2021 – 2045

Regional Transportation Plan

September 28, 2021

Rogue Valley Metropolitan Planning Organization

The RVMPO is staffed by the Rogue Valley Council of Governments

ROGUE VALLEY

REGIONAL TRANSPORTATION PLAN

Prepared for

ROGUE VALLEY METROPOLITAN PLANNING ORGANIZATION

the City of Medford
the City of Central Point
the City of Phoenix
the City of Ashland
the City of Talent
the City of Jacksonville
the City of Eagle Point
Jackson County
Rogue Valley Transportation District
Oregon Department of Transportation

and

ROGUE VALLEY COUNCIL OF GOVERNMENTS
Board of Directors

Adopted by the RVMPO Policy Committee, September 28, 2021
U.S. Department of Transportation Air Quality Conformity Determination, September 28, 2021

Rogue Valley Council of Governments
MPO/ Transportation Planning Department
155 North 1st Street / PO Box 3275
Central Point, Oregon

The preparation of this report has been financed in part by funds from the Federal Highway Administration and the Federal Transit Administration and the Oregon Department of Transportation (ODOT). The RVMPO and the authors of this document are solely responsible for the material contained herein.

Rogue Valley Metropolitan Planning Organization

Policy Committee

Stephen Jensen	City of Ashland
Mike Quilty, Vice Chair	City of Central Point
Ruth Jenks	City of Eagle Point
Jim Lewis, Chair	City of Jacksonville
Kevin Stine	City of Medford
Terry Baker	City of Phoenix
Eleanore Ponomareff	City of Talent
Dave Dotterrer	Jackson County
Tonia Moro	Rogue Valley Transportation District
Art Anderson	Oregon Department of Transportation

Technical Advisory Committee

Maria Harris	Ashland | Planning
Karl Johnson	Ashland | Public Works
Stephanie Holtey	Central Point | Planning
Matt Samitore	Central Point | Public Works
Mike Upston	Eagle Point | Planning
Robert Miller	Eagle Point | Public Works
Ian Foster	Jacksonville | Planning
Jeff Alvis	Jacksonville | Public Works
Matt Brinkley	Medford | Planning
Alex Georgevitch, Chair	Medford | Public Works
Joe Slaughter	Phoenix | Planning
VACANT	Phoenix | Public Works
VACANT	Talent | Planning
VACANT	Talent | Public Works
Charles Bennett	Jackson County | Planning
Mike Kuntz	Jackson County | Roads & Parks
Justin Shoemaker	ODOT | Region 3
Ian Horlacher	ODOT | Region 3
VACANT	RVTD | Planning
Paige West	RVTD | Planning
Non-voting Members:	
DLCD	Josh LeBombard
FHWA	Jasmin Harris

Public Advisory Council

Mary Wooding	Ashland
Larry Martin	Central Point
Jennifer Boardman	Central Point
Michael Stanek	Eagle Point
Ron Holthusen	Jacksonville
VACANT	Medford (East)
VACANT	Medford (West)
George "Ike" Eisenhauer	Phoenix
Thad Keays	Talent
VACANT	White City
Edgar Hee, Vice Chair	Bicycle/Ped
Mike Montero, Chair	Freight Industry
VACANT	Low Income Comm. Interest
VACANT	Mass Transit
VACANT	Minority Comm. Interest
Michael Polich	Public Health
Robin Lee	Senior

Resolution Number 2021 – 03
Rogue Valley Metropolitan Planning Organization - Policy Committee
Adoption of the RVMPO 2021-2045 Regional Transportation Plan

Whereas, the Rogue Valley Council of Governments (RVCOG) has been designated by the State of Oregon as the Metropolitan Planning Organization (MPO) for the greater Medford Urban Area; and

Whereas, the RVCOG has delegated responsibility for MPO policy functions to the RVMPO Policy Committee, a committee of elected officials from Ashland, Eagle Point, Central Point, Jacksonville, Medford, Phoenix, Talent, White City, Jackson County, the Rogue Valley Transportation District and the Oregon Department of Transportation; and

Whereas, a project identification and selection process was carried out through the development of the 2021-2045 Regional Transportation Plan (RTP); and

Whereas, a public involvement process was developed and implemented consistent with the RVMPO Public Participation Plan throughout the development of the RTP and Air Quality Conformity Determination (AQCD); and

Whereas, the MPO, as required by law, held a 30-day public comment period to secure input and comment on the proposed conformity determination and the comments received were explicitly considered; and

Whereas, the 2021-2045 RTP has been shown through this document to meet state and federal air quality requirements; and

Whereas, the improvements contained in the 2021-2045 RTP demonstrate fiscal constraint;

NOW THEREFORE, the Metropolitan Planning Organization Policy Committee approves and adopts the attached 2021-2045 Update for the Regional Transportation Plan

Adopted by the Rogue Valley Metropolitan Planning Organization Policy Committee on this 28th day of September, 2021.

Jim Lewis,
MPO Policy Committee Chair

Table of Contents

Maps

Appendices

This Page Intentionally Left Blank

"The RTP provides the framework and foundation for the region's transportation future."

CHAPTER 1 INTRODUCTION

1.1 PLAN OVERVIEW

PURPOSE

The Rogue Valley Regional Transportation Plan (RTP) is a multi-modal transportation plan designed to meet the anticipated 25-year transportation needs within the Rogue Valley Metropolitan Planning Organization (MRMPO) planning area boundary.

Regional transportation systems have significant and long-term impacts on the economic well-being and quality of life. Not only does the transportation system provide for the mobility of people and goods, it also influences patterns of growth and economic activity through accessibility to land. Furthermore, the performance of the transportation system affects such public policy concerns as air quality, environmental resource consumption, social equity, economic development, safety and security.

Regional transportation planning recognizes the critical links between transportation and other societal goals. The planning process is more than merely listing highway and transit capital investments. It requires developing strategies for operating, managing, maintaining and financing the regional transportation system in such a way as to advance long-term goals.

Development and adoption of an RTP is required to ensure that the area remains eligible to receive state and federal transportation funding. The federal and state rules requiring completion and adoption of the plan include federal legislation: Fixing America's Surface Transportation Act (FAST Act), the U.S. Clean Air Act amendments of 1990, and Oregon's Transportation Planning Rule (TPR).

As a product of multi-jurisdictional collaboration, the RTP reflects local jurisdiction policy and planning. While it is consistent with local plans, the RTP horizon extends beyond the horizon of most other adopted plans to fulfill federal requirements. Many of the long-range analysis and conditions described here are not within the scope of existing local plans and, therefore, should not be interpreted as the conditions planned or anticipated by the local jurisdictions. Within the region, transportation policy and planning is directed at the jurisdictional level.

As a regional plan, this document does not provide designs for individual projects. Nor does it identify the smaller, local projects that RVMPO cities and the county build with local funds. Such details are not within the scope of a regional plan. Project design is

completed on a project-by-project basis, typically with close involvement of the immediate project areas.

The RTP uses projections for future growth and development that are based on current trends and approved land uses, policies and ordinances. It identifies the basic land-use assumptions through the year 2045, including forecasts of future population and employment, and the resulting demand on the regional arterial and collector street system. Future travel conditions were developed through travel demand modeling, using a peer-reviewed model developed by ODOT's Transportation Planning and Analysis Unit in collaboration with MPO and local jurisdictional staff.

Planning Period

The RTP serves as a guide for the management of existing transportation facilities and for the design and implementation of future transportation facilities through 2045. The plan provides the framework and foundation for the region's transportation future. Policies and project descriptions are provided to enable agencies and the public to understand and track projects that will be needed over the next 25 years. The plan looks at different types of transportation opportunities that are available and potentially beneficial, and considers how these various elements could fit together to foster a coordinated system, improving system management and operation.

Although the RTP focuses on intra-regional (within the region) travel, it also addresses inter-regional (through-region) travel. Ultimately, the plan reflects the balance the region strikes between competing demands for funding and competing views as to the best course for development across the region. The funding resources identified in the Plan Implementation section are only those upon which the region can rely, so that the projects identified may be reasonably anticipated to occur with known funding.

Air Quality Conformity

The 2045 RTP also meets federal Clean Air Act requirements. Analysis shows that through the horizon of the plan, under land-use conditions described and projects and policies that can be implemented within the current funding forecast, the region will meet standards for emissions of carbon monoxide (CO) within the Medford area, and particulates less than 10 microns in size (PM_{10}) within the entire planning area. Information about the Air Quality Conformity analysis and details about the process for meeting air quality requirements are contained in the Air Quality Conformity Determination (AQCD) developed for this plan.

Regional Planning and Rogue Valley's Quality of Life

Taking a regional approach to transportation planning gives communities the opportunity to look at projected future development and resulting travel demands and make decisions to avoid some of unwelcome consequences of growth, such as sprawl development, traffic congestion and deteriorating air quality.

Thorough planning has become more critical as the cost of expanding roads to meet traffic demand has grown and the land on which to build has become scarcer and more valuable to the region for uses other than transportation. At the regional level, links between land use and roadway congestion may be more clearly seen and addressed. Through this plan the public can see future transportation needs and take necessary steps now to address them efficiently and effectively.

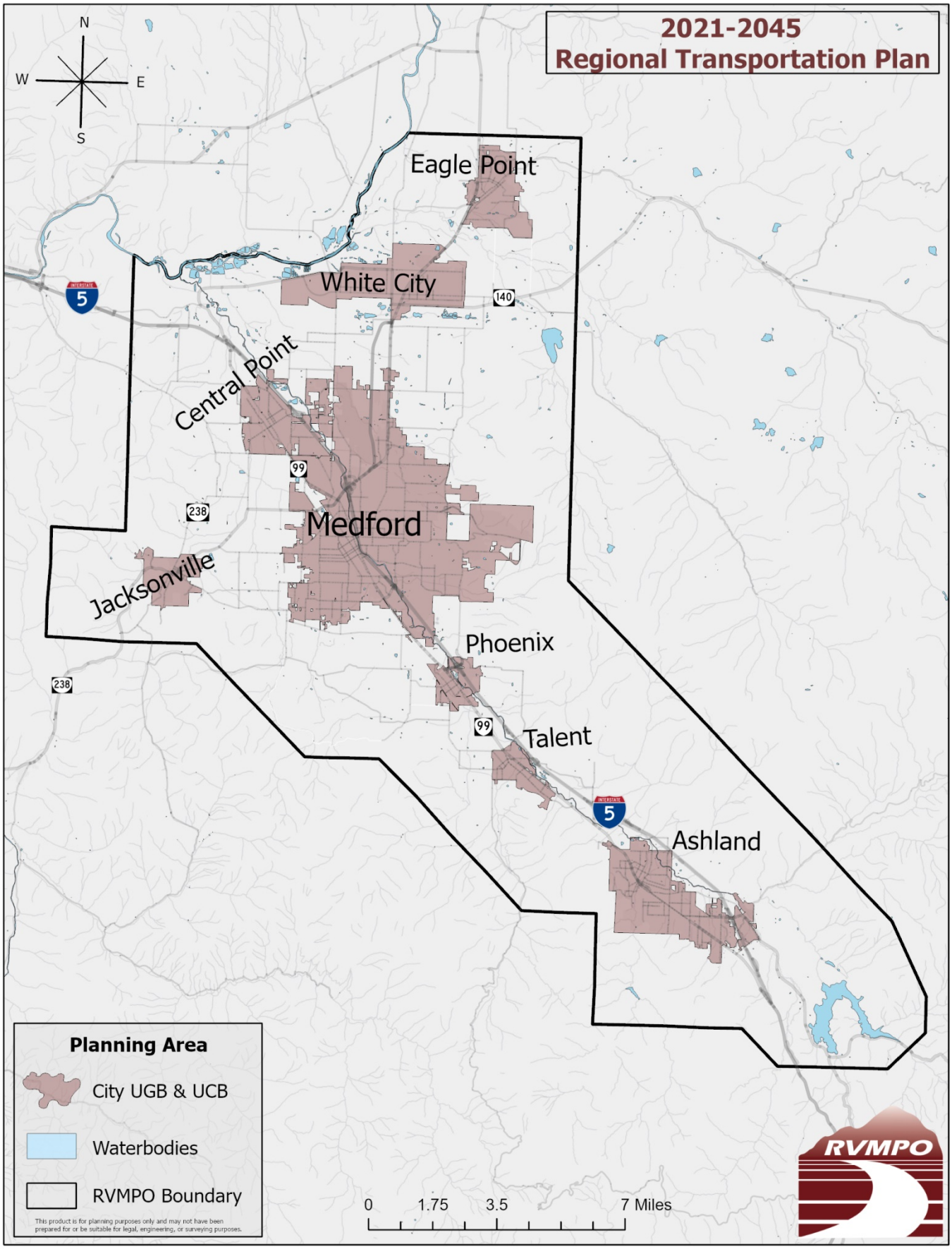
The state and federal regulatory framework that guides RTP development embodies many of the goals routinely brought forward by the public when they talk about the Rogue Valley area's future. None of the jurisdictions within the RVMPO exists in isolation: residents live in one city, work in another, shop and recreate in others. Significant development in one city is bound to effect conditions in other cities. The RTP, like the regional transportation system, links the region's communities. It identifies transportation needs they all hold in common and offers a foundation for addressing those needs as the region grows.

KEEPING THE RTP CURRENT

The RVMPO adopted its first regional plan in the mid-1990s. This 2045 update is part of a regularly occurring series of updates. Because of the Rogue Valley region's air quality conditions, the RVMPO must be able to show consistently that the region is in conformity with air quality standards for at least 20 years into the future. That conformity demonstration must be made at least every four years, and triggers an update of the RTP. The next such update will be required in Spring 2025. These updates give the RVMPO the opportunity to evaluate past projections for growth and anticipated use of the system. During the plan update process, the RVMPO looks at existing land uses, recent development trends, and the use of the different modal components of the transportation system to refine future growth projections and their implications for travel.

Although an RTP update occurs only every four years, it is routinely amended. Most commonly, it is amended to include projects where new funding has become available. In order for a project to receive federal funding it must be in this plan.

Map 1.1.1: RVMPO Planning Area

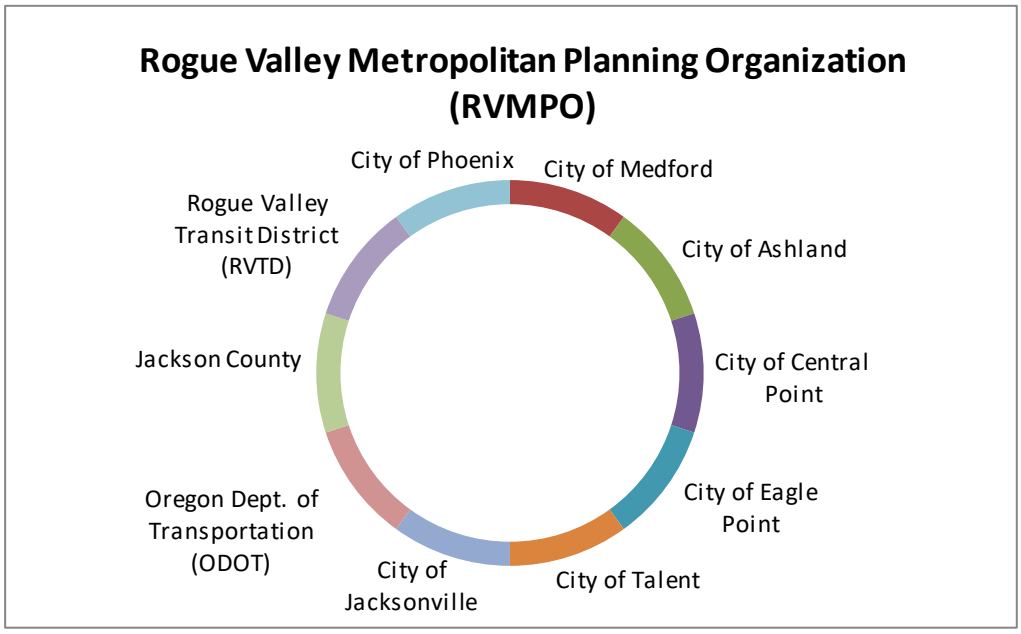


1.2 THE RVMPO

COMPOSITION

The RVMPO is a consortium of seven cities and the surrounding unincorporated area of Jackson County that is within or adjacent to the Medford urban area, plus the Oregon Department of Transportation and Rogue Valley Transportation District, the region's public transit provider. In addition, the Oregon Department of Environmental Quality, Oregon Department of Land Conservation and Development, Federal Highway Administration, Federal Transit Administration and U.S. Environmental Protection Agency participate in the RVMPO process, including development of this plan. Congress requires that metropolitan areas with a population of at least 50,000 establish a metropolitan planning process that is continuing, collaborative and comprehensive, in order for the region to continue receiving federal transportation funds. Currently there are some 400 metropolitan planning organizations in the nation. This plan fulfills federal requirements that metropolitan areas develop and maintain long-range transportation plans.

Figure 1.1: RVMPO Consortium



The Medford area reached the population threshold and was designated a Metropolitan Statistical Area after the 1980 Census. As a result, the Rogue Valley Council of Governments (RVCOG) was designated by the Governor of Oregon as the Rogue Valley MPO (RVMPO) on July 27, 1982. The RVCOG Board of Directors subsequently delegated responsibility for RVMPO policy functions to a Policy Committee of elected and appointed officials from all member jurisdictions.

Local jurisdictions initially involved in the planning activities of the RVMPO were Central Point, Jackson County and Medford. Phoenix was added to the urbanized area (UZA) in 1990 and subsequently became a member of the RVMPO. The 2000 Census showed that the Medford urbanized area again expanded to include Ashland, Jacksonville and Talent, and the RVMPO was required under federal law to once again expand its boundary to include those jurisdictions. Eagle Point became a voluntary MPO member after the 2000 Census. The 2010 Census determined that the city was part of the Medford Urbanized Area, so no official boundary change resulted.

"…RVMPO provides the forum for the many jurisdictions and agencies within the metropolitan region to come together to address the transportation issues that confront them all."

Ultimately, the RVMPO provides the forum for the many jurisdictions and agencies within the metropolitan region to come together to address the transportation issues that confront them all.

THE COMMITTEE PROCESS

The RVMPO functions under the guidance and direction of three committees that meet regularly and address issues relating to metropolitan planning responsibilities. Each committee operates under its own set of bylaws. Committee makeup, roles and responsibilities are outlined below, and described more fully in the RVMPO's Public Participation Plan. Committee memberships are listed in the opening pages of this document.

POLICY COMMITTEE

The Policy Committee is the decision-making body for the RVMPO. It is composed of officials from each of the member jurisdictions: Medford, Central Point, Ashland, Talent, Jacksonville, Eagle Point and Phoenix, Jackson County, RVTD and ODOT. The Policy Committee meets monthly.

TECHNICAL ADVISORY COMMITTEE

The Technical Advisory Committee (TAC) makes recommendations to the Policy Committee and is responsible for gathering, reviewing, and validating technical information and data used in RVMPO functions, including this update of the RTP. The TAC includes staff from all member jurisdictions, as well as the Department of Environmental Quality (DEQ), the Department of Land Conservation and Development (DLCD), and the Federal Highway Administration (FHWA). Staff members bring their individual community and agency issues to the technical review discussions. The TAC meets monthly.

PUBLIC ADVISORY COUNCIL

The Public Advisory Council (PAC) makes recommendations to the Policy Committee from the public's perspective on proposed long-range transportation plans and priorities for state and federal funding and other transportation issues. The PAC serves as a public sounding board for regional issues, and as such is a key public participation activity for the RVMPO. Membership is based on geographic area and special area of

interest, such as mass transit, freight, ect.. PAC members are appointed by the Policy Committee to serve two-year terms.

1.3 Plan Contents

Plan Requirements

The 2021-2045 Regional Transportation Plan (RTP) updates the federally mandated multimodal plan that was first adopted by the Rogue Valley Metropolitan Planning Organization (RVMPO) in 1995. Since adoption of the first plan, the RVMPO planning area has more than doubled in geographic area as a result of population growth. This plan update replaces the 2017-2042 RTP, which was updated in 2017. The 2021 update is intended to comply with current federal transportation legislation, Funding America's Surface Transportation Act (the FAST Act). Generally, transportation acts require the nation's metropolitan areas to adopt and maintain a plan that includes both long- and short-range strategies and actions that lead to the development of an integrated multimodal transportation system to facilitate the safe and efficient movement of people and goods, addressing current and future transportation demands (23 CFR 450.322). Funding for all projects in the plan must be identified, and the plan must incorporate measures to assure that both project costs and anticipated revenue are reasonable.

In regions such as the Rogue Valley, where air quality is an issue, the RTP must be updated at least every four years and the plan must be accompanied by an air quality conformity determination. The air quality document must show that through the horizon of the plan, the National Ambient Air Quality Standards will be met. For the Rogue Valley, the document must show that transportation-related emissions of carbon monoxide (CO) within the Medford Urban Growth Boundary will not exceed the budget set in the Medford CO State Implementation Plan (SIP). Also, the RVMPO must show that transportation-related emissions of Particulate Matter less than 10 microns in size (PM_{10}) within the Medford-Ashland Air Quality Maintenance Area will not exceed the budget set in the Medford-Ashland PM_{10} SIP.

"Funding for all projects must be identified, and the plan must assure that both project costs and anticipated revenue are reasonable."

Oregon's comprehensive land use planning law also shapes this plan, although adoption of the plan itself is not a land use action. The Oregon Transportation Planning Rule sets certain standards for jurisdictions within metropolitan planning areas. This plan contains provisions relating to those standards.

Document Structure

This update of the RTP is presented in ten chapters. Each chapter reflects the plan's major components, or key steps in the plan's development.

The RTP chapters include:

Chapter 1, Introduction - Contains summary information about the RTP and the RVMPO, the planning process, and plan requirements.

Chapter 2, Goals and Policies - This is the policy framework that guides development, implementation and evaluation of the RTP.

Chapter 3, Public Involvement - Contains information on community outreach conducted related to the development of the 2021-2045 RTP.

Chapter 4, Planning Area Characteristics - Provides an overview of demographics, including employment characteristics and commute patters.

Chapter 5, Regional Transportation System - The largest chapter in the RTP, it contains sections on Transportation System Management, roadways, transit, bicycle and pedestrian facilities, parking, Transportation Options, air and rail, waterways and pipelines, and multi-modal safety and security.

Chapter 6, Air Quality - The air quality conformity process required for regional transportation projects within the RVMPO area is described.

Chapter 7, Environmental Considerations - Various natural and man-made resource sites in the region are identified and their intersection with planned projects is discussed.

Chapter 8, Plan Implementation - Contains information on how and why projects are listed in the RTP; the criteria and considerations used by the RVMPO to fund projects; and contains the RTP Project List, listing projects by jurisdiction and timeframe of implementation (short, medium, long).

Chapter 9, Financial Plan - Contains details about cost and revenue forecasts and the funding needed to implement the RTP; includes the best available projections of local, state and federal transportation funds to pay for the projects identified in Chapter 8.

Chapter 10, Future Conditions - Describes results of travel demand modeling and predicting areas of future congestion, as well as other challenges related to transportation planning.

Appendix A - Transportation Planning Acronyms and Terms

1.4 Plan Consistency

Transportation System Plans

In the Rogue Valley, the RTP also serves as the region's Transportation System Plan (TSP) as required under Oregon land-use law. Oregon's Statewide Planning Goal 12 and its implementing division, the Transportation Planning Rule (TPR) (OAR Chapter 660, Division 12) requires such a plan. By adopting the RTP the RVMPO Policy Committee is not taking a land-use action under state law. Rather, local jurisdictions

direct transportation policy and planning through adoption of their comprehensive plans and TSP's. The RTP draws projects from jurisdictions' TSPs, and so is consistent with those plans. The RTP will be implemented by local jurisdictions through the TSP's and local development-review processes. The RTP's 20-year horizon, as required by federal law, extends beyond the horizons of the local plans, so not all long-range projects and strategies that could be in the RTP are identified. This means that the system performance analysis should be considered only for this plan. As jurisdictions update their TSPs, new projects will be added to the RTP. The RTP's frequent update cycle (every four years) readily accommodates updates to local plans. The updates are intended to ensure that the regional plan can adapt to changing needs and circumstances.

Language in the TRP (OAR 660-012-0016) specific to consistency between the RTP and TSP's is provided below:

Coordination with Federally-Required Regional Transportation Plans in Metropolitan Areas

(2) When an MPO adopts or amends an RTP that relates to compliance with this division (Transportation Planning), the affected local governments shall review the adopted plan or amendment and either:

> (a) Make a finding that the proposed RTP amendment or update is consistent with the applicable provisions of adopted regional and local transportation system plan and comprehensive plan and compliant with applicable provisions of this division; or
>
> (b) Adopt amendments to the relevant regional or local TSP that make the RTP and the applicable TSP's consistent with one another and compliant with applicable provisions of this division. Necessary plan amendments or updates shall be prepared and adopted in coordination with the federally-required plan update or amendment. Such amendments shall be initiated no later than 30 days from the adoption of the RTP amendment or update and shall be adopted no later than one year from the adoption of the RTP amendment or update or according to a work plan approved by the commission (Land Conservation and Development Commission). A plan amendment is "initiated" for purposes of this subsection where the affected local government files a post-acknowledgement plan amendment notice with the department (Department of Land Conservation and Development) as provided in OAR Chapter 660, Division 18.

OTHER PLANS

The RTP also must be consistent with Oregon Department of Transportation (ODOT) plans, including the Oregon Transportation Plan and the Oregon Highway Plan. The Oregon Transportation Commission adopted the multi-modal Oregon Transportation Plan (OTP) in 2006. The OTP provides a framework for policy objectives including expansion of ODOT's role in funding non-highway investments, maintaining the assets in place, optimizing the existing system performance through technology and better system integration, creating sustainable funding and investing in strategic capacity enhancements.

The OTP has four sections: (1) Challenges, Opportunities, and Vision; (2) Goals and Policies; 3) Summary of Financial and Technical Analyses; and (4) Implementation. The OTP meets a legal requirement that the OTC develops and maintains a plan for a multimodal transportation system for Oregon. The OTP also implements the federal requirements for a state transportation plan, and meets land use planning requirements for state agency coordination and the TPR. The transportation rule requires ODOT, the cities, and the counties of Oregon, as well as MPOs, to cooperate and to develop balanced transportation systems.

The Oregon Highway Plan establishes long-range policies and investment strategies for the state highway system. The Oregon Transportation Commission adopted the Oregon Highway Plan on March 18, 1999.

The plan contains the following elements:

- **Vision** – presents a vision for the future of the state highway system, describes economic and demographic trends in Oregon and future transportation technologies and demographic trends in Oregon and future transportation technologies, summarizes the policy and legal context of the plan, and contains information on the current highway system.

- **Policy** – contains goals, policies and actions in five areas: system definition, system management, access management, travel alternatives and environmental and scenic resources.

- **System** – contains analysis of state highway needs, revenue forecasts, descriptions of investment policies and strategies, implementation strategy and performance measures.

CHAPTER 2
GOALS & POLICIES

FAST Act Sets National Goals

Metropolitan planning areas are required to carry out a ***continuing, cooperative*** and ***comprehensive*** transportation planning process that provides for consideration and implementation of projects, strategies and services to address national transportation goals:

(1) Improve safety by achieving a significant reduction in fatalities and serious injuries on all public roads;

(2) Improve infrastructure conditions to achieve a state of good repair;

(3) Reduce congestion;

(4) Improve system reliability by increasing efficiency;

(5) Improve freight movement and economic vitality by improving the national freight network, strengthening the ability of rural communities to access national and international trade markets, and supporting regional economic development;

(6) Improve environmental sustainability by enhancing transportation system performance while protecting and enhancing the natural environment; and

(7) Reduce project delays to reduce costs and promote job growth.

A key feature of the FAST Act is the continuation of a performance- and outcome-based program. The expectation is for resources to be invested in projects that make progress toward achieving the national goals.

INTRODUCTION

The goals chapter of the Regional Transportation Plan provides the policy framework that guides development of the plan itself as well as subsequent decisions about system management, and project selection and implementation. The goals also provide a measuring stick to judge how well the plan reflects the values expressed by the community.

2.1 REGULATORY FRAMEWORK

Rogue Valley metropolitan planning functions within a framework of federal and state laws. The region is required to have a plan that is consistent with the 2015 transportation act, Fixing America's Surface Transportation Act (FAST Act). Through its goals and projects this update also maintains consistency with the previous RTP. On the state side, under Oregon land use law and specifically the Transportation Planning Rule, metropolitan planning is required to aim for specific outcomes relating to conservation and efficiency.

Federal FAST Act planning factors are listed in the box to the left. State Transportation Planning Rule requirements include:

- Provide and encourage a safe, convenient and economic transportation system;
- Encourage and support travel choice among a variety of mode options;
- Ensure that transportation planning is done in coordination with land use planning.

Additionally, the goals and policies are intended to support the state's transportation priorities as identified in the *Oregon Transportation Plan,* the state's long-range transportation policy document. "The goal: A safe, efficient and

sustainable transportation system that enhances Oregon's quality of life and economic vitality."

PURPOSE

The RTP goals and policies the serve as a policy foundation not only for this plan, but other planning and project development carried out in the RVMPO planning area. They've been developed by the RVMPO's standing committees (Policy, Technical Advisory Committee and Public Advisory Council) to be consistent with local plans, especially state-required Transportation System Plans. Linkage to local planning is critical because of the significant, long-term impacts transportation decisions have on the region and the people who live and work here. Decisions about future transportation facilities will impact other development decisions.

ORGANIZATION

This policy statement contains four elements: goals, policies, potential actions and performance measures. The intent is to go beyond describing a desired outcome in general terms and to provide examples of specific consequences to the potential actions that may result from a particular policy position. This RTP, following the direction of MAP-21, and reinforced by the FAST Act, introduces performance measures to provide a gauge by which to assess how well decisions further regional goals.

Each element in detail:

***Goals*:** These are broad statements about the region's desire for its future. Although a goal may not appear attainable, it is nonetheless useful as a description of an outcome the region is seeking to achieve.

Policies: These are statements describing some of the ways the region will seek to achieve its goals. Because transportation planning doesn't exist in isolation – land use decisions, for example, also are critical but not encompassed by this plan – polices listed here are not intended to represent the only actions that may be taken to achieve a goal.

Potential Actions: These are examples of the kinds of decisions, projects and other outcomes that can be expected by pursuing a particular policy line. These descriptions are intended to provide plan users with additional guidance as to the kinds of outcomes the region desires.

Performance Indicators: FAST Act continues a performance-based program to identify the most efficient investment of federal transportation funds. The act puts emphasis on national transportation goals, and increasing accountability and transparency. The intent is to improve decision making through performance-based planning and programming. Under the FAST Act, USDOT will establish performance measures, and states and MPOs will follow with targets to support the measures. The performance indicators in this plan continue the performance-based process for RVMPO that began with the prior transportation authorization bill, MAP-21.

GOALS, POLICIES & POTENTIAL ACTIONS

The goals and policies for the plan are listed below, along with the potential actions. The number of policies varies among the goals. Likewise the number of potential actions also varies. And not every policy has a corresponding performance indicator. The number of policies, actions or indicators (or, in some cases the absence of potential actions and indicators) is not a reflection of the importance or significance of a particular goal.

GOAL 1

Design, develop, and support a balanced multi-modal transportation system which will address existing and future needs.

POLICIES

1-1: Improve the accessibility, connectivity, efficiency and viability of the transportation system for all modes and users.

1-2: Utilize design standards, landscaping and other amenities as transportation facilities are developed in the urban areas to encourage transit, pedestrian and bicycle users.

1-3: Develop a user-friendly and comprehensive multi-modal transportation system by using the MPO structure as a forum.

1-4: Support multi-modal and public transportation options by encouraging land use design standards and funding opportunities.

1-5: Establish Long-Term Potential (LTP) corridor areas through the RVMPO where planning for future road connections beyond the planning horizon is apparent.

POTENTIAL ACTION

❖ Design projects with space reserved for current and future multi-modal transportation infrastructure connections.

PERFORMANCE INDICATORS

- ✓ Increase the proportion of regional corridors serving no less than three modes.
- ✓ Continuing developed use of "streetscapes," such as benches, planters, and traffic calming.
- ✓ Growth in transit, pedestrian and bicycle use.
- ✓ Improved quality and safety of multi-use paths
- ✓ Improved conditions for the safety and mobility of freight routes.

GOAL 2

Develop, optimize, and coordinate current procedures for the Safety and Security of the Transportation System.

POLICIES

2-1: Coordinate with Federal, State and local agencies to promote traffic safety education and awareness.

2-2: Catalogue and rank crash-prone areas, placing a higher priority on transportation investments correcting safety deficiencies for all modes of transportation.

2-3: Coordinate with incident-response agencies to design and operate a transportation system supporting timely and safe incident response.

2-4: Reduce vulnerability to the public, goods movement, and critical transportation infrastructure to crime, incidents and natural hazards.

2-5: Plan, manage and support development of alternate transportation routes in response to regional incident needs.

POTENTIAL ACTIONS

- ❖ Work together with local, state, and regional providers to maintain coordinated regional emergency and incident response plans.
- ❖ Examine all modes of transportation for security deficiencies. Recommendations for improvements are developed and implemented.

PERFORMANCE INDICATORS

- ✓ Measured reduction in the number and severity of injury and fatal crashes.
- ✓ Measured reduction in the number of non-injury and property damage crashes.
- ✓ Increase in safety education.
- ✓ Incorporate crash history/safety concerns in project evaluation.

GOAL 3

Identify and utilize transportation investments to foster compact, livable, and unique communities.

POLICIES

3-1: Recognize and encourage the connection between transportation efficiency and varying land use types, mixes, and densities.

3-2: Plan and support street and pathway connectivity, including off-road corridors for non-motorized users.

3-3: Identify, plan and support environmentally sensitive and healthy regional transportation options.

3-4: Identify and support funding regional transportation projects which will promote and benefit healthier communities

3-5: Identify and study potential environmental impacts and mitigation to maintain and restore affected environmental functions in consultation with appropriate, Federal, State, and local agencies.

3-6: Identify and consider incorporating into design and planning, areas that represent features of historical value and community identity.

3.7: Identify and support regional strategies which will encourage more efficient use of existing parking facilities.

POTENTIAL ACTIONS

- ❖ Support local transit oriented development plans and similar measures that improve transportation system efficiency.
- ❖ Develop street networks by connecting new and existing neighborhoods
- ❖ Identify and engage special populations, especially low-income and minority communities, in the planning process.
- ❖ Consult with federal state and local land use management, natural resources, wildlife, environmental protection, conservation and historic protection agencies during the transportation project planning process. Emphasize mitigation actions.
- ❖ Support development of local parking management plans.

PERFORMANCE INDICATORS

- ✓ Measure changes in mixed-use and downtown development.
- ✓ Measure impacts on open space and identified resource areas (Environmental Considerations chapter of the RTP) using most up-to-date data, including Rogue Valley Environmental Database.
- ✓ Measure expansion of off-network paths and increase in population and employment with access to paths.
- ✓ Improve air quality through projects that reduce carbon monoxide, particulates (PM10) and greenhouse gases.
- ✓ Improve lighting standards in urban areas, where it is appropriate, to reduce light pollution and to be consistent with roadway classifications.

GOAL 4

Develop a plan that can be funded and reflects responsible stewardship of public funds.

POLICIES

4-1: Develop innovative and sound funding policies to implement the RTP. Ensure that costs of planned improvements are consistent with policies.

4-2: Prioritize investments to preserve the existing transportation system.

POTENTIAL ACTIONS

- ❖ Encourage public-private partnerships and other innovative approaches to maximize resources.
- ❖ Support funding mechanisms such as System Development Charges to collect from new developments a proportionate share of facility improvement costs.

- ❖ Support, fund, and implement maintenance programs for transportation facilities.

PERFORMANCE INDICATORS

- ✓ Track funding obligations, funding availability.
- ✓ Review and update project funding criteria using quantitative methodologies to the extent practicable.
- ✓ Maintain RTP project selection criteria to be consistent with state and federal funding eligibility.

GOAL 5

Identify, plan and develop transportation infrastructure which maximizes the efficient use for all users and modes.

POLICIES

5-1: Analyze the regional transportation system effectiveness by adding or removing traffic signals and signal networks, including interstate access ramp signals.

5-2: Consider and support measures to optimize intersection and interchange design.

5-3: Support an access management strategy to improve traffic flow.

5-4: Identify, develop and effectively integrate technology with transportation infrastructure consistent with the RVMPO Intelligent Transportation System (ITS) program.

5-5: Encourage and consider the use of alternative design standards to minimize the costs and impacts to existing communities.

POTENTIAL ACTIONS

- ❖ Coordinate and link signals to a master control system to optimize system efficiency.
- ❖ Utilize interstate ramp meters to control the amount of traffic entering the freeway to maintain acceptable traffic volumes on the interstate.
- ❖ Increase intersection capacity through geometric improvements and elimination of turn movements.
- ❖ Implement Transit Signal Prioritization on primary transit corridors, where appropriate.

PERFORMANCE INDICATORS

- ✓ Measure improvements, upgrades to existing system.
- ✓ Measure implementation of ITS projects.
- ✓ Track projects that use innovative, emerging technologies.
- ✓ Track on-time performance for RVTD.

GOAL 6

Identify, develop and support diverse strategies to lessen dependence upon single-occupant vehicles.

POLICIES

6-1: Support Transportation Demand Management strategies.

6-2: Identify, develop and facilitate alternative parking strategies encouraging walking, car and bicycle sharing, bicycling, car and van-pooling, and transit.

6-3: Identify, plan and enhance bicycle, pedestrian, and transit systems in the region.

6-4: Strive to improve transit services in the region.

POTENTIAL ACTIONS

- ❖ Implement Transit Signal Prioritization on primary transit corridors, where appropriate Encourage infill development by supporting reduced parking requirements where appropriate.
- ❖ Support design standards with parking at side or rear of building so pedestrians can access entrances.
- ❖ Support park-and-ride standards to place facilities near transit routes.
- ❖ Promote regionally connected network of off-street bicycle/pedestrian facilities with minimal roadway crossings (Bear Creek Greenway).
- ❖ Plan for, build and maintain shared roadways for use by all modes.
- ❖ Use land use codes to promote bicycle and pedestrian travel by requiring amenities such as bike racks, crosswalks, showers and lockers at worksites and retail centers.
- ❖ Improve pedestrian access to transit.
- ❖ Support other forms of public and private transportation such as bus rapid transit, light rail, trolleys, and transit feeder and connector services as the region's population reaches higher thresholds.

PERFORMANCE INDICATORS

- ✓ Track transit service hours and ridership.
- ✓ Track funding for bicycle, pedestrian and transit projects.
- ✓ Measure population living within ¼-miles of transit service.
- ✓ Implement a TDM self-evaluations and reporting process for local jurisdictions.
- ✓ Track the number of people who are participating in a TDM program

GOAL 7

Develop, coordinate, and administer an open and balanced process for planning and developing the regional transportation system.

POLICIES

7-1: Coordinate and support existing and future plans for the regional transportation system in conjunction with land use and development.

7-2: Obtain and organize public input in the regional transportation planning process with innovative outreach methods consistent with the RVMPO Public Participation Plan.

7-3: Coordinate local, state, and regional transportation planning through the RVMPO.

7-4: Formulate decisions which shall be consistent with Federal and State regulations, including the Oregon Highway Plan, the Transportation Planning Rule, and the Clean Air Act.

POTENTIAL ACTIONS

- ❖ Maintain a website with updated information about all regional planning.
- ❖ Support the RVMPO's Technical Advisory Committee, Public Advisory Council, and the Policy Committee for deliberation of regional transportation planning issues.
- ❖ Participate in local and regional and national organizations to support RVMPO actions.
- ❖ Involve transportation providers in the planning process.

PERFORMANCE INDICATORS

- ✓ Record public participation, comments, attendance at meetings.
- ✓ Demonstrate linkage of public comments to decisions and plan content.

GOAL 8

Evaluate and support regional transportation investments to foster economic opportunities locally and regionally.

POLICIES

8-1: Accommodate travel demand to create a regional transportation system supporting a robust local economy.

8-2: Evaluate and analyze effects on freight mobility when prioritizing projects, regionally and locally.

8-3: Support transportation projects which will reduce and remove identified barriers to safe, reliable, and efficient freight movement including adequate roadway space for commercial vehicle deliveries, locally and regionally.

8-4: Support transportation projects which will serve commercial, industrial, and resource-extraction lands where an inadequate transportation network impedes freight-generating development.

8-5: Support a comprehensive and versatile regional transportation interface for the efficient movement of goods and people, both locally and regionally.

POTENTIAL ACTION

- ❖ Balance the demand for freight routes with the demands for local circulation.
- ❖ Explore the feasibility of developing interurban freight delivery systems.

PERFORMANCE INDICATOR

- ✓ Measure employment change in vicinity of projects.

This Page Intentionally Left Blank

CHAPTER 3

PUBLIC INVOLVEMENT

INTRODUCTION

The RVMPO has an adopted Public Participation Plan, last updated in 2018, which remains consistent with the planning requirements of the 2015 transportation act, Fixing America's Surface Transportation Act (FAST Act).

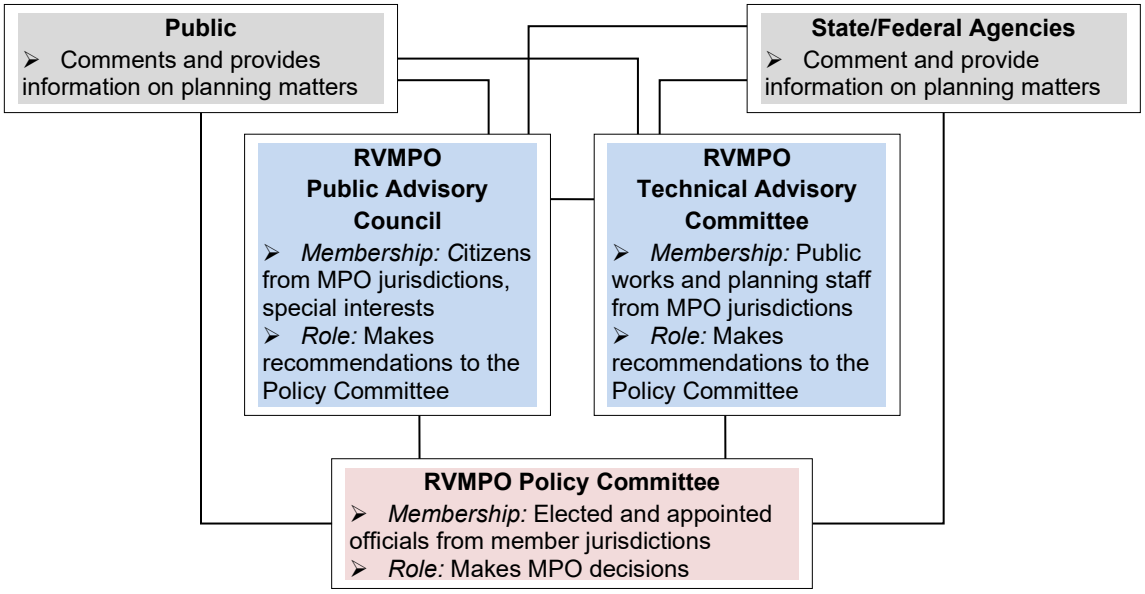
Public participation activities are conducted according to standards and requirements of the RVMPO Public Participation Plan. The participation plan establishes a goal of the RVMPO to provide citizens and interested parties with reasonable opportunities to participate in the metropolitan transportation planning process. Beyond efforts to provide information to the public, this goal encompasses a wide range of strategies and activities to enable the public to be involved in a meaningful way in the RVMPO's decision-making process. Ultimately, efforts to bring more voices and wide-ranging interests to the table will yield better planning results.

3.1 RTP PLANNING PROCESS AND PUBLIC PARTICIPATION

RTP UPDATE

The RVMPO had scheduled and advertised a series of workshops and open houses in the month of March for public outreach and participation. However, due to national health pandemic (COVID-19) these public meetings had to be canceled. In its place, RVMPO staff created a virtual open house to allow for public comment and participation. The virtual open house was posted on the RVMPO website.

Figure 3.1.1: RVMPO Organizational Structure

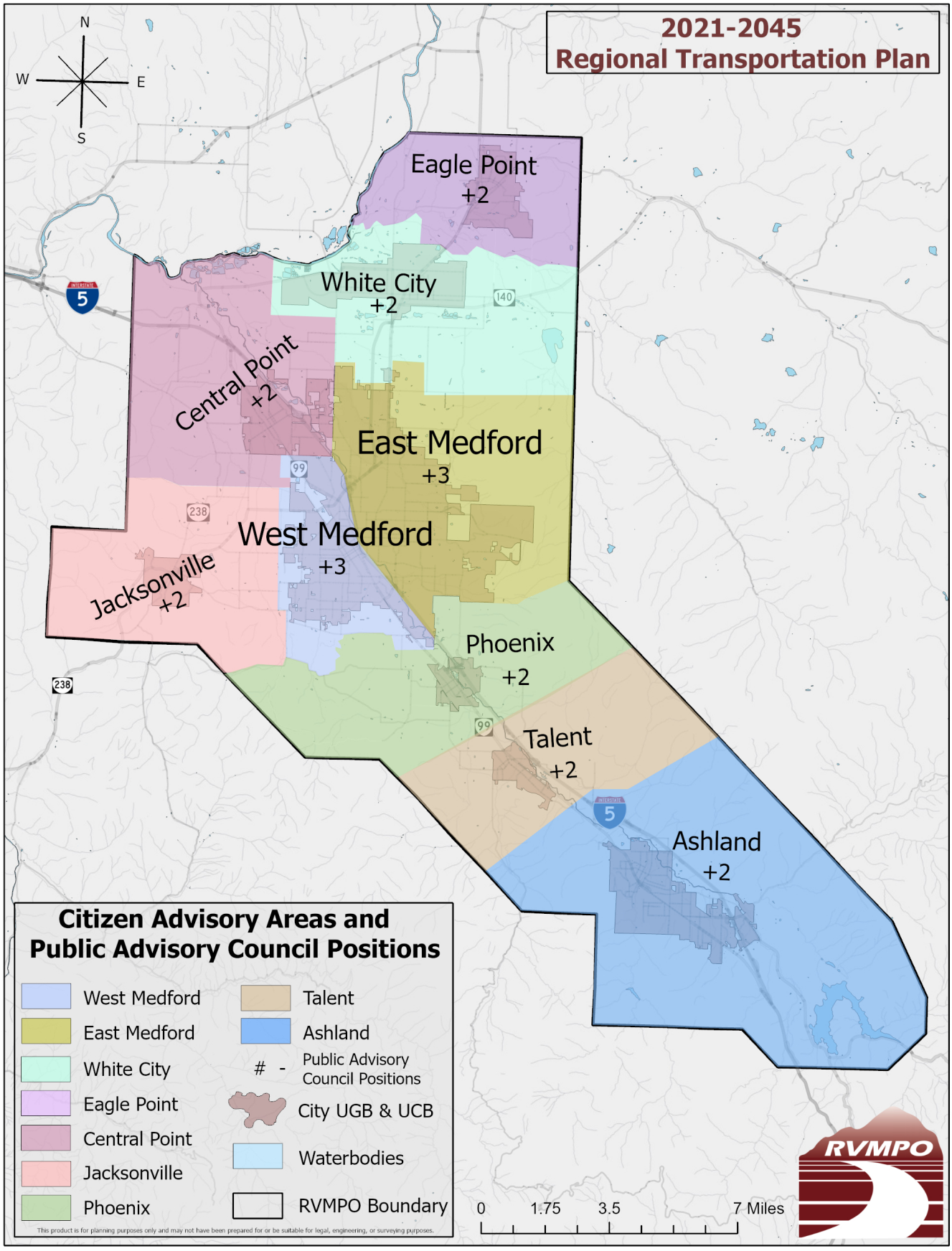


Development of this RTP update involved close coordination with member jurisdictions at both the staff and policy level. Critical parts of the plan, including the forecasts, policy statement and project selection were developed in RVMPO committee meetings, and individual consultation with jurisdictions. Public review and comment was made available through the website, from comments and recommendations made by the RVMPO Public Advisory Council, at committee meetings and public hearings, and at selected community events. Meetings at which plan components were discussed had been announced by email. Additionally, the RVMPO solicited comments on the plan to a contact list of "interested parties" and Title VI/Environmental Justice related organizations in the region. Meetings were also advertised from time to time in the local news media. The Policy Committee conducted a public hearing on the RTP as well as the conformity determination during the formal comment period. The public was invited to freely participate through advertisements in the Medford Tribune and on the RVMPO website.

PUBLIC COMMENTS AND THE RTP

This section presents a summary of public comments received throughout the plan update process. It is important to note that this does not include comments and recommendations from the RVMPO Public Advisory Council (PAC), an appointed group who are vital part of the MPO's public participation process. The PAC participated in the plan update process by making comments and recommendations on RTP material to the Policy Committee. Their meeting agendas and minutes can be found on the RVMPO website. For purposes of this RTP chapter, this section summarizes input from the public, other than the PAC.

No comments were received.


2021-2045
Regional Transportation Plan
N
W
E
S
Eagle Point
+2
White City
+2
Central Point
+2
East Medford
+3
West Medford
+3
Jacksonville
+2
Phoenix
+2
Talent
+2
Ashland
+2
5
140
99
238
Citizen Advisory Areas and
Public Advisory Council Positions
West Medford
East Medford
White City
Eagle Point
Central Point
Jacksonville
Phoenix
Talent
Ashland
- Public Advisory Council Positions
City UGB & UCB
Waterbodies
RVMPO Boundary
This product is for planning purposes only and may not have been prepared for or be suitable for legal, engineering, or surveying purposes.
0
1.75
3.5
7 Miles
RVMPO

CHAPTER 4
PLANNING AREA CHARACTERISTICS

4.1 DEMOGRAPHICS

Population trends are a key factor affecting the volume of travel in the region. In addition, where and how people live greatly determines which transportation facilities and modes get used most and which warrant the greatest investment of transportation funding. The following pages contain general demographic characteristics for the Planning Area based on the 2010 U.S. Census and the most recent American Community Survey (ACS) data. Employment and commute information are also provided. Where appropriate, the characteristics are compared to statewide or countywide data.

Data Notes

It is important to note that beginning with the 2010 U.S. Census, the decennial census no longer collects the same extent of socio-economic information; the American Community Survey now does. For those tables in this chapter containing ACS data, estimates are based on a sample of the population using five-year averages rather than a count at one point in time, such as the decennial census. Additionally, please keep in mind that there is a margin of error (MOE) associated with every estimate in this section, although not individually noted. An MOE is an indicator of the reliability of the data estimates by proving a range where the true value of the estimate most likely falls. For example, a 20% poverty rate could have a (+/- 2%) MOE, meaning that the poverty rate is actually likely between 18-22%. For smaller communities, MOEs for ACS data estimates are generally larger due to the smaller sample sizes. Additionally, columns labeled "RVMPO Urbanized Area" use US Census/ACS data for the Census defined Medford Urbanized Area (Medford UA). The Medford UA is smaller in land area than the RVMPO Planning Area, but contains all urbanized areas of the RVMPO and is therefore the best available data.

Downtown Medford

As shown in Table 4-1, the population of the area has shown a steady growth from 2000 to the present. The 2019 numbers are estimates promulgated by Portland State University.

Table 4.1 - Total Populations in MPO Area			
Jurisdiction	2000 (U.S. Census)	2010 (U.S. Census)	2019 Pop. Est. (PSU)
RVMPO Urbanized Area	128,780	154,081	183,534
Jackson County	181,269	203,206	39354
City of Ashland	19,522	20,078	20,960
City of Central Point	12,493	17,169	18,365
City of Eagle Point	4,797	8,469	9,260
City of Jacksonville	2,235	2,785	3,015
City of Medford	63,154	74,907	81,465
City of Phoenix	4,060	4,538	4,650
City of Talent	5,589	6,066	6,465

Table 4-2, below, shows the estimated **number of households** for the MPO Planning Area and for each city within the RVMPO based on numbers from the American Community Survey.

Table 4.2 - Number of Households		
Jurisdiction	Number of Households*	Household Size*
Ashland	9719	2.06
Talent	2959	2.14
Phoenix	2222	2.02
Medford	30805	2.51
Central Point	6948	2.54
Eagle Point	3564	2.49
Jacksonville	1502	1.91
*2013-2017 ACS 5-Year Estimates Table DP02		

The City of Eagle Point had the highest percentage (34%) of **households with a child less than 18 years old**, with Jacksonville having the lowest at 13.2%. The average for the Planning Area was 25.3%, just slightly under the statewide percentage of 26.2%.

Table 4.3 - Children Under 18 yrs.	
Jurisdiction	*Percentage of Total Population
Oregon	26.20%
Ashland	20.70%
Talent	25.40%
Phoenix	23.10%
Medford	29.60%
Central Point	31.10%
Eagle Point	34%
Jacksonville	13.20%

*2013-2017 ACS 5-Year Estimates Table S0101

The **median age** of 44.02 for residents of the Planning Area is slightly higher than the statewide median of 39.2 years. The City of Eagle Point had the lowest median age in the Planning Area at 36, while Jacksonville had the highest at 61.2. Over the past twenty years the median age of the area has gradually increased.

The Planning Area has a relatively high percentage of **senior residents (age 65+)** when compared to statewide averages. A large degree of variation exists between the cities that lie within the RVMPO boundary. These large increases likely represent the growing number of retirees coming into the area.

Table 4.4 - Median Age and Senior Pop.		
Jurisdiction	*Median Age	*Population Age 65+
Oregon	39.2	16.30%
Ashland	44.3	22.10%
Talent	40.5	21.10%
Phoenix	51.2	29.10%
Medford	37.1	16.90%
Central Point	37.9	17.40%
Eagle Point	36	17.40%
Jacksonville	61.2	44.60%

*Source: 2013-2017 ACS 5-Year Est. Table S0101

In the Planning Area, roughly 92% self-identify as **"White alone"** in their choice of race and ethnicity which is significantly higher than the state of Oregon as a whole. In choice of ethnicity, 8.7% of the Planning Area population identified as **"Hispanic or Latino"** which is significantly lower that the state as a whole. The differences among the jurisdictions may be seen in Table 4-5, below.

Table 4.5 - White Alone and Hispanic/Latino Populations		
Jurisdiction	*White Alone Population (Not Hispanic or Latino)	*Those Who Identify as Hispanic or Latino
Oregon	84.90%	12.70%
Ashland	91.70%	5.70%
Talent	93.70%	11.60%
Phoenix	88.90%	5.30%
Medford	89.80%	15.90%
Central Point	93.30%	11.60%
Eagle Point	93.40%	9.60%
Jacksonville	96.60%	1.80%
*2013-2017 ACS 5-Year Est Table DP05		

At 15.63% the RVMPO area shows a higher rate of poverty than for the state (at 14.9%) according to ACS data for 2013-2017. The reported percentage of the population living in poverty within Medford is 19.8%, with Talent having the highest percentage at 22% and Jacksonville the lowest at 4.2%.

Table 4.6 - Poverty	
Jurisdiction	*Population Living Below the Poverty Level (Last 12 Months)
Oregon	14.90%
Ashland	18.60%
Talent	22%
Phoenix	15.80%
Medford	19.80%
Central Point	13.40%
Eagle Point	15.60%
Jacksonville	4.20%
*2013-2017 ACS 5-Year Est Table S1701	

The percentage of **vacant housing units** is quite varied throughout the RVMPO planning area. The City of Ashland had 8% of housing units vacant, with Talent and Central Point at 4.1% and 4.8%, respectively (ACS 2013-2017 Table DP04).

In the state of Oregon, the percentage of **owner-occupied housing units** outnumber **renter-occupied housing units** in similar percentages to the previous update - 61.7% to 38.3%, respectively. In the RVMPO area the split is similar falling along an almost exact 60%/40% split – not dissimilar to the state's averages. The City of Phoenix has the highest percentage of owner-occupied units at 69%, while the City of Medford has approximately half of all housing units (48.3%) being renter-occupied and half owner-occupied (51.7%).

Table 4.7 - Housing Occupancy			
Jurisdiction	Owner-Occupied	Renter-Occupied	Vacant Units
Oregon	61.70%	38.30%	9.30%
Ashland	54.10%	45.90%	8%
Talent	56%	44%	4.10%
Phoenix	69.60%	30.40%	8.80%
Medford	51.70%	48.30%	6.60%
Central Point	61.20%	38.80%	4.80%
Eagle Point	62.90%	37.10%	7.50%
Jacksonville	63.60%	36.40%	8.20%
*2013-2017 ACS 5-Year Estimates Table DP04			

This Page Intentionally Left Blank

4.2 Commute Patterns

Commute characteristics and patterns help determine where transportation system needs exist. Many residents of outside areas commute into the RVMPO for work, as well as traveling to the area for shopping and services. Interstate 5, Hwy 99, Hwy 62, and Hwy 238 are all important commuter routes.

Between 2009 and 2011 the state of Oregon undertook a Household Activity Survey. The following text, data, tables, charts, and graphs are from that survey and were developed for the Rogue Valley area.

Daily Weekday Travel in Medford/Rogue Valley

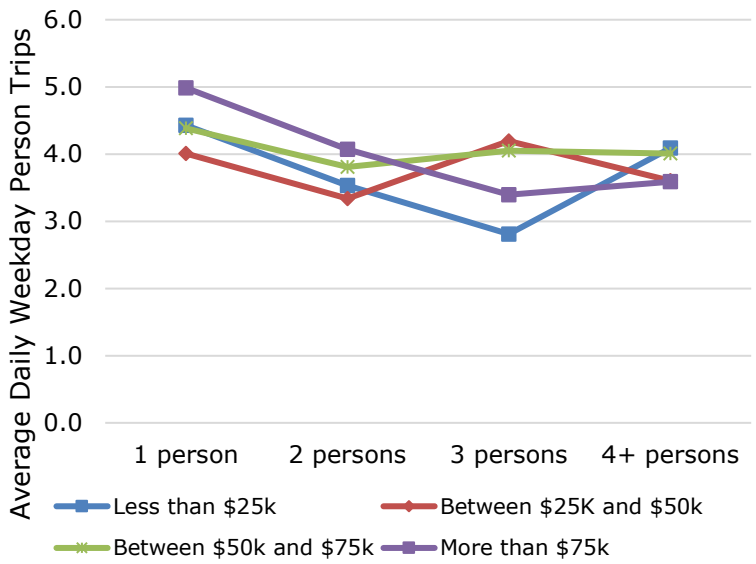
Across Rogue Valley, the 1,061 households that participated in the OHAS survey reported an average of 2.4 household members, 1.8 vehicles, and 1.6 bicycles. These same households reported an average of 9.1 daily weekday trips, traversing 41 miles per day and spending 128 minutes per day traveling. Per capita, this equated to 3.9 trips, 19 miles, and 59 minutes respectively. Household income and size were key explanatory variables in understanding travel patterns.

As shown in Table RV-1, people with household incomes over $75,000 reported the highest level of trip-making and longest distances traveled. Those in households with incomes under $25,000 reported fewer shorter trips but which took longer.

Table RV-1: Person Travel Metrics by Household Income

Household Income	Person Trips	Daily Trip Miles	Daily Travel Time (minutes)
Less than $25k	3.8	15	60
Between $25K and $50k	3.6	19	57
Between $50k and $75k	4.0	20	58
More than $75k	3.8	23	59
All Persons	3.9	19	59

Figure RV-1: Person Trips by Size and Income



The average daily weekday person trip rate remained fairly steady for persons when considering both household income and size. As shown in Figure RV-1, the greatest variation in trip rates across size was for those living in 3-person households with incomes under $25,000. Person travel was most consistent across the $50,000-$75,000 income group regardless of household size.

Children (ages 0-17) reported the lowest levels of average weekday travel, while those ages 35 to 64 reported the most, as indicated in Table RV-2. Respondents ages 18-34 (also known as Millennials) reported an average of 4.2 daily weekday person trips traveling 17 miles and 55 minutes.

Age Group	Person Trips	Daily Trip Miles	Daily Travel Time (minutes)
0-17	3.2	11	47
18-34	4.2	17	55
35-54	4.4	25	69
55-64	4.5	27	68
65+	3.5	19	60
All Ages	3.9	26	75

Table RV-2: Travel Metrics by Age Cohort

Thirty-five percent of household members age 16+ reported that they worked full-time (35 hours or more), while 28% reported they worked part-time or volunteered on a regular basis. The remaining respondents age 16+ were not employed. Within each age cohort, the proportion of full-time workers varied: more than half of all adults ages 35-54 were employed full-time (58%), as compared to 43% of those ages 18-34, 31% of those ages 55-64, and 8% of those ages 65-74.

Table RV-3: Worker Status by Age Cohort

Worker Status	Age Groups						Total Ages 16+
	16-17	18-34	35-54	55-64	65-74	75+	
Employed FT	0%	43%	58%	31%	8%	0%	35%
Employed PT or Volunteer	23%	31%	23%	34%	36%	23%	28%
Not Employed	77%	26%	19%	35%	56%	77%	36%
Total	100%	100%	100%	100%	100%	100%	100%

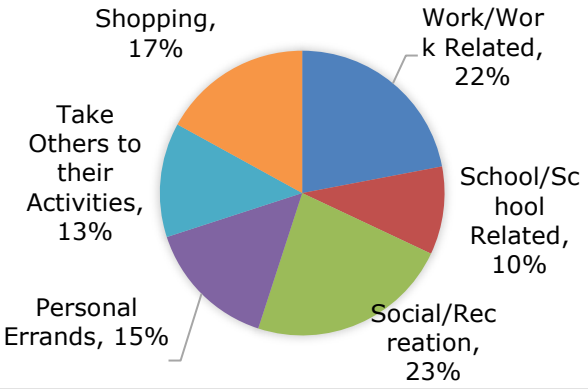
Work is a cornerstone of daily activity, and many aspects of our jobs influence when and how we travel during our non-work hours. The OHAS survey captured the following work-related details:

- Full-time workers reported working an average of 43 hours over a 5-day work-week while part-time/volunteer workers spent an average of 20 hours working over a 3-day work-week.
- Most workers who participated in the survey worked in the service industry (52% of those employed full-time and 68% of those working part-time or in volunteer positions).
- Most workers reported having full (27%) or some (44%) flexibility in their work schedule. Only 30% of respondents reported having no flexibility in the work schedule.
- One in four (27%) of all workers indicated that their job required them to have a personal vehicle available while at work.
- Most workers reported that their employers provided free parking (87%) and 3% indicated their employer provided free transit passes. *It is important to note that this is what the employee reported and may not reflect actual workplace programs*.
- Eleven percent of workers reported their employer permitted teleworking, where teleworking was defined as working from home in lieu of a commute (not working from home then going into the office on the same day). Of those workers eligible to telework, 57% did so at least once a week, 18% did so at least once a month, 16% reported teleworking almost every day and the remaining 10% report only teleworking a few times a year at most.

To link why we travel with how and when we travel, OHAS survey respondents recorded all activities and related travel for a 24-hour weekday period, including:

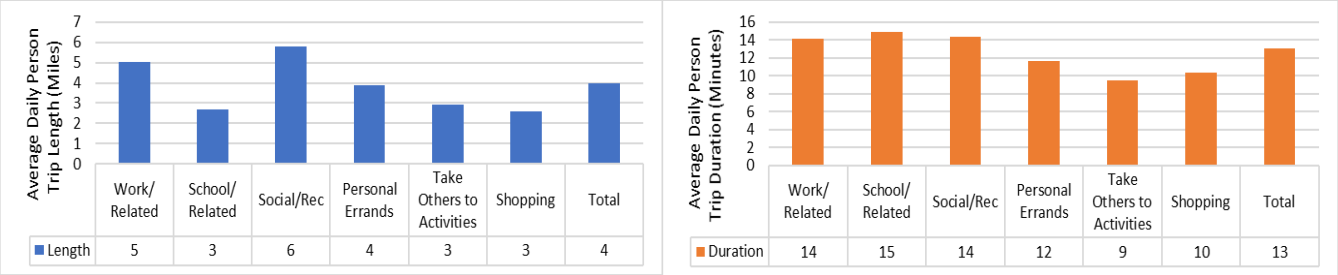
1. Work/Work-related
2. School/School-related
3. Social and Recreational
4. Personal Errands
5. Taking others to their activities
6. Shopping

Figure RV-2: Reasons for Travel



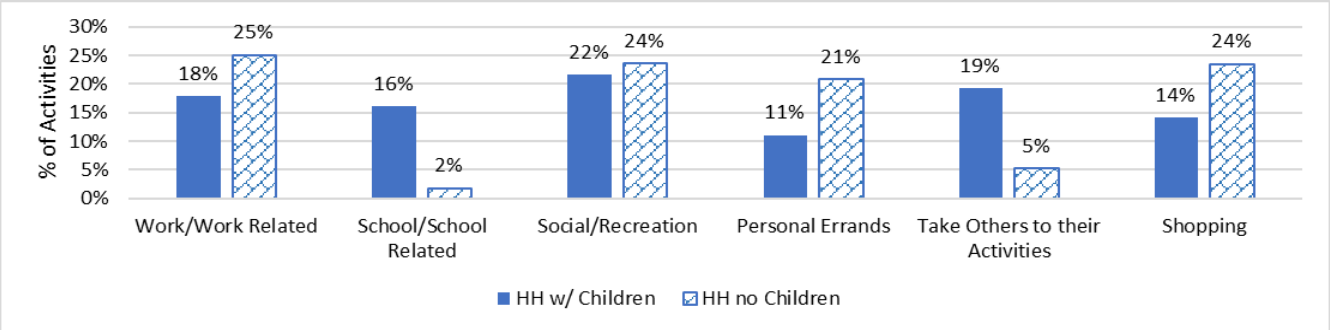
Average trip distance and duration for each activity are shown in Figure RV-3. Trips for social/recreation tended to be the longest at an average of 6 miles while school trips were shortest at 3 miles. In terms of average trip duration, school trips took the longest at 15 minutes while trips to take others to their activities averaged 9 minutes.

Figure RV-3: Travel Metrics by Activity



Households with children reported more school-related trips and fewer work trips than households with no children. The households with children also reported more trips for taking others to their activities and fewer trips for social/recreational, errands, or shopping.

Figure RV-4: Travel-Related Activities by Presence of Children



When considering weekday travel by age groups, travel for those ages 0-17 centered about school and social/recreation activities (see Table RV-4). School related activities declined sharply for adults while the proportion personal errands increased with age.

Table RV-4: Travel-Related Activities by Age Group

Age	Activity						Total
	Work/ Related	School/ Related	Social/ Recreation	Personal Errands	Take Others to Activities	Shopping	
0-17	1%	36%	28%	10%	13%	12%	100%
18-34	34%	8%	17%	8%	20%	13%	100%
35-54	33%	1%	19%	14%	14%	18%	100%
55-64	24%	0%	23%	22%	6%	25%	100%
65-74	13%	0%	26%	26%	6%	29%	100%
75+	7%	1%	31%	35%	4%	23%	100%
All Ages	22%	9%	23%	16%	12%	18%	100%

Regardless of the reason for the travel, the majority of reported trips were made by auto. Of the 617,000trips made on a typical weekday in the Rogue Valley region, 88% were auto trips. Of the remaining 13% of trips, 7% were walk trips, 2% bike trips, 1% transit trips, and 3% school bus trips. Those ages 18-34 who did not travel by auto either walked (5%) or biked (3%) as indicated in Table RV-5.

Table RV-5: Travel Mode by Age

Age	Travel Mode					
	Auto	Walk	Bike	Transit	School Bus	Total
0-17	76%	9%	3%	1%	12%	100%
18-34	90%	5%	3%	1%	0%	100%
35-54	88%	7%	3%	1%	0%	100%
55-64	94%	4%	1%	1%	0%	100%
65-74	92%	6%	0%	1%	0%	100%
All Ages	88%	7%	2%	1%	3%	100%

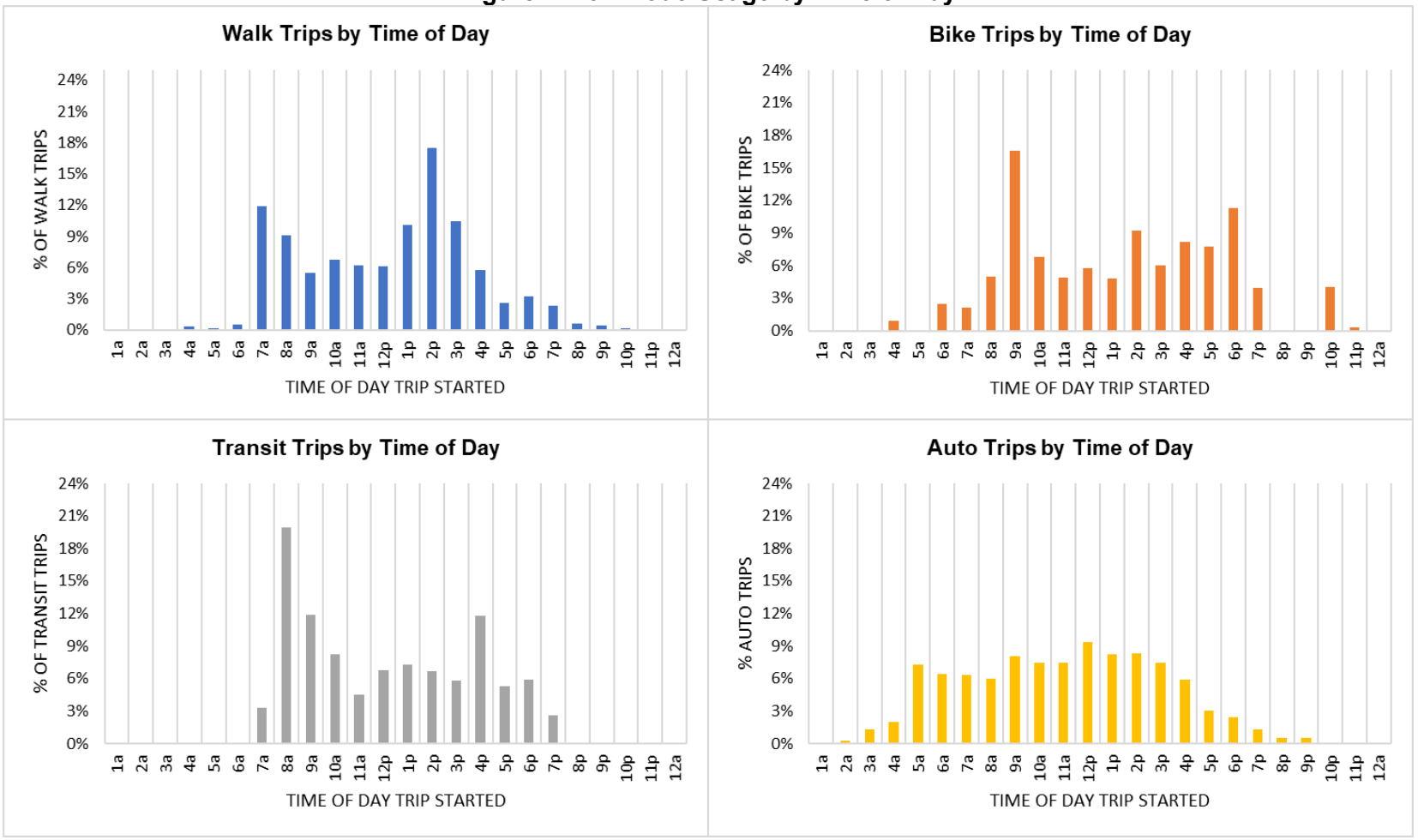
Work and work-related travel was largely by auto (91%). School and social/recreation travel saw the highest levels of walk trips, while adult school trips had the highest reported levels of transit usage (7%).

Table RV-6: Travel Modes by Activities

Activity	Auto	Walk	Bike	Transit	School Bus	Total
Work/Work Related	91%	5%	3%	1%	0%	100%
School/ Related (age <18)	55%	14%	4%	2%	25%	100%
School/ Related (age 18+)	75%	12%	1%	7%	5%	100%
Social/Recreation	89%	9%	1%	0%	1%	100%
Personal Errands	94%	4%	1%	1%	0%	100%
Take Others to Activities	93%	3%	3%	0%	1%	100%
Shopping	92%	6%	2%	1%	0%	100%
All activities	88%	6%	2%	1%	2%	100%

Mode usage varies across typical weekday. Each of the charts in Figure RV-5 display the distribution of all trips by each of the four main modes of walk, bike, transit, and auto. As to be expected, walk trips were concentrated mostly in the daytime hours, with a peak around 2 pm. Bike trips peaked in the morning (9 am). Transit trips were highest in the morning as well, while auto trips were distributed throughout the day.

Figure RV-5: Mode Usage by Time of Day



Travel patterns by time of day were fairly consistent by household size, income, and vehicle availability. What accounted for more variation in travel was the age of the traveler. While children reported the most pronounced morning and afternoon peaks, the elderly reported the most pronounced mid-day peaks, particularly those travelers age 75 and older, as indicated in Figure RV-6.

Figure RV-6: Time of Day Travel by Age Group

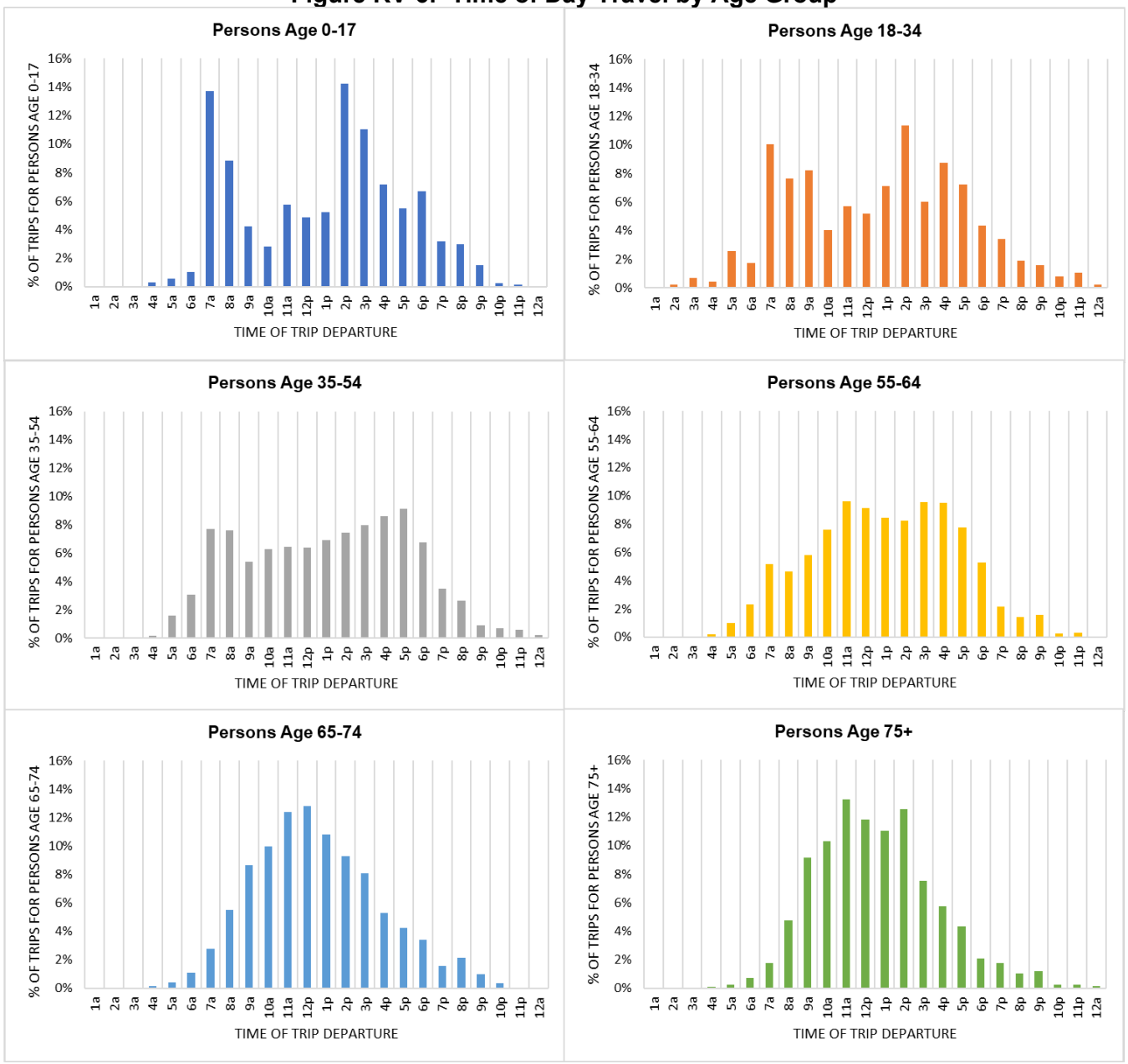


Table 4.2.8: Planning Area Worker Populations (workers 16 yrs+)

Worker Population Types	Share of Worker Population
Live in and Employed in RVMPO Planning Area	51.0%
Live in, but Employed Outside RVMPO Planning Area	48.9%
Live Outside, but Employed in RVMPO Planning Area	7.3%

Source: 2011-2015 ACS, Table B08008

In the RVMPO Planning Area, an average of 8.4% of households did not have access to a vehicle. Jacksonville had the lowest percentage in the MPO at 1.7%, while Medford had the highest at 10.6%. The percentage of **households without access to a vehicle** for the remaining cities in the MPO were as follows: 8.4% of households in Ashland, 4.7% in Central Point, 8.4% in Eagle Point, 1.7% in Jacksonville, 10.6% in Medford, 3.2% in Phoenix, and 2.8% in Talent.

Table 4.2.9: Households without Access to a Vehicle

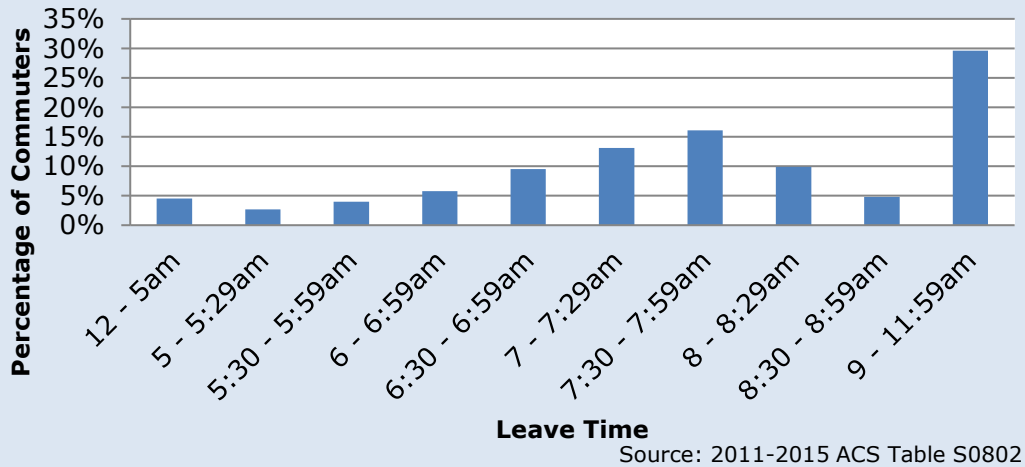
Jurisdiction	% HH's without Vehicle
State of Oregon	8.1%
RVMPO Urbanized Area	8.4%
City of Ashland	8.4%
City of Central Point	4.7%
City of Eagle Point	8.4%
City of Jacksonville	1.7%
City of Medford	10.6%
City of Phoenix	3.2%
City of Talent	2.8%

Source: 2011-2015 ACS, Table B08201

Figure 4-1 on the following page illustrates when commuters in the RVMPO Planning Area **leave home to go to work** according to 2011-2015 ACS data. As seen in the graph, the highest percentages of all area commuters left home between 9:00 a.m. and 11:59 a.m., with the next highest leave time bracket being 7:30 a.m. to 7:59 a.m. It is important to note, however, that all time brackets are one half hour, with the exception of the 9:00 a.m. to 11:59 a.m. time bracket being three hours.

Travel time to work (according to 2011-2015 ACS data) by all modes for RVMPO Planning Area residents were much less than for statewide residents, with a commute time of 19 minutes or less for 67.0% of RVMPO residents as compared to 49.5% of statewide residents.

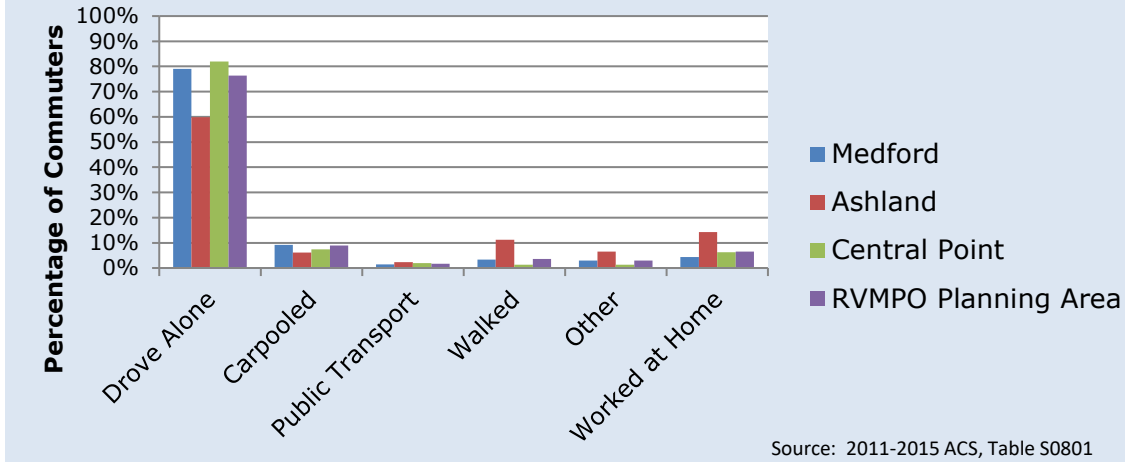
Figure 4.2.2: Time RVMPO Commuters Leave Home to Go to Work



Source: 2011-2015 ACS Table S0802

Throughout Oregon an estimated 71.4% of workers 16 years and older **drove alone while commuting to work**, according to 2011-2015 ACS data. In comparison, the following percentages reflect commuters in RVMPO jurisdictions who drove to work alone: 59.8% for Ashland, 81.9% in Central Point, 80.5% in Eagle Point, 81.0% in Jacksonville, 79.0% in Medford, 81.5% in Phoenix, 73.3% in Talent, and 76.4% throughout the RVMPO Planning Area. Of those in the Planning Area who did not drive to work alone, an estimated 8.9% **carpooled**, 1.7% **used public transit**, 3.6% **walked** and 2.9% used **"other" means of transportation**. An estimated 6.5% **worked at home**. Figure 4-2 illustrates the percentage of commuters by mode for jurisdictions over a five-year period from 2011-2015.

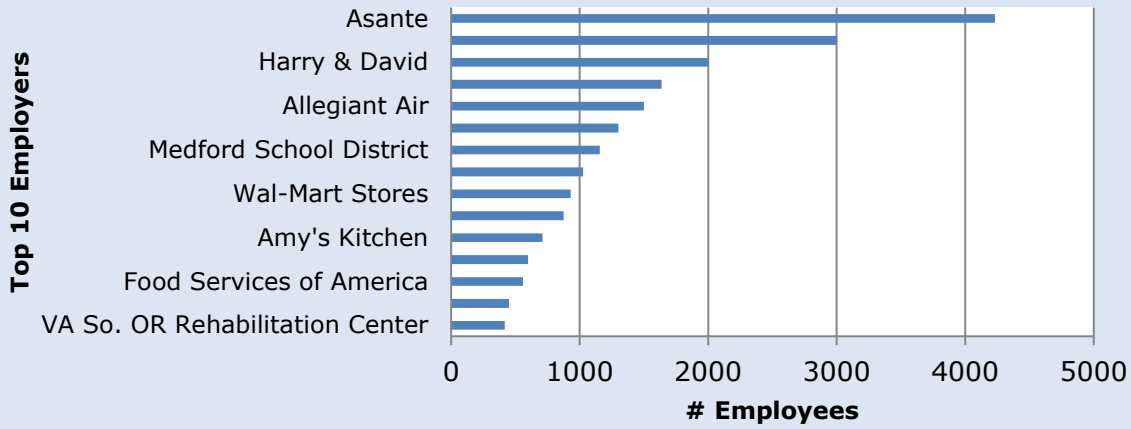
Figure 4.2.3: Commuters by Mode



Source: 2011-2015 ACS, Table S0801

The location of **major employers** helps to identify commuter travel patterns, including heavily used corridors and peak-hour transportation needs. The top 10 largest employers within the Planning Area are shown on Figure 4-4, below, and locations of large employers with 100 or more employees are shown on Map 4-1.

Figure 4.2.4: Major Employers

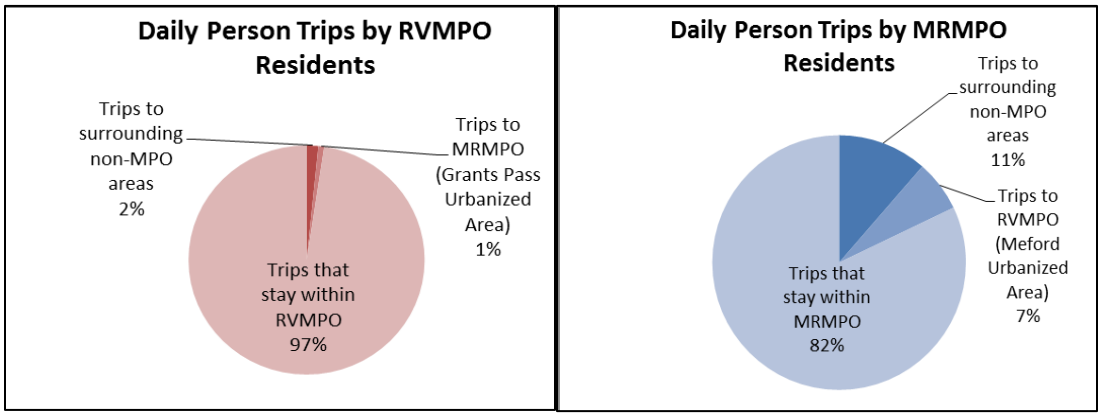


Source: Medford/Jackson County Chamber of Commerce, Major Employers 2016

Travel Patterns between the Medford Urbanized Area (RVMPO) and Grants Pass Urbanized Area (MRMPO)

It's important to note that many residents of the neighboring Middle Rogue MPO, which contains the Grants Pass Urbanized Area, travel to the Medford Urbanized Area (RVMPO) for work, shopping and services. Utilizing data from the 2010 Oregon Household Survey (OHAS), Figure 4-4 shows estimated weekday travel characteristics of both RVMPO and MRMPO residents, including: percentage of person trips that remain within the MPO of origin, those that go to the neighboring MPO (RVMPO or MRMPO), and trips to surrounding non-MPO areas.

Figure 4.2.5: Travel Patterns of Neighboring MPO Residents



Source: 2010 Oregon Household Survey Extrapolated Data

Given the number of inter-regional trips that occur between the Grants Pass and Medford urbanized areas, it is estimated that 40% of the average daily traffic on I-5 between the two regions are MRMPO residents traveling to/from RVMPO (9,100 daily person trips), and RVMPO residents traveling to/from MRMPO (3,988 daily person trips).

This Page Intentionally Left Blank

CHAPTER 5
REGIONAL TRANSPORTATION SYSTEM

5.1 TRANSPORTATION SYSTEM MANAGEMENT

INTRODUCTION

The Oregon Transportation Planning Rule defines Transportation System Management (TSM) strategies as:

> *"...techniques for increasing the efficiency, safety, capacity, or level of service of a transportation facility without increasing its size."*

TSM strategies are aimed at making the most efficient use of the existing transportation infrastructure, thus reducing the need for more costly projects, such as roadway capacity expansion. Example techniques include coordinating traffic signals, re-striping lanes, and channelizing intersections. TSM strategies can be an important component in maintaining mobility standards.

TSM needs examined in this chapter include:

- Intersection traffic control needs and improvements including signal coordination, signal upgrades and new signal installation or modifications;
- Intelligent Transportation System (ITS) needs and improvements; and
- Continuing traffic monitoring.

DATA COLLECTION AND INVENTORY

Locally, TSM strategies are considered first whenever system deficiencies are encountered. Local agencies have a history of implementing TSM projects and they are expected to continue to do so during the implementation period of the plan. Many TSM projects have relatively low capital costs in comparison to construction of new streets. TSM projects seldom require right-of-way acquisition, a sometimes lengthy, expensive and potentially disruptive process. Some TSM projects do not even require any physical construction.

Because of their relative simplicity, TSM projects often can be implemented soon after a problem is analyzed and a solution is developed. These are among the factors that make TSM projects attractive as methods of improving the transportation system of the region.

TSM Examples

Coordination of traffic signals, for example, can bring immediate congestion and air quality benefits. Coordinated signal timing in Oregon has produced 10- to 40-percent reductions in stops and 15- to 45-percent reductions in delays, yielding 5- to 25-percent reduction in travel time and up to 15-percent reduction in fuel consumption. Traffic signals within the RVMPO are operated by ODOT, Medford and Jackson County. They are owned by Ashland, Central Point, Medford and Jackson County and ODOT.

The Rogue Valley Intelligent Transportation System (RVITS) Plan, completed in 2016, contributes to TSM in areas of traffic operations and management, traveler information, incident management, public transportation management, emergency management, information management, and maintenance and construction management. RVITS is a 10-year plan for the installation and use of advanced technologies and management techniques to improve the safety and efficiency of the transportation system. This plan was developed collectively by the RVMPO member jurisdictions, including Rogue Valley Transportation District and the Oregon Department of Transportation.

Forecasting Future Demand

Chapter 10 looks at future-year demand across the entire regional transportation system. Additionally, RVMPO member jurisdictions have identified long-range system needs in their Transportation System Plans. The jurisdictions' TSPs identify numerous needs that can be met, at least in part, by TSM measures. Operational/capacity problems at intersections (volume-capacity ratio exceeding 1.0) can be addressed by intersection improvement projects. Medford and Central Point have built roundabouts to improve intersection performance. Channelization can also alleviate delay problems. Widening intersection approaches to provide left- and right-turn lanes can increase the approach capacity by up to 25 percent. Turn lanes also allow for simplified and more efficient signal timing. Most urban upgrade projects in the plan include channelization, which qualifies for Congestion Mitigation and Air Quality funds because reduced congestion reduces vehicle emissions.

Illustrating the potential effectiveness of TSM measures, Ashland in the early 2000s examined 20-year growth projections and determined that a combination of TSM measures, and an effective, area-wide transportation options (TO) policy (TO is discussed in Chapter 5.6), would yield an overall street system that operates within acceptable levels. TSM measures included in this analysis were:

- New traffic signals and signal coordination;
- Intersection approach enhancements, such as dedicated right-turn lanes; and
- Access management of private driveways and public streets.

Jurisdictions have identified signalization and other intersection-improvement projects, which are listed in Chapter 8 in the RTP Project List. These types of projects are part of an overall strategy to maximize the capacity of the existing street system.

System Deficiencies, Strengths and Weaknesses

Recurrent congestion for the most part is limited to morning and/or peak periods today. Most congestion falls within the moderate to high congestion range. The two trouble spots that fall into the severe congestion category are Table Rock Road between Antelope Road and Vilas Road, and Highway 62. Highway 62 has begun construction of its first phase of major improvement beginning in 2016. The first phase of construction of an expressway on Highway 62 will create a bypass for through traffic on the existing corridor. Chapter 10.3, Performance Measures, provides details about system performance.

Policy Issues and Actions

The potential benefits of TSM measures – both alone and in conjunction with other kinds of projects – will keep them at the forefront of system-improvement options. And as with other system needs, funding is not expected to keep pace with demand. The funding problem is not unique to the Rogue Valley region. In the area of updating and improving traffic signals, for instance, it has been estimated that approximately two-thirds of the urban signalized intersections in the United States need upgrading of physical equipment and changes to current timing. Generally, an inventory of traffic control devices is made to determine the need for replacement with new, more modern equipment. After the inventory is complete, comprehensive planning for signal systems can take place to improve traffic operations. Among the potential benefits of improved signal systems is a reduction in congestion, with a corresponding improvement in air quality.

The expected growth will put an enormous burden on the existing transportation system. Public agencies must realize that high land and construction costs and environmental constraints make it difficult to build new transportation infrastructure as the single means of relieving congestion. Therefore, a systematic approach is necessary to effectively manage the region's transportation system and capitalize on the existing infrastructure as the region grows. This will have to include a wide range of system management tools.

Facility Requirements

TSM measures most applicable to the RVMPO region are presented below. Where possible, specific projects have been identified. This discussion of TSM strategies does not represent any priority order. A broad range of strategies must be considered for the individual problems at each location.

Traffic Control Devices – The twin purposes of traffic signals (traffic lights) are a) to provide safety at intersections where volumes are considerable on at least one of the roads and b) to enhance smooth traffic flow through signal synchronization over several miles of arterial highway. In a synchronized system, the driver, after once getting a green light should be able to travel within the speed limit uninterrupted through a series of green lights. Synchronization through use of a master control system is discussed in the next section. Local governments traditionally base their decisions concerning the installation of traffic signals on the Manual on Uniform Traffic Control Devices. They also have a good record of using signals to help achieve optimum traffic flow. Local governments should continue to give priority to improving existing

traffic signal systems. Such improvements should include regular signal maintenance, updating the signal equipment and signal timing plan improvements. These improvements should be evaluated based on detailed analyses of traffic operations at individual intersections.

The coordination of new traffic signals through interconnection with existing and other new traffic signals should be considered to improve corridor-level traffic operations. Whenever additional intersections are signalized, agencies need to consider how they are best integrated with nearby signalized intersections. In some cases, signals operate most efficiently as independent signals, but in other cases, they are best integrated into a signal system.

The City of Medford already uses traffic signal systems and coordinated traffic signals in several locations. Experience in Medford and other communities have shown an eight to ten percent improvement in travel time along arterials after interconnected systems have been installed. Reduction of some types of automobile emissions is another possible benefit of improved signal systems.

Installation of master controllers, interconnection systems, and other equipment may help to achieve increased efficiency and reduce congestion of the street system.

Eliminate Unnecessary Traffic Signals – Intersection traffic-control improvements such as traffic signals are generally based on identified traffic congestion and safety problems. Over time, a change in the surrounding land use or street system may reduce travel demand at the signalized intersection, or geometric improvements may mitigate the safety problems at the intersection. Such changes may make the signal unnecessary, thereby requiring that the signal be removed for optimum system performance.

Intersections requiring removal of traffic signals may be converted to two-way stop control with free flow in the major direction of travel, or they may be converted to all-way stop control.

Intersection Geometric Improvements – Intersection improvements such as the provision of turning lanes, traffic islands, channelization, and improved design can generally be implemented at relatively modest cost depending on their complexity. The benefits, though, in the form of improved vehicular traffic flow and pedestrian safety, are substantial.

Local governments have a history of developing intersections that conform with national standards for geometric improvements at intersections. The following are eleven guidelines established by the Institute of Transportation Engineers in designing and improving arterial intersections at grade:

- Reduce the number of conflicts among vehicular movements.
- Control speed of vehicles entering and exiting the intersection.

- Coordinate different types of traffic control devices used with the traffic volume at the intersection.

- Select proper type of intersection to serve the traffic volume. Low volumes can be served with minimal control, whereas higher volumes require turning lanes and sophisticated actuated signal operations.

- Use separate left- and right-turn lanes at high volume intersections.

- Separate conflict points. Intersection hazards and delays are increased when intersection maneuver areas are too close together or overlap.

- Favor the heaviest and fastest flows.

- Reduce areas of conflict by channelization (striping, islands, etc.).

- Segregate non-homogenous flows. Separate lanes should be provided where appreciable volumes of traffic are traveling at different speeds (e.g. turning lanes for slowing vehicles).

- Consider the needs of pedestrians and bicyclists.

Intersection Turning Movement and Lane-Use Restrictions – Left-turning vehicles along major undivided highways can impede the flow of through traffic, especially when storage lanes are not provided for left-turning traffic. Turning movements are sometimes prohibited at arterial intersections to minimize conflict between turning vehicles and pedestrians, and between turning vehicles and other vehicles approaching from the opposite direction, thereby reducing delay and safety problems. In such cases, the turn movements should be prohibited during those hours when study data indicate that a significant capacity or safety problem exists, provided a suitable alternative route is available.

Alternatively, at signalized intersections, turning movements can be restricted to certain phases of the signal operation by use of separate displays and appropriate signs. This type of turn restriction is most effective only when a separate lane is provided for the use of turning vehicles.

Turn prohibition studies should consider the following:

- Amount of congestion and delay caused by turning movements;

- Number of collisions involving vehicles making the turning movements;

- Possible impact of traffic diversion on congestion and accidents at intersections required to accommodate traffic diverted by the prohibition;

- Reaction from local property owners;

- Possible adverse environmental impacts caused by re-routed traffic; and

- Feasibility of alternative solutions, such as providing separate storage lanes for turning movement, and separate turn-movements phasing at signalized intersections. The metropolitan area currently has few intersections where left-turns are prohibited. Additional candidate locations may be identified as the region grows. Turn prohibitions may be a viable solution where a separate left-turn lane and signal protection cannot be provided because of expense or right-of-way constraints.

Access Management – Roadways have two principal functions: the provision of access to adjacent properties and the provision of mobility for traffic already on the street. Streets of different categories have different blends of access and mobility functions.

Access management involves the balance between access to adjacent parcels and accommodating the flow of traffic. Not all of the local governments of the region have adopted access management plans. However, access management standards are a required component of local Transportation System Plans (TSPs). Currently, RVMPO member jurisdictions are in different phases of developing and implementing TSPs.

Access issues can be highly controversial since access management often regulates and limits access to individual businesses or requires access from side streets or frontage roads. Access issues must be handled individually for existing business sites. Significant concerns have been raised in Phoenix along Fern Valley Road, in Medford at the South Medford Interchange, and in Medford and Jackson County along Highway 62. Other local access issues have been raised on arterial and collector streets.

Experience throughout the United States has shown that a well managed access plan for a street system can:

- Minimize the number of potential conflicts between all users of the street system, providing a safer and more efficient system; and

- Minimize local costs for transportation improvements needed to provide additional capacity and access improvements.

Without an access management program along arterials and collectors, roadways may need to be periodically widened to accommodate demands of increased development. This cycle is a result of continually trying to satisfy traffic demands resulting from increased business activity. In turn, improved traffic conditions lead to further traffic demands. The number of vehicle conflict points rises because of an increase in the number of driveways, causing road capacity to diminish. Vehicle delay increases, and safety and comfort are reduced. The cost of allowing unplanned development to occur along arterials can be great because the inevitable solution calls for more capital expenditure, as the traffic conditions reach intolerable proportions. However, if proper planning in the form of an access management system is used, costs can be minimized.

The following are some of the more important components of an access management strategy that would be applicable to the metropolitan area.

Regulate minimum spacing of driveways – Several ways to accomplish this including:

- Regulate maximum number of driveways per parcel.
- Require access on adjacent cross street (when available).
- Consolidate access for adjacent properties.
- Encourage connections between adjacent properties that do not require motorists to traverse the public streets.
- Require adequate internal site design and circulation plan.
- Regulate the maximum width of driveways.
- Improve the vertical geometrics of driveways.
- Optimize traffic signal spacing and coordination.
- Install raised median divider, left-turn deceleration lane.
- Install continuous two-way left-turn lane.

Ramp Metering – Ramp meters are employed at freeway on-ramp entrances with the objective of optimizing throughput capacity on the mainline freeway. The optimization is achieved by regulating the entry of vehicles onto the freeway during the peak hours of operation with ramp signals at the on-ramps. Very often, optimization of freeway throughput capacity is achieved at the expense of additional delays at the metered on-ramps. Another important consideration is the ability to provide adequate queuing or storage capacity for the stopped vehicles on the ramps leading to the through road.

Ramp metering has proven to be one of the most cost-effective techniques to improve traffic flow on the freeway. A Federal Highway Administration study of seven ramp-metering sites in the United States and Canada revealed that average highway speeds increased by 29 percent after installing ramp metering. An analysis of the system in Seattle revealed that in addition to speed and corresponding travel time improvements, highway volumes increased between 12 and 40 percent because of ramp metering. Also, accident rate reductions between 20 and 58 percent have been recorded as a result of improved merging operations associated with ramp metering at freeway and on-ramp merge points.

The possibility of future metered on-ramps to I-5 has been raised, and could be evaluated more thoroughly by ODOT in cooperation with local governments as the region grows and travel-demands increase. Although I-5 and the ramps are under the jurisdiction of ODOT, it will be important for agencies to work cooperatively to balance the competing demands on the interstate system and to ensure that any ramp delays can be accommodated by the local street system.

Goods Movement Management – The efficient movement of goods into and out of urban areas is essential for the economic vitality of the region. Goods-movement management strategies are aimed at mitigating congestion and improving safety conditions along the arterials. Strategies include restricting truck deliveries and pick-ups to off-peak periods, using alleys for loading and unloading, and providing additional curb space for loading and unloading operations. Such strategies should be investigated in commercial areas along heavily congested roads.

Issues associated with goods movement management strategies include traffic management, improvements at shipping/receiving points, reductions in operational and physical constraints, changes in business operating practices, and changes in public policy. Shifting goods movement activities to off-peak hours through various incentives (tax and otherwise) assists in the reduction of peak period traffic congestion. Traffic management strategies include incident management, night shipping and receiving, and peak-period truck bans.

Restricting deliveries or trucking activities in locations where it has long been conducted with little regulation may be unpalatable. It may, however, be possible to require on-site loading and unloading as a design feature for new developments. It is recognized that existing businesses will strenuously object to any restriction on deliveries or any change to the way in which they have been doing business. It is particularly difficult to implement a strategy that gives one business a real or perceived advantage over a competitor. It is also difficult for an agency to justify removal of on-street parking and, potentially, the loss of meter revenue, to accommodate more or larger truck loading zones. The implementing agencies need to evaluate these concerns in light of the advantages and disadvantages.

Bus Bays – Bus bays are areas along a roadway that allow buses to pull out of the travel lane while boarding or discharging passengers. They may be used to relieve congestion and to reduce the interference between buses and other traffic. Buses stopping frequently in through traffic lanes may frustrate the vehicle drivers who are following, possibly causing a following driver to take unsafe risks to overtake the bus. Bus bays may also prevent following traffic from stopping in intersections. Bus bays are more effective on heavily traveled arterials or collectors, where their use may be an effective TSM strategy.

A potential disadvantage of bus bays is that it may be difficult for buses to re-enter the stream of traffic once they have stopped in the bus bay. This can slow transit service considerably, making it a less viable mode of transportation. Currently, Oregon has a "Yield to the Bus" Law requiring drivers to yield to buses that are trying to merge back into traffic. Potential disadvantages to bus bays can be mitigated by equipping RVTD's fleet with electronic yield signs, using public service announcements to explain the law, and enforcement of the law by local officers.

Intelligent Transportation Systems – In December 0f 2016 the RVMPO completed a comprehensive Intelligent Transportation Systems plan (RVITS). This 10-year plan identifies advanced technologies and management techniques that can relieve traffic congestions, enhance safety, provide services to travelers, and assist transportation system operators in implementing suitable traffic management strategies. Updates to the plan, with ongoing consultation with the RVMPO TAC and emergency services providers, continues. The Security chapter, 5.10, has additional information. The plan is maintained on the RVMPO website, www.rvmpo.org.

Example of ITS Application

RVITS is part of a federal initiative to use ITS to increase the efficiency of existing transportation infrastructure, improving overall system performance and reducing the need to add capacity. Efficiency is achieved by providing services and information to travelers so that they can make better travel decisions and to transportation system managers so they can better manage the system. To assure the development of a relevant plan, RVITS was produced with guidance from RVMPO member jurisdictions and key stakeholders from emergency services and communications agencies.

The RVITS plan provides a framework of policies, procedures and strategies for integration of ITS with the region's existing resources to meet future regional transportation needs and expectations. The plan includes the continuation and expansion of TSM projects and programs that have been under way for some time, such as coordination of traffic signals.

RVITS projects address the following categories:

- Travel and Traffic Management
- Communications
- Public Transportation Management
- Emergency Management
- Information Management
- Maintenance and Construction Management.

This Page Intentionally Left Blank

5.2 Street System

Introduction

The RVMPO's street system includes facilities for motorists, buses, bicyclists, pedestrians, and freight movement. Improvements to the street system are included in Chapter 8, RTP Project List. The list identifies projects on the arterial and collector street system, and other federally funded street projects to serve long-range needs for mobility and accessibility based upon anticipated development through the year 2045. Roadways in the RVMPO designated as arterials and collectors are identified on Map 5.2.1 on page 5-14.

In many cases, the street system improvements provide for upgrades to urban and rural streets which will include bicycle lanes or wider shoulders for safe bicycle travel, and the addition of sidewalks to allow for safe and accessible pedestrian use. Accessibility to transit routes is materially improved by the construction of sidewalks.

Goals and Policies

The process of developing the Street System started with the Goals and Policies shown in Chapter 2. Of particular relevance are the goals and policies relating to making the most efficient use of the existing transportation infrastructure and to providing adequate mobility, safety, and accessibility for all modes of transportation. Fixing America's Surface Transportation (FAST Act) contains a number of planning factors to be considered in assessing projects within the RVMPO. One of these factors is emphasis on preservation of the existing transportation system. Maintenance is also an important component of the Oregon Transportation Plan.

Project Priorities

Table 8.3.1, in Chapter 8 lists street system projects planned for construction in the RVMPO between the years 2021 and 2045. It consists of on-road projects that the RVMPO identifies as needed and funded. The projects are part of the RVMPO's Tier 1 list of financially constrained federally-funded and regionally-significant projects.

Separately, a Tier 2 project list was developed, consisting of needed regionally-significant projects for which funding cannot be identified within the 2045 timeframe. Tier 2 projects are listed at the end of Chapter 8.

The Tier 1 list has been based on an evaluation of the existing roadway

system, member jurisdictions' identified long-range needs, RTP Goals and Policies, and relevant state and federal goals, policies, and regulations.

To be included in the RTP projects must first meet the following criteria:

1) Upon demonstration of available funding through an analysis included in the RTP, projects from city/county-adopted plans, projects will be considered for inclusion in the RTP s financially-constrained (Tier 1) planned project list.

2) Projects from city/county-adopted plans for which available funding is not identified in the RTP were considered for inclusion in the illustrative (Tier 2) project list. Tier 2 projects are not considered planned projects in the RTP.

Funding estimates are based on existing known revenue streams, with forecasts developed in consultation with Oregon Department of Transportation (ODOT) and RVMPO member jurisdictions. Details about financial estimates are in Chapter 9: Financial Plan. The projects in Chapter 8 meet federal financial constraint criteria through the planning horizon of 2045. Tier 1 projects are the region's highest priority for funding.

Tier 2 projects are those that exceed current financial projections. The Tier 2 project list therefore identifies projects that are lower in priority to those on the Tier 1 list and are not considered "planned" projects. These projects indicate the region's priorities should unanticipated additional revenue sources become available.

FREIGHT CONSIDERATIONS

RVMPO began taking a closer look and the needs of haulers and shippers in the region in 2006. A committee of freight interests was formed to identify needs. In 2012, the original RVMPO Freight Study was reviewed and updated. Both the original report and the update can be found at www.rvmpo.org. The RVMPO drew from the updated Freight Study to develop specific policies supporting freight needs under the goal of fostering economic opportunities (Goal 8). The policies call on the RVMPO to:

- Consider effects on freight mobility when prioritizing projects.
- Support projects that reduce and remove identified barriers to safe, reliable and efficient goods movement.
- Support projects serving commercial, industrial and resource-extraction lands where an inadequate transportation network impedes freight-generating development.
- Plan for enhanced train-truck-transit interface for movement of goods and people.

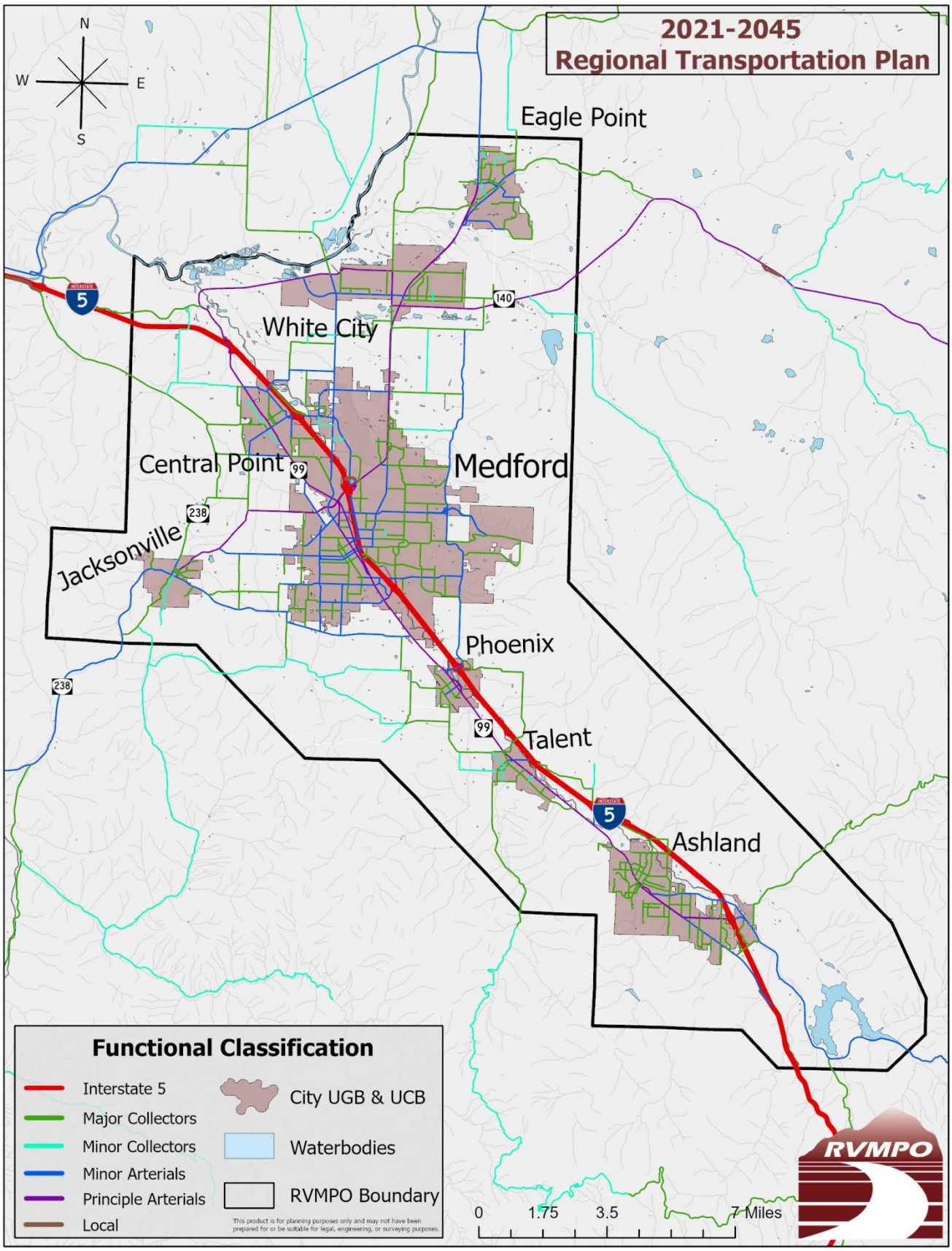
Many projects in this section benefit freight movement but recent efforts by the state and county to widen lanes and straighten curves are focused on improving conditions for large trucks. A series of improvements in the White City area will create a route for truckers westbound from Hwy 140 to Interstate 5 at Seven Oaks (just north of Central Point). This project was identified as a high priority by haulers seeking a more direct and less congested route across the region.

PROJECT DESCRIPTION

The RTP Project List in Chapter 8 includes a general description of each project based on the best available information. Project information will often be refined between a project's inclusion in this list and its construction.

The planning of listed projects has considered many variables including: traffic volumes and turning movements, truck and bus routing, the location of intersecting streets and driveways, the available right-of-way, topographic constraints, accident history, utility conflicts, and impacts on property owners. Such information is typically refined during the engineering phase of project implementation, which often immediately precedes construction.

Map 5.2.1: Functional Roadway Classifications



5.3 TRANSIT SYSTEM

INTRODUCTION

This chapter focuses on the services and programs of transit provider Rogue Valley Transportation District (RVTD), which reaches most of the RVMPO area (see service area map at the end of this chapter).

Between 2017 and the development of this RTP, RVTD has expanded services due to the new Special Transportation Improvement Fund (STIF), providing RVTD with approximately $3 Million in new revenues each year. Users tend to be the transit-dependent riders, which includes low income, young, older adults and persons living disabilities. RVTD developed the 2040 Transit Master Plan in 2019 identifying further transit improvements in a short-, mid- and long-range list of enhancements. However, the document's Finance Chapter shows that to meet the mid- and long-range additional revenues will need to be secured beyond the current sources.

LIMITATIONS OF TRANSIT USE

Reasons for the current modest use in transit include:

- The region is small and does not suffer from long delays caused by major traffic congestion.
- Although there are restricted time parking zones in some areas, most parking is free.
- Gas prices have decreased significantly since the Great Recession, as low as $1.50 per gallon during recent years.
- Growth is occurring at the urban fringe at relatively low densities (3-4 housing units per acre) whereas the transit industry's national standard is that a density of about 7 housing units per acre is needed to generate enough riders to warrant a bus line.

Nationally, and elsewhere around the world, "viable" bus transit does not mean self-supporting financially, only that the route will have riders and be productive.

Even the nation's most successful transit systems achieve only a little over 40 percent return on farebox revenues. Lower density systems such as RVTD's achieve around 20 percent on farebox, which means that every dollar in RVTD fare revenue must be supplemented by $4 in funding from other sources. The new STIF revenues have allowed for new routes to be added and increasing convenience on existing routes by improving frequency. RVTD was making advancements until COVID-19 caused a global pandemic in early 2020 that required services to the be shut down due to a loss of drivers willing to come to work. RVTD operated at a much lower level for approximately 2 years due to the pandemic.

FUTURE DEMAND

Through the 2040 TMP, RVTD utilized a Transit Supportive Area (TSA) definition in part of its analysis to determine which services are viable. The TSA is comprised of seven or more HH per acre or ten or more employees per acre. If the complete short-term enhancement list is implemented RVTD will be serving 64% of these areas within ¼ mile. The analysis also identifies that 62% of all MPO residents and 86% of all MPO employees will be within ¼ miles of transit service. These metrics show the low-density land pattern in the MPO area and the inability for RVTD to serve them efficiently. Population trends however continue to show a higher-than-average older adult, disabled and low-income population living in Jackson County than when compared to Oregon. These populations tend to use transit more frequently than other segments.

Since 2001, a large portion of the region's federal transportation money has been directed to support transit. $700,000 of the region's Surface Transportation Block Grant (STBG) allocation is dedicated to transit enhancement, and the STBG funds remaining along with Congestion Mitigation and Air Quality (CMAQ) funds are awarded through a competitive process among all RVMPO jurisdictions.

EXISTING SERVICE

RVTD provides public transportation to the cities of Ashland, Talent, Phoenix, Medford, White City, Central Point, and Jacksonville. A portion of the STIF revenues have also been used to expand a route to the city of Eagle Point. RVTD now serves eight cities covering approximately 70 square miles. Pre-COVID levels of service included thirteen routes operating Monday – Friday between 5:00 a.m. to 8:00 p.m. and Saturdays between 7:00 a.m. and 6:00 p.m. Headways vary between 20 and 60 minutes and implemented its first Express route between Medford and Ashland using STIF revenues. The conventional radial network has shifted more toward a grid system allowing transfers to be completed outside of the Medford city center. Although RVTD gained new stable funding in recent years and from the passing of a 5-year property tax worth 13 cents per thousand in 2016, there were several service cuts made in 2006, 20012 and again in 2015. The new STIF and special levy revenues sustained current service levels, added seven routes, added Saturday service and improved frequency on four routes.

RVTD has forty fixed route vehicles, the majority of which are powered by Compressed Natural Gas (CNG) and are35' in length with an average seated capacity of 33 passengers. RVTD added 30' buses to the fleet in 2018 for lower density neighborhood routes with an average seated capacity of 29 passengers. RVTD has one major transfer point, the Front Street Transfer Station in downtown Medford. The Front Street Transfer Station can accommodate up to ten transit vehicles at any given time. In 2019 RVTD worked with the City of Medford to secure bus parking on the opposite side of Front St. to add capacity. Three satellite routes were added in 2019 that required smaller transfer sites to be developed using curbside space. An intercity connection is provided at the Front Street Station through Greyhound and Josephine Community Transit.

RVTD also offers a paratransit service, Valley Lift, which provides curb-to-curb transportation for eligible disabled and older adult passengers. The Valley Lift service, which is mandated by the Americans with Disabilities Act (ADA), has a service boundary of .75 miles around the fixed route network and provides approximately 50,000 trips annually. RVTD also operates a non-emergency medical transportation brokering operation called TransLink. The TransLink Call Center is a centralized transportation brokerage facility. It operates in five counties – Coos, Douglas, Curry, Jackson and Josephine. It offers ride reservation, scheduling, and dispatched trips under contract to the Oregon Medical Assistance Program (OMAP) and the Community Care Organizations, to handle non-emergency medical rides.

RVTD also runs a Transportation Options program, and conducts community outreach, travel training and offers specialized programs such as ridesharing coordination and incentives and subsidized transit passes for employers and students. RVTD is the regional network administrator for the Get There rideshare website and works with major employers to promote signing up worksites to the network. RVTD coordinates several events each year including the Oregon Get There Challenge in the fall, Rogue Commute Challenge in the spring and oversees individualized marketing.

MICROTRANSIT

RVTD began a new general public, demand response service in Ashland using STIF Discretionary funds in 2019. This service is beginning as a pilot and uses Ford Transit vans equipped with a wheelchair lift and a passenger boarding door. Much like fixed

route service, the driver primarily stays in their seat, accepts fare payment and does not typically assist passengers unless needing a wheelchair secured. The service provides same day reservations using a mobile app within the Ashland city limits.

Future Potential Service

RVTD adopted its 2040 Transit Master Plan in 2019 that identifies and prioritizes specific new routes and services to be implemented as funding becomes available. A primary goal is to connect activity centers with high quality transit service and expand coverage to areas with low-income, older adults and persons with disabilities. RVTD seeks to attract all types of trips rather than just work trips or trips made by persons who presently have little choice in their mode of travel. The 2040 TMP utilized the Transit Boarding Estimation Tool (TBEST), Place types tool from DLCD and JEMnR travel model to analyze scenarios for services through 2042.

The 2040 TMP gives priority to, adding coverage to underserved areas by adding several new routes, improving service on existing routes by increasing the frequency, expanding the hours of service and adding express or high capacity transit service on Hwy 99, Hwy 62, Barnett Rd. and W. Main St. While there are many factors that contribute to transit ridership, the level and frequency of service are important factors in attracting and maintaining a ridership base. Concerns have been raised that that the hours of transit operation do not fully meet the demand for general public transit service, particularly for Southern Oregon University and Rogue Community College students Harry and David Corporation employees, Rogue Regional Medical Center, Providence Hospital and residents of the Veteran's Domiciliary in White City.
Modifications are needed to provide transportation to employees whose shifts begin early in the morning and for employees who work graveyard shifts.

On average, transit studies in similarly sized areas elsewhere have identified a preferred transit plan as one that would begin service at 4:00 a.m. and continue until 11:30 p.m. On average, weekend service (including Sundays) would begin at 6:30 a.m. and operate until 10 p.m.

Transit-Friendly Land Use

Transit-Oriented Development (TOD) means the development of higher density nodes of mixed use activity that lend themselves to easier transit service and higher transit ridership. Generally, transit seeks to serve areas that have at least seven dwelling units per acre or 10 employees to generate enough riders to justify a bus route. There are active TOD sites in Central Point and Medford. Others have been identified but not yet implemented, including Delta Waters, Highway 62 and 99, Downtown Medford, Barnett/Gateway, and West Medford.

Twin Creeks TOD Rendering, Central Point

Other features need to be considered when planning for roadway projects. These features might include thicker pavement at transit stops; transit-only right-of-way at congested intersections; construction of bus turnouts; construction of transit passenger shelters; wider sidewalks at transit stops; bicycle facilities near transit stops; and bike racks at transit stations. Consideration of transit infrastructure and capital needs early in street project planning may eliminate redundancy and reduce future expenditures. The construction of a new roadway that makes specific provisions for transit may allow RVTD to leverage funds or switch funds for the construction of transit infrastructure along that roadway. When possible, roadway and transit projects should be coordinated and constructed at the same time.

Transportation Management Associations (TMAs)

A TMA is an organization of employers and transit agencies. Its aim is to help employers provide programs and information to their employees that will increase transit, bicycling, carpooling and vanpooling to work.

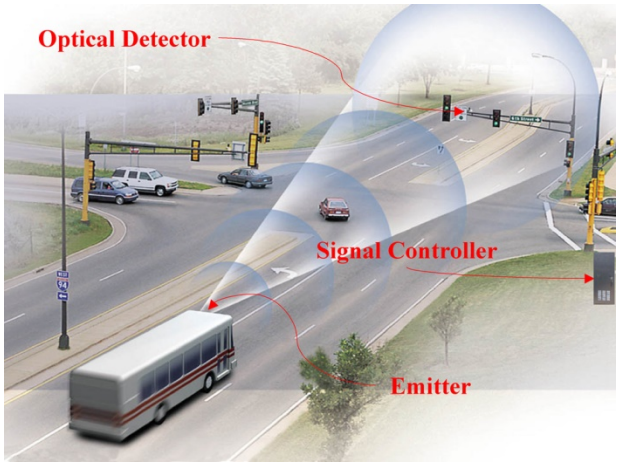
It is necessary to attract riders who currently use other modes of transport in order to significantly increase ridership. In order for these people to consider transit as a viable option, there must be sufficient public information about the services available. Encouraging new riders to try the transit option is the vital next step after any service improvements are made.

Deployment of New Technologies – ITS

Intelligent Transportation Systems (ITS) is an umbrella term that covers electronic and high tech installations that can help transportation efficiency and safety. For transit, three ITS installations that can help RVTD are:

- Automatic Vehicle Location technology – using global positioning, the bus reports its location and can be used to monitor and inform riders (at the bus stop or online) about delays and wait times. Such systems also play a vital role in transit safety and security issues. RVTD has had such as system in place since 2012.

- Traffic signaling devices that can enable a traffic signal to be tripped in favor of the bus and speed up its trip when delays have been encountered. RVTD has secured a Federal grant and is working with local jurisdictions to install TSP along Hwy 99.



- Mobile fare or e-fare- Allows passengers to purchase and load fare onto mobile ticketing apps or a plastic RFID cards providing convenience and flexibility for passengers and drivers. Additionally, with the COVID pandemic cashless systems were highly encouraged; passengers use of RVTD's cashless fare products are approximately 65% of all fare transactions.

BUS RAPID TRANSIT (BRT)

BRT is an intermediate transit technology now being developed in a number of locations including Eugene. It consists of high capacity, low-floor buses often using a special dedicated lane on the roadway. Locations where a BRT system may someday work well in the Rogue Valley include the Hwy. 62, Hwy. 99 between Ashland and Central Point, Barnett Rd. and W. Main St. in Medford. Other programs that may help reduce reliance on single-occupant vehicles include:

Vanpools – The employer or the transit agency leases or purchases a ten or more-seat van and makes it available for commuting to the worksite. Employees using the van are responsible for everything from driving to fuel and seeing to maintenance. The transit agency or employer pays for the initial capital cost of the vehicle and provides work place assistance in finding riders and supporting the program. The precise array of operating costs covered may vary – just fuel, oil and washing, or also insurance and maintenance. Vanpool programs work best when a number of workers are going to the same or nearby sites, yet there is not enough demand to run a fixed route bus to that location. Examples in the Rogue Valley include various major employers in White City, Harry and David, Amy's Kitchen, Tolo and some employers in Medford.

PTASP TARGETS

The Public Transportation Agency Safety Plan (PTASP) regulation, at 49 CFR Part 673, requires covered public transportation providers and States to establish Safety Performance Targets (SPTs) to address the Safety Performance Measures (SPMs) identified in the National Public Transportation Safety Plan (NSP) (49 CFR § 673.11(a)(3)).

PUBLIC TRANSPORTATION AGENCY SAFETY PLAN PERFORMANCE TARGETS					
Mode of Transit Service	**Fatalities**	**Injuries**	**Safety Events**	**System Reliability**	**Mileage Increment**
Fixed Route Bus	0.00	0.528	0.528	7,200	100,000
Demand Response	0.00	0.00	0.00	63,000	50,000

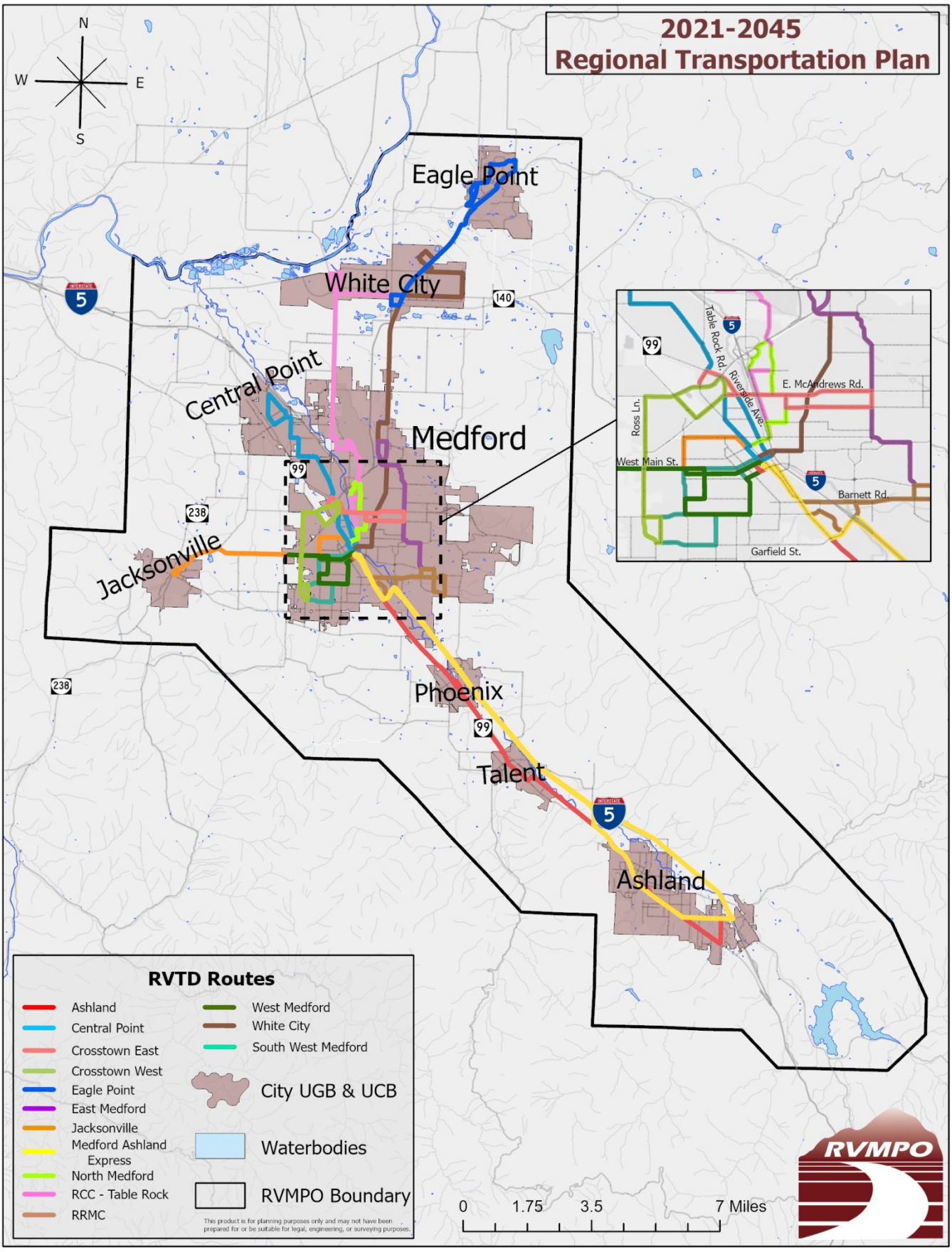
TAM Plan Targets

The Federal Transit Administration (FTA) Transit Asset Management (TAM) Final Rule was published July 26, 2016 in the Federal Register and became effective October 1, 2016. The final rule defines the term state of good repair and establishes minimum Federal requirements for transit asset management. This applies to all recipients of Federal financial assistance under 49 U.S.C. Chapter 53 who own, operate, or manage public transportation capital assets. The TAM rule specifies that an asset is in a state of good repair if it is in a condition sufficient for it to operate at a full level of performance. The rule also provides state of good repair standards.

https://www.oregon.gov/ODOT/RPTD/Pages/Transit-Asset-Management.aspx

Current transit routes are mapped on the following page.

Map 5.3.1: RVTD Transit Routes



5.4 Bicycle & Pedestrian Facilities

Introduction

This chapter discusses the RVMPO's bicycle and pedestrian modes of transportation. Bicycle and pedestrian facilities are both integrated, that is, sharing the street system with motorized traffic, and separate, using dedicated rights-of-way. On urban streets, pedestrians and cyclists are separated, with the former being required to use sidewalks, and the latter being provided where possible with bike lanes alongside motorized traffic. The place for skateboards and other fast human-powered vehicles such as inline skates tends to be ambiguous and will need addressing more fully as these activities grow. These modes (skateboarders and in-line skates) are often allowed to be on the surface streets in restricted areas such as downtowns, although they are not considered safe with medium to high-speed traffic. Otherwise, they are allowed to use sidewalks.

The value of non-motorized alternatives is discussed, along with results to date in improving the Rogue Valley non-motorized transportation system. Lastly, the chapter discusses how bicycle and pedestrian needs and amenities can be linked to the fixed transit system to increase use, since cycling and walking are the primary ways that customers access transit.

Regional Travel Behavior

Transportation Demand Management (TDM) research has estimated that a bicycle trip is reasonable for the commuter if within 3 miles; and a pedestrian trip, if it is to be attractive, to be within a mile assuming adequate facilities are available for the entire length of the trip. Further distinctions between non-motorized modes are difficult.

Walking currently accounts for about 7 percent of the home-based and non-home based trips in the metropolitan area. This upgrade of pedestrian facilities is planned to help continue to raise the mode share trips. The upgrading of pedestrian facilities will include the infill of missing sidewalk links, and changes in subdivision layout, providing for non-roadway pedestrian links between subdivisions and neighborhood commercial areas and schools.

The RTP recommends development of integrated bicycle and pedestrian networks to make it more convenient for people to bike and walk. The bicycle and pedestrian system depicted here is aimed at increasing the

Benefits of Bicycle and Pedestrian Use

Health benefits aside, there are important contributions that pedestrians and bicycle facilities and the people who use them make to the transportation system, including:

- Relieving congestion;
- Improving air quality;
- Providing a transportation choice for those who cannot afford a car or cannot drive; and
- Providing access to/from the bus to origins/destinations.

"mode share" that is, the slice of the total travel pie, being handled by non-motorized modes of travel. Journey-to-work trips are particularly important because many occur during times of peak traffic during the morning and afternoons, although work trips account for only about one of five trips in the region.

People may make decisions based on their environment or community. Home, work, school and community can provide either barriers to or opportunities for an active lifestyle. For example, a person may choose not to walk to the store or work because of a lack of sidewalks. When new sidewalks go in that are well-connected at each end, walking increases. Communities, homes, and workplaces each shape health decisions. With fewer options for physical activity and healthy eating, it becomes more difficult for people to make good choices. A result is increasing incidence of obesity and diabetes. Promoting healthy lifestyles to prevent obesity in a community involves the creation of a healthy environment. A role for transportation is to provide safe, easy, affordable access to destinations. Planning for "active transportation" has taken on a prominent role in state as well as regional planning. Jackson County has developed an Active Transportation Plan for the RVMPO area which was adopted in April of 2021. A link to the document is available on the MPO's website and is provided below:

https://rvmpo.org/wp-content/uploads/2019/09/Final-Active-Transportation-Plan-040921-1.pdf

BICYCLE FACILITIES

The region's bicycle system reflects a two-pronged approach. First are integrated bicycle systems. Second are stand-alone dedicated bike-and-pedestrian ways, most notably the Bear Creek Greenway; and more recently the Rogue River Greenway, planned to connect the existing Bear Creek Greenway near Central Point to the City of Rogue River. Ultimately, the Rogue River Greenway is to connect to Grants Pass.

Integrated Bikelanes – Communities have been actively striping bike lanes on existing streets that are wide enough to accommodate them, and inclusion of bike lanes on arterial and collector streets is required under Oregon law as indicated in the Transportation Planning Rule (TPR).

All streets in the metropolitan area should be designed to accommodate bicyclists safely. A bikeway network that provides a higher level of service for bicyclists should be implemented along major travel corridors to encourage bicycle use. The RTP includes projects along collector and arterial streets within the RVMPO boundaries. Consistent with the TPR, the RVMPO's policy is for these facilities to include bicycle lanes or, in rural areas, shoulders with a width greater than four feet. The RVMPO, as part of the Alternative Measures (See Appendix B) has tracked the progress of including these facilities on the RVMPO's street network. An inventory conducted in 2014 shows that the 54% of the RVMPO area's collector and arterial roadways have bike facilities.

Bicycle improvements may also include roadway widening to accommodate on-street bike lanes, or some locations where parking or travel lanes are changed to bike lanes. Bicycle parking is particularly important if bicycling is to become a viable mode of transportation and carry the expected percentage of trips specified in the plan. Bicycle parking needs include short-term parking for customers or visitors and all-day parking for employees or students. Bicycle parking requirements can be specified in the municipal code as a percentage of automobile parking. For some uses, relatively little bicycle parking needs to be provided, but it is rarely justified to have no bicycle parking at all. The code can also specify locations that make parking areas safe, convenient, and secure. For example, it is preferable for bicycle parking to be located in high-visibility areas near often-used public entrances of buildings.

Separate Facilities – Separate bicycle and pedestrian facilities have the merit of providing a quieter, cleaner, safer and more rural atmosphere for users. The Bear Creek Greenway within the RVMPO, provides a link between Ashland and Central Point, with good and frequent connections to local streets, means that both short-distance and long-distance users can benefit from a true alternative to sharing the highway and street system for much of their activity.

Greenways provide natural routes for multi-use paths. Because they often follow creek drainages, the potential exists to connect paths with the greenway path system. These paths provide an alternative to bicycle and pedestrian systems associated with the street system.

Bear Creek Greenway Multi-Use Path

Some bicycle commuters have said they do not use some sections of the Greenway due to the need to travel at slow speeds to address safety concerns while sharing the path with those traveling at lower speeds. These commuters generally travel on surface streets, particularly Hwy 99, which currently does not have a complete system of bicycle lanes.

The need should be further explored for bicycle lanes along the Hwy 99 corridor, east-west greenways, and surface street routes that connect to the Bear Creek Greenway. Until these facilities exist, commuting by bicycle will remain at levels that some cyclists feel are insufficient.

Facility Operations

Provision of the basic infrastructure is a necessary, but not a sufficient condition, of enthusiastic and growing non-motorized vehicle use. Good design and provision of amenities such as restrooms are important. However, equally important is good operation of the system. Users have complained that a lack of a sense of security was the greatest deterrent to greater Greenway use. Safe operations also require that pavement be kept in good repair and free of bulging root systems (a common problem in some sections) or potholes, since slender bicycle tires are much more at risk for catching a hole or obstruction and causing a spill than are wider automotive tires encountering similar obstacles on the highway. Surface street operations also need to be enhanced.

Pedestrian Facilities

The Oregon Transportation Planning Rule (TPR) requires sidewalks along all collector and arterial streets within an urban growth boundary. Streets and public spaces can be designed to promote pedestrian use, with important pedestrian-friendly amenities including street trees, park strips, on-street parking, adequate unobstructed sidewalk width pedestrian-scale lighting, and locating buildings near the street. Enhanced crosswalk facilities such as islands, medians and lighting beacons can also improve the pedestrian's safety.

Sidewalk System Continuity – Most local governments already require new developments to include sidewalks and walkways. Where such provisions are not required, this requirement should be adopted. Sidewalks are also generally provided with most major street improvement projects. One issue, which should be made a priority, is to develop a systematic approach to filling gaps in the sidewalk system. To accomplish this, an annual allocation for construction is recommended. The highest priority for sidewalk construction should be given to locations near schools, public facilities, and heavily used transit corridors. Safety should be a prime consideration in evaluation and design.

Transit-Related Bicycle and Pedestrian Issues – The provision of sidewalks is vitally important to transit, too. Pedestrian access to transit stops can be the

determining factor as to whether or not an individual chooses a trip via transit or automobile.

Current efforts at providing both pedestrian and bicyclist access to transit could be significantly expanded by providing better walkways to commercial centers and providing walkways from subdivisions to bus stops on arterials. Providing bicycle racks and lockers at transit stations, and bicycle racks on buses are strategies to encourage and promote the use of bicycles and transit for commuting.

Americans with Disabilities Act (ADA) - People with disabilities may use crutches or wheelchairs, use a walker, or have no visible sign of disability but suffer from heart disease, emphysema or other illness that limits how far and how easily they can walk. The ADA requires attention to the special mobility needs of this population. At the same time, pedestrians are the most physically vulnerable users of the transportation system, and safety is a significant issue in making the system accessible to these modes.

SAFETY

The maintenance of bike paths can have a significant impact on bicycle safety as previously noted. Another major issue for bicycle safety is motorists and cyclists not following the rules of the road. A common driver error is failing to yield to bicycles. Bicyclists riding the wrong way (against the traffic) are the leading cause of crashes in which the cyclist is at fault because it makes them less visible to drivers.

Traffic Calming Application: Center Island

While only 15 to 35 percent of bicycle crashes involve motor vehicles, most pedestrian crashes are collisions with cars. Most vehicle/pedestrian crashes occur as pedestrians are attempting to cross roadways. Speed is an important factor in the severity of car and pedestrian crashes. Reduced traffic speeds prevent pedestrian deaths. One method for reducing traffic speeds and thereby increasing bicycle and pedestrian safety is traffic calming. Methods of traffic calming include street redesign techniques to allow safer pedestrian and cycling activity and slow down the flow of traffic. Such measures include: pedestrian bulb-outs, center islands, chicanes, speed humps, and narrow traffic lanes.

In addition, bike and pedestrian safety can influence planning for other modes. For instance, enhancing bicycle and pedestrian facilities around schools could reduce the number of motor vehicle trips.

Traffic Calming Application: Sidewalk Bulb-out

FUNDING FOR BICYCLE AND PEDESTRIAN PROJECTS

RVMPO Congestion Mitigation and Air Quality (CMAQ) funds and ODOT's Enhance-It program are important sources of funding for bike/pedestrian projects in the region including the Bear Creek Greenway and, more recently, the beginning stages of the Rogue River Greenway. Additionally, state and local funds are used to add sidewalks and bike lanes to existing streets. These projects can be significant not only for the added blocks and miles of facilities, but because they fill gaps in the network and contribute to creating uninterrupted, safe routes for pedestrians and bicyclists.

5.5 PARKING

INTRODUCTION

Oregon's Transportation Planning Rule (TPR), (OAR 660-012-0000), requires that metropolitan area jurisdictions reduce their overall parking capacity (OAR 660-012-0045 (5) (c)). A reduction in parking is part of an overall strategy to reduce reliance on automobiles as the principal mode of travel and to help achieve a reduction in per capita vehicle miles traveled. The challenge of this goal is to reduce the amount of parking in ways that help achieve the travel-reduction goal and are equitable for all parties involved.

Parking reduction strategies are proposed to help the metropolitan area meet the TPR requirements. Strategies include changes to parking codes and policies, redesignation of existing parking, and management of roadway space. Next, some potential results are discussed (limited by data availability). Finally, some parking optimization techniques are presented, which may make it easier for motorists, employers, and employees to make use of available parking.

PARKING STANDARDS

The TPR requires implementation of a parking plan that achieves a 10 percent reduction in the number of parking spaces per capita in the MPO area over the planning period. This may be accomplished through a combination of restrictions on development of new parking spaces and requirements that existing parking spaces be redeveloped to other uses.

Ultimately, the parking plan must aid in achieving the overall requirement to reduce vehicle miles traveled per capita (VMT) in the MPO area. In MPO areas of less than 1 million population, including the RVMPO, a 5 percent VMT reduction is required.

It is anticipated that metropolitan areas will accomplish reduced reliance by changing land use patterns and transportation systems so that walking, cycling, and use of transit are highly convenient and so that, on balance, people need to and are likely to drive less than they do today.

The requirement to reduce VMT as it relates to parking offers some options. Local jurisdictions may set minimum and maximum parking standards in appropriate locations, such as downtowns, designated regional or

community centers and transit centers.

Parking Code and Policy Changes

Older parking regulations specified only minimum standards, leading some developments, such as retail stores, to provide an excess of parking. Most RVMPO cities now include maximum standards. Ashland and Talent limit spaces to 10 percent above the minimum; Phoenix limits the surplus to 5 percent. Medford's limit depends on uses, and Central Point's minimum standards are also its maximum standards. Codes also sometimes leave little flexibility to allow parking reduction strategies such as shared parking or on-street parking. Other recommended parking code and policy changes include parking fees and decreased building setbacks.

Lower Minimum Parking Requirements

Lower parking minimums could have an impact on the total parking inventory, but there is no guarantee that developers would choose fewer parking spaces for their developments. Lower minimum parking requirements, however, might encourage some in-fill development. In-fill development can be encouraged to increase densities and remove land from its temporary status as parking lots. Both the reduction of existing parking and increasing building densities will help lead to a more pedestrian friendly environment and encourage transit ridership – a primary goal of the TPR.

Parking Fees

Establishment of parking fees is not a policy of the RVMPO, but fees can be useful in some jurisdictions. Fees imposed on developers for each parking space are an indirect way of reducing the amount of parking provided by new developments. Fees can be levied on the developer, the tenant, or the end-user. These are fees for either the use or provision of each parking space. Fees levied on the developer may lead to smaller parking lots due to monetary considerations when building the project. Fees on the tenant may encourage them to seek out retail or office space in areas with smaller lots, thus putting market pressure on developers to build with less parking. Fees on end-users may result in different modal choices, bringing down parking demand and leaving land open for in-fill development or smaller parking facilities. Fees are an indirect strategy and may be difficult or impossible to implement as a stand-alone TPR-compliance parking reduction measure.

Redesignation of Existing Parking

Changing existing general-use parking spaces to special-use parking can be used to promote the use of alternative modes and meet the requirements of the TPR. General parking provided on-street or in lots could be reclassified as preferential parking for carpools, or the handicapped. Preferential parking, especially close to building entrances, for carpooling or vanpooling is a common way of helping to promote these as alternatives to driving alone. Carpool parking need not be limited to parking lots. On-street parking spaces, including metered spaces, may be restricted to carpools. Typically, monthly permits are obtained and displayed when parked in a reserved carpool space in a lot or on the street.

As a side benefit, reclassification from general parking to carpool parking may help meet TPR requirements. Under TPR definitions, park and ride lots, handicapped parking and parking spaces for carpools and vanpools are not considered parking spaces for purposes of the TPR. The reclassification of a portion of the parking supply as permanent high occupancy vehicle (HOV) space may satisfy the TPR's parking reduction requirement.

In areas where easy access to free or low-cost parking has always been readily available, restrictions on parking may be poorly received by the public. Widespread conversion of general-use parking spaces to reserved parking for carpools or other restricted uses may lead to a high level of parking violations. This may place an undue burden on agencies for the enforcement of parking regulations at the expense of other activities.

Management of Roadway Space

There is considerable competition for use of the paved roadway space: through lanes and turn lanes for motor vehicles, bicycle lanes, on-street parking spaces, loading zones, and bus stops. Management of the roadway space and the allocation for these uses can have a measurable impact on the amount of parking in the region. Changing parking spaces to travel lanes can help improve traffic flow, promote use of alternative modes, and meet the TPR requirements.

Parking and Bike Lanes

Bike lanes on arterial and major collector streets are required under the provisions of the TPR. In many locations throughout the Rogue Valley region, this will be accomplished by parking removal and re-striping of the street, rather than by widening the roadway.

Parking and Turn Lanes

Re-striping for turn lanes is a transportation system management strategy that can be used to increase the capacity of intersections. In many cases, queuing distances at stop signs or traffic signals will require that no-parking zones be extended for more than 100 feet from the intersection. This could require removal of parking, which is sometimes permitted as close as 20 feet from a crosswalk at an intersection.

No-Parking Zones

Designating larger no-parking zones to increase sight distances at intersections is already implied in the vehicle code. Parking is not permitted within 50 feet of a stop sign, yield sign, or other traffic control device where such parking hides it from view.

A blanket prohibition on parking within 50 feet of a corner would have a measurable impact on the number of parking spaces and would have other benefits related to sight distance.

Street Standards

Adopting new street standards for residential streets could include reducing street width to the extent that on-street parking would be permitted only on one side or eliminated.

Parking Optimization

There are techniques that can be used to make better use of parking, which may make it easier for residents, businesses, and employees to "live with" the parking reduction requirements of the TPR. However, optimizing the use of parking may defeat the other goal of the TPR, namely the reduction in per capita vehicle miles of travel. This is because the easy availability of free or low cost parking remains a significant factor in the individual's choice of mode for trips to work, shopping, etc.

Shared Parking

Shared parking is the use of one or more parking facilities between developments with similar or different land uses. Each land use experiences varying parking demand depending on the time of day and the month of the year. It is possible for different land uses to pool their parking resources to take advantage of different peak use times.

Traditionally, parking lots have been sized to accommodate at least 90 percent of peak hour and peak month usage and serve a single development. For the most part, these lots are operating at a level considerably less than this amount. Shared parking schemes allow these uses to share parking facilities by taking advantage of different business peak parking times.

For example, a series of buildings may include such land uses as restaurants, theaters, offices, and retail – all of which have varying peak use times. A restaurant generally experiences parking peaks from 6 to 8 p.m., while offices typically peak around 10 a.m. and again around 2 p.m. on weekdays. Some retail establishments have their peak usage on weekends. Theaters often peak from 8 to 10 p.m. Without a shared parking plan, these uses would develop parking to serve each of their individual peaks. This generally results in each lot being heavily used while the other lots operate at far less than capacity. Depending upon the combination of uses, a shared parking plan may allow some developments to realize a parking reduction of 10-15 percent without a significant reduction in the availability of parking at any one time. This is possible due to the different peak periods for parking.

Some of the major obstacles to implementing shared parking schemes are the codes of local jurisdictions themselves. Quite often, parking codes are written to express parking minimums as opposed to maximums. Although Medford does allow shared parking, not all agencies do. In some cases, the implementation of shared parking

strategies may require changes to the minimum parking requirements contained in the parking policies of the metropolitan area jurisdictions.

Other issues surrounding shared parking are liability, insurance and the need for reciprocal access agreements allowing patrons of one establishment to cross land owned by another.

PARKING MANAGEMENT

Parking management and parking management associations (PMAs) are mechanisms that can facilitate shared parking among non-adjacent land uses by providing off-site central parking facilities. These facilities can be large parking structures or surface lots. Parking management can employ a wide range of techniques that will result in the efficient use of existing parking facilities. These include facilities like short-term on-street parking, medium-term nearby lot parking, High Occupancy Vehicle (HOV) priority parking, and long-term parking.

PMAs are entities responsible for conducting this management and providing access to resources that will ease the burden on the parking supply. Often PMAs are non-profit groups supported by retail or business district associations. PMAs can incorporate such programs as providing bus passes or tokens in lieu of parking validation, delivery services, shuttle buses from remote lots, clear and consistent signage for parking facilities, etc.

An effective PMA benefits its members and its district by functionally increasing the parking supply for all uses and creating a parking plan that provides adequate parking for the area in a compact and coherent way. A PMA increases the efficiency of the use of land for parking, which helps reduce wasted space previously dedicated to underutilized parking. This, in turn, frees up land for further development. In the end, a successful PMA can create an area where parking is easier and more convenient, while using less land.

This Page Intentionally Left Blank

5.6 TRANSPORTATION OPTIONS

INTRODUCTION

The region's Transportation Options (TO) program is an activity of Rogue Valley Transportation District. The goal is to reduce Single-Occupant-Vehicle (SOV) trips and vehicle miles traveled (VMT) by encouraging use of other modes. It seeks to achieve these changes through better non-SOV facilities and educational programs to make the use of these modes more attractive than driving alone. TO therefore includes ride-sharing, trip reduction and also transit, cycling and walking. TO is important because of the lack of adequate funds and space to maintain and expand road infrastructure nationwide. The traffic capacity of existing roads is quickly filling up and the auto encourages sprawl that requires extra facilities and more VMT per household. The automobile is the largest producer of harmful emissions, and the largest consumer of petroleum-based fuels. TO can benefit society at a very reasonable cost compared to the cost of continuing on an SOV-focused system.

State Requirements for TO measures are based in the Oregon Highway Plan's Goal 4: "To optimize the overall efficiency and utility of the state highway system through the use of alternative modes and travel demand strategies."

Urban areas with populations over 25,000 are required by the Oregon Transportation Planning Rule to address Transportation Options in their Transportation System Plans. For these reasons, TO strategies are an integral part of the transportation planning being pursued in the Rogue Valley's Regional Transportation Plan. It is among the policy strategies in RTP Goal 6, which calls for using a variety of strategies to reduce reliance on single-occupant vehicles.

TO'S PURPOSE

The purpose of TO is to reduce the number of single-occupant vehicles using the road system while offering travel options. TO employs a variety of improvements – both structural changes such as parking areas for carpoolers, and bike lanes, as well as policy initiatives such as staggered work schedules in order to increase the capacity of the transportation system without the expense and inconvenience of major highway expansion. If implemented on an area-wide basis and actively supported by agencies, businesses, and residents, TO strategies may be able to reduce or delay the need for street improvements, save travelers some money, reduce energy consumption and improve air quality.

These benefits become increasingly important as the region continues to develop and both the land and the funding for roadway construction grow scarcer. The Federal Highway Administration predicts that strategies to manage demand will be more critical to transportation operations than strategies to increase capacity (supply) of facilities. The inability to easily and quickly add new infrastructure, coupled with the growth in passenger and freight travel, are forcing metropolitan areas to pay more attention to managing demands.

HOW TO WORKS

The current transportation system in much of the US is built around the automobile with wide streets, high speeds, sprawling development, and a lack of pedestrian, bicycling and transit-supporting infrastructure. TO seeks to revitalize urban centers and assist rural areas to become friendlier to the pedestrian and bicyclist, making the auto less attractive. TO often relies on both incentives, such as bus pass programs, and disincentives such as SOV parking surcharges. The RVMPO Policy Committee has expressed a preference for incentives rather that disincentives. Efforts have been made to encourage major trip generators such as universities and major employers to take the initiative in developing TO programs. Experience elsewhere, however, indicates that employers need encouragement and incentives to adopt TO measures affecting the work commute – a major target of TO programs.

Stakeholders in the transportation system may not see the true costs of an auto based society and observe many actions resulting in the majority of transportation funding being dedicated toward expanding and improving the road system.

The affected public needs to continue efforts to mobilize their elected officials to provide adequate transportation facilities and services for pedestrians, cyclists and transit service. Stakeholders also need to become part of a critical mass to show that non-SOV modes have interest, feasibility and merit.

An illustration of a comprehensive TO approach comes from Ashland, where an examination of long-term growth projections and travel demand led to a determination that an area-wide TO policy, combined with a set of Transportation System Management (TSM) measures (TSM is discussed in Chapter 5.1), would yield an overall street system that operates within capacity. TO measures considered in Ashland's analysis included:

1. Improved pedestrian and bicycle system connectivity, access and circulation;

2. Enhanced transit coverage and service;

3. Employer-based transit subsidy (e.g. university student pass program).

TO strategies are aimed at minimizing SOV travel or encouraging travel by a mode other than a single-occupant automobile. A community or an employer could take a number of approaches to accomplish this. First, a community could attempt to decrease peak demand, either by shifting person-trips from the peak hour of demand, or by eliminating person-trips. (Person-trips represent the number of trips made by an individual, while vehicle trips account for multiple person trips depending

upon the number of people traveling in the vehicle.) Second, for the person-trips that are necessary during the peak hours of demand, a community may encourage alternatives to single-occupant vehicles (SOVs).

There is a difference between TO outreach strategies for the employers and for the public. Employers can undertake a variety of marketing or promotional activities to support their employees not using a SOV, such as flyers, trip-reduction programs, incentives, and using the other modes themselves as a role model.

By contrast, not being organized around a workplace, the general population needs to be attracted into non-SOV travel with public outreach through special events such as Car Free Day. They can also take advantage of transportation-efficient mortgages, the real estate profit of having greenways nearby, and feeling secure about their kids walking to school on a sidewalk. Reaching this population relies on general marketing such as brochures, commercials, etc. and being available to be a personal consultant if needed.

Bicycling and walking options are most applicable for short trips, while ridesharing and transit may be preferable for intermediate and long trips. Telework may be used as a trip alternative regardless of the distance. Finally, a community may reduce the demand on its surface transportation system by decreasing the distances traveled by vehicle trips. Some methods for reducing trip lengths include transit-oriented designs and compact, mixed-use developments. There is an important inter-relationship between the transportation options and land use.

TO EXAMPLES

The following are examples of policies and programs that can support TO.

Alternative Work Arrangements – Local governments and major employers (greater than 50 employees) encourage work arrangements providing an alternative to the 8-to-5 work schedule. These arrangements may include employee flextime programs, staggered work hours and compressed work weeks.

Employee Flex-Time Programs – One opportunity employers have to affect total trip demand is through influencing their own employees' peak versus off-peak travel behavior. A flexible schedule may allow employees to match their work hours with transit schedules, make carpool arrangements, or merely avoid peak congestion times. Active promotion of alternative schedules might slightly decrease total peak hour traffic. Flextime is most useful in offices, particularly for administrative and information workers. It may not be as applicable for non-office employers since their employees often have to work hours that are not during the peak hour of traffic demand anyway (e.g., retail employers), or because their work requires continuous communication between workers. In addition, flextime may be difficult for small employers to implement.

Staggered Work Hours – Staggered work hours is a policy of established starting and finishing times for different groups of employees. Unlike flextime, the employer,

not the employee, determines the staggered work hours. Like flextime, this tool has greater applicability to employees of large offices, since many non-office employees already work staggered work hours, or work in an interdependent manner. Currently, some metropolitan area employers have staggered work hours due to the nature of their business. To have a significant impact on peak period traffic, however, a change in work hours would need to be much more widespread than it is today.

Government agencies could take a lead by establishing a standard work schedule that differs from the typical 8 a.m.-5 p.m. schedule. For example, employees can be encouraged to work a 7-to-4 or 9-to-6 day work schedule. This is often done for the street and parks crews in public works situations because of summer hours and weather conditions. It might also be established for other employees although some agencies and local governments have encountered opposition from employee groups claiming they should have additional compensation for unusual work hours. Staggered work hours have to be considered in light of the need to have service desk hours that meet the needs of residents, but could actually increase the opportunities for resident contact.

Compressed Work Week – Compressed workweeks involve employees working fewer days and more hours per day. One common form of this policy is the 4-day/40-hour week where the employee works four 10-hour days. A second common form is the 9-day/80 hour schedule, in which the employee works 9 days and 80 hours over a two-week period. With the 4/40 schedule, the employee gets one business day off each week; with the 9/80 schedule, the employee gets one business day off each two weeks.

Because of the extended hours, both policies usually shift at least one leg of a work trip per working day (either the arriving or departing leg) out of the peak hours. The 4/40 policy additionally eliminates an entire work trip every five business days (1/5 of the work trips). The 9/80 policy eliminates an entire work trip every 10 business days (1/10 of the work trips). One of the problems with a compressed work schedule is the potential for increases in non-work trips during the "off day." Increases in non-work travel may offset reductions in work related driving. Such trips, however, are often taken during non-peak periods and can be expected to provide benefits by reducing peak hour congestion and by improving air quality.

Telecommuting – Telecommuting is another way employers can reduce total trip demand. Telecommuting or telework is work done away from the worksite with the assistance of telecommunications technologies, serving to reduce trips to and from the worksite. Phones, pagers, faxes, emails, computers, and the Internet all are telework tools. Telecommuting for one or two days per week could save significant trip miles and still allow the benefits of working at the central work site. Telecommuting arrangements also may involve more than one employee, e.g., when an employer provides a satellite work center connected to the principal work center. Another telecommuting alternative is a neighborhood work center operated by more than one employer, or by an agency. Recent advances in communications technology should greatly enhance telecommuting options.

Due to the distance and volume of trips between Medford and Ashland, trips between these two cities may be the easiest to replace with telecommuting. Southern Oregon University in Ashland would be a logical site for a telecommuting center if sufficient demand exists among Medford employers. Similarly, Rogue Community College might be able to service telecommute trips between Grants Pass and Medford.

Ridesharing – Ridesharing includes two principal categories: carpooling and vanpooling. Carpooling uses an employee's private vehicle to carry other people to work or other destination, either by using one car and sharing expenses, or by rotating driving responsibilities and vehicles. Vanpooling involves the use of a passenger van consistently driven by one or more of the participating employees, with the costs partially paid by the other riders through monthly fares. A common feature of vanpooling is that the van is often owned by the employer, a public agency (such as a transit district), or a private, non-profit corporation set up for that purpose. Otherwise a lease agreement can be set up.

Ridesharing can be greatly influenced by special treatment at the work place. Participation can be increased by employer actions that make ridesharing more convenient, such as providing guaranteed ride home services, preferential car/vanpool parking, and area-wide and employer-based commuter matching services.

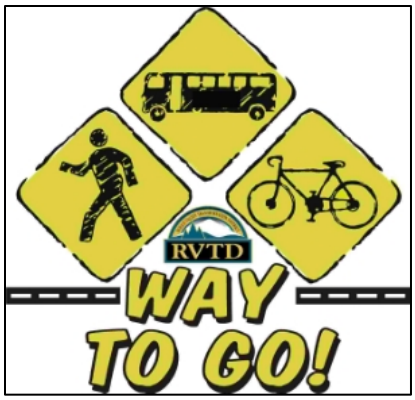
Guaranteed Ride Home (GRH) – A guaranteed ride home often makes ridesharing more attractive. Surveys have shown that many employees drive to work because they feel they need their automobile during the day or because they may work late. In some cases, they need their automobile for work trips or errands or want it available for emergencies. Therefore, provision of daytime and emergency transportation, by allowing use of a company vehicle or employer-sponsored free taxi, can encourage ridesharing. RVTD began a GRH program in 2004 and it can be used by any employer that adopts TO strategies. The program is set up so that the employer must be the first responsible party for securing a ride home and if this is not an option RVTD's Translink call service for the Valley Lift program will schedule a taxi for the employee at no charge to the employee.

Preferential Parking – Preferential carpool and vanpool parking is another simple, inexpensive way for an employer to encourage employees to rideshare by increasing the ease of access to the workplace. Ideally preferential carpool and vanpool parking spaces are provided close to the building entrance to provide convenient access to the building, particularly during inclement weather conditions. Adequate enforcement strategies need to be in place so that the spaces are not filled with SOV.

Ride-matching – Commuter matching services, whether area-wide or employer-based, help commuters find others with similar locations and schedules. An employer-based matching service offers the advantage of a shared destination, but presents the disadvantage of limiting the pool of potential riders. A carpool matching service can be one-time or continuous. For the study area, the Rogue Valley Transportation District serves as the carpooling agency and performs a variety of services to support and encourage the use of carpools, including matching of potential riders. They lease a website created by the City of Portland (www.CarpoolMatchNW.org) and offered for free to participating counties.

Support for TO – Oregon State, County and City policies and goals include provisions to embrace TO measures. Health officials, real estate professionals, insurance companies, credit agencies, environmental stewards, people under the age of 16, people with disabilities, low-income populations can all benefit from TO measures.

RVTD TO Program - RVTD has had a TO program in place since 1993. Current TO activities include: Alternative Transportation education programs that reach several thousand students during the school year are expanding to add a Senior Education program;



- Public outreach to promote TO and non-SOV transportation modes; Employer bus-pass programs;
- Free assistance with carpools, vanpools, Business Energy Tax Credits, telework, and trip-reduction incentives;
- Free employer trip-reduction analysis;
- On site transportation fairs for employers;
- Distribution of free materials in the community such as pedestrian and cycling reflectors, brochures, water bottles, bicycle helmets;
- Government outreach to educate officials about TO measures, attending meetings to promote the use of TO measures, and reviewing planning documents and site design for TO-supportive policies and infrastructure;
- Supporting parking construction mitigation- reducing the need for parking expansion with TO measures;
- Bicycle parking review and site design;
- Trip Reduction Incentive Programs- Creating and assisting with building and maintaining a Trip Reduction program that tracks employees' trips and rewards those who use non-SOV modes;
- Coordination of events to raise awareness of efficient transportation such as Car Free Day, Reflect on Walking, Safe Routes to School; and
- Marketing of TO through general advertising in various media.

EDUCATING THE PUBLIC ABOUT TO

Education and marketing are important parts of any TO program. It is possible for education by itself to be an incentive or disincentive that causes positive transportation behavior changes. Education and marketing complement any incentive/disincentive programs in place by increasing awareness and understanding of those programs. Education can be hands-on such as supporting a bus/bike-buddy program or it can be through traditional media such as newspaper, radio and TV advertisement, flyers and brochures, transportation exhibits, attending public meetings and giving testimony to public officials. Education that would promote using alternative modes of transportation would consist of highlighting the health and economic benefits, the environmental benefits as well as the facilities that a person can use. Marketing that would make driving a car less attractive could show the true cost of owning a car, the environmental impact, how it increases sprawl and dependence on foreign oil, to name a few. Although education and marketing are basic building blocks to a successful program they can only supply so much initiative for using alternative transportation. An example would be that many people know what times to catch a bus and where the bus stop is from successful education and marketing but they cannot use it because their work schedule runs after service hours, or possibly there is not connected sidewalk access from their work to the bus stop and they feel unsafe.

FACILITY AND SERVICE REQUIREMENTS

TO addresses travel behavior – the choices people make – and seeks to establish conditions under which people will change a long-established habit of driving themselves to destinations. Providing the right kinds of facilities and services are crucial to the success of many of the policy changes and programs described in the preceding section. Several of those strategies are closely tied to land use planning and the provision of adequate pedestrian/bicycle facilities and transit services, and modifying parking requirements. Another example is that TO could include constructing of High Occupancy Vehicle (HOV) or "diamond" lanes or an exclusive busway.

Specific actions related to parking are included in the Parking Chapter. Strategies aimed at improving pedestrian and bicycle facilities are discussed separately in the Bicycle and Pedestrian chapter. Transit service improvements are discussed in the Transit System Chapter. One key to the success of several TO strategies is establishment of park-and-ride facilities. These facilities increase efficiency of the transportation system, reduce energy consumption and provide options to the single-occupant vehicle trip. Park-and-ride facilities increase the effectiveness of transit service by expanding the area from which a transit draws riders. Patrons living beyond walking distance of an established transit stop can drive or bike to the park-and-ride and use transit or meet carpool partners, instead of driving alone or cycling long distances to their destination. Having free easy-to-access, secure and safe, easy to understand layouts, and direct pedestrian and bicyclist connections make the use of park-and-ride lots desirable.

Park-and-rides are frequently located near freeway interchanges or at transit stations and may be either shared-use, such as at a church or Transit Oriented Development (TOD) center, or exclusive-use. Shared-use facilities are generally

designated and maintained through agreements reached between the local transit operator and nearby businesses, churches, or other entities.

The expansion of transit is a key TO strategy element; however, RVTD service expansion is limited by funding. Nonetheless, strong public support for expanded bus service (nights, weekends, greater frequency, and expanded routes) is high.

Public opinion also has indicated that SOV use continues to be the desirable option at least in part because of the relative lack of serious highway congestion and safety problems in the region. In short, driving isn't difficult enough to force people to look for alternatives. While that attitude speaks well of our roads, it indicates that success with TO measures will be difficult. A challenge for the region in the short-term will be to set the conditions in place now to support greater transit use in the future – when more drivers will be looking for easier traveling alternatives. Those conditions include reserving space for High-Occupancy Vehicle (HOV), Bus Rapid Transit (BRT) or carpool lanes, and park-and-ride areas, as well as securing funds to expand transit service for those who need it.

Future Outlook

TO relies on efficient land use planning, education, and making the use of walking, cycling, carpooling and transit attractive. The 25-year outlook for TO should focus on how the cities in the RVMPO can begin having incentives for developers to make compact development accessible for pedestrians and bicyclists, and on how education can promote the use of these facilities. By engaging in these activities driving a car will become less and less attractive as an option. Transit is only one component of TO; pedestrians and cyclists need to be part of the program also.

Home-to-work and return trips comprise about one-fifth of total daily trips, and about half of the peak period traffic. Although all other types of trips are potential targets for TO alternatives, the effect is likely to be considerably less because the trips are not as regularly scheduled (e.g., shopping or business trips), often already have a higher vehicle occupancy (e.g., school trips), and sometimes involve the transfer of goods (e.g., shopping trips). Therefore, TO strategies recommended for the metropolitan area focus primarily on home-to-work and return trips. Strategies include establishing alternative work arrangements, promoting telecommuting and ridesharing, and, possibly, adopting a trip reduction ordinance.

Informal public survey activities have shown that transit could become an alternative to driving to and from work, easing the most serious of the region's traffic congestion problems if transit service were improved in key areas. These improvements include greater bus frequency, availability of evening service, and availability of park-and-ride facilities, which also would support carpooling. As the region grows, these improvements will become more economically viable.

Policy Issues and Actions

There are several actions that can be taken to further the aims of TO. They include:

- Identifying, encouraging and assisting role models who use alternative transportation. This can be done through awards, incentives and events.

- Encouraging developers to build high-density, multi-use buildings.

- Adopting maximum parking space requirements and an option to decrease parking further with the use of TO measures such as having attractive bicycle and pedestrian facilities, and carpool spaces within ¼ mile of transit service.

- Partnering with city government to encourage employers with more than 50 employees to adopt TO strategies.

- Prioritizing all city and county TSP bicycle and pedestrian construction projects to be completed in the earlier phases of this Plan.

- Encouraging developments with a large footprint to have a bicycle and pedestrian circulation plan. Securing funding for street aesthetics such as street furniture, landscaping, lighting, and creating dispersed tiny public places.

- Supporting the use of transit among major employers by encouraging the purchase of individual or subsidized group transit passes, having a bus shelter added nearby or other actions to reduce commuting trips;

- Encouraging development of discount transit fare programs and shuttle services by event sponsors; and

- Engaging in public, government and employer outreach to raise awareness about the use of TO strategies, including actively marketing to groups that have the greatest potential for reducing SOV trips.

This Page Intentionally Left Blank

5.7 Air, Rail, Waterways, and Pipelines

Public Air Facilities

The Rogue Valley International-Medford Airport is located north of the I-5/Highway 62 interchange in southwestern Oregon on 855 acres adjacent to the city of Medford, Oregon's central business district. The Airport serves the Southern Oregon/Northern California region, with the majority of the Airport's users residing within Jackson County. In 2013, over 631,000 passengers used air transportation and aircraft operations totaled over 40,000.

The management system at the Rogue Valley lnternational-Medford Airport consists of an Airport Advisory Committee/Director System. The Airport Advisory Committee is comprised of nine members appointed by the Jackson County Board of Commissioners. The goal of the committee is to act as an advisory board to the County Commissioners working through the Airport Director on matters of public concern.

The Ashland Municipal Airport was established in 1965. The City owns all of the land and buildings on the airport with the exception of the privately owned hangars at the northeast edge of the field and the Sky Research Hangar built in 2000. The airport has 34 hangars, 120 tie-down spaces and supports about 85 based aircraft. Management decisions for the Airport and related facilities receive oversight and recommendations through the Airport Commission, and staff work is completed through the Public Works Administrative Division.

Private Air Facilities

Burrill Airport is a private Airport located 7 miles north of Medford in the RVMPO boundary. There are no other private airports or airstrips exist within the Planning Area. There are several other private airstrips within 20 miles of the RVMPO boundary.

Freight Rail

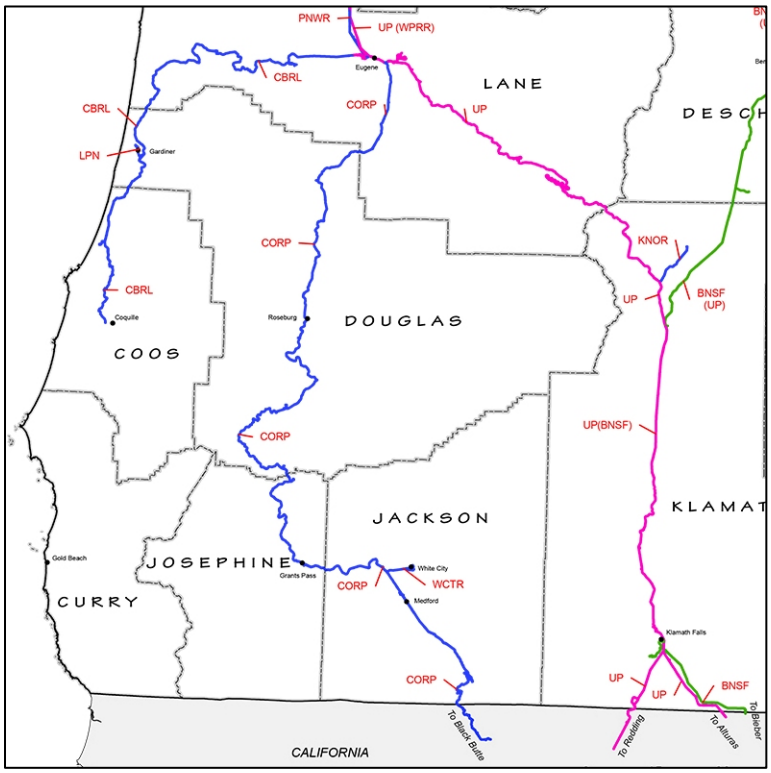
The Central Oregon and Pacific Railroad (CORP) is a Class II railroad (determined by revenue) that operates between Northern California and Eugene, Oregon with interchanges to the Coos Bay Rail Link, Union Pacific, White City Transfer Rail, and the Yreka Western Railroad. Traffic on CORP is approximately 16,000 cars predominately moving lumber, logs and plywood of national account lumber companies. Within the Planning Area, the rail line primarily follows parallel to Highway 99, running from the north to south boundaries of the MPO.

The Rogue Valley Terminal Railroad is a 14-mile shortline railroad that connects White City, Oregon, to a junction north of Medford with the Central Oregon and Pacific Railroad, which hauls its cars to the Union Pacific Railroad at Eugene, Oregon or Black Butte, California via the Siskiyou Summit, or to the Yreka Western Railroad at Montague, California.

The line began operations on November 3, 1954 on an abandoned Southern Pacific Transportation Company right-of-way as the White City Terminal & Utilities Co., on March 15, 2013 the railroad was renamed Rogue Valley Terminal Railroad Corporation.

The Siskiyou rail line is part of CORP, extending from Weed, California to Eugene, Oregon. The Siskiyou line has not been used since 2008. However, construction to upgrade the rail line is expected to be completed by Fall 2016. The reopening of this section of line is expected to renew and improve interstate freight rail options. It will allow Southern Oregon access to the Union Pacific mainline at Weed, California (access currently diverted through Eugene) and provide transportation options for the delivery of Southern Oregon lumber and manufactured goods.

Figure 5.7.1: Southwest Oregon Rail Lines



PASSENGER RAIL

There is no passenger rail service within the Planning Area. The nearest Amtrak train station is located in Klamath Falls, approximately 80 miles from Medford. Amtrak (Amtrak Cascades and Coast Starlight services) stops in Eugene and travels both north to Vancouver, British Columbia, and south to San Diego, California (Coast Starlight train only). Currently, both Greyhound and Southwest POINT shuttle provide service from Medford to the Amtrak station in Klamath Falls.

From 2001 to 2007, the RVMPO, had commissioned a number of studies examining commuter rail service using the CORP line between Ashland and Central Point,

including an extension to Grants Pass. Additionally, in 2010, ODOT had published the Intercity Passenger Rail Assessment that included examining the feasibility of Eugene to Ashland intercity passenger rail service using the CORP line. The conclusions of all studies noted challenges primarily related to costs vs. estimated passenger numbers, as well as delays associated with CORP priority for freight with construction of a new rail line being cost prohibitive.

More recently, passenger rail service to the MPO is discussed in the Oregon State Rail Plan (2014), which notes that out of travel markets not currently served by passenger rail, Southern Oregon (specifically, MRMPO to/from RVMPO) has good potential given its high percentage of interregional travel. This is based on data analyzed from the Oregon Household Activity Survey.

At-Grade Rail Crossings

The majority of the rail crossings in the Planning Area are at-grade, with the exception of the following:

- I-5 south of Ashland
- Ashland Street at Clay Street
- Water Street at Van Ness Avenue
- Jackson Road at Highway 99
- Highway 99 at Jackson Road
- McAndrews at Oak Street
- Rossanly Drive near Central Avenue
- I-5 north of Central Point

At-grade crossings can cause conflicts between trains and vehicles, pedestrians, and bicyclists, as well as delays for roadway users, especially during peak traffic periods.

Waterways

The Rogue River is the only navigable waterway within Planning Area boundaries. Within the Planning Area, the river is used for active and passive recreation. The river is currently not used for commercial navigation.

PIPELINES

The Rogue Valley is served by one pipeline, a natural gas line managed locally by Avista Corporation. While national security risks prevent Avista from providing detail about the location of the facility, the pipeline originally extended from Portland to Medford. A subsequent project connected Medford to a line that crosses central Oregon, permitting a loop system to exist. The value of completing a loop system was confirmed when the original line was disabled by an explosion near Wolf Creek, yet service to the Rogue Valley remained uninterrupted.

5.8 Performance Measures and Targets

Introduction

When Congress passed the transportation bill called Moving Ahead with Progress in the 21st Century (MAP-21) in 2012 they included the requirement that all State DOTs and MPOs include performance based planning practices in their ongoing planning efforts. This approach was reiterated with the signing into law of the Fix America's Surface Transportation (FAST Act). Performance-based planning was to be incorporated into addressing eight critical areas:

- Pavement condition on the Interstate System and on remainder of the National Highway System (NHS)
- Performance of the Interstate System and the remainder of the NHS
- Bridge condition on the NHS
- Fatalities and serious injuries—both number and rate per vehicle mile traveled--on all public roads
- Traffic congestion
- On-road mobile source emissions (through CMAQ)
- Freight movement on the Interstate System, and
- Transit

It should be noted that the vast majority of the performance measures and their respective targets involve the utilization of data that is collected and monitored by the state. Additionally, since the RVMPO is not designated a Transportation Management Area (TMA) the performance measures for congestion and on-road mobile sources are also tracked by the state. The Oregon Department of Transportation worked with Oregon's MPOs to develop performance-based targets for the state to adopt and the MPOs to refer to or use as their own.

The following tables indicate the state's, and by RVMPO Policy Committee decision, the RVMPO's targets for the aforementioned Performance Measures:

Table 5.8.1 – Pavement Condition

Pavement Condition	
Performance Measure	**2022 Performance Target**
1. Percentage of pavements of Interstate System in Good condition	35%
2. Percentage of pavements of the Interstate System in Poor condition	0.5%
3. Percentage of pavements of the non-Interstate NHS in Good condition	2-Year 50% 4-Year 50%
4. Percentage of pavements of the non-Interstate NHS in Poor condition	2-Year 10% 4-Year 10%

Table 5.8.2 – Bridge Condition

Bridge Condition	
Performance Measure	**2022 Performance Target**
5. Percentage of NHS bridges classified as in Good condition	10%
6. Percentage of NHS bridges classified as in Poor condition	3%

Table 5.8.3 – National Highway System Performance

National Highway System Performance	
Performance Measure	**2022 Performance Target**
7. Percent of the person-miles traveled on the Interstate that are reliable (Interstate Travel Time Reliability measure)	78%
8. Percent of person-miles traveled on the non-Interstate NHS that are reliable (Non-Interstate Travel Time Reliability measure)	78%

Table 5.8.4 – Freight Movement

Freight Movement on Interstate System	
Performance Measure	**2022 Performance Target**
9. Truck Travel Time Reliability (TTTR) Index (Freight Reliability measure)	1.45

Table 5.8.5 – On-road Mobile Source Emissions

	HC (VOC) Emission Reduction (kg/day)	CO Emission Reduction (kg/day)	NOx Emission Reduction (kg/day)	PM-10 Emission Reduction (kg/day)	PM 2.5 Emission Reduction (kg/day)[2]
Metro	226.51	3438.62	313.25	-	-
Rogue Valley	-	179.82	-	105.269	-
Middle Rogue	-	0	-	0	-
Rural Cities	-	0	0	415.2	0.45
TOTAL (BASELINE)	**226.51**	**3618.44**	**313.25**	**520.469**	**0.45**
2020 2-Year Targets	**29.49**	**584**	**71.45**	**363**	**0.12**
2022 4-Year Targets	**58.97**	**1168**	**142.9**	**726.4**	**0.23**

Table 5.8.6 – Fatalities and Serious Injuries*

		Statewide Targets			
Base Period	Fatalities (People 2011-2015)	Fatality Rate (People per 100 million VMT 2011 - 2015)	Serious Injury (People 2010-2014)	Serious Injury Rate (People per 100 million VMT 2010-2014)	Nonmotorized Fatalities and Serious Injuries (People 2010-2014)
Baseline	357	1.04	1,491	4.42	234
2013-2017	357	0.94	1,491	4.42	234
2014-2018*	350	0.89	1,461	4.33	229
2015-2019	343	0.83	1,432	4.24	225
2016-2020	328	0.78	1,368	4.06	215
2017-2021	306	0.73	1,274	3.78	200

***From the Oregon Transportation Safety Action Plan, 2016. Note this plan is currently being updated with the new TSAP expected to be adopted in the summer of 2021.

The Rogue Valley Transportation Authority is the transit agency in the RVMPO area. As such they are responsible for developing performance measure targets and the MPO is required to integrate, either directly or by reference the transit providers "…goals, objectives, performance measures, and targets …" into the planning process. Table 5.8.7 below are the targets as set by RVTD.

Table 5.8.7 – Public Transportation Agency Safety Action Plan

PUBLIC TRANSPORTATION AGENCY SAFETY PLAN PERFORMANCE TARGETS					
Mode of Transit Service	**Fatalities**	**Injuries**	**Safety Events**	**System Reliability**	**Mileage Increment**
Fixed Route Bus	0.00	0.528	0.528	7,200	100,000
Demand Response	0.00	0.00	0.00	63,000	50,000

The RVMPO considers the development and support of a balanced multi-modal transportation system that addresses both current and anticipated future needs a critical goal. The MPOs project selection process incorporates the goals and objectives of its RTP into the criteria for selecting projects. These goals and objectives are consistent with the performance-based targets as set by the State.

CHAPTER 6
AIR QUALITY

INTRODUCTION

This chapter describes the status of the air pollutants that affect the Rogue Valley, and how the RVMPO's RTP complies with the federal air quality regulations for transportation conformity.

To receive transportation funding or approvals from the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA), state and local transportation agencies with plans, programs or projects in nonattainment or maintenance areas must demonstrate that they meet the transportation conformity requirements of the federal Clean Air Act, as implemented in specific federal and state transportation conformity rules. To meet the requirements, Metropolitan Planning Organizations (MPOs) must show that the anticipated emissions resulting from implementation of transportation plans, programs and projects are consistent with and conform to the purpose of the State Implementation Plan (SIP) for air quality. A SIP is a plan mandated by the Clean Air Act and developed by the state that contains procedures to monitor, control, maintain and enforce compliance with the National Ambient Air Quality Standards. SIPs are required to be developed once a region has violated the standards.

Within the RVMPO area, demonstration of conformity to two SIPs is required: a carbon monoxide limited maintenance plan, or SIP, within the Medford Urban Growth Boundary (UGB) of 2002, and a particulate (PM_{10}) plan within the entire RVMPO planning area. The RVMPO is required to show through analysis that through the horizon of the plan (to 2045) and with the growth the plan forecasts, the standards and requirements of the SIPs will be maintained.

The full analysis is contained in a separate document, The Rogue Valley Metropolitan Planning Organization Air Quality Conformity Determination (AQCD). The AQCD document describes the current status of the two pollutants the RVMPO must report on, the state and federal legal requirements and how the RVMPO met those requirements.

6.1 AIR QUALITY CONFORMITY

An Air Quality Conformity Determination (AQCD) is required whenever the Regional Transportation Plan (RTP) or Transportation Improvement Program (TIP) is updated, or every four years, whichever comes first. Currently, the RVMPO is awaiting the Conformity Determination after the necessary inter-agency consultation has been completed and all comments accommodated.

In the Rogue Valley Metropolitan Planning Organization area, the conformity document must show that through the horizon of the plan and program air quality requirements for carbon monoxide (CO) and particulate matter (PM_{10}) will be met. Specifically:

> **Carbon Monoxide**—The area encompassed by the Medford urban growth boundary (UBG) was re-designated from nonattainment to attainment by the U.S. Environmental Protection Agency (EPA) in 2002, and a limited maintenance plan approved in 2016.
>
> **PM_{10}—**The area within the Medford-Ashland Air Quality Maintenance Area, which is entirely within the RVMPO planning area, was re-designated from nonattainment to attainment by EPA in 2006.

Although the conformity area for each pollutant differs, the process for showing conformity is similar. Analysis by the RVMPO found that through the horizon of the RTP (2045), and in intervening years, emissions from transportation will not exceed emission budgets, as shown in the table below.

Actions to be Taken

The RVMPO Policy Committee, as the policy board for the federally designated Metropolitan Planning Organization in the urbanized area that includes Medford and Ashland, must formally adopt the findings described in this report. Then USDOT and the federal Environmental Protection Agency confer on the analysis. Ultimately, USDOT will make a conformity determination based on this document. At that time, the RVMPO's 2021-2045 plan will go into effect.

Basis of the Analysis

The analysis uses computer models to project the amounts of CO and PM_{10} anticipated in the respective control areas from on-road transportation. The region's travel demand model, developed jointly by RVMPO and ODOT, estimates the amount of vehicle travel anticipated, expressed as vehicle miles traveled (VMT). Emission factors are generated using an EPA-approved model. From these calculations, future emissions are estimated. The model takes into account several key factors that can change over time including population and employment growth, land-use changes, changes to the transportation system and motor vehicle technology.

Details of the Air Quality Conformity Determination

This report shows that with the implementation of the 2045 RTP all current federal and state requirements for on-road transportation emissions within the planning area will be met. For the Medford UGB area, this means that on-road transportation-related emissions of CO will not exceed the budget for CO established by Oregon Department of Environmental Quality and approved by EPA in 2002. For the entire Medford-Ashland Air Quality Maintenance Area, an area within the RVMPO planning area, PM_{10} emissions from on-road transportation will not exceed the budget set by ODEQ and approved by EPA in 2006. This means that transportation projects will not impede the area in continuing to meet air quality requirements.

STATUS OF AIR POLLUTANTS

The Medford Urban Growth Boundary (UGB) is a maintenance area for carbon monoxide (Medford CO maintenance area) and the Medford-Ashland Air Quality Maintenance Area is a maintenance area for particulate matter of less than 10 microns (PM_{10}). See Map 6.1.1 on page 6-7 for more detail. Air quality for all other criteria pollutants meets the NAAQS and demonstration of conformity for these pollutants is not required. Rogue Valley Council of Governments (RVCOG) is the responsible agency for CO and PM_{10} conformity for state purposes.

STATUS OF CO

EPA approved the Medford CO maintenance plan (State Implementation Plan or SIP), with a daily transportation emissions budget effective Sept. 23, 2002. The boundary of the Medford CO maintenance area is the Medford Urban Growth Boundary, as shown on Map 6.1.1. The CO SIP also mandates a motor vehicle Inspection and Maintenance (I&M) program covering the entire Medford-Ashland Air Quality Maintenance Area (AQMA). All gasoline-powered motor vehicles registered to owners living within the Medford-Ashland AQMA must have vehicle emissions and on-board diagnostic systems tested biennially. There has not been a violation of the CO NAAQS in the maintenance area since 1991. While these data show that CO levels are in compliance with the NAAQS, demonstration of conformity relies upon compliance with the federal and state conformity regulations.

In December, 2015, the Oregon Department of Environmental Quality (ODEQ) submitted a Carbon Monoxide Limited Maintenance Plan (LMP) for the Medford area to EPA for approval. To be eligible for a CO LMP, an area has to have a design value at or below 7.65 ppm. Based on ODEQ's review of the 2008 – 2009 CO emissions data for Medford the area met the requirements for an LMP. The CO LMP went into effect on September 19, 2016. With the approval of the CO LMP, the area is exempt from performing a regional emissions analysis for CO and there is no "budget" test. The CO Maintenance area, however, must meet project level conformity analyses, and must respond to transportation conformity criteria in 40 CFR 93 Subpart A.

STATUS OF PM_{10}

EPA approved the PM_{10} maintenance plan (State Implementation Plan or SIP) for the Medford-Ashland AQMA effective Aug. 18, 2006. The plan establishes an annual transportation emissions budget. The Medford-Ashland PM_{10} AQMA is shown on Map 6.1.1.

There have been no violations of the NAAQS for PM_{10} since 1993. As with CO conformity, demonstration of PM_{10} conformity relies on compliance with federal and state conformity regulations.

CONFORMITY FINDINGS

The AQCD for this plan shows that with the implementation of the RVMPO 2021-2045 Regional Transportation Plan current federal air quality standards for regional transportation conformity will continue to be met in Medford and in the Medford-Ashland Air Quality Maintenance Area.

CO LIMITED MAINTENANCE PLAN CONFORMITY CRITERIA

On September 19, 2016, US-EPA approved a CO maintenance plan, known as a "limited maintenance plan" (LMP) for the Medford area. This limited maintenance plan has a 2025 horizon year. Because of the approved LMP, the Rogue Valley MPO no longer has to complete a regional emissions analysis for the Medford area for CO pursuant to 40 CFR 93.109(e).

However, all other transportation conformity requirements under 40 CFR 93.109(b) continue to apply. This RTP and TIP conformity determination meets all applicable requirements under the conformity rule as described below.

40 CFR 93.104 *Frequency of conformity determinations*.

> *Conformity of transportation plans and TIPS must be determined no less frequently than every four years. Conformity of plan and TIP amendments, except for those that add or delete exempt projects, must be demonstrated prior to approval of the action. All FHWA/FTA projects must be found to conform or must be re-conformed following any significant status or scope change, before they are adopted, accepted, approved or funded.*

The conformity determination is for the RVMPO 2021 - 2045 Regional Transportation Plan (RTP). The next RTP update will occur in four years (March 2025).

40 CFR 93.105 *Consultation*

> *Interagency consultation procedures must be carried out in accord with OAR 340-252-0060 and the MPO's public involvement policies developed under 23 CFR Part 450.*

A draft of this document along with the project list (Appendix B) was circulated by the MPO to ODOT, US-EPA, and USDOT (FHWA and FTA) during interagency consultation. The air quality implications of each project were reviewed to determine which projects had the potential for hot spot requirements.

Public notice was provided on the MPO's web site and through emails to interested parties in the region. A public hearing was held at the policy committee review meeting, and the 30-day public comment period required by the MPO's Public Participation Plan was held.

The RVMPO Technical Advisory Committee (TAC), the standing committee for interagency consultation, reviewed the project list and subsequently reviewed the results of the public comment period and the interagency consultation. No comments were provided at the public hearing or were submitted during the public comment period.

The project sponsor is responsible for assuring the conformity of FHWA/FTA projects and regionally significant projects in the RTP or TIP for which hot spot analysis is required. The project sponsor is also responsible for distributing draft and final project environmental documents prepared by the project sponsor to other agencies. It is the responsibility of the project sponsor to consult with the affected transportation and air quality agencies prior to making a project level conformity determination. These activities occur during the project design planning phase.

40 CFR 93.108 *Transportation plans and TIPs must be fiscally constrained*.

Fiscal constraint is described and affirmed in the 2045 RTP and the 2021-2024 TIP.

For the Medford PM_{10} maintenance area, all non-exempt projects in the 2021-45 RTP and the 2021-2024 Transportation Improvement Program within the Medford-Ashland Air Quality Maintenance Area were reviewed under the interagency consultation process.

PM_{10} Emissions Analysis

Analysis of future travel conditions shows that estimates of emissions of particulate matter (PM_{10}) within the Air Quality Maintenance Area are lower than permitted in corresponding state maintenance plans, which set emissions budgets. The table below show emissions budgets and summarizes estimated particulate matter emissions. As shown, RTP/TIP emissions in all applicable analysis years under both transit cases are well below the established motor vehicle PM10 emission budgets. Across all analysis scenarios, total motor vehicle PM_{10} emissions are less than 55% of the budgets.

Table 6.1.1: Estimates of Particulate

Analysis Year	2017	2025	2035	2045
PM_{10} Budget	3,754 tons/year	3,754 tons/year	3,754 tons/year	3,754 tons/year
Estimated PM_{10} Emissions *With* Transit Service	1,401 tons/year	1,482 tons/year	1,616 tons/year	1,748 tons/year
Estimated PM_{10} Emissions *Without* Transit Service	1,413 tons/year	1,497 tons/year	1,634 tons/year	1,786 tons/year

**Emissions estimates from 2021-45 RTP adopted September 28, 2021*

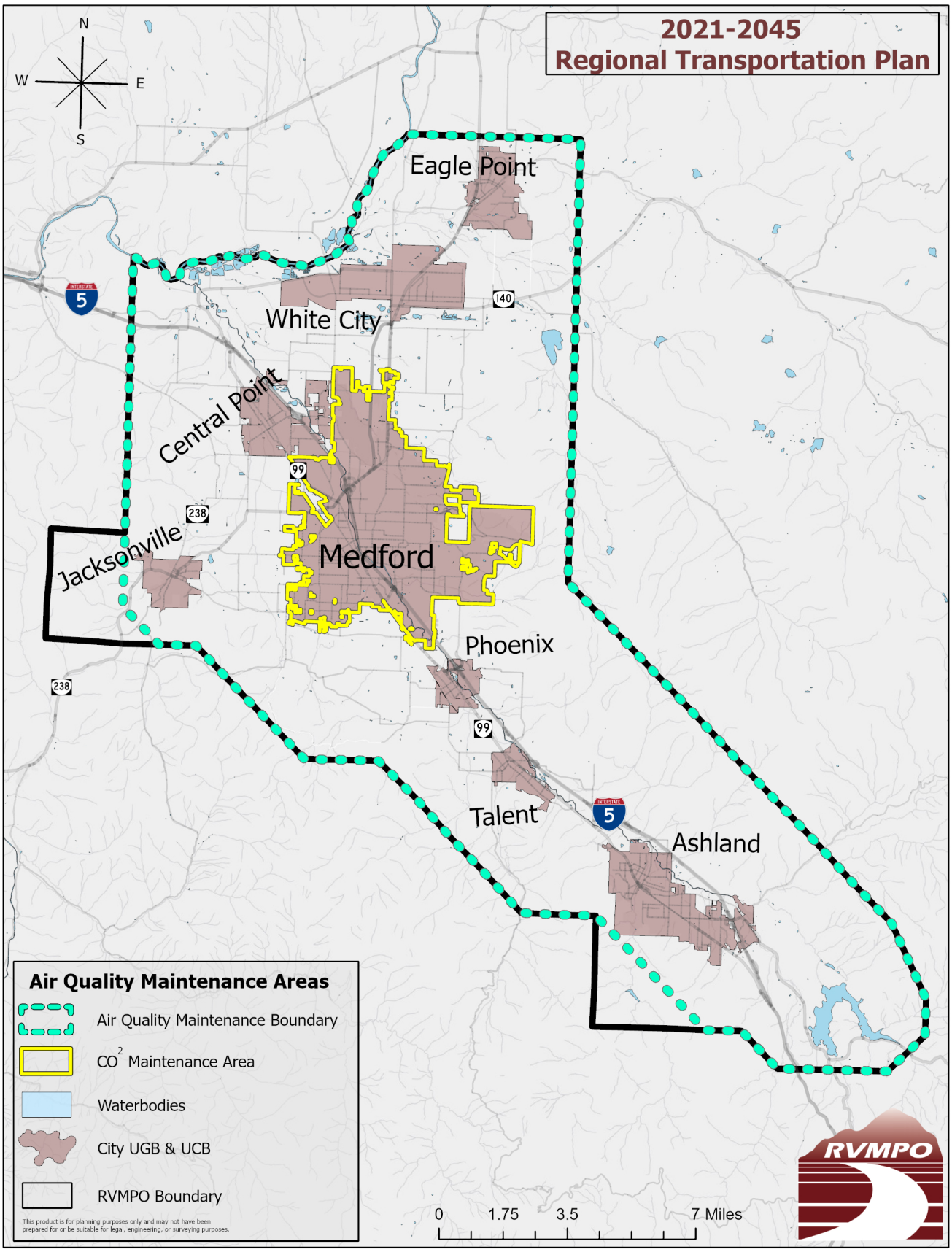
Specifically, the analysis shows that the PM_{10} emission budget in the SIP will not be exceeded. The budget serve as limits guaranteeing that if a region remains with the budget, Clean Air Act standards will be met.

Because this plan identifies financial uncertainties about the future of transit service, federal and state agencies asked the RVMPO to demonstrate conformity with and without transit service. The financial analysis finds that identified funds expected to be

available are not sufficient to maintain existing transit service. Therefore existing service is not fiscally constrained and cannot be included in the RTP. Additional funds could be identified in the future to prevent service reductions, at which point the RTP would be amended. The AQCD was developed to address this range of transit options.

The AQCD shows the extremes of what could transpire. Elimination of all transit is not expected, but RVTD does not have service reduction plans. For the air quality emissions analysis, the SOABM travel demand model was run with and without the transit service inputs. The "with transit" scenario envisions existing transit service (without the expanded evening and Saturday service funded through 2045. The second analysis estimated emissions without transit.

Map 6.1.1: Air Quality Maintenance Areas



This Page Intentionally Left Blank

CHAPTER 7
ENVIRONMENTAL CONSIDERATIONS

INTRODUCTION

This chapter includes a discussion of potential environmental impacts, avoidance and mitigation activities at the policy and strategy level rather than from a project-specific level. This analysis is a specific requirement of the Fixing America's Surface Transportation Act (FAST Act), signed into law in 2015.

The chapter was developed in consultation with federal, state and tribal wildlife, land management, and regulatory agencies, as shown on Table 7.1.1 on the next page.

7.1 ENVIRONMENTAL CONSIDERATIONS IN PLANNING

It is appropriate to begin considering the environmental consequences of any policy, project, and/or program that address transportation deficiencies. However, such consideration is not expected to be at the same level of detail as may be required by the National Environmental Policy Act (NEPA). It is important to note that a NEPA process is required for any transportation project having a federal nexus. A project has a federal nexus if it involves federal funding, a federal permit or approval, use of federal lands, or a federal program.

EARLY CONSIDERATION OF ENVIRONMENTAL CONSEQUENCES

A common principle of environmental laws and regulations is a stepped process that focuses on:

- Avoiding impacts to resources;
- Minimizing those impacts that are unavoidable, and
- If impacts are not avoidable, mitigating for those impacts.

If these processes can be considered at a regional level, projects may be able to advance through required environmental processes more quickly than projects whose impacts must be evaluated and considered independently.

ENVIRONMENTAL IMPACTS

Environmental mitigation activities are defined in FAST Act as strategies, policies, programs, actions and activities that over time will serve to minimize or compensate for the impacts to or disruption of elements of the human and natural environment associated with the implementation of the Regional Transportation Plan (RTP).

FAST Act requires that metropolitan planning organizations, as part of the consultation process, discuss types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore and maintain the environmental functions affected by the plan. These activities should also be developed in consultation with Federal, State and tribal wildlife, land management and regulatory agencies (23 U.S.C. 134(i)(2)(D)).

To fulfill this requirement, a comparison of projects in the RTP to historic and environmentally-sensitive areas was conducted to determine the environmental impacts and potential mitigation activities that could be implemented in areas where a project intersects a resource area.

The FAST Act requires a discussion of potential mitigation activities for each environmental resource affected by the RTP. These activities will be considered if the project, at the time of implementation, would produce any affect on the environment.

This RTP includes projects that are expected to receive federal funds including regionally significant projects for air quality. In addition, other environmental laws and regulations are applicable to projects regardless of the funding source. This chapter will outline the applicability of those laws and regulations as related to expected funding.

Table 7.1.1: RTP Environmental Considerations Agency Consultation

State Agencies	Federal Agencies
OR Department of Environmental Quality (DEQ)	U.S. Department of Transportation, Federal Highway Administration (FHWA)
OR Department of Fish and Wildlife (ODFW)	U.S. Environmental Protection Agency (EPA)
OR Department of Land and Conservation (DLCD)	U.S. Army Corps of Engineers (USACE)
OR State Historic Preservation Office (SHPO)	U.S. Department of Commerce, National Marine Fisheries Service (NMFS)
OR Department Of State Lands (DSL)	U.S. Department of Transportation Federal Transit Administration (FTA)
OR Department of Transportation (ODOT)	U.S. Fish and Wildlife Service (USFWS)

INVENTORY AND MAPPING

The RVMPO inventoried historic and natural resources within the MPO planning boundary. This work was coordinated with the appropriate federal, state, tribal, wildlife, land management and regulatory agencies.

The RVMPO collaborated with partners to identify and obtain the most current, complete and accurate data possible from which to develop the inventory in this chapters. Data used in the project includes data used to develop the Rogue Basin

Partnership's (RBP) Action Plan, data collected by RVCOG as part of a National Academies Strategic Highway Research Program and other sources.

Data was incorporated into GIS to create the maps that illustrate important environmental areas. Inventory and resource data are included in the discussion sections of this chapter; all maps appear in numerical order at the end of the chapter.

Environmental Considerations Maps 7.1.1 through 7.1.7 provide information pertaining to:

- Prime Agricultural Soils, Orchards, and Vineyards
- Wetlands, floodplains, vernal pools and mitigation sites
- Ecologically Sensitive Areas
- Wildlife movements
- Animal collision hotspots and collision locations
- Impaired water bodies, fish-passage barriers (dams, culverts), ODFW priority barriers.
- Archeologically and historically sensitive areas

Details about the selected maps appear below, with more in depth discussion of issues surrounding environmental features in the sections that follow. Map pages begin on Page 7-23.

Prime Agricultural Soils, Orchards, and Vineyards, Map 7.1.1 – These are the RTP projects that are located on agricultural soils (irrigated soils classes 1-4). This soil information is derived from U. S. Department of Agriculture (USDA) soils data, which categorize soils into eight capability classes.

Wetlands, Floodplain and Vernal Pools, Map 7.1.2 – Illustrates those RTP projects that intersect the National Wetlands Inventory, Local Wetlands Inventories, Vernal Pools, and FEMA's Special Flood Hazard Areas.

Wildlife Movements, Map 7.1.3 – This map illustrates RTP projects that overlap with ODFW wildlife movement data, which are key movement areas for wildlife, emphasizing areas that cross paved roads.

Animal Collision Data, Map 7.1.4 – Animal and vehicle collision locations (data from ODFW 2016). The map shows the point locations of where documented animal and vehicle collisions occurred.

Fish Passage Barriers, Salmonid Habitat, Total Maximum Daily Load (TMDL), Water Quality Limited Streams, Map 7.1.5(a) – Identifies fish passage barriers from ODEF. Salmonid habitat (Department of State Lands), and TMDL approved streams (water quality limited streams, DEQ).

Priority Fish Passage Barriers, Map 7.1.5(b) – This map identifies ODFW's updated priority fish passage barriers for the MPO.

Archeologically Sensitive Areas, Map 7.1.6 – The National Parks Service National Register of Historic Places and the Medford, Ashland and Jacksonville National Historic Districts are mapped with the RTP projects. In addition, archaeologically sensitive areas identified in the region are mapped with RTP projects. The sensitive areas were created by Archaeologist Jeff LaLande for the Transportation Research Board (TRB)/National Academies project in 2010, with funding provided by the National Academies and ODOT.

The RTP projects that intersect the archaeologically sensitive areas have a greater potential likelihood for containing possibly significant archaeological resources than do other portions of the valley floor.

USE OF ENVIRONMENTAL INFORMATION

Environmental information is typically collected and analyzed in the transportation planning process. The RVMPO maintains a GIS geodatabase of environmental data that can be used to identify and document potentially affected environmental resources. This information can then be used to identify opportunities to avoid or minimize environmental impacts of any alternative transportation solutions being considered, modify alternatives being considered, or potentially eliminate alternatives with unacceptable or greater environmental consequences.

In addition, the RVMPO and RVCOG have actively worked on projects to identify locations of ecological and historical significance, and overlay the information with planned transportation projects.

Documentation – Environmental information and/or analyses used in the planning process, and environmental impact avoidance or minimization actions taken, should be thoroughly documented. This will allow information to be used again, or incorporated as evidence of mitigation, resulting in effective and expedited environmental review.

Evaluation of Impacts - The evaluation of the impacts a roadway project has on natural areas and historic resources shall take into account (in accordance with 23 CFR Part 777.7):

1. The importance of the impacted wetlands and natural habitats

2. The extent of roadway impacts on the wetlands and natural habitats

3. Actions necessary to comply with the Clean Water Act, Section 404; the Endangered Species Act of 1973; and other relevant Federal statutes (e.g., TMDLs, National Pollutant Discharge Elimination System (NPDES) Stormwater Phase II)

4. Evaluation of the importance of the impacted wetlands and natural habitats shall consider:

    a. Wetland and natural habitat functional capacity

    b. Relative importance of these functions to the total wetland or natural habitat resource of the area

    c. Other factors such as uniqueness, aesthetics, or cultural values; and

    d. Input from the appropriate resource management agencies through interagency coordination.

5. A determination of the highway impact should focus on both the short and long-term effects of the project on wetland or natural habitat functional capacity.

AVOIDANCE, MINIMIZATION, MITIGATION

The RVMPO, utilizing GIS, species accounts, soil types and other relevant data, seeks to avoid environmental impacts. Where impacts cannot be avoided, efforts will be made to minimize impacts. Any remaining impacts will then be mitigated. Additionally, the RVMPO works with other agencies to provide greater benefits to the environment regionally. Additional discussion of avoidance, minimization and mitigation appears in subsequent sections addressing specific resources.

The Rogue Valley Council of Governments has a Natural Resource Department that coordinates and facilitates resource projects within the region. Subsequently, this internal knowledge of natural resources, combined with regional collaboration, will lead to improved avoidance measures and natural resource mitigation activities.

Where impacts cannot be avoided, minimization and mitigation is the attempt to offset potential adverse effects of human activity on the environment. Mitigation is the last step of the avoidance and minimization process. The National Environmental Policy Act regulations define mitigation (40 CFR 1508.20) as follows:

1. Avoiding adverse impacts by not taking an action.

2. Minimizing impacts by limiting the degree of action.

3. Rectifying by repairing, rehabilitating, or restoring the affected environment.

4. Reducing or eliminating impacts over time through preservation and maintenance activities.

5. Compensating for an impact by replacing or providing substitute resources or environments. In most mitigation agreements, more of a resource or habitat must be provided than was originally present. Ratios greater than 1:1 are required in part to compensate for unrealized losses and the inability of technology to completely restore the natural environment.

WETLANDS AND NATURAL HABITATS

The RVMPO encourages progressive approaches to wetlands and natural habitat mitigation. These approaches include the development of conservation and mitigation banking agreements or the purchase of intact natural areas. Conservation and mitigation banks differ to some degree. A mitigation bank could refer to mitigation of any habitat, although they are typically referring to wetland mitigation per federal guidance for Compensatory Mitigation for Losses of Aquatic Resources, Federal Register / Volume 73, Number 70, Thursday, April 10, 2008 / Rules and Regulations, Army Corps of Engineers (COR), 33 CFR Parts 325 & 332, Environmental Protection Agency (EPA), 40 CFR Part 230.

Whereas conservation banks are oriented toward endangered, threatened and other at-risk species; habitats are selected and managed based upon the needs of those specific species. Roadway projects are linear, often resulting in many small, incremental impacts. Subsequently, on-site mitigation sometimes results in isolated wetlands and natural habitat that might not provide benefits commensurate with costs and time required to establish wetland and natural habitat functions. Wetland or habitat banks have the ability to provide more wetland or habitat values and benefits per acre; consequently, the increased habitat benefits result in greater benefits to fauna, and often result in increased biodiversity. It is noteworthy that the mitigation area needs to receive sufficient management to ensure their functions will be sustained in perpetuity. In some cases it may be mutually beneficial, both in preserving the environment and creating an effective transportation system, to preserve the same or similar habitats in relatively close proximity to the habitats being impacted. The RVMPO recognizes that the Rogue Valley provides valuable habitat along the Pacific flyway, one of four flyways nationwide for migratory birds. Therefore, the RVMPO will strive to lessen impacts to habitats upon which species are dependent.

Additionally, efforts will be made to establish and maintain regional collaboration, both in identifying potential mitigation areas and ensuring their management in perpetuity.

Reducing Impacts – There are a number of actions that can be taken to minimize the impact of roadway projects on wetlands or natural habitats (23 CFR Part 777.9).

- Avoidance and minimization of impacts to wetlands or natural habitats through realignment and special design, construction features, or other measures.

- Compensatory mitigation alternatives, either inside or outside of the right-of-way. This includes, but is not limited to, such measures as on-site mitigation, when that alternative is determined to be the preferred approach by the appropriate regulatory agency; improvement of existing degraded or historic wetlands or natural habitats through restoration or enhancement on or off site; creation of new wetlands; and under certain circumstances, preservation of existing wetlands or natural habitats on or off site. Restoration of wetlands is generally preferable to enhancement or creation of new wetlands.

- Improvements to existing wetlands or natural habitats. Such activities may include, but are not limited to, construction or modification of water level

control structures or ditches, establishment of natural vegetation, re-contouring of a site, installation or removal of irrigation, drainage, or other water distribution systems, integrated pest management, installation of fencing, monitoring, and other measures to protect, enhance, or restore the wetland or natural habitat character of a site.

- Mitigation Banks- The RVMPO encourages the use of mitigation banks, or other habitat preservation measures, to offset habitat impacts. Banks will be approved in accordance with the Federal Guidance for Compensatory Mitigation for Losses of Aquatic Resources, Federal Register / Volume 73, Number 70, Thursday, April 10, 2008 / Rules and Regulations, Army Corps of Engineers (COR), 33 CFR Parts 325 & 332, Environmental Protection Agency (EPA), 40 CFR Part 230, or other agreement between appropriate agencies. Where feasible, the MPO will attempt to collectively conserve habitat areas that provide greater environmental benefits. Mitigation and conservation areas are shown on Map 7.1.6(a).

MITIGATION BANK AREAS IN THE RVMPO

FAST Act requires MPOs to provide a discussion of types of potential environmental mitigation activities and potential areas to carry out these activities. This section of the chapter provides an overview of the potential areas to carry out mitigation activities.

Wildlands Rogue Valley Vernal Pool

Wildlands Rogue Valley Vernal Pool Bank – A private vernal pool mitigation bank was developed near Eagle Point and approved in 2012. Wildlands, Inc. discussed conservation easement options with Southern Oregon Land Conservancy (SOLC) and private landowners in the area as part of the development. Phase One of bank is 131 acres. Later phases will be developed adding approximately 110 acres.

ODOT Vernal Pool Bank – Oregon Department of Transportation (ODOT) has a vernal pool / wetland mitigation bank near Central Point which is used for ODOT projects. ODOT began an extensive search for prospective vernal pool complex bank sites in 2005. Several prospective sites were viewed in the field by staff from ODOT, the U.S. Fish and Wildlife Service (USFWS), the Oregon Department of Fish and Wildlife

(ODFW), the U.S. Army Corps of Engineers (Corps), the Oregon Department of State Lands (DSL), the Oregon Department of Environmental Quality (DEQ), the National Marine Fisheries Service (NMFS), and the U.S. Environmental Protection Agency (EPA).

Preference for the selected site was supported by all agencies based on the presence of a large parcel of high quality vernal pool complex habitat and the adjacent The Nature Conservancy (TNC) Whetstone Preserve, which contributes to the sustainability and viability of the Bank site.

The ODOT Bank is located near the intersection of Newland and Truax Roads, in White City, Jackson County, Oregon (Map 7.1.6(a)). Originally the Bank consisted of the two parcels that comprise 80.23 acres and located west of and directly adjacent to the Nature Conservancy's Whetstone Savanna Preserve (a registered Oregon Natural Heritage Resource) and are of similar character. In 2014, ODOT completed the purchase of four additional parcels (116 acres) adjacent and to the west and north of the original Bank parcels to serve as Individual Permittee Responsible Mitigation for ODOT's Highway 62: Interstate 5 to Dutton Road Project.

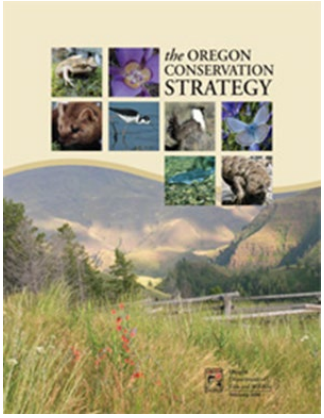
The adjacent preserve's acreage is approximately 116 acres of which roughly 13 acres is high functioning. The remaining 100 plus acres will be enhanced and restored to high functioning habitat. In 2014, approximately 14 acres of the property was restored, with additional phases of restoration slated for 2015 through 2017. Cumulatively, upon completion of restoration activities, approximately 196 acres of contiguous high functioning vernal pool complex will be protected and under management to sustain wetland functions and values.

Wildlife Habitat

The Oregon Department of Fish and Wildlife's (ODFW) follows a conservation strategy that focuses on habitat restoration and maintenance to address the needs of game and nongame species.

The strategy highlights specific actions that can conserve Oregon's fish and wildlife when the chances of success are greatest before they become sensitive or endangered.

Cover of The Oregon Conservation Strategy guide



The strategy provides information about species and habitats in every region in Oregon and the issues affecting their present and future health. This information is included in the RTP for the purposes of:

- Landowners and land managers who want to improve conditions for at-risk wildlife;
- Agencies and organizations interested in making conservation investments more effective and efficient; and
- Oregonians who want a better understanding of the conservation issues of concern in their area.

The link below offers more information on the ODFW Conservation Strategy for Oregon:

http://www.dfw.state.or.us/conservationstrategy/read_the_strategy.asp

Conservation Strategy for Oregon – Klamath Mountains Ecoregion – The RVMPO is situated within the Klamath Mountains ecoregion which covers much of southwestern Oregon, including the Umpqua Mountains, Siskiyou Mountains and interior valleys and foothills between these and the Cascade Range. Several popular and scenic rivers run through the ecoregion, including: the Umpqua, Rogue, Illinois, and Applegate. Within the ecoregion, there are wide ranges in elevation, topography, geology, and climate. The elevation ranges from about 600 to more than 7400 feet, from steep mountains and canyons to gentle foothills and flat valley bottoms. This variation along with the varied marine influence support a climate that ranges from the lush, rainy western portion of the ecoregion to the dry, warmer interior valleys and cold, snowy mountains.

The Klamath Mountains ecoregion boasts a high rate of species diversity, including many species found only locally. In fact, the Klamath-Siskiyou region was included in the World Wildlife Fund's assessment of the 200 locations most important for species diversity world-wide. The region is particularly rich in plant species, including many pockets of endemic communities and some of the most diverse plant communities in the world. For example, there are more kinds of cone-bearing trees found in the Klamath Mountains ecoregion than anywhere else in North America. In all, there are about 4,000 native plants in Oregon, and about half of these are found in the Klamath Mountains ecoregion.

The ecoregion is noted as an Area of Global Botanical Significance (one of only seven in North America) and world "Centre of Plant Diversity" by the World Conservation Union. The ecoregion boasts many unique invertebrates, although many of these are not as well studied as their plant counterparts.

For more information on the Klamath Mountains Ecoregion click on the link below:

http://www.dfw.state.or.us/conservationstrategy/docs/ecoregions/KlamathMtnsEcoSheet.pdf

HABITAT CONSERVATION OPPORTUNITIES

Conservation Opportunity Areas (COAs) are landscapes where broad fish and wildlife conservation goals would be best met. COAs were developed to guide voluntary, non-regulatory actions. There are three (3) COAs located within the RVMPO planning area. They are described below.

North Medford Area – This unique area provides important habitat for species living at lower elevations (valley) and includes the Denman Wildlife Area, Upper and Lower Table Rocks, Agate Desert Preserve, and the Whetstone Savannah Preserve.

This area contains many endemic, rare plants and is important for migrating and nesting waterfowl.

Key habitats are: aquatic; grasslands and oak savanna; riparian; and wetlands.

Key species are: horned lark; purple Martin; upland birds; waterfowl; Coho salmon; fall Chinook salmon; summer and winter steelhead; fairy shrimp;

Identified in other planning efforts:

- Oregon Biodiversity Project Conservation Opportunity Areas
- Oregon's Important Bird Areas (Denman WA, Table Rocks, Whetstone Savanna)
- The Nature Conservancy Ecoregional Assessment

Antelope Creek Area – This area encompasses the foothills east of Medford. The low elevation site provides a diversity of habitats for both terrestrial and aquatic species.

Key species are: fall Chinook salmon; winter steelhead; common king snake.

This area has been identified in other planning efforts including:

- American Fisheries Society Aquatic Diversity Areas
- Oregon Biodiversity Project Conservation Opportunity Areas
- The Nature Conservancy Ecoregional Assessment
- The Oregon Plan Core Salmon Areas

Siskiyou Crest-Soda Mountain – Located on the edge of three ecoregions, The Cascade-Siskiyou National Monument within this opportunity area was established for its "spectacular biological diversity."

The area provides habitat for a large number of species on the edge of their range, forming rare communities and species interactions.

Key habitats are: aquatic; grasslands and oak savanna; late successional mixed conifer forests; pine-oak woodlands; and wetlands. Recommended conservation action calls for working to restore fire regime to historical and natural range of variation.

Key species are: Siskiyou Mountains salamander; blue-gray gnatcatcher; great gray owl; northern spotted owl; willow flycatcher; Jenny Creek sucker; and fisher.

Identified in other planning efforts:

- American Fisheries Society Aquatic Diversity Areas
- Oregon's Important Bird Areas (Siskiyou Peak, Cascade-Siskiyou National Monument)
- The Nature Conservancy Eco-regional Assessment (Siskiyou Crest site, Soda Mountain site)

BARRIERS TO WILDLIFE MOVEMENT

Barriers to fish and wildlife movement are a key conservation issue for the RVMPO. Roads, dams and other structures act as barriers to the movement of fish and wildlife. These barriers reduce total habitat, create challenges to animal dispersal and reproduction and make wildlife more vulnerable to injury and death.

ODFW is working with the Oregon Department of Transportation, county transportation departments, and other partners to identify and reduce fish passage barriers and areas where wildlife mortality on highways occurs. ODFW's fish passage rules can be found here: http://www.dfw.state.or.us/fish/passage/ (OAR Chapter 635 Division 412).

Example of wildlife passageway under a highway in North Dakota

ODFW notes that stream crossing designs must meet fish passage criteria in order to provide fish passage for Oregon's native migratory fish species. Barriers to migration are a big challenge to recovery for the fish species in Bear Creek. Numerous tributaries have significant barriers near their confluence with Bear Creek. Restoration of native fish populations will lag if fish are not able to utilize the habitat available in the watershed, including urban stream areas.

During a project near a stream, it may be possible to utilize equipment and personnel to do smaller scale restoration projects on the nearby waterbody, such as adding some minor retrofits to improve fish passage. This can be scoped with ODFW pre-project.

ODOT is a partner in the Oregon Wildlife Movement Strategy, which is an interagency partnership to inventory and prioritize wildlife movement barriers on the state highway system. ODOT's Geo-Environmental Section is developing a Wildlife Collision Prevention Plan that addresses Federal Highway Administration and Oregon Department of Fish and Wildlife concerns for animal-vehicle collisions on the state highway system.

The effects of roads on wildlife can be mitigated through the design and construction of underpasses and overcrossings. For more information on wildlife and roads, click on the link below:

http://www.wildlifeandroads.org/decisionguide/

ADDRESSING IMPAIRED WATER RESOURCES

The Rogue Valley, like many regions in the United States, has experienced development and modification of the natural landscape. Subsequently, modifications of the natural landscape have led to water resource impacts. Surface waters and associated vegetation have been altered, leaving bodies of water with impairments, including increased temperatures, elevated levels of bacteria, and decreased dissolved oxygen levels and other concerns.

As a result of combined impairments to water bodies across the nation, the Clean Water Act was established, including a system for identifying and working to repair impaired water bodies. The system for identifying impaired water bodies is known as the 303(d) list and requires states to identify impaired waters within their state. The list identifies both the body of water and what impairments it has. The states are then required to prioritize their impaired water bodies and develop action plans, known as total maximum daily loads (TMDLs), to improve water quality of the listed systems.

TMDLs for the streams within the RVMPO (Bear Creek and Rogue River Basins) that meet the requirements of Section 303(d) of the Federal 1972 Clear Water Act have been approved.

Table 7.1.2: Rogue River Basin Streams Located within the Rogue Valley MPO with Approved TMDL Plans

Stream Segments (All listed streams are by river mile (RM), unless otherwise stated)	Parameters Covered in 2008 TMDL		
	Bacteria		**Temperature**
	E. coli	Fecal Coliform	
Antelope Creek (RM: 0 to 19.7)	S, FWS		S
Lake Creek (RM: 0 to 7.8)	S, FWS		S
Little Butte Creek (RM: 0 to 16.7)	S, FWS	S, FWS	S
Nichols Branch (RM: 0 to 2.7)	S, FWS		
North Fork Little Butte Creek (RM: 0 to 6.5)	FWS		S
South Fork Little Butte Creek(RM: 0 to 16.4)	S		S

Key: S=summer, FWS=fall/winter/spring

Source: Rogue Basin TMDL, ODEQ, Dec. 22, 2008

Table 7.2.3: Bear Creek Basin Streams within the RVMPO with Approved TMDL Plans

Stream Segments (All listed streams are from mouth to headwaters, unless otherwise stated)	Parameters Covered in 2007 TMDL					Parameters Covered in 1992 TMDL					
	Bacteria	Temperature	Sediments	Flow	Habitat	DO	Nutrient [P]	pH	Toxics	Chlorophyll(a)	Periphyton
Ashland Creek (Mouth to Ashland City)	Y										
Ashland Creek (Mouth to Ashland STP)							I		I		
Baldy Creek		S									
Bear Creek (Mouth to Neil Creek)	Y	S		*	*	Y	I	Y	I	S	Y
Butler Creek	FWS	S									
Carter Creek		S									
Coleman Creek	Y	S									
Crooked Creek	Y	S									
Emigrant Creek (mouth to dam)		S						Y			
Emigrant Crk (dam to Green Mtn. Crk)		S									
Griffin Creek	Y	S									
Hobart Creek		S									
Jackson Creek	Y	S									
Larson Creek	Y	S									
Lazy Creek	Y										
Lone Pine Creek		S									
Meyer Creek	Y	S									
Neil Creek (mouth to I-5)		S									
Payne Creek	Y										
Reeder Reservoir			Y								Y
Tyler Creek		S									
Walker Creek		S									
Wagner Crk (Horn Gulch to headwaters)		S									

Map 7.1.6(a) illustrates TMDL water bodies and dams; Tables 7.1.2 and 7.1.3 list TMDL stream segments within the RVMPO (Bear Creek and Rogue River Basins) along with their identified impairments. See Table 7.1.4 for a list of fish, wildlife and plant species including their status at the local, state or federal levels. (For example, State Species of Concern or Federally Threatened.)

STORMWATER MONITORING AND MANAGEMENT

Stormwater is the flow of water created by impermeable surfaces, such as roads, highways, bridges, sidewalks and parking lots. There are additional forms of development that contribute to stormwater runoff, such as commercial and residential buildings. Ultimately, the combinations of these impervious surfaces prevent water from infiltrating and percolating through the soils and into the groundwater (groundwater recharge). Consequently, water that used to be available through groundwater, as well as seeps, which may be needed by streams and other surface waters during the summer months may no longer be available. Therefore, a variety of interrelated impacts can occur.

A consequence of decreasing groundwater is a decrease in the amount of water available to surface waters, such as through seeps or springs. Typically during the warmer months when water levels are lower, seeps may be needed to augment stream flows in order to prevent surface waters (e.g., streams) from becoming shallow and warmer. Surface waters that do not receive appropriate inflow from seeps or springs may not properly function. Subsequently, the lower volumes of surface water lead to temperature increases which result in changes to aquatic and terrestrial species.

Impervious surfaces also lead to increased flows during months with high precipitation. Precipitation runs off and flows downhill (path of least resistance), and ends up in a receiving water body. It is noteworthy that increased runoff causes increased flow rates (seasonal peaks) which in turn cause scour and erosion, often resulting in modifications to the shape of the stream channel. For example, months with a lot of rain create peak flows in stream systems from the increased water being conveyed to them as a result of an increase in impervious surfaces. Consequently, stream channels can scour and banks can erode resulting in the channel being altered and subsequent changes to habitats and composition of species.

As stormwater runoff flows over ground surfaces, it can pick up debris, chemicals, dirt, and other pollutants and flow into a storm sewer system or directly to a lake, stream, river, wetland, or coastal water. Anything that enters a storm drain untreated is discharged into the water bodies. Pollutants commonly found in stormwater include nutrients (nitrogen and phosphorus), oil, bacteria, fertilizers, and metals (e.g., copper, lead, and zinc from automobile brake pads).

Impacts to aquatic and terrestrial habitats and associated fish and wildlife can result from roads and other impervious surfaces. Erosion and scour that changes a stream channel will modify flow, vegetation and temperature, and subsequently favor species adapted to the newly created conditions. In addition, pollutants draining from roads and parking lots can contribute to impaired water quality and degraded wildlife habitat. In relation to fish and aquatic species, these pollutants are a source of potent adverse effects to the biotic ecosystem, even at ambient levels. They are known to accumulate in the prey and tissues of juvenile salmon where they cause a variety of lethal and sub lethal effects including disrupted behavior, reduced olfactory function, immune suppression, reduced growth, disrupted smoltification, hormone disruption, disrupted reproduction, cellular damage, and physical and developmental abnormalities (National Oceanic and Atmospheric Administration (NOAA) Fisheries 2015). Therefore, care in the design of the transportation system is important. Stormwater discharge is

regulated under the Clean Water Act, Section 402. Projects will need to meet requirements of any local programs (e.g., NPDES Phase II) and design manuals (e.g. Rogue Valley Stormwater Water Quality Design Manual).

HISTORIC AND ARCHEOLOGICAL CONSIDERATIONS

Protection of historic and archeological resources must be considered as part of the decision-making process for transportation projects. Map 7.1.7 illustrates and provides additional information regarding national historic sites, districts and roads.

Numerous laws and regulations call for preservation and/or enhancement of cultural resources. These include the Department of Transportation (DOT) Act of 1966, the Federal-Aid Highway Act of 1968, the National Environmental Policy Act of 1969, the National Historic Preservation Act of 1966, the Archeological Resource Protection Act of 1979 and the Surface Transportation and Uniform Relocation Assistance Act of 1987. In addition, regulations by the Council on Environmental Quality (40 CFR, Part 1500-1508) and the Advisory Council on Historic Preservation (ACHP) (36 CFR, Part 800) have been promulgated to assure that effects on historic properties are considered in the development of federal undertakings. Historic properties are any historic district, site, building, structure or object included in, or eligible for inclusion in, the National Register of Historic Places.

Transportation officials are required to make a good faith effort to identify historic properties that may be affected by a transportation project. A discussion of the effects on historic properties must be included in the environmental documentation. This discussion is to be commensurate with the importance of the historic properties as well as the magnitude of the project's impacts on those properties.

The primary provisions related to historic preservation for transportation projects are Section 106 of the National Historic Preservation Act and Section 4(f) of the DOT Act. These provisions are applicable to actions that require federal approval or are undertaken with federal funds.

Section 106 of the National Historic Preservation Act of 1966 (NHPA) as amended through 2000 requires federal agencies to take into account the effects of their undertakings on historic properties and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on the undertaking. The historic preservation review and consultation process mandated by Section 106 is outlined in regulations issued by ACHP. Revised regulations, "Protection of Historic Properties" (36 CFR Part 800), became effective January 11, 2001 and were further amended in August 2004.

Federal agencies are responsible for initiating Section 106 review, most of which takes place between the agency and state and tribal officials. Appointed by the governor, the State Historic Preservation Officer (SHPO) coordinates the state's historic preservation program and consults with agencies during Section 106 review. Agencies also consult with officials of federally recognized Indian tribes when tribal lands or historic properties of significance to such tribes are involved. Some tribes have

officially designated Tribal Historic Preservation Officers (THPOs), who function as a SHPO on tribal lands, while others designate representatives to consult with agencies as needed.

At this time, none of the Tribes in the Region have a THPO. The MPO will consult with the Confederated Tribes of Grande Ronde; Confederated Tribes of Siletz; and Cow Creek Band of Umpqua Indians for each Regional Transportation Plan update. The appropriate Tribe to consult will be determined based upon historic and current information provided.

According to the Advisory Council on Historic Preservation, Section 106 review and consultation requires federal agencies to do the following:

- Determine if Section 106 of the NHPA applies to a given project and, if so, initiate consultation;
- Gather information to decide which properties in the project area are listed in or eligible for the National Register Historic Places;
- Determine how historic properties might be affected;
- Explore alternatives to avoid or reduce harm to historic properties; and
- Reach agreement with the SHPO/THPO (and the ACHP in some cases) on measures to resolve any adverse effects to historic properties.

Another protection to park and wildlife areas is provided by Section 4(f) of the U.S. Department of Transportation Act of 1966. This environmental regulation applies to projects that receive Department of Transportation (FHWA or FTA) funds. Section 4(f) (recodified in 49 USC 303, but still known as Section 4(f)) includes provisions prohibiting federal transportation agencies from using land from a significant publicly owned park, recreation area, wildlife or waterfowl refuge, or any land from an historic site of national, state, or local significance unless:

- There is no feasible and prudent alternative to the use of land, and
- The action includes all possible planning to minimize harm to the property resulting from use.

In assessing the environmental effects of an action through the National Environmental Policy Act process, FHWA includes an evaluation of the use of land protected under Section 4(f). The environmental regulations for applying Section 4(f) to transportation project development can be found at 23 CFR 771.135. For other detailed guidance on applying the requirements of Section 4(f), the FHWA wrote the Section 4(f) Policy Paper, which discusses such topics as the history of Section 4(f), alternatives analysis, mitigation, and how Section 4(f) relates to other statutes and regulations which protect the same types of resources, including Section 106 of the National Historic Preservation Act.

In order for FHWA field offices to make key determinations on projects having minor impacts or a net benefit on areas protected by Section 4(f), the agency issued several Nationwide Section 4(f) Programmatic Statements. Section 4(f) is considered by the preservation community to be one of the most effective tools in the protection of historic properties. But its stringent standards and interpretations by various court rulings have had the transportation community seeking revisions to provide more flexibility in implementing the law.

Additional information on archaeologically sensitive areas is provided on Map 7.1.7. This data was compiled by Archaeologist Jeff LaLande, with funding provided by the National Academies and ODOT.

The Archaeologically Sensitive Areas (Native American) layer is based on the Jeff LaLande's >40 years of local experience and current knowledge relative to which Bear Creek Valley terrain types (i.e., within the area located below about the 2,000-foot elevational contour) would have a greater potential likelihood for containing *possibly significant Native archaeological resources* than do other portions of the valley floor. Examples of significant resources would include winter villages and major seasonal camps.

Note: As compiled in December 2011, this map layer does not yet reference valley-bottom sites that may have been recorded since 1990 in the Oregon State Historic Preservation Office's archaeological-site database.

The Early Settlement Archaeologically Sensitivity Areas reflect the compiler's: (1) current knowledge of those urbanized areas (or locations of former major mining camps) where relatively intact/potentially significant early-historic archaeological deposits may yet remain, as well as: (2) results from the compiler's 2011 review of Jackson County's initial (1854) U.S. General Land Office (GLO) township-survey plats that give the approximate locations of *selected* original Donation Land Claim (DLC) settlers' cabins and farmhouses in the valley bottom.

Note: The selection of DLC sites was based on the compiler's best [not-field-checked] judgment as to just which of the various 1854-mapped structural sites would have a comparatively higher likelihood of still containing intact historic-period archaeological deposits than would other mapped DLC locations. (The locations of the selected cabin sites are approximate at best; if future transportation development or other projects were to be planned for such locations, a qualified land surveyor should consult the original GLO survey notes in an attempt to pinpoint a more accurate location.)

7.2 Environmental Justice

Environmental Justice encompasses three fundamental principles, listed in the adjacent box. These principles work to identify and appropriately address disproportionately high and adverse health or environmental effects on minority and low-income populations. Environmental Justice stems from Title VI of the Civil Rights Act of 1964 and Executive Order 12898 of 1994. The latter, Executive Order 12898, states that federal agencies incorporate achieving Environmental Justice into their missions. RVMPO maintains a separate Title VI & Environmental Justice Plan.

One of the RVMPO Regional Transportation Plan Environmental Justice goals is to achieve equal protection from environmental and health hazards and equal access to decision-making for all citizens of the Rogue Valley in an effort to promote quality of life.

Environmental Justice principles are addressed through policy, as well as through actions by the RVMPO to promote equality including criteria in the project selection process as described in *Chapter 8 Plan Implementation*. Through constant and consistent assessment the RVMPO will work to assure Environmental Justice – such as the recently completed Environmental Justice-related study, the RVMPO Transportation Needs Assessment for Traditionally Underserved Populations.

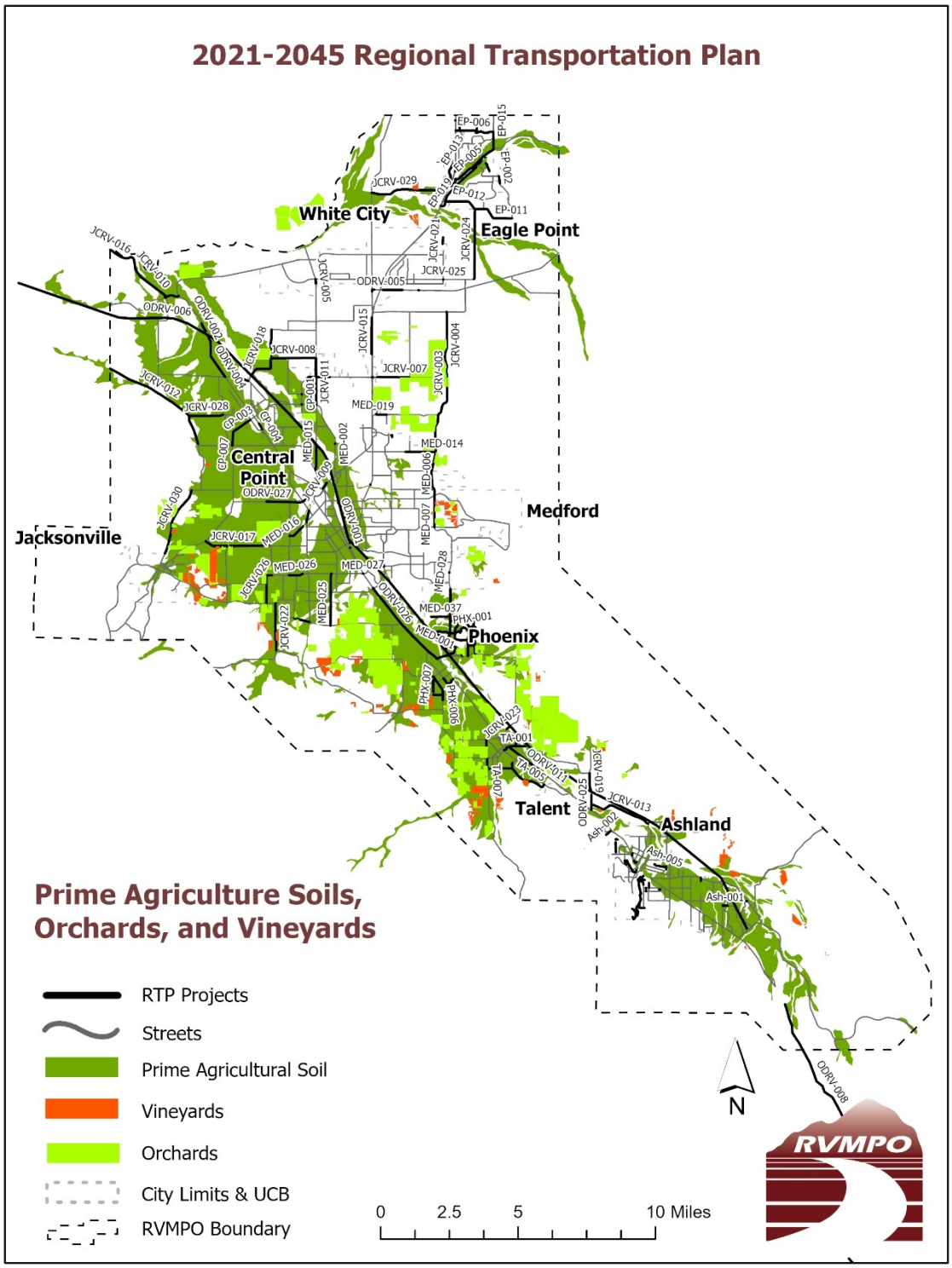
Environmental Justice Fundamental Principles

1. 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.

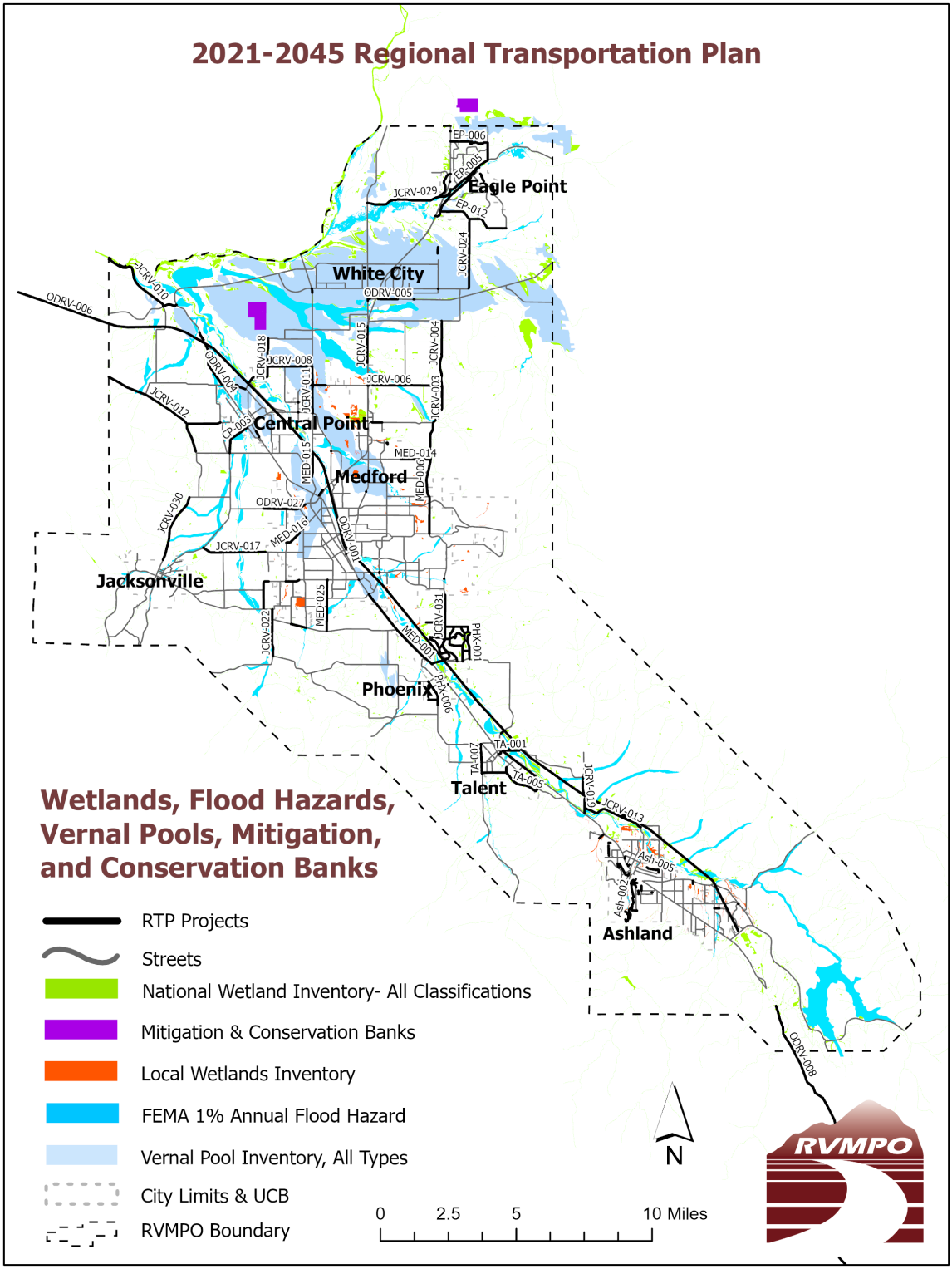
2. Ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.

3. Prevent the denial of, reduction in, or significant delay of these protections for minority and low-income populations.

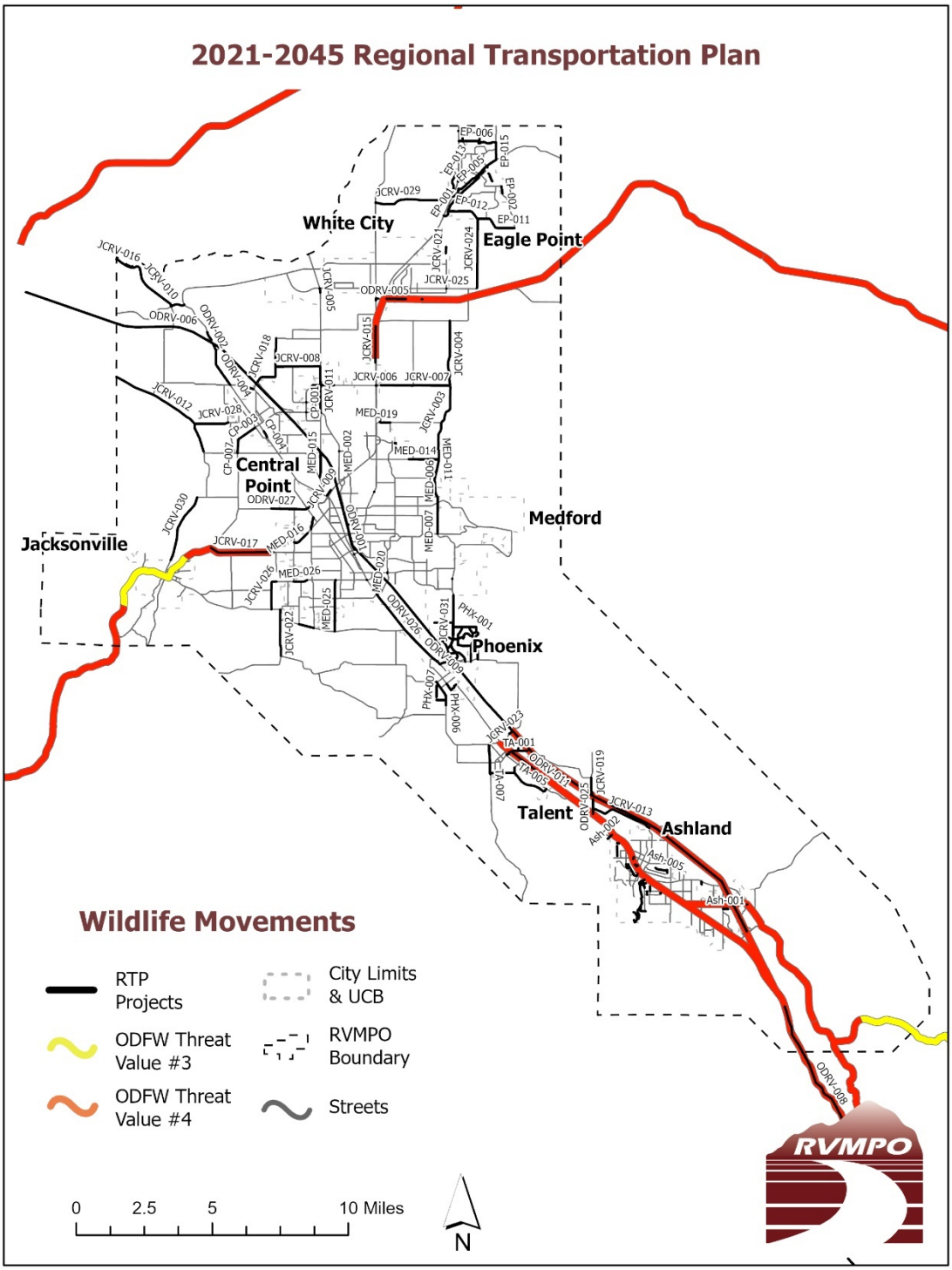
Map 7.1.1: Prime Agricultural Soils, Orchards, and Vineyards



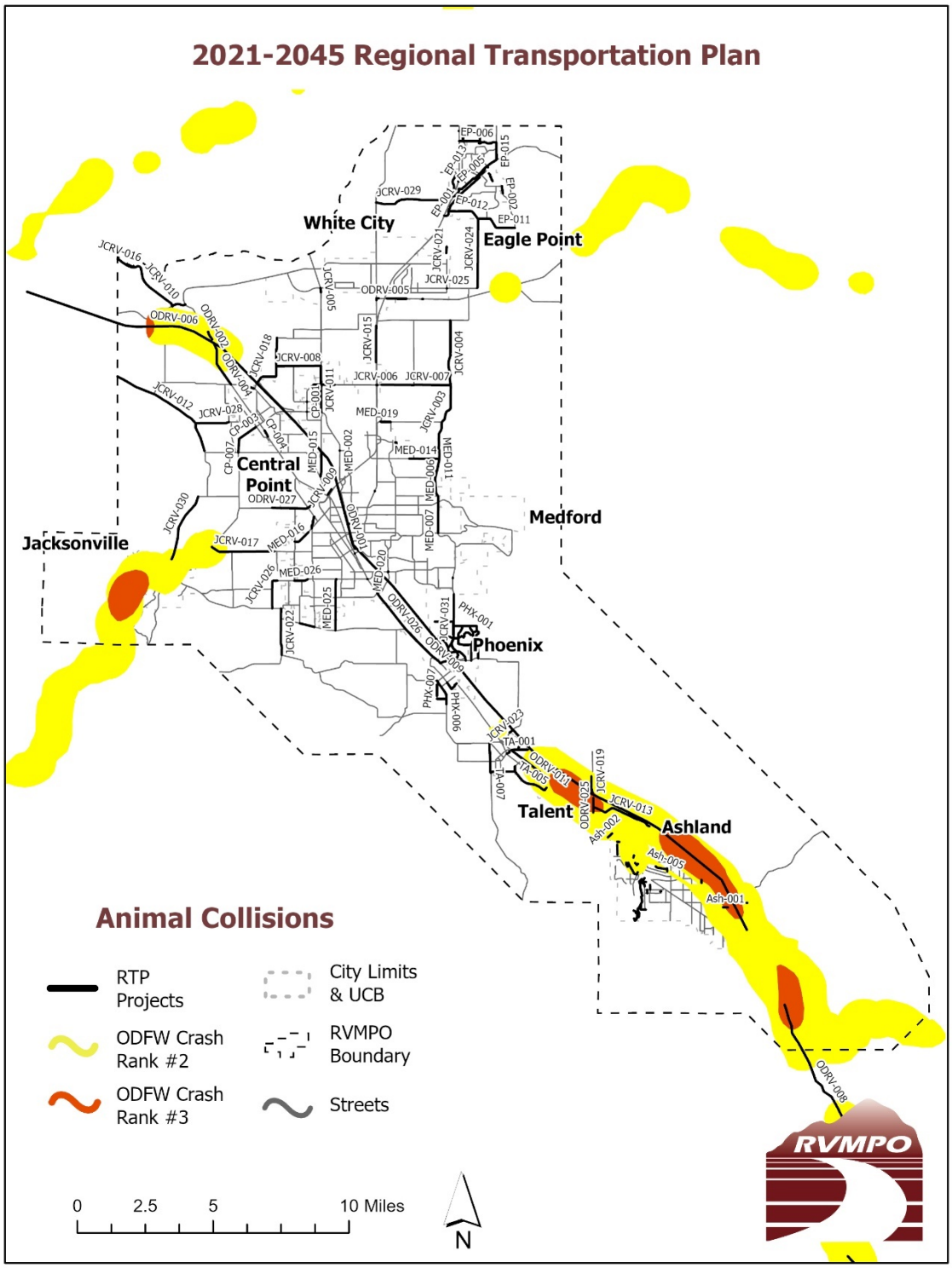
Map 7.1.2: Wetlands, Floodplain, and Vernal Pools



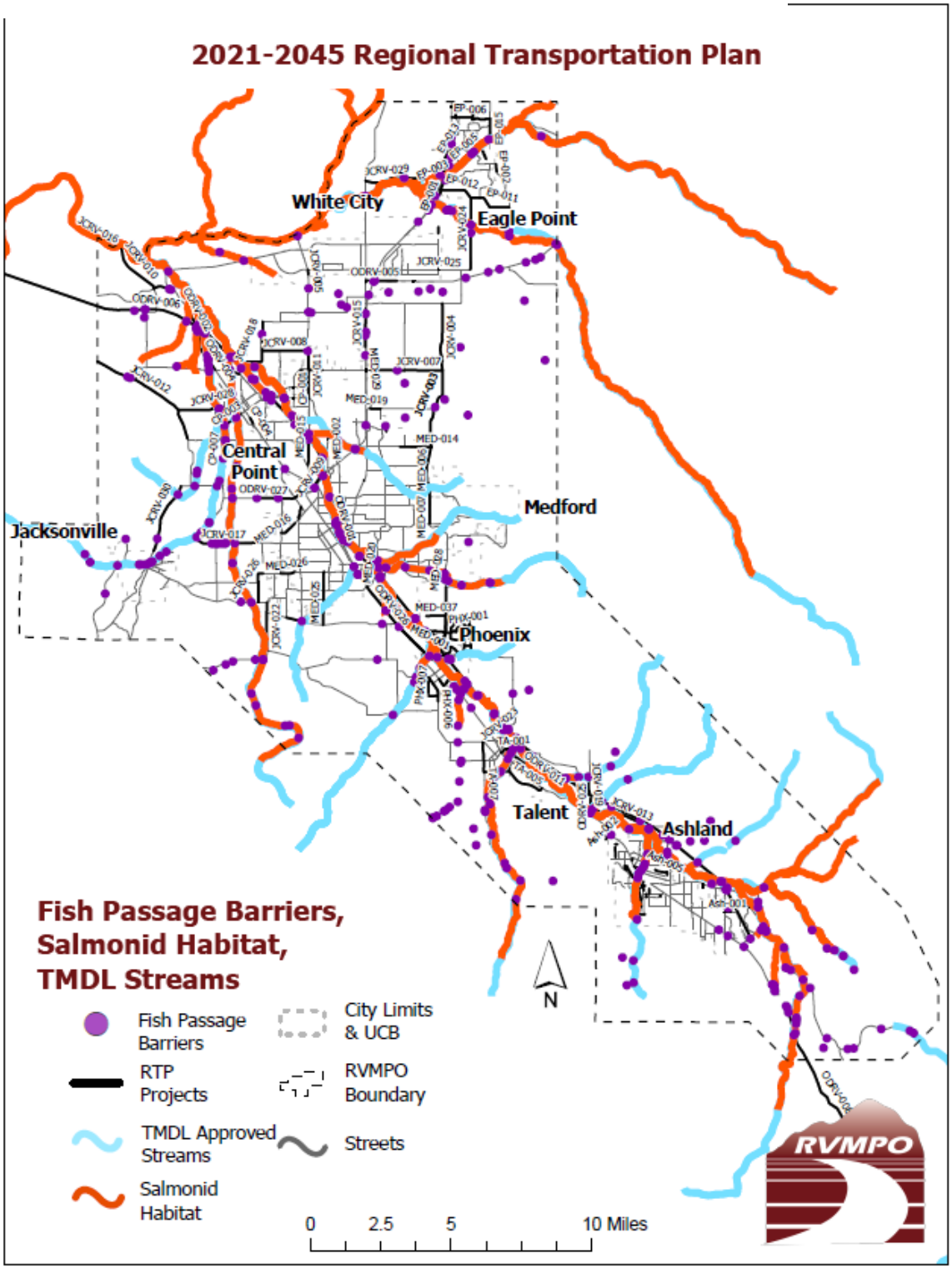
Map 7.1.3: Wildlife Movements



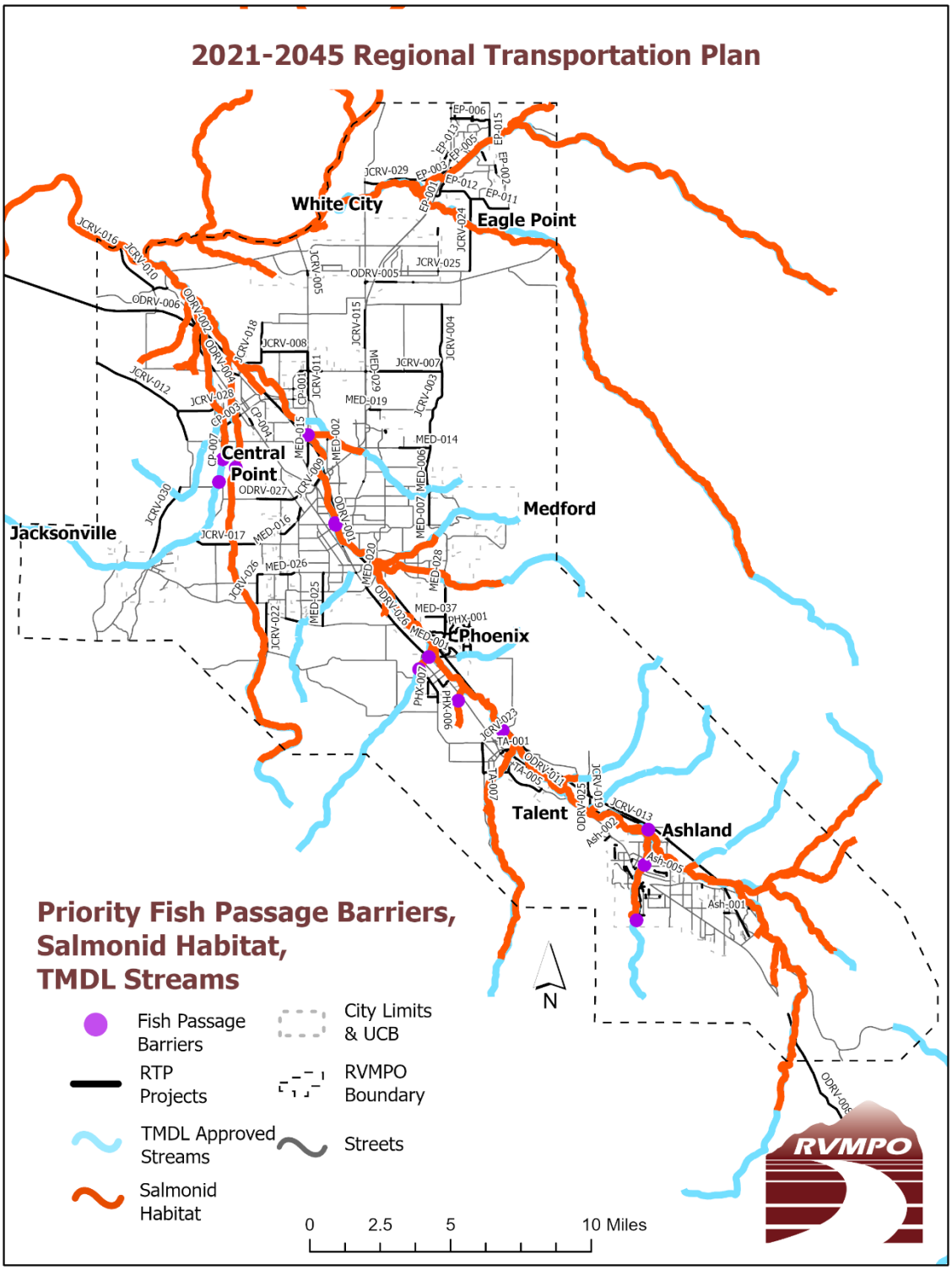
Map 7.1.4: Animal Collisions



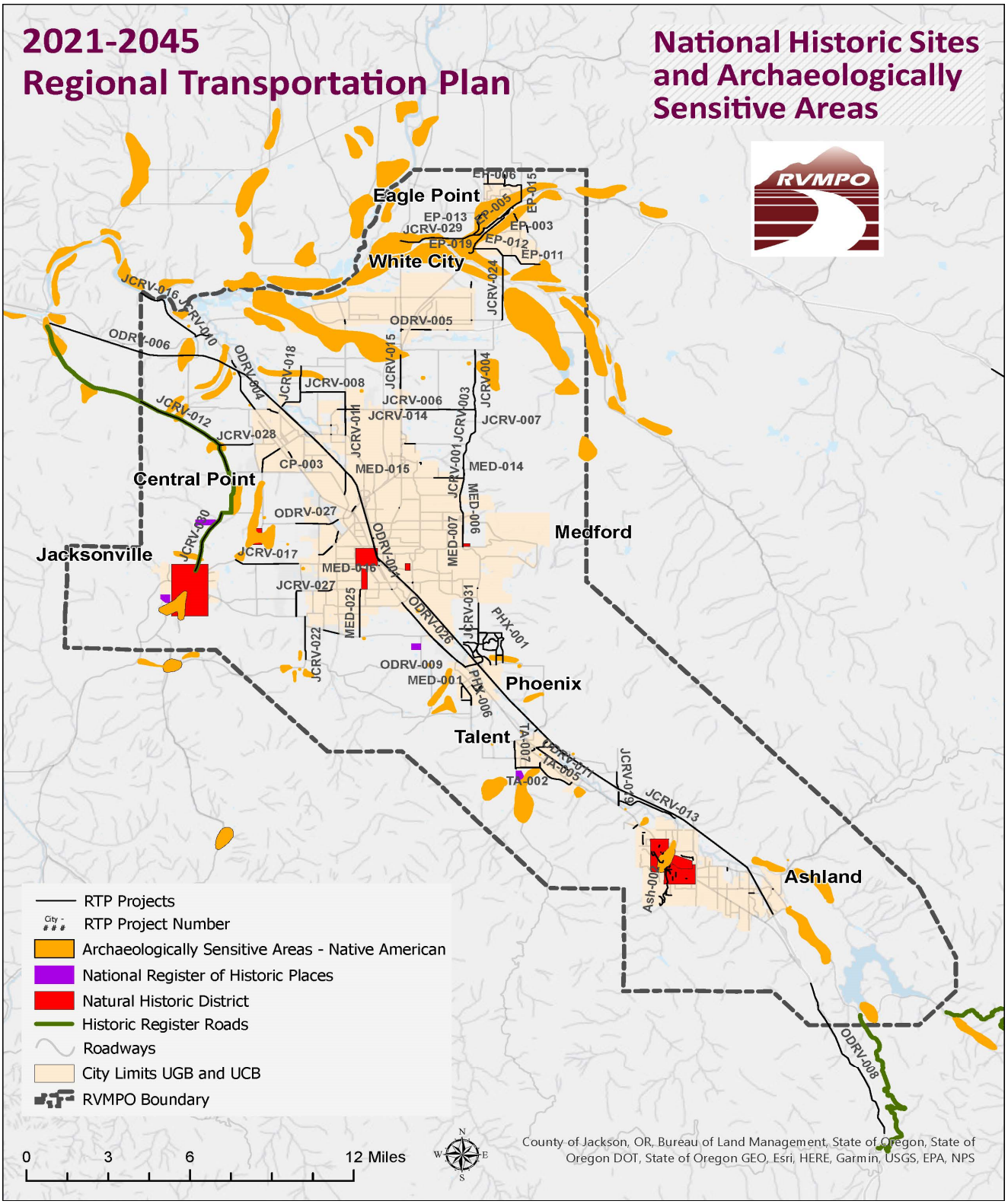
Map 7.1.5(a): Fish Habitat and Barriers



Map 7.1.5(b): Priority Fish Barriers



Map 7.1.6: Archeologically Sensitive Areas



This Page Intentionally Left Blank

CHAPTER 8
PLAN IMPLEMENTATION

INTRODUCTION

This chapter demonstrates how the goals and policies in Chapter 2 are implemented through procedures and criteria that the RVMPO uses to identify projects. The three parts of this chapter include: how and why projects are listed in the RTP, the criteria and considerations used by the RVMPO to fund projects, and the RTP Project List by jurisdiction.

8.1 PROJECTS INCLUDED IN AN RTP

Requirements for metropolitan plans are described in Federal Highway Administration rules, 23 CFR Part 450.324. The RTP must show through a horizon of at least 20 years the capital investment, and operations and management strategies planned to lead to an integrated multimodal transportation system. Funding for all projects shown in the plan must be identified, or there must be a reasonable expectation for funding. Funding expectations for this plan were developed in consultation with ODOT, USDOT, and the member jurisdictions. The estimates are the best available at the time, but are likely to change – especially in the long-range years, 2035-2045. Details about the financial planning process are available in *Chapter 9 Financial Plan*.

Federal transportation planning regulations specify the types of projects to be included in the Regional Transportation Plan (RTP). They include:

- New transportation facilities that include major roadways, transit, multimodal and intermodal facilities, pedestrian walkways and bicycle facilities, and intermodal connectors that should function as an integrated metropolitan transportation system… *(23 CFR 450.332, Development and Content of the Metropolitan Transportation Plan)*.

TRANSPORTATION SYSTEM PLANS

In Oregon, transportation planning begins in the local jurisdictions through the state-required Transportation System Plans. These plans identify local goals, existing and future system deficiencies and needs, and describe the projects that will be undertaken to address those needs, generally over a 20-year period. Public input is a key component of the TSP process and TSP's reflect the kind of transportation system the public believes the region should have. As a result, the RVMPO has followed a policy of drawing projects for the RTP from the local TSPs. Not all transportation projects planned within the region by Jackson County and the seven RVMPO cities are contained in this plan, however. Numerous local improvements are planned and implemented solely by the jurisdiction.

U.S. CLEAN AIR ACT

The Clean Air Act further defines the projects that must be included in MPO plans and in the analysis for transportation conformity. Because the RVMPO area is designated by the Environmental Protection Agency (EPA) as an "attainment and maintenance area" for carbon monoxide and particulates (see details in *Chapter 6 Air Quality* and in the Air Quality Conformity Determination, published separately), the Clean Air Act requirements must be met in this plan.

U.S Clean Air Act and the RTP

The RVMPO's long-range plan, as well as the short-range project program – the Transportation Improvement Program ("TIP") – must be found by the U.S. Department of Transportation to conform to the Clean Air Act in order to go into effect.

The Clean Air Act requires that plans include all *"regionally significant projects,"* and defines regionally significant as being on a facility that serves regional transportation needs, such as access to an area outside the region, major activity centers in the region, major developments and planned developments (malls, sports complexes, etc.)

Generally, these are the projects that are part of a regional travel demand modeling process (which excludes most local streets). At a minimum, regionally significant projects are those on principal arterials. Other projects may be included based on interagency consultation conducted for the Air Quality Conformity Determination, described in Chapter 6 and the Air Quality Conformity Determination for this plan (published separately).

8.2 Project Selection Criteria

Introduction

There are two project funding sources over which the RVMPO has discretion, both are federal and funded through the Highway Trust Fund. They are the Surface Transportation Block Grant (STBG) and the Congestion Mitigation and Air Quality (CMAQ) programs. The RVMPO has developed criteria for evaluating and scoring applications for these funds as a way of implementing RTP goals and policies. The intent is for the project selection process to treat all applications and jurisdictions fairly and provide the greatest possible public benefit. This chapter describes the evaluation criteria for both programs. Additional general background information about these two programs is in *Chapter 9 Financial Plan*.

Surface Transportation Block Grant Program

The Surface Transportation Block Grant Program (STBG) is the more flexible of the two fund sources and can be used on a wide variety of projects. As noted in the criteria below, the RVMPO dedicates $700,000 of the local allocation of STBG funds to the Rogue Valley Transportation District (RVTD) for enhanced transit service. This distribution is in accordance with state Transportation Planning Rule requirements, where the region must take several specific actions to reduce reliance on vehicle travel, especially single-occupant vehicle travel.

Congestion Mitigation & Air Quality Program

Air quality concerns in the Rogue Valley region and interest in reducing pollutants associated with transportation or on-road sources has qualified the region within the Medford-Ashland Air Quality Maintenance Area (AQMA) for funds from the CMAQ program. Congress first authorized the program in 1991 for surface transportation related projects that contribute to air quality improvements as well as reducing congestion. Along with other measures, the CMAQ program has been designed to realign the focus of transportation planning toward a more inclusive, environmentally-sensitive and multimodal approach to addressing transportation problems. Currently, the distribution of funds to each AQMA is based on statewide formula developed in 2006 by ODOT. The Rogue Valley Region has federally monitored programs in place to limit carbon monoxide and particulates (PM_{10}).

Selecting Projects for Implementation

RVMPO overhauled its project selection process in 2011 to create a single selection process for both funding streams. By having a single application and evaluation process the projects with the greatest benefit to the region can be more clearly identified through comparison with other proposed projects. More recently, in 2016, criteria language was revised to reflect the results of an Environmental Justice study conducted by RVMPO.

The evaluation criteria are drawn from the goals in the RTP, the organizational goals adopted by the Policy Committee and requirements of the current transportation act. The entire process is intended to help implement the organizational goal: "Strategically use RVMPO funding to pursue RVMPO goals."

Goals and requirements are grouped into four broad performance categories: mobility, community vitality and livability, transportation options and resource conservation. A total of 21 project evaluation criteria exist, each with guidelines on how they are to be measured in project evaluation.

Table 8.2.1 Policy Foundation for RVMPO Project Selection

	RVMPO Goal	2013-2034 RTP Goal	MPO Requirements (23 CFR, Part 450.306)
Mobility		Plan for, develop and maintain a balanced multi-modal transportation system to address existing and future needs.	Enhance the integration and connectivity of the transportation system, across and between modes for people and freight.
		Optimize safety and security of the transportation system.	Increase accessibility and mobility.
			Increase safety of the transportation system.
			Increase security of the transportation system.
Community Vitality & Livability	Continue to work toward more fully integrating transportation and land use planning.	Use transportation investments to foster compact, livable communities. Develop a plan that builds on the character of the community, is sensitive to the environment and enhances quality of life.	Protect and enhance the environment, promote energy conservation, improve quality of life, and promote consistency between transportation improvements and planned growth and economic development.
		Use transportation investments to foster economic opportunities.	Support economic vitality especially by enabling global competitiveness, productivity and efficiency.
Transportation Options	Increase integration and availability of transportation options.	Use incentives and other strategies to reduce reliance on single-occupant vehicles.	
Resource Conservation	Incorporate environmental and energy conservation into the RVMPO planning process.	Maximize efficient use of transportation infrastructure for all users and modes.	Promote efficient system management and operation.
		Encourage use of cost-effective emerging technologies to achieve regional transportation goals.	Emphasize the preservation of the existing transportation system.

Both staff and the RVMPO Technical Advisory Committee review the project funding criteria every two years in association with the biennial project funding solicitation process. It is expected, however, that the evaluation criteria may be updated outside of this timeframe, as necessary.

EVALUATION AND REVIEW

Evaluation procedures were developed by the RVMPO advisory committees and staff, and adopted by the Policy Committee. The process includes a uniform methodology to estimate costs so that committees can measure the comparative value of projects.

Projects are initially evaluated by staff. Staff results as well as applicant information and evaluation materials are posted on the RVMPO website and advertised for public comment. The Technical Advisory Committee (TAC) and Public Advisory Council (PAC) review all materials and make recommendations. The Policy Committee makes all final funding decisions.

This Page Intentionally Left Blank

8.3 RTP PROJECT LIST

This section lists all RTP projects by jurisdiction. It identifies all regional transportation actions anticipated to occur in the planning area through 2045, showing how the region will work toward meeting the goals and policies of the RTP. These projects provide facilities for motorists, buses, bicyclists and pedestrians and serve long-range needs for mobility and accessibility based on anticipated development.

Projects listed – referred to as Tier 1 projects – by no means represent of the transportation actions anticipated. Each jurisdiction will plan and carry out a multitude of local projects, which don't meet the criteria to be part of the RVMPO process. The local activities are based on the local Transportation System Plans (TSPs), which cities and the county develop as part of their state comprehensive planning obligations. The RVMPO projects are first identified in the local TSPs.

This plan identifies approximately $800 million dollars expected to be available to invest in the regional transportation system through 2045. Of that, transit provider Rogue Valley Transportation District plans on receiving just over $247 million for its activities. Details about the financial assumptions used to calculate these sums and financially constrain the projects in this Part are provided in Chapter 9: Financial Plan.

PROJECT TIMING

The project list on the following pages provides a brief description of the work to be done, estimated cost based on year of construction or implementation (inflation adjusted) and the timing.

Projects are scheduled by the following timeframes:

- Short Range – Between 2021 and 2024
- Medium Range – Between 2025 and 2034
- Long Range – Between 2035 and 2045.

Project numbers shown in the left hand column are internal tracking number for project identification within the RVMPO. As projects are implemented they are added to the RVMPO programming document, the Transportation Improvement Program (TIP) and forwarded into ODOT's Statewide Transportation Improvement Program (STIP) for authorization to proceed. At the TIP-STIP stage, projects receive a programming Key Number, which differs from RTP numbers. The key number is useful for tracking projects through implementation.

Maps showing project locations by RTP number are located at the end of this chapter, beginning on page 8.28.

Table 8.3.1 Project List by Jurisdiction

PROJECT NUMBER	LOCATION	DESCRIPTION	TIMING	COST	Cost by Range	Federal Funds Needed/ Programmed	Conformity Status	Within PM10/CO Maintenance Areas
Ashland								
Ash-001	Independent Way	Extend street from Washington St to Tolman Creek Rd; sidewalks, bicycle lanes (715-ft, 0.13 Miles)	short	$ 1,055,000			Non-Exempt	PM10
Ash-002	Chip Seal	project entails grading, prepping and installing a double chip seal on approximately 44,903 square yards of existing dirt roads within the Ashland City limits. (approx. 5.3 miles)	short	$ 561,648		$ 561,648	Exempt-93.126 Table 2 - Pavement resurfacing and/or rehabilitation	PM10
				Short Range (2021-2025) Total	**$ 1,616,648**			
		NO MID-RANGE PROJECTS						
				Long Range Projects		**$ -**		
Ash-003	Intersection Improvements: Ashland-Oak Knoll-E. Main	Realign intersection, install speed-reduction treatments (950-ft, 0.18 Miles)	long	$ 1,184,195			Exempt-93.127 - Table 3: Intersection Channelization	PM10
Ash-004	Normal Avenue Extension	Extend roadway to East Main; sidewalks, bicycle lanes (2,250-ft, 0.43 Miles)	long	$ 5,916,032			Non-Exempt	PM10
Ash-005	Clear Creek Drive Extension	Extend road to connect with N. Mountain Ave. (2,000-ft, 0.38 Miles)	long	$ 4,601,359			Non-Exempt	PM10
				Long Range (2036-2045) Total	**$ 11,701,586**	**$ -**		
		TIER TWO PROJECT LIST (UNFUNDED)						
Ash-006	E. Nevada Street Extension	Extend street over Bear Creek to link roadway at Kestrell; sidewalks, bicycle lanes (675-ft, 0.13 Miles)	TIER II	$ 5,055,500			Non-Exempt	PM10

PROJECT NUMBER	LOCATION	DESCRIPTION	TIMING	COST	Cost by Range	Funds Available	Federal Funds Needed	Conformity Status	Within PM10/CO Maintenance Areas
Central Point									
CP-001	Beebe at Hamrick Road Signal	Install new four way signal at Beebe and Hamrick Roads	short	$ 350,000		$ 350,000		Exempt 93.127 Table 3 - Signalization at individual intersections	PM10
CP-002	Hamrick at East Pine	Signal Upgrade - Install new north bound protected left, south bound designated right turn lane	short	$ 600,000		$ 600,000		Exempt 93.127 Table 3 - Signalization at individual intersections; Intersection channelization	PM10
CP-003	W. Pine Street Reconstruction: Glenn Way to Brandon Ave	Widen W. Pine St between Glenn Way and Brandon Ave; add sidewalks, curb and gutter, & bike lanes; 2 paved travel lanes and 1 continuous left turn lane. Drainage will also be installed/upgraded (2,200 ft, 0.42 miles)	short	$ 4,549,000				Exempt 93.126 Table 2 - Bicycle and Pedestrian facilities, Shoulder improvements, widening narrow pavements (no additional travel lanes)	PM10
				Short Range (2021-2025) Total	**$ 5,499,000**	**$ 14,143,000**			
CP-004	OR 99: Traffic Calming Unit 3	Traffic Calming (300 ft)	medium	$ 259,043				Exempt 93.126 Table 2 - Projects that correct, imprve, or eliminate a hazardous location or feature.	PM10
CP-005	Scenic Ave., Mary's Way to Scenic Middle School	Widen to add bike lanes and sidwalks (urban upgrade - no new travel lanes) (700 ft)	medium	$ 865,078				Exempt 93.126 Table 2 - Bicycle and Pedestrian facilities	PM10
				Medium Range (2026-2035) Total	**$ 1,124,121**	**$ 18,276,000**	**$ -**		
CP-006	Table Rock Rd. & Vilas Rd Intersection	Widen to add turn lanes	long	$ 1,751,803				Exempt 93.127 Table 3 - Intersection channelization projects	PM10
CP-007	Hanley – Brandon to Beall Lane	Widen to add center turn lane, bike lanes , sidewalks (no new travel lanes) (2,150 ft)	long	$ 3,286,685				Exempt 93.126 Table 2 - Bicycle and Pedestrian facilities, Shoulder improvements, widening narrow pavements (no additional travel lanes)	PM10
				Long Range (2036-2045) Total	**$ 5,038,488**	**$ 9,001,000**	**$ -**		

PROJECT NUMBER	LOCATION	DESCRIPTION	TIMING	COST	Cost by Range	Funds Available	Federal Funds Needed	Conformity Status	Within PM10/CO Maintenance Areas
Phoenix									
				Short Range (2021-2025) Total		**$ 776,000**			
PHX-001	Urban Reserve Areas PH-5, PH-10	Construct new street network (City Contribution) - length: approx. 5.841 miles	Medium	$1,000,000				Non-Exempt	PM10
PHX-002	Rose St, Oak to 1st	Install sideawalks - length: .218 miles	Medium	$346,500				Exempt-93.126 Table 2 - Bicycle and Pedestrian facilities	PM10
PHX-003	Camp Baker Road, Hilsinger to Colver	new or improved sidewalks on both sides - length: .258 miles	Medium	$445,000				Exempt-93.126 Table 2 - Bicycle and Pedestrian facilities	PM10
PHX-004	Oak St. Rose to Main	Install sideawalks - length: .216 miles	Medium	$363,000				Exempt-93.126 Table 2 - Bicycle and Pedestrian facilities	PM10
PHX-005	Colver Rd., First St. to 4th	Widen and construct sidewalks, bike lanes (no new travel lanes) .209 miles	Medium	$ 595,000				Exempt-93.126 Table 2 - Bicycle and Pedestrian facilities	PM10
PHX-006	Colver Rd., First St. to Southern UGB Boundary	Construct multi-use path on east side - length: .410 miles	Medium	$ 250,000				Exempt-93.126 Table 2 - Bicycle and Pedestrian facilities	PM10
				Medium Range (2026-2035) Total	**$ 2,999,500**	**$ 2,307,000**			
PHX-007	Hilsinger, Colver Road to UGB Boundary	Total reconstruct with addition of bike lanes and sidewalks, stormwater management facilities (no new travel lanes) .450 miles	long	$ 770,000				Exempt-93.126 Table 2 - Pavement resurfacing and/or rehabilitation, Bicycle and Pedestrian facilities	PM10
				Long Range (2036-2045) Total	**$ 770,000**	**$ 3,236,000**	**$ -**		

DESCRIPTION	TIMING	COST	Cost by Phase	Funds Available	Federal Funds Needed	Conformity Status	Within PM10/CO Maintenance Areas
Talent							
Road diet on W. Valley View from Hwy 99 to aprox. 0.46 miles to east. Remove existing and repave and restripe bike and ped upgrades	short	$ 1,400,000				Exempt-Table 2 - Safety improvements, pavement marking, bicycle and pedestrian facilities	PM10
Short Range (2021-2025) Total			**$ 1,400,000**	**$ 1,793,000**	**$ -**		
Rebuild and upgrade to urban major collector standard (widen lanes, add bicyle lanes, sidewalks) - no new travel lanes, approximately 3,500 feet	medium	$ 3,430,000				Exempt 93.126 Table 2 - Bicycle and Pedestrian facilities, Shoulder improvements, widening narrow pavements (no additional travel lanes)	PM10
Construct new collector street (50 feet), approximately 525 feet	medium	$ 730,000				Non-Exempt	PM10
Construct new 10-foot-wide multimodal path near Wagner Creek connecting to Bear Creek Greenway (install new creek crossing), approximately 995 feet	medium	$ 880,000				Exempt-Table 2 - bicycle and pedestrian facilities	PM10
Medium Range (2026-2035) Total			**$ 5,040,000**	**$ 2,607,000**			
Construct new railroad district collector street, approximately 5,135 feet	long	$ 5,200,000				Non-Exempt	PM10
Upgrade to collector standard and upgrade railroad crossing & restrict other crossings (Pleasant View, Hill Top) - no new travel lanes, approximately 400 feet	long	$ 800,000				Exempt - Table 2 - Safety, widen narrow pavements (no additional travel lanes)	PM10
Construct new collector street west of city in Urban Reserve area TA-1, approximately 4,415 feet	long	$ 2,730,000				Non-Exempt	PM10
Long Range (2036-2045) Total			**$ 8,730,000**	**$ 3,881,000**			

PROJECT NUMBER	LOCATION	DESCRIPTION	TIMING	COST	SDCs	DEVELOPER	Other	Funds Available	Grant Funds Needed	Conformity Status	Within PM10/CO Maintenance Areas
Eagle Point											
Short Range (2021-2025) Total								**$ 6,626,000**			
EP-001	South Shasta Avenue - Alta Vista Road to Arrowhead Trail (Phase I)	Urban Upgrade (Collector) with Bike Lanes and Sidewalks (no new travel lanes) 2,060 ft	short	$ 450,000	$300,000	$150,000				Exempt-Table 2 - bicycle and pedestrian facilities	PM10
EP-002	Stevens Road - Riley Road	Pedestrian Path to EP National Cemetery 1,750	short	$ 325,000	$25,000		$25,000		$275,000	Exempt-Table 2 - bicycle and pedestrian facilities	PM10
EP-003	S. Royal Ave Improvements, Design & ROW	Design & ROW purchase for future urban upgrade to roadway	short	$ 488,423	$50,000				$438,423	Non-exempt	PM10
	SHORT RANGE TOTAL			**$ 1,263,423**							
	MEDIUM RANGE										
EP-004	North Royal Avenue - Loto Street to E. Archwood Drive	Little Butte Creek Pedestrian Trail 2,500 ft	medium	$ 150,000						Exempt-Table 2 - bicycle and pedestrian facilities	PM10
EP-005	Royal Avenue - OR62 to Reese Creek Road	Urban Upgrade (Arterial) with Bike Lanes and Sidewalks (no new travel lanes) 4,100 ft	medium	$ 1,550,000	$150,000	$0	$50,000		$1,350,000	Exempt 93.126 Table 2 - Bicycle and Pedestrian facilities, Shoulder improvements, widening narrow pavements (no additional travel lanes)	PM10
EP-006	Barton Road - Highway 62 to Havenwood	Urban Upgrade (Collector) with Bike Lanes and Sidewalks (no new travel lanes) 2,800 ft	medium	$ 475,000	$25,000	$450,000				Exempt 93.126 Table 2 - Bicycle and Pedestrian facilities, Shoulder improvements, widening narrow pavements (no additional travel lanes)	PM10
EP-007	Havenwood Drive - Barton Road to UGB	Extension (Collector) with Bike Lanes and Sidewalks 690 ft.	medium	$ 525,000	$0	$525,000				Non-exempt	PM10
EP-008	Sienna Hills Drive - Barton Road to UGB	Extension (Collector) with Bike Lanes and Sidewalks 700 ft.	medium	$ 550,000	$25,000	$525,000				Non-exempt	PM10
Medium Range (2026-2035) Total				$ 3,250,000	$ 200,000	$ 1,500,000		$ -	$ 1,350,000		
	LONG RANGE (2036-2045)										
EP-009	Havenwood Drive - UGB to Rolling Hills Drive	Extension (Collector) with Bike Lanes and Sidewalks 710 ft	long	$ 575,000		$575,000				Non-exempt	PM10
EP-010	Sienna Hills Drive - UGB to Rolling Hills Drive	Extension (Collector) with Bike Lanes and Sidewalks 710 ft	long	$ 650,000	$50,000	$600,000				Non-exempt	PM10
EP-011	Alta Vista Road - Robert Trent Jones to Riley Road	Urban Upgrade (Arterial) with Bike Lanes and Sidewalks (no new travel lanes) 4,600 ft	long	$ 1,500,000	**$150,000**	**$1,350,000**				Exempt 93.126 Table 2 - Bicycle and Pedestrian facilities, Shoulder improvements, widening narrow pavements (no additional travel lanes)	PM10

EP-012	Alta Vista Road - S. Shasta Avenue to Robert Trent Jones	Urban Upgrade (Arterial) with Bike Lanes and Sidewalks (no new travel lanes) 6,050 ft	long	$ 750,000	**$600,000**	**$100,000**			**$50,000**	Exempt 93.126 Table 2 - Bicycle and Pedestrian facilities, Shoulder improvements, widening narrow pavements (no additional travel lanes)	PM10
EP-013	Hannon Road - West Linn Road to Nick Young Road	Urban Upgrade (Collector) with Bike Lanes and Sidewalks (no new travel lanes) 2,000 ft.	long	$ 1,000,000	**$250,000**	**$750,000**				Exempt 93.126 Table 2 - Bicycle and Pedestrian facilities, Shoulder	PM10
EP-014	Nick Young Road - OR 62 to Hannon Road	Urban Upgrade (Collector) with Bike Lanes and Sidewalks (no new travel lanes) 600 ft.	long	$ 375,000	**$25,000**	**$350,000**				Exempt 93.126 Table 2 - Bicycle and Pedestrian facilities, Shoulder improvements, widening narrow pavements (no additional travel lanes)	PM10
EP-015	Reese Creek Road - Royal Ave to Barton Rd	Urban Upgrade (Collector) with Bike Lanes and Sidewalks (no new travel lanes) 2,500 ft.	long	$ 550,000						Exempt 93.126 Table 2 - Bicycle and Pedestrian facilities, Shoulder improvements, widening narrow pavements (no additional travel lanes)	PM10
EP-016	South Shasta Avenue - Highway 62 to Arrowhead Trail (Phase II)	Urban Upgrade (Collector) with Bike Lanes and Sidewalks (no new travel lanes) 3,020 ft.	long	$ 750,000	$450,000	$300,000				Exempt 93.126 Table 2 - Bicycle and Pedestrian facilities, Shoulder improvements, widening narrow pavements (no additional travel lanes)	PM10

EP-017	Royal Ave/Old Highway 62 Intersection	Intersection Realignment	long	$ 550,000	$250,000	$300,000				Exempt 93.127 Table 3 - Intersection channelization projects	PM10
EP-018	Little Butte Park Pedestrian Bridge	New Pedestrian Bridge Near Teakwood	long	$ 2,500,000	$450,000				$2,050,000	Exempt-Table 2 - bicycle and pedestrian facilities	PM10
EP-019	S. Shasta Ave - Arrowhead Trail to Loto Street	Urban Upgrade (Collector) with Bike Lanes and Sidewalks (no new travel lanes) 4,500 ft.	long	$ 650,000	$350,000				$300,000	Exempt 93.126 Table 2 - Bicycle and Pedestrian facilities, Shoulder improvements, widening narrow pavements (no additional travel lanes)	PM10
EP-020	Cottonwood at Hwy 62	Realign Intersection	long	$ 50,000	$50,000					Exempt 93.127 Table 3 - Intersection channelization projects	PM10
EP-021	Linn Rd at Hwy 62	Dual Left Turn Lanes	long	$ 200,000	$200,000					Exempt 93.126 Table 2 - Projeccts that correct, improve, or eliminate a hazardous feature.	PM10
EP-022	Onyx St Extension	Extension Collector with Bike Lanes and Sidewalks 1,250 ft.	long	$ 325,000	$225,000	$100,000				Non-exempt	PM10
EP-023	Hwy 62 @ Rolling Hills Dr	Signalization	long	$ 500,000	$500,000					Exempt 93.127 Table 3 - Intersection Signalization at individual intersections	PM10
Long Range (2036-2045) Total				$ 10,925,000	$ 3,550,000	$ 4,425,000		$ -	$ 2,400,000		
		TIER II									
EP-024	West Lin Road - OR 62 to Dahlia Terrace	Urban Upgrade (Collector) with Bike Lanes and Sidewalks (no new travel lanes) 2,880 ft.	TIER II	$ 1,800,000						Exempt-Table 2 - Safety	PM10

PROJECT NUMBER	LOCATION	DESCRIPTION	TIMING	COST	Cost by Range	Funds Available	Federal Funds Needed	Conformity Status	Within PM10/CO Maintenance Areas
Jackson County									
JCRV-001	Foothill Rd., Delta Waters to Dry Creek Rd.	Improve (widen) to rural major collector standards with turn lanes (no new travel lanes) - 6,800 ft, 1.28 miles	short	$ 3,300,000		**BUILD Grant**		Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	PM10
JCRV-002	Kirtland to Gold Ray	Rogue River Greenway extension - 0.31 miles	short	$ 500,000			$ 500,000	Exempt 93.126 - Bicycle and pedestrian facilities	PM10
JCRV-003	Foothill Rd., Dry Creek Rd to Vilas Rd	Improve (widen) to rural major collector standards with turn lanes (no new travel lanes) - 1.1 miles	short	$ 3,000,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	PM10
JCRV-004	Foothill Rd., Vilas to Corey	Improve (widen) to rural major collector standards with turn lanes (no new travel lanes) - 1.7 miles	short	$ 4,000,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	PM10
JCRV-005	Table Rock Rd.,/Antelope Rd dual left turn lane	Add receiving lane southbound to allow dual left turns from Antelope Rd. Receiving lane tapers out at Mosquito Ln. - 0.15 mile	short	$ 1,000,000		$ 1,000,000		Exempt 93.127 table 3 - intersection channelization project	PM10
JCRV-006	E. Vilas Rd, Medford city limits to McLouglin	Improve (widen) to rural major collector standards with turn lanes (no new travel lanes) - 0.9 miles	short	$ 2,500,000		$ 2,500,000		Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	PM10
JCRV-007	E. Vilas Rd, McLouglin to Foothill	Improve (widen) to rural major collector standards with turn lanes (no new travel lanes) - 1.0 miles	short	$ 2,500,000		$ 2,500,000		Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	

JCRV-008	Wilson Rd, Upton to Table Rock	Improve (widen) to rural minor collector standards with turn lanes (no new travel lanes) - 1.25 miles	short	$ 2,500,000		$ 2,500,000		Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	PM10
JCRV-009	Crews Road	Pave Gravel Road	short	$ 528,000				Exempt 93.126 Table 2 - Pavement resurfacing and/or rehabilitation	
				Short Range (2021-2025) Total	**$ 19,828,000**				
	MEDIUM RANGE								
JCRV-010	Gold Ray Rd, Blackwell Rd to Upper River Rd.	Rogue River Greenway extension - 1.6 miles	medium	$ 2,000,000				Exempt 93.126 Table 2 - bibycle and pedestrian facilities	PM10
JCRV-011	Table Rock Rd, Biddle to Wilson	Install enhanced bicycle facility - 1.25 miles	medium	$ 1,000,000				Exempt 93.126 Table 2 - bibycle and pedestrian facilities	PM10
JCRV-012	Old Stage Rd., Winterbrook to MPO Boundary	Improve (widen) to rural major collector standards with turn lanes (no new travel lanes) - 3.3 miles	medium	$ 9,000,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	
JCRV-013	Eagle Mill Dr, S Valley View to Oak	Improve (widen) to rural major collector standards with turn lanes (no new travel lanes) - 1.75 miles	medium	$ 4,000,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	
JCRV-014	Table Rock Rd/Vilas Rd Intersection	Intersection widening adding turn lanes	medium	$ 1,500,000				Exempt 93.127, table 3 - Intersection Channelization	
JCRV-015	Crater Lake Highway, Medford CL to Fowler	Install enhanced bicycle facility - 1.0 miles	medium	$ 500,000				Exempt 93.126 Table 2 - bibycle and pedestrian facilities	
				Medium Range (2026-2035) Total	**$ 18,000,000**				

LONG RANGE (2036-2045)									
JCRV-016	Upper River Rd., Gold Ray Rd to RVMPO Boundary	Rogue River Greenway extension - 0.4 miles	long	$ 1,500,000				Exempt 93.126 Table 2 - bibycle and pedestrian facilities	PM10
JCRV-017	W Main St, Renault to Hanley	Improve (widen) to rural major collector standards with turn lanes and enhanced bike lanes (no new travel lanes) - 1.7 miles	long	$ 3,000,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	
JCRV-018	Upton Rd, Penninger to Gibbon	Improve (widen) to rural major collector standards with turn lanes (no new travel lanes) - 1.6 miles	long	$ 4,000,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	
JCRV-019	S. Valley View Rd, I-5 to W. Valley View	Improve (widen) to rural major collector standards with turn lanes (no new travel lanes) - 0.5 miles	long	$ 1,500,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	
JCRV-020	Table Rock Rd/Biddle Rd Intersection	Intersection widening (capacity)- adding east bound left turn laned	long	$ 2,000,000				Exempt - 93.127 Table 3 - channelization project	
JCRV-021	Atlantic Ave., Cole Dr to E Dutton	New 3-lane major collector	long	$ 2,000,000				Non-exempt	
JCRV-022	Griffin Cr Rd, S Stage Rd to Pioneer Rd	Improve (widen) to rural major collector standards with turn lanes and sidepath (no new travel lanes) - 1.0 miles	long	$ 3,000,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	
JCRV-023	Suncrest Rd, Bear Cr Greenway E to Bear Cr Greenway W	Install enhanced bike and ped facilities (does not include bridge widening)	long	$ 500,000				Exempt 93.126 Table 2 - bibycle and pedestrian facilities	
JCRV-024	Bigham Brown Rd, Antelope to Alta Vista	Improve (widen) to rural major collector standards with turn lanes (no new travel lanes) - 1.9 miles	long	$ 5,000,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	

JCRV-025	Antelope Rd/Atlantic Intersection	New Traffic Signal	long	$ 500,000				Exempt 93.127 Table 3 - Intersection Signalization at individual intersections	
JCRV-026	Stewart Ave, Oak Grove to Hull	Improve (widen) to rural major collector standards with turn lanes (no new travel lanes) - 0.15 miles	long	$ 500,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	
JCRV-027	Hull Rd, Stewart to S. Stage	Improve (widen) to rural major collector standards with turn lanes (no new travel lanes) - 0.75 miles	long	$ 2,000,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	
JCRV-028	Taylor Rd, Old Stage to Grant	Improve (widen) to rural major collector standards with turn lanes (no new travel lanes) - 1.0 miles	long	$ 3,000,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	
JCRV-029	Nick Young Rd, Agate to Eagle Point CL	Improve (widen) to rural major collector standards with turn lanes (no new travel lanes) - 2.0 miles	long	$ 6,000,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	
JCRV-030	Old Stage Rd, Jacksonville CL to Ross	Widen shoulders to conform with Old Stage Road Corricor Plan - 1.9 mil	long	$ 3,000,000				Exempt 93.126 Table 2 - Shoulder improvements	
JCRV-031	N Phoenix Rd, Medford CL to Phoenix CL	Improve (widen) to rural arterial standards with turn lanes (no new travel lanes) - 1.6 miles	long	$ 2,000,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	
				Long Range (2036-2045) Total	**$ 39,500,000**				

PROJECT NUMBER	LOCATION	DESCRIPTION	TIMING	COST	Cost by Range	Funds Available	Federal Funds Needed	Conformity Status	Within PM10/CO Maintenance Areas
Medford									
MED-001	South Stage Road, South Pacific Highway to North Phoenix Road	Complete the environmental process and purchase right-of-way for a new minor arterial roadway (includes center turn-lane, bike facilities, and sidewalks) and overcrossing of I-5 (part of the N. Phoenix / Foothill and S Stage Corridor)	Short	$3,000,000		$3,000,000		Non-exempt	PM10/CO
MED-002	Biddle Road & Lawnsdale Road	Update signal phasing and install protected/permitted signal heads in northbound and southbound directions	Short	$160,000		$160,000		Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature	PM10/CO
MED-003	Various sidewalk gap locations with focus on high-priority areas including schools, activity centers and essential destinations, transit routes, and transit oriented districts (TOD)	Construct sidewalks or other pedestrian facilities at high-priority locations ($250,000 annually)	Short	$1,250,000		$1,250,000		Exempt 93.126 Table 2 - bicycle and pedestrian facilities	PM10/CO
MED-004	Various bicycle network gap locations with focus on high-priority areas including schools, activity centers and essential destinations, transit routes, and transit oriented development areas	Evaluate and construct potential roadway reconfigurations to accommodate bicycle facilities through re-striping and/or minor reconstruction at high-priority locations ($100,000 annually)	Short	$500,000		$500,000		Exempt 93.126 Table 2 - bicycle and pedestrian facilities	PM10/CO
MED-005	Signal System Upgrades	Upgrade signal controllers to Advanced Traffic Controllers, upgrade communications to signals, and other signal technology upgrades	Short	$1,000,000		$1,000,000		Exempt - ITS systems for congestion reduction	PM10/CO
MED-006	Foothill Road, McAndrews Road to Delta Waters Road	Upgrade to regional arterial standard including two lanes in each direction, center-turn lane, bike facilities, and sidewalks (part of the N. Phoenix / Foothill and S Stage Corridor)	Short	$36,000,000		**BUILD Grant**		Non-exempt	PM10/CO
MED-007	Foothill Road, Hillcrest Road to McAndrews Road	Upgrade to regional arterial standard including two lanes in each direction, center-turn lane, bike facilities, and sidewalks	Short	$13,000,000		**BUILD Grant**		Non-exempt	PM10/CO
MED-008	Owen Drive, Springbrook Road to Torrent Street	Construct new minor arterial roadway (includes center turn-lane, bike facilities, and sidewalks)	Short	$525,000		$525,000		Non-exempt	PM10/CO
MED-009	Biddle Road & Stevens Street	Replace/upgrade traffic signal	Short	$400,000		$400,000		Exempt - 93.127, table 3 - Intersection signalization projects at individual intersections.	PM10/CO
MED-010	McAndrews Road at Foothill Road Ramps	Install traffic signals	Short	$600,000		**BUILD Grant**		Exempt 93.127 Table 3 - Intersection signalization at individual intersections	PM10/CO
MED-011	Foothill Road & Delta Waters Road	Install turn lanes and traffic signal or roundabout when warranted (part of the N. Phoenix / Foothill and S Stage Corridor)	Short	$2,200,000		**BUILD Grant**		Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	PM10/CO
MED-012	Foothill Road & Lone Pine Road	Intersection control improvements such as right-in/right-out only due to proximity to planned signal at McAndrews ramp - TBD by intersection further analysis and safety analysis (part of the N. Phoenix / Foothill and S Stage Corridor)	Short	$400,000		**BUILD Grant**		Exempt 93.126 Table 2 - Safety - eliminate hazardous feature	PM10/CO
MED-013	Crater Lake Avenue & Brookhurst Street	Replace/upgrade traffic signal to increase vertical clearance and optimize signal timing/phasing	Short	$400,000				Exempt 93.127 Table 3 - Intersection channelization	PM10/CO
MED-037	South Stage Road, North Phoenix Road to 1,000 feet West	New minor arterial standard including one lane in each direction, center-turn lane, bike facilities, and sidewalks (part of the N. Phoenix / Foothill and S Stage Corridor)	Short	$2,000,000		**BUILD Grant**		Non-exempt	PM10/CO
		Short Range (2021-2025) Total			**$59,435,000**		**$ -**		

MEDIUM RANGE (2026-2035)									
MED-014	Delta Waters Road, Nome Court to Foothill Road	Complete street improvements to Major Collector standard where one or both sides are not already completed	Medium	$1,815,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	PM10/CO
MED-015	Table Rock Road, Merriman Road to Interstate 5	Upgrade to minor arterial standard including one lane in each direction, center-turn lane, bike facilities, and sidewalks	Medium	$3,575,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	PM10/CO
MED-016	McAndrews Road, Ross Lane to Jackson Street	Upgrade to minor arterial standard including one lane in each direction, center-turn lane, bike facilities, and sidewalks	Medium	$2,045,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	PM10/CO
MED-017	South Stage Road, City Limits to Orchard Home Drive	Realign S Stage Rd and construct new minor arterial roadway (includes center turn-lane, bike facilities, and sidewalks)	Medium	$4,345,000				Non-exempt	PM10/CO
MED-018	12th Street & Riverside Avenue	Replace/upgrade traffic signal and increase vertical clearance	Medium	$400,000				Exempt 93.127 Table 3 - Intersection signalization projects at individual intersections	PM10/CO
MED-019	Coker Butte Road, Crater Lake Avenue to Springbrook Road	Realign and upgrade to major arterial standard including two lanes in each direction, center-turn lane, bike facilities, and sidewalks.	Medium	$3,400,000				non-exempt	PM10/CO
MED-020	Highland Drive & Barnett Road	Intersection improvements such as second northbound right-turn lane (protected)	Medium	$1,500,000				Exempt 93.127 Table 3 - Intersection channelization	PM10/CO
MED-021	Various sidewalk gap locations with focus on high-priority areas including schools, activity centers and essential destinations, transit routes, and transit oriented districts (TOD)	Construct sidewalks or other pedestrian facilities at high-priority locations ($250,000 annually)	Medium	$2,500,000				Exempt 93.126 Table 2 - bicycle and pedestrian facilities	PM10/CO
MED-022	Various bicycle network gap locations with focus on high-priority areas including schools, activity centers and essential destinations, transit routes, and transit oriented development areas	Evaluate and construct potential roadway reconfigurations to accommodate bicycle facilities through re-striping and/or minor reconstruction at high-priority locations ($100,000 annually)	Medium	$1,000,000				Exempt 93.126 Table 2 - bicycle and pedestrian facilities	PM10/CO
MED-023	Signal System Upgrades	Upgrade signal controllers to Advanced Traffic Controllers, upgrade communications to signals, and other signal technology upgrades	Medium	$984,000				Exempt - ITS systems for congestion reduction	PM10/CO
				Medium Range (2026-2035) Total	**$21,564,000**		**$ -**		

LONG RANGE (2036-2045)									
MED-024	Columbus Avenue, West McAndrews Road to Sage Road	Realign, extend Columbus Avenue to Sage Rd, and widen to major arterial standard including center-turn lane, bike facilities, and sidewalks	Long	$4,345,000				Non-exempt	PM10/CO
MED-025	Kings Highway, South Stage Road to Stewart Avenue	Upgrade to minor arterial standard including one lane in each direction, center-turn lane, bike facilities, and sidewalks	Long	$8,495,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	PM10/CO
MED-026	Stewart Avenue, Lozier Lane to Dixie Lane	Upgrade to major arterial standard including two lanes in each direction, center-turn lane, bike facilities, and sidewalks	Long	$2,645,000				Non-exempt	PM10/CO
MED-027	South Pacific Highway & Stewart Avenue	Intersection improvements such as second southbound left and second eastbound left-turn lanes	Long	$3,000,000				Exempt 93.127 Table 3 - Intersection channelization	PM10/CO
MED-028	Creek View Drive & North Phoenix Road	Install traffic signal when warranted. Remove traffic signal at Albertson's access and convert to right-in/right-out only (part of the N. Phoenix / Foothill and S Stage Corridor) (Also,	Long	$400,000				Exempt 93.127 Table 3 - Intersection signalization at individual intersections	PM10/CO
MED-029	Crater Lake Avenue & East Vilas Road	Re-align Crater Lake Ave to the east and install traffic signal	Long	$400,000				Exempt 93.127 Table 3 - Intersection signalization at individual intersections, intersection channelization	PM10/CO
MED-030	Crater Lake Highway & East Vilas Road	Monitor needs after construction of Crater Lake Highway Bypass	Long	$5,000				N/A	PM10/CO
MED-031	Various sidewalk gap locations with focus on high-priority areas including schools, activity centers and essential destinations, transit routes, and transit oriented districts (TOD)	Construct sidewalks or other pedestrian facilities at high-priority locations ($250,000 annually) - TSP Plan year ends in 2038	Long	$1,250,000				Exempt 93.126 Table 2 - bicycle and pedestrian facilities	PM10/CO
MED-032	Various bicycle network gap locations with focus on high-priority areas including schools, activity centers and essential destinations, transit routes, and transit oriented development areas	Evaluate and construct potential roadway reconfigurations to accommodate bicycle facilities through re-striping and/or minor reconstruction at high-priority locations ($100,000 annually) - TSP Plan year ends in 2038	Long	$500,000				Exempt 93.126 Table 2 - bicycle and pedestrian facilities	PM10/CO
			Long Range (2036-2045) Total		**$21,040,000**		**$ -**		
		TIER II PROJECTS							
	Tier 2 List								
MED-033	Foothill Road, Delta Waters Road to North UGB	Upgrade to regional arterial standard including two lanes in each direction, center-turn lane, bike facilities, and sidewalks (part of the N. Phoenix / Foothill and S Stage Corridor)	TIER II	$4,555,000					PM10/CO
MED-034	N Phoenix Rd, Juanipero Way to South UGB	Upgrade to regional arterial standard including two lanes in each direction, center-turn lane, bike facilities, and sidewalks (part of the N. Phoenix / Foothill and S Stage Corridor)	TIER II	$7,800,000					PM10/CO
MED-035	North Phoenix Road from Barnett Road to Juanipero Way	Widen to regional arterial standard including two lanes in each direction, center turn-lane, bike facilities, and sidewalks (part of the N. Phoenix / Foothill and S Stage Corridor)	TIER II	$7,600,000					PM10/CO
MED-036	South Stage Road, South Pacific Highway to North Phoenix Road	Construct new minor arterial roadway (includes center turn-lane, bike facilities, and sidewalks) and overcrossing of I-5 (part of the N. Phoenix / Foothill and S Stage Corridor)	TIER II	$47,000,000					PM10/CO

PROJECT NUMBER	LOCATION	DESCRIPTION	TIMING	COST	Cost by Range	Funds Available	Federal Funds Needed	Conformity Status	Within PM10/CO Maintenance Areas
ODOT									
ODRV-001	I-5 Medford Viaduct Deck Overlay	Overlay deck, 0.5 miles	short	$ 1,650,000				Exempt 93.126 Table 2 - pavement resurfacing/ rehabilitation	PM10/CO
ODRV-002	OR140: Exit 35 Blackwell Rd	Add center turn lane, widen shoulders, add bike path	short	$ 9,605,836				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	PM10
ODRV-004	OR99: I-5 to Scenic Ave	Convert 4-Lane Roadway to 3-Lane Roadway with Center Turn Lane, Add Traffic Signal	short	$ 3,262,000				Exempt 93.126 Table 2 - pavement resurfacing/ rehabilitation	PM10
ODRV-005	OR140: Bear Creek - Agate Rd	Grind out the existing pavement and replace with new asphalt between MP 6.70-1.16	short	$ 4,922,000				Exempt 93.126 Table 2 - pavement resurfacing/ rehabilitation	PM10
ODRV-006	I-5: Ashland to Gold Hill	Repair or replace culverts, address scour and road embankment problems near culverts	short	$ 4,884,153				Exempt 93.126 Table 2 - pavement resurfacing/ rehabilitation	PM10/CO
ODRV-007	OR62: Corridor Solutions Unit 2 Phase 3 (Medford)	Planting of vegetation for storm water treatment facilities	short	$ 300,000				Exempt 93.126 Table 2 - Bicycle and pedestrian facilities	PM10/CO
ODRV-008	I-5 California State Line - Ashland Paving	Grind/Inlay; 11.45 miles	short	$ 23,000,000				Exempt 93.126 Table 2 - Bicycle and pedestrian facilities	PM10
ODRV-009	OR99: Coleman Ck. (Phoenix)	Replace Culvert at Coleman Creek - Added sidewalk and Bike facilities at culvert	short	$ 7,300,000				Exempt 93.126 Table 2 - Traffic control devices and opeating assistance other than signalization projects	PM10
ODRV-011	OR99: Creel to Bear Creek Greenway Connector (Talent)	Connecting Hwy 99 to the shared multi-use path.	short	$ 625,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	PM10
ODRV-012	I-5: Siskiyou Pass Variable Advisory Speed Signs	Install weather responsive variable speed system for I-5 Siskiyou mountain pass	short	$ 6,586,000				Exempt 93.126 Table 2 - Traffic control devices and opeating assistance other than signalization projects	PM10
ODRV-013	OR140: Lakeview Dr. Left turn lane	Adding turn lane on OR140 to Laveview Drive	short	$ 1,670,000					
ODRV-014	I-5 Region 3 Clear Zone Improvements	Install traffic safety barriers to protect drivers from roadside hazards that cannot be removed.	short	$ 2,722,800				N/A	

ODRV-015	I-4 Southern Oregon Wrong Way Driver Mitigation	Help improve signage onto I-5 from local roadways to help mitigate and stop wrong way entry onto I-5.	short	$ 2,497,000				Exempt 93.126 Table 2 - Traffic control devices and opeating assistance other than signalization projects	
ODRV-016	OR99 at Laruel Street (Ashland)	Intersection improvemetents at OR 99 and Laurel Ave in Ashland.	short	$ 1,444,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	
ODRV-017	I-5 North Ashland - South Ashland	**PE only - Design for a future construction project to remove existing pavement and replace with new asphalt to extend the service life of the pavement.	short	$ 900,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	
ODRV-018	OR62: Corridor Solutions Unit 2 Phase 4 (Medford)	ITS equipment installation	short	$ 2,448,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	
ODRV-019	Southern Oregon Seismic Slopes Stability	Seismic upgrades on 7 hillside slopes	short	$14,775,000					
ODRV-020	Southern Oregon Seismic Bridge Retrofit (Phase 2)	Seismic upgrades on bridge and overpass structures	short	$3,725,000					
ODRV-021	Souther Oregon Seismic Bridge Retrofit (Phase 3)	Seismic upgrades on bridge and overpass structures	short	$7,500,000					
ODRV-022	OR140: Bear Creek - 5th Street	** PE only Develop plans for a future construction project to include deck overlay on bridge numbers 00406A and 08743. Grind out the existing pavement and replace with new asphalt	short	$ 5,871,567				N/A	
ODRV-023	Foothil Rd. Corridor	Expand the current footpring of the Foothills Rd. Corridor to a 5-lane sectoin (4 travel lanes and a TWTL), bikelanes, curb, gutter, and sidewalks.	short	$ 14,477,599				non-exempt	
Short Range (2021-2025) Total					**$ 120,165,955**	**$ 120,165,955**	**$ -**		

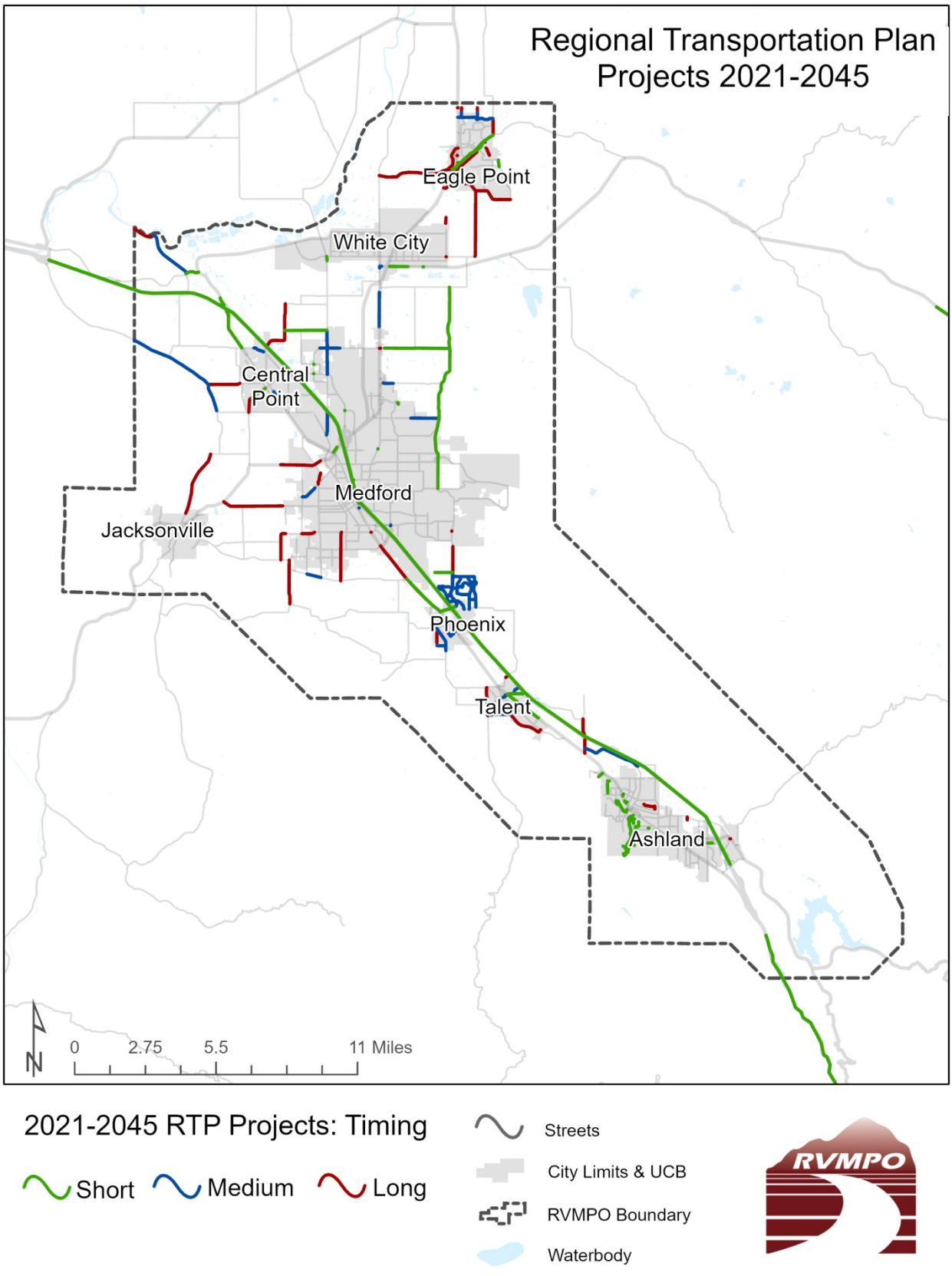
MEDIUM RANGE (2026-2035)									
ODRV-024	OR-140 @ Agate and @ Leigh Way	Improve intersections alignments and change thru movement to favor the highway alignment.	Medium	$ 7,000,000				Exempt 93.127 Table 3 - intersection channelization projects	PM10
Medium Range (2026-2035) Total					**$ 7,000,000**	**$ 20,000,000**	**$ -**		
LONG RANGE (2036-2045)									
ODRV-025	South Valley View Bridge Replacement	Realign and widen the Bear Creek Bridge over South Valley View Rd, located off Exit 19 near Ashland. It will also widen and add turning lanes to South Valley View Rd from the Interstate to Hwy 99 and connect peds and bikes with the Bear Creek Greenway.;0.5 miles	Long	$ 15,000,000				Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	PM10/CO
ODRV-026	OR-99: Birch Street to Garfield	Add sidewalks and bikelanes; Upgrade Storm Drain; 1.8 miles	Long	$ 40,000,000				Exempt 93.126 Table 2 - Bicycle and pedestrian facilities	PM10
ODRV-027	OR-238: West Main to N. Ross Lane	Realign and widen highway; add adequate shoulders and/or bikelanes, add pedestrian improvements in urban areas; 2.8 miles no new travel lanes	Long	$ 18,000,000			**$ -**	Exempt 93.126 Table 2 - Projects that correct, improve, or eliminate a hazardous location or feature, widening narrow pavements with no additional travel lanes	
Long Range (2036-2045) Total					**$ 73,000,000**	**$ 33,000,000**			

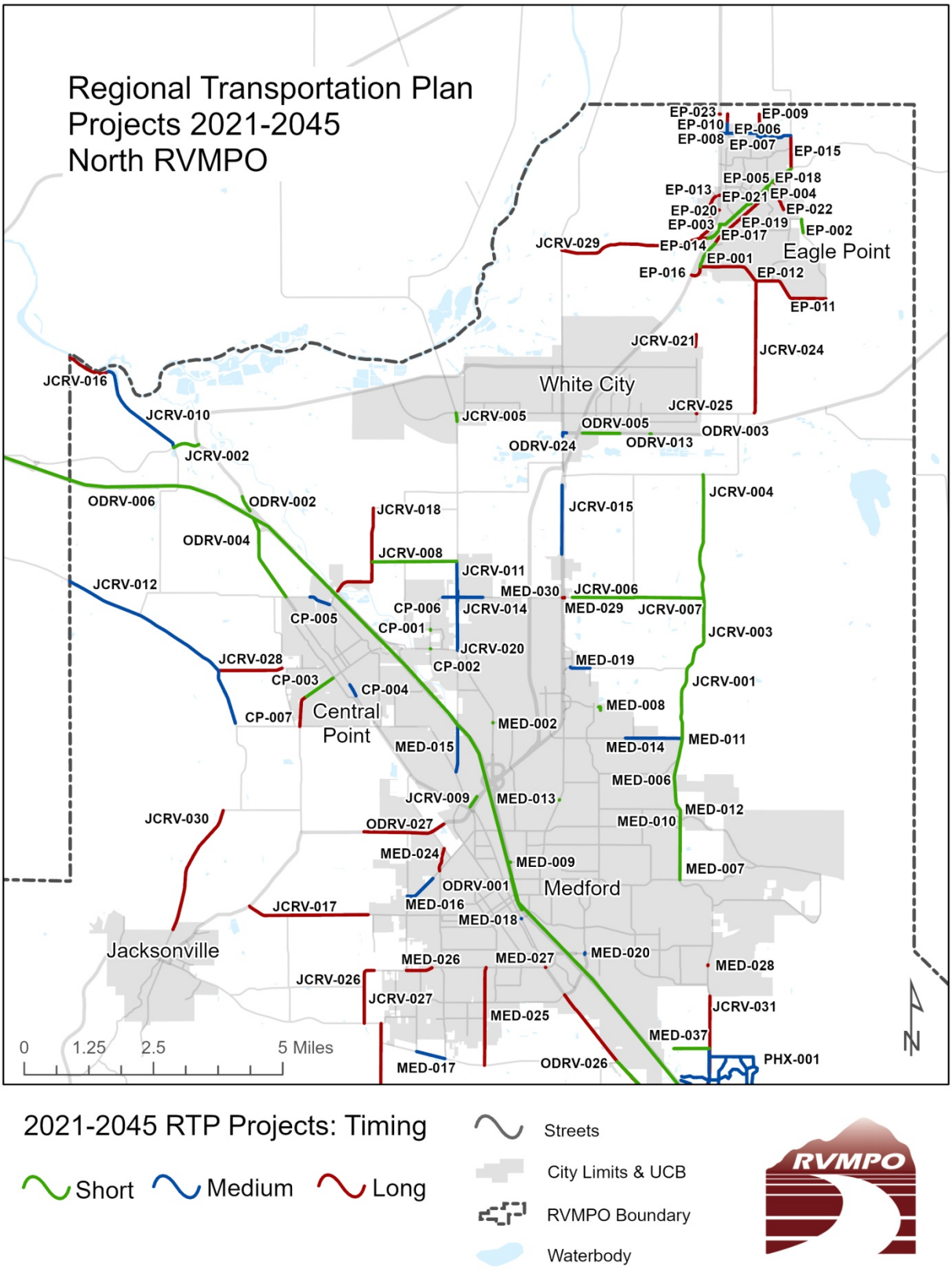
SHORT			Total	Federal
RVTD-001	Urban Operating Assistance, FFY2021	short	$ 5,666,438	$ 2,833,219.00
RVTD-002	Urban Operating Assistance, FFY2022	short	$ 5,779,768	$ 2,889,884.00
RVTD-003	Urban Operating Assistance, FFY2023	short	$ 5,895,362	$ 2,947,681.00
RVTD-004	Urban Operating Assistance, FFY2024	short	$ 5,895,362	$ 2,947,681.00
RVTD-005	Preventive Maintenance (MPO STBG Transfer, FFY2021)	short	$ 771,890	$ 700,000.00
RVTD-006	Preventive Maintenance (MPO STBG Transfer, FFY2022)	short	$ 771,890	$ 700,000.00
RVTD-007	Preventive Maintenance (MPO STBG Transfer, FFY2023)	short	$ 771,890	$ 700,000.00
RVTD-008	Preventive Maintenance (MPO STBG Transfer, FFY2024)	short	$ 771,890	$ 700,000.00
RVTD-009	RVTD - 5339 Bus & Facilities Program (Bus Expansion, FFY 2021) 2021)	short	$ 3,582,000	$ 2,687,000.00
RVTD-010	RVTD Rideshare and TDM (FFY 21-23)	short	$ 231,872	$ 210,277.00
RVTD-011	RVTD Rideshare and TDM (FFY 24-26)	short	$ 231,872	$ 210,277.00
RVTD-012	RVTD-5310 Enhanced Mobility Small Urban (2020-22)	short	$ 686,664	$ 572,220.00
RVTD-013	RVTD-5310 Enhanced Mobility Small Urban (2023-25)	short	$ 700,397	$ 583,664.00
RVTD-014	RVTD - 5339 Bus & Facilities Program (Bus Replacement, FFY 2024)	short	$ 2,500,000	$ 2,000,000.00
RVTD-015	ODOT Mass Transit Capital Replacement (2021-2023)	short	$ 1,440,000	$ 1,200,000.00
RVTD-016	TDM Rideshare (2021)	short	$ 144,000	$ 129,211.20
RVTD-017	TDM Rideshare (2022)	short	$ 144,000	$ 129,211.20
RVTD-018	TDM Rideshare (2023)	short	$ 144,000	$ 129,211.20
RVTD-019	TDM Rideshare (2024)	short	$ 144,000	$ 129,211.20
RVTD-020	TDM Rideshare (2025)	short	$ 144,000	$ 129,211.20
RVTD-021	Urban Operating Assistance, FFY2025	medium	$ 6,000,000	$ 3,000,000.00
RVTD-022	Urban Operating Assistance, FFY2026	medium	$ 6,120,000	$ 3,060,000.00
RVTD-023	Urban Operating Assistance, FFY2027	medium	$ 6,242,400	$ 3,121,200.00
RVTD-024	Urban Operating Assistance, FFY2028	medium	$ 6,367,248	$ 3,183,624.00
RVTD-025	Urban Operating Assistance, FFY2029	medium	$ 6,494,593	$ 3,247,296.48
RVTD-026	Urban Operating Assistance, FFY2030	medium	$ 6,624,485	$ 3,312,242.41
RVTD-027	Urban Operating Assistance, FFY2031	medium	$ 6,756,975	$ 3,378,487.26
RVTD-028	Urban Operating Assistance, FFY2032	medium	$ 6,892,114	$ 3,446,057.00
RVTD-029	Urban Operating Assistance, FFY2033	medium	$ 7,029,956	$ 3,514,978.14
RVTD-030	Urban Operating Assistance, FFY2034	medium	$ 7,170,555	$ 3,585,277.71
RVTD-031	Preventive Maintenance (MPO STBG Transfer, FFY2025)	medium	$ 771,890	$ 700,000.00
RVTD-032	Preventive Maintenance (MPO STBG Transfer, FFY2026)	medium	$ 771,890	$ 700,000.00
RVTD-033	Preventive Maintenance (MPO STBG Transfer, FFY2027)	medium	$ 771,890	$ 700,000.00
RVTD-034	Preventive Maintenance (MPO STBG Transfer, FFY2028)	medium	$ 771,890	$ 700,000.00

RVTD-035	Preventive Maintenance (MPO STBG Transfer, FFY2029)	medium	$	771,890	$	700,000.00
RVTD-036	Preventive Maintenance (MPO STBG Transfer, FFY2030)	medium	$	771,890	$	700,000.00
RVTD-037	Preventive Maintenance (MPO STBG Transfer, FFY2031)	medium	$	771,890	$	700,000.00
RVTD-038	Preventive Maintenance (MPO STBG Transfer, FFY2032)	medium	$	771,890	$	700,000.00
RVTD-039	Preventive Maintenance (MPO STBG Transfer, FFY2033)	medium	$	771,890	$	700,000.00
RVTD-040	Preventive Maintenance (MPO STBG Transfer, FFY2034)	medium	$	771,890	$	700,000.00
RVTD-041	RVTD - 5339 Bus & Facilities Program (Bus Replacement, FFY 2027)	medium	$	2,500,000	$	2,000,000.00
RVTD-042	RVTD - 5339 Bus & Facilities Program (Bus Replacement, FFY 2030)	medium	$	2,500,000	$	2,000,000.00
RVTD-043	RVTD - 5339 Bus & Facilities Program (Bus Expansion, FFY 2033)	medium	$	2,500,000	$	2,000,000.00
RVTD-044	RVTD Rideshare and TDM (FFY 24-26)	medium	$	231,872	$	210,277.00
RVTD-045	RVTD Rideshare and TDM (FFY 27-29)	medium	$	231,872	$	210,277.00
RVTD-046	RVTD Rideshare and TDM (FFY 30-32)	medium	$	231,872	$	210,277.00
RVTD-047	RVTD Rideshare and TDM (FFY 32-34)	medium	$	231,872	$	210,277.00
RVTD-048	RVTD Rideshare and TDM (FFY 35-36)	medium	$	231,872	$	210,277.00
RVTD-049	RVTD-5310 Enhanced Mobility Small Urban (2026-27)	medium	$	257,379	$	214,482.54
RVTD-050	RVTD-5310 Enhanced Mobility Small Urban (2028-29)	medium	$	262,527	$	218,772.19
RVTD-051	RVTD-5310 Enhanced Mobility Small Urban (2030-32)	medium	$	267,777	$	223,147.63
RVTD-052	RVTD-5310 Enhanced Mobility Small Urban (2033-35)	medium	$	273,133	$	227,610.59
RVTD-053	ODOT Mass Transit Capital Replacement (2025-2027)	medium	$	1,440,000	$	1,200,000.00
RVTD-054	ODOT Mass Transit Capital Replacement (2030-2031)	medium	$	1,440,000	$	1,200,000.00
RVTD-055	ODOT Mass Transit Capital Replacement (2032-2034)	medium	$	1,440,000	$	1,200,000.00
RVTD-056	TDM Rideshare (2025)	medium	$	144,000	$	129,211.20
RVTD-057	TDM Rideshare (2026)	medium	$	144,000	$	129,211.20
RVTD-058	TDM Rideshare (2027)	medium	$	144,000	$	129,211.20
RVTD-059	TDM Rideshare (2028)	medium	$	144,000	$	129,211.20
RVTD-060	TDM Rideshare (2029)	medium	$	144,000	$	129,211.20
RVTD-061	TDM Rideshare (2030)	medium	$	144,000	$	129,211.20
RVTD-062	TDM Rideshare (2031)	medium	$	144,000	$	129,211.20
RVTD-063	TDM Rideshare (2032)	medium	$	144,000	$	129,211.20

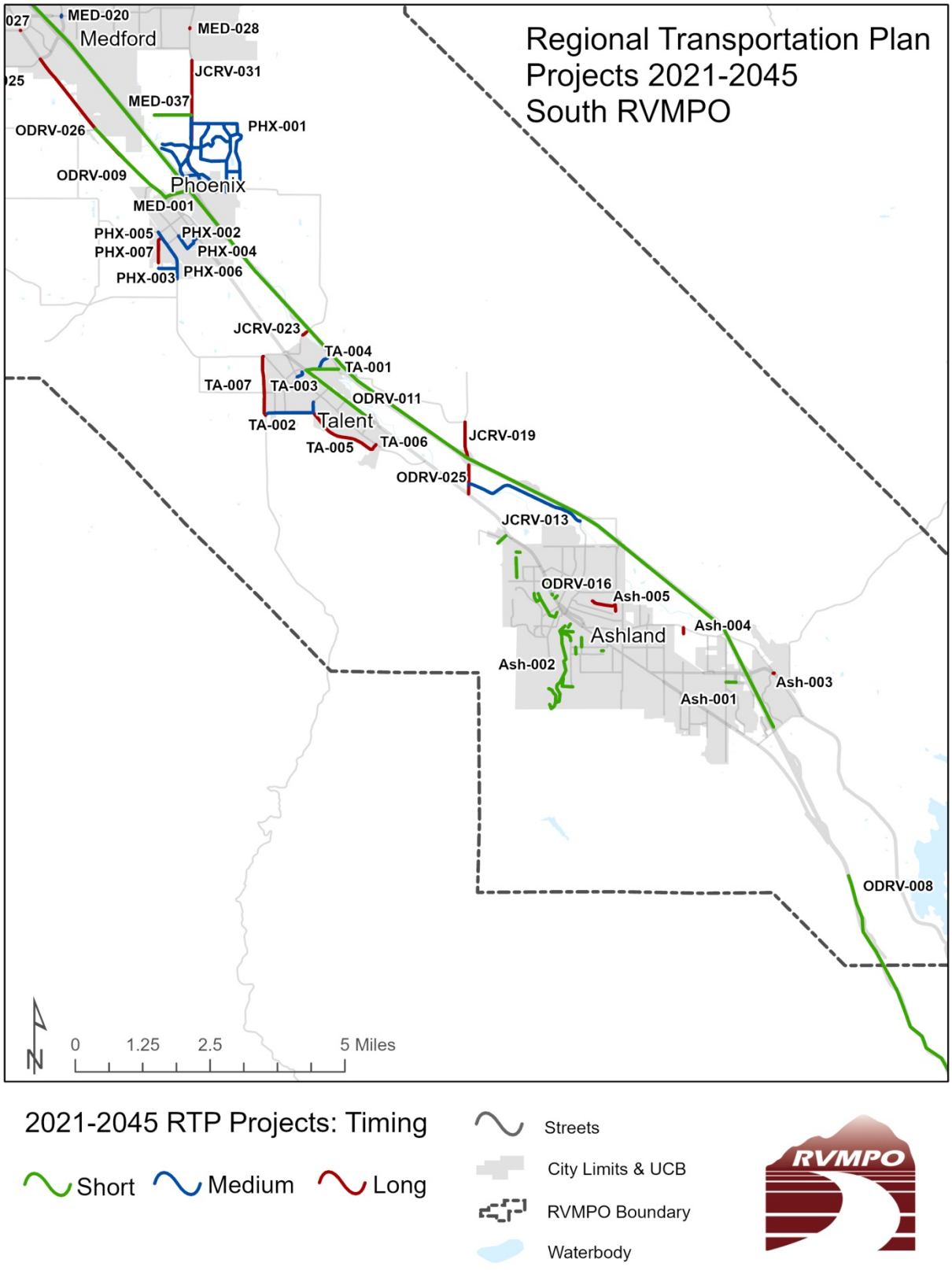
RVTD-064	TDM Rideshare (2033)		medium	$	144,000	$ 129,211.20
RVTD-065	TDM Rideshare (2034)		medium	$	144,000	$ 129,211.20
RVTD-066	TDM Rideshare (2035)		medium	$	144,000	$ 129,211.20
RVTD-067	Urban Operating Assistance, FFY2035-2045		Long	$	89,000,000	$ 44,500,000.00
RVTD-068	Preventive Maintenance (MPO STBG Transfer, FFY2035-2045		Long	$	8,490,790	$ 7,700,000.00
RVTD-069	RVTD - 5339 Bus & Facilities Program (Bus Replacement, FFY2035-2045		Long	$	10,000,000	$ 8,000,000.00
RVTD-070	RVTD Rideshare and TDM (FFY2035-2045)		Long	$	2,370,805	$ 2,150,000.00
RVTD-071	RVTD-5310 Enhanced Mobility Small Urban (FFY2035-2045)		Long	$	6,138,000	$ 5,115,000.00
RVTD-072	ODOT Mass Transit Capital Replacement (FFY2035-2045)		Long	$	4,320,000	$ 3,600,000.00
RVTD-073	TDM Rideshare (FFY2035-2045)		Long	$	1,433,510	$ 1,300,000.00
				$	247,211,804	

Map 8.3.1 RTP Project Locations, Entire MPO Area




Regional Transportation Plan
Projects 2021-2045
North RVMPO
EP-023
EP-009
EP-010
EP-006
EP-008
EP-007
EP-015
EP-005
EP-018
EP-013
EP-021
EP-004
EP-020
EP-022
EP-003
EP-019
EP-002
EP-017
JCRV-029
EP-014
Eagle Point
EP-001
EP-016
EP-012
EP-011
JCRV-021
JCRV-024
JCRV-016
White City
JCRV-025
JCRV-010
JCRV-005
ODRV-005
ODRV-003
ODRV-024
ODRV-013
JCRV-002
JCRV-004
ODRV-006
ODRV-002
JCRV-018
JCRV-015
ODRV-004
JCRV-008
JCRV-011
JCRV-012
MED-030
JCRV-006
CP-006
JCRV-014
MED-029
JCRV-007
CP-005
CP-001
JCRV-003
JCRV-020
JCRV-028
CP-002
MED-019
CP-003
CP-004
JCRV-001
Central
Point
CP-007
MED-008
MED-002
MED-014
MED-011
MED-015
MED-006
JCRV-009
MED-013
MED-012
JCRV-030
ODRV-027
MED-010
MED-024
MED-009
MED-007
ODRV-001
Medford
JCRV-017
MED-016
MED-018
Jacksonville
MED-026
MED-027
MED-020
MED-028
JCRV-026
JCRV-027
JCRV-031
MED-025
MED-037
0
1.25
2.5
5 Miles
MED-017
ODRV-026
PHX-001
N
2021-2045 RTP Projects: Timing
Short
Medium
Long
Streets
City Limits & UCB
RVMPO Boundary
Waterbody
RVMPO

Map 8.3.3 RTP Project Locations, Southern MPO Area



FINANCIAL PLAN

INTRODUCTION

This chapter presents all of the financial assumptions used to create the financially constrained project list for the RVMPO's transportation system, as required by federal law. Financially constraining projects is particularly important for the RVMPO region because of federal and state air quality conformity requirements, described in the Air Quality Conformity Determination published by the RVMPO for this plan.

Forecasts of state and federal revenue sources are developed cooperatively by a statewide working group consisting of ODOT staff and representatives from all Oregon MPOs and public transportation agencies. These forecasts have most recently been updated in 2018 to reflect federal requirements and are the basis of the financial forecasts used in the update of the 2021-2045 RTP.

9.1 FEDERAL REGULATIONS FOR FINANCIAL CONSTRAINT

Federal legislation sets forth guidelines that seek to ensure that the needs identified in the RTP are balanced with resources expected to be available over the planning period. Fiscal constraint for the long range transportation plan (known as the regional transportation plan) was first required by the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991. For the first time since their inception, MPO's were now required to develop a "reasonable estimate of future transportation funds covering the years identified in the [RTP]." In 2005, with the passage of the Safe Accountable Flexible Efficient Transportation Act – A Legacy for Users (SAFETEA-LU), an additional requirement was placed on MPOs. MPOs were now required to estimate the cost of a project in the year it is anticipated to move forward. This is known as estimating "year of expenditure" (YOE) costs for all projects in future years. This plan reflects these requirements and are identified within this chapter.

A financial plan that demonstrates how the adopted long-range transportation plan can be implemented, indicates resources from public and private sources that are reasonably expected to be made available to carry out the plan, and recommends any additional financing strategies for needed projects and programs.

Furthermore: the financial plan may include, for illustrative purposes, additional projects that would be included in the adopted long-range transportation plan if reasonable additional resources beyond those identified in the financial plan were available. For the purpose of developing the long-range transportation plan, the metropolitan planning organization and State shall cooperatively develop estimates of funds that will be available to support plan implementation.

Federal and state revenue projections were provided by ODOT in a document titled *Long Range Financial Assumptions for the Development of Metropolitan Transportation Plans* in September 2018. Most of the revenue projections of federal and state funds used in the RTP

are based on the projections provided in this document.

METHODS USED TO COMPLETE FINANCIAL PLAN

To complete this chapter, the following steps were followed:

- **Reviewed existing data.** Primary documents reviewed included ODOT's September *2018 Long-Range Revenue Forecast*
- **Conferred with staff from relevant State and local jurisdictions.** Discussions with staff from RVMPO member jurisdictions and ODOT Region 3 to gain insight into local transportation revenues and expenditures.

9.2 TYPES OF FUNDING AVAILABLE FOR TRANSPORTATION

INTRODUCTION

This section provides details on the funding required to implement the capital projects in the RTP. Funding has been estimated over the 25-year duration of the plan and is linked to street system and transit projects to establish the RVMPO's financially constrained Tier 1 project list.

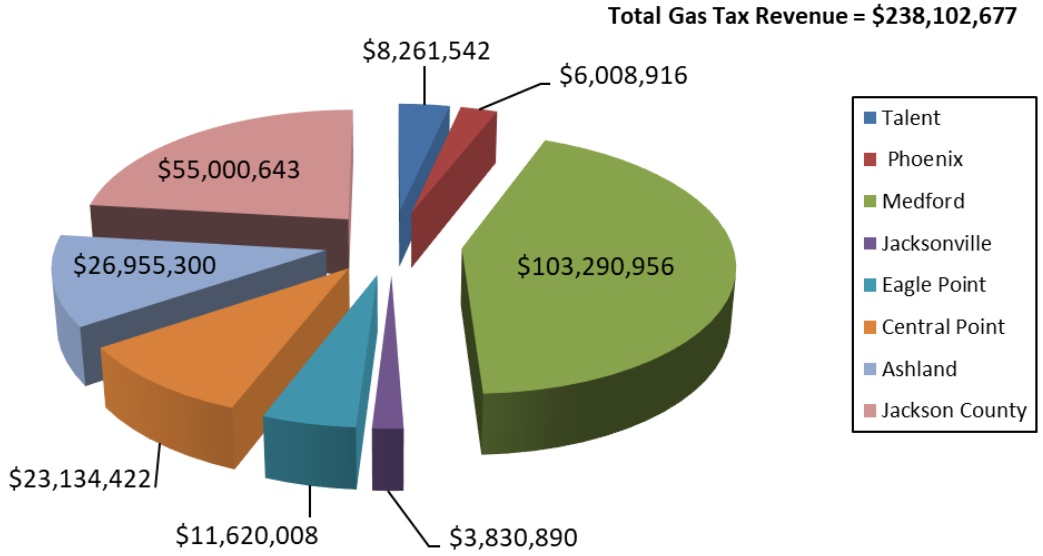
FINANCIAL CONSTRAINT

Tier 1 projects are in the plan based on their ability to fulfill RTP goals and to be implemented and funded within the 2045 planning horizon. Funds shown in this part establish financial constraint. They were developed in consultation with ODOT, Oregon MPOs, and the RVMPO jurisdictions, consistent with federal and state requirements for determining financial constraint. Please note that it is assumed that the Oregon Department of Transportation estimates that they will have sufficient funding to cover the costs of projects that they have submitted for this RTP update.

Information for this part also was drawn from Federal, State and local revenue sources that are used to fund regional transportation system projects and programs which are described below. Funding used primarily for the road network is described below. Details about transit funding sources and sums follow.

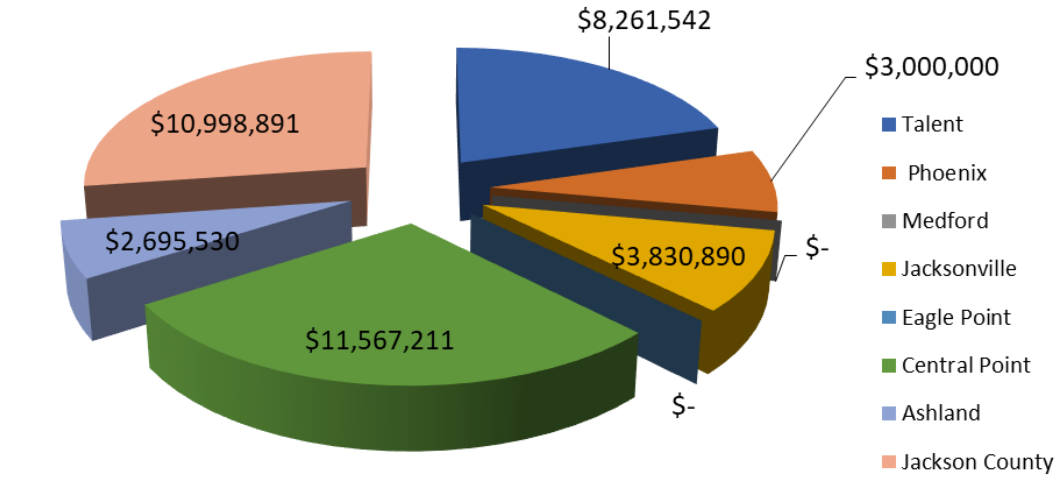
The primary source of funding available to the local jurisdictions is the State of Oregon's Gas Tax Revenue as distributed to the local jurisdictions by ODOT. Figure 9.1 below provides the estimated total amount of Gas Tax revenue that each of the jurisdictions may anticipate receiving over the next 25 years.

Figure 9.1 - Estimated State Gas Tax Revenues Available 2020 - 2045



It should be noted that state gas tax revenue is by far the most flexible of funds received by the local jurisdictions and therefore many of the local governments use a significant amount of state gas tax revenues for transportation related expenses other than building new or expanding/improving existing roadways. Figure 9.2 is based on the actual amount of gas tax the local jurisdictions intend to use for projects in the RTP update.

Figure 9.2 - Gas Tax Revenues for use in the 2020 - 2045 RTP

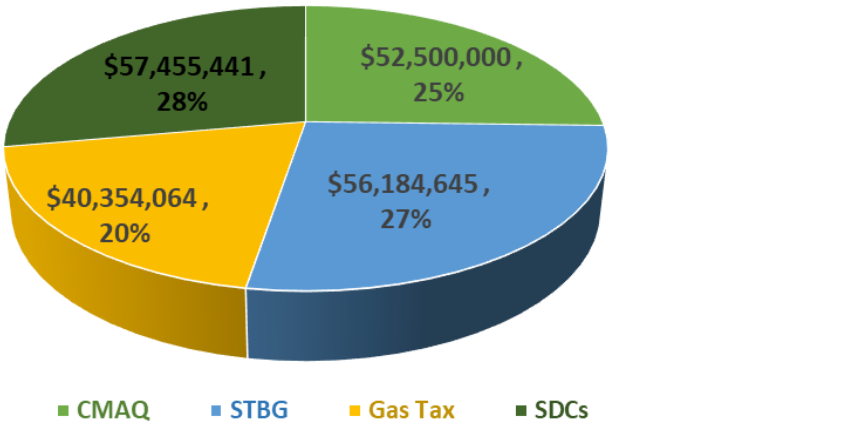


Total Gas Tax Revenue Used for 2021-45 RTP = $40,354,064

Other funding sources – primarily locally generated – include System Development Charges (SDCs) and Street Utility Fees (STFs). Additionally, for small cities there are additional state funds made available on a grant application basis known as Special City Allotments.

Figure 9.3 shows the primary sources of funding that are reasonably expected to be available to support the RVMPO regional street system for the 2021-2045 RTP. State funds make up the largest share of revenues (40%), well ahead of local and federal revenues. Typically, State and local funds are used by jurisdictions for administration, operations, and maintenance of the local street system. Federal funds are a main source for new projects.

Figure 9.3 - Primary Funding Available For 2021-45 RTP



Total Funds Available = $206,494,151

Street System Revenue Sources

State Highway Fund (SHF) is composed of several major funding sources: Motor Vehicle Registration and Title Fees, Driver License Fees, Motor Vehicle Fuel Taxes, and Weight-Mile Tax. The SHF funds are apportioned to three jurisdiction levels in the following amounts: State (59%), Counties (25%), and Cities (16%).

Statewide Transportation Improvement Program (STIP) is Oregon's four-year transportation capital improvement program. This program defines which projects will be funded by what amount of money throughout the planned four-year program period. Projects at all jurisdiction levels are included in the program; Federal, state, county, and city.

Surface Transportation Block Grant (STBG) this is the major federal transportation program to provide "flexible" funds for transportation projects at the state and local levels. Funds are "flexible" in that they can be spent on a variety of transportation related projects, e.g., mass transit, bike-pedestrian.

Congestion Mitigation and Air Quality (CMAQ) ISTEA created the CMAQ program to deal with transportation related air pollution. States with areas that are designated as non-attainment for ozone or carbon monoxide (CO) must use their CMAQ funds in those non-attainment areas. A state may use its CMAQ funds in any of its particulate matter (PM_{10}) maintenance areas if certain requirements are met. The projects and programs must either be included in the air quality State Implementation Plan (SIP) or be good candidates to contribute to attainment of The National Ambient Air Quality Standards (NAAQS). If a state does not have any non-attainment areas, the allocated funds may be used for STBG or CMAQ projects. CMAQ requires a 10.27 percent local match unless certain requirements are met.

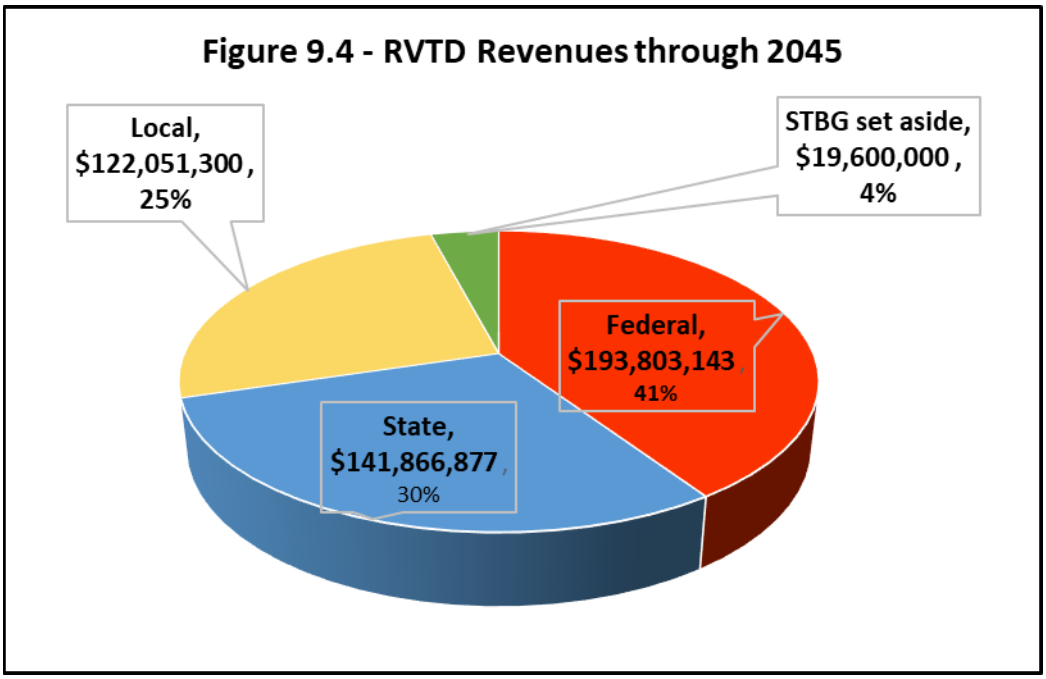
Special City Allotment (SCA) ODOT sets aside $1 million per year to distribute to cities with populations less than 5,000. Projects to improve safety or increase capacity on local roads are reviewed annually and ranked on a statewide basis by a committee of regional representatives. Projects are eligible for a maximum of $50,000 each. Although begun as a set-aside for the smaller local governments this program has become more of a grant application format which local governments can count on only once every few years.

System Development Charges (SDC) are fees collected when new development occurs. These fees are then used to partially fund capital improvements, such as new streets within the city.

TRANSIT SYSTEM REVENUE SOURCES

Transit services in the RVMPO are provided by the Rogue Valley Transportation District (RVTD), which relies on federal, state, and local funding sources. Revenues from these sources are described below. Further information on the assumptions used to estimate revenues are located in Appendix A.

Figure 9.4 shows the sources of funding that are reasonably expected to be available to support the RVTD transit system for the 2021-2045 RTP. Federal funds make up the largest share (41%) of transit revenues, followed by State funds (30%), and Local Funds at 25%. Additionally, the RVTD is allocated $700,00 per year by the RVMPO which comes to 4% of their revenue stream.



Federal Transit Revenue Sources

The Federal Transit Administration (FTA) carries out the federal mandate to improve public transportation systems. It is the principal source of federal assistance to help urban areas (and, to some extent, non-urban areas) plan, develop, and improve comprehensive mass transportation systems. The FTA provides federal funding to RVTD. The FTA's programs of financial assistance to RVTD are described below. Federal grant funds are allocated to transit districts and other eligible providers by ODOT through the State Transportation Improvement Plan (STIP) process.

Urbanized Area Formula Grants (5307)
The largest of FTA's grant programs, this program provides grants to urbanized areas to support public transportation. Funding is distributed by formula based on the level of transit service provision, population, and other factors.

Bus and Bus Facilities Program (5309) (Ladders of Opportunity Initiative)
The Ladders of Opportunity Initiative makes funds available to public transportation providers to finance capital projects to replace, rehabilitate, and purchase buses and related equipment and to construct bus-related facilities, including programs of bus and bus-related projects for assistance to sub-recipients that are public agencies, private companies engaged in public transportation, or private non-profit organizations. Projects may include costs incidental to the acquisition of buses or to the construction of facilities, such as the costs of related workforce development and training activities, and project development.

Enhanced Mobility of Seniors and Individuals with Disabilities (5310)
This program provides formula funding to increase the mobility of seniors and persons with disabilities. Funds are apportioned based on each State's share of the targeted populations and are now apportioned to both States (for all areas under 200,000) and large urbanized areas (over 200,000). The former New Freedom program (5317) is folded into this program.

The New Freedom program provided grants for services for individuals with disabilities that went above and beyond the requirements of the Americans with Disabilities Act (ADA). Activities eligible under New Freedom are now eligible under the Enhanced Mobility of Seniors and Individuals with Disabilities program.

Projects selected for funding must be included in a locally developed, coordinated public transit-human services transportation plan; and the competitive selection process, which was required under the former New Freedom program, is now optional. At least 55 percent of program funds must be spent on the types of capital projects eligible under the former section 5310 -- public transportation projects planned, designed, and carried out to meet the special needs of seniors and individuals with disabilities when public transportation is insufficient, inappropriate, or unavailable.

The remaining 45 percent may be used for: public transportation projects that exceed the requirements of the ADA; public transportation projects that improve access to fixed-route service and decrease reliance by individuals with disabilities on complementary paratransit; or, alternatives to public transportation that assist seniors and individuals with disabilities. Using these funds for operating expenses requires a 50 percent local match while using these funds for capital expenses (including acquisition of public transportation services) requires a 20 percent local match.

State of Good Repair Grants (5337)
The FAST Act caries on this program which was created under the previous federal legislation. This is a grant program to maintain public transportation systems in a state of good repair. This program replaces the fixed guideway modernization program (Section 5309). Funding is limited to fixed guideway systems (including rail, bus rapid transit, and passenger ferries) and high intensity bus (high intensity bus refers to buses operating in high occupancy vehicle (HOV) lanes.) Projects are limited to replacement and rehabilitation, or capital projects required to maintain public transportation systems in a state of good repair. Projects must be included in a transit asset management plan (see next section) to receive funding. The new formula comprises: (1) the former fixed guideway modernization formula; (2) a new service-based formula; and (3) a new formula for buses on HOV lanes.

Bus and Bus Facilities Program (5339)
A new formula grant program is established under Section 5339, replacing the previous Section 5309 discretionary Bus and Bus Facilities program from previous transportation bills. This capital program provides funding to replace, rehabilitate, and purchase buses and related equipment, and to construct bus-related facilities. This program requires a 20 percent local match.

RVMPO STBG Funding In April of 2002, the RVMPO agreed to allocate a portion of its STBG funds to RVTD on an annual basis. This agreement was revisited in 2018 and the allocation was fixed at $700,000 per annum. STBG funds are to be used for funding transit capital or maintenance and cannot be directly used to fund transit operations. However, the effect of this increased funding will be to free up funding for transit operations. The RTP assumes this funding for RVTD will continue through 2045.

STATE TRANSIT REVENUE SOURCES

State Special Transportation Fund (STF) ODOT's Public Transit section administers a discretionary grant program derived from state cigarette-tax revenues that provides supplementary support for transit-related projects serving the elderly and disabled. JCT uses their allocation for local match of other federal funds. A competitive process has been established for awarding STF funds, which are programmed on an annual basis.

Statewide Transportation Improvement Fund (STIF) – In 2017 the Oregon Legislature passed HB2017 which created a new funding source for transit. This fund source was divided into two components – one component of the fund is distributed by an agreed upon formula. The other segment of STIF funds (5% of the funds) are discretionary and are treated like a grant program. RVTD assumes that they will be moderately successful in acquiring these funds.

LOCAL TRANSIT REVENUE SOURCES

Farebox Revenues and Bus Pass Revenues Farebox revenues, the fares paid by users of transit systems, and bus-pass revenues both are fees paid directly by users of the transit system. Such fees cover about eleven percent of RVTD's operating costs.

Other Other funding includes local property taxes, a local special levy and local fund reserves.

9.3 REVENUE PROJECTIONS

INTRODUCTION

Projecting revenues over long time periods – in this case, 25 years – necessarily involves making several assumptions that may or may not prove valid. For example, changing social, economic and political conditions cannot be predicted, yet these factors play important roles in determining future funding levels for regional transportation system and local street improvement projects. In general, revenue projections for federal and state revenue sources described here rely on information provided by RVMPO member jurisdictions and ODOT.

RESPONDING TO RISK

Developing revenue forecasts over the long range requires assumptions about a broad range of unknowns, from fuel costs, consumption and sales, to levels of political support – federal, state and local – for transportation. A reasonable assumption, or set of assumptions, one year can change drastically with an election, or a shift in the economy. Circumstances underpinning some assumptions can change rapidly, such as enactment of a new transport act, while others, such as the recent downward tick in gasoline consumption, develop over months and years. Given the resulting level of uncertainty associated with assumptions in this plan, it is important to remember that the plan is reviewed and updated every four years. The frequent re-evaluation of the financial assumptions helps to ensure their usefulness.

The revenue estimates include assumptions that while responsible and solidly based on history may not come to pass. Long-range projections and listed projects should be considered with caution. To address a revenue shortfall, additional funds would have to be found, or some planned projects would have to be delayed.

Transportation System Plans (TSPs) are critical to the development of RTP project lists. Through the TSP process, needs on the local level are identified and addressed. Projects developed in TSPs flow into the RTP.

RVMPO RTP Funding Forecasts, Assumptions

Tables on the following two pages summarize the RTP funding forecasts through 2045.

Table 9.1 below shows the projected 25-year capital funding scenario for regional transportation system and local street projects. Transportation revenue estimates for RVMPO cities are shown by funding source.

Local revenue estimates are provided by the jurisdictions themselves and, as such, are not completely transferable in format from one jurisdiction to the other. Some local governments felt comfortable assuming a stream of revenue from grants (including STBG and CMAQ funds from the MPO) based on their previous history. Others preferred to cite only those funds that are historically collected or received.

Table 9.1 – Anticipated Revenue Streams through 2045

	State Gas Tax	SDCs	Other Local Sources	Anticipated Grants*	Totals
Ashland	$ 2,695,530	$ 3,100,000	$ -	$ 8,500,000	$ 5,795,530
Central Point	$ 11,567,211	$ 4,000,000	$ -	$ -	$ 15,567,211
Eagle Point	$ 10,460,000	$ 5,187,200	$ 5,925,000	$ 3,750,000	$ 25,322,200
Jacksonville	$ 3,830,890	$ -	$ -	$ -	$ 3,830,890
Jackson County	$ 30,933,995	$ 10,000,000	$ -	$ 22,000,000	$ 62,933,995
Medford**	***$ 107,190,343***				$107,190,343
Phoenix	$ 3,000,000	$ 168,241	$ 1,130,500	$ -	$ 4,298,741
Talent	$ 8,261,542	$ 4,000,000	$ -	$ -	$ 12,261,542
STBG					$ 56,184,645
CMAQ					$ 52,500,000
COVID Relief					$ 2,500,000
Total					**$348,385,097**

**Anticipated Grants include STBG and CMAQ funds through the MPO as well as state and other federal grant programs*

*** The city of Medford provided there revenues in a somewhat different format*

Table 9.2 below is a summary of RVTD's revenue stream and Figure 9.5 on the next page is the City of Medford's anticipated revenue stream.

Table 9.2 – RVTD Revenue Streams through 2045

Federal	$ 193,803,143	$ 94,469,286	**S5307**
		$ 71,982,680	**5311**
		$ 18,000,000	**5309 & Capital**
		$ 9,351,177	**5310**
State	$ 141,866,877	$ 27,443,378	**STF**
		$ 107,723,499	**STIF**
		$ 6,700,000	**STIF/Disc.**
Local	$ 122,051,300	$ 50,068,620	**Farebox**
		$ 71,982,680	**Property Tax**
STBG set aside	$ 19,600,000	$ 19,600,000	**STBG Set aside**

Figure 9.5 – City of Medford's Anticipated Revenue

passed legislation to increase state transportation revenues are summarized in Table 2 for three time periods. These time periods include:

- First five years of the TSP (fiscal year 2018 through 2022)
- Second five years of the TSP (fiscal year 2023 through 2027)
- Last ten years of the TSP (fiscal year 2028 through 2038)

Table 2 City of Medford 20-Year Transportation Revenue Estimates

Budget Item	2018-2022	2023-2027	2028-2038
Revenue Estimates			
Existing Revenue Sources:			
State Gas Tax	$ 23,500,000	$ 23,500,000	$ 47,000,000
Street System Development Charges (SDC)	$ 8,750,000	$ 8,750,000	$ 17,500,000
Street Utility Fees	$ 37,000,000	$ 37,000,000	$ 74,000,000
Miscellaneous (CBDG, grants, MURA, etc.)	$ 3,500,000	$ 3,500,000	$ 7,000,000
Total Estimated Revenue from Existing Sources	*$ 76,750,000*	*$ 76,750,000*	*$ 153,500,000*
Anticipated Revenue Sources:			
State Transportation Revenue Increase from HB 2017	$ 6,484,160	$ 9,887,520	$ 20,209,600
Total Estimated Revenues	**$ 83,234,160**	**$ 86,637,520**	**$ 173,709,600**
Fixed Expenditures			
Operating Expenses (staff, indirect, non-road capital)	$ 49,000,000	$ 49,000,000	$ 98,000,000
Maintenance (includes 3% annual increase)	$ 13,272,840	$ 15,386,859	$ 38,516,238
Loan Repayment (Foothill)	$ 5,000,000	$ 5,000,000	
SDC Credits	$ 2,250,000	$ 2,250,000	$ 4,500,000
Contingency	$ 2,965,000		
Total Fixed Expenditures	**$ 72,487,840**	**$ 71,636,859**	**$ 141,016,238**
Balance Available for Capital Street Projects	$ 10,746,320	$ 15,000,661	$ 32,693,362
Fund Balance Carried Forward	$ 30,000,000		
Total Revenue Available for Capital Projects	***$ 40,746,320***	***$ 15,000,661***	***$ 32,693,362***
20-year Total Revenue Available for Capital Projects	**$ 88,440,343**		

Please Note: In addition to the $88,440,343 in anticipated revenue the city has also recently received $15,500,000 in BUILD grant funding along with a county donation of $3,250,000.

Table 9.3 on the next page shows estimated costs for implementation of the RTP projects through 2045.

The analysis shows there is adequate revenue for all regionally significant transportation projects planned by the jurisdictions. Planned projects for which funding cannot be identified are in the Tier 2 category.

Table 9.3 - Project Costs by Jurisdiction

Jurisdiction	Time Frame	Estimated Project Costs
Ashland	Short	$ 1,616,648
	Medium	$ -
	Long	$ 11,701,586
Central Point	Short	$ 5,499,000
	Medium	$ 1,124,121
	Long	$ 5,038,488
Eagle Point	Short	$ 1,263,423
	Medium	$ 3,250,000
	Long	$ 10,925,000
Jacksonville	Short	$ -
	Medium	$ -
	Long	$ -
Jackson Co.	Short	$ 19,828,000
	Medium	$ 18,000,000
	Long	$ 39,500,000
Medford	Short	$ 59,435,000
	Medium	$ 21,564,000
	Long	$ 21,040,000
Phoenix	Short	$ -
	Medium	$ 2,999,500
	Long	$ 770,000
Talent	Short	$ 1,400,000
	Medium	$ 5,040,000
	Long	$ 8,730,000
TOTAL PROJECT COSTS		**$ 238,724,766**

CHAPTER 10
FUTURE CONDITIONS

INTRODUCTION

Performance measures in this chapter are forecasts of future travel conditions—specifically traffic congestion. The forecasts are estimates produced by the Southern Oregon Activity Based Model (SOABM) travel demand model. The model, computer software that performs a series of calculations, is based on information the RVMPO obtained about future population and employment. Estimates of the numbers of people, jobs and their locations within the region are critical to the model. Also, the transportation network itself is represented in the model. The current system, including numbers of lanes, locations of intersections, signals, turn lanes and lane widths all can be significant to traffic flow and road capacity. Future conditions for all of these factors are estimated in consultation with local, state and federal agencies and governments, and are incorporated into the model for specific future years.

10.1 TRAVEL DEMAND MODELING

POPULATION ESTIMATES

Population forecasts provide the foundation for land use and transportation planning.

In 2013 the state approved legislation (HB 2253) assigning coordinated population forecasting to the Population Research Center (PRC) at Portland State University (PSU). The legislation created the Oregon Population Forecast Program which is now responsible for developing county and urban growth boundary (UGB) level population forecasts for all Oregon counties (with the exception of the Portland Metropolitan region counties) and incorporated cities. The program develops coordinated forecasts with a 50-year forecast horizon at least once every four years. Forecasts are released in three groups based on defined regions. PSU released forecasts for Jackson County in 2018.

Table 10.1.1: Jackson County Coordinated Population Forecasts, 2018-2045

Forecasts for Total Population							
Area / Year	**2018**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**
Jackson County	219,270	224,980	235,066	246,611	257,256	266,910	275,829
Ashland UGB	21,501	21,788	22,539	23,196	23,544	23,630	23,617
Butte Falls UGB	419	412	420	427	434	440	446
Central Point UGB	19,101	19,714	21,035	22,920	24,815	26,707	28,553
Eagle Point UGB	9,188	9,515	10,034	11,159	12,298	13,444	14,575
Gold Hill UGB	1,234	1,238	1,274	1,307	1,338	1,366	1,392
Jacksonville UGB	2,985	3,056	3,199	3,483	3,767	4,044	4,311
Medford UGB	82,566	84,966	88,985	94,210	99,640	105,225	110,950
Phoenix UGB	4,861	4,896	5,051	5,331	5,591	5,826	6,063
Rogue River UGB	2,846	2,891	2,958	3,114	3,258	3,389	3,521
Shady Cove UGB	3,288	3,338	3,463	3,749	3,995	4,213	4,422
Talent UGB	6,416	6,489	6,796	7,314	7,743	8,142	8,551
Outside UGB Area	64,865	66,676	69,314	70,402	70,835	70,483	69,428
Final Population Forecasts prepared by: Population Research Center, Portland State University, June 30th, 2018.							
Final forecasts represent populations as of July 1 of each year							

The PSU forecasts assume that growth rates will decrease over time in Jackson County. The rationale for that assumption is described in detail in the Jackson County Coordinated Population Forecast report by PSU. The key reasons relate to in-migration rates and birth and death rates. Table 10.1.2 shows population change by period for the UGB's.

EMPLOYMENT FORECASTS

Unlike the population forecasts, there are no statewide employment forecasting requirements. The Oregon Employment Department prepares 10-year employment forecasts that RVMPO member jurisdictions use as a starting point in determining employment growth in their communities. Jurisdictions can choose to use the data provided by the RVMPO or provide their own employment data to be included in the model.

The employment estimates for 2017, as shown in Tables 10.1.2 and 10.1.3, were developed by using the model baseline data for 2017 provided by ODOT's Transportation Planning Analysis Unit.

Table 10.1.2: RVMPO Employment by Jurisdiction, 2017

GEOGRAPHY	2017 EMPLOYMENT TOTAL	PERCENTAGE OF OVERALL EMPLOYMENT
ASHLAND	10193	12.4%
CENTRAL POINT	5049	6.1%
EAGLE POINT	1390	1.7%
JACKSONVILLE	923	1.1%
MEDFORD	51255	62.2%
OTHER RVMPO	11279	13.7%
PHOENIX	1211	1.5%
TALENT	1107	1.3%
RVMPO	82407	100.00

Source: 2017 data from TPAU

Table 10.1.3: RVMPO Employment by Sector, 2017

SECTOR	2017	PERCENTAGE OF EMPLOYMENT
SERVICE	47937	58.17
INDUSTRY	12241	14.85
RETAIL	15958	19.36
OTHER	6271	7.61
ALL SECTORS	82407	100

Source: 2017 data from TPAU

RVMPO Model

The model itself, the information and running the software, is a cooperative project between RVMPO and ODOT's Transportation Planning and Analysis Unit. This chapter looks at some of the results, or outputs, of the model – the answers the model provides to question about road capacity, congestion and delays.

The model provides answers on a regional level for a variety of analyses. Beyond the generalized, region-scale outputs that are reported in this chapter, and in the Air Quality Conformity Determination, the RVMPO utilizes the recently developed Southern Oregon Activity Based Model (SOABM) is the foundation for more detailed analyses that jurisdictions, developers and project managers conduct to estimate fine-grained conditions such as: How much traffic will be generated by a particular development, what road will be affected and to what extent?; How much traffic can be accommodated at a particular location and what happens to traffic conditions if a lane is added, or access points changed?; How large does a facility such as a freeway interchange have to be in terms of number of lanes and their length to accommodate future anticipated traffic?

For this RTP update, the model was used to evaluate the performance of the transportation system in future years, given the plan's forecasts for growth. Results are described in the following sections.

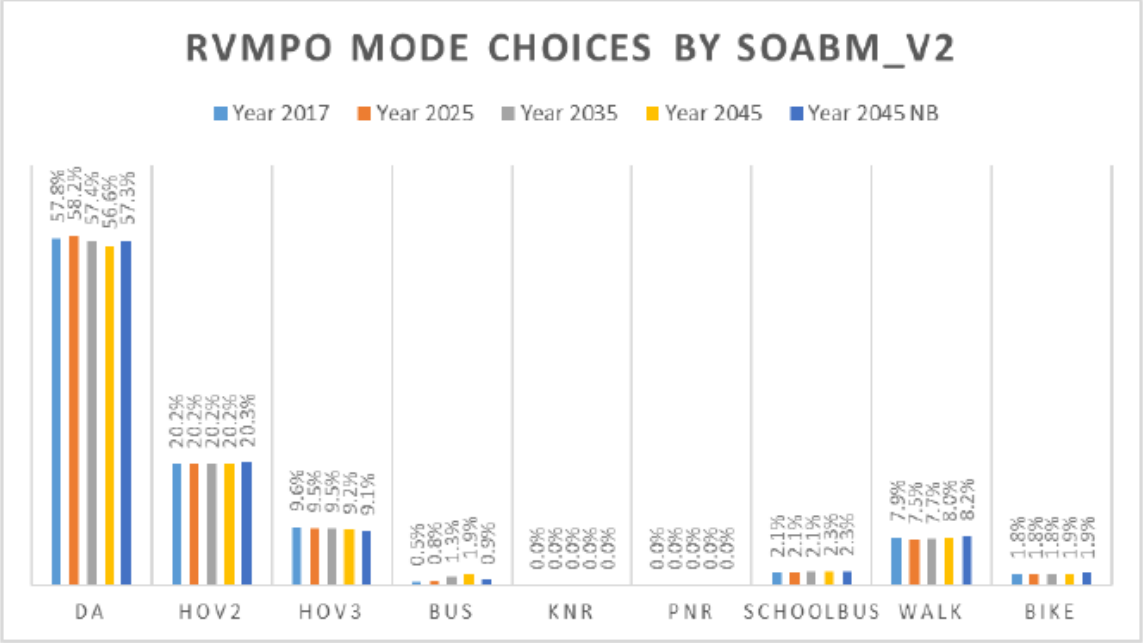
MODE SHARE

Table 10.1.4 shows the number of person trips and the mode choices utilized for those trips for the model years 2017, 2025, 2035, and 2045 according to the SOABM. The trips are sorted by nine different trip types: Drive Alone, High Occupancy Vehicle - 2 passengers, High Occupancy Vehicle – 3 passengers, Bus, Kiss-n-Ride, Park-n-Ride, School Bus, Walk, and Bike. In 2017, auto trips accounted for 87.6% of the mode share, transit 0.5%, and bicycling and walking 9.7%. In 2045, auto trips will make up 86% of the mode of travel (down by 1.6% from 2017). Transit's share of the region's travel mode will increase to 1.9% by 2045. Bike/Ped mode share is projected to increase to 10.1% by 2045.

Table 10.1.4: Travel Person Trips and Mode Choices

All Person Trips	DA	HOV2	HOV3	BUS	KnR	PnR	SCHOOLBUS	WALK	BIKE	Total
Year 2017	470,693	164,862	78,374	4,402	214	85	16,776	64,747	14,651	814,804
Year 2025	516,947	179,392	84,577	6,671	127	89	18,784	66,467	15,879	888,933
Year 2035	566,599	199,212	93,699	13,134	229	131	21,118	75,634	18,112	987,868
Year 2045	609,080	217,390	98,971	20,272	158	137	24,381	85,755	20,051	1,076,195
Year 2045 NB	617,396	218,980	97,744	9,757	154	96	24,636	88,041	20,837	1,077,641
Mode Choices	**DA**	**HOV2**	**HOV3**	**BUS**	**KnR**	**PnR**	**SCHOOLBUS**	**WALK**	**BIKE**	**Total**
Year 2017	57.8%	20.2%	9.6%	0.5%	0.0%	0.0%	2.1%	7.9%	1.8%	100.0%
Year 2025	58.2%	20.2%	9.5%	0.8%	0.0%	0.0%	2.1%	7.5%	1.8%	100.0%
Year 2035	57.4%	20.2%	9.5%	1.3%	0.0%	0.0%	2.1%	7.7%	1.8%	100.0%
Year 2045	56.6%	20.2%	9.2%	1.9%	0.0%	0.0%	2.3%	8.0%	1.9%	100.0%
Year 2045 NB	57.3%	20.3%	9.1%	0.9%	0.0%	0.0%	2.3%	8.2%	1.9%	100.0%

Figure 10.1.1: 2017 & 2045 Mode Share



FUTURE CONGESTION

Generally, travel demand modeling shows that the region can expect congestion to increase. Table 10.1.5 below shows conditions throughout the RVMPO at four points in the future.

Table 10.1.5 Future Conditions

SOABM_v2 RTP2021-2045 RVMPO System-wide Evalaution Measures					
Scenario	Reference 2017	RTP 2025	RTP 2035	RTP 2045	NoBuild 2045
Total Lane Miles	2,811	2,823	2,834	2,840	2,823
P.M. Peak Hour Speed (mph)	32	32	31	30	31
PM Peak Hour VMT	275,291	295,476	332,476	358,497	358,768
P.M. Peak Hour VHT	8,612	9,330	10,711	11,762	11,690
Congested Lanes Miles	4.7	4.7	7.2	9.6	10.6
% of Congestion	0.2%	0.2%	0.3%	0.3%	0.4%
Daily Bus Mode Split	0.6%	0.8%	1.4%	1.9%	0.9%

As Table 10.1.5 shows, with implementation of the 2045 RTP the total of congested lane-miles will increase from 4.7 lane miles today to 9.6 lane miles in 2045. If the RTP projects were not pursued (the No Build Scenario) congested lane miles would increase to 10.6.

CONGESTED ROADS

Travel conditions on several key roads were examined with the model. Results on Table 10.1.6 and 10.1.7 show estimated 2017 and future conditions (2045). Travel conditions expressed are peak hour conditions, which are calculated to be typical conditions a motorist is likely to encounter at the late afternoon-early evening hours – the time of the greatest amount of travel in the RVMPO region. The numbers in the columns in these two tables are the number of lane miles on a particular road that are at the traffic volume ranges indicated in the first column.

Congestion is expressed as a ratio of travel demand, or number of vehicle trips to roadway capacity available to accommodate vehicles. High congestion indicates too many vehicles attempting to travel on the segment of road, causing delay. The estimates report peak hour travel - travel at certain hours in the day, generally mid-afternoon in the Rogue Valley. (Peak hour varies from region to region, dependent on conditions such as shift changes and school hours.) Congestion on the roads shown on these tables can lead to delays on intersecting roads as well.

Table 10.1.6 Model-estimated Demand/Capacity Ratios for Selected Corridors, 2017

2017 Reference PM Peak Hour Lane Miles in 8 Corridors								
Demand/Capacity Ratios	**Foothill Rd**	**Hwy 238**	**Hwy 62 / Old Hwy 62**	**Hwy 62 Bypass**	**Hwy 99**	**I-5**	**N Phoenix Rd**	**Table Rock Rd**
0 – 0.59	11.721	18.641	41.605	8.496	85.119	89.338	10.798	20.414
0.59 – 0.69	0.073	0	0.314	0	0.018	19.034	0	0
0.69 – 0.79	0	0	2.075	0	0	4.978	0	0.083
0.79 – 0.89	0	0	0.843	0	0	0	0	0
0.89 – 0.99	0	0	0.123	0	0	0	0	0
0.99 – 9.99	0.168	0	0.084	0	0	0	0	0
No Congestion	12	19	44	8	85	113	11	20
Congestion	0	0	1	0	0	0	0	0
High Congestion	0	0	0	0	0	0	0	0
Total Lane Miles	**12**	**19**	**45**	**8**	**85**	**113**	**11**	**20**

Table 10.1.7: Model-estimated Demand/Capacity Ratios for Selected Corridors, 2045

2045 RTP2021-2045 PM Peak Hour Lane Miles in 8-Corridors								
Demand/Capacity Ratios	**Foothill Rd**	**Hwy 238**	**Hwy 62 / Old Hwy 62**	**Hwy 62 Bypass**	**Hwy 99**	**I-5**	**N Phoenix Rd**	**Table Rock Rd**
0.0 - 0.59	16.503	18.669	36.746	17.14	83.186	72.436	6.936	22.292
0.60 - 0.69	0.651	0	4.8	0	0.19	16.916	1.573	0.096
0.70 - 0.79	0	0	0.276	0	0.012	14.158	1.01	0
0.80 - 0.89	0	0	0.121	0	0	9.854	1.025	0.083
0.90 - 0.99	0	0	0.4	0	0	0	0.171	0
> 1.0	0	0	0.207	0.275	0	0	0.085	0
No Congestion	17	19	42	17	83	104	10	22
Congestion	0	0	1	0	0	10	1	0
High Congestion	0	0	0	0	0	0	0	0
Total Lane Miles	**17**	**19**	**43**	**17**	**83**	**113**	**11**	**22**

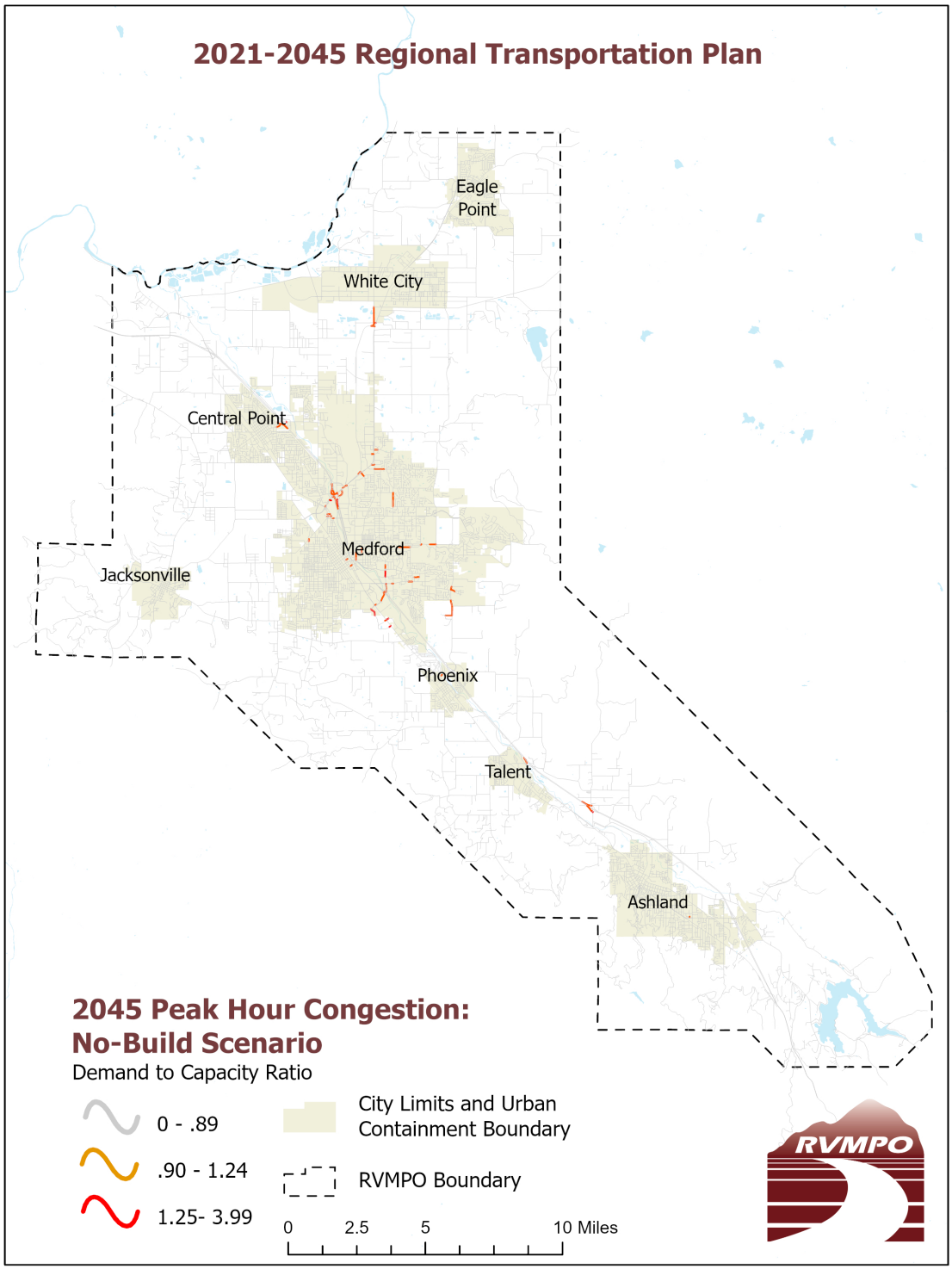
CONGESTION MAPS

Maps 10.1.1 and 10.1.2 on the following pages indicate locations where the RVMPO travel demand model estimates potential for congestion in future years. The maps show the difference between the "no-build" and "build" scenarios.

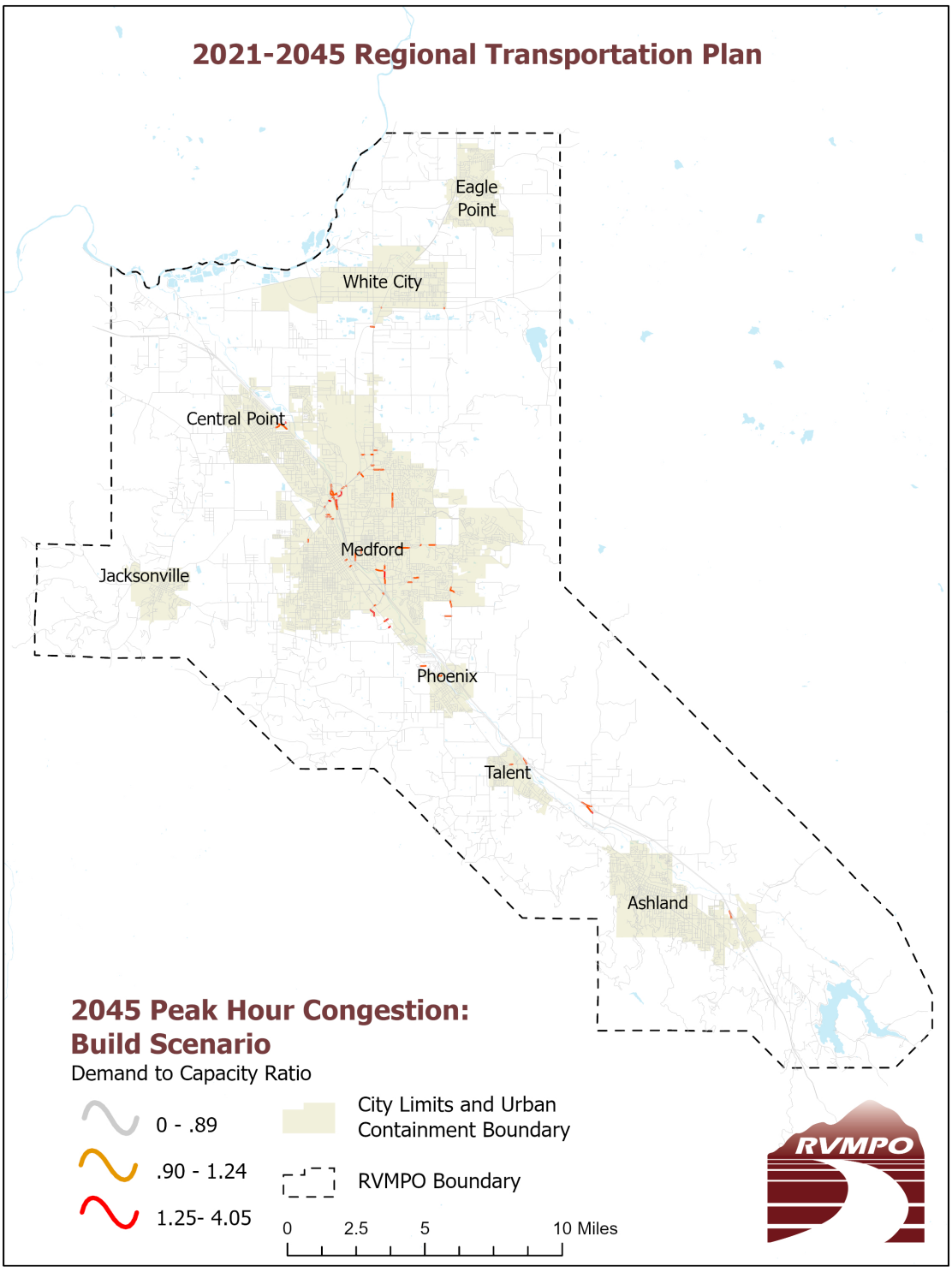
Rather than showing with absolute certainty future congested conditions, these maps indicate the locations most vulnerable to traffic pressures. The futures shown here are far from certain because RVMPO jurisdictions are in agreement that additional funds will need to be identified for projects not yet in the plan. Beyond that, there are

projects being planned, but are not included in this analysis because RTP projects must be financially constrained, as described in *Chapter 9: Financial Plan*.

Map 10.1.1: 2045 Peak Hour Congestion – No Build



Map 10.1.2: 2045 Peak Hour Congestion - Build



Transportation Planning Acronyms and Terms

3-C	Comprehensive, Continuing and Coordinated
ACT	Area Commission on Transportation
ADA	Americans with Disabilities Act
ADT	Average Daily Traffic
AQCD	Air Quality Conformity Determination
AQMA	Air Quality Maintenance Area
CAAA	Clean Air Act Amendments
CBD	Central Business District
CMAQ	Congestion Mitigation & Air Quality
CNG	Compressed Natural Gas
CO	Carbon Monoxide
CO LMP	Carbon Monoxide (CO) Limited Maintenance Plan
COATS	California Oregon Advanced Transportation Systems
DEQ	Department of Environmental Quality
DLCD	Department of Land Conservation and Development
EJ	Environmental Justice
EMME/2	Computerized Transportation Modeling Software
EPA	Environmental Protection Agency
FAST Act	Fixing America's Surface Transportation Act
FFY	Federal Fiscal Year: *October 1 to September 31*
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FTZ	Foreign Trade Zone
FY	Fiscal Year: *Oregon* | *July 1 to June 30*
GCP	General Corridor Planning
GIS	Geographic Information Systems
GPS	Global Positioning System
HOT	High Occupancy Toll lane with extra charge for single occupants
HOV	High Occupancy Vehicle lane for vehicles with more than one occupant
HPMS	Highway Performance Monitoring System
I/M or I & M	Inspection and Maintenance Program for emissions control
IAMP	Interchange Area Management Plan
IGA	Intergovernmental Agreements
IM	Interchange Management
ITS	Intelligent Transportation Systems
JCT	Josephine Community Transit
JJTC	Jackson-Josephine Transportation Committee
LCDC	Land Conservation and Development Commission
LMP	Limited Maintenance Plan
LOS	Level of Service | A measure of traffic congestion from A (free-flow) to F (grid-lock)
LRT	Light Rail Transit | self-propelled rail cars such as Portland's MAX
LSNP	Local Street Network Plan
MAP-21	Moving Ahead for Progress in the 21st Century (P.L. 112-141) | Signed into law by President Obama on July 6, 2012. Funding surface transportation programs at over $105 billion for fiscal years (FY) 2013 and

	2014, MAP-21 is the first long-term highway authorization enacted since 2005.
MIS	Major Investment Study
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization | A planning body in an urbanized area over 50,000 population which has responsibility for developing transportation plans for that area
MRMPO	Middle Rogue Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NARC	National Association of Regional Councils
NHS	National Highway System
NPTS	Nationwide Personal Transportation Survey
NTI	National Transit Institute
OAR	Oregon Administrative Rules
ODEQ	Oregon Department of Environmental Quality
ODFW	Oregon Department of Fish and Wildlife
ODOT	Oregon Department of Transportation
OHAS	Oregon Household Activity Survey
OHP	Oregon Highway Plan
OMPOC	Oregon MPO Consortium
OMSC	Oregon Modeling Steering Committee
ORS	Oregon Revised Statutes
OSTI	Oregon Sustainable Transportation Initiative
OSUM	Oregon Small Urban Model
OTC	Oregon Transportation Commission, ODOT's governing body
OTP	Oregon Transportation Plan
PAC	Public Advisory Council
PL112 / PL Funds	Public Law 112, Federal Transportation Planning Funds
$PM_{2.5}$	Particulate Matter of less than 2.5 micrometers
PM_{10}	Particulate Matter of less than 10 micrometers
PPP	Public Participation Program
RPS	Regional Problem Solving | RVCOG study examining how to plan for double the current population
RTP	Regional Transportation Plan
RVACT	Rogue Valley Area Commission on Transportation
RVCCC	Rogue Valley Clean Cities Coalition
RVCOG	Rogue Valley Council of Governments
RVMPO	Rogue Valley Metropolitan Planning Organization
RVTD	Rogue Valley Transportation District
SA	Strategic Assessment
SIP	State Implementation Plan
SOV	Single Occupancy Vehicle
STA	Special Transportation Area
STBG	Surface Transportation Block Grant
STIP	Statewide Transportation Improvement Program
TAC	Technical Advisory Committee
TAZ	Transportation Analysis Zones
TCM	Traffic Control Measures

TDM	Transportation Demand Management
TGM	Transportation & Growth Management
TGMP	Transportation & Growth Management Program
TIP	Transportation Improvement Program
TO	Transportation Options
TOD	Transit Oriented Development
TPAU	Transportation Planning Analysis Unit
TPR	Transportation Planning Rule
TSM	Transportation Systems Management
TSP	Transportation System Plan
UCA	Urban Containment Area
UGB	Urban Growth Boundary
UGBMA	Urban Growth Boundary Management Agreements
UPWP	Unified Planning Work Program
URA	Urban Redevelopment Authority
USDOT	U.S. Department of Transportation
V/C	Volume to Capacity
VHT	Vehicle Hours of Travel
VMT	Vehicle Miles of Travel

3C ("Three C's") = Continuing, Comprehensive and Cooperative: This term refers to the requirements set forth in the Federal Highway Act of 1962 that transportation projects in urbanized areas be based on a "continuing, comprehensive transportation planning process carried out cooperatively by states and local communities." ISTEA's planning requirements broaden the framework for such a process to include consideration of important social, environmental and energy goals, and to involve the public in the process at several key decision making points.

Appropriation: Legislation that allocates budgeted funds from general revenues to programs that have been previously authorized by other legislation. The amount of money appropriated may be less than the amount authorized.

Authorization: Federal legislation that creates the policy and structure of a program including formulas and guidelines for awarding funds. Authorizing legislation may set an upper limit on program spending or may be open ended. General revenue funds to be spent under an authorization must be appropriated by separate legislation.

Capital Costs: Non-recurring or infrequently recurring cost of long-term assets, such as land, buildings, vehicles, and stations.

Conformity Analysis: A determination made by the MPOs and the US DOT that transportation plans and programs in non-attainment areas meet the "purpose" of the SIP, which is to reduce pollutant emissions to meet air quality standards.

Emissions Budget: The part of the SIP that identifies the allowable emissions levels for certain pollutants emitted from mobile, stationary, and area sources. The emissions levels are used for meeting emission reduction milestones, attainment, or maintenance demonstration.

Emissions Inventory: A complete list of sources and amounts of pollutant emissions within a specific area and time interval (part of the SIP).

Exempt / Non-Exempt Projects: Transportation projects which will not change the operating characteristics of a roadway are exempt from the Transportation Improvement Program conformity analysis. Conformity analysis must be completed on projects that affect the distance, speed, or capacity of a roadway.

Federal-aid Highways : Those highways eligible for assistance under Title 23 of the United States Code, as amended, except those functionally classified as local or rural minor collectors.

Functional Classification: The grouping of streets and highways into classes, or systems according to the character of service that they are intended to provide, e.g., residential, collector, arterial, etc.

Key Number: Unique number assigned by ODOT to identify projects in the TIP/STIP.

Maintenance: Activities that preserve the function of the existing transportation system.

Maintenance Area: "Any geographical region of the United States that the EPA has designated (under Section 175A of the CAA) for a transportation related pollutant(s) for which a national ambient air quality standard exists." This designation is used after non-attainment areas reach attainment.

Mobile Sources: Mobile sources of air pollutants include motor vehicles, aircraft, seagoing vessels, and other transportation modes. The mobile source related pollutants of greatest concern are carbon monoxide (CO), transportation hydrocarbons (HC), nitrogen oxides (NOx), and particulate matter (PM_{10}). Mobile sources are subject to a different set of regulations than are stationary and area sources of air pollutants.

Non-attainment Area: "Any geographic region of the United States that the EPA has designated as non-attainment for a transportation related pollutant(s) for which a national ambient air quality standard exists."

Regionally Significant: From OAR 340-252-0030 (39) "Regionally significant project" means a transportation project, other than an exempt project, that is on a facility which serves regional transportation needs, such as access to and from the area outside the region, major activity centers in the region, major planned developments such as new retail malls, sports complexes, etc., or transportation terminals as well as most terminals themselves, and would normally be included in the modeling of a metropolitan area's transportation network, including at a minimum:

a) All principal arterial highways;
b) All fixed guideway transit facilities that offer an alternative to regional highway travel; and
c) Any other facilities determined to be regionally significant through interagency consultation pursuant to OAR 340-252-0060.

From: West, Paige <pwest@rvtd.org>
Sent: Tuesday, September 7, 2021 2:38 PM
To: Ryan MacLaren <rmaclaren@rvcog.org>; Karl Welzenbach <kwelzenbach@rvcog.org>
Subject: Fwd: PTASP Table for RTP

See attached and below for explanation.

Paige West
RVTD Planning &
Strategic Programs Manager
(541) 608-2429
www.rvtd.org

---------- Forwarded message ---------
From: **West, Paige** <pwest@rvtd.org>
Date: Mon, May 17, 2021 at 3:36 PM
Subject: PTASP Table for RTP
To: BOARDMAN Jennifer <jennifer.boardman@odot.state.or.us>, Jeremy Borrego <jeremy.borrego@dot.gov>, Karl Welzenbach <kwelzenbach@rvcog.org>, Stojak, Mark (FTA) <mark.stojak@dot.gov>, Ryan MacLaren <rmaclaren@rvcog.org>, Scott Chancey <schancey@co.josephine.or.us>, Scott Chancey <schancey@josephinecounty.gov>

Please see attached. This is the spreadsheet we used to calculate the targets for the PTASP. I created a new tab titled, "RTP" that has the data summarized as displayed in the PTASP.

Paige West
RVTD Planning &
Strategic Programs Manager
(541) 608-2429
www.rvtd.org

PUBLIC TRANSPORTATION AGENCY SAFETY PLAN PERFORMANCE TARGETS					
Mode of Transit Service	**Fatalities**	**Injuries**	**Safety Events**	**System Reliability**	**Mileage Increment**
Fixed Route Bus	0.00	0.528	0.528	7,200	100,000
Demand Response	0.00	0.00	0.00	63,000	50,000

From: West, Paige <pwest@rvtd.org>
Sent: Tuesday, September 7, 2021 2:38 PM
To: Ryan MacLaren <rmaclaren@rvcog.org>; Karl Welzenbach <kwelzenbach@rvcog.org>
Subject: Fwd: RTP Transit chapter

Circling back on this topic about how to integrate the TAM Plan and Safety plan. I believe that is ultimately what Jeremy with FTA wanted.

The edits were made to the transit chapter but we also need to plug in the chart from the TAM Plan and the link to ODOT's website with the safety targets.

Paige West
RVTD Planning &
Strategic Programs Manager
(541) 608-2429
www.rvtd.org

---------- Forwarded message ---------
From: **West, Paige** <pwest@rvtd.org>
Date: Tue, May 18, 2021 at 10:06 AM
Subject: RTP Transit chapter
To: Ryan MacLaren <rmaclaren@rvcog.org>, Karl Welzenbach <kwelzenbach@rvcog.org>

Ryan,

Attached is the transit chapter with edits in track changes.

I wasn't sure where to put the perf. targets we spoke about yesterday. And does it need some introduction language as to why it's being placed there?

So give this a look over and then we can tackle that issue.

Paige West
RVTD Planning &
Strategic Programs Manager
(541) 608-2429
www.rvtd.org

5.3 TRANSIT SYSTEM

INTRODUCTION

This chapter focuses on the services and programs of transit provider Rogue Valley Transportation District (RVTD), which reaches most of the RVMPO area (see service area map at the end of this chapter).

Between 2017 and the development of this RTP, RVTD has expanded services due to the new Special Transportation Improvement Fund (STIF), providing RVTD with approximately $3 Million in new revenues each year. Users tend to be the transit-dependent riders, which includes low income, young, older adults and persons living disabilities. RVTD developed the 2040 Transit Master Plan in 2019 identifying further transit improvements in a short-, mid- and long-range list of enhancements. However, the document's Finance Chapter shows that to meet the mid- and long-range additional revenues will need to be secured beyond the current sources.

Deleted: Although the public has consistently voiced support for expanded transit service during outreach for this RTP update, RVTD has struggled to maintain service at a modest level due to a lack of funding

Deleted: old

Deleted: and disabled residents of the region

Deleted: Long-range planning by

Deleted: shows that for transit service to expand, local support – beyond the existing property tax – will have to increase

Deleted:

LIMITATIONS OF TRANSIT USE

Reasons for the current modest use in transit include:

- The region is small and does not suffer from long delays caused by major traffic congestion;
- Although there are restricted time parking zones in some areas, most parking is free.
- Gas prices have decreased significantly since the Great Recession, as low as $1.50 per gallon during recent years.
- Growth is occurring at the urban fringe at relatively low densities (3-4 housing units per acre) whereas the transit industry's national standard is that a density of about 7 housing units per acre is needed to generate enough riders to warrant a bus line.

Nationally, and elsewhere around the world, "viable" bus transit does not mean self-supporting financially, only that the route will have riders and be productive. Even the nation's most successful transit systems achieve only a little over 40 percent return on farebox revenues. Lower density systems such as RVTD's achieve around 20 percent on farebox, which means that every dollar in RVTD fare revenue must be supplemented by $4 in funding from other sources. The new STIF revenues have allowed for new routes to be added and increasing convenience on existing routes by improving frequency. RVTD was making advancements until COVID-19 caused a global pandemic in early 2020 that required services to the be shut down due to a loss of drivers willing to come to work. RVTD operated at a much lower level for approximately 2 years due to the pandemic.

Commented [PW1]: Not sure you want to keep this in here? While this is true, the cities could counter that they have new laws requiring infill and have made progress toward upzoning.

Deleted: An RVMPO study, the North-South Travel Demand Study, was completed in 2010 that examined the densities that would be necessary to enhance transit opportunities on the Hwy. 99 corridor from Ashland to Central Point.

Deleted: Another factor affecting transit growth is that new bus hours require new funding.

Deleted: RVTD's lack of a stable long-term funding base is the biggest reason for the limited transit service levels. Unmet demands of many types have been identified, but cannot yet be satisfied.

Future Demand

Through the 2040 TMP, RVTD utilized a Transit Supportive Area (TSA) definition in part of its analysis to determine which services are viable. The TSA is comprised of seven or more HH per acre or ten or more employees per acre. If the complete short-term enhancement list is implemented RVTD will be serving 64% of these areas within ¼ mile. The analysis also identifies that 62% of all MPO residents and 86% of all MPO employees will be within ¼ miles of transit service. These metrics show the low-density land pattern in the MPO area and the inability for RVTD to serve them efficiently. Population trends however continue to show a higher-than-average older adult, disabled and low-income population living in Jackson County than when compared to Oregon. These populations tend to use transit more frequently than other segments.

Deleted: The outlook for transit indicates greater demand, and with demand a greater opportunity to expand service. Transit ridership has been increasing, even as gasoline prices have stabilized. Additionally, several jurisdictions are proceeding with planning for higher-density Transit Oriented Development within cities. This planning work began with the RVMPO's Transit-Oriented Development (TOD) in the late 1990s that has yielded proposals for eight TOD sites.

Since 2001, a large portion of the region's federal transportation money has been directed to support transit. $700,000 of the region's Surface Transportation Block Grant (STBG) allocation is dedicated to transit enhancement, and the STBG funds remaining along with Congestion Mitigation and Air Quality (CMAQ) funds are awarded through a competitive process among all RVMPO jurisdictions.

Existing Service

RVTD provides public transportation to the cities of Ashland, Talent, Phoenix, Medford, White City, Central Point, and Jacksonville. A portion of the STIF revenues have also been used to expand a route to the city of Eagle Point. RVTD now serves eight cities covering approximately 70 square miles. Pre-COVID levels of service included thirteen routes operating Monday – Friday between 5:00 a.m. to 8:00 p.m. and Saturdays between 7:00 a.m. and 6:00 p.m. Headways vary between 20 and 60 minutes and implemented its first Express route between Medford and Ashland using STIF revenues. The conventional radial network has shifted more toward a grid system allowing transfers to be completed outside of the Medford city center. Although RVTD gained new stable funding in recent years and from the passing of a 5-year property tax worth 13 cents per thousand in 2016, there were several service cust made in 2006, 20012 and again in 2015. The new STIF and special levy revenues sustained current service levels, added seven routes, added Saturday service and improved frequency on four routes.

Deleted: Daily fixed route service begins as early as 5 a.m. RVTD operates 9 routes in a radial network configuration.

Deleted: , and service is operated Monday – Friday with limited service on Saturdays.

Deleted: has struggled with

Deleted: resulting in service reductions (2007 and 2015 saw more than 30% reduction in revenue hours),

Deleted: the district was successful with

Deleted: additional

Deleted: funds

Deleted: two

Deleted: 3

Deleted: 26

Deleted: . The

Deleted: buses

Deleted: have

Deleted: 30

RVTD has forty fixed route vehicles, the majority of which are powered by Compressed Natural Gas (CNG) and are 35' in length with an average seated capacity of 33 passengers. RVTD added 30' buses to the fleet in 2018 for lower desndity neighborhood routes with an average seated capacity of 29 passengers. RVTD has one major transfer point, the Front Street Transfer Station in downtown Medford. The Front Street Transfer Station can accommodate up to ten transit vehicles at any given time. In 2019 RVTD worked with the City of Medford to secure bus parking on the opposite side of Front St. to add capacity. Three satellite routes were added in 2019 that required smaller transfer sites to be developed using curbside space. An intercity connection is provided at the Front Street Station through Greyhound and Josephine Community Transit.

Deleted: RVTD currently utilizes seven of the spaces for the regular fixed route service.

Deleted: s

Deleted: Additional intercity connection can be made from RVTD's fixed route system to the Greyhound depots in Medford and Ashland.

RVTD also offers a paratransit service, Valley Lift, which provides curb-to-curb transportation for eligible disabled and older adult passengers. The Valley Lift service, which is mandated by the Americans with Disabilities Act (ADA), has a service boundary of .75 miles around the fixed route network and provides approximately 50,000 trips annually. RVTD also operates a non-emergency medical transportation brokering operation called TransLink. The TransLink Call Center is a centralized transportation brokerage facility. It operates in five counties – Coos, Douglas, Curry, Jackson and Josephine. It offers ride reservation, scheduling, and and dispatched trips under contract to the Oregon Medical Assistance Program (OMAP) and the Community Care Organizations, to handle non-emergency medical rides.

RVTD also runs a Transportation Options program, and conducts community outreach, travel training and offers specialized programs such as ridesharing coordination and incentives and subsidized transit passes for employers and students. RVTD is the regional network administrator for the Get There rideshare website and works with major employers to promote signing up worksites to the network. RVTD coordinates several events each year including the Oregon Get There Challenge in the fall, Rogue Commute Challenge in the spring and oversees individualized marketing.

MICROTRANSIT

RVTD began a new general public, demand response service in Ashland using STIF Discretionary funds in 2019. This service is beginning as a pilot and uses Ford Transit vans equipped with a wheelchair lift and a passenger boarding door. Much like fixed route service, the driver primarily stays in their seat, accepts fare payment and does not typically assist passengers unless needing a wheelchair secured. The service provides same day reservations using a mobile app within the Ashland city limits.

FUTURE POTENTIAL SERVICE

RVTD adopted its 2040 Transit Master Plan in 2019 that identifies and prioritizes specific new routes and services to be implemented as funding becomes available. A primary goal is to connect activity centers with high quality transit service and expand coverage to areas with low-income, older adults and persons with disabilities. RVTD seeks to attract all types of trips rather than just work trips or trips made by persons who presently have little choice in their mode of travel. The 2040 TMP utilized the Transit Boarding Estimation Tool (TBEST), Placetypes tool from DLCD and JEMnR travel model to analyze scenarios for services through 2042.

The 2040 TMP gives priority to, adding coverage to underserved areas by adding several new routes, improving service on existing routes by increasing the frequency, expanding the hours of service and adding express or high capacity transit service on Hwy 99, Hwy 62, Barnett Rd. and W. Main St. While there are many factors that contribute to transit ridership, the level and frequency of service are important factors in attracting and maintaining a ridership base. Concerns have been raised that that the hours of transit operation do not fully meet the demand for general public transit service, particularly for Southern Oregon University and Rogue Community College students Harry and David Corporation employees, Rogue Regional Medical Center, Providence Hospital and residents of the Veteran's Domiciliary in White City. Modifications are needed to provide transportation to employees whose shifts begin early in the morning and for employees who work graveyard shifts.

Deleted: financial management services

Deleted: Drive Less Connect

Deleted: Drives Less

Deleted: programs and coordinates Safe Routes to School events

Formatted: Normal

Deleted: PARATRANSIT¶
RVTD offers a paratransit service, Valley Lift, which provides origin-to-destination transportation for disabled and elderly passengers. The Valley Lift service, which is mandated by the Americans with Disabilities Act (ADA), has a service boundary of .75 miles around the fixed route network with the same operating days and timeframes. RVTD also operates a dial-a-ride program in the Upper Rogue communities called the Rogue Valley Connector. This service provides transportation to the communities of Trail, Shady Cove, Eagle Point and White City with connections to RVTD's fixed route bus service in Medford. The RV Connector's primary purpose is to provide transportation options to older adults and people with disabilities. ¶
¶
NON-EMERGENCY MEDICAL TRANSPORTATION¶
RVTD operates a non-emergency medical transportation service called TransLink. The TransLink Call Center is a centralized transportation brokerage facility. It operates in seven counties – Coos, Douglas, Curry, Lake, Klamath, Jackson and Josephine – but will also provide transportation statewide when members need to travel elsewhere in the state. It offers ride reservation and scheduling under contract to the Oregon Division of Medical Assistance Program (DMAP) to handle non-emergency medical rides. Translink also works with the newly formed Coordinated Care Organizations or "C.C.O.'s" to provide non-emergency medical transportation. ¶
¶
RVTD also runs a Transportation Demand Management program (see Chapter 5.6), and conducts community outreach and offers specialized programs such as vanpooling coordination and incentives for employers. Fare discounts and subsides also are offered. ¶

Deleted: has a long-range plan

Deleted: RVTD is working on a 2042 Transit Master Plan that should be completed by the end of 2018.

Deleted: current plan

Deleted: improving service on existing routes by increasing the frequency

On average, transit studies in similarly sized areas elsewhere have identified a preferred transit plan as one that would begin service at 4:00 a.m. and continue until 11:30 p.m. On average, weekend service (including Sundays) would begin at 6:30 a.m. and operate until 10 p.m.

Transit-Friendly Land Use

Transit-Oriented Development (TOD) means the development of higher density nodes of mixed use activity that lend themselves to easier transit service and higher transit ridership. Generally, transit seeks to serve areas that have at least seven dwelling units per acre or 10 employees to generate enough riders to justify a bus route. There are active TOD sites in Central Point and Medford. Others have been identified but not yet implemented, including Delta Waters, Highway 62 and 99, Downtown Medford, Barnett/Gateway, and West Medford.

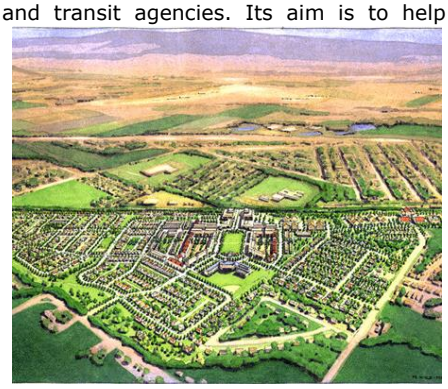
Also, the RVMPO's alternative measures, described in the Land Use Nexus, chapter 5.10, address development density and the relationship of densities to the availability of transit service. As indicated elsewhere in this plan, including the Bicycle and Pedestrian Element, transit relies upon pedestrians for ridership. This makes it particularly important that roadway projects include provisions for sidewalks.

Other features need to be considered when planning for roadway projects. These features might include thicker pavement at transit stops; transit-only right-of-way at congested intersections; construction of bus turnouts; construction of transit passenger shelters; wider sidewalks at transit stops; bicycle facilities near transit stops; and bike racks at transit stations. Consideration of transit infrastructure and capital needs early in street project planning may eliminate redundancy and reduce future expenditures. The construction of a new roadway that makes specific provisions for transit may allow RVTD to leverage funds or switch funds for the construction of transit infrastructure along that roadway. When possible, roadway and transit projects should be coordinated and constructed at the same time.

Twin Creeks TOD Rendering, Central Point

Transportation Management Associations (TMAs)

A TMA is an organization of employers and transit agencies. Its aim is to help employers provide programs and information to their employees that will increase transit, bicycling, carpooling and vanpooling to work.



It is necessary to attract riders who currently use other modes of transport in order to significantly increase ridership. In order for these people to consider transit as a viable option, there must be sufficient public information about the services available. Encouraging new riders to try the transit option is the vital next step after any service improvements are made.

Deleted: A general industry rule of thumb

Deleted: is that

Deleted: are required

Commented [PW2]: Not sure if this is all accurate?

Commented [PW3]: Should this be updated to include perf. measure analysis that has been completed?

Deployment of New Technologies – ITS

Intelligent Transportation Systems (ITS) is an umbrella term that covers electronic and high tech installations that can help transportation efficiency and safety. For transit, three ITS installations that can help RVTD are:

- Automatic Vehicle Location technology – using global positioning, the bus reports its location and can be used to monitor and inform riders (at the bus stop or online) about delays and wait times. Such systems also play a vital role in transit safety and security issues. RVTD has had such as system in place since 2012.

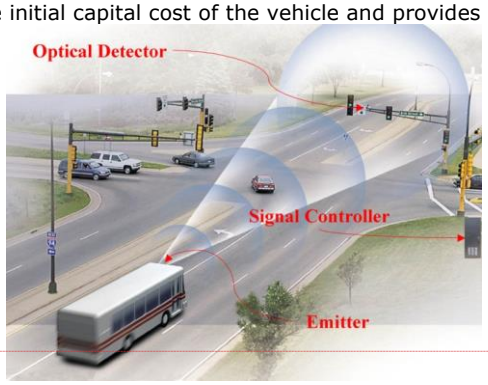
- Traffic signaling devices that can enable a traffic signal to be tripped in favor of the bus and speed up its trip when delays have been encountered. RVTD has secured a Federal grant and is working with local jurisdictions to install TSP along Hwy 99.

- Mobile fare or e-fare- Allows passengers to purchase and load fare onto mobile ticketing apps or a plastic RFID cards providing convenience and flexibility for passengers and drivers. Additionally, with the COVID pandemic cashless systems were highly encouraged; passengers use of RVTD's cashless fare products are approximately 65% of all fare transactions.

Bus Rapid Transit (BRT)

BRT is an intermediate transit technology now being developed in a number of locations including Eugene. It consists of high capacity, low-floor buses often using a special dedicated lane on the roadway. Locations where a BRT system may someday work well in the Rogue Valley include the Hwy. 62 Hwy. 99 between Ashland and Central Point, Barnett Rd. and W. Main St. in Medford. Other programs that may help reduce reliance on single-occupant vehicles include:

Vanpools – The employer or the transit agency leases or purchases a ten or more-seat van and makes it available for commuting to the worksite. Employees using the van are responsible for everything from driving to fuel and seeing to maintenance. The transit agency or employer pays for the initial capital cost of the vehicle and provides work place assistance in finding riders and supporting the program. The precise array of operating costs covered may vary – just fuel, oil and washing, or also insurance and maintenance. Vanpool programs work best when a number of workers are going to the same or nearby sites, yet there is not enough demand to run a fixed route bus to that location. Examples in the Rogue Valley include various major employers in White City, Harry and David, Amy's Kitchen, Tolo and some employers in Medford.



Deleted: two

Formatted: Indent: Left: 0.5", No bullets or numbering

Deleted: quality

Deleted: (reclining seats, tinted windows, air conditioning, tray tables etc)

Deleted: A full transitway is a two-way corridor, usually in the median of a freeway, that has flyover ramps to enable buses and other permitted vehicles (e.g. vanpools and carpools) to enter and exit the transitway without having to weave through traffic in the other freeway lanes.

Deleted: Expressway median, and the

Deleted: corridor

Deleted: Bear Creek Corporation

Current transit routes are mapped on the following page.

Map 5.3.1: RVTD Transit Routes

Deleted: Worker-Driver Buses – Worker-driver buses are operated very similarly to vanpools and are successful when even larger numbers of employees (30-40 instead of the 10-15 of a vanpool) want to go to the same worksite at the same time. There is the added challenge of the driver finding adequate parking for a bus near his/her home. In the Rogue Valley it seems likely that vanpools are a better place to start, reserving the idea of worker-driver buses for the future if high density vanpool demand emerges.¶
¶
Subscription Bus Routes – A subscription bus route is a form of demand-responsive transit. The route is tailored to the pick-up locations of a specific group of riders. Unlike the vanpool or worker-driver bus, a subscription bus has a transit agency driver and thus costs more. There have been many requests for Grants Pass to Medford bus service; a subscription bus route might be the answer. However, a smaller scale and less expensive answer would be to start with vanpool services. Institutional changes would be needed since RVTD cannot provide service to Grants Pass under current law and district configuration.¶

Deleted: RTP TRANSIT SERVICE¶
In 2014 RVTD pursued a local property tax to sustain and add a modest service increase. After the failure of the levy RVTD was forced to cut headways and sections of routes in 2015. RVTD pursued the same property tax levy of 13 cents per thousand in May of 2016 and was successful with a 61% vote in favor. The levy maintains current service levels and also helps meet increasing demand on public transportation. It restored Saturday bus service and increased frequency on bus routes that are experiencing overcrowding, including Route 10 which serves Medford, Phoenix, Talent and Ashland and Route 24 which serves Barnett Rd. in east Medford. Service in Southwest Medford is being expanded to provide a route to South Medford High School and surrounding neighborhoods. It also provides a limited commuter service from downtown Medford to Rogue Community College's Table Rock Campus. ¶
¶
The special levy is available for a 5 year period and RVTD will need to ask the local voters again for continued funding in 2021 to continue providing the additional services and to maintain service over the course of the next 10 years. RVTD is also working with other transit providers in the state to secure state funding, either through general fund or taxes to improve public transportation in the state. It is unclear whether a funding stream from the legislature would be for a biennium or provide permanent support for operations.¶
¶
If RVTD is unable to secure funds locally for another 5 year period or through the Oregon legislature service cuts would need to be made beginning in 2022 to maintain a base level of service.¶

Deleted: *<object>*