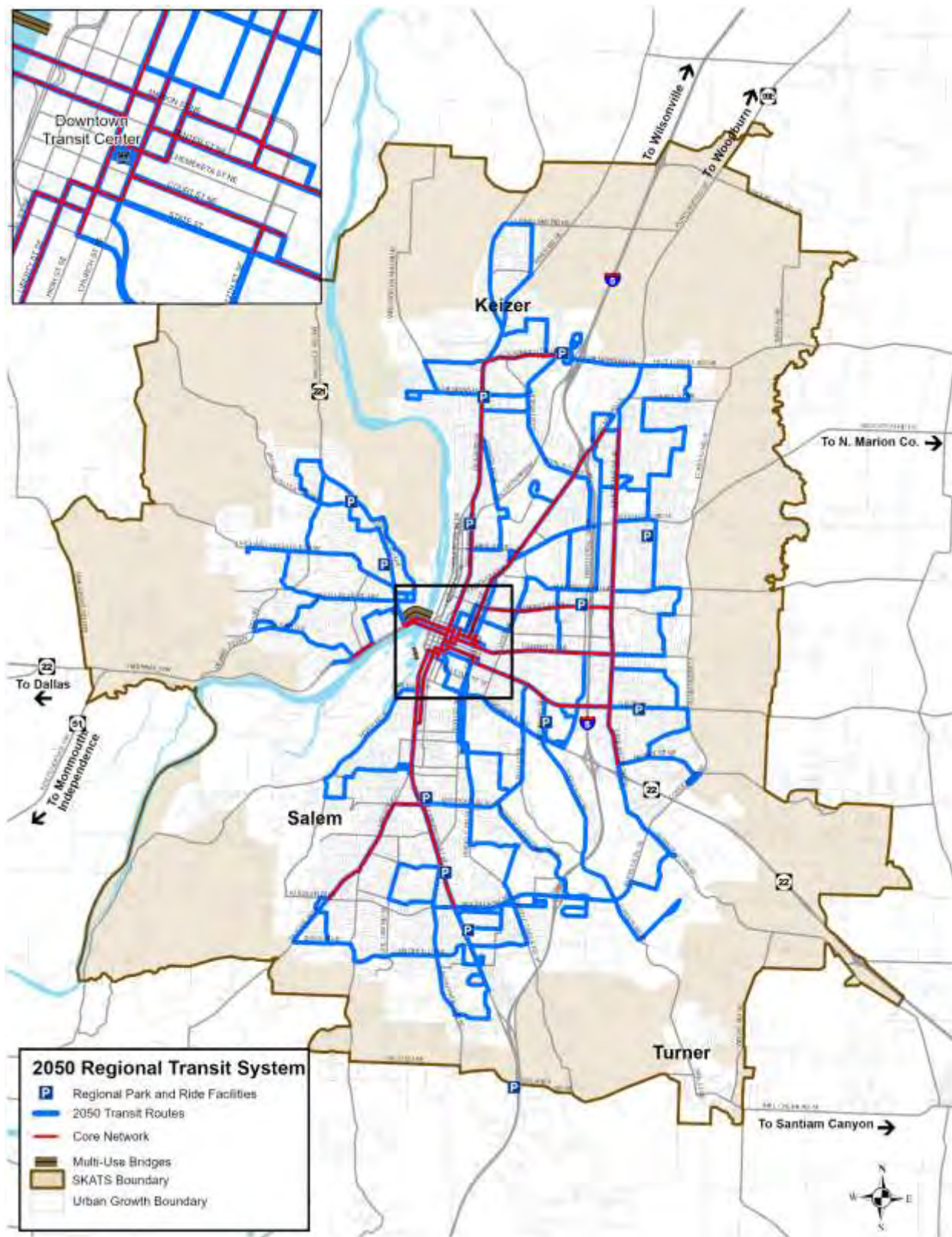
Both SKATS and ODOT currently provide funding for Transportation Demand Management (TDM) and Cherriots Transportation Options (nee Trip Choice (nee Rideshare)). This arrangement ends in 2024, when SKATS will be funding these programs and ODOT will be funding ECO (Employee Commute Option) related programs and offering competitive rideshare grants⁶.

⁵ The ability to levy an employer-based transit tax is from S.B. 1536 (2018), see: <https://gov.oregonlive.com/bill/2018/SB1536/>

⁶ The ECO rule will be written by the Department of Environmental Quality and expand the current program to the metropolitan areas outside of Portland. More information will be available by the next update to this Plan.



Map 7-3: Proposed Cherriots Local Transit Service with Identified Funding



Travel and Goods Movement - Future Regional Road System

Over the next 27 years, the regional road system will look very similar to its current configuration. The number of *major* new roads scheduled to be built in the area is minimal. New roads will, for the most part, be local streets with a few collectors and minor arterials built or extended. The majority of projects identified for construction by 2050 address increasing the efficiency of the current system, whether that is by interconnecting the signals, rebuilding roads to ‘urban standards’ (aka complete streets) or addressing bottlenecks at intersections and other locations.

By the 2020s, most of the signals in the Salem-Keizer area will be interconnected and controlled by the Regional Traffic Signal Control Center (RTSCC). This should help address locations where the cause of congestion is attributable to ‘poor signal timing.’⁷ Interconnected signals will help keep signals synchronized so that traffic can better flow along a corridor. Additional video cameras are scheduled for installation at intersections within the urban area. These cameras will be used mainly to provide data to the signal controllers, but a number will also be able to provide traffic volume data to the RTSCC for further analysis and use. The RTSCC was expanded in 2013 to accommodate extra staff and newer equipment, and the software for controlling the signals was updated in 202x. No further changes are currently planned for the center.

Expansion of the existing bicycle network is planned to occur via a variety of projects. These include projects that bring existing roads without bike lanes up to current urban standards by adding bicycle lanes or buffered bicycle lanes. Other projects for bicyclists include building multi-use paths that are separated from the roads and designating corridors as a family-friendly bicycle route (nee ‘bicycle boulevard’). Projects from the first three categories are illustrated and discussed by district in this chapter.

Since the 2019 update to this Plan, two bikeshare programs have started and been shut down, both providing service in downtown Salem. The COVID-19 pandemic and the uncertainty of the viability of any service with the current market and post-pandemic conditions is currently one of the larger roadblocks to starting a new service. These developments will be followed and the MTP updated as necessary. Transportation Network Companies (TNCs, i.e., Lyft and Uber) are currently licensed to operate in Salem and are available in other jurisdictions.

The recommended road projects presented in this chapter come from six sources:

- Projects from the SKATS MTP 2019-2043 (adopted in 2019) that had not been constructed.
- Salem’s Transportation System Plan (as amended in 2016 including projects from studies such as the Central Salem Mobility Study and Bike/Walk Salem). An update is planned to begin in 2023.

⁷ See SKATS Congestion Management Process (2022) for more information.

- Keizer’s 2008 Transportation System Plan (revised in 2014).
- Marion County’s 2005 Rural Transportation System Plan. An update is planned to begin in 2023.
- Turner’s 1999 Transportation System Plan. An update is planned to begin in 2023.
- ODOT’s FY 2021 – 2024 State Transportation Improvement Program (STIP), the draft FY 2024 – 2027 STIP, and various planning studies conducted in the past 15-20 years.

As mentioned above, updates to many of the local transportation system plans (TSP) will be taking place between now and the next update to this Plan. In addition, the revisions to the Transportation Planning Rule introduces new requirements to the local TSPs that could change the projects included in the 2027 MTP Update.

In order to evaluate how the proposed projects correspond to the adopted goals of this plan, the project scoring process was updated for this MTP update. Nine criteria corresponding to the goals of the plan were used in the evaluation with extra weight (as decided by the SKATS Policy Committee) given to projects that increase safety (see **Appendix C** for more details on the scoring process). The SKATS Policy Committee used the results of the scoring process when they considered which projects to include in the project list that is illustrated in **Table 7-3**

The 189 projects⁸ in the plan address both near-term and long-term needs of the urbanized area to provide the residents and businesses with an adequate level of accessibility. Additional projects that do not have funding identified are considered part of the “Illustrative List” and are presented in **Appendix I**. The projects in that appendix are **not** considered part of the financially constrained Plan; however, these projects may be reconsidered for inclusion in future updates of the MTP. Before any of the illustrative projects could be built using federal funds, funding sources would need to be identified. The Plan would then need to be amended; and the project added to the current SKATS TIP, as necessary.

Supporting Tourism and a Vibrant Regional Economy

Goal 9 of the MTP as discussed in **Chapter 3** acknowledges that visitors to the area, whether for business, personal, or tourism related reasons contribute to a diverse, vibrant regional economy. Salem and Keizer are located near destinations such as the wineries in the Willamette and Chehalem valleys, and convenient to the Oregon Coast and the Cascades Mountains. Other draws include the State Capitol, the State Fairgrounds, plus access to services and shopping offered by Salem Hospital, the Willamette Centre, and downtown Salem (including special events that take place such as World Beat).

In general, decisions on transportation investments within Salem are typically not predicated on tourism or visitor travel, although they can be supportive. Understanding the amount of travel directly related to tourists and/or visitors is difficult given the current data sources. Some transportation investments that have likely supported tourism include

⁸ This includes 167 projects from the local jurisdictions and SAMTD, and 22 ODOT projects.

the Union Street and Minto-Brown Island bridges, linking three parks adjacent to downtown Salem.

One proposed project that will likely drive tourism related trips higher is the proposed casino on Confederated Tribes of the Siletz Indians trust property just northwest of the Portland Road interchange with I-5. From the Environmental Assessment document completed for the proposed Siletz Salem Gaming Facility, The Innovation Group documents that there are 25 hotels with 2,166 rooms available within Keizer and Salem⁹. There are seven hotels within Salem and Keizer that offer meeting spaces, the largest being the Salem Convention Center with attached Grand Hotel¹⁰.

Classifying Projects

This MTP continues the classification of projects into five categories: Road-Bridge, ITS-Signal, Bicycle-Pedestrian, Transit, and Other. It should be noted that most projects contain a multi-modal safety element in their design, but this MTP does not have a separate safety category. For example, a project classified as a “road” project – whether or not it adds a travel lane for vehicles - may have as some of its key components adding curb, gutters, sidewalks and bikelanes, and a mid-block crossing to a road that lacks most or all of those components. Adding the sidewalks, bikelanes, and crossing provides additional safety benefits to users, but the project is listed as a road project. Even projects whose primary aim is for improving safety (such as installing a mid-block crossing for pedestrians or adding reflectors on signal backplates) are classified as a “bicycle-pedestrian” project or “ITS-Signal” project, respectively. As such, while there is not a separate category for safety projects in this plan, many of the projects in this plan have improving safety for the users of the transportation system as one of their key objectives.

The classifications used for projects are briefly discussed below.

Road-Bridge

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 (see **Map 5-3** for seismic vulnerability). The projects identified will either replace an 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. Environmental regulations address the accessibility of streams to spawning fish. Culverts and bridge spans must be designed to allow for fish to swim upstream unimpeded to reach spawning grounds.

⁹ The proposed casino would be located off Portland Road north of the interchange with I-5. On page 225 of the Siletz Environmental Assessment (page 66 of the Innovation Group report contained within the EA) is the information on hotels. Available at: <https://siletzsalemcasinonepa.com/>. See the sidebar on the website for the Draft EA document.

¹⁰ Page 219 of the EA, page 60 of the Innovation Group report.

This category includes a wide variety of projects such as widening or building a new road, or that otherwise involve new pavement within right-of-way. When roads are built or reconstructed, bicycle lanes, sidewalks, curbs, and gutters are installed as a matter of course, unless conditions preclude them.

Included are projects that add significant capacity, either to an existing road or by constructing a new road. These projects must conform to the requirements and procedures specified in the Congestion Management Process (available as a separate document). 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.

There are 107 projects categorized as “Road-Bridge”, as illustrated in **Table 7-2** below, followed by general descriptions of these classifications.

Table 7-2: Classes of Road-Bridge Projects¹¹

	Count	Percent
Urban Standards w/ Center Turn Lane	33	31%
Urban Standards	27	25%
Turn Lanes	17	16%
Adding Capacity	4	4%
New Road	7	7%
Intersection	5	5%
Other	5	5%
Safety	2	2%
Bridge-related	4	4%
Reconstruction	3	3%

Bridge-related – These bridges on the regional system have been identified to be replaced or upgraded. No extra travel lanes are added as part of these replacements.

Adding Capacity – These projects add travel lanes to existing roads. Primarily these projects are along I-5.

New Road – These includes projects that extend existing roads (e.g., Verda Lane NE, Mildred Lane SE), or create new roads (e.g., Marine Drive NW, the backage roads along Highway 22 W).

Other – Projects include converting one-way streets to two-way, access management along a road.

¹¹ Several projects fit into multiple classes.

Reconstruction – Projects for reconstructing roads where the pavement or roadbed has degraded beyond simple fixes.

Safety – Projects whose sole purpose is safety including adding rumble strips, warning signs and/or pedestrian crossings beacons. It must be noted that many of the road, signal, and pedestrian-bicycle projects improve safety for users as well, but are not classified as such.

Turn Lanes – These projects add a turn-lane or turn pockets at an intersection or along a segment of a corridor (such as when a minor road T-intersects a road with higher functional classification).

Intersections – Projects are adding turn lanes and through lanes to intersections, or otherwise have more modifications compared to “Turn Lanes” projects. It also includes development of two new interchanges: Highway 22W at Highway 51 (Polk County) and Highway 22E at Cordon Road (Marion County).

Urban Standards – These projects add sidewalks, bicycle lanes, and/or gutters or other stormwater handling facilities to an existing road. The modifications could either be within the existing right-of-way or some right-of-way may be needed. They don’t add additional through travel lanes that increase capacity but may include turn pockets, as needed.

Urban Standards w/ Center Turn Lanes – Similar to “Urban Standards” but includes continuous center turn lanes and/or a median to more efficiently address traffic issues.

Bicycle-Pedestrian

Projects that add facilities for bicyclists or pedestrians, whether in the right-of-way or not, are included in this category. If the facilities being built are within the existing right-of-way, and no other work on the road is taking place, the project will be put in this category. These projects include providing sidewalks along arterials, constructing bulb-outs at intersections, and constructing multi-use paths. There are 60 proposed projects in this category. These proposed projects will reduce the extent of the gaps in the regional sidewalk system by 59 miles, or approximately 41 percent, and fill in 34 miles of gaps in the regional bicycle system, which is approximately 40 percent.

ITS-Signals

ITS (Intelligent Transportation System) projects utilize technological means to provide the users and operators of the transportation system with information on its operation, as well as to facilitate the operation and functioning of the system. These projects are employed to increase the efficiency of the existing and planned system. They can also address the safety and security of the system.

Also included in this category: new or updated signal installations and interconnecting signals. New signals are installed at intersections where traffic signal warrants indicate a

need for a signal. Traffic signal interconnect projects link existing or new signals in a corridor to the Regional Traffic Signal Control Center. By connecting to this center, the signals can be optimized to allow for better timing of the signals as well as reacting to incidents. This should allow traffic to move without the stop-and-go nature that might otherwise result. There are eight ITS-Signal projects proposed for construction in the next 27 years.

Transit

Transit projects in the MTP include developing new transit centers and modifying the existing transit centers or maintenance facilities. There are three projects that add or enhance transit facilities in this plan.

Other

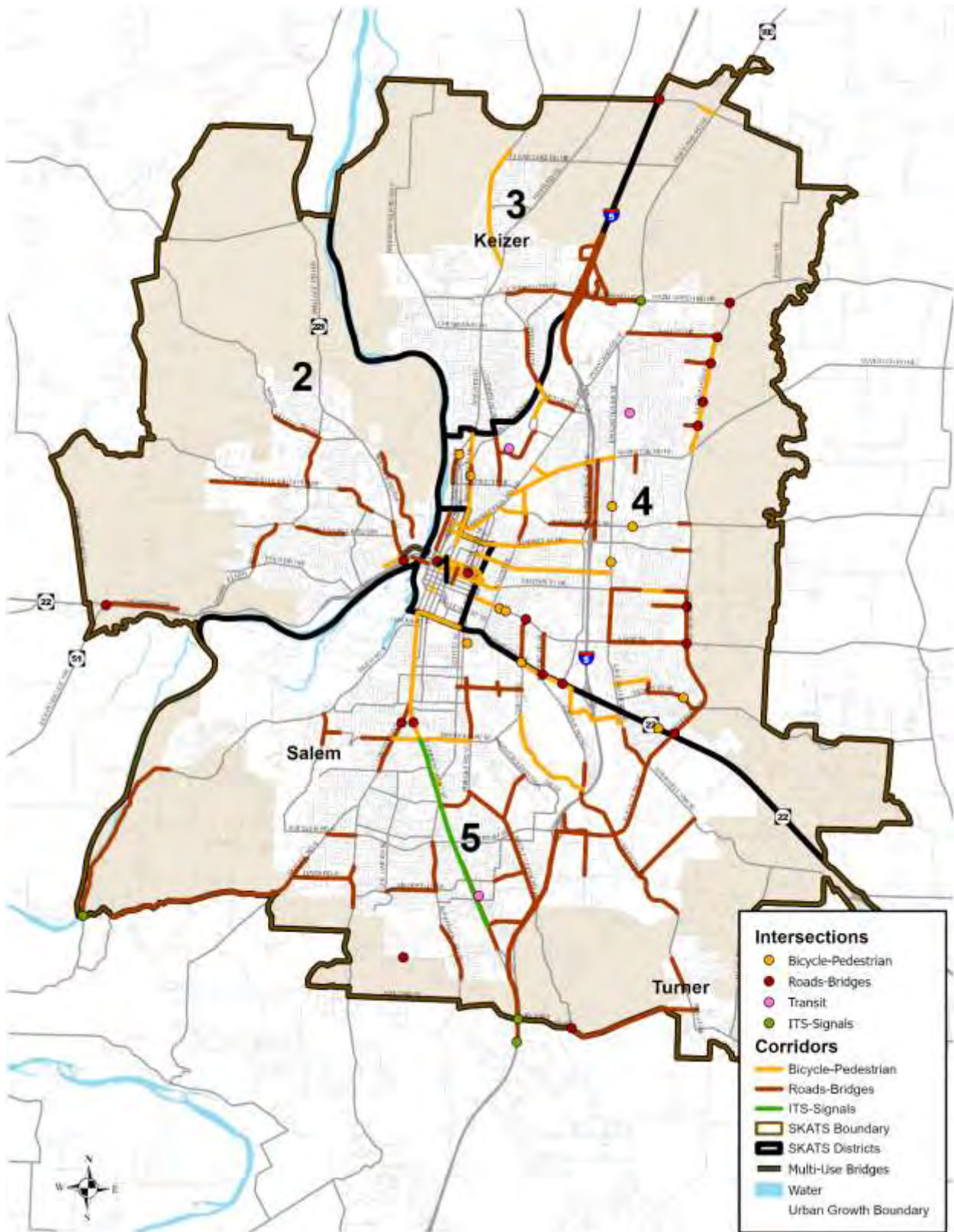
Those projects that do not fit into the previous four categories are placed into the “Other” category. No projects are in this category.

Discussion of Proposed Projects by Districts

The remainder of this chapter describes projects in each of the five districts of the region. This is not meant to be an exhaustive discussion of every project in each district but rather to provide descriptions of some key projects. The locations of the projects are illustrated in the maps, and the descriptions are provided in the project list (**Table 7-3**).

The district maps provide a visual way of distinguishing the project category (by color) and the jurisdiction that will “own” it (by the first letter in the project code: for example, Salem projects follow the format *Snnn*, where “n” is a number from 0 to 9). For a complete list of the proposed projects, see **Table 7-3** at the end of the chapter.

Following the discussion by districts is a discussion of the ODOT projects that have been identified within SKATS.



Map 7-5: Recommended Projects within SKATS

District 1: Downtown Salem

In downtown Salem, a number of projects are proposed for construction over the next 24 years (**Map 7-6**). ODOT has recently finalized a planning study for a project (0034) that was identified in H.B. 2017 (passed in 2017). The study is to determine what seismic upgrades can be made to the Center Street bridge over the Willamette River, which is part of the state highway route OR 22, to bring it up to current seismic standards. As part of H.B. 2017, the Oregon Legislature set aside \$60 million toward the identified upgrades. Additional funding has been identified as preliminary engineering work has been completed. Bid opening will be in 2025 and construction is currently scheduled to be completed by 2027.

Several projects identified in the Bike/Walk Salem (2010) study or the Central Salem Mobility Study (2012) are recommended. Bike lanes or other bike facilities will be installed on a number of downtown streets (e.g., Union Street). Intersection modifications will be made to reduce the length that pedestrians need to cross or to address the turning movement for vehicles.



Map 7-6: Downtown Salem

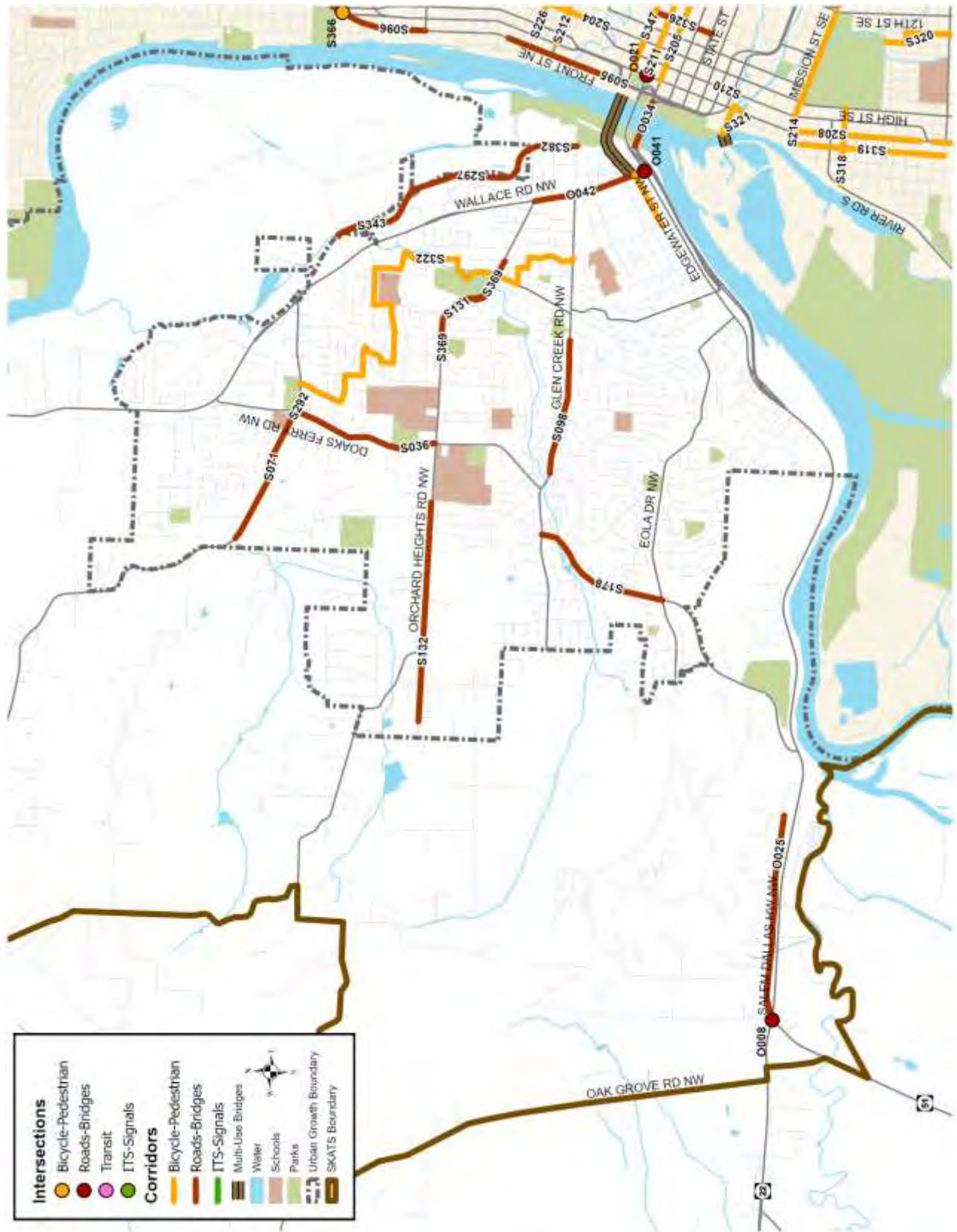
District 2: West Salem

One of the final projects proposed from the *Bridgehead Engineering Study (1998)* left to be completed is to revise the geometry of the off-ramp from Highway 22W bridge to Wallace Road (S160).

A new collector, Marine Drive, is planned to connect from approximately Hope Avenue NW in the north, south to Glen Creek Road.

The area surrounding the Highway 22W – 51 intersection was the focus of the Highway 22 W Expressway Management Plan study that identified projects that would address safety and capacity issues along that section of the highway. Funding is available to initiate development of improvements identified in the plan. The portion of Highway 22W from Doaks Ferry Road to the Willamette Bridges will be studied as part of an Expressway Management Plan in the future. Projects identified in this study will be considered for inclusion in future MTP updates or amendments.

Other projects provide for newer signals and protected pedestrian crossing of Wallace Road and bringing several roads up to urban standards.



Map 7-7: West Salem

District 3: Keizer

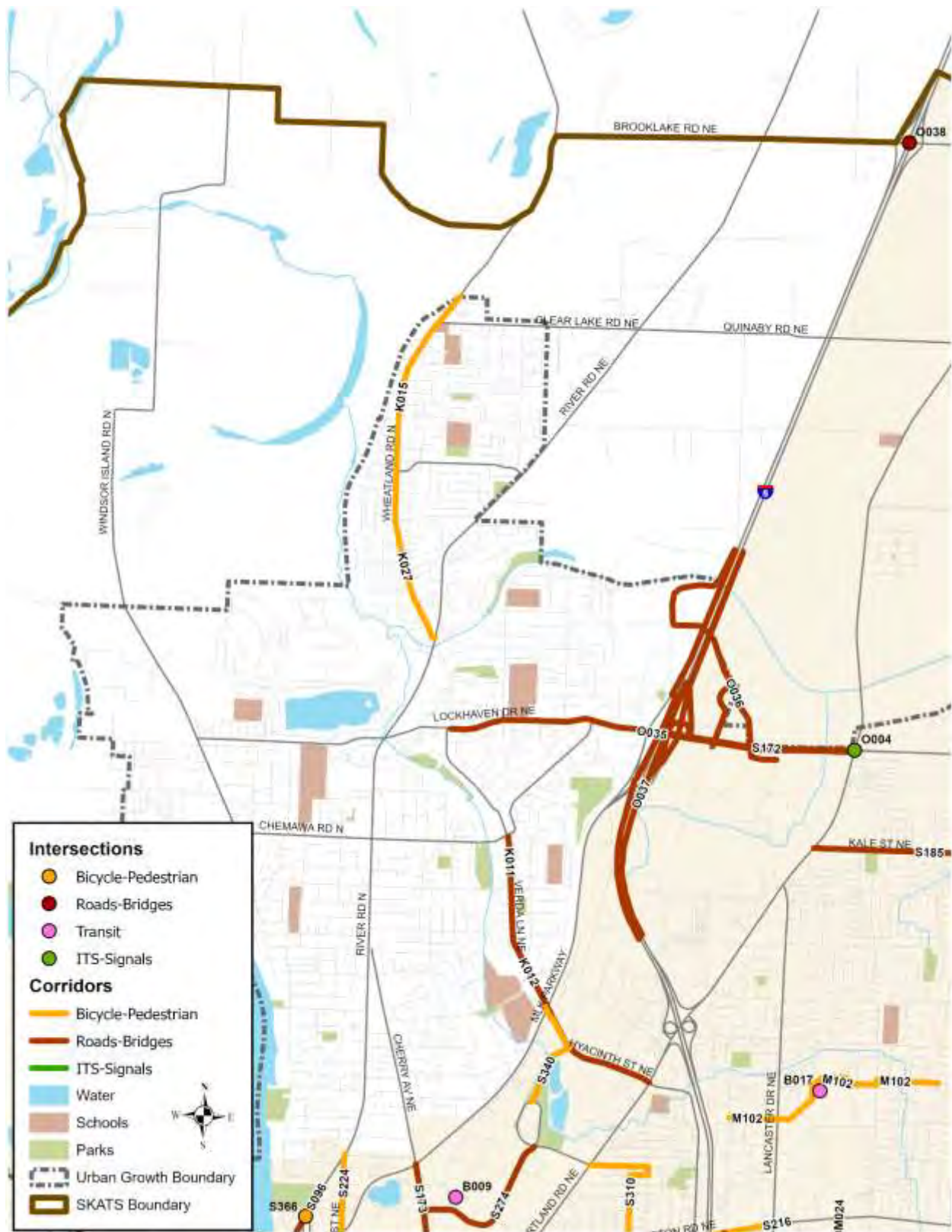
Over the next 20 years, several road projects are proposed that will address capacity and safety issues on the roads in Keizer. These projects are located along three corridors: River Road North, Lockhaven Drive, and Verda Lane.

The projects along River Road include modifying the intersection with Lockhaven Drive to provide more capacity for west-bound to south-bound turning movements (K024), moving the intersection at Manzanita Street south (K021) which will align with the proposed Verda Lane extension (K022), as well as provide more space at the intersection with Wheatland Road, where a second northbound left-turn lane will be added (K022).

The intersection at Verda Lane will be modified to restrict north-south movements to reduce cut-through traffic in the neighborhood to the south of Lockhaven (K023).

The projects on Verda Lane are located along the proposed extension of Verda Lane from Lockhaven Drive to River Road North (K022), which will partially follow the existing right-of-way of Trail Avenue north of Harmony Drive. The intersections at either end of this extension will be modified as described above.

Several projects are located outside of Keizer on Brooklake Road given the importance of this road and interchange to allow access to the northern Keizer. The Brooklake Interchange with I-5 is identified as an Outstanding Issue and projects identified in the Brooklake/I-5 IAMP will be funded and constructed by ODOT as funds are available after adoption of the IAMP by the Oregon Transportation Commission.



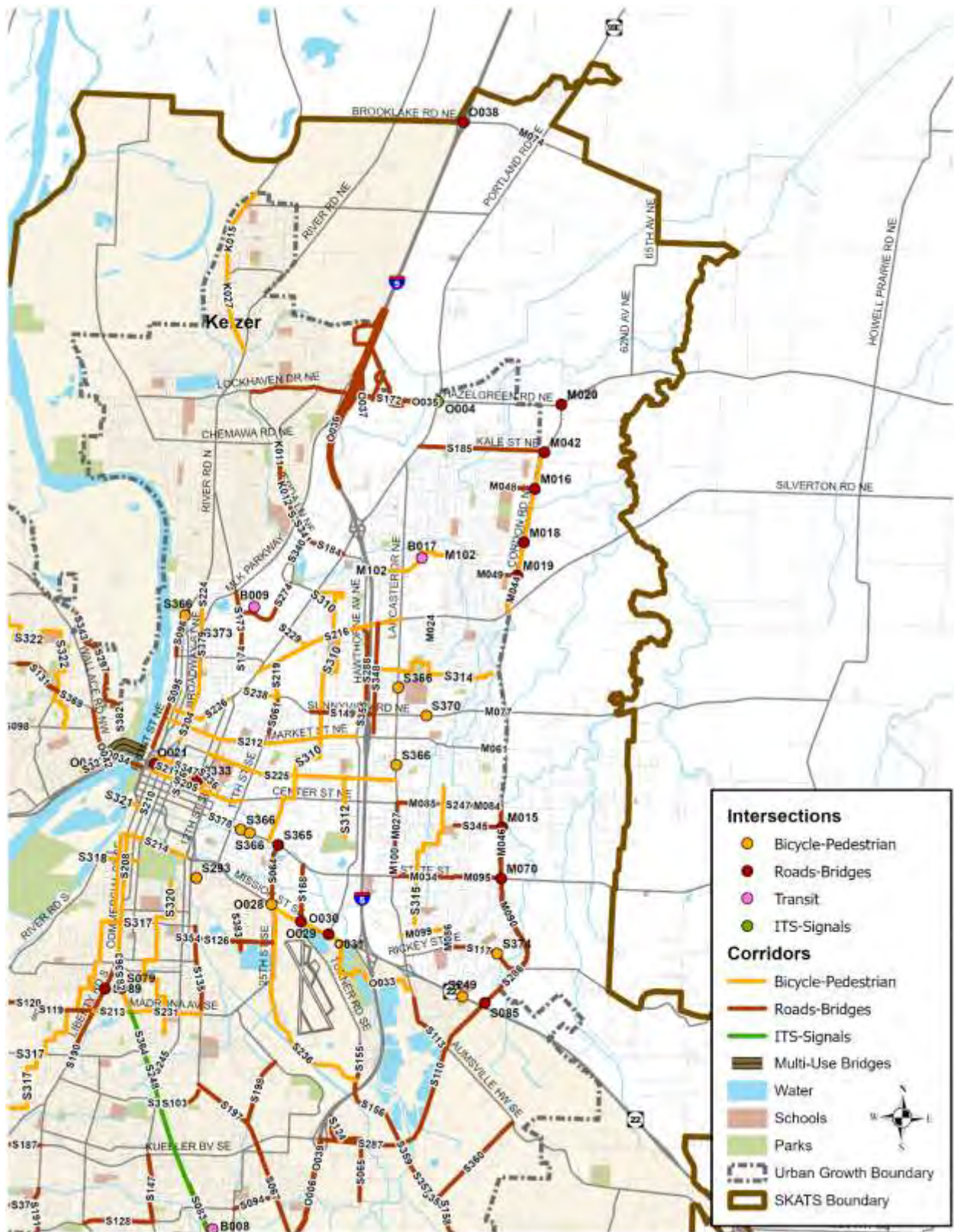
District 4: East Salem

This area contains the largest number of projects proposed in the Plan including several along Cordon Road. The long-term goal of Marion County and Salem is to complete the Kuebler Boulevard/Cordon Road/Hazelgreen Road corridor as a limited access facility with four travel lanes, turn lanes where appropriate, and a separated multi-use path. To achieve this goal, several projects are identified in this Plan to add turn lanes at various intersections along Cordon Road, realign and signalize the Cordon Road/Hazelgreen Road intersection, and interconnect the signals along Cordon Road with the Regional Traffic Signal Control Center (RTSCC). Other projects along Cordon Road include widening the segments from Highway 22E to Caplinger Road and from State Street to Center Street to four lanes with turn lanes where appropriate, and a separated multi-use path, and building an interchange with Highway 22E replacing the current overpassing. These projects are intended to protect and maintain Cordon Road and Hazelgreen Road's function as part of a circumferential route around the Salem area (see **Chapter 9 – Outstanding Issues**).

Along Lancaster Drive there are projects to add or replace traffic signals at a number of intersections and to interconnect the signals to the RTSCC.

Other projects in the area are designed to bring the roads up to current multimodal standards by providing sidewalks, curbs/gutters or bioswales, and bicycle lanes. These are on roads owned and operated by both Salem and Marion County. Examples include Hawthorne Avenue and 45th Avenue.

Paths to connect the Kroc Center with Hyacinth Street and then northward toward Keizer were identified in the Kroc Center Study and included in this Plan.



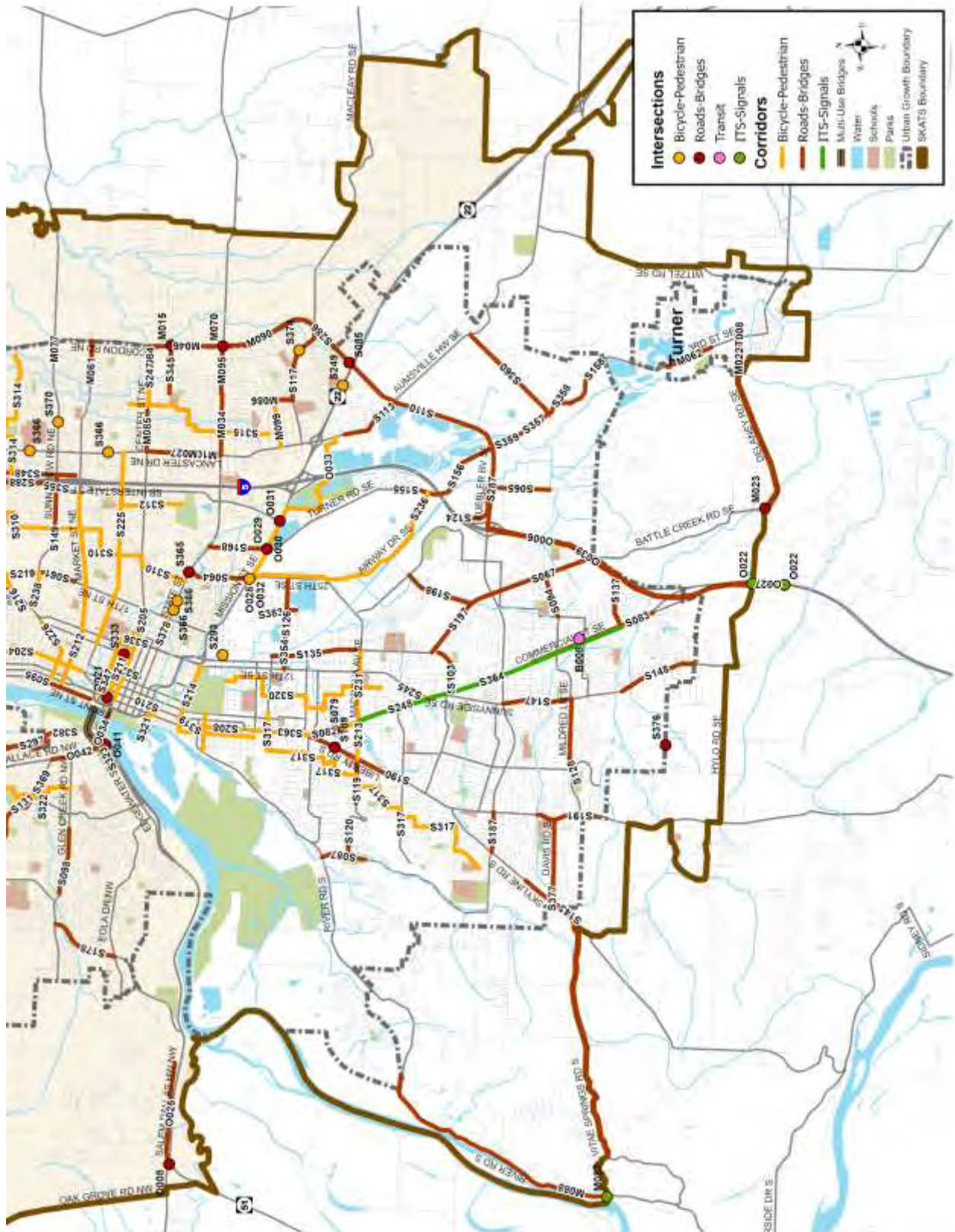
Map 7-9: East Salem

District 5: South Salem and Turner

Many of the projects in this area are driven in part by continuing large-scale developments in the Mill Creek Industrial Park and the proposed future interchange at Highway 22E. The Kuebler Boulevard/Cordon Road/Hazelgreen Road corridor is envisioned to be a limited access facility with four travel lanes and turn lanes, where appropriate. Projects call for widening Kuebler Boulevard to four lanes from Turner Road to Highway 22E, along with revising several of the existing intersections to accommodate higher levels of motorized traffic. These projects are intended to protect and maintain Kuebler Boulevard's function as part of a circumferential route around the Salem area (see ***Chapter 9 – Outstanding Issues***).

Other projects to build new roads in the area are focused on bringing the existing roads up to what is currently considered as minimally acceptable for multi-modal mobility. Signal interconnect projects along 12th / 13th Streets, Madrona Avenue, and Commercial Street will ensure that all the existing signals in the area are connected to the RTSCC.

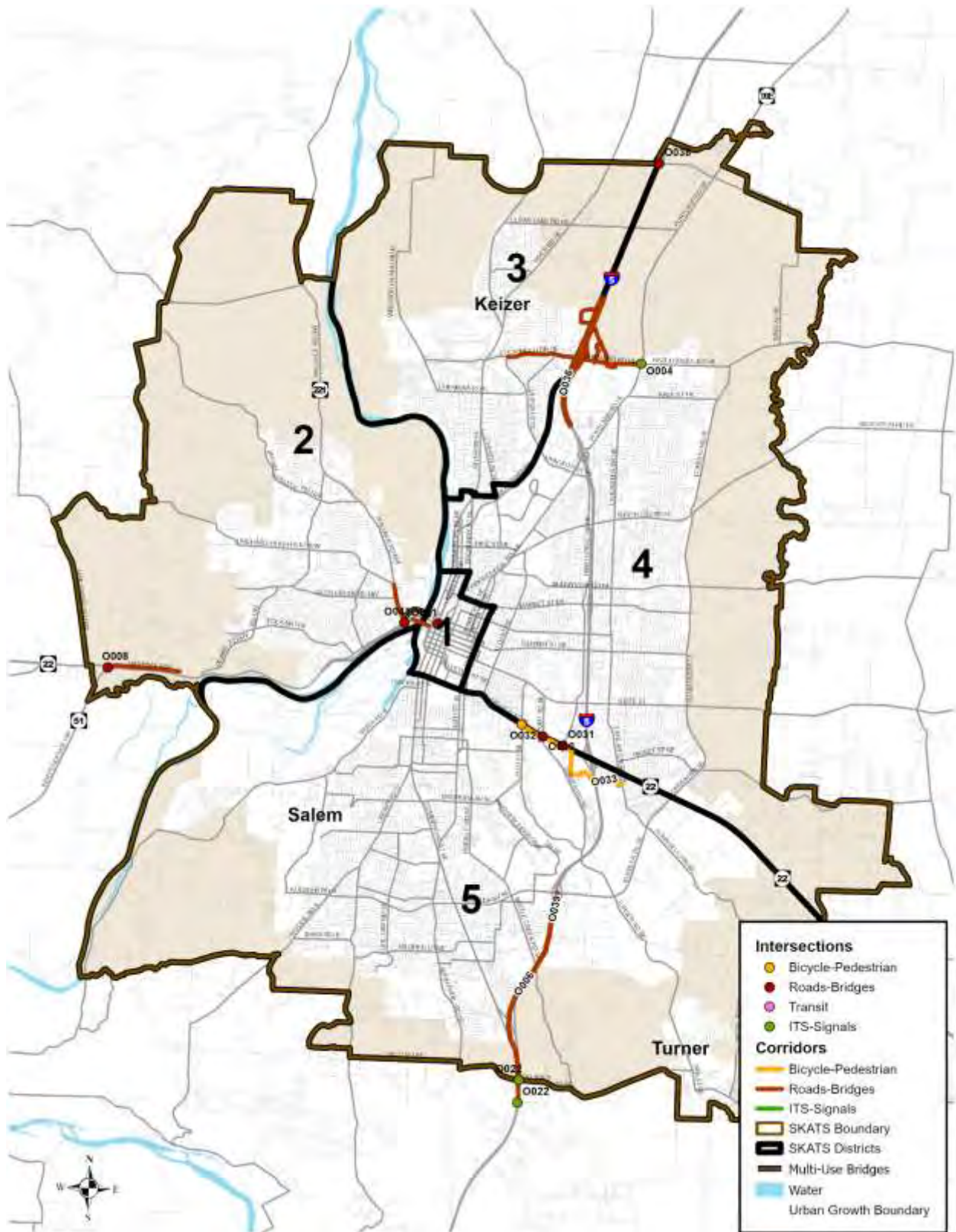
The South Salem Transit Center will be constructed at the Commercial at Wiltsey location identified from their study.



Map 7-10: South Salem

ODOT Projects

The projects identified on the portion of the regional road system that is owned and operated by ODOT are shown in **Map 7-11**. While the projects that have funding identified and are either in the current TIP or proposed for the upcoming TIP have been shown in the previous set of maps at the district level, due to the manner in which projects are funded by ODOT, there is a set of projects not shown. As discussed in **Chapter 6**, funding for projects further out than five years or so is not guaranteed, nor is there a document that provides a list of when a particular project will be funded and constructed. Expensive projects (such as the Center Street bridge seismic rehabilitation project) require funding from acts of the Oregon Legislature. Others use federal grants (e.g., INFRA and FASTLANE) to supplement the other federal and state funds being used. But there has been consistent pattern of projects *eventually* being funded and constructed. As such, and to recognize this unique status, the majority of ODOT projects within SKATS are labeled as “ODOT TBD”.



Map 7-11: ODOT Projects 2023-2050

Committed and Included Projects

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
City of Keizer								
Committed								
K012	Verda Ln NE: Dearborn Av NE to Southern City Limits	Widen to 3 lanes, add bike lanes and sidewalks	Verda Ln NE from Dearborn Dr NE to Keizer's southern city limits	Roads-Bridges	2024	\$4,074,800	\$5,013,306	10-20 yrs
Included								
K011	Verda Ln NE: Chemawa Rd NE to Dearborn Av NE	Widen to 3 lanes, add bike lanes and sidewalks. Westside portion to be completed by development by December 2022.	Verda Ln NE from Dearborn Dr NE to Chemawa Rd NE	Roads-Bridges	2031	\$2,200,000	\$4,700,522	10-20 yrs
K015	Wheatland Rd Multimodal Project - Phase 1	Construct refuge medians, street lighting, buffered bike lanes, and a multi-use path. See second phase in K027.	Wheatland Rd N from Aldridge Dr N to Jays Dr	Bicycle-Pedestrian	2028	\$6,709,744	\$9,399,942	0-5 yrs
K020	Wheatland Rd / River Rd Intersection	Add second northbound left-turn lane and protected left-turn signal phase. Lengthen outside southbound through lane.	Wheatland Rd @ River Rd	Roads-Bridges	2040	\$1,100,000	\$2,676,193	0-10 yrs
K027	Wheatland Rd Multimodal Project - Phase 2	Construct refuge medians, street lighting, buffered bike lanes, and a multi-use path. See K015 for phase 1.	Wheatland Rd N from Aldridge Dr NE to River Rd N	Bicycle-Pedestrian	2030	\$3,200,000	\$4,783,765	0-10 yrs
City of Salem								
Committed								
S079	Commercial SE & Ratcliff Drive SE	Construction of sidewalks along east side of Commercial St SE between Ratcliff Dr SE and Vista St SE, and new signal at Ratcliff Dr SE.	Commercial St SE at Ratcliff Dr SE	Roads-Bridges	2026	\$4,500,000	\$5,907,872	10-20 yrs
S082	Commercial St SE: Ratcliff Dr SE to Vista Av SE	Add curbs, gutters and sidewalks where missing along this segment of Commercial Street SE.	Commercial St SE: Ratcliff Dr SE to Vista Av SE	Roads-Bridges	2026	\$1,803,000	\$3,729,227	0-5 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
S126	McGilchrist St SE: 12th St SE to 25th St SE	Reconstruct to a 3-lane standard from 12th to 22nd, and to a 4-lane standard (with eastbound lanes) from 22nd the 25th. Add or revise signals at 5 intersections, realign 22nd and widen both 22nd and 25th in the vicinity of McGilchrist. See S316. Work on/at 22nd separately funded (STIP 21887) see S383. RAISE grant awarded in 2022 for \$13,229,320. Part of the 2022 GO Bond.	McGilchrist St SE: 12th St SE to 25th St SE	Roads-Bridges	2025	\$16,760,000	\$16,760,000	0-10 yrs
S135	Pringle Rd SE: McGilchrist St SE to Georgia Av SE	Widen to minor arterial standards with 2 travel lanes, center turn lane or turn pockets, bike lanes, curbs, stormwater treatment, streetlights, and sidewalks. Includes four pedestrian crossing near transit stops. Part of the 2022 GO Bond.	Pringle Rd SE: McGilchrist St SE to Georgia Av SE	Roads-Bridges	2030	\$19,220,000	\$19,220,000	0-5 yrs
S297	Marine Drive NW: Harritt Dr NW to Cameo St at 5th Av NW	Construct a new collector street to the east of Wallace Rd along alignment determined by the flood plain. Uses a special Salem TSP cross section with two travel lanes, new curb, sidewalk on westerly side, 12-foot multi-use path on the easterly side, stormwater treatment, and streetlights. Includes connector streets at Beckett St and 5th Av and improvements to Harritt Dr NW. Sections may be constructed by developers depending on timing of development vs. funding for city construction. See also S343 and S382. In the 2022 GO Bond.	New alignment for Marine Dr NW from Harritt Dr NW to Cameo St at 5th Av NW	Roads-Bridges	2027	\$23,530,000	\$23,530,000	0-10 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
S321	Pringle Creek Path: Civic Center to Riverfront Park.	Construct a pedestrian bridge crossing of Pringle Creek under the Commercial street bridge, construct a new path along Pringle creek from Commercial Street under the existing railroad bridge to the Riverfront Park. Includes creek overlooks and art wall. From 2022 Salem GO Bond.	Pringle Creek Path from Riverfront Park to Civic Center	Bicycle-Pedestrian	2030	\$5,300,000	\$5,300,000	0-5 yrs
S336	Union St Bikeway - Phase 2 Summer St NE to 12th St NE	Build buffered bike lanes on Union Street from Summer St NE to 12th St curve and end at Marion St. Requires adjustment to curb extensions. From Central Salem Mobility Study (2012). See also S311 for Phase 1, S298 for the signal at Commercial St, and S347 for Phase 1B. Part of the 2022 GO Bond Package.	Union St NE from Summer St NE to 12th St NE	Bicycle-Pedestrian	2028	\$4,300,000	\$4,300,000	0-5 yrs
S347	Union St Bikeway: Phase 1B	Phase 1B includes curb extensions at the intersection of Liberty St NE and Union St NE, and the design and construction of enhanced bicycle facilities on Union St NE between Commercial St NE and Summer St NE. See also S298, S311, and S336.	Union St NE between Commercial St NE and Summer St NE	Bicycle-Pedestrian	2023	\$3,799,405	\$4,525,152	0-5 yrs
S348	Fisher Rd NE - Silverton Rd NE to East/West Curve	On Fisher Rd NE from Silverton Rd NE to the East/West curve, construct to collector street standrads, including new curb, sidewalks, bike lanes, stormwater treatment, and streetlights. Includes a traffic signal replacement at Sunnyview Road and pedestrian crossings at Beverly Av and Devonshire Av. Part of the Salem 2022 GO Bond.	Fisher Rd NE from Silverton Rd NE to the East/West curve.	Roads-Bridges	2027	\$27,650,000	\$27,650,000	0-10 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
S354	Replace Railroad and McGilchrist St culverts on West Fork Pringle Creek	Replace Union Pacific Railroad and McGilchrist St culverts on West Fork Pringle Creek. From the Pringle Creek Basin Plan, project PC-01C. In FY2023 CIP.	UP RR line and McGilchrist St at West Fork Pringle Creek	Roads-Bridges	2024	\$2,500,000	\$3,075,799	0-5 yrs
S355	Hawthorne Av NE at Sunnyview Rd NE	Design and construction of modification to the northwest and southeast quadrants of the intersection of Hawthorne Ave NE at Sunnyview Rd NE to align the northbound and southbound left-turn pockets and add a new northbound right-turn pocket. This project would require minor widening of the southeast quadrant to accommodate the new right-turn lane. The project would also overlay the approaches, restripe the new lane configuration and relocate traffic signal poles in the NW and SE quadrants	Hawthorne Av NE at Sunnyview Rd NE	Roads-Bridges	2025	\$2,530,000	\$3,215,428	0-5 yrs
S357	Turner Rd SE: Mill Creek Bridge to Deer Park Dr SE	Design and construction of full-street improvements from Mill Creek bridge to Deer Park Rd SE	Turner Rd SE: Mill Creek Bridge to Deer Park Dr SE	Roads-Bridges	2024	\$1,223,850	\$1,505,727	0-5 yrs
S358	Turner Rd SE at Gath Rd SE and Deer Park SE	Design and construction of improvements to realign Turner Rd SE at Gath Rd SE / Deer Park Dr SE and add SB and WB left-turn lanes.	Turner Rd SE at Gath Rd SE and Deer Park SE	Roads-Bridges	2025	\$6,079,930	\$7,727,105	0-5 yrs
S359	Turner Rd SE: Kuebler Blvd SE to Mill Creek Bridge	Design and construction of full-street improvements on Turner Rd SE for 1500 linear feet from Kuebler Blvd SE to the Mill Creek bridge and 500 linear feet from Turner Rd SE north of Kuebler Blvd SE. Work also includes signal modifications and 1000 linear feet of half-street improvements on the south side of Kuebler Blvd SE from Turner Rd Se to the Mill Creek bridge.	Turner Rd SE: Kuebler Blvd SE to Mill Creek Bridge	Roads-Bridges	2023	\$4,698,730	\$5,596,263	0-5 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
S360	Deer Park Dr SE Modifications	Construct full-street improvements from Aumsville Hwy SE to Turner Rd SE. Work includes one travel lane in each direction, left-turn pockets, curbs, and sidewalks.	Deer Park Dr SE from Aumsville Hwy SE to Turner Rd Se	Roads-Bridges	2023	\$5,733,540	\$6,828,738	0-5 yrs
S362	Hilfiker Ln SE at Commercial St SE	Design, RoW, and construction to widen the approaches on Hilfiker Ln SE to allow a left-turn lane and bike lanes in both directions. Replace traffic signal.	Hilfiker Ln SE at Commercial St SE	Roads-Bridges	2023	\$4,486,900	\$5,343,970	0-5 yrs
S363	Commercial St SE: Oxford St SE to Winding Way SE	Design and construct buffered bike lanes and pedestrian crossings along this stretch.	Commercial St SE: Oxford St SE to Winding Way SE	Bicycle-Pedestrian	2023	\$2,144,590	\$2,554,241	0-5 yrs
S364	Commercial St SE: Madrona Av SE to Robins Ln SE - Signal Improvements	Design and construct upgrades at signalized intersections on Commercial St SE from Madrona Av SE to Robins Ln SE.	Commercial St SE: Madrona Av SE to Robins Ln SE	ITS-Signals	2024	\$773,750	\$951,960	0-5 yrs
S365	State St at 25th St SE Intersections Improvements	Design and construct intersection modifications to improve pedestrian visibility and reduce traffic incidents.	State St at 25th St SE	Roads-Bridges	2024	\$648,730	\$798,145	0-5 yrs
S366	Pedestrian Island and Crossing Safety Improvements Package	Design and construct crossing modifications on State St at 21st SE; Lancaster Dr NE at Weathers St NE and River Rd N at Riveria Dr NE.	State St at 19th St SE and 21st SE; Lancaster Dr NE at Weathers St NE and Wolverine St NE; and River Rd N at Riveria Dr NE.	Bicycle-Pedestrian	2024	\$1,424,360	\$1,752,418	0-5 yrs
S367	Downtown Signal Upgrades	Design and construct upgrades at signalized intersections at various locations within downtown bordered by State St, Capitol St NE, Union St NE, and Commercial St NE.	Various locations within downtown bordered by State St, Capitol St NE, Union St NE, and Commercial St NE.	ITS-Signals	2023	\$118,360	\$140,969	0-5 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
S369	Orchard Hts Rd NW Modifications	Design and construct modifications along the south side of two segments of Orchard Hts Rd NW, from Snowbird Dr NW to Schoolhouse Ct NW, and from Chapman Hill Dr to Westhaven Av NW. Modifications include constructing missing curb, sidewalks, and widening Orchard Hts Nw to provide a pedestrian median island at Parkway Dr NW and WB left-turn pocket from Orchard Hts Rd Nw to Parkway Dr NW.	South side of two segments of Orchard Hts Rd NW, from Snowbird Dr NW to Schoolhouse Ct NW, and from Chapman Hill Dr to Westhaven Av NW. Orchard Hts Nw at Parkway Dr NW and Orchard Hts Rd Nw to Parkway Dr NW.	Roads-Bridges	2025	\$2,312,440	\$2,938,926	0-5 yrs
S370	Sunnyview Rd NE at Hollywood Dr NE Pedestrian Crossing	Design and construct a new median island crossing at Sunnyview Rd NE at Hollywood Dr NE with street lighting, improved crosswalk and ramps.	Sunnyview Rd NE at Hollywood Dr NE	Bicycle-Pedestrian	2023	\$175,930	\$209,535	0-5 yrs
S373	Broadway St NE at Locust St NE Pedestrian Crossing	Design and construct a new median island crossing of Broadway St at Locust St NE, with street lighting, improved crosswalk, and ramps.	Broadway St NE at Locust St NE	Bicycle-Pedestrian	2023	\$161,570	\$192,432	0-5 yrs
S374	Macleay Rd SE and Caplinger Rd SE Pedestrian Crossing	Design, RoW, and construction of a new crossing with pedestrian island, lighting, and new sidewalk on west side of Macleay Rd SE from 150 linear feet south of Periwinkle Dr SE to 100 linear feet west of Gaffin Rd SE and the south side of Caplinger Rd Se from Macleay Rd SE to 750 linear feet easterly to connect to existing sidewalk.	West side of Macleay Rd SE from 150 linear feet south of Periwinkle Dr SE to 100 linear feet west of Gaffin Rd SE and the south side of Caplinger Rd SE from Macleay Rd SE to 750 linear feet easterly to connect to existing sidewalk.	Bicycle-Pedestrian	2023	\$2,320,000	\$2,763,157	0-5 yrs
S375	Portland Rd NE at Hazelgreen Rd NE Intersection	Developer funded modifications that may include NB double left-turn lanes and an additional WB receiving lane.	Portland Rd NE at Hazelgreen Rd NE	Roads-Bridges	2023	\$1,000,000	\$1,191,016	0-5 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
S376	Lone Oak Rd SE at Rees Hill Rd SE	Design and RoW acquisition for intersection modifications that include a lengthened left-turn lane and an acceleration lane on Rees Hill Rd SE.	Lone Oak Rd SE at Rees Hill Rd SE	Roads-Bridges	2025	\$1,350,000	\$1,715,742	0-5 yrs
S377	Davis Rd S: Skyline Dr S to Liberty Rd S	Urban upgrade of the existing road to add new curb, sidewalks, bikelane, stormwater treatment and streetlights with pedestrian crossings. Adds a new traffic signal at Davis Rd S at Liberty Rd S. From the 2022 Salem GO Bond.	Davis Rd S: Skyline Dr S to Liberty Rd S	Roads-Bridges	2028	\$7,600,000	\$7,600,000	0-5 yrs
S378	State St: 13th St NE to 17th St NE Bike Lanes and Pavement	Pavement rehabilitation and striping reconfiguration to one travel lane in each direction with a center turn lane and bike lanes. Includes a pedestrian crossing at 15th St and streetscape features. Also includes a new traffic signal at the 17th St intersection. From the 2022 Salem GO Bond. See S217 for portion east of 17th.	State St: 13th St NE to 17th St NE	Bicycle-Pedestrian	2028	\$12,950,000	\$12,950,000	0-5 yrs
S379	Broadway: Pine St N to Tryon St N	Add "flashing yellow arrow" to left turn signals and convert 4 lane roadway to a 3 lane roadway with a center turn lane to increase safety and improve traffic flow. Add bike facilities via ARTS funds. See S204 and S380.	Broadway: Pine St N to Tryon St N	Roads-Bridges	2023	\$2,000,000	\$2,382,032	0-5 yrs
S383	McGilchrist St SE at 22nd St SE	Realign 22nd St SE at McGilchrist St SE to make a four-leg intersection and install a new traffic signal to increase traffic flow. See S126 for remaining work on McGilchrist St SE.	McGilchrist St SE at 22nd St SE	Roads-Bridges	2023	\$9,925,000	\$9,925,000	0-5 yrs
Included								
S036	Doaks Ferry Rd NW: Brush College Rd NW to Orchard Heights Rd NW	Widen to 3 lanes where appropriate with curbs, bikelanes and sidewalks. Improves intersection at Orchard Hts. Developer contribution expected.	Doaks Ferry Rd NW from Brush College Rd NW to Orchard Hts Rd NW	Roads-Bridges	2030	\$6,200,000	\$12,823,741	0-10 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
S061	17th St NE: Norway St NE to Sunnyview Rd NE	Widen to minor arterial standards, including 2 travel lanes with curbs, gutters, sidewalks and bike lanes, plus left turn lanes at intersections.	17th St NE: Norway St NE to Sunnyview Rd NE	Roads-Bridges	2035	\$1,791,000	\$4,961,598	0-20 yrs
S064	25th St SE: State St to Helm St SE	Add bike facilities and turn pockets as needed.	25th St SE: State St to Helm St SE	Roads-Bridges	2045	\$2,654,000	\$6,456,923	0-20 yrs
S065	36th Av SE: Kuebler Bv SE to Langley St SE	Widen to minor arterial standards with 2 travel lanes, center turn lane or turn pockets, bike lanes, curbs, gutters and sidewalks.	36th Av SE: Kuebler Bv SE to Langley St SE	Roads-Bridges	2032	\$889,000	\$2,234,224	0-10 yrs
S067	Battle Creek Rd SE: Kuebler Bv SE to Wiltsey Rd SE	Widen to minor arterial standards with 2 travel lanes, center turn lane or turn pockets, bike lanes, curbs, gutters and sidewalks. Likely developer funded or built.	Battle Creek Rd SE: Kuebler Bv SE to Wiltsey Rd SE	Roads-Bridges	2030	\$3,520,000	\$8,290,238	0-10 yrs
S071	Brush College Rd NW: Doaks Ferry Rd to BPA Power Lines	Widen to minor arterial standards with 2 travel lanes, left turn lanes, bike lanes, curbs, gutters and sidewalks.	Brush College Rd NW: Doaks Ferry Rd to BPA Power Lines	Roads-Bridges	2035	\$3,756,000	\$8,846,061	10-20 yrs
S083	Commercial St SE: Baxter Rd SE to I-5 Interchange	Widen to major arterial standards, including 4 travel lanes, left turn lanes at selected locations, curbs, gutters, sidewalks, and bike lanes.	Commercial St SE: Baxter Rd SE to I-5 Interchange	Roads-Bridges	2040	\$7,329,000	\$23,882,087	10-20 yrs
S085	Cordon Rd SE & Hwy 22	Construct interchange with recommended signalized intersections and lane configurations. From Cordon Road Interchange Study and the OR 22E Facility Plan.	Cordon Rd SE at OR 22E	Roads-Bridges	2038	\$30,000,000	\$64,098,023	10-20 yrs
S087	Croisan Creek Rd S: River Rd S to Heath St S	Widen to collector standards by adding curbs, bikelanes & sidewalks	Croisan Creek Rd S from River Rd S to Heath St S	Roads-Bridges	2040	\$2,770,000	\$9,026,249	0-20 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
S094	Fabry Rd SE: Reed Ln SE to Battle Creek Rd SE	Extend Fabry Rd SE eastward from Reed Ln SE to Battle Creek Rd SE. This along with the westward extension of Mildred Ln SE will provide an east/west minor arterial connection south of Kuebler Bv SE from Battle Creek Rd SE to Skyline Rd. Developer funded partially or fully.	Fabry Rd SE: Reed Ln SE to Battle Creek Rd SE	Roads-Bridges	2025	\$3,930,000	\$7,617,544	0-10 yrs
S095	Front St N: Norway St NE to Division St NE	Rebuild Front Street to a modified minor arterial standard and aligning the railroad tracks down the center. Construct wide travel lanes as well as curbs, gutters, and sidewalks. The project includes the reconstruction of Mill Creek Bridge.	Front St N: Norway St NE to Division St NE	Roads-Bridges	2040	\$4,000,000	\$13,034,295	0-20 yrs
S096	Front St N: River Rd N to Norway St N	Widen to minor arterial standards, including 2 travel lanes with curbs, gutters, sidewalks and bike lanes, plus left turn lanes at intersections.	Front St N: River Rd N to Norway St N	Roads-Bridges	2025	\$3,650,000	\$5,636,546	0-10 yrs
S098	Glen Creek Rd NW: Crescent Dr NW to Westfarthing Way NW	Widen to minor arterial standards with 2 travel lanes, left turn lanes, bike lanes, curbs, gutters and sidewalks.	Glen Creek Rd NW: Crescent Dr NW to Westfarthing Way NW	Roads-Bridges	2037	\$2,617,000	\$7,736,247	0-10 yrs
S103	Hilfiker Ln SE: Commercial St SE to Pringle Rd SE	Construct extention of Hilfiker Lane SE to Hillrose Street SE and reconstruct both Hilfiker and Hillrose to collector standards, with two travel lanes, turn pockets, curbs, gutters, sidewalks, and bike lanes. A portion of the project will likely be developer funded.	Hilfiker Ln SE from Commercial St SE to Pringle Rd Se	Roads-Bridges	2025	\$3,866,000	\$7,740,778	0-10 yrs
S110	Kuebler Bv SE: Turner Rd SE to Hwy 22 Overpass	Widen to four travel lanes, paved or raised median, bike lanes, curbs, gutters and sidewalks, improvements to the bridge over Mill Creek. Developer funds the NB portion, only Salem portion is shown.	Kuebler Blvd from Turner Rd SE to Hwy 22 overpass	Roads-Bridges	2030	\$7,500,000	\$11,211,949	10-20 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
S113	Lancaster Dr SE: Cranston St SE to Kuebler Bv SE	Realign curves and widen to 2 travel lanes plus a center turn lane with curbs, gutters, sidewalks, and bike lanes.	Lancaster Dr SE: Cranston St SE to Kuebler Bv SE	Roads-Bridges	2025	\$6,300,000	\$8,006,796	0-10 yrs
S117	Macleay Rd SE: Pennsylvania Av SE to Cordon Rd SE	Widen to collector standards, including 2 travel lanes, curbs, gutters, sidewalks, and bike lanes where designated.	Macleay Rd SE: Pennsylvania Av SE to Cordon Rd SE	Roads-Bridges	2035	\$4,059,000	\$7,616,249	0-20 yrs
S119	Madrona Av S: Biegler Lane S to Liberty Rd S	Widen to minor arterial standards, including 2 travel lanes with curbs, gutters, sidewalks and bike lanes, plus left turn lanes at intersections.	Madrona Av S: Biegler Lane S to Liberty Rd S	Roads-Bridges	2050	\$650,000	\$2,930,516	0-20 yrs
S120	Madrona Av S: Croisan Creek Rd S to Elderberry Dr S	Widen to an interim 2 travel lanes with curbs, gutters, sidewalks and bike lanes.	Madrona Av S: Croisan Creek Rd S to Elderberry Dr S	Roads-Bridges	2040	\$2,203,000	\$7,178,638	0-20 yrs
S124	32nd Av SE & Trelstad Ave SE: East of I-5 to 36th Av SE signal at Kuebler Bv SE	Widen to minor arterial standards, including 2 travel lanes, left turn pockets where needed, curbs, gutters, sidewalks, and bike lanes.	32nd Av SE & Trelstad Ave SE: I-5 to 36th Av SE signal at Kuebler Bv SE	Roads-Bridges	2045	\$2,600,000	\$10,634,159	0-20 yrs
S128	Mildred Ln SE: Lone Oak Rd SE to Sunnyside Rd SE	Widen to minor arterial standards with 2 travel lanes, center turn lane or turn pockets, bike lanes, curbs, gutters and sidewalks.	Mildred Ln SE: Lone Oak Rd SE to Sunnyside Rd SE	Roads-Bridges	2032	\$3,356,000	\$8,434,259	0-10 yrs
S131	Orchard Heights Rd NW: Parkway Dr NW to Snowbird Dr NW	Widen to minor arterial standards with 2 travel lanes, left turn lanes, bike lanes, curbs, gutters and sidewalks. NEW *** Reconstruct northside of the road to include stormwater, bike and pedestrian facilities. See Sxyz for sidewalks on southside.	Orchard Heights Rd NW: Parkway Dr NW to Snowbird Dr NW	Roads-Bridges	2037	\$1,600,000	\$3,002,217	0-20 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
S132	Orchard Heights Rd NW: Titan Dr NW to UGB	Widen to minor arterial standards with 2 travel lanes, left turn lanes, bike lanes, curbs, gutters and sidewalks. Include realignment of Orchard Heights Rd west of BPA power lines. Developer funded.	Orchard Heights Rd NW: Titan Dr NW to UGB	Roads-Bridges	2040	\$2,779,000	\$9,055,577	0-20 yrs
S137	Robins Lane, east of Commercial St. SE	Connect Robins Lane to Battlecreek Rd with a new collector street alignment.	Robins Ln SE, east of Commercial St SE, to Battcreek Rd	Roads-Bridges	2030	\$2,517,000	\$5,927,991	0-10 yrs
S143	Skyline Rd S: Maplewood Dr S to Mildred Lane S	Widen to minor arterial standards including 2 travel lanes, a center turn lane, curbs, gutters, sidewalks and bike lanes.	Skyline Rd S: Maplewood Dr S to Mildred Lane S	Roads-Bridges	2040	\$2,535,000	\$8,260,485	0-20 yrs
S147	Sunnyside Rd S: Kuebler Bv SE to Mildred Lane SE	Widen to minor arterial standards with 2 travel lanes, left turn pockets, bike lanes, curbs, gutters and sidewalks.	Sunnyside Rd S: Kuebler Bv SE to Mildred Lane SE	Roads-Bridges	2040	\$4,520,000	\$14,728,754	0-20 yrs
S148	Sunnyside Rd S: Pawnee Circle SE to the UGB	Widen to minor arterial standards with 2 travel lanes, left turn pockets, bike lanes, curbs, gutters and sidewalks.	Sunnyside Rd S: Pawnee Circle SE to the UGB	Roads-Bridges	2050	\$3,784,000	\$17,060,113	0-20 yrs
S155	Turner Rd SE: 2100 feet south of Cascade Gateway Park to Airway Dr SE	Project to include bike lanes, drainage, paved shoulder on one side, and curb, gutter and sidewalk on the other.	Turner Rd SE: 2100 feet south of Cascade Gateway Park to Airway Dr SE	Roads-Bridges	2045	\$3,984,000	\$15,270,333	0-20 yrs
S156	Turner Rd SE: Airway Dr SE to Kuebler Blvd SE	Widen to minor arterial standards with 2 travel lanes, center turn lane or turn pockets, bike lanes, curbs, gutters and sidewalks.	Turner Rd SE: Airway Dr SE to Kuebler Blvd SE	Roads-Bridges	2050	\$5,131,000	\$23,133,044	0-20 yrs
S158	Turner Rd SE: Gath Rd SE to UGB	Widen to minor arterial standards with 2 travel lanes, left turn pockets, bike lanes, curbs, gutters and sidewalks.	Turner Rd SE: Gath Rd SE to UGB	Roads-Bridges	2050	\$3,502,000	\$15,788,720	0-20 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
S168	Airport Rd SE: State St. to Mission St.	Widen to minor arterial standards with 2 travel lanes, center turn lane or turn pockets, bike lanes, curbs, gutters, and sidewalks	Airport Rd SE from State St to Mission St SE	Roads-Bridges	2040	\$2,242,000	\$7,305,722	0-20 yrs
S172	Chemawa Rd NE: I-5 to Portland Rd NE	Widen to 4 lanes plus center turn lane, bike lanes, curbs, gutters and sidewalks.	Chemawa Rd NE from I-5 to Portland Rd NE	Roads-Bridges	2035	\$2,511,000	\$6,956,210	0-20 yrs
S173	Cherry Av NE: BNRR to Dr. MLK Jr Parkway NE	Widen to 5 lanes with 4 travel lanes, a center turn lane, curbs, gutters, sidewalks, and bike lanes	Cherry St NE from RR to Dr. MLK Jr Parkway NE	Roads-Bridges	2040	\$5,523,000	\$17,997,103	0-20 yrs
S174	Cherry Av NE: Johnson St NE to Pine St NE	Widen to an interim 3-lane configuration, with 2 travel lanes, a center turn lane, curbs, gutters, sidewalks, and bike lanes	Cherry St NE from Johnson St NE to Pine St NE	Roads-Bridges	2040	\$1,604,000	\$5,226,752	0-20 yrs
S176	Croisan Scenic Wy S: Joplin Rd S to Croisan Creek Rd S	Extend Croisan Scenic Way S southward connecting with a section already built near Madrona Avenue S, then continuing southward and westward intersecting with Croisan Creek Road S just south of River Rd S.	Croisan Scenic Way S from Joplin Rd S to Croisan Creek Rd S	Roads-Bridges	2050	\$5,806,000	\$26,176,273	0-20 yrs
S177	Doaks Ferry Rd NW: Eola Dr NW to UGB	Widen to an interim 3-lane, minor arterial standard, with 2 travel lanes, center turn lane, bike lanes, curbs, gutters and sidewalks. Include all necessary realignments and intersection modifications.	Doaks Ferry Rd NW from Eola Dr NW to UGB	Roads-Bridges	2050	\$5,759,000	\$25,964,374	0-20 yrs
S178	Doaks Ferry Rd NW: Glen Creek Rd NW to Eola Dr NW	Widen to an interim 3-lane, minor arterial standard, with 2 travel lanes, center turn lane, bike lanes, curbs, gutters and sidewalks. Include all necessary realignments and intersection modifications.	Doaks Ferry Rd NW from Glen Creek Rd NW to Eola Dr NW	Roads-Bridges	2035	\$3,423,000	\$9,482,718	0-20 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
S184	Hyacinth St NE: Dr. MLK Jr Parkway NE to Portland Rd NE	Widen to major arterial standards, including 4 travel lanes and a center turn lane with curbs, gutters, sidewalks, bike lanes and intersection modifications.	Hyacinth from Dr. MLK Jr Parkway to Portland Road	Roads-Bridges	2038	\$3,448,000	\$10,529,171	0-20 yrs
S185	Kale St NE: Portland Rd NE to Cordon Rd NE	Add a center turn lane, bike lanes, curbs and sidewalks in missing sections as development occurs.	Kale St NE: Portland Rd NE to Cordon Rd NE	Roads-Bridges	2030	\$3,894,000	\$9,171,076	0-20 yrs
S187	Kuebler Bv SE: Skyline Rd S to Liberty Rd SE	Widen to 4 lanes, curbs, sidewalks, bikelanes, center turn lane or median	Kuebler Blvd S from Skyline Rd S to Liberty Rd SE	Roads-Bridges	2040	\$1,127,000	\$3,672,413	0-20 yrs
S189	Liberty Rd S & Salem Heights Av S	Add northbound and southbound left turn lanes, bike lanes	Liberty Rd S at Salem Heights Ave S	Roads-Bridges	2040	\$1,705,000	\$5,928,606	0-20 yrs
S190	Liberty Rd S: Commercial St SE to Browning Av SE	Widen to 4 travel lanes, center turn lanes or raised medians, curbs, gutters, sidewalks, and bike lanes.	Liberty Rd S: Commercial St SE to Browning Av SE	Roads-Bridges	2050	\$10,347,000	\$49,778,966	0-20 yrs
S191	Liberty Rd S: Holder Ln SE to South UGB	Widen to an interim 3-lane urban standard, with 2 travel lanes, a center turn lane, curbs, gutters, sidewalks, and bike lanes.	Liberty Rd S: Holder Ln SE to South UGB	Roads-Bridges	2035	\$1,822,000	\$5,047,477	0-20 yrs
S197	Battle Creek Rd SE: Kuebler Bv SE to Hillrose St SE	Widen to minor arterial standards with 2 travel lanes, center turn lane or turn pockets, bike lanes, curbs, gutters, and sidewalks. Additional lanes may be required in the vicinity of the Kuebler Bv intersection.	Battle Creek Rd SE: Kuebler Bv SE to Hillrose St SE	Roads-Bridges	2032	\$6,163,000	\$15,488,778	0-20 yrs
S198	Reed Rd SE: Battle Creek Rd SE to Strong Rd SE	Widen to minor arterial standards with 2 travel lanes, center turn lane or turn pockets, bike lanes, curbs, gutters, and sidewalks. Half street modifications to be built by developers as Sustainable Fairview is built-out.	Reed Rd SE from Battle Creek Rd SE from Strongl Rd SE	Roads-Bridges	2028	\$1,778,000	\$3,026,585	0-10 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
S199	River Rd S: Croisan Creek Rd S to UGB	Widen to minor arterial standards where topography allows, including 2 travel lanes with curbs, gutters, sidewalks and bike lanes, plus left turn lanes at various intersections.	S. River Rd.: Croisan Creek to UGB	Roads-Bridges	2040	\$9,800,000	\$24,629,243	0-20 yrs
S204	Broadway St NE: Liberty St NE to Dr. MLK Jr Parkway	Add bike facilities. The portion from Dr. MLK Jr Parkway to Pine St NE is funded with ARTS funds is \$1.4 million. This includes a turn pocket. See also S379 and S380	Broadway St NE: Liberty St NE to Dr. MLK Jr Parkway NE	Bicycle-Pedestrian	2035	\$2,000,000	\$3,632,886	0-20 yrs
S205	Center St NE: Commercial St NE to 17th St NE	Add bike facilities	Center St NE: Commercial St NE to 17th St NE	Bicycle-Pedestrian	2040	\$690,000	\$1,850,439	0-20 yrs
S208	Commercial St SE: Mission St SE to Superior St SE	Add bike facilities	Commercial St SE: Mission St SE to Superior St SE	Bicycle-Pedestrian	2030	\$155,000	\$300,437	0-10 yrs
S210	Liberty St: Trade St SE to E St NE	Add bike facilities	Liberty St: Trade St SE to E St NE	Bicycle-Pedestrian	2037	\$179,000	\$435,490	0-20 yrs
S211	Marion St NE: 13th St NE to Commercial St NE	Add bike facilities	Marion St NE: 13th St NE to Commercial St NE	Bicycle-Pedestrian	2040	\$426,000	\$1,142,445	0-20 yrs
S212	Market St NE: Commercial St NE to Hawthorne Av NE	Add bike facilities	Market St NE: Commercial St NE to Hawthorne Av NE	Bicycle-Pedestrian	2048	\$2,131,000	\$7,409,888	0-20 yrs
S213	Madrona Av SE: Liberty Rd S to Commercial St SE	Add bike facilities	Madrona Av SE: Liberty Rd S to Commercial St SE	Bicycle-Pedestrian	2030	\$341,000	\$660,962	0-10 yrs
S214	Mission St SE: 12th St SE to Commercial St SE	Add bike facilities.	Mission St SE: 12th St SE to Commercial St SE	Bicycle-Pedestrian	2045	\$146,000	\$460,554	0-20 yrs
S216	Silverton Rd NE: Fairgrounds Rd NE to Lancaster Dr NE	Add bike facilities	Silverton Rd NE: Fairgrounds Rd NE to Lancaster Dr NE	Bicycle-Pedestrian	2045	\$2,033,000	\$6,413,050	0-20 yrs
S219	17th St NE: Sunnyview Rd NE to Silverton Rd NE	Add bike facilities	17th St NE from Sunnyview Rd NE to Silverton Rd NE	Bicycle-Pedestrian	2035	\$310,000	\$706,782	0-10 yrs
S224	Broadway St NE: Dr. MLK Jr Parkway NE to River Rd N	Add bike facilities	Broadway St NE: Dr. MLK Jr Parkway NE to River Rd N	Bicycle-Pedestrian	2045	\$83,000	\$261,822	0-20 yrs
S225	D St NE: Lancaster Dr NE to Summer St NE	Add bike facilities	D St NE: Lancaster Dr NE to Summer St NE	Bicycle-Pedestrian	2042	\$2,646,000	\$7,572,096	0-20 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
S226	Fairgrounds Rd NE/Hood St NE: Summer St NE to Commercial St NE	Add bike facilities	Fairgrounds Rd NE/Hood St NE: Summer St NE to Commercial St NE	Bicycle-Pedestrian	2038	\$162,000	\$335,072	0-20 yrs
S229	Lana Av NE: Portland Rd NE to Silverton Rd NE	Add bike facilities	Lana Av NE: Portland Rd NE to Chemeketa Community College	Bicycle-Pedestrian	2040	\$57,000	\$152,862	0-20 yrs
S231	Madrona Av SE: Pringle Rd SE to Commercial St SE	Add bike facilities	Madrona Av SE: Pringle Rd SE to Commercial St SE	Bicycle-Pedestrian	2045	\$925,000	\$2,917,890	0-20 yrs
S236	25th St SE/Airway Dr SE: Madrona Av SE to Turner Rd SE	Add bike facilities	25th St SE/Airway Dr SE: Madrona Av SE to Turner Rd SE	Bicycle-Pedestrian	2045	\$2,216,000	\$8,493,739	0-20 yrs
S238	Sunnyview Rd NE: 17th St NE to Fairgrounds Rd NE	Add bike facilities	Sunnyview Rd NE: 17th St NE to Fairgrounds Rd NE	Bicycle-Pedestrian	2035	\$500,000	\$1,139,972	0-20 yrs
S245	12th St SE: Ibsen St SE to Commercial St SE	Add sidewalks for the west side of the street.	12th St SE: Ibsen St SE to Commercial St SE	Bicycle-Pedestrian	2040	\$1,000,000	\$2,068,345	0-20 yrs
S247	Center St NE: Mitchel St NE to Cordon St NE	Add sidewalks. See S346.	Center St NE: Mitchel St NE to Cordon St NE	Bicycle-Pedestrian	2038	\$8,000,000	\$15,506,451	0-20 yrs
S248	Commerical St SE: Winding Way SE to Lansford Dr SE	Add sidewalks	Commerical St SE: Winding Way to Landsford	Bicycle-Pedestrian	2040	\$8,000,000	\$16,546,763	0-20 yrs
S249	Bike/Ped overpass of Hwy 22 between Lancaster Dr and Cordon Rd	Construct a pedestrian overpass of Highway 22 connecting a residential area to the south to a shopping center and two schools to the north. Salem has an overcrossing from Bill Riegel Park to Miller E.S. in their plans.	Overpass of Hwy 22 between Lancaster Dr and Cordon Rd	Bicycle-Pedestrian	2033	\$3,495,000	\$9,073,451	0-10 yrs
S274	Salem Industrial Dr Improvement	Widen half the street to collector standards, with sidewalks, curbs, gutters and bike lanes where designated.	Salem Industrial Dr NE from Cherry Av NE to Bill Frey Dr NE	Roads-Bridges	2030	\$3,000,000	\$7,065,544	0-10 yrs
S286	Cordon Rd: Highway 22 E to Caplinger Rd SE	Widen to 4 lanes, plus center turn lane or left turn lanes at selected locations, curbs, gutters, sidewalks and bike lanes.	Cordon Rd SE from Highway 22 E to Caplinger Rd SE	Roads-Bridges	2035	\$3,390,000	\$9,391,299	10-20 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
S287	Kuebler Blvd SE: I-5 to Turner Rd SE	Widen to 4 travel lanes, paved or raised median, bike lanes, curbs, gutters and sidewalks. This project includes turn lanes at Turner Rd SE and bridge modifications over the railroad.	Kuebler Blvd SE: I-5 to Turner Rd SE	Roads-Bridges	2030	\$13,400,000	\$31,559,430	10-20 yrs
S288	Hawthorne Ave NE: Silverton Rd NE to Sunnyview Rd NE	Widen to 2 travel lanes with center turn lane where needed. Add curbs, gutters, sidewalks, bicycle lanes, and modify intersection approach to Silverton Rd NE and Sunnyview Rd NE. Project scope is to do interim minor arterial projects using a modified cross section (46 feet curb to curb in a 64 foot ROW) with construction to major arterial standards within 400 feet of intersections with Silverton Rd and Sunnyview Ave. Project includes some intersection realignment on the south side of Sunnyview to line up with new cross section. See also S364 for Hawthorne Ave at Sunnyview Rd project.	Hawthorne Ave NE: Silverton Rd NE to Sunnyview Rd NE	Roads-Bridges	2040	\$9,810,000	\$28,073,417	0-10 yrs
S292	Brush College Rd NW: Pedestrian Project	Construct missing section (approximately 850 feet) of sidewalk on north side of Brush College Rd NW to Doaks Ferry Rd NW to provide access to Brush College Elementary school from the west.	Brush College Rd NW: From Doaks Ferry Rd NW running 850 feet southwest.	Bicycle-Pedestrian	2027	\$4,600,000	\$6,238,450	0-20 yrs
S293	Hines St SE Railroad Crossing Pedestrian Facilities	Construct sidewalks on Hines St SE at the Union Pacific railroad crossing, including relocating rail switching equipment, crossing arms, and connect to existing sidewalks.	Hines St SE at Union Pacific railroad crossing.	Bicycle-Pedestrian	2045	\$1,500,000	\$5,049,160	0-20 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
S308	Capitol Mall to Keizer/Kroc Center Bike Corridor	Enhance the corridor for bicycle travel between the Capitol Mall and Keizer/Kroc Center. This will be accomplished by implementing the appropriate supporting facility, such as bike lanes, shared lane markings, off-street paths and/or modifying the road to bikeway standards. Cost is an estimate excluding two sections of the corridor (covered in other projects).	Winter St NE from Court St NE to Norway St NE; Norway St NE from Winter St NE to 5th St NE; Cottage St NE/Maple Av NE from Norway St NE to Bilier Av NE; Salem Industrial Dr NE from its western terminus to north of Anunsen St NE; Claggett Creek Path from B	Bicycle-Pedestrian	2030	\$186,000	\$360,525	Unfunded
S310	State St to Kroc Center Bike Corridor	Enhance corridor for bicycle travel between the State St in central east Salem and the Kroc Center. This will be accomplished by implementing the appropriate supporting facility, such as bike lanes, shared lane markings, off-street paths and/or modifying the road to bikeway standards. Cost is an estimate excluding two sections of the corridor (covered in other projects)	24th St NE from State St to Center St NE; 23rd St NE from Center St NE to Ellis Av NE; Ellis Av NE from 23rd St NE to Park Av NE; Park Av NE from Ellis Av NE to Market St NE; Park Av NE from Market St NE to Sunnyview Rd NE; Florence Av NE/Chester Av NE fr	Bicycle-Pedestrian	2035	\$1,095,000	\$2,496,538	0-20 yrs
S312	Geer Community Park to Hoover Elementary School Bike Corridor	Create a corridor for bicycle travel between Geer Community Park and Hoover Elementary School. This will be accomplished by implementing the appropriate supporting facility, such as bike lanes, shared lane markings, off-street paths and/or modifying the road to bikeway standards.	Illinois Av NE/Vinyard Av NE from Monroe Av NE to D St NE	Bicycle-Pedestrian	2035	\$72,000	\$164,156	0-20 yrs
S314	McKay Park East/West Bike Corridor	Create a corridor for bicycle travel connecting to McKay Park. This will be accomplished by implementing the appropriate supporting facility, such as bike lanes, shared lane markings, off-street paths and/or modifying the road to bikeway standards. Cost is an estimate excluding one section of the corridor (covered in other projects)	Beverly Av NE from Fisher Rd NE to Coral Av NE; Beverly Av NE/Phipps Ln NE/Carolina Av NE from Lancaster Dr NE to eastern terminus of Carolina Av NE; McKay Park Connector from Phipps Ln NE to Hollywood Dr NE; San Francisco Dr NE from Hollywood Dr NE to Wa	Bicycle-Pedestrian	2035	\$116,000	\$264,473	0-20 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
S315	Four Corners Elementary School and Auburn Elementary School Bike Corridor	Create a corridor for bicycle travel between the Four Corners Elementary School and Auburn Elementary School. This will be accomplished by implementing the appropriate supporting facility, such as bike lanes, shared lane markings, off-street paths and/or modifying the road to bikeway standards.	Elma Av SE/Donalyn Ln SE/Deana St SE/Monroe Av SE/45th Av SE/Barker St SE/45th PI SE/Mitchell St SE from Glendale Dr SE to Dean St SE	Bicycle-Pedestrian	2040	\$189,000	\$506,859	0-20 yrs
S317	Sprague HS to South Salem HS Bike Corridor	Create a corridor for bicycle travel between Sprague HS and South Salem HS. This will be accomplished by implementing the appropriate supporting facility, such as bike lanes, shared lane markings, off-street paths and/or modifying the road to bikeway standards. Cost is an estimate excluding three sections of the corridor (covered in other projects)	Justice Way Ct S/Joplin St S/Camellia Dr S/Barrett St S from Croisan Scenic Wy S to Browning Av S; Browning Av S from Barrett St S to Neelon Dr S; Crestview Dr S/Ewald Av S from Browning Av S to Stanley Ln S; Stanley Ln S from Ewald Av S to Madrona Av S;	Bicycle-Pedestrian	2035	\$376,000	\$857,259	0-20 yrs
S318	Bush's Pasture Park to River Road Bike Corridor	Create a corridor for bicycle travel between the Bush's Pasture Park and River Road S. This will be accomplished by implementing the appropriate supporting facility, such as bike lanes, shared lane markings, off-street paths and/or modifying the road to bikeway standards.	Miller St S from River Rd S to High St SE	Bicycle-Pedestrian	2027	\$43,000	\$75,612	0-5 yrs
S319	Saginaw St Bike Corridor	Create a corridor for bicycle travel between Mission St and Rural Av, bypassing the Commercial/Liberty couplet. This will be accomplished by implementing the appropriate supporting facility, such as bike lanes, shared lane markings, off-street paths and/or modifying the road to bikeway standards.	Saginaw St S/Mission St SE from Rural Av SE to Commercial St SE	Bicycle-Pedestrian	2030	\$93,000	\$180,262	0-10 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
S320	Clark Creek Park/South Village Park Bike Corridor	Create a corridor for bicycle travel between the Clark Creek Park and South Village Park. This will be accomplished by implementing the appropriate supporting facility, such as bike lanes, shared lane markings, off-street paths and/or modifying the road to bikeway standards. Cost is an estimate excluding three sections of the corridor (covered in other projects)	Yew St SE/Berry St SE/Electric St SE/Summer St SE from Leffelle St SE to Vista Av SE; Clark Creek Park Connector from Vista Av SE to Norwood St SE; Norwood St SE/Hulsey Av SE/Morningside St SE/Peck Av SE from Clark Creek Park to Harris Av SE; South Villag	Bicycle-Pedestrian	2030	\$200,000	\$387,661	0-10 yrs
S322	Orchard Heights Park / Brush College Park Bike Corridor	Create a corridor for bicycle travel between Orchard Heights Park and Brush College Park. This will be accomplished by implementing the appropriate supporting facility, such as bike lanes, shared lane markings, off-street paths and/or modifying the road to bikeway standards. Cost is an estimate excluding three sections of the corridor (covered in other projects)	Lupin Ln NW/Larkspur Ln NW/Karen Wy NW from Parkway Dr NW to Glen Creek Rd NW; Parkway Dr NW from Lupin Ln NW to Orchard Heights Rd NW; Orchard Heights Park Access Road from Orchard Heights Rd NW to northern terminus; Orchard Heights Park/Hope Av Connecto	Bicycle-Pedestrian	2040	\$263,000	\$705,312	0-20 yrs
S323	2nd St NW Bike Corridor - Phase 1	Design and reconstruction of 2nd St NW, phased from Gerth Av NW to Wallace Rd NW. Phase 1 is between Patterson St NW to Wallace Rd NW. From the Salem CIP. See also S344. Previously \$5.93 million has been allocated to this project.	2nd St NW from Patterson St NW to Wallace Rd NW	Bicycle-Pedestrian	2024	\$2,400,000	\$2,952,767	0-10 yrs
S324	25th St South of Mission St Bike Corridor	Create a corridor for bicycle travel along 25th Av SE. This will be accomplished by implementing the appropriate supporting facility, such as bike lanes, shared lane markings, off-street paths and/or modifying the road to bikeway standards. Cost is an estimate excluding two sections of the corridor (covered in other projects). See S221.	25th St SE from Madrona Av SE to Mission St SE	Bicycle-Pedestrian	2035	\$3,300,000	\$6,607,493	0-20 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
S326	Cottage St - Convert to two-way	Convert to two-way with sharrows. From the Central Salem Mobility Study (2012).	Cottage St NE from Court St NE to Union St NE	Roads-Bridges	2036	\$700,000	\$1,648,627	0-20 yrs
S333	Summer St NE & Marion St NE Intersection Modifications	Remove southbound right-turn movement from shared lane and remove fourth westbound lane east of Summer St and start it as an add lane for the southbound right-turn movement. From the Central Salem Mobility Study (2012).	Summer St NE at Marion St NE	Roads-Bridges	2035	\$120,000	\$273,593	0-10 yrs
S340	Kroc Center Pathway	Build a bicycle/pedestrian connection between Hyacinth St NE and Bill Frey Dr, including a bridge over Claggett Creek. Cost estimate is for the most expensive option (concrete path and bridge).	Between Hyacinth St NE and Bill Frey Dr.	Bicycle-Pedestrian	2036	\$1,800,000	\$3,972,795	0-20 yrs
S341	Hyacinth St Multi-Use Path	Build a bicycle/pedestrian path along the south side of Hyacinth St NE between Salem Parkway and Salem Industrial Drive NE.	Hyacinth St NE between Salem Parkway and Salem Industrial Dr NE	Bicycle-Pedestrian	2036	\$550,000	\$1,213,910	0-20 yrs
S342	Bike/Pedestrian Bridge over Dr. MLK Jr Parkway	Build a bridge over Dr. MLK Jr Parkway to separate bicycle and pedestrian travel from motorized vehicles. Would include connections to the existing multi-use path along Dr. MLK Jr Parkway and to the proposed multi-use path along Hyacinth St NE (see S340).	Dr. MLK Jr Parkway at Verda Dr NE/Hyacinth St NE	Bicycle-Pedestrian	2050	\$3,500,000	\$12,170,159	0-20 yrs
S343	Marine Dr NW: Harritt Dr NW to River Bend Rd NW	Construct a collector from the Harritt Dr NW extension to River Bend Rd NW. Road will include one lane in each direction, center turn pockets as necessary and facilities for bicycles and pedestrians. See also S297 and S382.	Marine Dr NW from Harritt Dr NW to River Bend Rd NW	Roads-Bridges	2045	\$8,110,000	\$19,730,838	0-20 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
S345	Auburn Rd NE: Baldwin Av NE to Cordon Rd NE	Widen to collector standards, add bike lanes, drainage and sidewalks. Continuation of M071. Was M011. Developer funded.	Auburn Rd: Baldwin Dr to Cordon Rd	Roads-Bridges	2030	\$2,000,000	\$4,136,691	0-20 yrs
S372	Pedestrian Crossing Program	Design and construct pedestrian safety crossings. Locations determined annually based on opportunites or identified crossing safety issues.	TBD	Bicycle-Pedestrian	2023	\$975,000	\$1,161,241	0-5 yrs
S382	Marine Dr NW: 5th Av NW to Glen Creek Rd	Construct a new collector from the 5th Av extension to Glen Creek Rd NW. Road will include one lane in each direction, center turn pockets as necessary, facilities for bicycles and pedestrians, and appropriate stormwater treatment. See also S297 and S343.	From 5th Ave NW extesnion to Glen Creek Rd NW to the west of the park.	Roads-Bridges	2038	\$17,000,000	\$32,951,208	0-20 yrs

City of Turner

Included

T008	Delaney Road at Turner Road	Add sidewalks, bicycle lanes, and a right turn lane to Delaney Road east of Turner Road extending approximately 340 feet, connecting to the existing sidewalks and bicycles lanes at 2nd St. SE.	Delaney Road east of Turner Road	Roads-Bridges	2032	\$744,450	\$1,187,561	0-10 yrs
------	-----------------------------	--	----------------------------------	---------------	------	-----------	-------------	----------

Marion County

Committed

M015	Cordon Rd NE & Auburn Rd NE	Add traffic signal and widening of intersection for lane channelization on Auburn Rd. Developer funded	Cordon Rd at Auburn Rd	Roads-Bridges	2025	\$1,300,000	\$1,652,196	0-10 yrs
M016	Cordon Rd NE & Hayesville Dr NE	Add northbound left turn lane, ARTS funds	Cordon Rd at Hayesville Dr	Roads-Bridges	2022	\$610,000	\$775,261	0-5 yrs
M023	Delaney Rd: Bridge over Battle Creek	Replace bridge, realign intersection at Battle Creek Road and at Parrish Gap Rd. STIP key 21896	Delaney Rd bridge over Battle Creek	Roads-Bridges	2028	\$4,900,000	\$6,864,601	Unfunded

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
M024	Hollywood Dr: Salem City Limits to Silverton Rd NE	Widen to collector standards and add new signal at Hollywood Dr at Silverton Rd. (combined with M032).	Hollywood Dr from Salem City Limits to Silverton Rd	Roads-Bridges	2022	\$3,150,000	\$4,003,398	0-5 yrs
M027	Lancaster Dr NE: Center St to Monroe St NE	Reconstruct road, including sidewalk, ADA and access modifications. (see M100 for second part)	Lancaster Dr from Center St to Monroe St	Roads-Bridges	2022	\$2,625,000	\$3,336,165	0-5 yrs
M030	Sidewalk construction: various locations (set 1)	Construct sidewalks at various locations - \$300,000 per year, or used as match for grants for sidewalk projects.	TBD	Bicycle-Pedestrian	2028	\$1,500,000	\$2,101,408	0-5 yrs
M034	State St: Lancaster Dr NE to 46th Av	Widen to 2 travel lanes plus a center turn lane with curbs, gutters, sidewalks, and bike lanes. Scaled down from 4+CTL. See Mxxx.	State St from Lancaster Dr to 46th Av	Roads-Bridges	2026	\$5,452,000	\$7,157,715	0-10 yrs
M042	Cordon Rd NE & Kale St NE	Add left turn refuge on Cordon Rd at Kale St. ARTS funded.	Cordon Rd at Kale St	Roads-Bridges	2022	\$565,000	\$718,070	0-5 yrs
M070	Cordon Road SE & State St	Modify the intersection to upgrade the signal, add NB & SB travel lanes, NB right turn lane, EB & WB travel lanes. Assume 50 percent developer funded.	Cordon Road SE & State St	Roads-Bridges	2028	\$3,000,000	\$4,484,780	0-5 yrs
M085	Center St: Lancaster Dr to 45th Pl (3-lane interim)	Widen to include 3-lane section with center turn lane, sidewalks and bike lanes on the north side. Stormwater mitigation as required. Was S171, see also M084.	Center Street from Lancaster Drive to 45th Place	Roads-Bridges	2024	\$3,483,500	\$4,285,818	0-5 yrs
M086	Connecticut St: Bike and Pedestrian	Design bike and pedestrian path on west-side. PE Phase in 2020, construction in 2024.	Connecticut St: Macleay Rd to Rickey St	Roads-Bridges	2024	\$1,296,000	\$1,594,494	0-5 yrs
M088	Marion County Curve Warning Signs	Upgrade and install new curve warning (chevron) signs on curves where warranted (Vitae Springs Rd, Orville Rd and River Rd South)	Segments of Vitae Springs Rd, Orville Rd and River Rd South	Roads-Bridges	2022	\$300,000	\$357,305	0-5 yrs
Included								

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
M018	Cordon Rd NE & Ward Dr NE	Add northbound left turn lanes	Cordon Rd at Ward Dr	Roads-Bridges	2035	\$1,000,000	\$1,758,415	10-20 yrs
M019	Cordon Rd NE & Herrin Rd NE	Add left turn refuge	Cordon Rd at Herrin	Roads-Bridges	2035	\$1,000,000	\$1,758,415	10-20 yrs
M020	Hazelgreen Rd at Cordon Rd NE / 55th Ave	Realign, add turn lanes and signal or roundabout	Cordon Rd at Hazelgreen Rd and 55th Ave	Roads-Bridges	2030	\$4,500,000	\$6,727,169	0-10 yrs
M022	Delaney Rd: Battle Creek SE to Turner	Widen road to county arterial standards	Delaney Road from Battle Creek to Turner	Roads-Bridges	2030	\$5,500,000	\$8,222,096	0-10 yrs
M031	Sidewalk construction: various locations (set 2)	Construct sidewalks at various locations - \$300,000 per year, or used as match for grants for sidewalk projects.	TBD	Bicycle-Pedestrian	2033	\$1,500,000	\$2,471,793	0-10 yrs
M044	Cordon Rd NE: Silverton Rd NE to Kale St NE	Separated multi-use path	Cordon Rd from Silverton Rd to Kale St	Bicycle-Pedestrian	2040	\$1,400,000	\$2,895,684	Unfunded
M046	Cordon Rd SE: Center Rd NE to State St SE	Construct to Parkway standards with 4 travel lanes, center turn lane and multi-use path including required signal modifications. Partially developer funded.	Cordon Rd from State St to Center St	Roads-Bridges	2030	\$7,000,000	\$10,464,486	0-10 yrs
M048	Hayesville Dr NE: Fuhrer Dr NE to Cordon Rd NE	Widen to collector standards. See also M073.	Hayesville Dr from Fuhrer Dr to Happy Rd	Roads-Bridges	2045	\$2,800,000	\$6,812,126	Unfunded
M049	Herrin Rd NE: Middle Grove Dr NE to Cordon Rd NE	Widen to collector standards, replace bridge	Herrin Rd from Middle Grove to Cordon Rd	Roads-Bridges	2040	\$2,800,000	\$5,791,367	Unfunded
M058	Pedestrian Treatments: various locations (set 3)	Construct sidewalks, ADA facilities, pedestrian crossings at various locations - used as match for grants for pedestrian projects.	TBD	Bicycle-Pedestrian	2043	\$1,500,000	\$3,419,915	10-20 yrs
M059	Pedestrian Treatments: various locations (set 4)	Construct sidewalks, ADA facilities, pedestrian crossings at various locations - used as match for grants for pedestrian projects.	TBD	Bicycle-Pedestrian	2039	\$1,500,000	\$3,003,406	0-20 yrs
M061	Swegle Rd NE: City limits to Cordon Rd NE	Widen to minor arterial standards, including 2 travel lanes plus a center turn lane with curbs, gutters, sidewalks and bike lanes.	Swegle Rd from Salem City Limits to Cordon Rd	Roads-Bridges	2045	\$1,500,000	\$3,649,353	Unfunded

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
M062	Turner Rd SE: Val View Dr SE to Turner UGB	Widen to minor arterial standards adding turn lanes where needed, bike lanes, curbs, gutters, and sidewalks. Partially developer funded. See T007	Turner Rd from Val View Rd to the northern boundary of the Turner UGB	Roads-Bridges	2045	\$4,200,000	\$10,218,190	Unfunded
M074	Brooklake Rd NE Pedestrian Enhancements	On the north side of Brooklake Rd, provide sidewalks, add seating areas, lighting and landscaping.	Brooklake Rd NE: from Pueblo Av NE to approximately OR 99E	Bicycle-Pedestrian	2025	\$1,000,000	\$1,270,920	Unfunded
M077	Sunnyview Rd NE: Walker Rd NE to Cordon Rd NE	Widen to minor arterial standards, including 2 travel lanes with curbs, gutters, sidewalks and bike lanes, plus left turn lanes at intersections.	Sunnyview Rd NE from Walker Rd NE to Cordon Rd NE	Roads-Bridges	2045	\$1,100,000	\$2,676,193	Unfunded
M082	ITS - Overheight Warning System	Add two overheight warning systems and turn arounds on River Rd S before low clearance railroad bridges.		ITS-Signals	2027	\$2,300,000	\$3,119,225	0-5 yrs
M084	Center St NE: Greencrest Dr NE to Cordon Rd NE	Widen to major arterial standards, including bikelanes, sidewalks, curbs and gutters as necessary. Was S171.	Center St NE from Greencrest St NE to Cordon Rd NE	Roads-Bridges	2038	\$5,000,000	\$10,341,727	Unfunded
M090	Cordon Road: Caplinger Road to State Street	Construct to county parkway standards with 4 travel lanes, center turn lane and a multi-use path including required signal modifications at the intersections.	Cordon Road from Caplinger Road to State Street	Roads-Bridges	2038	\$3,600,000	\$6,977,903	0-20 yrs
M093	Small Bridge Replacement	Replace small bridges at locations to be determined after further study.	TBD	Roads-Bridges	2031	\$1,500,000	\$2,471,793	0-20 yrs
M095	State Street: 46th Avenue to Cordon Road	Widen to three travel lanes adding center turn lane with curbs, gutters, sidewalks and bike lanes. Joint project with Salem (see Sxxx).	State St. from 46th Ave to Cordon Road	Roads-Bridges	2030	\$7,700,000	\$12,283,191	Unfunded
M099	Macleay Rd: Lancaster Dr. to Connecticut Ave	Construct sidewalks and bicycle lanes.	Macleay Rd from Lancaster to Connecticut Ave	Bicycle-Pedestrian	2040	\$2,800,000	\$5,791,367	Unfunded
M100	Lancaster Dr NE: Monroe St NE to State St	Reconstruct road, including sidewalks, ADA and access modifications. See M027 for first part of project.	Lancaster Dr NE from Monroe St NE to State St	Roads-Bridges	2026	\$3,300,000	\$4,332,439	0-5 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
M102	Chemeketa CC East/West Bike Corridor	Create a corridor for bicycle travel connecting to Chemeketa Community College. This will be accomplished by implementing the appropriate supporting facility, such as bike lanes, shared lane markings, off-street paths and/or modifying the road to bikeway standards. Cost is an estimate excluding one section of the corridor (covered in other projects). Was S313.	Cooley Dr NE from Fisher Rd NE to Chemeketa CC West Transit Station; Chemeketa Cross Campus Path from Cooley Dr NE to Satter Dr NE; Satter Dr NE from 45th Av NE to 47th Av NE	Bicycle-Pedestrian	2040	\$48,000	\$128,726	0-20 yrs
<div> <div>ODOT</div> <div>Committed</div> </div>								
O006	I-5 Phase IV: Kuebler Interchange to Delaney Rd. (SB Phase)	Widen I-5 southbound from Battlecreek Road to Delaney Road. Pave the existing section southbound and northbound. Replace a bridge over Commercial Street NB off-ramp. Rebuild and realign the SB Delaney Road off-ramp. Create concept level designs for replacing Battle Creek Road over-crossing bridge. Add broadband along the segment. Design and Right-of-Way for both directions. See also O039 for NB project.	I-5 from Kuebler Interchange to Delaney Rd Interchange	Roads-Bridges	2024	\$50,000,000	\$61,515,976	0-5 yrs
O025	Backage Roads (OR 22W)	Develop backage roads to the north of OR 22W corridor between the revised alignment of Doaks Ferry Rd. and OR 51. Cost represents amount available for planning and other stages. Listed in the TIP/STIP (key number 13188). Was P003.	North of OR 22W between the revised alignment of Doaks Ferry Rd. and OR 51	Roads-Bridges	2027	\$8,200,000	\$13,512,468	0-5 yrs
O034	Center St Bridge - Seismic Updates	Seismic updates to the Center Street Bridge based on the Seismic Study (2019). Funded by Oregon Legislature via HB 2001 for \$60 million.	Center Street bridge over the Willamette River	Roads-Bridges	2025	\$100,000,000	\$131,286,043	0-5 yrs
<div>Included</div>								

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
O021	Commercial St NE & Marion St Bridge	Restripe the through/right lane to a right-turn only lane giving 2 right-turn only lanes onto the bridge. Add curb extensions on the south side of the intersection and improve the northwest corner to facilitate truck turning movements.	Commercial St at Marion St NE	Roads-Bridges	2027	\$165,000	\$352,539	0-10 yrs
O039	I-5 from Kuebler Bv Interchange to Delaney Rd Interchange - Phase 2 NB	Widen I-5 to three lanes between Kuebler Boulevard and Delaney Road interchange ramps. Design and RoW were part of Phase 1 (O006). Phase 2 focuses on the NB lanes and the Battle Creek Road over-crossing bridge.	I-5 from Kuebler Boulevard Interchange to Delaney Road Interchange	Roads-Bridges	2029	\$12,600,000	\$18,234,341	0-10 yrs
O041	Wallace Rd NW & Edgewater St NW (BHES)	Increase radius of westbound bridge ramp to Wallace Road NW, provide an additional westbound entrance lane from bridge onto Edgewater Road NW, and bridge ramp lanes, and close Musgrave Lane NW. Alternative access would be provided to impacted businesses. Was S160	Wallace Rd NW at Edgewater Rd NW	Roads-Bridges	2030	\$1,681,000	\$3,959,060	0-10 yrs
O042	Wallace Rd NW: Edgewater St NW to Orchard Heights Rd NW	Address safety issues through construction of a raised median with turn pockets to serve businesses. Pedestrian and bicycle facilities will be included. Was S163.	Wallace Rd NW from Edgewater Rd NW to Orchard Hts Rd NW	Roads-Bridges	2040	\$1,196,000	\$3,897,254	0-20 yrs
ODOT TBD								
O004	Chemawa/Hazelgreen & Portland Rd NE	Upgrade signal and interconnect	Chemawa Rd NE / Hazelgreen Rd NE at Portland Rd NE	ITS-Signals		\$180,000	\$296,615	Unfunded
O008	Hwy 22 and 51 interchange	Construct an interchange at the OR22W and OR51 intersection. Year to be built is a placeholder based on the OR22W EMP to allow for YoE estimates. No funding is currently available (2022)	OR 22 W and OR 51	Roads-Bridges	2038	\$25,000,000	\$71,542,858	Unfunded

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
O010	ITS - En-Route Traveler Information System - Phase II-III	Deploy Dynamic Message Signs and city/county/state websites to notify motorists of incidents and other traveler information. Multiple phase project.		ITS-Signals		\$2,083,000	\$3,908,511	Unfunded
O027	I-5: Delaney Road to Albany	Widen I-5 from Delaney Road interchange south to Albany. Add an additional lane in each direction. Cost estimate is for development work only. Project is in the SKATS area only at ramps for the Delaney Road interchange.	I-5 from Delaney Road interchange south to Albany city limits	Roads-Bridges		\$3,000,000	\$4,068,554	Unfunded
O028	Mission St @ 25th St: Turn Lane	Add a WB right turn lane with storage lane. From OR 22E Facility Plan.	Mission St at 25th St	Roads-Bridges	2037	\$350,000	\$747,810	Unfunded
O029	Mission St at Airport Road: EB Turn Lanes	Install EB right turn with storage lane on Airport Road. Improve the North/South geometry of the intersection. From the OR 22E Facility Plan.	Mission St at Airport Road	Roads-Bridges	2037	\$850,000	\$1,816,111	Unfunded
O030	Mission St at Airport Rd: EB Turn Lane	Add EB left turn with storage lane (resulting in dual lefts). From the OR 22E Facility Plan.	Mission St at Airport Rd	Roads-Bridges	2037	\$350,000	\$747,810	Unfunded
O031	Mission St at Hawthorne Av: WB Turn Lane	Add a WB right turn with storage lane on Hawthorne Av. From OR 22E Facility Plan.	Mission St at Hawthorne Av	Roads-Bridges	2037	\$350,000	\$747,810	Unfunded
O032	Mission St at 25th St: Pedestrian Refuge	Add a pedestrian refuge island on west leg of the intersection. From the OR 22E Facility Plan.	Mission St at 25th St	Bicycle-Pedestrian	2037	\$250,000	\$534,150	Unfunded
O033	Mission St (OR 22E) Corridor Multi-Use Path	Construct a separated multi-use path paralleling Mission St (OR 22E) from 25th St to Lancaster Dr. Preliminary proposal is for a path would follow Mission St to Turner Rd, go south until Cascade Park to a trail that goes under I-5 linking to Lancaster Dr. From the OR 22E Facility Plan.	Mission St to Turner Rd to off-street path to Lancaster Dr	Bicycle-Pedestrian	2037	\$475,000	\$1,014,885	Unfunded

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
O035	Chemawa / I-5 Phase 1 - Lockhaven/Chemawa Limited Widening	Projects from the Chemawa / I-5 IAMP for Phase 1 including widening Lockhaven Road from I-5 to the Verda Lane extension (see K0xx) and widening Chemawa Road from I-5 to Portland Road (OR99E).	Lockhaven Road from I-5 to the Verda Lane extension and Chemawa Road from I-5 to Portland Road.	Roads-Bridges		\$42,000,000	\$64,858,882	Unfunded
O036	Chemawa / I-5 Phase 2 - Tepper / 35th / Indian School Road Extensions	Projects from the Chemawa / I-5 IAMP for Phase 2, including realignment of 35th Street, realignment of Indian School Road, adding auxiliary lanes on I-5 between Portland Road and Chemawa Road, lengthen the NB and SB ramps from Chemawa Road to I-5, and build an overcrossing of I-5 at Tepper Drive and construct East Tepper Drive from I-5 to a new intersection with Chemawa Road.		Roads-Bridges		\$80,000,000	\$123,540,728	Unfunded
O037	Chemawa / I-5 Phase 3 - Chemawa Partial Cloverleaf	Projects from the Chemawa / I-5 IAMP for Phase 3. Build NB Partial cloverleaf interchange of I-5 and Chemawa Road on the eastside.		Roads-Bridges		\$12,000,000	\$18,531,109	Unfunded
O038	Brooklake at I-5 Short-term projects	Placeholder for short-term projects from the Brooklake/I-5 IAMP (2022) Traffic signals at I-5 ramp terminals. Re-grade ramp terminals. Lengthen and widen I-5 off-ramps (increase to two-lanes) Traffic signal and turn lane on Brooklake Road at Huff Avenue		Roads-Bridges	2030	\$7,400,000	\$11,062,456	0-10 yrs

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
O040	Brooklake Rd at I-5: Interchange Replacement	Rebuild/replace the current interchange on I-5 at Brooklake Road to a tight diamond configuration per the Preferred Alternative from the Brooklake/I-5 IAMP (2022). Includes signalization of the ramp terminals, reconstructing the ramps to match grades, lengthened, and add lanes for turning movements. Dual WB lanes, separate LT lanes, single EB lane, with new bicyclist and pedestrian facilities. Widen Brooklake Road to five lanes between Huff Avenue and I-5 SB ramp, including a new signal at Huff Av. Widen and extend Huff Avenue north and south of Brooklake Road to provide access to the current properties. See also O038 for projects that could be accomplished in the short-term.	Brooklake Road at I-5	Roads-Bridges	2040	\$59,800,000	\$123,687,054	Unfunded
SAMTD								
Committed								
B008	South Salem Transit Center	Design and construct a Transit Center with 6 - 10 bus bays, park and ride lot with 40 to 100 spaces, driver's break-room, indoor passenger waiting area with restrooms and other customer amenities, bicycle facilities, energy efficiency features and opportunities for commerical development.	Northeast corner of the Commercial St SE at Wiltsey SE intersection.	Transit	2025	\$9,750,000	\$12,391,471	0-10 yrs
Included								
B003	ITS - Transit Signal Priority	Implement signal priority along corridors with High Frequency Transit.	Intersections along High Frequency Transit Corridors	ITS-Signals		\$175,000	\$328,367	Unfunded

RTSP ID	Project Name	Project Description	Project Location	Project Type	Year to be Built	Cost (\$)	YoE \$	Project Priority
B005	ITS - Real-time Transit Arrival Information	Provide real-time arrival and departure info to transit users. Data at selected bus stops and electronically to users via apps, etc.	Transit centers and select bus stops	ITS-Signals	2023	\$800,000	\$1,318,290	Unfunded
B009	Paratransit Facility	Design and construct a dispatch and administration facility for the district's paratransit contractor. This will eliminate using operating funds to pay lease costs for these functions.	Del Webb Maintenance and Dispatch Facility, Salem	Transit	2015	\$3,184,200	\$5,247,122	0-10 yrs
B017	East Salem Transit Center	Build a transit center in east Salem at Chemeketa Community College to replicate the service offered by transit centers in Keizer, south Salem and west Salem. Currently a placeholder until a planning study provides the details.	Chemeketa Community College campus	Transit	2028	\$9,750,000	\$13,659,155	0-20 yrs

Chapter 8 ~ Impacts

The proposed projects are examined for their potential impacts to the existing cultural, historic, and environmental resources in the Salem-Keizer area. An environmental justice analysis of the proposed projects is presented.

Well-designed and implemented transportation projects minimize the negative impacts on the people, businesses, and resources of a region whether these are environmental, historic, and cultural resources while maximizing the positive impacts to society and the environment. Positive impacts include making travel more convenient or safer, making businesses more accessible, reducing traffic congestion or emissions, encouraging people to be more active, or restoring environmental conditions along a corridor. Negative impacts include disruption to an environment, bisecting a community, increasing stormwater runoff, health impacts from pollution, or reducing accessibility or connectivity to a neighborhood.

The potential impacts that may arise from the construction, maintenance, and operation of the regional system as proposed in **Chapter 7** are presented in this chapter. These potential impacts include how the projects could affect the environmental, historic, and cultural resources in the area; result in increased or decreased emissions of pollutants; whether the projects provide a burden or benefit to communities of concern; or address or exacerbate the congestion along the regional corridors. Possible economic impacts are not considered.

The chapter begins with a discussion of why this analysis is being performed. Then a brief discussion of each of the six categories (Cultural Resources, Environmental Resources, Historic Resources, Environmental Justice, Air Quality, and Travel time/congestion) that is analyzed regarding potential impacts followed by the analysis for the categories. The chapter ends with methods of reducing possible impacts, and failing that, to mitigating their effect on the resources in the area.

Why Examine Potential Impacts?

Numerous federal and state goals, laws, and regulations stipulate that the potential impacts that would result from the construction of a project be considered during the planning and development phase. These goals, laws, and regulations are described in **Chapter 2** including the Infrastructure Investment and Jobs Act of 2021 (IIJA) and the Clean Air Act. Each requires a different level and type of analysis such as comparing the location of the projects regarding the natural and cultural resources identified in the region. Each regulation requires a different action based on the results of the analysis. For the federal 20-year transportation plans required of MPOs, the primary level of analysis is to compare projects with resource maps to allow for early identification and modification of the project's scope to avoid potential impacts. In cases where changing the project's scope is not feasible, activities need to be developed that will minimize any

possible impact or to implement mitigation processes to offset the loss caused by the project. This 27-year plan also considers the impacts at a regional scale for Environmental Justice, Air Quality, and travel time.

Project-level analysis is not performed nor a requirement for this Plan. (Project-level analysis would be conducted once funding has been secured for a project, and the preliminary design and environmental analysis is started.) The analyses presented in this chapter is consideration of the operation of the regional system as a whole as well as identifying where proposed projects may potentially impact a resource due to proximity. In most cases, understanding the area and the environment in which the proposed project will be located can help the planners and engineers design a better solution that does not impact the resources in the area.

Types of Potential Impacts

In this chapter, six categories of potential impacts of a project have been considered: Cultural Resources, Environmental Resources, Historic Resources, Environmental Justice, Air Quality and Travel time/vehicular congestion. These represent the resources that are either legislatively mandated to be analyzed (e.g., environmental resources) or that are commonly used when discussing transportation projects (e.g., travel time/congestion).

Projects can have different impacts on each of the categories considered in this analysis. For example, a project that results in widening a road to add turn lanes or additional travel lanes may temporarily reduce congestion along a roadway segment, which decreases the travel time for people using that route in a vehicle. However, the same project could result in increased runoff into a local stream reducing the habitability of that stream unless appropriate mitigations are developed for the project. Finally, widening the road could disturb cultural resources or impact the people and businesses in the area in harmful ways (such as encouraging speeding or increasing emissions).

The MTP includes many types of projects identified as being necessary to meet the future multi-modal mobility needs of the region's residents and businesses. For a complete discussion of the project categories included in the MTP, see **Chapter 7**. A complete list of the financially constrained projects is available in **Table 7-3**. These types of projects have different potential impacts on the natural environment ranging from slight or none to (at the extreme level) habitat destruction. Obviously, the impact potential is dependent on the location of the project to the resource and the specifics of the project. In an area with sensitive habitats, even a generally benign project may have more of an impact than in an area with no sensitive habitats. The general impact potential of project types regarding cultural, historical, and environmental resources is presented in **Table 8-1**. These are the potential impacts from when a project is constructed. They do not reflect the impacts resulting from the operation of the facility.

Table 8-1: Project Types and Impact Potential on Cultural, Historic and Environmental Resources

Project Type	Impact Potential
Bridge – New or Replacing	High
New Road	High
Widen Existing Road (add travel lanes)	Medium
Widen Intersection	Medium
Add Turn Lanes / Center Lane	Medium
Adding Sidewalks	Medium
Adding Bicycle Lanes	Medium
Adding Bicycle Lanes (striping)	Low
Signals & Interconnects	Low
Purchasing Buses	Low

Methods Used and Analysis of Projects

Cultural, Historical, and Environmental Resources

Data describing the cultural, historical, and natural resources within SKATS were collected from a variety of sources including city, county, state, and federal resource agencies. The data were in the form of maps, plans, assessments, and GIS layers covering one or more of the resources of interest. There are more data sources available describing the natural resources in the area, particularly, fish and water resources, that are subject to national laws such as the Endangered Species Act or the Clean Water Act than for historical resources.

If possible, the data gathered from the resource agencies was entered into a geographical information system (GIS) along with information on the locations of the proposed projects in the MTP. The GIS was used to perform a spatial analysis that displays where a project intersects or is within a given distance of a feature such as a waterway. For projects where the work is performed in one location, such as modifying an intersection or reconstructing a bridge, a distance of 0.05 mile (264 feet) was used for the analysis. For “corridor” projects or where the modification is longer than an intersection or bridge span, such as reconstructing a road to include a center-turn lane, a GIS *intersection* was performed, which shows where the projects cross the resources being considered. When comparing the corridors with the wetland’s coverage, an *intersection* was not performed¹; instead, a GIS *proximity buffer* was used to determine whether the project was within 0.009 mile (50 feet) of a wetland².

Cultural

The potential impact of projects on the cultural resources of the area, specifically

¹ This is due to an artifact of how the GIS coverage was created.

² Wetlands defined as “wetland channels” were included in the analysis.

archeological sites, is complicated by the lack of information and data that may be shared in a public discourse. The State Historic Preservation Office (SHPO) considers the locations of sites of archeological interest to be sensitive due to the possibility of disturbance to the sites. Because of this, individual projects will need to perform the necessary studies during their development. No region-wide analysis is currently possible.

Historic

Following the analysis described above, three proposed projects (or portions of a project) will be built in an established historic district. One is for adding bicycle facilities. The other two are for pedestrian facilities. None of these are likely to require additional right-of-way. The locations of the historic districts and buildings within SKATS and the projects proposed in this Plan are presented in **Map 8-1**. For this analysis, only projects on the National Register of Historic Places were used. In addition to the national list, there are list of historic buildings and landmarks maintained by the State of Oregon and each of the jurisdictions. Also, the impact to buildings older than 50 years old need to be considered and evaluated even if they are not on any of the lists. This work is typically complete once the project is closer to implementation. For more information on the specific locations of historic districts, buildings, or properties including impacts from a proposed project, contact the local jurisdiction.

Environmental

The environmental resources considered for this analysis include the following:

1. critical and essential salmon habitat³;
2. the waterways designated in the 2022 303(d) list for not meeting the Clean Water Act that is maintained by the Oregon Department of Environmental Quality (DEQ), and
3. wetlands in the area, as defined in the wetland inventories⁴.

Based on this analysis, it was determined that 114 of the 189 (60 percent) projects have a potential direct or indirect impact on one or more to the natural resources of interest (**See Table 8-2.**). The locations of the projects along with the 303(d) streams and critical habitats in the area are illustrated in **Map 8-2**. There are several projects that have potential impacts on more than one resource. Typically, waterways that are listed as critical habitat for steelhead trout and Chinook salmon are also listed as essential habitat as well. In addition, some features have multiple projects potentially impacting them. One hundred thirteen projects (60 percent) included in the financially constrained plan potentially cross or are within 0.009 miles (50 feet)⁵ of a wetland identified in the various Wetland Inventories (**See Map 8-3.**). Note that since the 2019 update, there has been and increase in the amount of land identified as either a wetland or having hydric soils. The

³ Data from NOAA Fisheries and Oregon Department of State Lands on the habitat for Chinook Salmon and Steelhead Trout (Salmonid).

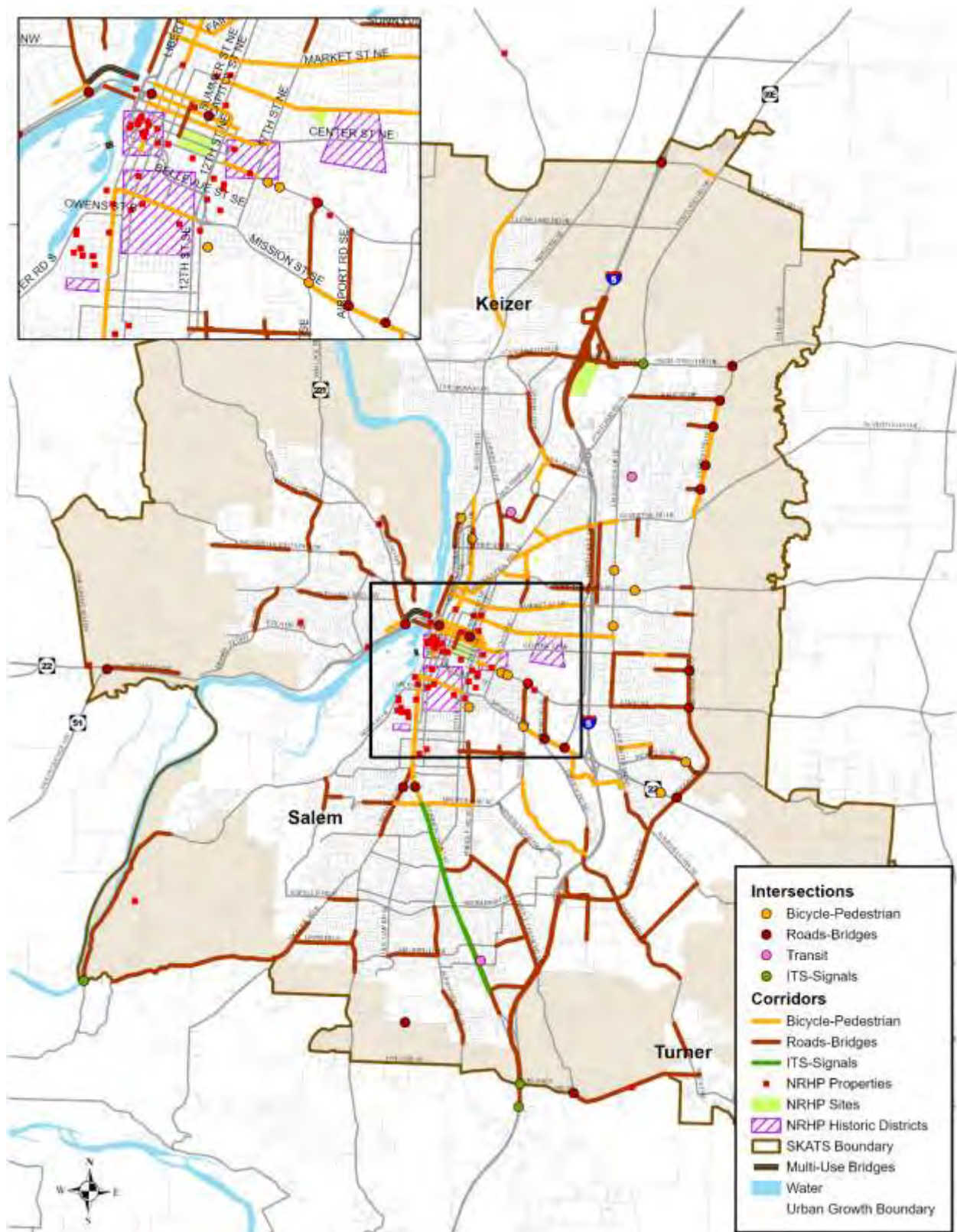
⁴ Data from the Oregon Department of State Lands and the Local Wetland Inventory.

⁵ Analysis in previous MTPs used a value of 26 feet (0.005 miles). This has been revised based on comments from resource agency staff.

number of projects with potential impacts by the project type is illustrated in **Tables 8-3 to 8-6**.

Table 8-2: Number of Projects with Potential Impacts by Project Type

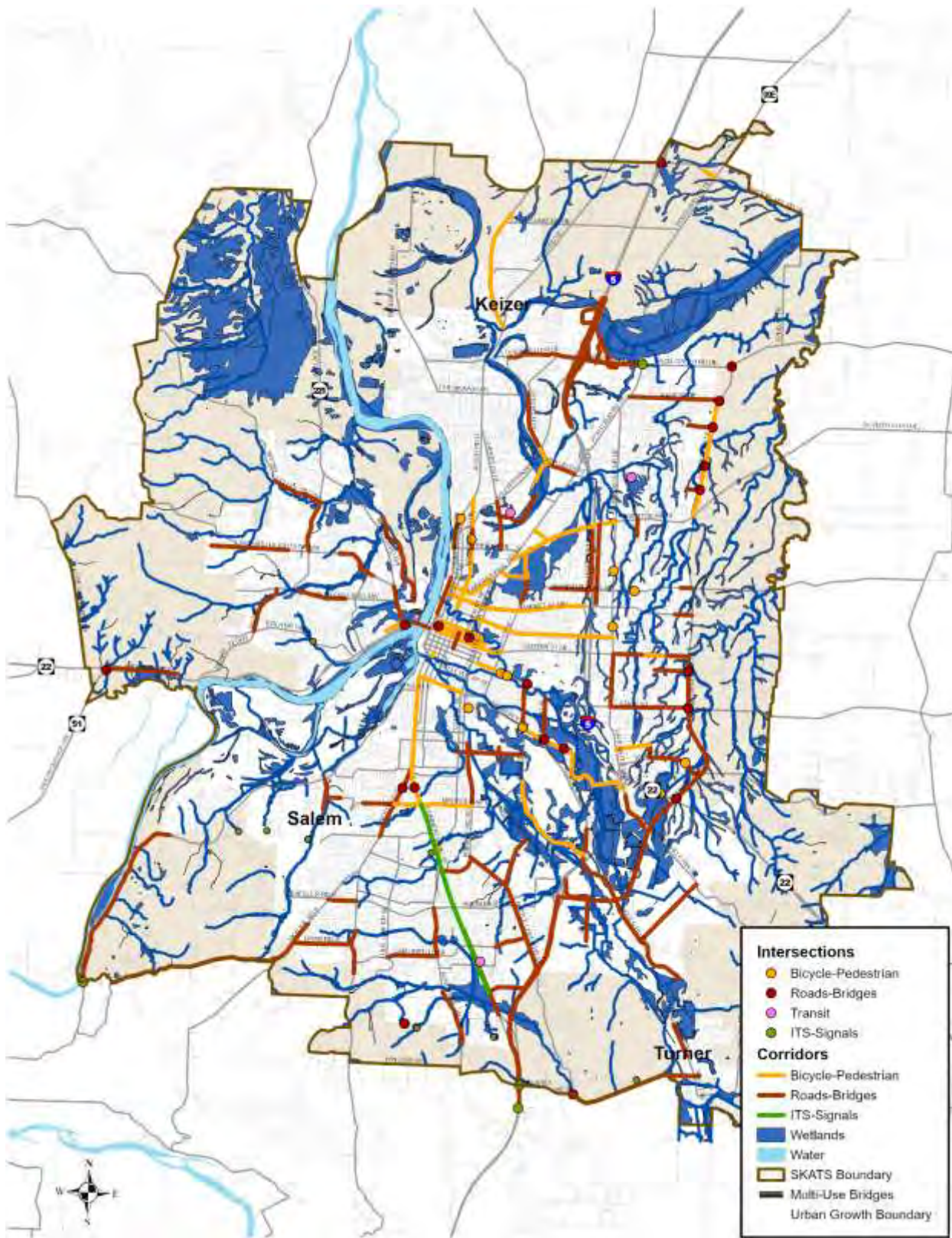
Project Type	Number of Potential Impacts
Road-Bridge	88
ITS-Signals	3
Pedestrian-Bicycle	22
Transit	1



Map 8-1: Historic Properties and Proposed Projects



Map 8-2: Project Location and 303(d) Streams and Critical Habitats



Map 8-3: Proposed Projects and Location of Wetlands and Wetland Channels

Table 8-3: Projects with Potential Impacts

RTSPKey	Project Name	Critical Habitat	303D	Historic	Wetland
B017	East Salem Transit Center				X
M015	Cordon Rd NE & Auburn Rd NE				X
M018	Cordon Rd NE & Ward Dr NE				X
M019	Cordon Rd NE & Herrin Rd NE	X			X
M022	Delaney Rd: Battle Creek SE to Turner				X
M023	Delaney Rd: Bridge over Battle Creek		X		X
M027	Lancaster Dr NE: Center St to Monroe St NE				X
M034	State St: Lancaster Dr NE to 46th Av				X
M044	Cordon Rd NE: Silverton Rd NE to Kale St NE				X
M046	Cordon Rd SE: Center Rd NE to State St SE				X
M049	Herrin Rd NE: Middle Grove Dr NE to Cordon Rd NE				X
M061	Swegle Rd NE: City limits to Cordon Rd NE				X
M062	Turner Rd SE: Val View Dr SE to Turner UGB				X
M082	ITS - Overheight Warning System				X
M084	Center St NE: Greencrest Dr NE to Cordon Rd NE				X
M085	Center St: Lancaster Dr to 45th Pl (3-lane interim)				X
M086	Connecticut St: Bike and Pedestrian				X
M088	Marion County Curve Warning Signs				X
M090	Cordon Road: Caplinger Road to State Street				X
M095	State Street: 46th Avenue to Cordon Road				X
M099	Macleay Rd: Lancaster Dr. to Connecticut Ave				X
M100	Lancaster Dr NE: Monroe St NE to State St				X
O004	Chemawa/Hazelgreen & Portland Rd NE				X
O006	I-5 Phase IV: Kuebler Interchange to Delaney Rd. (SB Phase)				X
O008	Hwy 22 and 51 interchange				X
O025	Backage Roads (OR 22W)				X
O028	Mission St @ 25th St: Turn Lane				X
O029	Mission St at Airport Road: EB Turn Lanes				X
O030	Mission St at Airport Rd: EB Turn Lane				X
O031	Mission St at Hawthorne Av: WB Turn Lane				X
O032	Mission St at 25th St: Pedestrian Refuge				X
O033	Mission St (OR 22E) Corridor Multi-Use Path				X
O034	Center St Bridge - Seismic Updates				X
O035	Chemawa / I-5 Phase 1 - Lockhaven/Chemawa Limited Widening				X

Table 8-4: Projects with Potential Impacts (cont.)

RTSPKey	Project Name	Critical Habitat	303D	Historic	Wetland
O036	Chemawa / I-5 Phase 2 - Tepper / 35th / Indian School Road Extensions			X	X
O037	Chemawa / I-5 Phase 3 - Chemawa Partial Cloverleaf			X	X
O038	Brooklake at I-5 Short-term projects				X
O039	I-5 from Kuebler Bv Interchange to Delaney Rd Interchange - Phase 2 NB				X
O041	Wallace Rd NW & Edgewater St NW (BHES)				X
O042	Wallace Rd NW: Edgewater St NW to Orchard Heights Rd NW				X
S036	Doaks Ferry Rd NW: Brush College Rd NW to Orchard Heights Rd NW				X
S061	17th St NE: Norway St NE to Sunnyview Rd NE				X
S064	25th St SE: State St to Helm St SE				X
S065	36th Av SE: Kuebler Bv SE to Langley St SE				X
S067	Battle Creek Rd SE: Kuebler Bv SE to Wiltsey Rd SE				X
S071	Brush College Rd NW: Doaks Ferry Rd to BPA Power Lines				X
S083	Commercial St SE: Baxter Rd SE to I-5 Interchange				X
S085	Cordon Rd SE & Hwy 22				X
S087	Croisan Creek Rd S: River Rd S to Heath St S				X
S094	Fabry Rd SE: Reed Ln SE to Battle Creek Rd SE				X
S095	Front St N: Norway St NE to Division St NE				X
S098	Glen Creek Rd NW: Crescent Dr NW to Westfarthing Way NW				X
S103	Hilfiker Ln SE: Commercial St SE to Pringle Rd SE				X
S110	Kuebler Bv SE: Turner Rd SE to Hwy 22 Overpass				X
S113	Lancaster Dr SE: Cranston St SE to Kuebler Bv SE				X
S117	Macleay Rd SE: Pennsylvania Av SE to Cordon Rd SE				X
S120	Madrona Av S: Croisan Creek Rd S to Elderberry Dr S				X
S124	32nd Av SE & Trelstad Ave SE: East of I-5 to 36th Av SE signal at Kuebler Bv SE				X
S126	McGilchrist St SE: 12th St SE to 25th St SE				X
S131	Orchard Heights Rd NW: Parkway Dr NW to Snowbird Dr NW				X
S132	Orchard Heights Rd NW: Titan Dr NW to UGB				X
S137	Robins Lane, east of Commercial St. SE				X
S147	Sunnyside Rd S: Kuebler Bv SE to Mildred Lane SE				X
S148	Sunnyside Rd S: Pawnee Circle SE to the UGB				X
S149	Sunnyview Rd NE: Evergreen Av NE to Fisher Rd NE				X

Table 8-5: Projects with Potential Impacts (cont.)

RTSPKey	Project Name	Critical Habitat	303D	Historic	Wetland
S155	Turner Rd SE: 2100 feet south of Cascade Gateway Park to Airway Dr SE				X
S156	Turner Rd SE: Airway Dr SE to Kuebler Blvd SE				X
S158	Turner Rd SE: Gath Rd SE to UGB				X
S168	Airport Rd SE: State St. to Mission St.				X
S172	Chemawa Rd NE: I-5 to Portland Rd NE				X
S173	Cherry Av NE: BNRR to Dr. MLK Jr Parkway NE				X
S174	Cherry Av NE: Johnson St NE to Pine St NE				X
S178	Doaks Ferry Rd NW: Glen Creek Rd NW to Eola Dr NW				X
S185	Kale St NE: Portland Rd NE to Cordon Rd NE				X
S190	Liberty Rd S: Commercial St SE to Browning Av SE				X
S191	Liberty Rd S: Holder Ln SE to South UGB				X
S197	Battle Creek Rd SE: Kuebler Bv SE to Hillrose St SE				X
S198	Reed Rd SE: Battle Creek Rd SE to Strong Rd SE				X
S204	Broadway St NE: Liberty St NE to Dr. MLK Jr Parkway NE				X
S205	Center St NE: Commercial St NE to 17th St NE				X
S212	Market St NE: Commercial St NE to Hawthorne Av NE				X
S213	Madrona Av SE: Liberty Rd S to Commercial St SE				X
S214	Mission St SE: 12th St SE to Commercial St SE				X
S216	Silverton Rd NE: Fairgrounds Rd NE to Lancaster Dr NE				X
S219	17th St NE: Sunnyview Rd NE to Silverton Rd NE				X
S225	D St NE: Lancaster Dr NE to Summer St NE				X
S236	25th St SE/Airway Dr SE: Madrona Av SE to Turner Rd SE				X
S238	Sunnyview Rd NE: 17th St NE to Fairgrounds Rd NE				X
S245	12th St SE: Ibsen St SE to Commercial St SE				X
S247	Center St NE: Mitchel St NE to Cordon St NE				X
S248	Commercial St SE: Winding Way SE to Lansford Dr SE				X
S249	Connecticut Ave SE Bike/Ped overpass of Hwy 22 between Lancaster and Cordon				X
S274	Salem Industrial Dr Improvement				X
S286	Cordon Rd: Highway 22 E to Caplinger Rd SE				X
S287	Kuebler Blvd SE: I-5 to Turner Rd SE				X
S288	Hawthorne Ave NE: Silverton Rd NE to Sunnyview Rd NE				X
S292	Brush College Rd NW: Pedestrian Project				X
S297	Marine Drive NW: Harritt Dr NW to Cameo St at 5th Av NW				X
S323	2nd St NW Bike Corridor - Phase 1				X

Table 8-6: Projects with Potential Impacts (cont.)

RTSPKey	Project Name	Critical Habitat	303D	Historic	Wetland
S340	Kroc Center Pathway				X
S343	Marine Dr NW: Harritt Av NW to River Bend Rd NW				X
S345	Auburn Rd NE: Baldwin Av NE to Cordon Rd NE				X
S354	Replace Railroad and McGilchrist St culverts on West Fork Pringle Creek				X
S355	Hawthorne Av NE at Sunnyview Rd NE				X
S357	Turner Rd SE: Mill Creek Bridge to Deer Park Dr SE				X
S359	Turner Rd SE: Kuebler Blvd SE to Mill Creek Bridge				X
S360	Deer Park Dr SE Modifications				X
S364	Commercial St SE: Madrona Av SE to Robins Ln SE - Signal Improvements				X
S365	State St at 25th St SE Intersections Improvements			X	
S366	Pedestrian Island and Crossing Safety Improvements Package	X		X	X
S369	Orchard Hts Rd NW Modifications				X
S379	Broadway: Pine St N to Tryon St N				X
S382	Marine Dr NW: 5th St NW to Glen Creek Rd				X
S383	McGilchrist St SE at 22nd St SE				X

Environmental Justice⁶

The Federal Highway Administration (FHWA) defines the following three fundamental environmental justice (EJ) principles⁷:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects including social and economic effects on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

⁶ **Appendix E** provides a more complete discussion of the Environmental Justice evaluation completed, including how this analysis was considered as part of the project selection process.

⁷ Department of Transportation Environmental Justice Strategy (March 2, 2012)

https://www.fhwa.dot.gov/environment/environmental_justice/ej_at_dot/dot_ej_strategy/index.cfm

As part of the process to ensure that a minority or low-income population will not be unduly burdened by the projects proposed in this Plan, the following analysis was conducted. The proposed projects were compared to two socio-demographic characteristics:

- percent of the population below the poverty level; and
- the percent of the population that is minority.

The U.S. Census Bureau reports this information at the census tract level for the Salem-Keizer area.

Definition of Environmental Justice (EJ) Population Areas

For each of the characteristics of interest, the regional average was computed using data from the American Community Survey (ACS) for the years 2016 to 2020 the latest available that covers the entire area. Census tracts are used as the geographic building block to identify the location of minority and low-income population for the EJ analysis. Minority populations include people who are Black/African American, Hispanic or Latino, Asian American, American Indian and Alaskan Native, and Native Hawaiian and other Pacific Islander, or any combination of two or more races. Low-income populations for this analysis are defined as those living below the poverty level as determined by the U.S. Census Bureau. The poverty level is based on multiple criteria including income level and family size and composition (age of head of household and number of children)⁸.

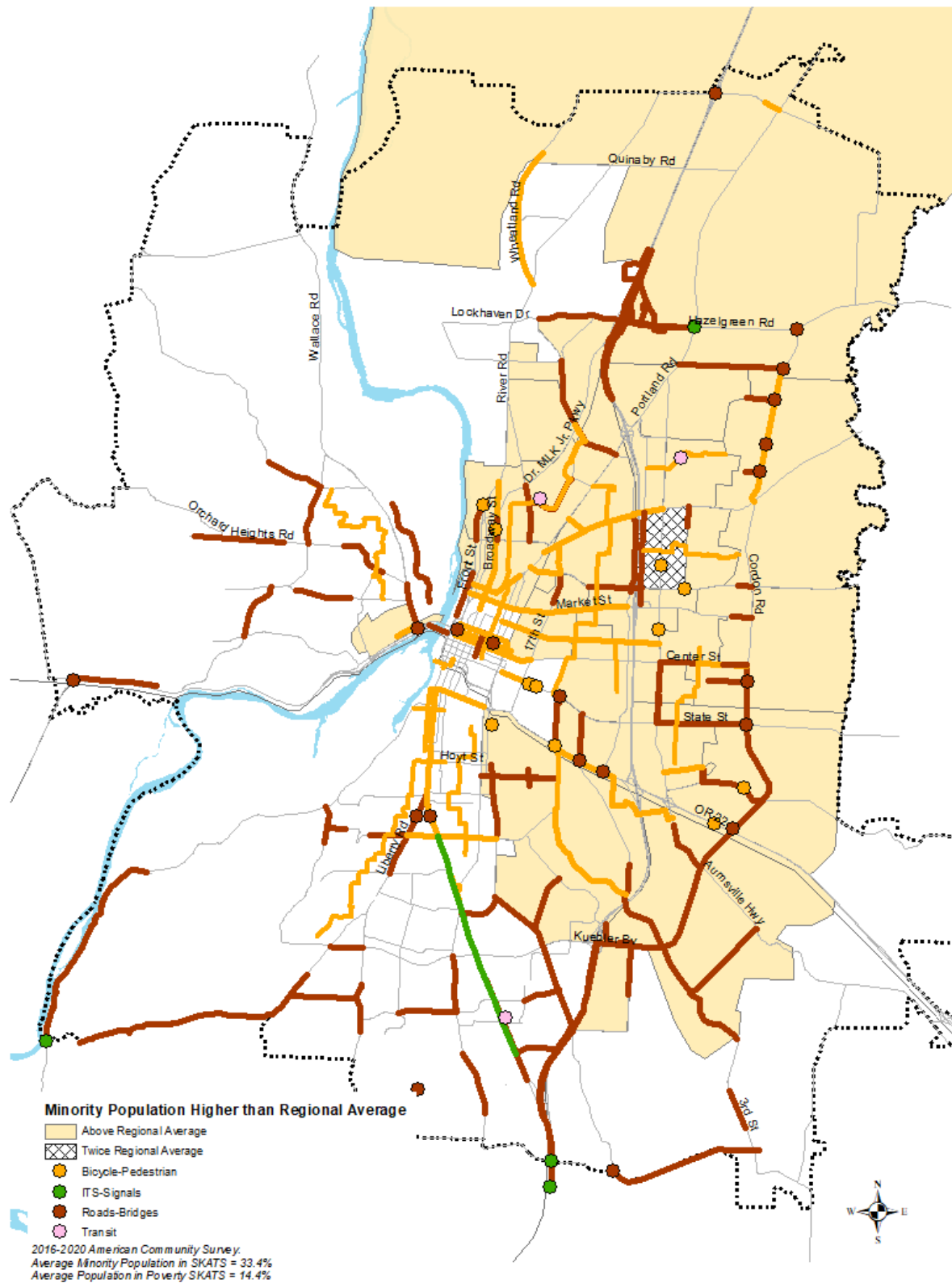
The regional average within SKATS for the low-income population is 14.4 percent; and the regional average of the minority population is 33.5 percent, from the 2016-2020 American Community Survey data.

EJ populations were determined first by selecting census tracts with twice the regional average of either minority population or low-income populations. This resulted in six census tracts. Second, the average population density within the Salem-Keizer Urban Growth Boundary was determined and is 5.03 persons per acre. Census tracts with a population density higher than the average, in addition to being above or near the regional average in either minority or low-income populations were also included. This resulted in another 14 tracts. These resulting 20 census tracts are the areas with the largest and greatest concentration of low-income and minority populations and are considered as the EJ areas for analysis. This is a revised definition from that used four years ago and results in a smaller geographic area; however, it is also considered a better representation of the populations of concern.

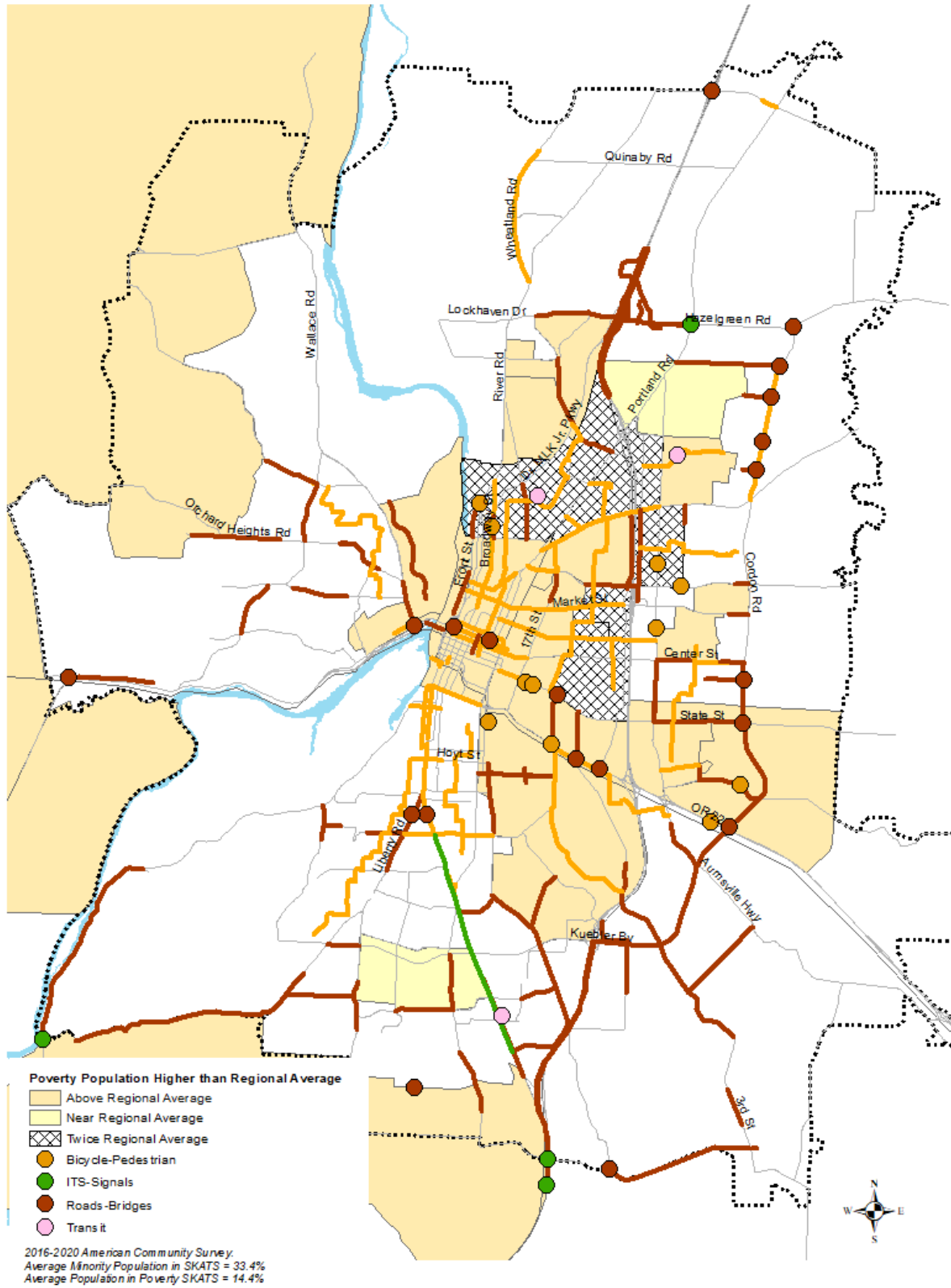
⁸ Poverty is determined for individuals and families, in 2020 an individual in poverty had annual income of less than \$13,171, and a family of four less than \$26,496 See the *Demographic Profile of Transportation Disadvantaged Population in the SKATS Area* (2022) for more details. Available at: <https://www.mwvcog.org/programs/transportation-planning/skats/reports-and-data/>

For reference, the percent minority population and percent low-income populations are shown in **Maps 8-4** and **8-5**, respectively. Also shown on the maps are the location of projects in the 2023-2050 MTP that have a geographic component. The shading for the Census Tracts on the maps is broken into three intervals based on census tract values of below average, at or near average, and above average. The middle interval aligns with the average within SKATS making it easier to see which areas fall clearly above and below the regional average. Any tract with a value twice the regional average is marked with hatching. As with all census data, there are margins of errors associated with the estimates. For this tabular summary and associated maps, the percentage rates do not factor in those margins of error⁹.

⁹ As provided by the data in the American Community Survey



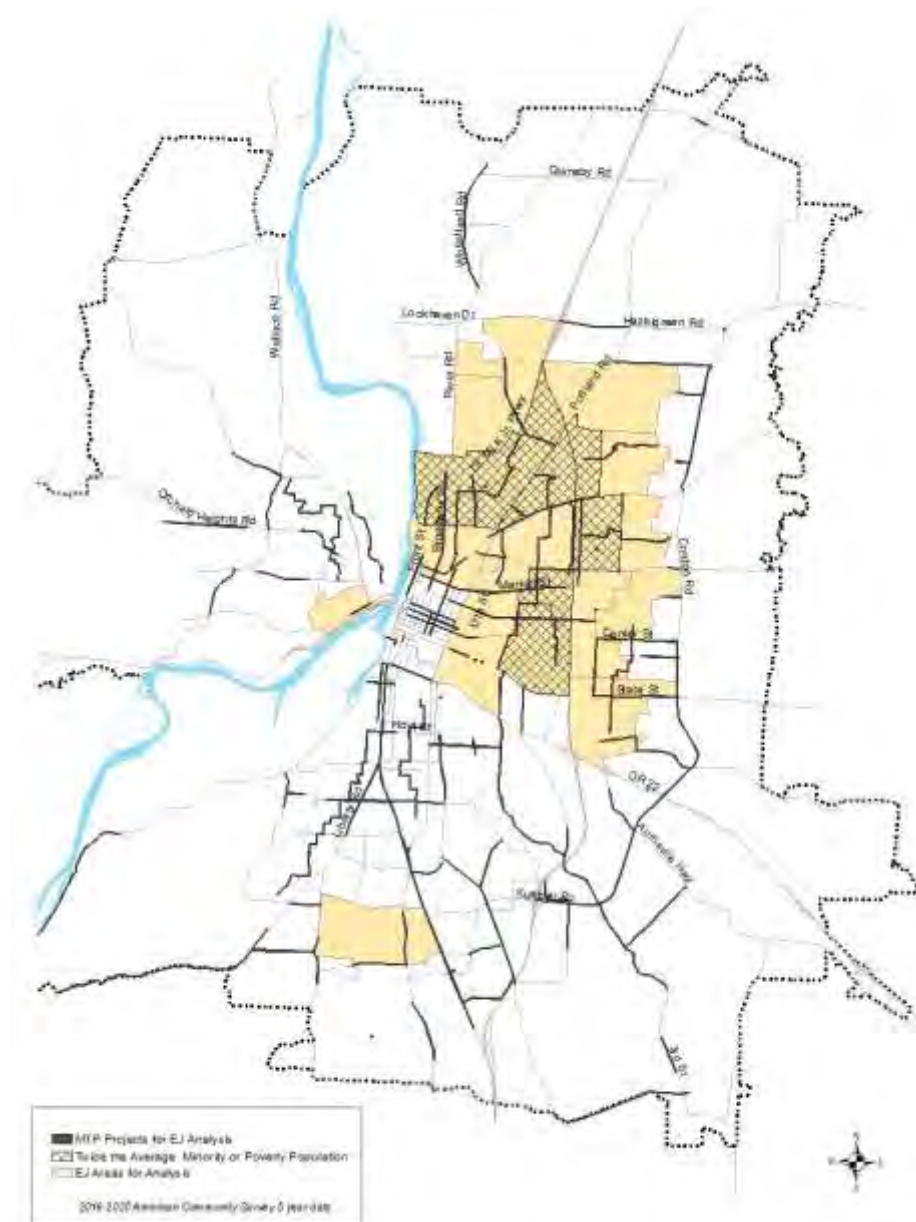
Map 8-4: Minority Population in SKATS



Map 8-5: Low Income Population in SKATS

Spatial Analysis of Benefit and Burden

As described previously, the EJ areas for analysis were determined by a combination of population density and above average populations rates. For the spatial analysis, projects with a geographical location were mapped over these EJ areas consisting of 20 census tracts.. EJ population areas with the MTP projects overlaid are illustrated in **Map 8-6**. Using the GIS, the financially constrained projects were overlaid to determine if they were in or out of the EJ population area. A project was considered inside the EJ population area if at least half of its length or area fell within. The result of this analysis is presented in **Table 8-7** and **8-8**. As illustrated in the table, 35 percent of the projects are located in an EJ population area.



Map 8-6: EJ Population Areas and Projects

Table 8-7: Projects Inside an EJ Population Area (only projects that have a geographic location and are mappable)

Type of Project	Project Costs	Percent of Total Cost	Number of Projects	Percent of all MTP projects
Bicycle-Pedestrian	\$88,258,000		25	
ITS-Signals	\$0		0	
Roads-Bridges	\$222,956,300		29	
Transit	\$18,906,000		2	
Total	\$330,120,300	29%	56	35%

Table 8-8: Projects Outside an EJ Population Area (only projects that have a geographic area and are mappable)

Type of Project	Project Costs	Percent of Total Cost	Number of Projects	Percent of all MTP projects
Bicycle-Pedestrian	\$101,842,000		28	
ITS-Signals	\$4,071,000		2	
Roads-Bridges	\$703,636,000		71	
Transit	\$12,391,000		1	
Total	\$821,940,000	71%	102	65%

Shown in **Table 8-7** and **Table 8-8** is the distribution of projects by type and whether they are within or outside of an EJ population area (for those projects in the MTP that have a geographic component) respectively. The number of projects located in EJ population areas is approximately half the number of projects outside of EJ population areas. Estimated project costs are also summarized in the table and the percent reflects the cost of the mappable projects to the total cost of the projects in the two tables, \$1,152,060,000 (there are approximately \$16.8 million in projects that are not mappable).

The EJ areas shown in **Map 8-6** contain approximately 39 percent of the population within SKATS and six percent of the land area. The finding of this analysis is that the EJ areas of low-income and/or minority residents are receiving a share of program and project investments that is approximately the same as their share of the population. [It should be noted that a more detailed EJ analysis and outreach for projects proposed to get committed funding is done during the update of the SKATS Transportation Improvement Program (TIP).]

Environmental Justice with Transit Service

The Salem Area Mass Transit District (SAMTD) is also required to consider environmental justice within its provision of service areas, and to conduct an equity analysis when considering proposed major service changes. MWVCOG includes transit

projects in its environmental justice review when they are physically located projects, for example transit centers or bus stop amenities. SAMTD's Title VI and equity analysis considers access and service areas.

Air Quality

Currently the SKATS area is designated as "attainment" for ozone. In addition, the SKATS area is operating under a Limited Maintenance Plan for carbon monoxide (CO). This requires SKATS to demonstrate conformity but no longer requires emission analysis at the regional level for CO to be performed. There has been discussion that the U.S. Environmental Protection Agency (EPA) may enact stricter regulations regarding ozone in the future. If so, this may require SKATS to resume regional emissions analysis for this pollutant. These developments will be followed and addressed in future Plan updates, as needed.

In accordance with Federal regulations, SKATS has prepared a document detailing the *Air Quality Conformity Determination* for this Plan. It is available under a separate cover (<http://www.mwvcog.org> search for "AQCD") and as an appendix to the final MTP (**Appendix Y**).

Travel time/Congestion

Except for a few very large projects, the impact of a single roadway project on the operation of the regional system is difficult to quantify. In addition, the impact of some types of projects on the operations of the transportation system cannot be adequately calculated with the current travel demand modeling software. For example, a project to interconnect the traffic signals along a corridor to synchronize the controller clocks for efficient traffic progression (with the result that platoons of vehicles do not have to stop at each intersection) has been shown to reduce fuel consumption and vehicular emissions while at the same time decreasing travel time and measures of congestion along a corridor. However, quantifying this efficiency improvement as part of the travel demand model is difficult.

Measures which include only that portion of the roadway system that is part of the Interstate or National Highway System (NHS) (which are required federal performance measures) are as follows:

- Percent of the Person Miles Traveled on the Interstate that are Reliable (LOTTR)
- Percent of the Person Miles Traveled on the non-Interstate NHS that are Reliable (LOTTR-Non-Interstate)
- Truck Travel Time Reliability on the Interstate (TTTR)
- Annual Peak Hour Excessive Demand per Capita (PHED)

The federal performance measures provide a snapshot of how I-5 and the non-interstate NHS performed in 2021. As illustrated in **Table 8-9**, I-5 was considered reliable 100

percent of the time, and the non-interstate NHS was reliable for 85.2 percent of the year. Truck travel time was also reliable for the 2021 (values closer to 1.0 are reliable). The Annual Peak Hour Excessive Delay per capita (PHED) value represents the estimated hours in the year that a traveler is delayed above the certain threshold. This value only applies to roads that are part of the NHS¹⁰.

Table 8-9: Performance on the Regional System

Measure	Value	Year
LOTTR – Interstate	100%	2021
LOTTR – Non-Interstate	85.2%	2021
TTTR	1.22	2021
PHED	6.8 hours	2021

Strategies for Minimizing Impacts

The population of the SKATS area is expected to increase by 33 percent by 2050 placing pressure on land uses and transportation systems throughout the region. The region needs to continue to use and refine strategies and activities to minimize the impact of transportation projects on the environment, whether built or natural. Given that budgets for transportation planning, construction, and maintenance are restricted, it would benefit the jurisdictions of the region to continue to support and enhance existing policies or strategies and develop new ones that reduce use of automobiles and encourage use of mass transit, carpooling, walking, bicycling, and telecommuting. Many of these strategies (e.g., carpool and vanpools) are discussed in **Chapters 4 and 7** and are promoted in the SKATS area, as well as the surrounding area, by the Cherriots Transportation Options, which is administered by the Salem Area Mass Transit District.

Avoid, Reduce, Mitigate

One of the most effective ways to reduce planning, construction, and maintenance costs; benefit the environment; and manage complex regulatory issues is to consider options at the outset that can reduce or eliminate environmental impacts and thus regulatory requirements. The Clean Water Act requires that those jurisdictions or agencies proposing projects focus first on avoiding impacts to water resources that may impact wetlands, streams, or rivers. Considering location and landscape features early in project scoping and design can reduce the negative effects of construction activities and ultimately the use of a given facility whether street, road, or bridge. Thoughtful planning to reduce erosion and sedimentation, impervious surface and other infiltration impediments, and wetland and stream impacts can eliminate the need for permits saving time, money, and environmental degradation.

The five strategies discussed below are designed to mitigate the impact that transportation projects might have on environmental resources during development.

¹⁰ Composed of the roads that are Interstate or Principal Arterials as shown in **Map 4-3 in Chapter 4**.

Strategy 1: Enhance Wetland Banking

When impacts are unavoidable, there are several ways to improve the value of project mitigation. Traditionally, mitigation has been on a project-by-project basis to replace the same type of resource that was impacted by the development. Two resources that have been mitigated in the past in the SKATS area are wetlands and streams. As of 2006, three private wetland mitigation banks serve the Salem area. It may be beneficial for the SKATS region to develop wetland or conservation banks to be used for public and or private development mitigation as the area develops. The first step in determining the desirability of banking is to calculate the scale and type of development and the commensurate need for mitigation over the next several decades. Then, a determination of the number of credits that are likely to be coming online during that period and their anticipated costs will be made. If the number of credits required is equal to or greater than the number of credits available at the existing banks, it may be in the region's interest to develop a regional mitigation bank for all future projects.

Strategy 2: Establish stream bank mitigation banking

If construction or development may impact a stream, the project owner must coordinate with the Department of State Lands and/or U.S. Army Corp of Engineers staff to determine whether permitting is necessary. The jurisdiction/agency or developer is then required to maintain that section for five years. One possible downfall of this policy is that it can create 150-foot pockets of restored but isolated habitat that are adjacent to degraded riparian segments. Salem has taken the approach wherein a broader range of mitigation needs can be met by restoring the city's streams at key sites. Salem staff has stated that most city stream impacts cannot be mitigated elsewhere.

Traditional wetland banks, run by the private sector under the direction of DSL, offer credits that can be purchased from a landowner who has restored a wetland on his/her private property. The purchase of these credits offsets or compensates for wetlands destroyed within the project area. The Salem stream banking system is similar; but instead of the restoration activities taking place outside the city, the mitigation credits would be purchased from the city. The restoration investment would be made on riparian areas in the city limits.

The city of Salem has implemented a stream mitigation bank program within its city limits in 2015. The first credits were released in February 2016 by DSL.

Strategy 3: Consider Conservation Banking

Thus far, there are few opportunities for conservation banking in Oregon. ODOT has developed a program in which they hope to mitigate for a variety of resources on several high value sites they have purchased throughout the state. At present, they are developing methods for valuing credits and creating the "currency" for these banks, a challenging endeavor. It would be wise for the jurisdictions in the SKATS region to

explore possible collaboration with ODOT and certainly to explore the model that ODOT is developing. Once again, the jurisdictions within the region need to collectively assess their anticipated growth and mitigation need and make a cost/benefit analysis.

Strategy 4: Wildlife Connectivity

Over the past decade, there have been many innovative approaches taken in constructing transportation systems to prevent negative effects on wildlife. Transportation planners have teamed with wildlife researchers to develop structures that help terrestrial wildlife cross roads, ranging from overpasses and underpasses to open-bottom culverts that function much like natural streambeds. In the SKATS area, as in much of Oregon, transportation agencies are systematically removing barriers to fish migration. However, according to the Oregon Department of Fish and Wildlife, the Salem-Keizer area will be hampered in providing wildlife habitat connectivity so long as there is no detailed species and habitat inventory for the metropolitan area. Such an inventory can help the region prioritize key habitats and natural areas and identify linkages and corridors to wildlife migration for both large and small species. State and federal wildlife management agencies encourage transportation planners to consult with them early and throughout project planning to identify the need for accommodating wildlife movement and avoid other impacts to habitat.

Strategy 5: Stormwater

Minimizing or mitigating the effects that stormwater and associated run-off from surface transportation facilities is one of the factors identified by the Federal Highway Administration for consideration when developing a metropolitan transportation plan. This ties in with Clean Water Act regulations that limit the amount of pollutants that can be discharged into a water body. Each jurisdiction in Oregon is required to address a number of federal and state regulations when designing and implementing roadway projects. Work undertaken by the jurisdiction often involves coordination with other entities such as watershed councils to determine the amounts and ways of reducing stormwater runoff. Efforts often include building stormwater retention facilities closer to the project to allow for filtration by plants and soaking into the ground.

Chapter 9 ~ Outstanding Issues

The identified gaps presented in Chapter 5 will not be completely addressed with the proposed system of projects discussed in Chapter 7. Partially this is due to a lack of funding. Presented in this chapter is a discussion of the Outstanding Issues that will remain after the proposed projects are completed.

The projects identified in this Plan address many, but not all, of the regional transportation issues facing the Salem-Keizer area over the next 27 years. Some issues are not fully addressed by these projects. The reasons for this are:

- The nature of these issues is very complex and further analysis is required to adequately understand the underlying travel demand contributing to the issues;
- Several potential approaches might be useful, either alone or in combination;
- A project may be identified; however, there may not be sufficient funding available over the next 27 years. (See the Illustrative List in **Appendix I** for the projects that are not included in the 2023-2050 MTP);
- Restrictions on certain funds preclude their use except for a particular project (for example, Federal funds for Congestion Mitigation and Air Quality (CMAQ) are only for projects that address either improvement to the air quality or to reducing vehicular congestion in the region. (For a complete See **Table 6-1** in **Chapter 6**);
- 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
- Several of these issues are the subjects of current ongoing planning studies, and as such, do not have any currently recommended solutions.

Outstanding issues that were identified in the preceding chapters, along with some broader issues facing the region, are summarized in this chapter. In addition to those regional transportation issues discussed below, the local jurisdictions and transit district will focus on transportation issues that will be addressed as part of a local TSP or as part of specific study processes associated with updating local comprehensive land use plans.

Future Regulations

As discussed in **Chapter 2**, laws and regulations, at both the Federal and State level, guide the actions of SKATS, the transit district, and the cities and counties within SKATS. New laws and regulations at both levels of government occur on regular basis, addressing existing or new issues. With the passage of the Infrastructure Investment and Jobs Act of 2021 in November 2021, new programs and funding streams were created. Regulations and guidance on these have yet to be written, and will clarify what is expected from the MPOs, DOTs, and transit districts.

Climate Related

The State of Oregon has passed a series of legislations to approach addressing greenhouse gases, starting with HB 3543 in 2007 to reduce them by 75 percent by 2050. The passage of HB 2021 and HB 2186 in 2009 and SB 1059 in 2010 set the direction for the state and metropolitan areas to address greenhouse gas reduction. The Land Conservation and Development Commission (LCDC) approved greenhouse gas reduction targets for all MPO areas in Oregon and revised the targets in 2017 (to a 20 percent per capita reduction by 2040 from 2005 levels). More recently in February 2020, Governor Brown issued Executive Order 20-04 that directed four state agencies¹ to cooperatively work toward reducing climate pollution (aka greenhouse gas emissions).

As part of the response to this Executive Order, the Department of Land Conservation and Development (DLCD) set up a historically diverse “Climate Friendly and Equitable Communities” rulemaking advisory committee to provide feedback in the development of new and the revision of existing rules. One outcome of that process is the requirement for the cities and counties within the boundary of each MPO to develop a plan to address greenhouse gas emissions and to show that it would meet the target set for the area. Efforts by the local jurisdictions to meet this requirement include conducting a study to determine possible “Climate Friendly Areas”, modifying their Comprehensive Plan to include the findings, preparing a “Regional Scenario Plan” to show how the reduction targets could be met, and finally, updating their Transportation System Plan (TSP) to include the projects identified. The TSPs for the affected jurisdictions within SKATS are scheduled to be completed by the end of 2027. The next MTP Update will include these projects as appropriate.

In December 2022, the Environmental Quality Commission, which oversees the Department of Environmental Quality, voted to adopt the Advanced Clean Cars II rules which phase out the sale of fossil fueled vehicles in Oregon by 2035. These rules have also been adopted by the States of California and Washington. Infrastructure and support for the existing fleet of fossil fueled vehicles will still be in place after 2035².

In 2020, the Salem City Council adopted the goals to reduce GHG emissions citywide by 50 percent in 2035 from 2016 levels, and to be carbon neutral by 2050. To realize these goals, the city of Salem has developed a Climate Action Plan (CAP) that lists actions to be taken to reduce greenhouse gas emissions and increase resiliency to the effects of climate change. The CAP was accepted by the City Council in February 2022. As part of the work in developing the CAP, analysis showed that 53 percent of the GHG emissions are from transportation³.

¹ Oregon Departments of Energy, Environmental Quality, Transportation, and Land Conservation and Development, and their respective Commissions.

² See: <https://www.oregon.gov/deq/about-us/eqc/Pages/121922.aspx>

³ See: <https://www.cityofsalem.net/community/natural-environment-climate/climate-action-plan-for-salem>

The SAMTD is planning on developing a Climate Action Plan in the near-term, and ODOT has one covering actions to be undertaken from 2021 to 2026⁴.

At the Federal level, the Federal Highway Administration (FHWA) is currently reviewing the public comments to a Notice of Proposed Rule Making for a performance measure covering the tailpipe emissions of greenhouse gases on the National Highway System (NHS). The final rule will likely not be published until after the adoption of this Update.

Funding

As discussed in the preceding chapters and especially in **Chapter 6** (Finance), the region faces uncertain revenues in the future when compared with the increasing and continuing need for roadway operation, maintenance, and capital funding. State highway funds have increased as a result of House Bill (HB) 2017 (enacted in 2017) providing funds to the local jurisdictions for operation and maintenance of the existing road system; however, costs of materials and labor for maintenance could outpace the increase in state revenues. Indeed, in the years since the start of the COVID-19 pandemic, construction costs have outpaced the earlier estimates, requiring additional funds to be allocated to the projects under construction. This is due to several factors including, but not limited to, a shortage of labor, an increase in the cost of materials, and supply chain issues.

The Federal fuel tax has not been increased since 1993, and the Highway Trust Fund remains solvent only because Congress has repeatedly transferred funds from the federal government's General Fund. The revenue forecast in this MTP assumes a growth in federal funds (with a total of \$361 million of federal funds allocated to SKATS over the period of this Plan) but eventually it will be up to the U.S. Congress to determine the amount of federal funds distributed to states and MPOs. This MTP makes the reasonable assumption that several voter-approved bonds will be available to the city of Salem over the lifetime of the Plan; if they are not passed, less revenue will be available for both the local and regional roadways that are owned by Salem. In summary, implementation of the projects identified in the plan are tied to funding decisions at the federal, state, and local level.

Another significant funding issue concerns changes to the vehicle fleet, federal and state legislation or regulations, and transportation revenues. As vehicles become more fuel efficient or don't require any gasoline or diesel, it will have major impacts to the amount of revenues collected from the federal and state fuel taxes. Over the next several decades, we likely will see considerable changes in the vehicle fleet and its fuel efficiency.

Oregon's fleet is expected to include more electric vehicles and hybrids as more models are provided by manufacturers and charging locations becomes more generally available. With HB 2017, the Oregon Legislature provided incentives to the public for purchasing electric vehicles. Fuel efficiency of vehicles under the federal CAFE (corporate average fuel economy) standards will increase to 49 miles per gallon (MPG) for model year 2026

⁴ See: <https://www.oregon.gov/odot/Programs/Pages/Climate-Action-Plan.aspx>

passenger cars and light trucks⁵, further reducing the amount of funds captured by fuel taxes.

Recognizing that revenues from Oregon's fuel tax would not keep up with needed revenues, Oregon was first in the nation to pilot a vehicle miles traveled tax in 2007 and the first to pass legislation in 2013 for a permanent road use charge system. The current implementation (OReGO) is a voluntary system. In addition, tolling is being planned for the Portland area (on sections of I-5 and I-205) which may start a longer-term change to more tolling on roads in Oregon. These ongoing and simultaneous changes to fleets, efficiency standards, and alternative ways to collect revenues will have a profound impact in the amount of revenues available for transportation.

The uncertainty in future funding impacts all the jurisdictions in the area including the Salem Area Mass Transit District (SAMTD). When the SKATS MPO was designated as a Transportation Management Area (TMA) in 2002, SAMTD lost the ability to use a significant percentage of its federal transit funds to support operation of their buses. Instead, SAMTD must use the federal funds it receives primarily on capital expenses such as purchasing new buses or constructing bus shelters and transit centers, as well as preventive maintenance. Only a limited amount of its federal funds can be used for operations. To expand service (i.e., operations), previously SAMTD had to rely on local funds which required voter approval. New state funding (from HB 2017) from the new employee payroll tax can be used for operations, allowed SAMTD to expand its weekday service hours and begin resuming service on the weekends starting in 2019 for Saturday service and in 2021 for Sunday service. Over the long-term, to keep or expand SAMTD's services, it remains to be seen if the state payroll tax will keep pace with increases in operating costs. Beginning January 2026, SAMTD will have the ability to implement an employer payroll tax but has yet to formally state whether this option will be pursued, nor for what amount. It is anticipated that before the next update to this Plan, SAMTD will decide on this issue.

Safety

Information on crashes involving a motor vehicle (whether with another vehicle, pedestrian or bicyclist) within Oregon is collected and provided by ODOT's Crash Analysis and Reporting Unit⁶. Data is available for the Salem-Keizer area from 2007 to 2020. While the data showed a decrease in crashes and fatalities between 2007 and 2014, the trend has since been increasing. And anecdotally, as official data is not yet available, this trend has continued into 2021 and 2022. A similar pattern of increased fatalities has been recorded in other parts of Oregon and nationally.

At the state level, ODOT has put more resources to address safety and adopted a new Transportation Safety Action Plan (TSAP) in 2021. The TSAP provides the long-term

⁵ See: <https://www.nhtsa.gov/laws-regulations/corporate-average-fuel-economy>

⁶ Crash information comes from reports submitted by police and the drivers. It is likely that the number of crashes is underreported, especially those that do not involve fatalities and/or police response.

vision of zero deaths and life-changing injuries and provides goals policies and strategies to work toward this vision. The long-term elements of the Plan provide guidance to policy-makers, planners, and designers about how to proactively develop a transportation system with fewer fatalities and serious injuries. The TSAP also includes a near-term component in the form of Emphasis Areas (EA) and actions. Each year, ODOT also develops an annual Transportation Safety Performance Plan that identifies problems, establishes performance goals, and lists the program and projects to implement. ODOT also continues to provide engineering and construction funding through its ARTS (All-Roads Transportation Safety) program.

Improving safety has been a top priority of the local jurisdictions in SKATS as well as the SKATS Policy Committee. In the last 20 years, the local jurisdictions and ODOT have constructed dozens of projects to improve safety for users of all modes (drivers, pedestrians, and bicyclists) with a significant contribution coming from the discretionary funds available through SKATS. These include everything from improved signals, medians, speed humps, permanent radar speed signs, rumble strips, Rectangular Rapid Flash Beacons (RRFBs) for intersection and mid-block crossings; many new sidewalks and off-street paths, sidewalk corner bulb outs, a modern roundabout (in Keizer), buffered bike lanes, green lanes for bicyclists and bike-only signals, and many other projects. To address an increase in pedestrian crashes and fatalities, the city of Salem completed a Pedestrian Safety Study in 2018 with citywide strategies and site-specific improvements. Salem is implementing a “Safe Crossing Program” – an objective, request-driven process for implementing new pedestrian crossings. The city of Keizer maintains a Traffic Safety-Bikeways-Pedestrian Committee to make recommendations on projects and practices that improve safety.

SKATS is involved in each of the aforementioned areas: working with ODOT on safety policies and safety targets, coordinating with the local jurisdictions on safety committees and planning, and working with the jurisdictions on advancing projects in the SKATS TIP and MTP that improve safety. Most of the emphasis by SKATS has been on the engineering side of safety; however, beginning in 2018, SKATS has started to coordinate with state and local agencies about partnerships on the educational side of safety. One effort has been the implementation of a Safe Routes to School program. Finally, a *Metropolitan Transportation Safety Action Plan (MTSAP)* is currently being developed with completion in late 2023, portions which will be included in the 2027 MTP Update as appropriate.

Pedestrian and Bicycle

Providing safe and convenient pedestrian facilities along and across the regional road system is supported by the policies of this Plan. SKATS has always allocated a significant portion of its available funds in the SKATS TIP to sidewalk or urban upgrade projects that add sidewalks to streets and provide safer crossings (see earlier section on Safety), especially streets near schools and along transit routes. However, because many areas within SKATS were initially built with roads that lacked sidewalks, there is still a large portion of arterials and collectors that lack basic sidewalks.

Improving connectivity and safety for bicyclists within SKATS is a continuing aim in this Plan. Over the last two decades, individual bike projects and street upgrades have added many miles of bike lanes and bike facilities to the regional system. However, similar to the discussion on sidewalks, many of the older road segments were not initially constructed with bike lanes or even shoulders outside the travel lanes to accommodate bicycles. Several portions of the designated Regional Bicycle System within SKATS cannot currently accommodate the addition of dedicated bike lanes or even widened outside travel lanes without either significant right-of-way purchase or a reduction of the number 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. At other locations, crossing intersections and traveling or making turns alongside traffic poses hazards to the bicyclist. Finding satisfactory solutions to all these issues will require additional time and study and remains a continuing issue in the regional transportation planning process.

Goods Movement

The movement of goods, whether through the region, or destined for a business or home within SKATS, has been increasing as the population and economy grow. The COVID-19 pandemic accelerated trends of online shopping, with the associated home delivery of the goods. However, 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 they collect. Other than a few high-level data sources, information on the where, when, and why of goods movement within SKATS is lacking. And the sources available provide an incomplete picture. For example, while larger trucks are accounted for in some data sources, the delivery vans that are ubiquitous as part of the e-commerce trend are not. How these are being impacted, or themselves impacting, traffic on the region's roads is unknown. The need for additional information regarding the quantity and type of goods being moved in and around the area, as well as a more thorough identification of freight-critical routes and associated problem areas, is an issue that needs to be addressed.

Further, it has been identified that the region needs a comprehensive and coordinated approach toward the movement of freight, mainly by truck, into and through, the area. Ensuring that large trucks can efficiently and safely convey their cargo is a priority for the economy at all levels, local, regional, state, and national.

Resiliency & Seismic

A transportation system is never more important than when a disaster strikes and emergency responders need to access the affected area. However, as described in **Chapter 5**, ODOT has identified many state-owned and local jurisdiction bridges along important routes that are vulnerable or potentially vulnerable to seismic events. In addition, other routes could be blocked due to collapsed buildings or power lines that

have fallen onto the roadway.

In general, additional study needs to be done on how the transportation system (beyond bridges) will operate during and after major storms, disruptions, and other events (see **Appendix R – Resiliency** for further discussion).

Rail

Intercity passenger rail service can provide a viable alternative to automobile travel over medium to longer-distances, be it for commuting or for shopping/recreation trips. ODOT completed the *Oregon Passenger Rail Project* to identify the preferred alignment for future higher-speed passenger rail in the Willamette Valley and allow for projects to be eligible for future federal funds. The preferred alignment is the existing Union Pacific Railroad (UP) line used by the Amtrak *Cascades* and *Coast Starlight*. The Federal Railroad Administration (FRA) signed a Record of Decision on the completed Tier 1 Final Environmental Impact Statement for this alignment in April 2021. This allows Oregon to compete for federal infrastructure grants to implement the identified projects to increase the capacity of the rail line to allow for additional passenger service in the future and minimize the impacts to UP's freight operations.⁷

Another issue is to examine the potential and feasibility of intercity passenger rail service for commuters along the I-5 corridor between the Salem-Keizer area and the Portland Metropolitan area to the north and Corvallis/Albany to the south. This would focus on the people commuting between the metropolitan areas for work and offer a different type of service than is offered by the current *Cascades* corridor service. 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 Portland & Western (ex-BNSF) line that runs to the west of I-5 from Keizer to Wilsonville where it would connect with Tri-Met's Westside Express Service (WES) commuter rail service linking Wilsonville and Beaverton⁸. Discussion of the need for this type of service initially took place in early 2000s. over the past decade, there have been bills introduced to the Oregon Legislature to study extending the WES from Wilsonville to Salem. To date, no bill has passed out of committee.

The States of Oregon and Washington, along with the Province of British Columbia, have been studying the possibility of "Ultra-high-speed rail" connecting Vancouver, B.C. to Portland, Oregon⁹. This would provide options for travelers between the larger urban areas within the Cascadia megaregion beyond driving, flying, or the current rail offerings. Patterned after the high-speed rail systems in use in other countries, the travel time would be competitive with flying. The Washington Legislature allocated \$4 million for additional analysis and identified \$150 million for matching federal funds should the opportunity arise in the next six years (until 2028). The corridor is not planned to extend

⁷ See: <https://www.oregon.gov/odot/RPTD/Pages/Passenger-Rail.aspx> for the Final EIS and Oregon Passenger Rail Service Development Plan.

⁸ The Keizer Transit Center is adjacent to this line.

⁹ <https://wsdot.wa.gov/construction-planning/search-studies/ultra-high-speed-rail-study> (2021)

past Portland, but could still provide benefits to Salem and the surrounding area.

Other outstanding issues that cannot be fully addressed by this document include the preservation of industrial land that is currently capable of being served by rail and the reduction of land-use conflicts near existing rail lines.

The two railroad lines in Salem are both privately owned and operated. The plans for future service and expansion of these lines are not available. The main impact to the other transportation modes would be from either longer trains and/or increased frequency of trains.

Transportation System Efficiency Management

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 MTP Update. Exploring the feasibility of ways to increase the efficiency and capacity of the existing infrastructure needs to move beyond the cursory look that typically takes place in planning studies.

Public Transportation

Public transportation faces a variety of obstacles over the next twenty years to provide the services that people depend on for their day-to-day lives. For a variety of reasons, ridership has been decreasing since a high in 2008. This trend is seen in both nationally and at the local level with Cherriots ridership. The COVID-19 pandemic accelerated this trend in 2020 and ridership has yet to return to the level it was in 2019. This is due to a mix of staffing issues, a hesitancy of some of the population to be in enclosed spaces, and an increase in the use of telework and hybrid work schedules.

Compounding this situation is the possible impacts from a wider presence and adoption of shared rides (via Transportation Network Companies (TNC) such as Lyft and Uber), and bike/scooter/car share services.

On the upside, there is a recognition at the State level of the need to support transit as one of the tools to address climate goals and to ensure more people can get to jobs and services, no matter their circumstances.

ADA/Elderly and Handicapped-Related Services

The district is currently meeting the demand for ADA (Americans with Disabilities Act)/Elderly and Handicapped services. But in the future with an aging population, the need for these services is likely to grow faster than available funding. Offering these services costs much more than fixed-route bus service, with cost per trip three to five times as much. As a result, the district will likely have to pursue additional funding. Cherriots currently provides training and assistance to users of this service to allow them to use the fixed-route Cherriots bus routes.

Intercity Bus Service

The existing intercity bus service (Cherriots Regional) connects the Salem-Keizer urban area with cities in Polk and Marion Counties provides a baseline of service. Expanding this service to provide more trips each day and to other cities and towns in the area to better serve the population has been recently evaluated by SAMTD with a small increase that began in 2019 using Statewide Transportation Improvement Funds (STIF). To go beyond this amount will require additional funds to be available. The Transit District has developed other plans in the past few years to look at intercity transportation needs over the next 20 years.

The plans of other providers of intercity bus service, either publicly operated (e.g., Yamhill County Transit) or privately operated (e.g., FlixBus) is unknown and outside of the influence of SKATS.

Future Mobility

With a few exceptions, many of the urban arterials in the area have reached their ultimate physical width. Expanding would result in displacement of existing businesses and/or residents, and would be expensive as well. As the population within SKATS continues to increase, the area will need to consider using techniques other than road widening to provide for the area's mobility. In the last 10 years, there has been the development and investment in what is termed "New Mobility." This spans from people using mobility-as-a-service options (e.g., bike share, taxi/car share) to the development of autonomous vehicles.

Within the timeframe of this Plan, an increasing amount of "connected vehicle" infrastructure will likely be put in place. This infrastructure provides information to the vehicle regarding the traffic and road situation (e.g., whether there is a crash ahead), as well as gathering data from the vehicle on the traffic flow and other pertinent information. Whether vehicle to vehicle (V2V) or vehicle to infrastructure (V2I), the process has already started, and both the public and private sectors are involved, working toward ensuring the interoperability of such devices.

Around the world many larger cities and regions are experiencing an increase in travel via "mobility as a service." Beyond the traditional travel by public transit and taxi, carsharing and bike sharing operations are providing options to the public that weren't available, or even possible, 10 years ago. These services are facilitated by the increases in the capabilities of smartphones, wireless data networks and, to a degree, the increase in people living, working, or visiting denser urban areas. Whether these services expand from their current meager offerings in Salem remains to be seen.

Autonomous vehicles (AVs) have progressed from vehicles with rudimentary capabilities to ones that are being tested on the streets around the world. Full-scale deployment is still (likely) years away; but during the time frame of this Plan, they are predicted to be available at the very least to fleet owners such as taxi companies and transit operators.

These technologies have the possibility to change the way that people use and interact with the transportation system. This could result in the need for a different set of funding

priorities, depending on how successful or not they are with the public.

EV Infrastructure

With the passage of the Infrastructure Investment and Jobs Act of 2021 and the Inflation Reduction Act in 2022, federal attention and funding is being made available to planning for and installing infrastructure that support battery electric vehicles (BEV). ODOT has released the Transportation Electrification Infrastructure Needs Analysis (TEINA)¹⁰ to determine where to place EV chargers along ODOT routes. Infrastructure is also being put into place by a variety of private enterprises, primarily at destinations, but also along major highways. The role the local jurisdictions will play in this endeavor, beyond providing for their own fleets, is still being discussed.

Roads

Willamette River Crossing Capacity

As discussed in **Chapter 5**, the two downtown bridges (Center Street and Marion Street) that are part of OR22 that provide the principal crossings of the Willamette River between Marion and Polk Counties. The next nearest bridges over the Willamette River are located in Independence (10 miles to the south) and Newberg (25 miles to the north). Included in **Chapter 5** is a graph showing the growth of traffic on Center Street and Marion Street from 1980 to 2021 and a discussion of the congestion issues. Over the decades, there have been multiple planning studies on whether, where, and how to provide additional capacity (primarily vehicular capacity) across the Willamette River within the SKATS boundary, particularly, in the area between Lockhaven Drive to the north to Kuebler Boulevard to the south.

The most recent planning studies have been the *Willamette River Crossing Capacity Study* (2000) and the *Salem River Crossing Study* (2006 – 2019). 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 *Salem River Crossing Study* began in 2006. As part of the initial study work, 17 crossing concepts along 10 potential alignments were analyzed. After analysis of these concepts, the project's Oversight Team directed the project team to focus on three major corridors (with a combined eight Build alternatives) for analysis in the Draft Environmental Impact Statement (EIS):

- No Build Alternative, aka Alternative 1.
- Existing Bridges crossing location – where Alternative 2A & 2B are located.
- Hope Avenue to Tryon Avenue crossing location – where Alternative 3 is located.
- Hope Avenue to Pine Street/Hickory Street crossing location – where Alternatives 4A, 4B, 4C, 4D, and 4E are located.

These Build alternatives evolved from an iterative process of engineering, planning, and

¹⁰ See: <https://www.oregon.gov/odot/Programs/Pages/TEINA.aspx>

environmental analysis combined with review and comment by project stakeholders and public input. Through this iterative process, concepts were eliminated from consideration, new concepts were analyzed, and concepts refined and revised. Extensive analysis of the alternatives in the Draft EIS were completed and documented, which was released for public review on April 12, 2012. Public hearings were conducted, and the public review ended on June 18, 2012. The project Oversight Team preliminarily selected DEIS Alternative 4D as the preferred alternative. After many meetings, Salem City Council rejected Alternative 4D as the preferred Alternative and proposed a scaled-down version (similar to DEIS Alternative 4A) referred to as the “Salem Alternative.” On February 14, 2014, the Oversight Team voted to advance the “Salem Alternative” as the preferred alternative for the project.

To abide by Oregon land-use law, an Urban Growth Boundary (UGB) amendment would be needed to expand the boundary by approximately 35 acres in Polk County to include a portion of the new bridge and part of the planned local street (Marine Drive). In October 2016, there was a joint public hearing for expanding the UGB and other needed ordinances by all the affected jurisdictions (Marion County, Polk County, city of Salem, and city of Keizer). The city of Salem passed its ordinance in December 2016. However, Salem’s ordinance was appealed to Oregon’s Land Use Board of Appeals (LUBA), whose final order in August 2017 denied the majority of the appeal but did find three issues that the city needed to address. The Salem City Council held a work session in January 2019 and a public hearing in February 2019, both heavily attended by members of the public. The Salem City Council eventually decided not to address the LUBA remand and to support the No-Build alternative. In the Final EIS/Record of Decision, FHWA, in concurrence with conclusions reached by ODOT, selected the No-Build Alternative. The FEIS/ROD was signed on September 5, 2019 and published in the Federal Register on November 19, 2019.

Following its decision in February 2019, members of Salem City Council (including councilors who opposed the Salem Alternative and supported the No-Build as the Local Preferred Alternative) stated that they are willing to continue to examine projects to relieve congestion on the bridges and possibly re-look at a new bridge crossing at another location. Polk County’s Commissioners sent a letter to ODOT saying they do not accept the outcome of a “no build” alternative and intend to explore river crossing alternatives.

Listed in **Chapter 5** are past and future strategies and construction projects to improve traffic flow on the bridges and connecting arterials. Near-term projects such as construction of Marine Drive NW and the Union Street Family Friendly Bikeway could help reduce some traffic on Wallace Road and the bridges. Expansion of local and regional transit service could also help to reduce vehicle trips over the bridges.

However, in the absence of a new bridge within SKATS and unless there is a significant shift in the travel demand and patterns in the region, it is expected that the number of trips traveling across the bridges will increase due to local and regional population growth, concomitant with more traffic congestion and increased travel delays for drivers,

and that the peak periods of congestion will expand during the mornings and evenings. Some of the operational, travel-demand management and other recommendations from the city of Salem's Congestion Relief Task Force Action Plan could be implemented during the timeframe of this SKATS MTP; but they will provide relatively minor congestion relief on the Marion and Center Street Bridges and connecting arterials. Furthermore, there remain barriers to people using active transportation – particularly crossing Wallace Road NW- that needs to be overcome so that bicycling and walking between west Salem to downtown is more convenient and safer.

The Willamette River Crossing Capacity Study of 2000 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. Currently, there is neither the funding nor consensus regarding a future bridge in the Kuebler corridor. 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.

Kuebler-Cordon-Hazelgreen Circumferential Route

Kuebler Boulevard, Cordon Road, Hazelgreen Road, and Chemawa Road form a circumferential route around the Marion County portion the Salem-Keizer area. This route also functions as the emergency bypass route when incidents close major facilities such as I-5, Portland Road, Lancaster Drive, or other regional roads. It is critical that this route retain its functionality as a beltway for moving goods and people through the urban area in the most efficient and expedient manner. Toward this end, Marion County and Salem are working toward interconnecting the signals along the corridor to optimize progression and generally limiting future access to street connections to those that support regional movement. A study began in 2021 to study this corridor to provide recommendations on future projects, including the intersections, the provision of additional capacity and providing for safe travel for all modes. The study will conclude after adoption of this Update and projects will be considered, as funding is available, for inclusion in the 2027 MTP Update.

I-5 Interchanges at Brooklake Road and Chemawa Road

These facilities are congested, and recent developments in the area are expected to place additional demands on the interchanges. Interchange Area Management Plans (IAMPs) have been completed for both interchanges that identified the severity of the expected problems and evaluated and recommended a set of preferred solutions. The Chemawa/I-5 was completed in 2011 and has been adopted into the affected jurisdictions TSP and/or Comprehensive Plan as appropriate. No funding has been identified for these projects.

The Brooklake/I-5 IAMP was completed in 2022 and was adopted by the Oregon Transportation Commission in March 2023. The interchange connecting Brooklake Road and I-5 is currently controlled with stop signs on the off-ramp approaches. In addition,

the geometry of the bridge results in short sightlines leading to safety issues. As the area's businesses develop and more residents of the northern part of the SKATS area (particularly Keizer residents) utilize this interchange to access I-5 heading north or south for jobs or shopping, the ability of the existing facility to adequately meet the mobility needs while satisfying safety goals will be diminished. Funding for these projects has yet to be identified.

OR 22 West (OR 51 to Willamette River Bridges)

This section of Highway 22 in West Salem has been the focus of study mainly due to safety and congestion issues. Increasing development in West Salem and Polk County – as well as increases in through trips – will increase travel demand and exacerbate safety issues on this section of Highway 22. An Expressway Management Plan (EMP) was completed in 2010 for the section of Highway 22 from Greenwood Road to Doaks Ferry Road. Projects from this EMP are listed in this MTP, but complete funding has not been identified. ODOT is currently finishing design work on the interchange and backage roads, and will be looking for funding to complete these projects. Work on the second half of the corridor (from Doaks Ferry Road to the Willamette Bridges) was put on hold by ODOT until the Salem River Crossing EIS was completed.

Oregon Alternative Mobility Targets

As part of the Oregon Highway Plan, ODOT has developed and adopted, via the Oregon Transportation Commission, a set of mobility targets that apply to ODOT owned and operated facilities. These mobility targets are meant to ensure that an acceptable and reliable level of mobility is maintained on the state highway system. In certain cases, as projects are implemented on the state roads that result in the mobility targets not being met, alternative mobility targets may need to be adopted to reflect the unique situation in that area. In such cases, ODOT would develop a package of investments that would result in the level of mobility meeting the alternative standards. Previously there has been discussion on the need for a set of targets specific to the ODOT-owned/operated roads within SKATS. Any further work on this would wait until after the Oregon Transportation Plan (OTP) and Oregon Highway Plan (OHP) have been updated, when the state-wide targets will likely be reviewed and, as necessary, modified to reflect the current regulations.

Lancaster Drive

Lancaster Drive is the main north-south corridor in eastern Salem providing connections to businesses, educational institutions, and homes. Daily traffic volumes on segments of Lancaster Drive are among the highest in the SKATS area. Unfortunately, the number of crashes is also among the highest in the region as several intersections on Lancaster are consistently in the annual list of top ten crash locations. Complicating this is the shared ownership of Lancaster Drive by Marion County and city of Salem. Over the years, the

city and county have constructed improvements to address capacity and safety issues such as medians to reduce conflict points, extra turning lanes for capacity, better traffic signals, reflectorized backing plates for signals, and pedestrian crossing lights. The city and county should consider a future planning study to address the safety, congestion, and land use issues that exist along the corridor.

Lasting Impacts from the COVID-19 Pandemic

It is perhaps too early to know what the long-term changes will be to travel, work, and shopping from the COVID-19 pandemic. There were short-term boosts to the number of people working from home, and using grocery/shopping delivery services, that have a direct impact on the transportation system. There also was an initial substantial decrease in transit ridership, that is slowly being reduced. And unfortunately, during the pandemic that was an increase in traffic fatalities that has continued as the economy has reopened.