2009-2034 Regional Transportation Plan

April 27, 2009

Rogue Valley Metropolitan Planning Organization

The RVMPO is staffed by the Rogue Valley Council of Governments

ACKNOWLEDGMENTS

2009-2034 ROGUE VALLEY REGIONAL TRANSPORTATION PLAN

Prepared for

ROGUE VALLEY METROPOLITAN PLANNING ORGANIZATION

City of Medford
City of Central Point
City of Phoenix
City of Ashland
City of Talent
City of Jacksonville
City of Eagle Point
White City Urban Renewal Agency
Jackson County
Rogue Valley Transportation District
Oregon Department of Transportation

and

ROGUE VALLEY COUNCIL OF GOVERNMENTS
Board of Directors

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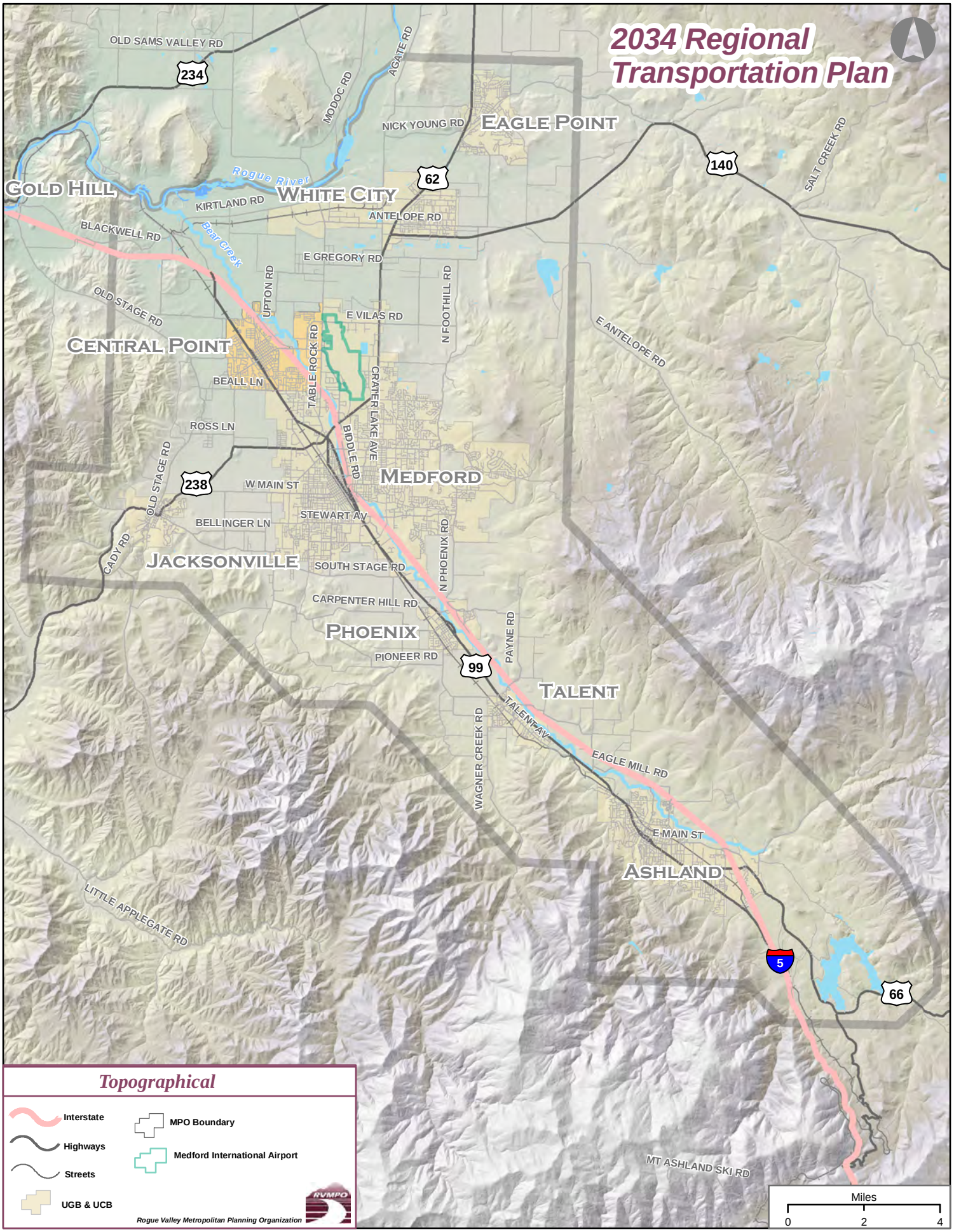
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Part 1

Introduction

Chapter 1, Plan Overview

Regional Transportation Planning

Regional transportation systems have significant and long-term impacts on 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.

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 (RVMPO) planning area boundary. The 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 the federal Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), the U.S. Clean Air Act amendments of 1990, and Oregon's Transportation Planning Rule (TPR). The RTP serves as the regional transportation system plan required under the TPR. A synopsis of TPR and RTP requirements is included in Appendix A.

As a product of multi-jurisdiction collaboration, the RTP reflects local jurisdiction policy and planning. While it is consistent with local plans, the RTP horizon extends beyond the horizon of 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 jurisdiction level, and as timeframes for local plans advance, the RTP will be amended accordingly.

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 the best possible projections for future growth and development based on current trends and approved land uses, policies and ordinances. It identifies the basic land-use assumptions through the year 2034, 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 in collaboration with ODOT's Transportation Planning and Analysis Unit.

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. The RTP serves as a guide for the management of existing transportation facilities and for the design and implementation of future transportation facilities through the year 2034. 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 within the next 25 years.

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 the projects identified may be reasonably anticipated to occur with known funding.

The 2034 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 within the Medford area, and particulates less than 10 microns in size (PM_{10}) within the entire planning area. Information about this analysis and details about the process for meeting air quality requirements is contained in the Air Quality Conformity Determination developed for this plan.

The Rogue Valley Metropolitan Planning Organization

The Rogue Valley Metropolitan Planning Organization (RVMPO) is a consortium of seven cities and the surrounding rural 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. In addition, the Oregon Department of Environmental Quality, Oregon Department of Transportation, Oregon Department of Land Conservation and Development, Federal Highway Administration, Federal Transit Administration and U.S. Environmental Protection Agency participate in the

RVMPO process. Congress requires that metropolitan areas of at least 50,000 population 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 380 metropolitan planning organizations in the nation. This plan fulfills federal requirements that metropolitan areas develop and maintain long-range transportation plans.

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. Details about RVMPO planning process are in Part 2: Plan Development.

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 remained outside the urbanized area but opted to join the RVMPO.

Ultimately, MPOs provide the forum for the many jurisdictions and agencies within a particular metropolitan region to come together to address the transportation issues that confront them all.

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: sprawl development, traffic congestion and deteriorating air quality. Thorough planning has become more significant 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 citizens when they talk about

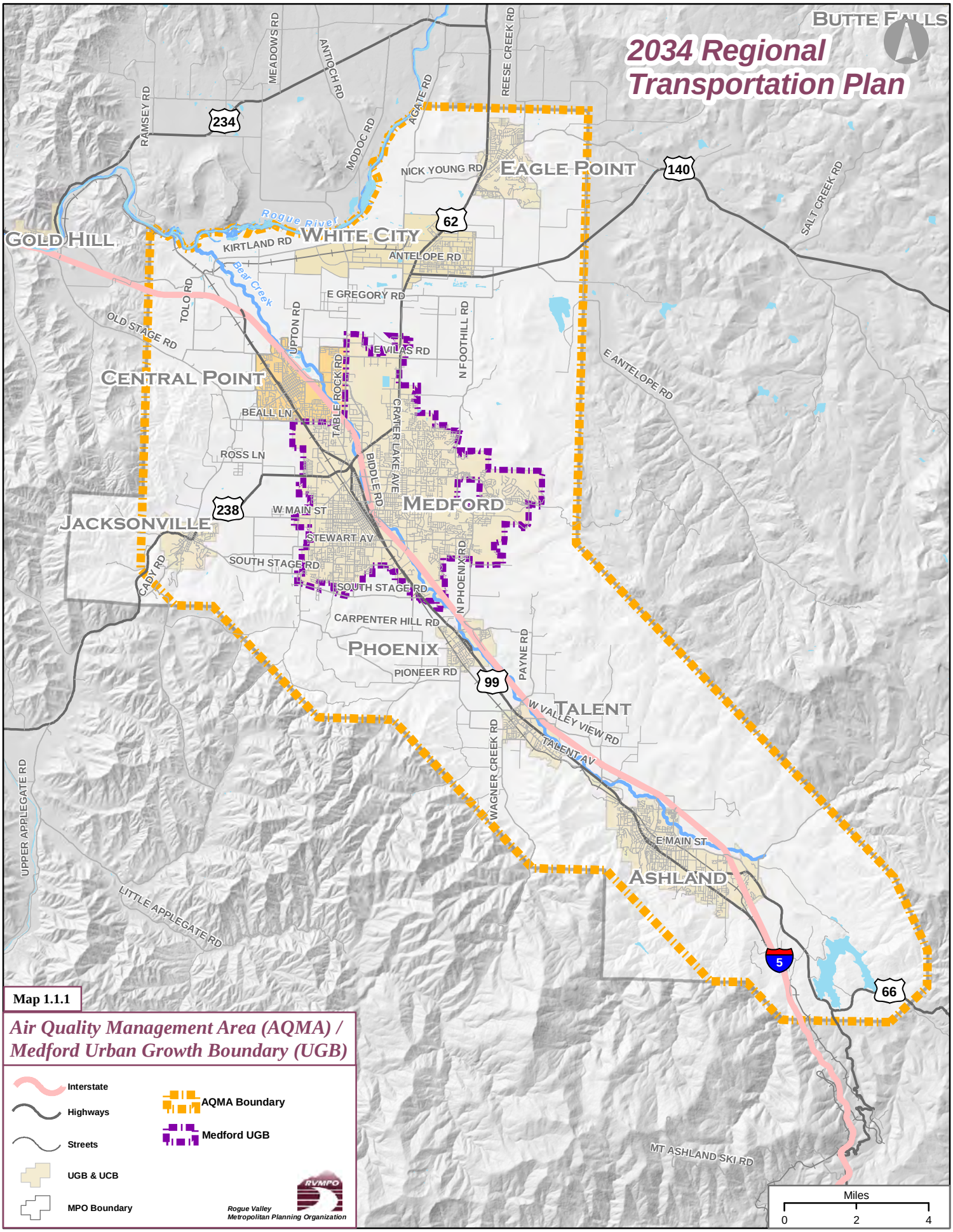
the Rogue Valley area's future. Citizens who participated in this plan update expressed concern about a transportation system almost solely devoted to motor vehicles and single-occupant vehicle travel. Alternatives to automobile travel such as public transportation become viable only when considered on the regional level.

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 affect conditions in other cities. The RTP, like the regional transportation system, links the region's communities. It identifies a transportation need they all hold in common and offers a foundation for addressing that need as the region grows.

Keeping the RTP Current

The RVMPO adopted its first regional plan in the mid-1990s. This 2034 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 2013. 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 compares the existing land use, recent development trends, and the use of the different modal components of the transportation system. This new perspective permits the RVMPO to refine growth projections and their implications on travel.

While such updates are infrequent, the RTP is routinely amended. Most commonly it is amended to include local projects that receive federal funding. For example, as this update is being written, The American Recovery and Reinvestment Act has been approved and additional funding will be coming into the region for transportation projects. This plan will be amended to include those projects. For local projects to receive federal funding they must be in this plan and the RVMPO short-range funding programming document, the Metropolitan Transportation Improvement Program. The RTP is intended to be regularly updated to reflect such changes.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Part 1

Introduction

Chapter 2, Plan Organization

Plan Requirements

The 2009-2034 Regional Transportation Plan updates the federally mandated multimodal plan that was first adopted by the Rogue Valley Metropolitan Planning Organization 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. The largest cities in the Bear Creek Valley participate in RVMPO and are represented in this plan.

This update replaces the 2005-2030 RTP, which was updated in 2007. The 2007 updates made the 2030 plan compliant with the 2006 federal transportation act, Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). This update also is SAFETEA-LU compliant, maintaining and updating the act's requirements for metropolitan areas to 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).

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.

This update of the RTP is presented in seven parts, with most parts containing two or more chapters. This chapter describes each part and the chapters within them. The parts reflect the plan's major components, or key steps in the plan's development. The RTP parts are:

1. Introduction
2. Plan Development
3. Goals and Policies
4. Plan Implementation
5. Regional Transportation System Improvements
6. Evaluation and System Performance

Part 1: Introduction

This part contains summary information about the RTP and the planning process.

Part 2: Plan Development

Part II describes the key steps taken to produce this plan, and details the processes and procedures followed in for each step. Chapters in this part:

Chapter 2.1, Organization of the RVMPO

This chapter provides details about decision making and the process for carrying out metropolitan planning in the Rogue Valley region.

Chapter 2.2, Future Conditions

Forecasts for population, employment, land uses and funding.

Chapter 2.3, Plan Consistency

Examination of other plans and their impacts on the RTP.

Part 3: Goals, Policies & Potential Actions

This is the policy framework that guides development, management and evaluation of the RTP. This section includes discussion of potential projects that could be undertaken to implement a particular policy and help the region achieve a planning goal.

Part 4: Plan Implementation

Shows how goals and polices are implemented through procedures and criteria used by the RVMPO to identify projects. Chapter in this part:

Chapter 4.1, Projects in the RTP

How and why projects are listed in the RTP.

Chapter 4.2, Project Selection Criteria

Criteria and considerations used by the RVMPO to fund projects.

Part 5: Regional Transportation System Improvements

Chapters in this part list the region's funded projects by jurisdiction and by project type and system need through 2034. Projects from all RVMPO jurisdictions are presented and mapped in terms of short-, medium-, and long-range implementation.

Chapter 5.1, RTP Projects by Jurisdiction

All funded projects, organized by jurisdiction.

Chapter 5.2, Multi-Modal Safety

Describes efforts to improve safety for all system users, including transit, bicycles and pedestrian and identifies projects that contribute to better safety.

Chapter 5.3, Multi-Modal Security

Description of security issues and concerns is provided, and projects dedicated to improving transportation system security are shown.

Chapter 5.4, Transportation System Management

Efficient management of the transportation system can reduce costs by avoiding the need for more expensive roadway expansion projects. Strategies and projects are described, including implementation of the RVMPO Intelligent Transportation System Plan.

Chapter 5.5, Transportation Demand Management

Programs that focus on improving transit, carpooling and other alternatives to motor vehicle travel – especially travel in single-occupant vehicles – are examples of Transportation Demand Management. Making such alternatives more attractive can help lower demands made on the road/highway system and to improve air quality. Local TDM projects and potential strategies are described in this chapter.

Chapter 5.6, Street System

This chapter identifies strategies, priorities and funded projects on the street system that provide facilities for motorists, buses, freight, bicyclists and pedestrians to meet long-range needs for mobility and accessibility.

Chapter 5.7, Bicycle and Pedestrian Facilities

An overview of bicycle and pedestrian needs and current regional facilities, this chapter includes improvements plans and funded projects to improvement connectivity for pedestrians and cyclists.

Chapter 5.8, Transit System

Present and long-term role for transit service, including projected funding and planned projects.

Chapter 5.9, Parking

Parking demand, new projects and state requirements to limit overall parking supply to encourage non-motorized travel are presented.

Chapter 5.10, Land Use Nexus

The link between transportation planning in metropolitan areas and state land use law is reviewed with the focus on the Alternative Measures that are in place in the RVMPO region.

Chapter 5.11, Public-Private Partnerships

The region has developed funding agreements with private businesses, using transportation funds to improve air quality. Air quality concerns also are addressed in Part 7.1 and in the Air Quality Conformity Determination.

Part 6: Financial Plan

Details about cost and revenue forecasts and the funding needed to implement the RTP. This chapter includes the best available projections of local, state and federal transportation funds used to pay for the projects identified in Part 5.

Part 7: Evaluation and System Performance

A variety of measures are in place to help the region determine how well decisions about the regional transportation system are fulfilling various standards and goals. Measures presently in place are described, and the system's performance is demonstrated.

Chapter 7.1, Air Quality

The air quality conformity process required for regional transportation projects within the RVMPO area is described, and summary results of the air quality analysis are show. The full Air Quality Conformity Determination for this plan is published separately.

Chapter 7.2, Environmental Considerations

Various natural and man-made resource sites in the region are identified and their intersection with planned projects is discussed. Chapter includes review of areas set aside to mitigate the impacts of transportation projects on certain environmental features.

Chapter 7.3, Performance Measures

The RVMPO-area's newly updated travel demand model was used to estimate future travel volumes and identify roadway segments that likely will experience congestion-related travel delays by 2034.

Chapter 7.4, Future Challenges

Not all regional travel needs can be met with existing funds, and as-yet unknown conditions will present challenges to the region -- probably within the horizon of

this plan. This chapter describes some of those unmet needs and potential future challenges.

The topics in this chapter include:

- Listing of projects that jurisdictions predict will be needed by 2034 but as yet do not have funding identified ("Tier 2 Projects");
- Other potential projects of long-term regional significance; and
- Potential new air quality requirements relating to greenhouse gas emissions and very-small particulate emissions ($PM_{2.5}$).

Appendices

Appendix A: Transportation Planning Acronyms and Terms

Common acronyms and terms used in this plan and other transportation planning documents are listed.

Appendix B: Consistency with State Planning Requirements

The RVMPO has adopted Alternative Measures and Alternative Highway Mobility Standards. Both have been acknowledged by the state. Appendix demonstrates how the metropolitan area planning is consistent with both requirements.

Part 2

Plan Development

Chapter 2.1,

Organization of the RVMPO

Introduction

Metropolitan transportation planning is the process of examining travel and transportation issues and needs in metropolitan areas. It includes a demographic analysis of the community in question, as well as an examination of travel patterns and trends. The planning process includes an analysis of alternatives to meet projected future demands, and for providing a safe and efficient transportation system that meets mobility while not creating adverse impacts to the environment. In metropolitan areas over 50,000 population, the responsibility for transportation planning lies with designated Metropolitan Planning Organizations (MPO).

Federal requirements for metropolitan planning attached to federal transportation funds were established by Congress in the 1962 Federal Aid Highway Act. The act required that all federally

funded highway projects be based on a continuing, comprehensive, and coordinated (3-C) planning process involving states and local agencies. States may designate metropolitan planning organizations to carry out the 3-C planning process in urban areas with populations of at least 50,000 people. A UZA is defined as a central population center of at least 50,000 and surrounding area with a density of at least 1,000 residents per square mile. Once the UZA threshold is reached, the jurisdictions in a metropolitan planning organization may set the MPO planning area boundary.

Summary: MPO Requirements

Federal and state transportation planning responsibilities for the RVMPO can generally be summarized as follows:

- Develop and maintain a long-range Regional Transportation Plan (RTP) and short-range Transportation Improvement Program (TIP) consistent with state and federal planning requirements.
- Perform regional air quality conformity analyses and create an air quality conformity determination for carbon monoxide (CO) and particulate matter (PM_{10}) demonstrating that both the RTP and TIP are in conformity with the State Implementation Plans (SIPs) for these pollutants.
- Develop and maintain a Public Participation Plan to guide development of all RVMPO projects, plans and programs.
- Review specific transportation and development proposals for consistency with the RTP.
- Coordinate transportation decisions among local jurisdictions, state agencies, and area transit operators.
- Develop an annual work program that shows how metropolitan planning requirements are being met and funded.

Medford became a U.S. Census-defined Urbanized Area (UZA) in 1980. In 1982, the Governor designated the Rogue Valley Council of Governments as the MPO for the greater Medford area. RVCOG's Board of Directors subsequently delegated responsibility for policy functions to the RVMPO Policy Committee, a committee of elected and appointed officials representing the RVMPO local governments and affected agencies.

The Rogue Valley Metropolitan Planning Organization (RVMPO) was formed with membership of Medford, Central Point, Jackson County, Rogue Valley Transportation District (RVTD) and Oregon Department of Transportation (ODOT). Ten years later, the 1990 census showed the Medford UZA extending to Phoenix and the White City area, and so Phoenix and White City became part of the RVMPO. And ten years later, the 2000 census show the UZA had again expanded, and included Jacksonville, Talent and Ashland. Those cities became part of the RVMPO. At the same time, Eagle Point opted in to the organization, although the Medford UZA does not extend to the city. Jurisdictions within the RVMPO drew the current boundary to follow the air quality conformity area for particulates (PM_{10}).

Under existing federal and state legislation, the MPO is responsible for certain transportation planning functions, including development and maintenance of a long-range Regional Transportation Plan (RTP) that shows how regional transportation

needs will be met over a period of at least 20 years. A significant responsibility of the MPO is to coordinate transportation discussions and decisions among the public and appropriate federal, state, and local agencies. The RTP provides a framework for these discussions.

The 2009-2034 Regional Transportation Plan updates the federally mandated multimodal plan that was first adopted by the Rogue Valley Metropolitan Planning Organization 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. The largest cities in the Bear Creek Valley participate in RVMPO and are represented in this plan.

The Committee Process

The RVMPO functions under guidance and direction of three committees that meet regularly and address all issues relating to metropolitan planning. Each committee operates under a 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 (TAC)

The TAC meets monthly and makes recommendations to the Policy Committee and is responsible for gathering, reviewing, and validating technical information and data used in RVMPO functions, including the RTP. The TAC includes staff from all member jurisdictions, as well as 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.

Public Advisory Council (PAC)

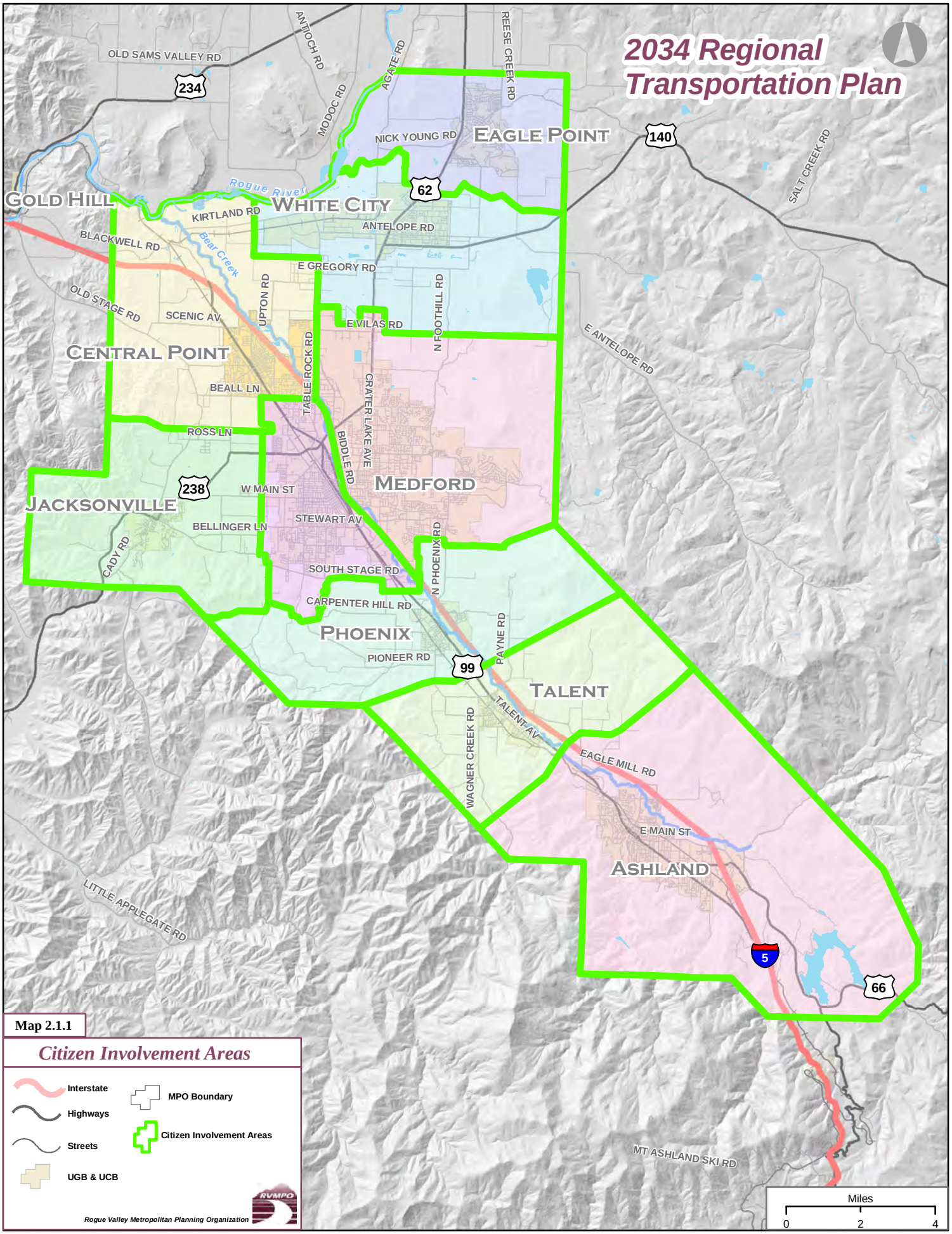
The PAC makes recommendations to the Policy Committee from the public's perspective on transportation plans and priorities and provides a forum for public discussion. The PAC serves as a public soundboard for regional issues, and as such is a key public participation activity for the RVMPO. Membership is based on

geographic area and special area of interest, such as mass transit. PAC members are appointed by the Policy Committee to serve two-year terms.

Public Participation

The RVMPO maintains a Public Participation Plan, last updated in 2007 to be consistent with the planning requirements of the 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy of Users (SAFETEA-LU). Planning requirements of SAFETEA-LU are listed in Part 3, Goals, Policies & Potential Actions. Public participation in this plan included to Open House meetings, one in Central Point and one in Medford, to present and discuss findings and plan draft material. Additionally, all RVMPO committees reviewed and advised on aspects of the plan in advertised public meetings. The Policy Committee also conducted a workshop on the draft plan during the 30-day public comment period. Prior to adoption, the Policy Committee also conducted a public hearing. Public comments received and discussion about impacts on the plan are presented in Chapter 4.1, Projects in the RTP.

RVMPO PAC members discuss draft 2034 RTP elements at Open House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Part 2

Plan Development

Chapter 2.2, Future Conditions

Introduction

The 2009-2034 RTP update builds upon a series of technical analyses and technical reports dating back to earlier updates of this plan and moving forward to new estimates and forecasts, many developed primarily for this plan. This update was accomplished during an 18 month span that began in Fall 2007. Critical benchmarks, such as updating RTP goals and policies, building a new travel demand model and developing new forecasts for employment and financing, were accomplished in consultation with RVMPO committees (Technical Advisory Committee, Public Advisory Council and Policy Committee), presented and discussed with the public through printed updates, website postings and at two Open House sessions. The entire plan was reviewed and discussed by RVMPO committees. The Policy Committee

conducted both a workshop and a public hearing on the draft. Details about public participation in this update are presented in Chapter 4.1.

Travel Demand Modeling

Updating the travel model, RVMPO.2, was a major undertaking, completed in collaboration with ODOT's Transportation Planning and Analysis Unit (TPAU). Following discussion of the model, this chapter will highlight key model inputs for population and employment. The model is sophisticated and requires significant data definition and input.

A travel demand model is a tool that can accurately replicate existing transportation conditions and evaluate future year development and infrastructure scenarios. To replicate traffic patterns as they are today, essential inputs include the existing roadway network, recent traffic counts, and current population and employment information. Once these data have been entered, the model simulates current traffic patterns within a small percentage of error of those observed. Comparing its results to actual known levels is a way to validate the model.

The next step in the modeling process involves projections for future population distribution, employment locations, and any changes in travel behavior. Household and employment data are forecast for target future years. Using these inputs, the model is able to derive future capacity limitations relative to the current roadway system. Once these deficiencies are identified, potential network changes are evaluated by rerunning the model with the modified transportation network. A range of different street networks, and even different land use patterns, may be tested this way. Although this description is somewhat over-simplified, it demonstrates the usefulness of the model as a tool. Future-year traffic projections are based on numerous assumptions about how population, employment, automobile operating costs and other factors, will change over time. As such, future year projections are only as good as the assumptions that are made. Every effort has been made to ensure that the assumptions used in the development of the RVMPO travel demand model are as reasonable and accurate as possible.

For the purposes of evaluating the future year roadway improvements, a series of model runs, for 2009, 2015, 2020, 2026 and 2034 was conducted. A complete analysis of the future conditions required the preparation of future year street networks and land use scenarios that are based on the RTP project list and the population and employment assumptions described below. The baseline network is comprised of the road system as it existed in

2006, plus all regionally significant projects that are under construction. This represents the baseline, or "no-build" network, against which the "build" networks are evaluated.

Parallel to this analysis, a financially constrained transportation system improvement strategy was developed. This was done by estimating the availability of transportation funding for projects in the RVMPO and then comparing these amounts to the estimated project costs. An initial "wish list" of potential projects was thereby winnowed down to those that can be built within the RTP's timeframe. This is known as the financially-constrained or "Tier 1" list and is divided into short (2009-2013), medium (2014 to 2019) and long range (2020 to 2034) timeframes. Projects which have been identified but for which there is no available funding in the period through 2034 are shown unfunded or "Tier 2," and are listed in Chapter 7.4. Transportation system improvements were developed by starting with local Transportation System Plans (TSPs) in conjunction with the goals and policies (detailed in Part 3: Goals, Policies and Potential Actions) and the evaluation criteria described in Part 4: Plan Implementation

The model was updated in 2008 with land use and demographic data described in this document, and calibrated and validated to 2006. The model was peer reviewed in 2008.

The RVMPO model was developed primarily to address an immediate need for a travel demand forecasting tool that could be used to support development of the region's RTP in a manner consistent with MPO transportation planning responsibilities established by USDOT, the Oregon Transportation Planning Rule, and EPA for air quality conformity. Development of the model consisted primarily of calibrating and validating the JEMnR model for local conditions. JEMnR, Joint Estimation Model in R statistical programming language, was first validated in 2001, based on household activity and travel surveys in the mid-1990s involving all Oregon MPOs and 11 counties. ODOT and the MPOs jointly estimated a travel demand model for all MPO areas based on the survey data.

The general structure of the model follows a five-step process of pre-generation (organizing household characteristics matching demographic data), trip generation (calculating person trips by purpose and household), trip distribution (estimating trips between transportation analysis zones [TAZs], matching trip origins and destinations), mode choice (auto, transit, walking or bicycling) and traffic assignment (identifying specific routes taken). It is implemented entirely through a series of script files written in the

R language, with the exception of traffic assignment, which was carried out in EMME/2.

Specific data obtained from the model for this analysis included volumes and vehicle miles traveled by area and facility type. A link-by-link analysis was carried out. Since roadway capacity and speed are included in the model, the effects of congestion are also included.

Roads included in the model are those of regional significance, generally arterials and collectors in addition to Interstate 5.

Population Estimates

Population forecasts for this update plan were drawn from Jackson County's comprehensive plan population element, which was updated in mid-2007 and is consistent with official forecasts for the state produced by the Office of Economic Analysis (OEA). The Oregon Legislature in 1995 recognized the need for local consistency in population forecasting and for a coordinated statewide forecast by adding a statute requiring counties to establish and maintain population forecast in coordination with local governments. Further, the Legislature designated the OEA as the primary forecasting agency. The population element contains population information relating to Jackson County and its incorporated cities. The RVMPO and this plan are entirely within the county boundary. The element presents the coordinated forecast as required under ORS 195.036, for the period 2006-2040. Population is allocated among the county's 11 incorporated cities, four unincorporated communities and other rural areas. The element is intended for use in planning within the county. Through consultation with jurisdictions it has been estimated that 41 percent of the rural Jackson County population resides inside the RVMPO.

Table 2.2-1:
RTP Population Forecasts

Jurisdiction	2009	2034
Ashland	21,236	22,818
Central Point	16,944	27,593
Eagle Point	9,214	19,447
Jacksonville	2,807	3,951
Medford	80,233	123,659
Phoenix	5,292	7,462
Jackson County	21,628	21,789
Talent	6,901	9,234
White City	8,338	12,371
TOTAL	172,593	248,324

NOTE: **Population relates to TAZ area boundaries, which do not match city boundaries; therefore, totals differ slightly from official "city" estimates**

As discussed in the model section above, population estimates shown in Table 2.2.1 from the county comprehensive plan were

sub-allocated to the TAZ level by the RVMPO in consultation with each jurisdiction

Employment Forecasts

The employment projections originate from an Economic Opportunities Analysis conducted in the RVMPO planning area in 2007 for the Regional Problem Solving project. Forecasts in the analysis were compared to U.S. Commerce Department data for the region, shorter term economic forecasts by the state OEA, Oregon Employment Department data and outlook, and consultation with local jurisdictions. The analysis accounts for the amount of available employment land for development and the sectors of employment predicted to grow; based on local, state and national trends.

Table 2.2-2: RTP Employment Forecasts

Jurisdiction	2009	2034
Ashland	13,859	18,071
Central Point	4,565	6,308
Eagle Point	1,155	1,505
Jacksonville	1,156	1,506
Medford	55,684	72,659
Phoenix	2,308	3,012
Jackson County	8,907	11,632
Talent	1,154	1,507
White City	8.081	10,546
TOTAL	110,459	150,666

Four sectors of business growth are considered: manufacturing, warehousing / transportation, retail, and professional / scientific / technical services. This analysis provides a thorough representation for employment growth in the region.

In determining future employment, six different forecasting methodologies were examined to determine the most realistic and feasible employment projections. They included employment growth based on:

- 2005-2030 RTP forecast.
- 1969-2000 historic growth rate.
- Jackson County Population Element's Average Annual Growth Rate (AAGR).
- Constant jobs per population ratio.
- Oregon Employment Department's (OED) 2004-2014 projection.

NOTE: **Employment relates to TAZ area boundaries, which do not match city boundaries, therefore, totals differ slightly from any official "city" estimates**

As noted above, population and employment were distributed among small TAZ areas. Additionally, population was distributed

among households through the travel modeling process. Household size and travel behavior – critical aspects of the travel model – are based on a survey of local households conducted in the mid-1990s. Age of the household data is a concern. Household demographics might have changed significantly. To address this concern, RVMPO anticipates joining a statewide household survey. RVMPO anticipates beginning the survey in 2012. Meanwhile, to remain consistent with federal planning guidelines, the best available data is from the existing household survey, so it has been used for this plan.

Table 2.2-3:
RTP Summary Forecasts

The table 2.2.3 summarizes local planning assumptions used in this plan.

	2006	**2009**	**2015**	**2020**0	**2026**	**2034**
Households	64,678	69,302	76,670	82,582	89,504	98,486
Population	157,272	172,665	191,994	207,502	225,596	248,324
Employment	110,459	115,430	125,371	133,566	148,772	150,666

Part 3

Goals, Policies & Potential Actions

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 development. The goals also provide a measuring stick to judge how well the plan reflects the values expressed by the community.

The goals were developed as work began on the 2034 RTP. Guiding Principles developed for the 2030 RTP were evaluated against comments received during a project Open House and meetings of the RVMPO's committees. In general, there was a desire to streamline the goals, keep them pertinent to the metropolitan planning process and relay their meaning and significance. The result is a set of goals and policies that include descriptions of the kinds of projects or actions that could result.

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 2005 transportation act, the Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users. The RVMPO's 2030 RTP was brought into conformance with SAFETEA-LU in April 2007, and this update maintains that consistency. 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 SAFETEA:LU planning factors are listed in the shaded 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 policies as expressed in the *Oregon Transportation Plan,* the state's long-range policy document.

Federal Planning Factors under SAFETEA:LU

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 the following factors:

(1) Support the economic vitality especially by enabling global competitiveness, productivity and efficiency;

(2) Increase the safety of the transportation system;

(3) Increase the security of the transportation system;

(4) Increase accessibility and mobility;

(5) Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and planned growth and economic development;

(6) Enhance the integration and connectivity of the transportation system, across and between modes for people and freight;

(7) Promote efficient system management and operation; and

(8) Emphasize the preservation of the existing transportation system.

Purpose

The goals and policies of this RTP 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 three elements: goals, policies and potential actions. The objective is to go beyond describing a desired outcome in general terms to describe some of the specific consequences – the potential actions – that may result from a particular policy position. 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.

Goals, Policies & Potential Actions

The goals and policies for the plan are listed below, along with the potential actions. The number of policies vary among the goals. Likewise the number of potential actions also varies. The number of policies or actions (or, is some cases the absence of potential actions) is not a reflection of the importance or significance of a particular goal. Boxes in the margin designate each goal to help readers locate and identify goals quickly. The boxes also reference the chapter(s) in which the goal is addressed in detail.

Goal 1

Plan for, develop and maintain a balanced multi-modal transportation system that will address existing and future needs.

Policies

1-1: Improve the equitable accessibility, efficiency and viability of the public-private transportation system for all users.

Goal 1

A balanced multi-modal system addressing existing and future needs

Chapter 2.2
Part 4
Part 5
Chapter 7.4

1-2. As transportation facilities are developed in urban areas, use landscaping and other amenities to encourage people to walk.

1-3: The RVMPO establishes Long-Term Potential (LTP) corridor areas where planning for future road connections beyond the planning horizon is probable.

Potential Action

- Projects are designed with space reserved for current and future multi-modal transportation infrastructure connections.

Goal 2

Safety and security

Chapters 5.2, 5.3

Goal 2

Optimize Safety and Security of the transportation system.

Policies

2-1: Work with other agencies to promote traffic safety education and awareness.

2-2: Inventory accident-prone areas and place a higher priority on investments that address safety-related deficiencies in all modes.

2-3: Coordinate with emergency-response agencies to design and operate a transportation system that supports timely and safe emergency response.

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

Potential Actions

- Local, state and regional providers work together to maintain coordinated regional emergency response plans.
- All modes of transportation are examined for security deficiencies. Recommendations for improvements are developed and implemented.

Goal 3

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

Policies

3-1: Recognize the connection between transportation efficiency and land use and densities.

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

3.3: Provide environmentally sensitive and healthy transportation options.

3.4: Minimize impacts to local communities.

3-5: Identify and avoid disproportionately high and adverse human health or environmental effects.

3-6: Consider potential environmental impacts and mitigation to maintain and restore affected environmental functions in consultation with federal state and local land use management, natural resources, wildlife, environmental protection, conservation and historic protection agencies.

Potential Actions

- Local plans support transit oriented development and similar measures that improve transportation system efficiency.
- Street networks are developed connecting new and existing neighborhoods.
- Special populations, especially low-income and minority communities, are identified and engaged in the planning process.
- As transportation projects are planned, funded and designed, federal, state and local land use management, natural resources, wildlife, environmental protection, conservation and historic protection agencies are consulted. Emphasis is put on mitigation actions with high potential to protect resources.

Goal 4

Financing and responsible stewardship

Chapter 4.2

Part 6

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 Regional Transportation Plan. Ensure that costs of planned improvements are consistent with policies.

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

Potential Actions

- Public-private partnerships and other innovative approaches maximize resources.
- Funding mechanisms such as System Development Charges collect from new developments a proportionate share of facility improvement costs.
- Maintenance programs for transportation facilities are developed, funded, and implemented.

Goal 5

System Efficiencies

Chapter 4.2

Part 5

Goal 5

Maximize efficient use of transportation infrastructure for all users and modes.

Policies

5-1: Add or remove traffic signals and signal networks, including interstate access ramp signals, to improve system efficiency.

5-2: Optimize intersection design.

5-3: Manage street access to improve traffic flow.

Potential Actions

- Signals are coordinated and linked to a master control system to optimize system efficiency.

- Interstate ramp meters control the amount of traffic entering the freeway to maintain acceptable traffic volumes on the interstate.

- Geometric improvements and elimination of turn movements increase intersection capacity.

Goal 6

Use incentives and other strategies to reduce reliance on single-occupant vehicles.

Policies

6-1: Support Transportation Demand Management strategies.

6-2: Facilitate alternative parking strategies to encourage walking, bicycling, carpooling and transit.

6-3: Enhance Bicycle and Pedestrian Systems.

6-4: Support transit service.

Potential Actions

- Public education in the form of fairs, festivals, and other large-scale events.

- The Rogue Valley Transportation Management Association (RVTMA) works with local employers to reduce commuting.

- Governments model TDM strategies by allowing flexed work hours, subsidizing rideshares, telecommuting, and other methods of trip reduction.

- Low minimum and maximum parking-space standards increase infill development.

- Existing spaces are designated for special use, such as car-pool spaces near entries.

- Existing parking spaces on roads are redesigned to bike lanes and transit stops.

- Design standards require parking at side or rear of buildings so pedestrians can access entrances.

Goal 6

Reducing reliance on single-occupant vehicle

Chapter 4.2

Chapters 5.2, 5.3, 5.4, 5.5, 5.7, 5.8, 5.10

- Park-and-ride facilities are near transit routes.
- A regionally connected network of off-street bicycle/pedestrian facilities has minimal roadway crossings (Bear Creek Greenway).
- Create a non-motorized route classification system.
- 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.
- Provide continuous sidewalks in new development, discouraging construction of sidewalk segments.
- Improve pedestrian access to transit.
- Support funding to ensure viability of transit service.
- Ensure transit for disabled and elderly.
- Provide transit shelters and bike racks in appropriate locations.
- Review transit ridership and adjust routing accordingly; provide service within ¼ mile of all urban areas.
- Reduce transit headways and expand service hours and days.
- Establish bays on congested streets so that buses don't block traffic flow.

Goal 7

Planning process that is open, balanced, credible

Chapters 2.1, 2.3

Chapter 4.1

Goal 7

Provide an open, balanced, credible process for planning and developing the transportation system.

Policies

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

7-2: Conduct outreach consistent with the RVMPO Public Participation Plan to acquire public input in the planning process.

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

7-4: Decisions will 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.

Goal 8

Encourage use of cost-effective emerging technologies to achieve regional transportation goals.

Goal 8

Cost-effective, emerging technologies

Chapter 4.2

Chapters 5.4, 5.11

Policies

8-1: Implement a comprehensive Intelligent Transportation Systems (ITS) program.

8-2: Plan a transportation system for the future utilizing the latest technologies.

8-3: Undertake market studies and prepare strategies to deal with growth in the use of slow-moving vehicles such as electric carts and scooters as market conditions change.

Potential Actions

- Support projects that reduce diesel emissions in the public and private sector including new technology for truck emissions.

- New technologies such as non-fossil fuels, rail systems and road-design innovations can help the region achieve its transportation goals.

Goal 9

Foster economic opportunities

Chapter 4.2

Chapters 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.8, 5.9

Chapter 8.3

Goal 9

Use transportation investments to foster economic opportunities.

Policies

9-1: Accommodate travel demand to create a regional transportation system that supports the local economy.

9-2: Examine options for designated freight routes.

Potential Actions

- Balance the demand for freight routes with the demands for local circulation.

Part 4

Plan Implementation

Chapter 4.1, Projects in the RTP

Introduction to Part 4

This part shows how the goals and policies in Part 3 are implemented through procedures and criteria that the RVMPO uses to identify projects. The two chapters in this part address: how and why projects are listed in the RTP, including public participation; and criteria and considerations used by the RVMPO to fund projects.

MPO Plan Projects

Requirement for metropolitan plans are described in Federal Highway Administration rules, 23 CFR Part 450.233. The plan must show through a horizon of at least 20 years the capital investment, operations and management strategies planned to lead to an integrated multimodal transportation system. Funding for all projects shown in the plan must be funded, or there must be a reasonable expectation for funding.

The RVMPO developed the funding expectations for this plan 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, 2020-2034. Details about the financial planning process are detailed in Part 6.

Not all transportation projects planned within the region by Jackson County and the seven RVMPO cities are contained in this plan. Numerous local improvements are planned and implement solely by the jurisdiction. Such projects are undertaken through the local Transportation System Plan, a state planning document required under Oregon land use law and generally incorporated into the local Comprehensive Plan.

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

- Any regionally-significant project, regardless of funding source;
- Any project that will require federal environmental clearance;
- Any project that will be programmed in the MTIP; and
- Any project that will receive state or federal transportation funds.

In previous RTPs jurisdictions have included all kinds of transportation projects over and above what is required. This has lead to lists of hundreds of projects, many of which aren't tracked through the RVMPO because are located on local streets and use local funds. The practice of listing all projects has made it difficult for the public to determine which projects are needed or planned to improve the regional transportation system. For this RTP update, the RVMPO is breaking from the past and listing only the projects that are required by federal law. This creates a clearer picture of the regional transportation system serving the RVMPO area.

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

What is a Regionally Significant Project?

State and federal guidelines generally define a *regionally significant* transportation project as one 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 (OAR 340-252-0030 (39)). At a minimum, this includes principal arterial highways. Other projects may be included based on interagency consultation conducted for the Air Quality Conformity Determination, described in Chapter 7.1 and the Air Quality Conformity Determination for this plan (published separately).

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. Plans reflect the kind of transportation system the public believes the community should have. Because of the significance of the TSPs in the RVMPO, the RVMPO has followed a policy of drawing projects for the RTP from the local TSPs.

The RVMPO planning process considers TSPs from a regional level, focusing primarily on improvements to roads – including construction of bicycle lanes, sidewalks and landscaping – and transit that serve the regional travel need.

Significance of the Regional Transportation System

Regional transportation systems have significant and long-term impacts on 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, "smart growth," economic development, safety and security. 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 area's transportation system in such a way as to advance the region's long-term goals. For these reasons, the RTP includes measures addressing system management, demand management.

Additionally, the RTP addresses land use and the role development plays in transportation planning. The role of transportation on growth patterns in the RVMPO area has become more pronounced in recent years. As the region grows, competition tightens between the demand for space for new homes and businesses and the desire to preserve open space and farm land. Planning projects undertaken by the RVMPO have looked at ways to use land use and "smart growth" measures – such as compact, pedestrian and transit friendly development and commercial-residential mixed use development and open space – to help address future transportation needs. Ways to address future transportation system demand through land use decisions are described in Chapter 5.10.

RTP Planning Process

Development of this RTP update occurred over an 18-month period and involved close coordination with member jurisdictions at both the staff and policy level. Critical parts of the plan, including the forecasts, project descriptions and policy statement were developed in RVMPO committee meetings, individual consultation with jurisdictions and public review and comment. Drafts of data and analysis were posted on the RVMPO web site and advertised from time to time in the local news media. RVMPO staff made public presentations to community groups and Open House sessions were held to solicit comments and ideas. Activities were conducted according to standards and requirements of the RVMPO Public Participation Plan. The participation plan, updated in 2007, 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.

Many suggestions, ideas and preferences were generated in two Open House sessions – one at the beginning of the update project in Fall 2008, and one at the end of the data collection and analysis process as the draft plan was beginning to be written. In this way comments were gathered at times when they would be most useful and have the greatest impact on the plan.

Public Comments and the RTP

This section presents a summary of public comments received throughout the update process. The RVMPO for several years has asked not only for comments on the RTP goals but also to rank the goals. Although the RTP itself doesn't present the goals in preferred order, the ranking exercise gives policy makers insights into how the pubic views regional transportation system needs.

Goals the public identified as most important:

- *Goal 5: Maximize efficient use of transportation infrastructure for all users and modes.* This indicates a desire for transportation planning efforts that focus on existing/future facilities and begin a focus on multi-modal transport.

- *Goal 6: Use incentives and other strategies to reduce reliance on single-occupant vehicles.* This indicates

support for Transportation Demand Management (TDM) techniques and public transportation to provide alternatives.

The least important of the goals was Goal 2, address safety and security, indicating that the public feels safe on local roadways.

Open House attendees also were asked to choose among a set of emphasis options about transportation and their communities. The options are listed below in the order of preference.

1. Improve public transportation
2. Develop communities where people don't have to drive
3. Build new roads asking for preferences regarding options to improve the local transportation network.

There are several ways in which the RTP works toward implementing these preferences, including support for options to single-occupant vehicle travel – the kind of travel that puts the greatest burden on the transportation system. Briefly:

Support for public transportation – the RVMPO allocates half of its discretionary money from the federal Surface Transportation Program to transit provider Rogue Valley Transportation District. This support is planned to continue through the planning horizon. More information is in the Public Transportation chapter, 5.8.

Support for Transportation Demand Management – the RVMPO is using a portion of its discretionary federal funding to develop a transportation demand management plan that will identify ways the region can support transportation options. More information is in the Transportation Demand Management chapter, 5.5.

Support for linking transportation and land use – the RVMPO is sponsoring projects to address ways land use actions can reduce congestion impacts on the transportation system. More information is in the Land Use Nexus chapter, 5.10.

Other project decisions demonstrate support for building bicycle lanes and sidewalks and enhancing the existing transportation system. Chapters in Part 5 address all planned transportation projects.

Part 4

Plan Implementation

Chapter 4.2,

Project Selection Criteria

Introduction

There are two project funding sources over which the RVMPO has discretion, both federal and funded through the Highway Trust Fund. They are the Surface Transportation Program and the Congestion Mitigation and Air Quality program. The RVMPO has developed criteria for evaluating and scoring applications for these funds as a way of implementing RTP goals and policies in a way that treats all applications and jurisdictions fairly and provides the greatest possible public benefit. This chapter describes the evaluation criteria for both programs.

Additional general background information about these two programs is in the Financial Plan, Part 6.

Surface Transportation Program

The Surface Transportation Program (STP) is the more flexible of the two funds. It can be used on a wide variety of projects. As noted in the criteria below, the RVMPO dedicates half of the local allocation to Rogue Valley Transportation District (RVTD) for enhanced transit service. This distribution is in accordance with state Transportation Planning Rule requirements that the region take several specific actions to reduce reliance on motor vehicle travel. Details about the state requirement are in Chapter 5.10, Land Use Nexus.

In 2005 the RVMPO developed criteria and project scoring for all STP fund applications as outlined below.

A. Project Prioritization Process

1. Project proposals for RVMPO STP funding will be submitted by the local member agencies of the RVMPO every two years.

2. The applicant submitting each proposal will be responsible for providing an initial evaluation based on the process described below.

3. The Technical Advisory Committee (TAC) and the Public Advisory Council (PAC) will then review and rank the proposals and incorporate the highest-ranking projects, subject to available funding, in the draft TIP prior to submittal to Policy Committee for their consideration and for public review and comment.

4. Following the public review period for the draft MTIP, the TAC will recommend appropriate changes to the draft MTIP based on public input and initial feedback from the PAC and forward its recommendations to Policy Committee for the public hearing and subsequent adoption of the final TIP Update.

B. STP Funding Split by Category

1. Alternative Transportation Funding 50%

Allocation has gone to Rogue Valley Transportation District to satisfy Oregon Transportation Planning Rule requirements, specifically RVMPO Alternative Measure 7: Alternative Transportation Funding. See Appendix B for additional information about RVMPO Alternative Measures.)

2. System Preservation +-20%

   Roadway

   Bike / Pedestrian

3. System Modernization +-20%

   Roadway

   Bike / Pedestrian

The funding split by category represents allocation shares over a 4-year MTIP period.

C. Threshold Criteria

A proposal must meet all three of the following criteria to be considered for STP funding in the time frame of the MTIP update:

1. Included in the Regional Transportation Plan and adopted TSPs, except for preservation projects (RTP).

2. Eligible for STP funding based on federal guidelines.

3. Capable of being implemented within the MTIP time frame.

Rogue Valley Transportation District's Front Street Station, Medford

D. Prioritization Factors

Proposals will be evaluated for relative priority based on consideration of the following three factors:

1. The ability of the proposal to leverage other public or private funding.

2. The extent to which the proposal addresses one or more of the adopted RTP goals and/or policies.

3. The extent to which the proposal addresses one or more of the adopted RTP Alternative Measures.

Evaluation Point System

RVMPO uses a simple point system to evaluate projects on each of the three prioritizing factors:

1. Priority Factor 1 – Funding Partnerships

10% other contributions beyond required match– 5 points

20% other contributions beyond required match– 10 points

30% other contributions beyond required match – 20 points (recommended upper limit for this measure)

2. Priority Factor 2 – RTP Policies

seven points for each policy that would be directly impacted by the project in a positive manner.

No more than two policies (14 points) would be counted within the same goal heading (i.e., Land Use, TDM, TSM, Roadway, Transit, Bicycle, Pedestrian, Freight, etc.).Maximum of 50 points for this factor

3. Priority Factor 3 – RTP Alternative Measures

Six points for each Alternative Measure the project helps to advance

Maximum of 30 points for this factor

The maximum possible total score for all three priority factors for any project would be 100 points.

Using this point system, each proposal is scored and then its total point value is compared to other project proposals within the same project category. The point values would be a major tool for evaluating and ranking projects within each category, but final adjustments would be expected to occur based on factors such as mode balance and a sense of equity among the RVMPO jurisdictions over the timeframe of an entire MTIP.

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 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 reduce congestions. Along with other measures CMAQ has been designed to realign the focus of transportation planning toward a more inclusive, environmentally-sensitive and multimodal approach to addressing transportation problems. The formula for distribution of funds considers an area's population by county and the severity of its ozone and carbon monoxide problem. The Rogue Valley Region has federally monitored programs in place to limit carbon monoxide and particulates (PM_{10}). Under the current transportation act, SAFETEA-LU, MPOs are required to give priority to providing CMAQ funds for diesel engine retrofits and other cost-effective emission reduction and congestion mitigation activities that provide air quality benefits.

SAFETEA-LU also requires the Transportation Secretary to evaluate and assess the effectiveness of a representative sample of

CMAQ projects to determine the direct and indirect impact of the projects on air quality and congestion levels, and to ensure the effective implementation of the program. RVMPO was one of six MPOs in the nation selected to be part of the national review of the program. RVMPO was selected because it was among the first to forge partnerships with private business to reduce emissions from older diesel trucks. RVMPO practices, including evaluation criteria were reviewed by USDOT representatives in Summer 2008, and the findings were published in late Fall 2008. Additional information is in Public Private Partnerships, chapter 5.11.

RVMPO overhauled selection criteria in 2005 to assure that projects that would benefit both the regions transportation system and air quality received highest priority. After SAFETEA-LU, the criteria were adjusted in 2007 to give greater emphasis to projects that would address diesel emissions. Diesel is the dominant fuel used by the commercial transportation sector. While diesel engines offer fuel economy, power and durability, diesel emissions are a major contributor to unhealthy levels of fine particles and ozone (or "smog") as well as air toxins. Fine particles have been associated with an increased risk of premature death, hospital admissions for heart and lung disease, increased adverse respiratory symptoms such as asthma, and other adverse effects. Long-term exposure to diesel exhaust may pose a lung cancer hazard to humans. RVMPO conducts outreach efforts targeting private businesses that might want to apply for CMAQ money for their diesel fleets. The goal is to encourage private and non-profit organizations to apply for funding to help pay for the purchase and installation of diesel pollution exhaust after-treatment devices on vehicles using low sulfur highway diesel fuel.

Catalyst and filters shown installed on truck exhaust pipe clean truck emissions.

Although the RVMPO hasn't found it necessary, it is possible for the region to obtain emissions credits during the air quality conformity process for transportation projects that can be shown to reduce pollution emissions and thereby improve air quality. The conformity process is discussed in Chapter 7.1 as well as in the Air Quality Conformity document, which is published separately.

The current project selection criteria used by the RVMPO to determine CMAQ funding allocations has four objectives:

1. Develop projects that will enable the region to maintain the National Ambient Air Quality Standards (NAAQS).

2. Develop projects that meet regional air quality and transportation needs.

3. Develop projects that strive to meet multi-modal objectives.

4. Develop projects that strive to meet state and local goals and objectives (e.g., reduce reliance on automobiles, etc.).Points are awarded based on applicants' answers to specific questions, and on results of objective analysis of potential benefits. The questions – 10 in all – their point value, purpose and use are listed below.

- Project Description - Identify the location and purpose of the project. If possible, provide information on potential air quality benefits (e.g., provide daily traffic volumes and mileage of proposed road segment). 20 points. RVCOG staff will use this information to prepare the initial air quality analysis.

- Project Cost Effectiveness, kilogram reduction/ $ spent (Detailed Estimate): 20 points. RVCOG staff will be able identify the most efficient projects that reduce pollutants.

- How does the project have long-term air quality benefit potential (will the project have a positive impact on air quality in 5 years, 10 years)? 15 points. RVCOG staff will measure the reduction of pollutants for future years to ensure the project / program has continual effects on improving air quality.

- How will the project contribute to the reduction of reliance on the automobile? 15 points. Reducing the use of the automobile will directly lead to a reduction of emission pollutants.

- How will the project reduce congestion? 15 points. Congestion leads to idling vehicles, which emit a larger percentage of pollutants. Reducing congestion, consequently, would lead to improved air quality.

- How will the project help to complete a multi-modal transportation system? 10 points. A multi-modal transportation system increases the users' opportunity use lower-emitting transportation sources.

- Is the project a diesel retrofit program? 5 points. Project is a priority of SAFETEA-LU.

- Is the project located within city limits or inside an Urban Containment Boundary? 5 points. Air pollutant reduction should be focused on major population clusters, which will improve public health and increase quality of life.

- Identify how the project results in the reduction of Ozone precursors (NOx and VOCs). 5 points. Rogue Valley is on the cusp

of being non-attainment for the 8-hour ozone pollutant. Addressing the precursors will progressively lower the amounts of these pollutants.

- Does the project/ program employ new technology or innovative methods, not generally used in Southern Oregon, to provide the emissions reductions? 5 points. Instituting technology that directly corresponds with improved air quality would be highly beneficial to the Rogue Valley.

Evaluation and Review

Evaluation procedures for both programs were developed by the RVMPO advisory committees and staff, and adopted by the Policy Committee. The same process is followed for evaluating projects under the guidelines and funding projects. Staff performs the first round of reviews and evaluations for both programs. Staff results as well as applicant information and evaluation materials are posted on the RVMPO website and advertised for public comment. The TAC and PAC review all materials and make recommendations. The Policy Committee makes all final funding decisions.

Part 5

Regional Transportation System Improvements

Chapter 5.1,

RTP Projects by Jurisdiction

Introduction to Part 5

This is the largest Part in the RTP. It describes all of the regional transportation actions anticipated to occur in the planning area through 2034. Actions are presented first, in Chapter 5.1, as a listing by jurisdiction, and then presented in the context of the respective modes and planning issues. Taken as a whole, this Part shows how the region will work toward meeting the obligations of metropolitan planning within the region, and the goals and policies of the RTP.

Introduction

This chapter shows all RTP projects by jurisdiction. These projects provide facilities for motorists, buses, bicyclists and pedestrians. They served 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 action 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 a total of $588 million available to invest in the regional transportation system through 2034. Of that, transit provider Rogue Valley Transportation District plans on receiving just under $257 million for its activities. The RVMPO is estimating roughly $331 million will be available for other transportation projects.

Details about the financial assumptions used to calculate these sums and financially constrain the projects in this Part are provided in Part 6: 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 timeframe:

- Short Range – Between 2009 and 2013
- Medium Range – Between 2014 and 2019
- Long Range – Between 2020 and 2034.

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 Metropolitan Transportation Improvement Program (MTIP) and forwarded into ODOT's Statewide Transportation Improvement Program (STIP) for authorization to proceed. At the MTIP-STIP stage, projects receive a programming Key Number, which differ from RTP numbers.

Maps showing project locations by RTP number are at the end of this chapter, immediately following the project lists, Table 5.1.2

RVTD Transit Projects

All RTP transit projects are summarized in Table 5.1.1, shown here. Details about planned operations by transit service provider RVTD are in Chapter 5.8, Transit System. This plan does not anticipate significant changes to transit service in the region.

Other Projects

Additional projects identified as necessary and important by all jurisdictions – called Tier 2 Projects – are presented in Chapter 7.4, Future Challenges.

Table 5.1.1:
RTP Transit Projects
(X$1,000)

Expenses	Time Frame			Totals
	Short (2009-2013)	Medium (2014-2019	Long (2020-2034)	
Operations	$11,709	$16,476	$52,239	$80,425
Alt Operations	$8,951	$12,602	$45,177	$66,730
Maintenance	$7,890	$10,978	$39,585	$58,453
Administration	$7,057	$9,651	$33,625	$50,334
Capital Match	$160	$192	$480	$832
Sub-total	**$35,769**	**$49,899**	**$171,107**	**$256,774**

Table 5.1.2: RTP Projects by Jurisdiction

PROJECT NUMBER	LOCATION	DESCRIPTION	TIMING	COST	Cost by Phase	Funds Available
Ashland						
102	Plaza Av.: Nezla Av to Verda St.	Pave & Improve	short	$797,000		
106	Hargadine St., Gresham St. to Second St.	Overlay	short	$46,634		
108, 109	Harrison St., Siskiyou Blvd. to Euclid St.	Overlay	short	$128,366		
115	Allison St., Union St. to Gresham St.	Overlay	short	$207,446		
120, 122, 134	E. Main St. Railroad Crossing	R/R X-ing improvements, signals and surface	short	$860,288		
157	Ashland City Streets: Pavement Overlay	Overlay	short	$438,791		
158	Hersey St.: Oak St. - Ann St. Sidewalks	Sidewalks	short	$200,000		
		Short Range Total			**$2,678,525**	**$2,678,525**
147	Washington St., Ashland St. to E. Jefferson St.	Urban upgrade w/ bike lanes and sidewalks	medium	$586,000		
		Medium Range Total			**$586,000**	**$586,000**
122	Walker Ave. at R/R X-ing	R/R X-ing improvements, surface improvement	long	$263,700		
144	Mistletoe Rd., Siskiyou Blvd. to Tolman Creek Rd.	Urban upgrade w/ bike lanes and sidewalks	long	$1,940,832		
128	Ashland St. (OR 66) at Normal Ave.	Signalize intersection	long	$263,700		
129	Siskiyou Blvd. (OR 99) at Tolman Creek Rd.	Intersection enchancements w/ signalization	long	$603,580		
		Long Range Total			**$3,071,812**	**$3,100,000**
PROJECT NUMBER	**LOCATION**	**DESCRIPTION**	**TIMING**	**COST**	**Cost by Phase**	**Funds Available**
Central Point						
201	New Haven Rd. and Hamrick Rd. intersection	Add signal for pedestrian crossing	short	$376,000		
203	OR 99: Traffic Calming Unit 1	Traffic Calming	short	$350,000		
206	OR 99: Traffic Calming Unit 2	Traffic Calming	short	$395,000		
208	Oak St.: 2nd to 3rd, & 1st: Manzanita to Laurel	Improve alleys and parking facility	short	$717,000		
229	Pine St.: 1st Street to 6th Street	Overlay / Safety	short	$392,787		
		Short Range Total			**$2,230,787**	**$2,230,787**
215	OR 99: Traffic Calming Unit 3	Traffic Calming	medium	$175,000		
214	Scenic Ave., Mary's Way to Scenic Middle School	Widen to add bike lanes and sidwalks (urban upgrade)	medium	$584,416		
		Medium Range Total			**$759,416**	**$800,000**
219	Table Rock Rd. & Vilas Rd Intersection	Widen to increase capacity	long	$799,500		
224	Scenic Ave, 10th St. to Scenic Middle School	Widen to add continuous turn lane with bike lanes and sidewalks	long	$510,000		
227	W. Pine St., Hanley St. to Haskell St.	Widen to 3 lanes, bike lanes , sidewalks	long	$1,500,000		
		Long Range Total			**$2,809,500**	**$3,000,000**
PROJECT NUMBER	**LOCATION**	**DESCRIPTION**	**TIMING**	**COST**	**Cost by Phase**	**Funds Available**
Eagle Point						
301	Main St., Royal Ave. intersection	Intersection reconfiguration	short	$240,000		
313	Alta Vista Rd. at Shasta Ave.	Intersection improvements with signals	short	$225,000		
320	Main St.: Platt Ave - Roal Ave	Overlay, sidewalks & curbs	short	$303,119		
		Short Range Total			**$768,119**	**$768,119**
308	OR 62 frontage road	Sienna Hills extension from Barton Rd. to Rolling Hills Dr.	medium	$693,000		
		Medium Range Total			**$693,000**	**$700,000**
320	Main St. improvements	Reconstruct pavement, parking, lighting, landscaping	long	$970,000		
321	Downtown alleys	Construct / repave downtown alleys	long	$300,000		
322	Pedstrian path - Lotto St. to Butte Creek Mill	Construct path adjacent to creek on west side	long	$544,000		
323	Barton Rd. from Hwy 62 to Reese Creek Rd.	Urban upgrade w/ bike lanes and sidewalks	long	$500,000		
		Long Range Total			**$2,314,000**	**$2,400,000**

Table 5.1.2: RTP Projects by Jurisdiction

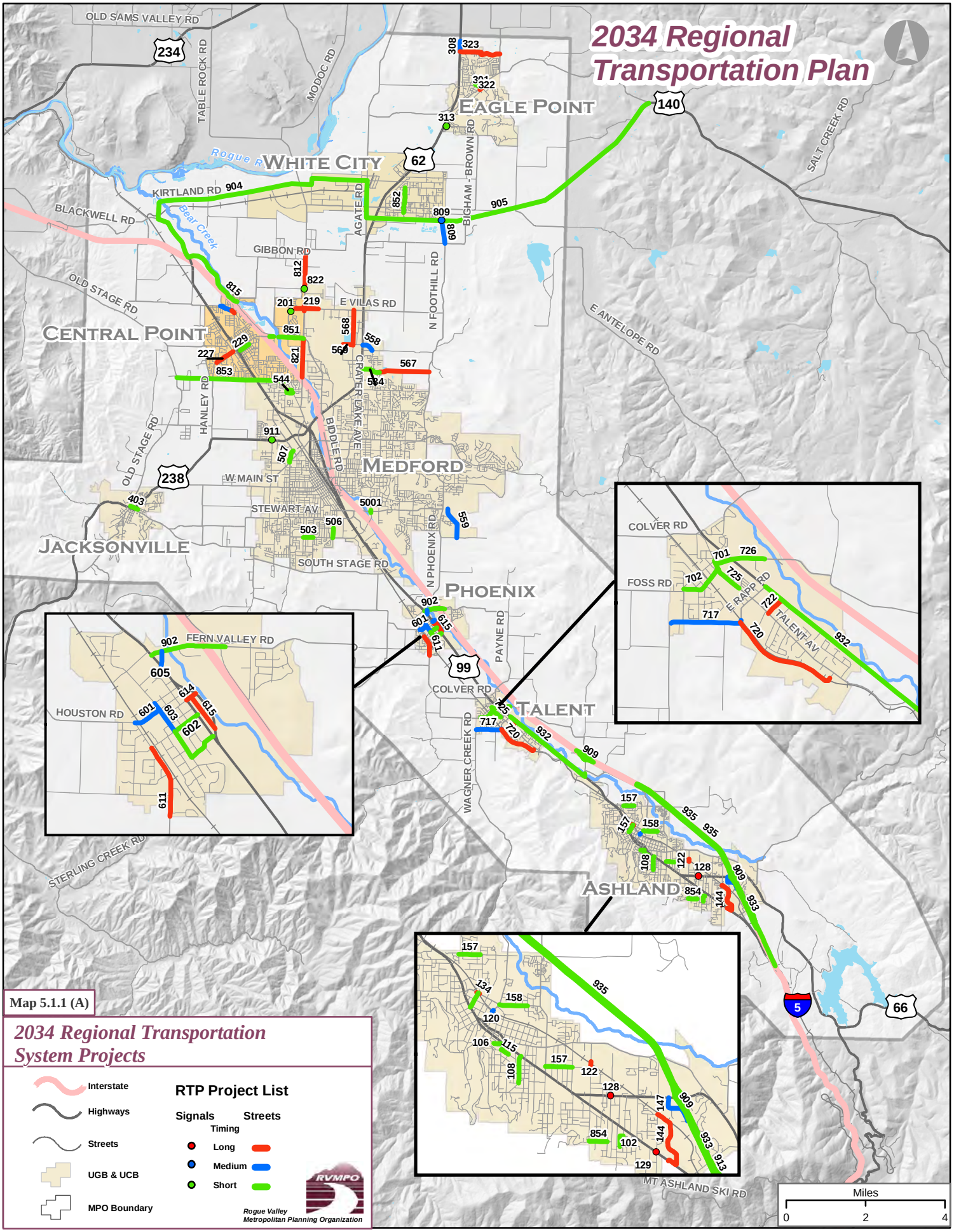
PROJECT NUMBER	LOCATION	DESCRIPTION	TIMING	COST	Cost by Phase	Funds Available
Jacksonville						
402	Jacksonville Street Sweeper Purchase	Purchase street sweeper for city streets	short	$199,240		
403	"C" Street: Bicycle & Pedestrian Improvements	Construct bike lanes and sidewalks	short	$238,500		
		Short Range Total			**$437,740**	**$437,740**
No medium range projects proposed			medium	$0		
		Medium Range Total			**$0**	**$671,000**
No long range projects proposed			long	$0		
		Long Range Total			**$0**	**$1,935,000**
PROJECT NUMBER	**LOCATION**	**DESCRIPTION**	**TIMING**	**COST**	**Cost by Phase**	**Funds Available**
Medford						
502	Various locations in city	Construct sidewalks, storm drains, curbs	short	$3,612,437		
503	Garfield Ave., Kings Hwy. to Peach St.	Adding continuous turn lane with bike lanes and sidewalk	short	$824,019		
506	S. Holly St., Garfield Ave. to Holmes Way	Construct new 3 - lane street with bike lanes and sidewalks	short	$3,700,000		
507	Columbus Ave., McAndrews Rd. to Sage Rd.	Extend Columbus to Sage, with center turn lane, bike lanes, sidewalks	short	$3,000,000		
597	Alternative Fueling Center	Install alternative fueling station for city vehicles	short	$500,000		
598	Crater Lake Av & Jackson Street Alleys	Pave and Improve Alleys	short	$1,047,000		
599	Medford Street Sweeper Replacement	Purchase CNG street sweeper for city streets	short	$226,000		
544	Mace Rd., Howard Elementary sidewalk build	Construct sidewalks around Howard Elementary School	short	$415,001		
5001	Bear Creek Greenway: Barnett Rd Bridge	Construct bicycle & pedestrian bridge	short	$2,380,049		
		Short Range Total			**$ 15,704,506**	**$ 15,704,506**
558	Coker Butte Rd., OR 62 to E. of Crater Lake Ave.	Move Coker Butte Rd. north, re-align Crater Lake Ave., add sign	medium	$4,802,000		
559	Stanford Rd., Coal Mine Rd. to Cherry Ln.	Construct new three lane street with bike lanes and sidewalks	medium	$7,546,000		
		Medium Range Total			**$12,348,000**	**$12,400,000**
567	Owens Dr., Crater Lake Ave. to Foothill Rd.	Construct new three lane street with bike lanes and sidewalks	long	$9,987,600		
568	Lear Way, Coker Butte Rd. to Vilas Rd.	Construct new two lane street with bike lanes and sidewalks	long	$2,598,400		
569	Coker Butte Rd., Lear Way to Haul Rd.	Construct new five lane street with bike lanes and sidewalks	long	$1,997,520		
		Long Range Total			**$14,583,520**	**$15,000,000**
PROJECT NUMBER	**LOCATION**	**DESCRIPTION**	**TIMING**	**COST**	**Cost by Phase**	**Funds Available**
Phoenix						
602	1st St., Rose St. to OR 99 (SB)	Widen to provide bike lanes and sidewalks	short	$750,000		
626	South Rose Street & Oak Street Pavement Overlay	Overlay	short	$261,900		
		Short Range Total			**$ 1,011,900**	**$ 1,011,900**
600	4th St., OR 99 (SB) to OR 99 (NB)	Widen to provide bike lanes	medium	$296,516		
601	4th St., Rose St. to Colver Rd.	Widen to provide bike lanes and sidewalks	medium	$338,708		
603	Rose St., First St. to Fifth St.	Widen to provide bike lanes	medium	$293,000		
605	Bolz Rd., OR 99 to Fern Valley Rd.	Widen to provide bike lanes and sidewalks	medium	$410,200		
		Medium Range Total			**$1,338,424**	**$1,517,000**
611	Colver Rd., First St. to southern UGB limits	Widen to provide bike lanes and sidewalks	long	$527,400		
614	3rd St., existing terminus to OR 99 (NB)	Construct new street with bike lanes and sidewalks	long	$586,000		
615	Parking St., OR 99 (NB) to Third St.	Construct new street with bike lanes and sidewalks	long	$1,758,000		
		Long Range Total			**$2,871,400**	**$2,900,000**

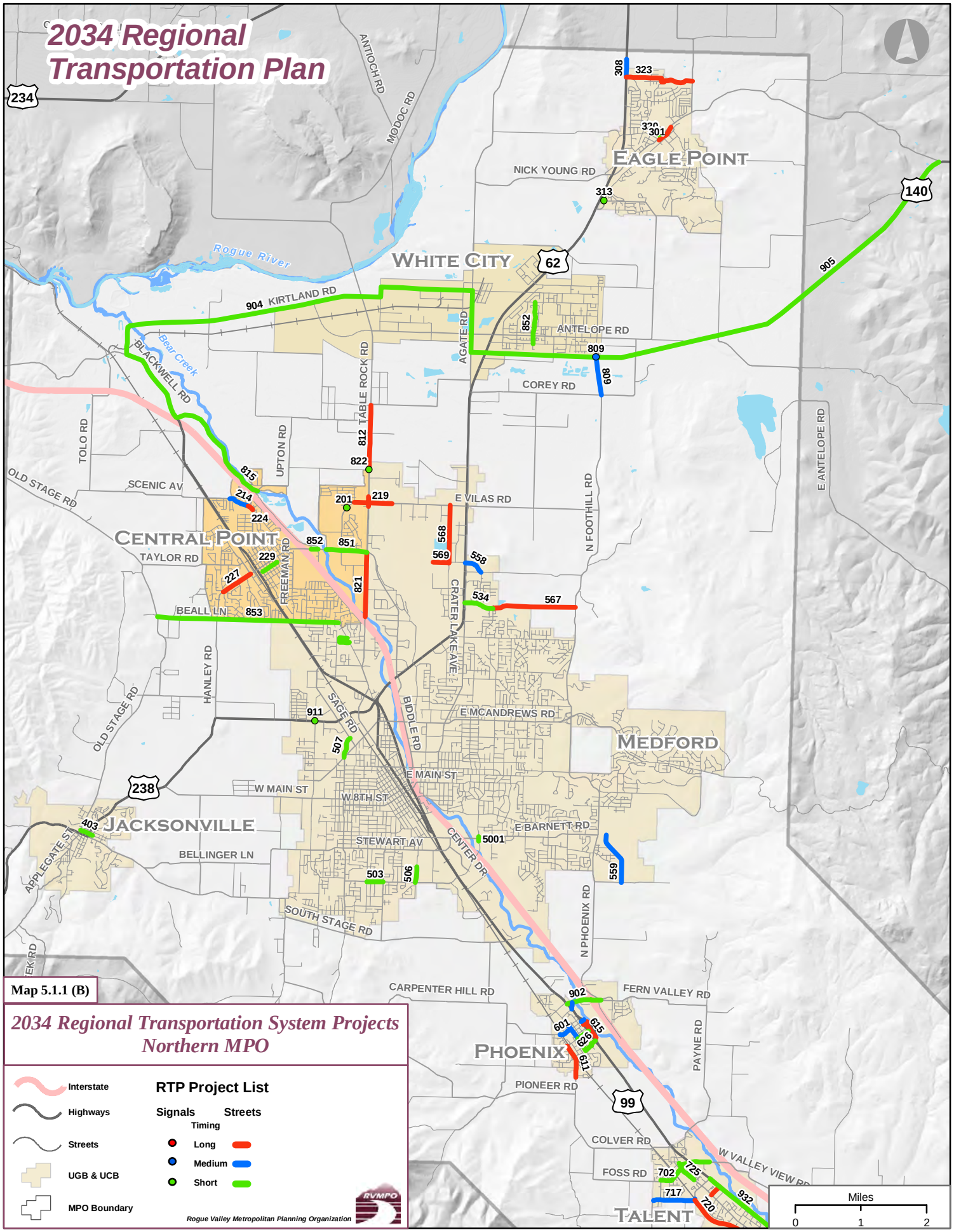
Table 5.1.2: RTP Projects by Jurisdiction

PROJECT NUMBER	LOCATION	DESCRIPTION	TIMING	COST	Cost by Phase	Funds Available
Talent						
701	W. Valley View Master Plan	Urban upgrade w/ bike lanes and sidewalks	short	$2,000,000		
702	Wagner St., R/R tracks to Main St.	Urban upgrade w/ bike lanes and sidewalks	short	$298,860		
703	Wagner St., Talent Ave. to R/R tracks	Urban upgrade w/ bike lanes and sidewalks	short	$58,600		
725	WaTalent Ave: paving signs & signals	Overlay / Safety	short	$140,418		
726	West Valley View paving	Overlay	short	$140,417		
		Short Range Total			**$ 2,638,295**	**$ 2,638,295**
717	Rapp Rd., R/R X-ing to Wagner Creek Rd.	Rebuild and upgrade to urban major collector standard	medium	$1,758,000		
		Medium Range Total			**$1,758,000**	**$1,937,000**
720	Helms/Hilltop, Rapp Rd. to Belmont St.	Construct new railroad district collector street	long	$2,344,000		
722	Rogue River Parkway, OR 99 to Talent Ave.	Construct new street or upgrade existing street to major collector	long	$1,758,000		
		Long Range Total			**$4,102,000**	**$4,134,000**
PROJECT NUMBER	**LOCATION**	**DESCRIPTION**	**TIMING**	**COST**	**Cost by Phase**	**Funds Available**
Jackson County						
805	Ave G - Kirtland Rd., Pacific Ave to Table Rock Rd	New 2-lane urban industrial collector	short	$2,250,000		
815	Bear Creek Greenway: Upton to Seven Oaks	Multi-use trail	short	$950,000		
816	Ross Lane: McAndrews Rd. to Rossanley Rd.	Widen to add continuous turn lane with bike lanes and sidewalks	short	$1,750,000		
852	East Pine St., I-5 to Peninger St.	Add right turn lane with sidewalks	short	$550,000		
853	Street Sweeper Replacement	Replace existing sweeper	short	$170,000		
854	Peachy Rd., Walker to Hillview	Pave and Improve	short	$568,283		
812	Table Rock Rd.: Wilson to Gregory	Widen to 5 Lanes: Curb, gutter, sidewalk, bike lanes	short	$2,940,000		
851	E. Pine St: Bear Crk Bridge-Medford city limit	Overlay, signals, striping	short	$600,000		
852	Hale Way: Avenue A - Falcon St.	Overlay	short	$325,000		
853	Beall Lane: Merriman - Old Stage Rd	Overlay	short	$247,795		
856	Blackwell: Southside Blackwell Hill	Straighten curves between Mileposts 2 & 3	short	$1,500,000		
		Short Range Total			**$11,851,078**	**$11,851,078**
822	Table Rock Rd. at Wilson Rd.	New traffic signal	medium	$250,000		
809	Foothill Rd., Corey Rd. to Atlantic St.	New two lane rural major collector + signal	medium	$1,800,000		
		Medium Range Total			**$2,050,000**	**$2,200,000**
821	Table Rock Rd: I-5 Crossing to Biddle	Widen to 3 & 5 Lanes, curb, gutter, & Sidewalk + bike lanes	long	$2,700,000		
		Long Range Total			**$2,700,000**	**$3,000,000**

Table 5.1.2: RTP Projects by Jurisdiction

PROJECT NUMBER	LOCATION	DESCRIPTION	TIMING	COST	Cost by Phase	Funds Available
ODOT						
534, 558	OR 62: Owens Dr. & Coker Butte	New 5-lane street from OR 62 Springbrook Rd, Realign Crater Lake Ave & Coker Butte, Signalization	short	$10,510,000		
902	I-5: Fern Valley Interchange, Phase 2	Reconstruct interchange; realign, widen connecting roads: replace Bear Creek Bridge	short	$75,000,000		
903	OR 62: Corridor Solutions Phase 2	Right of Way Acquisition	short	$23,000,000		
904	OR 140 Freight Extension	Lane and shoulder widening for freight movements	short	$2,389,000		
905	OR 140: White City to MP 8	Chip seal	short	$600,000		
909	I-5 N. Ashland Interchage Greensprings Bundle 314	Replace Bridge	short	$20,577,000		
909	I-5 Exits 14 & 19 Interchange improvements	Widen structures; signalization; lighting	short	$3,000,000		
911	OR 238 @ N. Ross	Install new traffic signal	short	$250,000		
913	I-5: Siskiyou Rest Area (Ashland)	Relocate rest area at new location	short	$5,720,000		
932	OR 99: Rapp Rd to Valley View Paving	Grind/Inlay and Overlay pavement	short	$1,800,000		
933	I-5 Exits 14 - 11 paving	Rehabilitate SB lanes from MP 11.45 - 14	short	$924,975		
934	OR62 & OR 140 Paving	Overlay	short	$9,752,000		
935	I-5: Ashland Paving	Overlay	short	$2,862,000		
936	I-5 Striping, MP 18 - 168	Striping	short	$2,050,000		
		Short Range Total			**$158,434,975**	**$158,434,975**
937	OR 62: Corridor Solutions, Phase 3	Right of Way Acquisition	medium	$12,500,000		
938	OR 62: Access Management	Major Approach Relocation west of I-5	medium	$2,000,000		
		Medium Range Total			**$14,500,000**	**$15,000,000**
939	OR 62: Corridor Solutions, Phase 4	Right of Way Acquisition	long	$67,500,000		
		Long Range Total			**$67,500,000**	**$67,500,000**
PROJECT NUMBER	**LOCATION**	**DESCRIPTION**	**TIMING**	**COST**	**Cost by Phase**	**Funds Available**
RVMPO						
1001	IdleAire Diesel Emissions Abatement	Install Advanced Truck Stop Electrification Units	Short	$978,620		
1002	Cascade Sierra Solutions Emissions Reduction Center	Implement Diesel Retrofit Outreach Center	Short	$410,200		
		Short Range Total			**$1,388,820**	**$1,400,000**
				TOTAL	**$331,129,817**	**$335,935,925**


2034 Regional Transportation Plan
EAGLE POINT
WHITE CITY
CENTRAL POINT
MEDFORD
JACKSONVILLE
PHOENIX
TALENT
ASHLAND
OLD SAMS VALLEY RD
TABLE ROCK RD
MODOC RD
Rogue R
KIRTLAND RD
BLACKWELL RD
Bear Creek
GIBBON RD
OLD STAGE RD
E VILAS RD
AGATE RD
BIGHAM - BROWN RD
N FOOTHILL RD
SALT CREEK RD
E ANTELOPE RD
CRATER LAKE AVE
BIDDLE RD
HANLEY RD
W MAIN ST
STEWART AV
SOUTH STAGE RD
N PHOENIX RD
PAYNE RD
COLVER RD
WAGNER CREEK RD
FERN VALLEY RD
HOUSTON RD
STERLING CREEK RD
FOSS RD
E RAPP RD
TALENT AV
MT ASHLAND SKI RD
234
62
140
238
99
5
66
Miles
0
2
4
Map 5.1.1 (A)
2034 Regional Transportation System Projects
Interstate
Highways
Streets
UGB & UCB
MPO Boundary
RTP Project List
Signals
Streets
Timing
Long
Medium
Short
Rogue Valley Metropolitan Planning Organization
RVMPO


2034 Regional Transportation Plan
EAGLE POINT
WHITE CITY
CENTRAL POINT
MEDFORD
JACKSONVILLE
PHOENIX
TALENT
Rogue River
Bear Creek
NICK YOUNG RD
ANTELOPE RD
COREY RD
KIRTLAND RD
BLACKWELL RD
TABLE ROCK RD
AGATE RD
UPTON RD
TOLO RD
OLD STAGE RD
SCENIC AV
E VILAS RD
TAYLOR RD
FREEMAN RD
BEALL LN
HANLEY RD
CRATER LAKE AVE
N FOOTHILL RD
E ANTELOPE RD
SAGE RD
BIDDLE RD
E MCANDREWS RD
W MAIN ST
W 8TH ST
E MAIN ST
E BARNETT RD
STEWART AV
CENTER DR
BELLINGER LN
APPLEGATE ST
SOUTH STAGE RD
N PHOENIX RD
CARPENTER HILL RD
FERN VALLEY RD
PAYNE RD
PIONEER RD
COLVER RD
FOSS RD
W VALLEY VIEW RD
234
238
62
99
140
Map 5.1.1 (B)
2034 Regional Transportation System Projects
Northern MPO
Interstate
Highways
Streets
UGB & UCB
MPO Boundary
RTP Project List
Signals
Streets
Timing
Long
Medium
Short
Rogue Valley Metropolitan Planning Organization
RVMPO
Miles
0
1
2

Part 5

Regional Transportation System Improvements

Chapter 5.2, Multi-Modal Safety

Introduction

Public safety is by far the most important element considered in every transportation project. Its significance begins with federal goals and policies, continues with state transportation goals and on to the regional and local planning level. Safety is one of eight planning factors in SAFETEA-LU that must guide state and regional transportation planning. The federal planning factors can be found in the RTP Goals and Policies, Chapter 3. According to the Bureau of Transportation Statistics' (BTS) Safety data Action Plan:

> *"Deaths and injuries are a major cost in transportation. Transportation fatalities rank third as the cause of lost years of life in the U.S. (behind heart disease and cancer). Several travel modes have death counts whose impact exceeds that of AIDS. But the Department of*

Transportation has not yet responded to this public health threat by developing data programs as capable as those used in the federal medical community."

The chapter seeks to address all major modes of transportation, and addresses the following:

- The context for Rogue Valley transportation safety;
- A discussion of the potential role of the RVMPO in transportation safety planning;
- Rogue Valley crash data; and
- Recommendations for further RVMPO safety work.

The ideal situation is that all elements of the multi-modal transportation system are safe. However, that is not always the case and plans must be made for elimination of physical transportation infrastructure hazards and problems to create a safer travel environment.

Safety often is discussed along with security, but the two are different and must be addressed separately because they involve different issues and circumstances. The simplest distinction between safety and security is that safety problems, crashes, are unpremeditated unfortunate events. As such, they may be caused by driver error or impairment, adverse weather, a temporary hazard in the right-of-way, poor infrastructure, poor vehicle design, inadequate vehicle maintenance, or all of the above. By contrast, security events always connote a negative intention. (See Security Chapter)

Safety Data and Crash Information

At present, accident data comes from many varied sources. For national information, there's the National Highway Safety Administration and the Bureau of Transportation Statistics, but within USDOT. The National Center for Health Statistics and the National Safety Council also provide statistics and summaries. At the state level ODOT produces an annual Summary of Motor Vehicle Traffic Crashes, containing reports by type and area. The 2007 summary was published in July 2008. It contains some good news for the region: Although the total amount of travel, expressed and vehicle miles travels, or VMT, has increased, both the number of fatal crashes and the number of motor vehicle fatalities declined from 2006 to 2007. In 2006 there were 17 fatal crashes and 19 deaths; in 2007 there were 14 fatal crashes and 16 deaths. Tables 5.2.1 and 2, below, summarize 2007 crash data for Jackson County.

Additional statewide information is available on the web at www.oregon.gov/ODOT/TS.

Table 5.2.1: 2009 Crash Data, Jackson County

	1A. TYPE OF MOTOR VEHICLE CRASH	Number of Crashes											
		Total				On Roadway				Off Roadway			
		Total	Fatal	Nonfatal Injury	Property Damage	Total	Fatal	Nonfatal Injury	Property Damage	Total	Fatal	Nonfatal Injury	Property Damage
Non-coll.	1. Overturning	43		32	11	22		15	7	21		17	4
Non-coll.	2. Other noncollision	1			1	1			1				
Collision involving:	3. Pedestrian	26	2	24		25	2	23		1		1	
Collision involving:	4. MV in transport	1,435	5	649	781	1,432	5	648	779	3		1	2
Collision involving:	5. MV on other roadway												
Collision involving:	6. Parked MV	44	1	12	31	4		1	3	40	1	11	28
Collision involving:	7. Railway train	1		1		1		1					
Collision involving:	8. Pedalcyclist	26		25	1	24		23	1	2		2	
Collision involving:	9. Animal	39		8	31	39		8	31				
Collision involving:	10. Fixed object	370	6	211	153	1			1	369	6	211	152
Collision involving:	11. Other object	8		4	4	7		4	3	1			1
Collision involving:	12.												
Collision involving:	Totals	1,993	14	966	1,013	1,556	7	723	826	437	7	243	187

Table 5.2.2: 2007 Crash Injuries, Jackson County

	1B. TYPE OF MOTOR VEHICLE CRASH	Number Of Persons					
		Total Killed	Total Injured	Major Injuries	Minor Injuries	Possible Injuries	No Injury
Non-coll.	1. Overturning		39	7	27	5	26
Non-coll.	2. Other noncollision						1
Collision involving:	3. Pedestrian	2	24	2	18	4	33
Collision involving:	4. MV in transport	5	1,068	55	323	690	3,133
Collision involving:	5. MV on other roadway						
Collision involving:	6. Parked MV	1	14	2	10	2	44
Collision involving:	7. Railway train		1		1		
Collision involving:	8. Pedalcyclist		25	1	19	5	34
Collision involving:	9. Animal		11	4	7		46
Collision involving:	10. Fixed object	8	272	34	135	103	284
Collision involving:	11. Other object		5	1	4		7
Collision involving:	12.						
Collision involving:	Totals	16	1,459	106	544	809	3,608

Data compiled by ODOT

Approach to Safety

There are two components to efforts toward improving transportation safety: public education, and facility improvement. Federal, state and local agencies engage in efforts addressing both. In the area of education, programs go beyond safe-driver programs to provide information to pedestrians, children traveling to school and workers in traffic zones. Crash data show driver error and the failure of bicyclist and pedestrians to obey the rules of the road are factors in most crashes, so traffic safety education can play a significant role in crash reduction. In addition, children, who are among the most vulnerable pedestrians, can be better protected through increasing their awareness of traffic hazards and safety rules.

Education includes law enforcement. ODOT research indicates a direct relationship between traffic law enforcement and crash rates.Due to funding shortfalls, however, the number of state police on the road has fluctuated but generally has remained below national average rates. Crash records show that two common infractions have a significant impact on traffic crash rates and severity: red-light running and speeding. These can be reduced through the consistent enforcement of safety-related traffic laws.

While the behavior of system users is critical, the facilities themselves need to be designed, built, maintained and operated in ways that make them safe. In the design and construction area, this means following standards for everything from lane widths and driveway spacing to sign placement and crosswalk location. Operations and maintenance programs look at where crashes occur and why, to determine whether any change on the ground could make accidents less likely. Visibility, for example, is important especially at intersections, to allow motorists a clear view of signs, cyclists, pedestrians, and other cars. Landscaping, which is used to improve appearances and conditions for neighbors and pedestrians, cannot be allowed to obstruct a clear line of sight when needed for traffic safety purposes.

Within the RVMPO area, safety programs are conducted at the state and jurisdiction level. Agencies track crash location and incident details and routinely draw on the expertise of both the emergency responders and public works staff to develop street improvements.

The RVMPO has investigated better methods of tabulating and mapping highway accident data in three major corridors in the Rogue Valley. The project aims to combine ODOT accident data with GIS mapping and database compilation. This ability is still evolving as data sources improve.

Also, RVMPO has examined the region’s highest accident locations. There are many issues of compatibility of report formats, optimal software for extracting and tabulating or mapping data, and inconsistencies in reporting of street names and the like. A project in future years would be to work with police departments to establish standardized pedestrian and bicycle accident reporting formats and software, and to create a regional database.

RTP Safety Projects

Virtually all the road projects listed in the RTP have a safety element. One of the most common types of improvement, urban upgrade, makes roads safer for motorists as well as bicyclists and pedestrians by adding sidewalks and bicycle lanes that are separate from motor traffic. For motor vehicle drivers also benefit from

having marked lanes for non-motorized modes, marked crosswalks and signals. There is concern that the RVMPO not duplicate work already occurring at the local level, but instead find ways to enhance those efforts. Options for the RVMPO planning include:

- Using published sources, create annual tables of transportation accident and incident data by mode.
- As resources and source agency databases allow, create Geographic Information Systems (GIS) –related database files and maps of accident and incident data by mode.
- Coordinate with appropriate lead agencies, with the primary focus being on highway and pedestrian safety improvements accidents since those constitute the highest number of accidents, but also focusing on transit safety needs.
- Continue Intelligent Transportation Systems planning and project programming, particularly with a view to investments that will enhance safety, which is described in Chapter 5.4, Transportation System Management.
- Review with the Technical Advisory Committee the TIP scoring matrix and other specific funding program scoring matrices to ensure that safety projects receive appropriate weighting and priority in the TIP.
- Help jurisdictions identify additional transportation funding sources that are specifically targeted at safety projects to supplement the limited funds from conventional transportation sources.

According to the National Highway Traffic Safety Administration: “Deaths and injuries resulting from motor vehicle crashes are the leading cause of death for persons of every age from 4 through 33 years old (based on 2000 data). Traffic fatalities account for more than 90 percent of transportation-related fatalities.” Safety measures do make a difference, however. According to the National Highway Traffic Safety Administration, conditions improved in the last decade:

“Fortunately, much progress has been made in reducing the number of deaths and serious injuries on our nation’s highways. In 2000, the fatality rate per 100 million vehicle miles of travel fell to a new historic low of 1.5, down from 1.6, the rate from 1997 to 1999. The 1990 rate was 2.1 per 100 million vehicle miles traveled. A 71 percent safety belt use rate nationwide and a reduction in the rate of alcohol involvement in fatal crashes – to 40 percent in 2000 from 50 percent in 1990 – were significant contributions to maintaining this consistently low fatality rate.”

Safety and the RTP

Every planned transportation project has some element of safety to it. Projects are designed with top priority to improving and maintaining the safety of all users. A few of the planned projects, however, are focused principally on improving safety, and they are shown in this chapter. These are projects that don't increase roadway capacity or expand the transportation system. By listing them separately it's possible to measure how much available funding is dedicated solely to safety.

RTP planned safety projects total nearly $11 million.

Table 5.2.3: Selected RTP Safety Projects

PROJECT NUMBER	LOCATION	DESCRIPTION	TIMING	COST	Cost by Phase
Ashland					
120, 122, 134	E. Main St. Railroad Crossing	R/R X-ing improvements, signals and surface	short	$860,288	
		Short Range Total			**$860,288**
122	Walker Ave. at R/R X-ing	R/R X-ing improvements, surface	long	$263,700	
129	Siskiyou Blvd. (OR 99) at Tolman Creek Rd.	Intersection enchancements w/ signalization	long	$603,580	
		Long Range Total			**$867,280**
Central Point					
201	New Haven Rd. and Hamrick Rd. intersection	Add signal for pedestrian crossing	short	$376,000	
203	OR 99: Traffic Calming Unit 1	Traffic Calming	short	$350,000	
206	OR 99: Traffic Calming Unit 2	Traffic Calming	short	$395,000	
		Short Range Total			**$1,121,000**
215	OR 99: Traffic Calming Unit 3	Traffic Calming	medium	$175,000	
		Medium Range Total			**$175,000**
Eagle Point					
301	Main St., Royal Ave. intersection	Intersection reconfiguration	short	$240,000	
313	Alta Vista Rd. at Shasta Ave.	Intersection improvements with signals	short	$225,000	
		Short Range Total			**$465,000**
Talent					
717	Rapp Rd., R/R X-ing to Wagner Creek Rd.	Rebuild and upgrade to urban major collector standard	medium	$1,758,000	
		Medium Range Total			**$1,758,000**
ODOT					
913	I-5: Siskiyou Rest Area (Ashland)	Relocate rest area at new location	short	$5,720,000	$5,720,000
				TOTAL	$10,966,568

Part 5

Regional Transportation System Improvements

Chapter 5.3, Multi-Modal Security

Introduction

The federal government in 1998, called for states and MPOs to address transportation security issues. In 2005, with enactment of the current transportation act SAFETEA-LU, the requirement was strengthened. Long-range Regional transportation plans must consider security distinct from transportation safety. Furthermore, in 2002 Transportation Security Administration (TSA) was created with extensive requirements for operational and capital improvements relating to security. While the public's eye has been on passenger aviation, TSA's mission relates to all modes.

The September 11, 2001, terrorist incidents have focused attention on large scale, area wide responses to sudden terrorist incidents. As a result, the federal government anticipates that over the next several years, security considerations will result in changes in how transportation is planned, designed, implemented and operated.

Transportation goals, planning processes, databases, analytical tools, decision-making considerations, and organizational structures will change due to security concerns. Transportation will be on the front line in responding to security risks. The response to security concerns will be cross-jurisdictional and functional lines and be among the most complex and important challenges to transportation professionals. While it may be too early to begin changing our long-range infrastructure network plans in response to security risks, there will be changes in spending priorities in the near term and most probably over a longer period of time."

There is a wide range of such incidents that could cause varying levels of disruption to the transportation system. A recent report recommending a national research and development strategy for improving surface transportation security presented a wide ranging list of possible threat scenarios. The list originated in a U.S. Department of Transportation vulnerability assessment of the U.S. transportation system. The nature of the threats was characterized primarily as being a physical, biological, chemical or cyber attack. The types of responses would clearly be different dependent on what type of attack occurred.

The magnitude and scope of an incident will clearly be an important determinant for gauging the appropriate public safety/emergency response. And most studies of sudden disruptions to the transportation network, either from natural or man-made causes, have concluded that the redundancies in a metropolitan area's transportation system provides a rerouting capability that allows the flow of people and vehicles around disrupted network links. For instance, in the RVMPO area, parallel north-south routes Hwy 99 and I-5 offer that redundancy.

Definitions

The simplest distinction between safety and security is that safety problems- accidents – are just that—unpremeditated unfortunate events. As such, they may be caused by driver error or impairment, adverse weather, a temporary hazard in the right-of-way, poor infrastructure or vehicle design, or all of the above. By contrast, security events always connote a negative intention, whether the perpetrator is a disgruntled single individual, a member of a gang, or a member of a political organization, that is, a terrorist. In number, terrorist attacks on transportation systems are few, with the vast majority of security breaches being perpetrated by non-political actors. But terrorist events, when they do occur, can be much more dramatic, harm many more people, and require much more to address. Table 5.3.1 provides a description of various

types of security problems that can arise in any transportation system.

Table 5.3.1: Examples of Transportation Security Incidents

Event	Description
Aggravated Assault	An unlawful attack by 1 person upon another for the purpose of inflicting severe or aggravated bodily injury. This type of assault usually is accompanied by the use of a weapon or by means likely to produce death or great bodily harm.
Arson	To unlawfully and intentionally damage, or attempt to damage, any real or personal property by fire or incendiary device.
Burglary	The unlawful entry of a structure to commit a felony or a theft. This includes offenses known locally as burglary (any degree), unlawful entry with intent to commit a larceny or felony, breaking and entering with intent to commit a larceny, housebreaking, safe cracking and all attempts at these offenses.
Larceny/Theft	The unlawful taking, carrying, leading or riding away of property from the possession or constructive possession of another. This includes pocket picking, purse snatching, shoplifting, thefts from motor vehicles, thefts of motor vehicle parts and accessories, theft of bicycles, theft from buildings, theft from coin operated devices or machines, and all other theft not specifically classified.
Trespass	To unlawfully enter land, a dwelling or other real property.
Vandalism	The willful or malicious destruction, injury, disfigurement or defacement of any public or private property, real or personal, without consent of the owner or person having custody or control by cutting, tearing, breaking, marking, painting, drawing, covering with filth, or any other such means as may be specified by local law.
Terrorism	The willful or malicious destruction, injury, disfigurement or defacement of any public or private property [etc. as above] by domestic or foreign nationals for the purpose of making a political impact.

An Approach to Security

FHWA guidance offers one approach to handling potential security or disaster incidents. The plan offers six options for action.

Prevention: This has several components, ranging from the actual stopping of an attack before it occurs, to providing improved facility designs that prevent large scale destruction. Surveillance, monitoring, and sensing technologies will likely play an important role in the prevention phase of an incident.

Response: A range of responses is offered.

> *Mitigation*: Reducing the harmful impact of an attack as it occurs and in the immediate aftermath. This entails identifying the most effective routing for emergency vehicles as well as for the evacuation of large numbers of people, as well as providing effective communication systems among emergency response teams and for general public information.

Monitoring: Recognizing that an incident is underway, characterizing it, and monitoring developments. Clearly, surveillance, monitoring, and sensing technologies would be critical to this phase of incident response, as would public information.

Recovery: Facilitating rapid reconstruction of services after an incident. Depending on the degree of damage to the community and/or transportation system, regaining some level of normalcy will require bringing the transportation system back to adequate levels of operation.

Investigation: Determining what happened in an attack, how it happened, and who was responsible. This is primarily a security/police activity that reconstructs the incident and determines causality and responsibility.

Institutional Learning: Conducting a self-assessment of organizational actions before, during, and after an incident. This element provides a feedback to the prevention element in that by understanding what went wrong or right in response to an incident, steps can be taken to prevent possible new threats.

RVMPO Area Security Planning

Within the planning area, some specific strategies have been developed. They are discussed below in the context of national security planning initiatives.

Intelligent Transportation System (ITS) Program – In the past decade or so, a new federal transportation program focusing on information technology to address problems has been developed. This Intelligent Transportation Systems program can make a major contribution toward transportation security. It can assist in all four phases of security: planning, preparedness, response and recovery. However, planners must consider that because of ITS installations' dependence on computers and electrical power, they are also more vulnerable to security threats than are many other transportation elements.

Freight – Special security planning efforts focus on freight movements. The Federal Motor Carrier Safety Administration reviews security measures with motor carriers and shippers that may be the target of terrorist attack. Its mission is to increase the level of awareness of hazardous materials carriers to terrorist threats. The FMCSA field staff provide information in the form of recommendations and suggestions.

Transit – By law, 1 percent of urbanized funds / formula funds for transit are to be used for safety and security. More funding has

been assigned since 9/11. The focus has been on intercity bus systems. Activities have focused on protecting the driver; monitoring and communicating with over-the-road buses; implementing and operating passenger and baggage screening programs; assessing critical security needs and vulnerabilities; and training transportation personnel to recognize and respond to criminal attacks and terrorist threats, as well as in evacuation procedures.

Because the security threat to bus operations is not limited to intercity services, all public transportation companies are required to have security plans. RVTD, with assistance from RVMPO, is preparing a security plan for its facilities and activities.

RVMPO Planning

Security planning efforts in the planning area are directed and managed by the emergency responders – police, fire, medical – representing all of the RVMPO jurisdictions. All of the agencies have collaborating on producing and maintaining emergency response plans. In areas involving transportation, public works staffs collaborate and assist the responders in both planning and incident response. Emergency coordinating organizations in the region have a long history of collaboration and cooperation. They have taken the lead in developing appropriate strategies and implementing plans. Also, they routinely coordinate drills and exercises among transportation providers to practice emergency plan.

The RVMPO's role has been through the staff who participate in both the RVMPO TAC and in emergency response planning efforts. The RTP's principal role is in identifying projects that assist responder efforts, most specifically in the area of ITS. RVMPO developed and maintains the region's ITS plan in consultation with emergency responder representatives. As such, the RVMPO provides a forum for agencies and the public to examine issues and identify needs and solutions. To accomplish this, the RVMPO organized and maintains the Rogue Valley Intelligent Transportation System group (RVITS), and facilitates RVITS meetings to continue ITS planning and implementation.

Future contributions of the RVMPO are likely to focus in two areas: prevention and mitigation. Prevention planning can include: funding new strategies/technologies/projects that can help prevent events; providing a forum for security/safety agencies to coordinate surveillance and prevention strategies; finding funds for security-enhancing systems; continuing to coordinate with security officials in development of prevention strategies.

Other activities for the RVMPO could include:

- Using published sources, create annual tables of transportation security incident data by mode.

- Analyze the available databases for policy and program directions and review conclusions with appropriate lead agencies.

- Working with regional lead agencies, assist in conducting security assessments / audits for each of the transportation modes in the region , addressing physical facilities and equipment, training levels, table top exercises and response / recovery plans. The role of the RVMPO in these audits should be to provide a source of information on national developments and guidelines, and to encourage a degree of consistency among modes in terms of the quantity and quality of data collected.

- Regularly review with the Technical Advisory Committee the TIP scoring matrix and other specific funding program scoring matrices to ensure that security projects receive appropriate weighting and priority in the TIP.

- Regularly review the Tier 1 and Tier 2 project development process for the Regional Transportation Plan (RTP) to ensure that security receives adequate priority in the development of the long range project list.

Part 5

Regional Transportation System Improvements

Chapter 5.4, 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 as 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 2004, 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 20-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.

RVITS-related equipment currently in use is summarized in table 5.4.1.

Table 5.4.1: RVITS Equipment

Device	Number	Location	Owner
CCTV Cameras	6	Medford	ODOT
CCTV Cameras	2	Medford	Medford
Dynamic Message Signs	4	Medford, Ashland, Phoenix	ODOT
Automatic Traffic Recorders	3	Medford, Talent	ODOT
Automatic Traffic Recorders	6	Medford	Medford
Weather Station	1	Medford	ODOT
Mayday Phone	2	Medford	ODOT
Hwy. Advisory Radio	1	Ashland	ODOT
Truck Weigh-in Motion	2	Ashland	ODOT
Red-Light Enforcement Camera	2	Medford	Medford

Forecasting Future Demand

Other chapters in Part 5 address 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 will install at least one roundabout as a way of improving intersection flow during the life of this Plan. Channelization might also alleviate such 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.

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 travel demand management (TDM) policy (TDM is discussed in Chapter 5.5), 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 the Street System Element. These 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 three trouble spots that fall into the severe congestion category are Fern Valley Road between Highway 99 and the Interstate 5 interchange, and Interstate 5 interchanges in Medford at Barnett Road and Highway 62. Although the two Medford interchanges are problem areas today, reconstruction of the South Medford interchange is nearing completion and reconstruction of the Fern Valley Interchange is programmed with construction to begin short-term. Chapter 7.3, 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.

Statewide, while the population is expected to increase about 30 percent over the next 20 years, traffic volume is expected to increase 100 percent. This increase requires a transportation system that is efficiently operated and responsive to increasing demands.

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.

The need for traffic signal equipment updates, timing plan improvements, and traffic signal removal 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 has 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 function well. Local agencies should consider following recognized 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 the relative speed of vehicles both entering and leaving the intersection.
- Coordinate different type 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.
- Avoid multiple and compound merging and diverging maneuvers. These require complex driver decisions and create additional conflicts.

- 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.

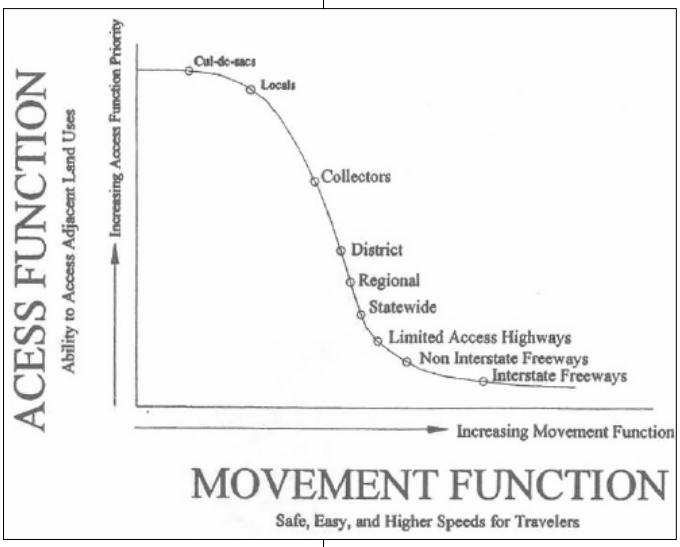
Turn prohibition studies should consider the following:

- 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. These functions are illustrated at left.

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.



Traffic capacity vs. access is illustrated above. Generally, higher degree of access limitation yields greater movement function, or capacity.

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 planned new South Medford Interchange, and in Medford and Jackson County along Highway 62. Other local access issues are 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.

Install New Traffic Signals at Intersections – Traffic control improvements in the form of new signals are estimated to be required at approximately 40 intersections in the Rogue Valley metropolitan planning region. These locations, along with other street system improvements, are identified in the Street System Project List (Table 8-2) in the Street System Element of the plan.

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 need for metering on-ramps to I-5 should be evaluated by ODOT in cooperation with local governments as the region grows and travel-demands increase along I-5. 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 ramp back-ups 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 improving congestion and 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.

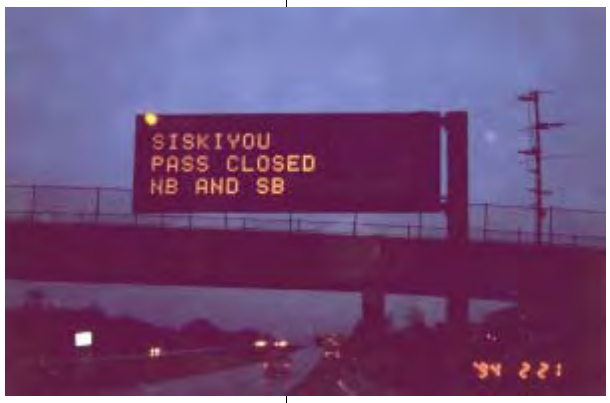
Restricting deliveries or trucking activities in locations where it has long been conducted with little regulation may be unpalatable. It may, however, be possible to require on-site loading and

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 2004 the RVMPO completed a comprehensive Intelligent Transportation Systems plan (RVITS). This 20-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, 5.3, has additional information. The plan is maintained on the RVMPO website, www.rvmpo.org.



Message board on I-5 is part of the region's ITS system

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:

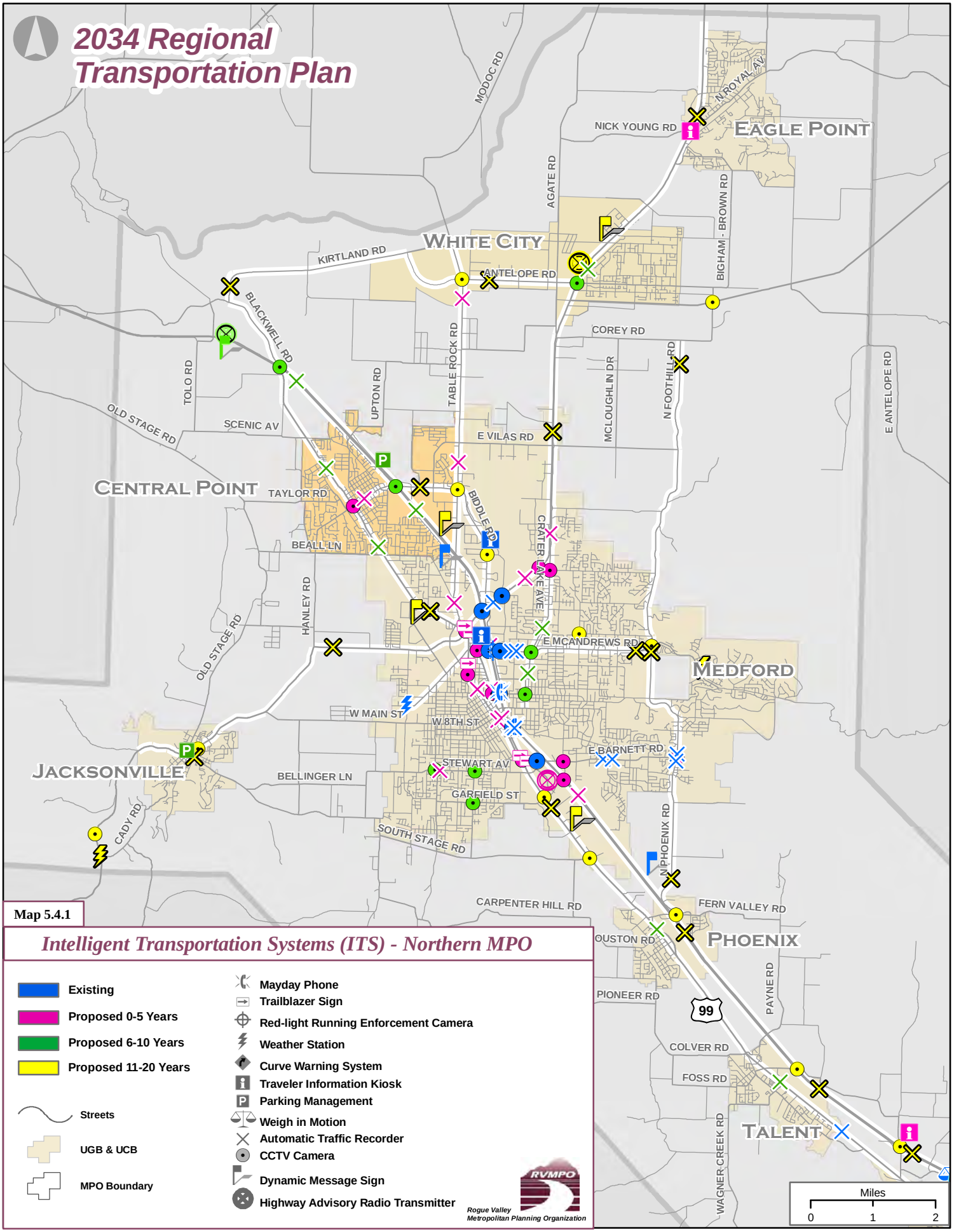
- Travel and Traffic Management
- Communications
- Public Transportation Management
- Emergency Management
- Information Management
- Maintenance and Construction Management.

RTP System Management Projects

Most planned projects have some element of improving the management of the system. The projects identified in this chapter, Table 5.4-2, are those focused primarily on management, rather than other aspects of system development or operation.

Table 5.4-2: RTP Transportation System Management Projects.

PROJECT NUMBER	LOCATION	DESCRIPTION	TIMING	COST	Cost by Phase
Ashland					
128	Ashland St. (OR 66) at Normal Ave.	Signalize intersection	long	$263,700	
129	Siskiyou Blvd. (OR 99) at Tolman Creek Rd.	Intersection enchancements w/ signalization	long	$603,580	
		Long Range Total			**$867,280**
Jackson County					
852	East Pine St., I-5 to Peninger St.	Add right turn lane with sidewalks	short	$550,000	
		Short Range Total			**$550,000**
822	Table Rock Rd. at Wilson Rd.	New traffic signal	medium	$250,000	
		Medium Range Total			**$250,000**
ODOT					
911	OR 238 @ N. Ross	Install new traffic signal	short	$250,000	
		Short Range Total			**$250,000**
				TOTAL	**$1,917,280**

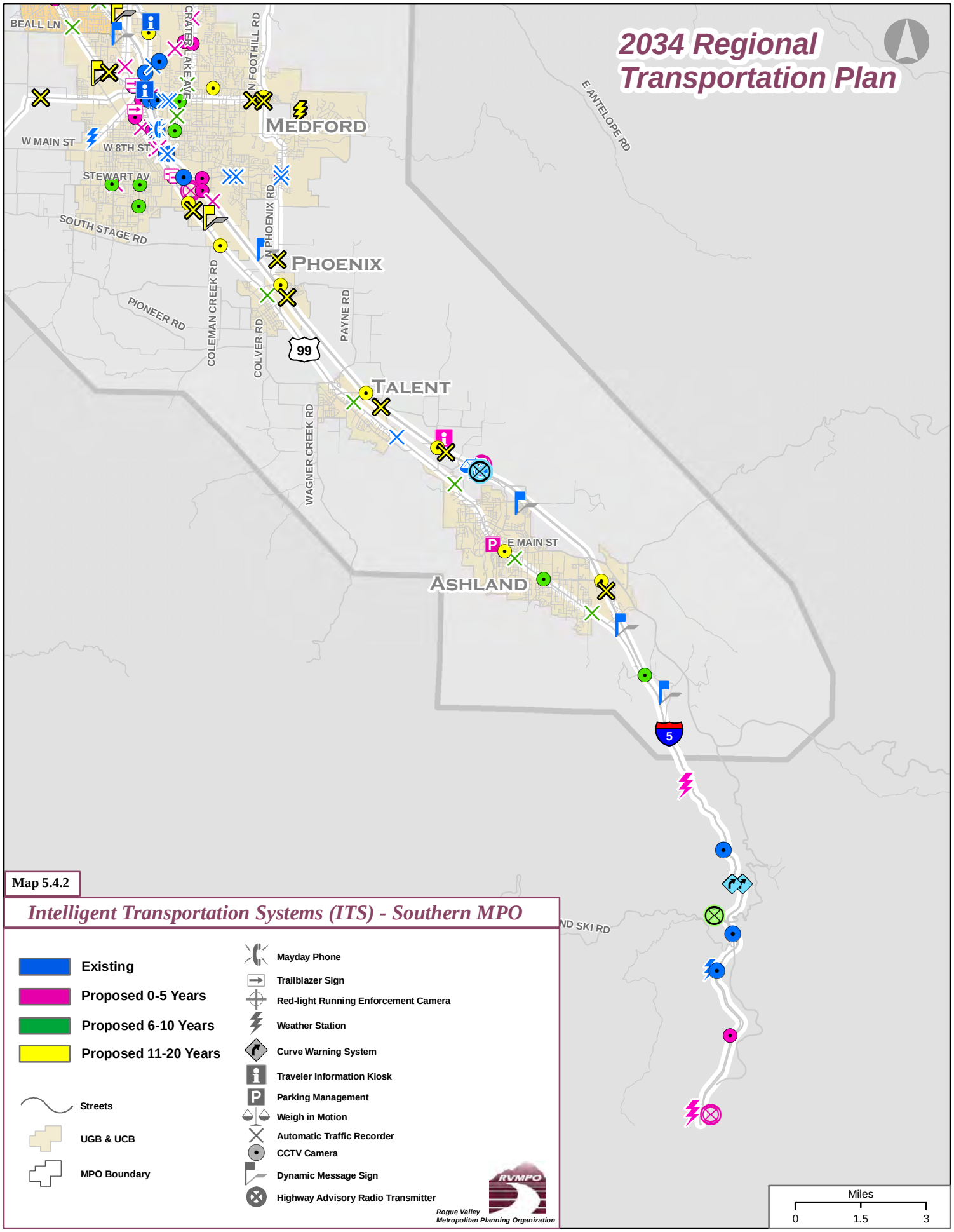


Map 5.4.1

Intelligent Transportation Systems (ITS) - Northern MPO

- Existing
- Proposed 0-5 Years
- Proposed 6-10 Years
- Proposed 11-20 Years
- Streets
- UGB & UCB
- MPO Boundary
- Mayday Phone
- Trailblazer Sign
- Red-light Running Enforcement Camera
- Weather Station
- Curve Warning System
- Traveler Information Kiosk
- Parking Management
- Weigh in Motion
- Automatic Traffic Recorder
- CCTV Camera
- Dynamic Message Sign
- Highway Advisory Radio Transmitter

Rogue Valley Metropolitan Planning Organization


2034 Regional Transportation Plan
BEALL LN
CRATER LAKE AVE
N FOOTHILL RD
MEDFORD
W MAIN ST
W 8TH ST
STEWART AV
SOUTH STAGE RD
N PHOENIX RD
PHOENIX
PIONEER RD
COLEMAN CREEK RD
COLVER RD
PAYNE RD
99
TALENT
WAGNER CREEK RD
E MAIN ST
ASHLAND
E ANTELOPE RD
5
ND SKI RD
Map 5.4.2
Intelligent Transportation Systems (ITS) - Southern MPO
Existing
Proposed 0-5 Years
Proposed 6-10 Years
Proposed 11-20 Years
Streets
UGB & UCB
MPO Boundary
Mayday Phone
Trailblazer Sign
Red-light Running Enforcement Camera
Weather Station
Curve Warning System
Traveler Information Kiosk
Parking Management
Weigh in Motion
Automatic Traffic Recorder
CCTV Camera
Dynamic Message Sign
Highway Advisory Radio Transmitter
RVMPO
Rogue Valley Metropolitan Planning Organization
Miles
0
1.5
3

Part 5

Regional Transportation System Improvements

Chapter 5.5, Transportation Demand Management

Introduction

The region's Transportation Demand Management (TDM) 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 education to make the use of these modes more attractive than driving alone. TDM therefore includes ride-sharing, trip reduction and also transit, cycling and walking. TDM 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; the auto encourages sprawl that requires extra facilities and more VMT per household; the auto is the largest producer of harmful emissions; and the largest consumer of

petroleum-based fuels. TDM can benefit society at a very reasonable cost compared to the cost of continuing on an SOV-focused system.

State Requirements for TDM 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 Demand Management in their Transportation System Plans. For these reasons, TDM 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.

The RVMPO is developing a comprehensive TDM plan for the region in 2009. Once that plan is completed, this chapter will be amended as necessary.

TDM's Purpose

The purpose of TDM is to reduce the number of single-occupant vehicles using the road system while offering travel options. TDM 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 – 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, TDM 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 TDM 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. TDM seeks to revitalize urban centers and assist rural areas to become friendlier to the pedestrian and bicyclist, making the auto less attractive. TDM requires an approach using both incentives, such as bus pass programs, and disincentives such as SOV parking surcharges. Government agencies have expended considerable effort encouraging major trip generators such as universities and major employers to take the initiative in developing TDM programs. Past experience however has shown that employers need encouragement and incentives to adopt TDM measures affecting the work commute – a major target of TDM 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 public 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 TDM's effectiveness comes from Ashland, where an examination of long-term growth projections and travel demand led to a determination that an area-wide TDM policy, combined with a set of Transportation System Management (TSM) measures (TSM is discussed in Chapter 5.4), would yield an overall street system that operates within capacity. TDM measures considered in Ashland's analysis were:

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);
4. Rideshare, carpool and vanpool programs; and
5. Mixed use land development.

TDM strategies are aimed at minimizing 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 TDM 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, 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 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 demand management and land use. Some of the implications of land use changes are presented in the Land Use Element.

Project Examples

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

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 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 State College 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 TDM 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 offer it for free to participating counties.

Support for TDM – Oregon State, County and City policies and goals include provisions to embrace TDM 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 TDM measures.

RVTD has had a TDM program in place since 1993. Current TDM activities include:

- Alternative Transportation education programs that reached over 6,000 students in the 2003-4 school year and is now moving into a Senior Education program;

- Public outreach activities to promote TDM 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 TDM measures including attending meetings to promote the use of TDM measures, and reviewing planning documents and site design for TDM-supportive policies and infrastructure;
- Supporting parking construction mitigation- reducing the need for parking expansion with TDM 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 TDM through general advertising in various media.

Another program begun a few years ago, the Rogue Valley Transportation Management Association (RVTMA), has been in-active for some time, although funds for the program – a Congestion Mitigation and Air Quality grant – is in the RTP and programmed in the current MTIP.

A TMA is a voluntary association of private and public sector parties. Its mission is to increase the efficiency of the local transportation system, often through programs that reduce SOV reliance. The RVTMA was established in 2002 to meet one of the requirements of the Alternative Mobility Standards for the South Medford interchange, which is due to be completed in mid-2009. The standards, approved by the Oregon Transportation Commission, imposed certain conditions on growth in the interchange area, including the formation of the RVTMA to address traffic congestion problems. The RVTMA also has added the goals of improving air quality, enhancing transportation

efficiency and maintaining the quality of life by reducing SOV dependence.

Educating the Public about TDM

Education and marketing are important parts of any TDM 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

TDM 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 TDM could include constructing of High Occupancy Vehicle (HOV) or “diamond” lanes or an exclusive busway. Other pavement includes sidewalks and bikeways.

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 TDM 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, security and safety, 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 TDM 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. Several participants in RTP open house sessions noted the need for more transit service in their comments.

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 TDM 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

TDM relies on efficient land use planning, education, and making the use of walking, cycling, carpooling and transit attractive. The 25-year outlook for TDM 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 doing

these things, driving a car will become less and less attractive as an option. Transit is only one component of TDM; 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 TDM 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, TDM 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. Asthe 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 TDM. 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 TDM 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 TDM strategies.

- Prioritizing all city and county TSP bicycle and pedestrian construction projects to be complete 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 TDM strategies, including actively marketing to groups that have the greatest potential for reducing SOV trips.

Part 5

Regional Transportation System Improvements

Chapter 5.6, Street System

Introduction

The Street System Chapter consists of a list of proposed federally-funded and regionally-significant projects relating to the street system that provide facilities for motorists, buses, bicyclists, and pedestrians. 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 2034. Projects are shown on maps at the end of Chapter 5.1.

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 3. 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. The Safe, Accountable, Flexible, Efficient Transportation Equity Act: Legacy for Users (SAFETEA-LU) 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 5.6.1 shows the list of street system projects scheduled for construction in the RVMPO between the years 2009 and 2034. It includes nearly $2.8 million that RVMPO cities received from American Recovery & Reinvestment Act, and roughly $12.6 million in ARRA funds allocated to projects within the RVMPO by ODOT. These projects comprise 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 2034 timeframe. Tier 2 projects are in Chapter 7.4, Future Challenges.

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 and/or which require goal exceptions from the state will be considered for the illustrative (Tier 2) project list. Such projects cannot be relied upon for

purposes of meeting state planning requirements (e.g., Transportation Planning Rule) and are not considered planned projects in the RTP.

3) Projects developed through Regional Problem Solving (RPS) or any other process that has not been formally adopted by an RVMPO agency will not be considered for Tier 1 inclusion unless such projects can meet criterion #1 above. Such projects may be considered for inclusion on the Tier 2 list if a potential source of funding (and/or sponsoring agency) can be identified.

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 Part 6: Financial Plan. The projects in this chapter meet federal financial constraint criteria through the planning horizon of 2034. 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 illustrate the region's priorities should unanticipated additional revenue sources become available.

RTP Street and Highway Project List

The list of street system projects contains projects that fall under the jurisdiction of nine agencies: the cities of Ashland, Central Point, Eagle Point, Jacksonville, Medford, Phoenix and Talent, Jackson County and ODOT. Projects that are funded by the White City Urban Renewal Agency are included within the Jackson County section. Tier 1 projects have been divided into short, medium, and long-range phases.

Tier 1 projects are listed under the agency that will have principal jurisdiction over construction. They have then been sorted according to timing phase and tier. With the exception of a few short-term projects that include federal funding sources, projects listed are those on the RVMPO's major street network, defined as collector and arterial streets.

The following information is included for each project:

- project location;
- project description;
- timing (short, medium, long range) and
- project cost.

For most projects, the location is a street segment defined by the street name along with project termini. For others, the location is an intersection. Specific location information will often be refined when further analysis and preliminary engineering are conducted prior to construction.

Project Description

A general description of each project is included and has been 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.

Timeframe

Projects in the list are divided into three general categories, according to the phase in which construction itself is expected to take place. The short-range phase includes projects expected to be completed between 2009 and 2013; the medium-range phase includes projects scheduled between 2014 and 2019; and the long-range phase includes projects scheduled for more than ten years after plan adoption, or years 2020-2034.

Since environmental analysis, design, engineering work, and right-of-way acquisition precede construction, these activities may be undertaken in the phase preceding that listed for construction.

RTP Street System

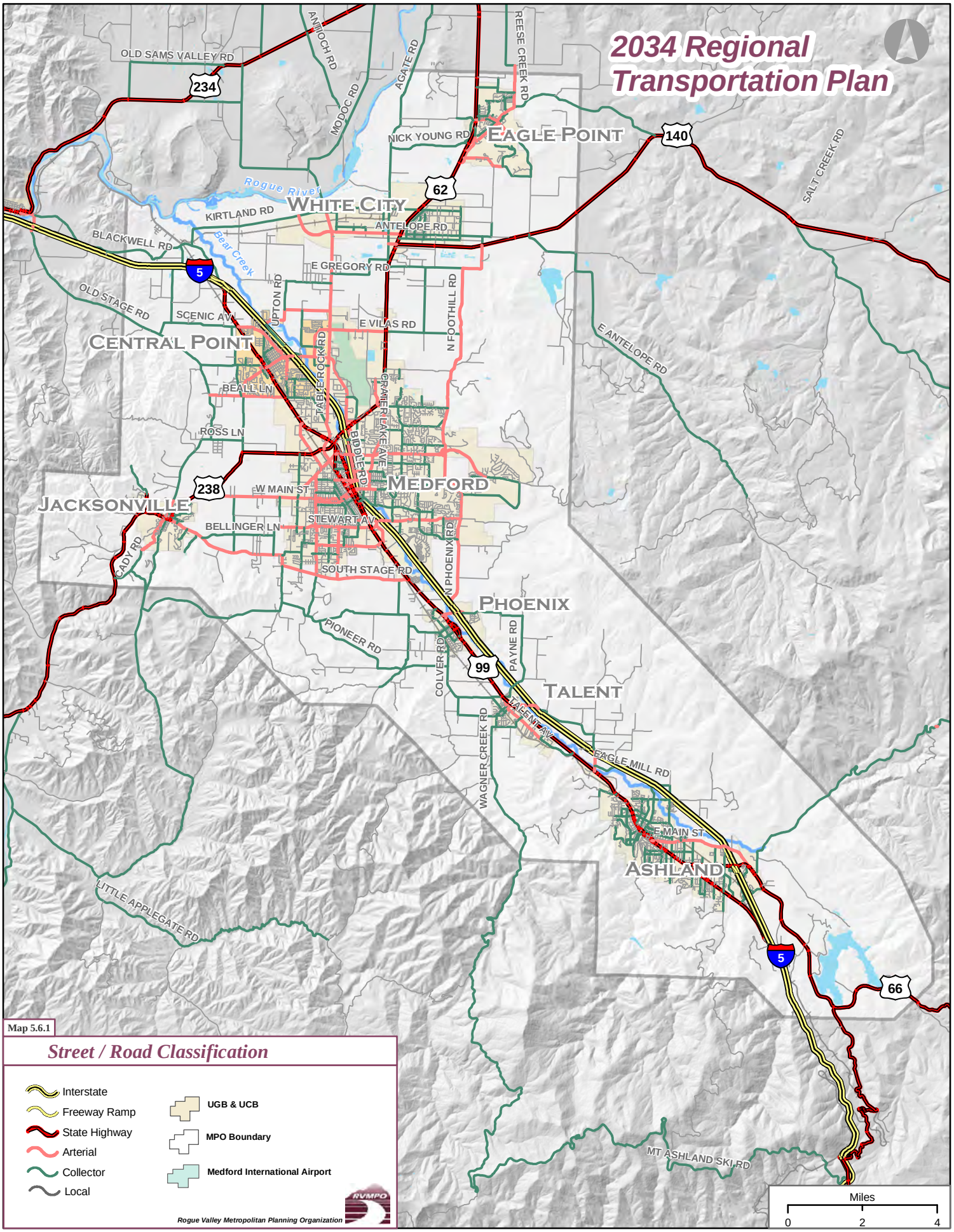
Table 5.6.1 lists RTP street system projects. Maps at the end of Chapter 5.1: RTP Projects by Jurisdiction, illustrate project locations. A map of the end of this chapter shows the regional transportation system with street classifications.

Table 5.6.1: RTP Street System Projects

PROJECT NUMBER	LOCATION	DESCRIPTION	TIMING	COST	Cost by Phase
Ashland					
102	Plaza Av.: Nezia Av to Verda St.	Pave & Improve	short	$797,000	
106	Hargadine St., Gresham St. to Second St.	Overlay	short	$46,634	
108, 109	Harrison St., Siskiyou Blvd. to Euclid St.	Overlay	short	$128,366	
115	Allison St., Union St. to Gresham St.	Overlay	short	$207,446	
120, 122, 134	E. Main St. Railroad Crossing	R/R X-ing improvements, signals and surface	short	$860,288	
157	Ashland City Streets: Pavement Overlay	Overlay	short	$438,791	
158	Hersey St.: Oak St. - Ann St. Sidewalks	Sidewalks	short	$200,000	
			Short Range Total		**$2,678,525**
147	Washington St., Ashland St. to E. Jefferson St.	Urban upgrade w/ bike lanes and sidewalks	medium	$586,000	
			Medium Range Total		**$586,000**
122	Walker Ave. at R/R X-ing	R/R X-ing improvements, surface improvement	long	$263,700	
144	Mistletoe Rd., Siskiyou Blvd. to Tolman Creek Rd.	Urban upgrade w/ bike lanes and sidewalks	long	$1,940,832	
128	Ashland St. (OR 66) at Normal Ave.	Signalize intersection	long	$263,700	
129	Siskiyou Blvd. (OR 99) at Tolman Creek Rd.	Intersection enchancements w/ signalization	long	$603,580	
			Long Range Total		**$3,071,812**
PROJECT NUMBER	**LOCATION**	**DESCRIPTION**	**TIMING**	**COST**	**Cost by Phase**
Central Point					
201	New Haven Rd. and Hamrick Rd. Intersection	Add signal for pedestrian crossing	short	$376,000	
203	OR 99: Traffic Calming Unit 1	Traffic Calming	short	$350,000	
206	OR 99: Traffic Calming Unit 2	Traffic Calming	short	$395,000	
208	Oak St.: 2nd to 3rd, & 1st: Manzanita to Laurel	Improve alleys and parking facility	short	$717,000	
229	Pine St.: 1st Street to 6th Street	Overlay / Safety	short	$392,787	
			Short Range Total		**$2,230,787**
215	OR 99: Traffic Calming Unit 3	Traffic Calming	medium	$175,000	
214	Scenic Ave., Mary's Way to Scenic Middle School	Widen to add bike lanes and sidwalks (urban upgrade)	medium	$584,416	
			Medium Range Total		**$759,416**
219	Table Rock Rd. & Vilas Rd Intersection	Widen to increase capacity	long	$799,500	
224	Scenic Ave, 10th St. to Scenic Middle School	Widen to add continuous turn lane with bike lanes and sidewalks	long	$510,000	
227	W. Pine St., Hanley St. to Haskell St.	Widen to 3 lanes, bike lanes , sidewalks	long	$1,500,000	
			Long Range Total		**$2,809,500**
PROJECT NUMBER	**LOCATION**	**DESCRIPTION**	**TIMING**	**COST**	**Cost by Phase**
Eagle Point					
301	Main St., Royal Ave. Intersection	Intersection reconfiguration	short	$240,000	
313	Alta Vista Rd. at Shasta Ave.	Intersection improvements with signals	short	$225,000	
320	Main St.: Platt Ave - Roal Ave	Overlay, sidewalks & curbs	short	$303,119	
			Short Range Total		**$768,119**
308	OR 62 frontage road	Sienna Hills extension from Barton Rd. to Rolling Hills Dr.	medium	$693,000	
			Medium Range Total		**$693,000**
320	Main St. Improvements	Reconstruct pavement, parking, lighting, landscaping	long	$970,000	
323	Barton Rd. from Hwy 62 to Reese Creek Rd.	Urban upgrade w/ bike lanes and sidewalks	long	$500,000	
			Long Range Total		**$1,470,000**
PROJECT NUMBER	**LOCATION**	**DESCRIPTION**	**TIMING**	**COST**	**Cost by Phase**
Jacksonville					
403	"C" Street: Bicycle & Pedestrian Improvements	Construct bike lanes and sidewalks	short	$238,500	
			Short Range Total		**$238,500**
No medium range projects proposed			medium	$0	
			Medium Range Total		**$0**
No long range projects proposed			long	$0	
			Long Range Total		**$0**
PROJECT NUMBER	**LOCATION**	**DESCRIPTION**	**TIMING**	**COST**	**Cost by Phase**
Medford					
502	Various locations in city	Construct sidewalks, storm drains, curbs	short	$3,612,437	
503	Garfield Ave., Kings Hwy. to Peach St.	Adding continuous turn lane with bike lanes and sidewalk	short	$824,019	
506	S. Holly St., Garfield Ave. to Holmes Way	Construct new 3 - lane street with bike lanes and sidewalks	short	$3,700,000	
507	Columbus Ave., McAndrews Rd. to Sage Rd.	Extend Columbus to Sage, with center turn lane, bike lanes, sidewalks	short	$3,000,000	
544	Mace Rd., Howard Elementary sidewalk build	Construct sidewalks around Howard Elementary School	short	$415,001	
			Short Range Total		**$ 11,551,457**
558	Coker Butte Rd., OR 62 to E. of Crater Lake Ave.	Move Coker Butte Rd. north, re-align Crater Lake Ave., add sign	medium	$4,802,000	
559	Stanford Rd., Coal Mine Rd. to Cherry Ln.	Construct new three lane street with bike lanes and sidewalks	medium	$7,546,000	
			Medium Range Total		**$12,348,000**
567	Owens Dr., Crater Lake Ave. to Foothill Rd.	Construct new three lane street with bike lanes and sidewalks	long	$9,987,600	
568	Lear Way, Coker Butte Rd. to Vilas Rd.	Construct new two lane street with bike lanes and sidewalks	long	$2,598,400	
569	Coker Butte Rd., Lear Way to Haul Rd.	Construct new five lane street with bike lanes and sidewalks	long	$1,997,520	
			Long Range Total		**$14,583,520**
PROJECT NUMBER	**LOCATION**	**DESCRIPTION**	**TIMING**	**COST**	**Cost by Phase**
Phoenix					
602	1st St., Rose St. to OR 99 (SB)	Widen to provide bike lanes and sidewalks	short	$750,000	
626	South Rose Street & Oak Street Pavement Overlay	Overlay	short	$261,900	
			Short Range Total		**$ 1,011,900**
600	4th St., OR 99 (SB) to OR 99 (NB)	Widen to provide bike lanes	medium	$296,516	
601	4th St., Rose St. to Colver Rd.	Widen to provide bike lanes and sidewalks	medium	$338,708	
603	Rose St., First St. to Fifth St.	Widen to provide bike lanes	medium	$293,000	
605	Bolz Rd., OR 99 to Fern Valley Rd.	Widen to provide bike lanes and sidewalks	medium	$410,200	
			Medium Range Total		**$1,338,424**
611	Colver Rd., First St. to southern UGB limits	Widen to provide bike lanes and sidewalks	long	$527,400	
614	3rd St., existing terminus to OR 99 (NB)	Construct new street with bike lanes and sidewalks	long	$586,000	
615	Parking St., OR 99 (NB) to Third St.	Construct new street with bike lanes and sidewalks	long	$1,758,000	
			Long Range Total		**$2,871,400**

Table 5.6.1 Continued: RTP Street System Projects

PROJECT NUMBER	LOCATION	DESCRIPTION	TIMING	COST	Cost by Phase
Talent					
701	W. Valley View Master Plan	Urban upgrade w/ bike lanes and sidewalks	short	$2,000,000	
702	Wagner St., R/R tracks to Main St.	Urban upgrade w/ bike lanes and sidewalks	short	$298,860	
703	Wagner St., Talent Ave. to R/R tracks	Urban upgrade w/ bike lanes and sidewalks	short	$58,600	
725	WaTalent Ave: paving signs & signals	Overlay / Safety	short	$140,418	
726	West Valley View paving	Overlay	short	$140,417	
			Short Range Total		$ 2,638,295
717	Rapp Rd., R/R X-Ing to Wagner Creek Rd.	Rebuild and upgrade to urban major collector standard	medium	$1,758,000	
			Medium Range Total		$1,758,000
720	Helms/Hilltop, Rapp Rd. to Belmont St.	Construct new railroad district collector street	long	$2,344,000	
722	Rogue River Parkway, OR 99 to Talent Ave.	Construct new street or upgrade existing street to major collector	long	$1,758,000	
			Long Range Total		$4,102,000
PROJECT NUMBER	LOCATION	DESCRIPTION	TIMING	COST	Cost by Phase
Jackson County					
805	Ave G - Kirtland Rd., Pacific Ave to Table Rock Rd	New 2-lane urban industrial collector	short	$2,250,000	
816	Ross Lane: McAndrews Rd. to Rossanley Rd.	Widen to add continuous turn lane with bike lanes and sidewalks	short	$1,750,000	
852	East Pine St., I-5 to Peninger St.	Add right turn lane with sidewalks	short	$550,000	
854	Peachy Rd., Walker to Hillview	Pave and Improve	short	$568,283	
812	Table Rock Rd.: Wilson to Gregory	Widen to 5 Lanes: Curb, gutter, sidewalk, bike lanes	short	$2,940,000	
851	E. Pine St: Bear Crk Bridge-Medford city limit	Overlay, signals, striping	short	$600,000	
852	Hale Way: Avenue A - Falcon St.	Overlay	short	$325,000	
853	Beall Lane: Merriman - Old Stage Rd	Overlay	short	$247,795	
856	Blackwell: Southside Blackwell Hill	Straighten curves between Mileposts 2 & 3	short	$1,500,000	
			Short Range Total		$10,731,078
822	Table Rock Rd. at Wilson Rd.	New traffic signal	medium	$250,000	
809	Foothill Rd., Corey Rd. to Atlantic St.	New two lane rural major collector + signal	medium	$1,800,000	
			Medium Range Total		$2,050,000
821	Table Rock Rd: I-5 Crossing to Biddle	Widen to 3 & 5 Lanes, curb, gutter, & Sidewalk + bike lanes	long	$2,700,000	
			Long Range Total		$2,700,000
PROJECT NUMBER	LOCATION	DESCRIPTION	TIMING	COST	Cost by Phase
ODOT					
534, 558	OR 62: Owens Dr. & Coker Butte	New 5-lane street from OR 62 Springbrook Rd, Realign Crater Lake Ave & Coker Butte, Signalization	short	$10,510,000	
902	I-5: Fern Valley Interchange, Phase 2	Reconstruct Interchange; realign, widen connecting roads: replace Bear Creek Bridge	short	$75,000,000	
903	OR 62: Corridor Solutions Phase 2	Right of Way Acquisition	short	$23,000,000	
904	OR 140 Freight Extension	Lane and shoulder widening for freight movements	short	$2,369,000	
905	OR 140: White City to MP 8	Chip seal	short	$600,000	
909	I-5 N. Ashland Interchage Greensprings Bundle 314	Replace Bridge	short	$20,577,000	
909	I-5 Exits 14 & 19 Interchange Improvements	Widen structures; signalization; lighting	short	$3,000,000	
911	OR 238 @ N. Ross	Install new traffic signal	short	$250,000	
913	I-5: Siskiyou Rest Area (Ashland)	Relocate rest area at new location	short	$5,720,000	
932	OR 99: Rapp Rd to Valley View Paving	Grind/Inlay and Overlay pavement	short	$1,800,000	
933	I-5 Exits 14 - 11 paving	Rehabilitate SB lanes from MP 11.45 - 14	short	$924,975	
934	OR62 & OR 140 Paving	Overlay	short	$9,752,000	
935	I-5: Ashland Paving	Overlay	short	$2,862,000	
936	I-5 Striping, MP 18 - 168	Striping	short	$2,050,000	
			Short Range Total		$158,434,975
937	OR 62: Corridor Solutions, Phase 3	Right of Way Acquisition	medium	$12,500,000	
938	OR 62: Access Management	Major Approach Relocation west of I-5	medium	$2,000,000	
			Medium Range Total		$14,500,000
939	OR 62: Corridor Solutions, Phase 4	Right of Way Acquisition	long	$67,500,000	
			Long Range Total		$67,500,000
				TOTAL	$323,424,708


2034 Regional Transportation Plan
OLD SAMS VALLEY RD
ANTIOCH RD
MODOC RD
AGATE RD
REESE CREEK RD
234
NICK YOUNG RD
EAGLE POINT
140
SALT CREEK RD
62
Rogue River
WHITE CITY
KIRTLAND RD
ANTELOPE RD
BLACKWELL RD
Bear Creek
5
E GREGORY RD
OLD STAGE RD
SCENIC AV
UPTON RD
N FOOTHILL RD
E VILAS RD
E ANTELOPE RD
CENTRAL POINT
TABLE ROCK RD
BEALL LN
GRANTS PASS AVE
ROSS LN
BIDDLE RD
238
W MAIN ST
MEDFORD
JACKSONVILLE
STEWART AV
BELLINGER LN
CADY RD
SOUTH STAGE RD
N PHOENIX RD
PHOENIX
PIONEER RD
COLVER RD
99
PAYNE RD
TALENT
TALENT AV
WAGNER CREEK RD
EAGLE MILL RD
E MAIN ST
ASHLAND
LITTLE APPLEGATE RD
5
66
MT ASHLAND SKI RD
Map 5.6.1
Street / Road Classification
Interstate
Freeway Ramp
State Highway
Arterial
Collector
Local
UGB & UCB
MPO Boundary
Medford International Airport
Rogue Valley Metropolitan Planning Organization
RVMPO
Miles
0
2
4

Part 5

Regional Transportation System Improvements

Chapter 5.7, Bicycle & Pedestrian Facilities

Introduction

This Chapter provides an overview of bicycle and pedestrian needs, current facilities, improvement plans and issues. It connects closely to Chapter 5.5, which address Transportation Demand Management measures. The cycling and pedestrian systems 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, and future plans. 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. Census 2000 data shows journey-to-work bicycle trips at less than 1 percent in the Rogue Valley metropolitan area. A much higher level of bicycle use is anticipated in the future for both journey-to-work and non-work trips through an expansion of the bicycle system, correction of some existing deficiencies, and the provision of secure locking areas protected from weather.

Walking currently accounts for about 3.5 percent of the journey-to-work trips in the metropolitan area. Upgrading pedestrian facilities is planned to help continue to raise the mode share for journey-to-work trips as well as non-work 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 "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.

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 on the motorized portion of the system;
- Improving air quality, since these travelers generate zero emissions;
- Providing a transportation choice for those who may not be able to afford a car for every adult in the house; and
- Providing the essential link between homes and other trip origins/destinations, and the bus transit system.

Facilities Need

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. The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity 2000 identified several action steps to prevent and decrease obesity and overweight. Promoting healthy lifestyles to prevent obesity in a community involves the creation of a healthy environment. The first step is to provide a community with safe, easy, affordable access to destinations.

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 connecting 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 in new and reconstructed streets is required under Oregon law as indicated in the following policy:

All Street Improvement Chapter projects listed as "urban upgrade," include bicycle lanes and sidewalks on both sides of the road.

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) is tracking the progress of including these facilities on the RVMPO's street network.

Bicycle improvement projects 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. The city of Medford zoning code currently requires bicycle parking but this code is often not enforced and bicycle parking is not consistently installed. Other municipalities need to review their zoning codes and revise them to include requirements for bicycle parking. 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 creation of a potentially 30-mile "greenway" link between Ashland, and ultimately the City of Rogue River, 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.

Avid commuters have stated that 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 does not have 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. Bicycle racks and lockers should be provided at transit stations, and bicycle racks should be provided on buses to promote the use of bicycles and transit for commuting.

Americans with Disabilities Act (ADA)

Disabled people may be on crutches, in wheelchairs, using a walker or having no visible sign of disability but suffering 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 mentioned in the section of this Element titled Bikeway Requirements. 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.

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, as shown by the following figure. Reduced traffic speeds prevent pedestrian deaths. One method for reducing traffic speeds and thereby increasing bicycle and pedestrian safety is traffic calming, that is, application of a choice of street redesign techniques to allow safer pedestrian and cycling activity and slow down the flow of traffic.

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.

Funding for Bicycle and Pedestrian Projects

The federal transportation act, SAFETEA-LU continues the federal policy of allocating 10 percent of Surface Transportation Program funds to states for transportation enhancement activities, which include construction of facilities for bicyclists and pedestrians. The Transportation Enhancement (TE) program has been an important source of funding for large 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.

RTP Bicycle and Pedestrian Projects

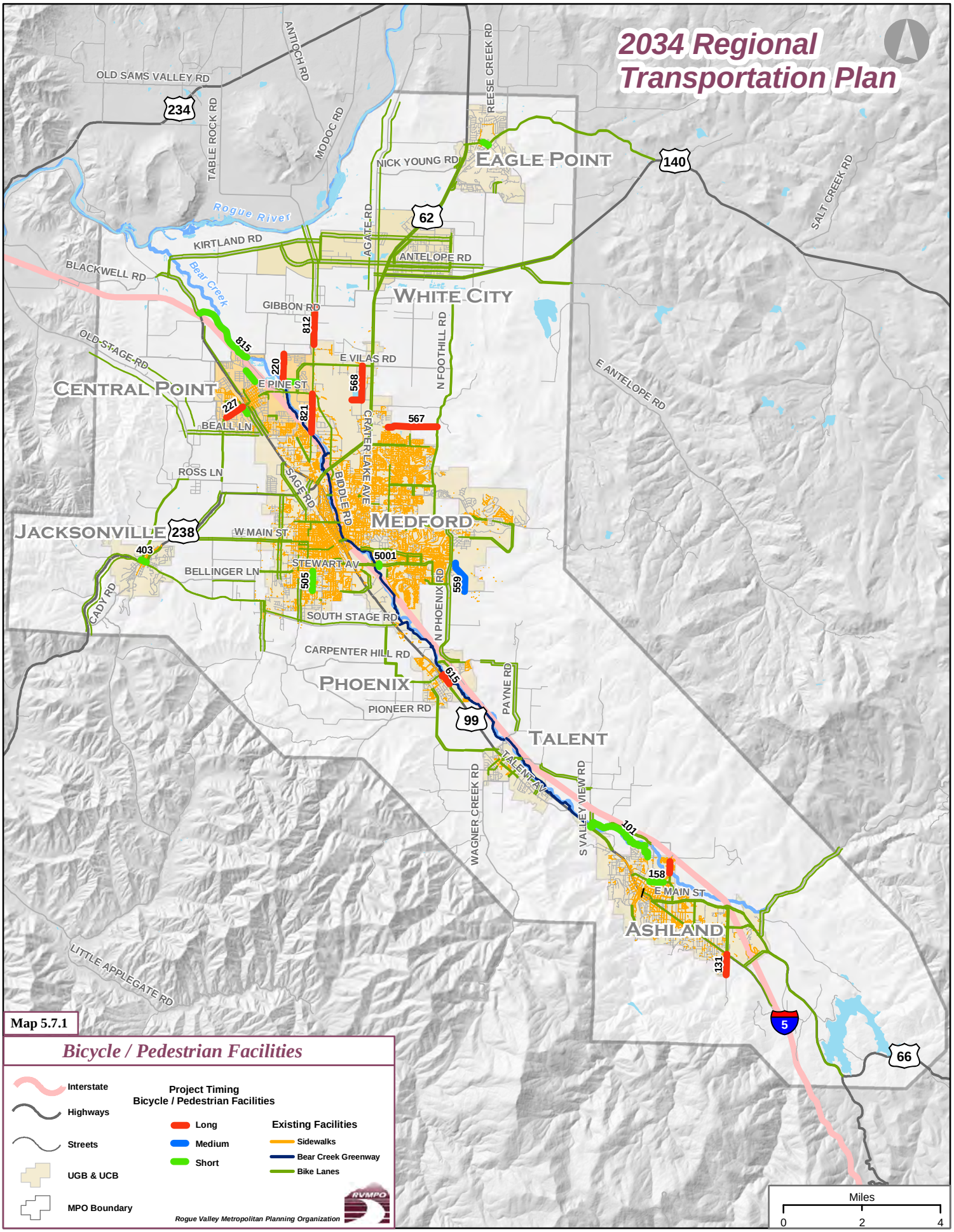
Table 5.7.1 presents all planned projects that are or include a significant bicycle and pedestrian element. All urban upgrade projects add bicycle lanes and sidewalks. Other projects target those improvements specifically. Also, federal funds going to projects on trails and similar facilities that are not part of the system for motorized vehicles also are shown.

The total amount published, represents the project total, cost of the bike/pedestrian improvements in such projects as urban upgrades haven't been isolated from total project cost estimates.

Following the project list is a map of the region's bicycle and pedestrian system, with key projects identified. Project numbers on the map link to the project list description.

Table 5.7.1: RTP Bicycle & Pedestrian Projects

PROJECT NUMBER	LOCATION	DESCRIPTION	TIMING	COST	Cost by Phase
Ashland					
158	Hersey St.: Oak St. - Ann St. Sidewalks	Sidewalks	short	$200,000	
			Short Range Total		**$200,000**
147	Washington St., Ashland St. to E. Jefferson St.	Urban upgrade w/ bike lanes and sidewalks	medium	$586,000	
			Medium Range Total		**$586,000**
144	Mistletoe Rd., Siskiyou Blvd. to Tolman Creek Rd.	Urban upgrade w/ bike lanes and sidewalks	long	$1,940,832	
			Long Range Total		**$1,940,832**
PROJECT NUMBER	**LOCATION**	**DESCRIPTION**	**TIMING**	**COST**	**Cost by Phase**
Central Point					
201	New Haven Rd. and Hamrick Rd. Intersection	Add signal for pedestrian crossing	short	$376,000	
203	OR 99: Traffic Calming Unit 1	Traffic Calming	short	$350,000	
206	OR 99: Traffic Calming Unit 2	Traffic Calming	short	$395,000	
			Short Range Total		**$1,121,000**
215	OR 99: Traffic Calming Unit 3	Traffic Calming	medium	$175,000	
214	Scenic Ave., Mary's Way to Scenic Middle School	Widen to add bike lanes and sidwalks (urban upgrade)	medium	$584,416	
			Medium Range Total		**$759,416**
224	Scenic Ave, 10th St. to Scenic Middle School	Widen to add continuous turn lane with bike lanes and sidewalks	long	$510,000	
227	W. Pine St., Hanley St. to Haskell St.	Widen to 3 lanes, bike lanes , sidewalks	long	$1,500,000	
			Long Range Total		**$2,010,000**
PROJECT NUMBER	**LOCATION**	**DESCRIPTION**	**TIMING**	**COST**	**Cost by Phase**
Eagle Point					
320	Main St.: Platt Ave - Royal Ave	Overlay, sidewalks & curbs	short	$303,119	
			Short Range Total		**$303,119**
322	Pedstrian path - Lotto St. to Butte Creek Mill	Construct path adjacent to creek on west side	long	$544,000	
323	Barton Rd. from Hwy 62 to Reese Creek Rd.	Urban upgrade w/ bike lanes and sidewalks	long	$500,000	
			Long Range Total		**$1,044,000**
PROJECT NUMBER	**LOCATION**	**DESCRIPTION**	**TIMING**	**COST**	**Cost by Phase**
Jacksonville					
403	"C" Street: Bicycle & Pedestrian Improvements	Construct bike lanes and sidewalks	short	$238,500	
			Short Range Total		**$238,500**
PROJECT NUMBER	**LOCATION**	**DESCRIPTION**	**TIMING**	**COST**	**Cost by Phase**
Medford					
502	Various locations in city	Construct sidewalks, storm drains, curbs	short	$3,612,437	
503	Garfield Ave., Kings Hwy. to Peach St.	Adding continuous turn lane with bike lanes and sidewalk	short	$824,019	
506	S. Holly St., Garfield Ave. to Holmes Way	Construct new 3 - lane street with bike lanes and sidewalks	short	$3,700,000	
507	Columbus Ave., McAndrews Rd. to Sage Rd.	Extend Columbus to Sage, with center turn lane, bike lanes, sidewalks	short	$3,000,000	
544	Mace Rd., Howard Elementary sidewalk build	Construct sidewalks around Howard Elementary School	short	$415,001	
5001	Bear Creek Greenway: Barnett Rd Bridge	Construct bicycle & pedestrian bridge	short	$2,380,049	
			Short Range Total		**$ 13,931,506**
558	Coker Butte Rd., OR 62 to E. of Crater Lake Ave.	Move Coker Butte Rd. north, re-align Crater Lake Ave., add sign	medium	$4,802,000	
559	Stanford Rd., Coal Mine Rd. to Cherry Ln.	Construct new three lane street with bike lanes and sidewalks	medium	$7,546,000	
			Medium Range Total		**$12,348,000**
567	Owens Dr., Crater Lake Ave. to Foothill Rd.	Construct new three lane street with bike lanes and sidewalks	long	$9,987,600	
568	Lear Way, Coker Butte Rd. to Vilas Rd.	Construct new two lane street with bike lanes and sidewalks	long	$2,598,400	
569	Coker Butte Rd., Lear Way to Haul Rd.	Construct new five lane street with bike lanes and sidewalks	long	$1,997,520	
			Long Range Total		**$14,583,520**
PROJECT NUMBER	**LOCATION**	**DESCRIPTION**	**TIMING**	**COST**	**Cost by Phase**
Phoenix					
602	1st St., Rose St. to OR 99 (SB)	Widen to provide bike lanes and sidewalks	short	$750,000	
			Short Range Total		**$ 750,000**
600	4th St., OR 99 (SB) to OR 99 (NB)	Widen to provide bike lanes	medium	$296,516	
601	4th St., Rose St. to Colver Rd.	Widen to provide bike lanes and sidewalks	medium	$338,708	
603	Rose St., First St. to Fifth St.	Widen to provide bike lanes	medium	$293,000	
605	Bolz Rd., OR 99 to Fern Valley Rd.	Widen to provide bike lanes and sidewalks	medium	$410,200	
			Medium Range Total		**$1,338,424**
611	Colver Rd., First St. to southern UGB limits	Widen to provide bike lanes and sidewalks	long	$527,400	
614	3rd St., existing terminus to OR 99 (NB)	Construct new street with bike lanes and sidewalks	long	$586,000	
615	Parking St., OR 99 (NB) to Third St.	Construct new street with bike lanes and sidewalks	long	$1,758,000	
			Long Range Total		**$2,871,400**
PROJECT NUMBER	**LOCATION**	**DESCRIPTION**	**TIMING**	**COST**	**Cost by Phase**
Talent					
701	W. Valley View Master Plan	Urban upgrade w/ bike lanes and sidewalks	short	$2,000,000	
702	Wagner St., R/R tracks to Main St.	Urban upgrade w/ bike lanes and sidewalks	short	$298,860	
703	Wagner St., Talent Ave. to R/R tracks	Urban upgrade w/ bike lanes and sidewalks	short	$58,600	
			Short Range Total		**$ 2,357,460**
PROJECT NUMBER	**LOCATION**	**DESCRIPTION**	**TIMING**	**COST**	**Cost by Phase**
Jackson County					
815	Bear Creek Greenway: Upton to Seven Oaks	Multi-use trail	short	$960,000	
816	Ross Lane: McAndrews Rd. to Rossanley Rd.	Widen to add continuous turn lane with bike lanes and sidewalks	short	$1,750,000	
852	East Pine St., I-5 to Peninger St.	Add right turn lane with sidewalks	short	$550,000	
812	Table Rock Rd.: Wilson to Gregory	Widen to 5 Lanes: Curb, gutter, sidewalk, bike lanes	short	$2,940,000	
851	E. Pine St: Bear Crk Bridge-Medford city limit	Overlay, signals, striping	short	$600,000	
			Short Range Total		**$6,750,000**
821	Table Rock Rd: I-5 Crossing to Biddle	Widen to 3 & 5 Lanes, curb, gutter, & Sidewalk + bike lanes	long	$2,700,000	
			Long Range Total		**$2,700,000**
				TOTAL	**$72,663,177**


2034 Regional Transportation Plan
OLD SAMS VALLEY RD
234
TABLE ROCK RD
ANTIOCH RD
MODOC RD
REESE CREEK RD
NICK YOUNG RD
EAGLE POINT
140
SALT CREEK RD
62
Rogue River
KIRTLAND RD
AGATE RD
ANTELOPE RD
BLACKWELL RD
Bear Creek
WHITE CITY
GIBBON RD
812
815
OLD STAGE RD
220
E VILAS RD
568
N FOOTHILL RD
E ANTELOPE RD
CENTRAL POINT
E PINE ST
227
821
567
BEALL LN
CRATER LAKE AVE
ROSS LN
SAGE RD
BIDDLE RD
MEDFORD
JACKSONVILLE
238
W MAIN ST
403
5001
STEWART AV
BELLINGER LN
505
559
N PHOENIX RD
CADY RD
SOUTH STAGE RD
CARPENTER HILL RD
615
PHOENIX
PAYNE RD
PIONEER RD
99
TALENT
TALENT AV
WAGNER CREEK RD
S VALLEY VIEW RD
101
158
E MAIN ST
ASHLAND
131
LITTLE APPLEGATE RD
5
66
Map 5.7.1
Bicycle / Pedestrian Facilities
Interstate
Highways
Streets
UGB & UCB
MPO Boundary
Project Timing
Bicycle / Pedestrian Facilities
Long
Medium
Short
Existing Facilities
Sidewalks
Bear Creek Greenway
Bike Lanes
Rogue Valley Metropolitan Planning Organization
RVMPO
Miles
0
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Part 5

Regional Transportation System Improvements

Chapter 5.8, Transit System

Introduction

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

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. RVTD provides bus service weekdays only. Users tend to be the transit-dependent riders, which includes low income, young, old and disabled residents of the region. Long-range planning by RVTD shows that for transit service to expand, local support – beyond the existing property tax – will have to increase.

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;
- 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. An RVMPO study underway is taking a closer look at density, examining the densities that would be necessary to expand transit service on the Hwy. 99 corridor from Ashland to Central Point.

Another factor militating against transit growth is that new bus hours require new funding. Even the nation's most successful transit systems achieving 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. 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

The outlook for transit indicates greater demand, and with demand a greater opportunity to expand service. For example, transit ridership has been increasing, even as gasoline prices have fallen in late 2008 and early 2009. 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.

Local decision-makers have agreed to spend a large portion of the region's federal transportation money to support transit. Half of the region's Surface Transportation Program (STP) allocation is dedicated to transit enhancement, and Congestion Mitigation and Air Quality (CMAQ) funds also have been awarded through a competitive process among all RVMPO jurisdictions.

RVTD received CMAQ funds for a Transportation Management Association several years ago, and hopes to renew interest in the program. It could include the region's major employers and help organize specific transit, carpooling and vanpooling assistance to key work sites.

Existing Service

RVTD provides public transportation to the southern Oregon cities of Ashland, Talent, Phoenix, Medford, White City, Central Point, and Jacksonville. Fixed route service begins as early as 5 a.m., with the last bus leaving stations at 6 or 6:30 p.m. Monday through Friday. RVTD also offers a paratransit service, Valley Lift, and a non-emergency medical regional ride 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 financial management services under contract to the Oregon Medical Assistance Program (OMAP), to handle non-emergency medical rides.

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 give time. RVTD currently utilizes seven of the spaces for the regular fixed route service. An intercity connection is provided at the station through Amtrak's bus service. Additional intercity connection can be made from RVTD's fixed route system to the Greyhound depots in Medford and Ashland.

RVTD also runs a Transportation Demand Management program, and conducts community outreach and offers specialized programs such as vanpooling coordination and incentives for employers. Fare discounts and subsides also are offered.

Future Potential Service

RVTD has a long-range plan 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. 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 long-range plan includes more service hours, buses, and facilities than are currently available.

The plan is giving priority to improving service on existing routes by increasing the frequency of service, expanding the hours of service, and adding Saturday service. 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, Bear Creek Corporation employees, Rogue Valley Medical Center, Providence Hospital, residents of the Veteran's Domiciliary in White City, and the Rogue Valley Manor in Medford. 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 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 that lend themselves to easier transit service and higher transit ridership. A general industry rule of thumb is that seven dwelling units per acre are required to generate enough riders to justify a bus route. There are 3 active TOD sites in the region: Central Point, Southeast Medford, and Phoenix. Five more that have been identified but not yet implemented: 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.

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, two 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 in transit safety and security issues.
- 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.

Bus Rapid Transit (BRT)

BRT is an intermediate transit technology now being developed in a number of locations including Eugene. It consists of high quality buses (reclining seats, tinted windows, air conditioning, tray tables etc) using a special lane on the roadway. 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. Locations where a BRT system may someday work well in the Rogue Valley include the Hwy. 62 Expressway median, Hwy. 99 / rail corridor between Ashland and Central Point.

There also needs to be intra-city circulator systems, and planning for these routes is expected to be initiated by the RVMPO in FY 2010.

Other programs that may help reduce reliance on single-occupant vehicles include:

Vanpools – The employer or the transit agency 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, Bear Creek Corporation and some employers in Medford.

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.

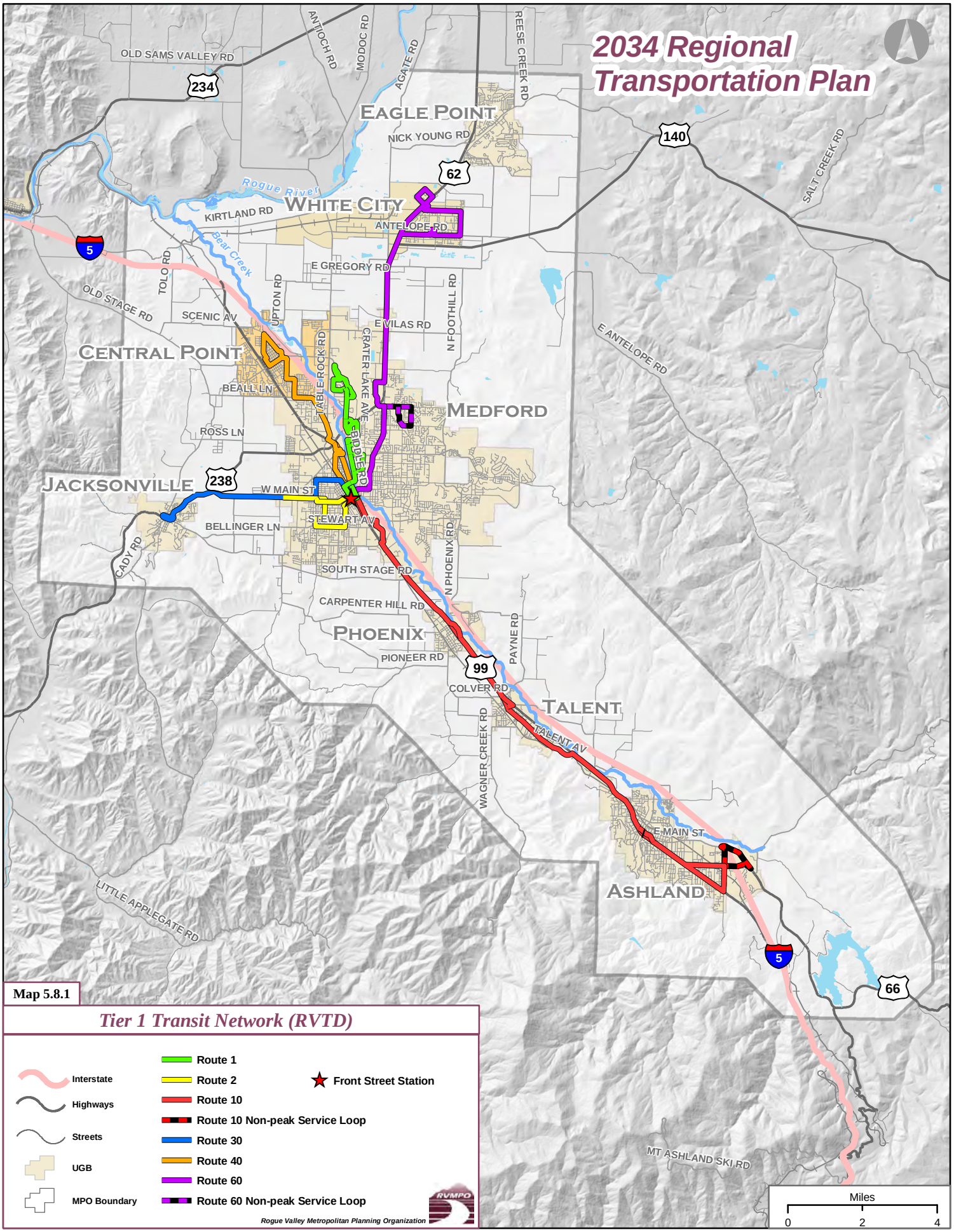
Subscription Bus Routes – A subscription bus route is a form of demand-responsive transit. The route is tailored to the pick-up locations of a specific group of riders. Unlike the vanpool or worker-driver bus, a subscription bus has a transit agency driver and thus costs more. There have been many requests 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.

Table 5.8.1:
RTP Transit Projects
(x 1,000)

Expenses	Time Frame			Totals
	Short	Medium	Long	
Operations	$11,709	$16,476	$52,239	$80,425
Alt Operations	$8,951	$12,602	$45,177	$66,730
Maintenance	$7,890	$10,978	$39,585	$58,453
Administration	$7,057	$9,651	$33,625	$50,334
Capital Match	$160	$192	$480	$832
Sub-total	$35,769	$49,899	$171,107	$256,774

RTP Transit Service

The 2034 RTP assumes no change in transit service. Although RVTD has plans to seek a payroll tax in the short-term to expand service, the RVTD project list shown below is financially constrained to meet federal planning requirements.


2034 Regional Transportation Plan
EAGLE POINT
WHITE CITY
CENTRAL POINT
MEDFORD
JACKSONVILLE
PHOENIX
TALENT
ASHLAND
OLD SAMS VALLEY RD
ANTIOCH RD
MODOC RD
AGATE RD
REESE CREEK RD
NICK YOUNG RD
SALT CREEK RD
Rogue River
KIRTLAND RD
ANTELOPE RD
Bear Creek
TOLO RD
OLD STAGE RD
SCENIC AV
UPTON RD
E GREGORY RD
E VILAS RD
N FOOTHILL RD
E ANTELOPE RD
TABLE ROCK RD
CRATER LAKE AVE
BEALL LN
ROSS LN
BIDDLE RD
W MAIN ST
STEWART AV
BELLINGER LN
CADY RD
SOUTH STAGE RD
N PHOENIX RD
CARPENTER HILL RD
PAYNE RD
PIONEER RD
COLVER RD
TALENT AV
WAGNER CREEK RD
E MAIN ST
LITTLE APPLEGATE RD
MT ASHLAND SKI RD
5
62
140
234
238
99
66
Map 5.8.1
Tier 1 Transit Network (RVTD)
Interstate
Highways
Streets
UGB
MPO Boundary
Route 1
Route 2
Route 10
Route 10 Non-peak Service Loop
Route 30
Route 40
Route 60
Route 60 Non-peak Service Loop
Front Street Station
Rogue Valley Metropolitan Planning Organization
RVMPO
Miles
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Part 5

Regional Transportation System Improvements

Chapter 5.9, Parking

Introduction

Oregon's Transportation Planning Rule (TPR) requires that metropolitan area jurisdictions reduce their overall parking capacity over the next 30 years. 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 travel. 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, the potential impacts of strategies are calculated, given the limited availability of data. Finally, some parking optimization techniques are presented,

which may make it easier for residents, 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.

Some Parking Strategies

The state Transportation Planning Rule offers some options for meeting parking requirements, including:

- Reduce minimum off-street parking requirements for all non-residential uses from 1990 levels;
- Allow provision of on-street parking, long-term lease parking, and shared parking to meet minimum off-street parking requirements;
- Establish off-street parking maximums in appropriate locations, such as downtowns, designated regional or community centers, and transit-oriented developments;
- Exempt structured parking and on-street parking from parking maximums;
- Require that parking lots over 3 acres in size provide street-like features along major driveways (including curbs, sidewalks, and street trees or planting strips); and
- Provide for designation of residential parking districts.

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

Current parking regulations specify only minimum standards, thereby implicitly encouraging some developments, such as retail stores, to provide an excess of parking supply. Furthermore, codes sometimes leave little flexibility to allow parking reduction strategies such as shared parking or on-street parking. Establishing maximums or caps on parking and lowering minimum parking requirements would have a direct, quantifiable impact on parking supply. Some other suggested parking code and policy changes include parking fees and decreased building setbacks.

Maximum Parking Requirements

As indicated above, current parking regulations specify minimum numbers of spaces for a development, but not the maximum. Existing codes can be amended to specify a maximum parking requirement (or a parking cap). This could apply to all developments or only to new developments that are constructed following adoption of the implementing ordinances.

The main benefit with applying parking caps to only new development is that existing developments and jurisdictions are spared the expense of time and labor involved in tabulating each development's parking lot capacity and policing the sites. However, the policy may place new developments at a competitive disadvantage in relation to existing businesses.

Some types of development appear to build at least twice as much parking as the minimum required by the code. Depending upon how the code was structured, the amount of parking built in connection with new development could be reduced by as much as 30 percent. The exact levels of parking permitted for new development would be figured on the rate of expected construction by land use type.

Lower Minimum Parking Requirements

Lower parking minimums could have an impact on the total parking inventory, but there is no guarantee that developments 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.

RTP and Parking

Federal funds are programmed in the RVMPO to surface exiting parking areas. Such projects do not create new or additional parking, but improve air quality by reducing dust kicked up be traffic. Road dust is a significant cause of particulate, PM_{10}, pollution in the RVMPO area. Paving travel surfaces is a strategy for reducing this pollutant.

One such project, in Central Point, is planned in the RTP. This project, # 208, would pave an existing gravel lot near the City Hall/Library complex. It's a short term project, shown in the project list in Chapter 5.1.

Part 5

Regional Transportation System Improvements

Chapter 5.10, Land Use Nexus

Introduction

Total metropolitan employment and population are essential factors determining travel demand in the Rogue Valley region. How those jobs and dwelling are distributed throughout the region can have an impact on how well the regional transportation system functions in the future. Illustrative modeling performed for the RVMPO and the Rogue Valley Regional Problem Solving project, showed that the careful development of regional employment centers could ease future roadway congestions to a greater extent than could major roadway expansion projects. Although that analysis goes well beyond the planning horizon for this RTP the results indicate the significance that land use decisions can have.

Although MPOs do not make land use decisions, and adoption of an RTP is not a land use action in Oregon, MPOs consider land use because of the potential impacts on transportation.

Also, the region has a set of Alternative Measures, approved by the Oregon Land Conservation and Development Commission that require RVMPO cities to make certain land use decisions to support the transportation system. Those measures are discussed briefly in this chapter and explained fully in Appendix A.

Land use decisions can also impact transit service availability. Decisions to support high densities (10 units per acre or greater) and mixing employment uses and dwelling, are more likely to support transit service. To be viable in an area, transit must be able to serve concentrations of population, which aren't found at lower densities.

This chapter addresses some land use activities in as they relate to the transportation system.

Mixed Uses, Transit Friendly

Cities are fostering increased densities by integrating land use and transportation. To promote this integration, the RVMPO adopted alternative measures, which received LCDC acknowledgment on April 3, 2002. Several of the measures emphasize the effect of the land use pattern on the transportation system. They call for:

- More dwelling along transit routes,
- More dwellings in mixed use and pedestrian friendly areas, which includes all downtown areas.
- More employment in mixed use and pedestrian friendly areas, which includes all downtown areas.

Development of Transit Oriented Development in the region is considered to a strategy for controlling future travel demand. TODs locate people near transit services while decreasing their dependency on automobiles. While sprawling development patterns necessitate use of automobiles for virtually every trip, TODs - through the creation of higher-density, mixed-use, pedestrian districts - increase the convenience of walking, bicycling, and transit and thereby reduce automobile dependency.

In 1999, the RVMPO undertook a Transit-Oriented Design and Transit Corridor Development Strategies Study (TOD Study). The TOD Study outlined recommendations for ten TOD sites in Central Point, Medford, Phoenix, and White City (in unincorporated Jackson County). The study was intended to provide an alternative land use scenario that would bring the RVMPO into compliance with the TPR. Many of the study's land use recommendations are being implemented, including:

Central Point TOD – Under construction in the northwest section of the city..

Medford TOD – Planning for the West Medford TOD is under way. Additionally, Medford's Southeast Plan area is a large development employing Smart Development principles.

Phoenix – Phoenix has developed a mixed-use plan for the City Center area that incorporates TOD policies and standards consistent with the RVMPO's TOD Study. The TOD site includes much of the existing downtown area, and the city is committed to urban-centered, pedestrian-friendly growth.

Jacksonville – North Fifth Street Gateway TOD includes measures to enhance the northern entrance to the city, focusing on transportation and land use issues affecting a group of commercial properties, one of which is the site of a new senior housing complex. Ordinances, street design standards, development opportunities that support transit development, pedestrian-oriented environment, and multi-modal access were among the goals of the project. The plan recommended improvements to circulation and safety at the intersection of Shafer Lane and North Fifth Street, and included conceptual renderings for capital improvements showing sidewalk locations, walkways, crosswalk locations, lighting, potential entry sign designs, and other pedestrian amenities.

Transit-Oriented Design and Development (TOD) is a general description of a set of development strategies that are designed to encourage the use of public transit by creating an atmosphere that is safe, convenient, and easily accessible by foot, bicycle, and transit. One purpose of transit-oriented design is to increase ridership by shaping and intensifying land use through the integration of transit stops with other activities of the community such as banking and shopping. Transit Oriented Development (TOD) is a concept that promotes neighborhood livability and increased use of the transit system. A mix of residential, public, and commercial uses, a diverse range of dense housing types, and a pedestrian-oriented environment characterize TOD sites. This pattern is a departure from traditional zoning that separates residential and commercial uses.

Urban design strategies associated with transit-oriented development also encourage bicycle and walk travel modes. By reducing reliance on single-occupant vehicles, TOD improves air quality by reducing the number of vehicle trips. Another benefit of TOD is the promotion of economic development by attracting businesses and consumers to the area surrounding the transit stop. By encouraging mixed-use development, transit-oriented design strategies can also increase housing options.

Other Strategies

Smart development – Concepts help make streets attractive, convenient, and safe for pedestrians, cyclists, and motorists. Landscaping, including street trees where appropriate, public art, and places for people to congregate all contribute to the desirability of a neighborhood or commercial center. These concepts increasingly are being incorporated into communities' comprehensive plans and zoning regulations.

Preserving Future Corridors – The preservation of corridors may prove to have significant financial benefits for local agencies. By identifying needed corridors for streets, bicycle/pedestrian ways, transit corridors, railroad corridors, and other uses, agencies may be able to avoid development on or loss of access to these corridors. This saves the expense of having to compensate landowners for the value of these developments when the right of way is needed for transportation. Regional corridors also merit protection, particularly in areas likely to urbanize during the planning period. The Regional Problem Solving effort, coordinated by RVCOG, identified existing corridors to be upgraded to urban standards and new connections to accommodate urban levels of development. When enacting ordinances or making plan changes, agencies must comply with applicable laws regarding property rights and may incur financial obligations as a result.

Separated multi-use bike/pedestrian paths are safest if they do not cross local streets at grade. Creating underpasses or overpasses for multi-use paths is very expensive. Typically, multi-use paths are only practical along barriers such as lakes, rivers, cliffs, or airports. Local governments should develop policies to preserve barrier edges for use as multi-use paths.

Local Street Connectivity – Poor connections between people and destinations often result in longer trip lengths and more vehicle miles traveled. Cars must travel farther to reach a destination that has no direct route from their point of origin. In addition, poor connectivity makes travel by alternative modes difficult or impossible, since longer trip lengths making biking and walking impractical.

Traffic Calming – Where appropriate, local governments should consider the use of traffic calming techniques and reduced street widths to minimize negative impacts of traffic on neighborhoods. Traffic calming is a strategy that can improve livability in residential neighborhoods, by reducing motor vehicle speeds, traffic hazards, and noise. Some traffic calming strategies include traffic circles, speed bumps, street trees, road surface modifications, and narrowing of residential streets.

Part 5

Regional Transportation System Improvements

Chapter 5.11, Public-Private Partnerships

Introduction

The RVMPO supports several partnerships with private businesses to improve air quality, particularly to reduce diesel emissions. Partnerships are made through the federal Congestion Mitigation and Air Quality program (CMAQ). The region receives nearly $2 million annually through this program for transportation projects that improve air quality. By opening this funding source to local businesses, the RVMPO seeks air quality benefits that could not be achieved through more traditional transportation projects.

Projects

Jurisdictions typically use CMAQ money to pave existing transportation routes to reduce particulate emissions. Surfacing

gravel roads and shoulders, adding shoulders, bike lanes and sidewalks (urban upgrade projects) reduce particulates emitted when vehicles track out roadside dirt and repeatedly grind it into very fine particles that drift in the air. Paving has the immediate effect of reducing the amount of area from which vehicles track out dirt and dust, and a longer-term benefit of making street cleaning more effective. Regular street cleaning is another important element of air quality improvement efforts.

Reducing vehicle emissions is another aspect of regional air quality improvement efforts. Jurisdictions have used CMAQ funds to purchase or retrofit municipal fleets to cleaner burning fuels. Creating cleaner-burning and more efficient vehicle fleets is the purpose of the private partnerships.

The private partnership program began in 2005 when the RVMPO awarded $49,692 to local refuse carrier Rogue Disposal and Recycling to retrofit nine garbage trucks with equipment to enable the vehicles to run more cleanly. Rogue Disposal subsequently received and additional $50,000 to retrofit an additional nine vehicles.

Rogue Disposal and Recycling used regional transportation funds to improve air quality by installing emission-reduction devices on much of its fleet. (Rogue Disposal Photograph)

From Rogue Disposal and Recycling 2005 application to RVMPO for CMAQ funding: *Rogue Disposal and Recycling is the primary refuse collector in the Medford area, operating 15 diesel-powered trash collection trucks. The fleet consumes more than 400,000 gallons of fuel annually, with individual vehicles traveling up to 57,000 miles annually, much of that within residential areas. Each year the fleet emits a total of 2.13 tons of carbon monoxide (CO), 0.86 tons of volatile organic compounds (VOC) and0.2 tons of particulate matter. The high-efficiency particulate filters installed in this project will reduce particulate emissions by more than 80 percent, and reduce CO and VOC emissions by 67 percent and 95 percent respectively. Additional air toxics benefits from reduced VOC emissions include reductions in benzene, formaldehyde and polycyclic aromatic hydrocarbons. Overall cost per ton emissions reduction of $4,766, is well within the range of cost effectiveness for many pollution-reduction strategies.*

The partnership with Rogue Disposal, planned in collaboration with the Oregon Department of Environmental Quality, was the first of its kind in Oregon and one of the first in the nation. It has

become a national model for public-private partnerships, noted in a 2008 Federal Highway Administration report to Congress on the CMAQ program, *CMAQ Evaluation and Assessment,* FHWA-HEP-08-019.

Currently public-private partnerships using CMAQ funds are programmed for a company that will partly electrify a local truck stop so that trucks won't have to run their engines to supply heat, cooling and electricity. Another project would establish a retrofit center in the region where truckers would have a range of devices installed to improve efficiency. Advanced exhaust controls also are installed to reduce the most harmful pollutants with the greatest impact to public health and the environment. Devices permitted by the RVMPO must not shorten the vehicle's lifespan or hurt fuel economy. Eligible costs include the retrofit equipment, supplies directly related to the installation of the equipment and labor. A match of 10.27 percent is required of the private partner in a diesel retrofit project. Partnerships that do not include retrofitting diesel engines are available with a 20 percent match required. Companies may qualify for Oregon tax credits as well.

Public-private partnerships were encouraged by Congress when it drafted the current transportation act, Safe, Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users.

RTP Private Partnerships

Public-private partnerships are funded in this plan and the current program. Programmed projects are shown below. Private projects approved by the Policy Committee are managed by the RVMPO

Table 5.11.1: Partnerships with private organizations

PROJECT NUMBER	LOCATION	DESCRIPTION	TIMING	COST	Cost by Phase
RVMPO					
1001	IdleAire Diesel Emissions Abatement	Install Advanced Truck Stop Electrification Units	Short	$978,620	
1002	Cascade Sierra Solutions Emissions Reduction Center	Implement Diesel Retrofit Outreach Center	Short	$410,200	
		Short Range	Total		$1,388,820

Part 6

Financial Plan

Introduction

This part consists of a single chapter that presents all of the financial assumptions used to create the financially constrained project list for the street and transit 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. This part begins with street system funding; transit funding discussion follows, beginning on page 13 of this Part.

Street System Funding

This section provides details on the funding required to implement the capital projects in Part 5: Regional Transportation System Improvements. Funding has been estimated over the 25-year duration of the plan and is linked to projects in Part 5 to establish the RVMPO's financially constrained project list – the Tier 1

projects. Tier 1 projects are in the plan based on their ability to be implemented and funded. Funds shown in this part establish financial constraint. They were developed in consultation with the ODOT, and the RVMPO jurisdictions, consistent with federal and state requirements for determining financial constraint. Information for this part also was drawn from the documents listed on Table 6.1.

Table 6.1: Documents Consulted for Financial Plan

Jurisdiction	Transportation Planning Document	Date
Ashland	Ashland TSP	April 1998
Talent	Talent TSP	June 2001
Phoenix	Phoenix TSP	1999
Jacksonville	Jacksonville TSP	Update in-progress 2009
Medford	Medford TSP	November 2004
Central Point	Central Point TSP	Update in-progress 2009
Eagle Point	Eagle Point TSP	Update in-progress 2009
Jackson County	Jackson County TSP	March 2004
	White City TSP	
ODOT	Coordination with Oregon Department of Transportation Finance Section	March - December 2008

Regional Transportation System Revenue Sources

The Federal, State and local revenue sources that are used to fund regional transportation system projects are described below. Estimates of capital funding availability required for Medford, Central Point, and Phoenix, Ashland, Talent, Jacksonville, Eagle Point and the White City Urban Renewal Area projects are shown in Table 6.2. The table shows how the various revenue sources are expected to contribute as a percentage of total revenues to the jurisdictions through 2034. As the table shows, the primary transportation funding source in the region is the State Highway Fund, which varies from 34 to 46 percent of the annual revenues for the RVMPO cities.

Table 6.2: RVMPO City Revenue Forecast – All Sources

Jurisdiction	Revenues					Totals
	Federal	State	Local			
			SDCs	Fees	Other	
Ashland	5%	34%	12%	43%	7%	100%
Central Point	9%	41%	24%	3%	22%	100%
Eagle Point	8%	30%	50%	10%	2%	100%
Jacksonville	31%	34%	2%	33%	0.4%	100%
Medford	2%	29%	17%	40%	12%	100%
Phoenix	25%	34%	11%	18%	12%	100%
Talent	21%	46%	9%	16%	8%	100%

Federal Revenue Sources

Federal Earmarks – Earmarks are funding allocations that are tied directly to a project through the legislative process. Jackson County received a $2 million dollar earmark for completion of a section of the Bear Creek Greenway. The earmark is included in this financial forecast.

Interstate Maintenance --USC Title 23.119 – With funding from the Highway Trust Fund, this program funds resurfacing, restoring, rehabilitating, and reconstructing the Interstate Highway program in the continental United States, Alaska and Puerto Rico. Expansion of the capacity of any Interstate highway or bridge, where such new capacity consists of one or more new travel lanes [that are not high-occupancy vehicle lanes or auxiliary lanes,] is not eligible for funding under this section.

Surface Transportation Program (STP) – The STP, an intermodal block-grant-type program, provides funds for a broad range of transportation uses. Projects can include highway and transit capital projects, carpool projects, bicycle and pedestrian facilities, planning, and research and development. STP funds are allocated to the State and sub-allocated to MPOs, cities (outside of an MPO), and counties on a formula basis by the Oregon Transportation Commission.

Congestion Mitigation and Air Quality Program (CMAQ) – The Intermodal Surface Transportation Efficiency Act (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 (such as the RVMPO planning area, which has achieved attainment status) 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 STP or CMAQ projects. CMAQ requires a 10.27 percent local match unless certain requirements are met.

STP Transportation Enhancements Program – Each state must set aside 10 percent of its yearly STP revenues for Transportation Enhancement Activities, which comprise a broad range of projects. Enhancement funds are allocated to local jurisdictions throughout the state on a competitive basis. Eligible transportation enhancement projects include pedestrian and bicycle facilities;

preservation of abandoned railway corridors; landscaping and other scenic beautification; control and removal of outdoor advertising; acquisition of scenic easements and scenic or historic sites; scenic or historic highway programs; historic preservation; rehabilitation and operation of historic transportation buildings, structures, or facilities; archaeological planning and research; and mitigation of water pollution due to highway runoff. Enhancement projects require a 20-percent non-federal match.

STP Safety Funds – Each state must set aside 10 percent of its base STP funds for safety programs (hazard elimination, rail-highway crossings, etc.). The match rate for safety projects is 80 percent federal, 20 percent state or local.

Highway Bridge Replacement and Rehabilitation Program (HBRR) – The HBRR Program provides funds to replace or maintain existing bridges; new bridges are not eligible for funding under this program. Currently, Bridge Replacement and Rehabilitation funds are distributed through the STIP process. In the future, these funds will be distributed according to the Unified Bridge Program, a rating system that indicates the condition and traffic level on each bridge in the State.

Hazard Elimination Program (HEP) – The HEP provides funding for safety improvement projects on public roads. Safety improvement projects may occur on any public road and must be sponsored by a County or City. To be eligible for federal aid, a project should be part of either the financial element of a Transportation System Plan or the annual listing of rural projects by ODOT. However, they do not have to be part of the approved STIP to receive STIP funding.

Timber Receipts – The United States Forest Service (USFS) shares 25 percent of national forest receipts with counties. By Oregon law (ORS 294.060), counties then allocate 75 percent of the receipts to the road fund and 25 percent to local school districts. Counties' share of USFS timber receipts is no longer directly tied to the level of timber harvests. Under current legislation, counties are guaranteed payments on a schedule that reduces this support by 3 percent annually over the next decade. The guaranteed payments are now considered minimums, so actual receipts could be greater if timber harvest levels increase.

State Revenue Sources

State Highway Fund – The major source of funding for transportation capital projects statewide is the State Highway Fund. The Highway Fund derives its revenue through fuel taxes, licensing and registration fees, and weight-mile taxes assessed on freight carriers. Revenues have historically been divided as

follows: 15.57 percent to cities, 24.38 percent to counties, and 60.05 to ODOT. Revenue from increased tax rates will be shared on a 20-30-50 percent basis, respectively. County shares of the Fund are based on the number of vehicle registrations, while the allocations to the cities are based on population. **OTIA – Oregon Transportation Investment Act –** The 2001 Legislature took the first two of three major steps toward solving Oregon's highway infrastructure problems. House Bill 2142, also referred to as the Oregon Transportation Investment Act I (OTIA I), increased several Driver and Motor Vehicle fees to secure $400 million in bonds to increase lane capacity and improve interchanges ($200 million), repair and replace bridges ($130 million), and preserve road pavement ($70 million).

Favorable bond rates resulted in the passage of the second phase of the OTIA program during the first legislative session in 2002. OTIA II added $50 million for projects to increase lane capacity and improve highway interchanges, $45 million for additional bridge projects, and $5 million to preserve road pavement.

The $500 million in bonds from OTIA I and II was combined with matching funds from local governments. This allowed ODOT and local governments to deliver transportation projects across Oregon worth a total of $672 million.

Projects for the first two phases of the OTIA program were selected through an extensive public input process. Local governments and area commissions on transportation worked together to forward project lists to the Oregon Transportation Commission, which approved the final choices. The OTC received requests for about five times as much funding as was available—an indication of the unmet needs that still exist. It is estimated that 100 percent of the projects in the first two phases of the OTIA program will be open to traffic by 2009.

Building on the success of the first two phases of the OTIA program, the 2003 Legislature addressed Oregon's problems of aging, bridges—and the state's economic downturn. Governor Kulongoski signed the third phase of the OTIA program into law on July 28, 2003. OTIA III uses existing ODOT funds and federal advance construction money, as well as increases in title, registration, and other Driver and Motor Vehicle fees, to bond a total of $2.46 billion. Further information about OTIA can be found at: http://egov.oregon.gov/ODOT/HWY/OTIA/

Special Public Works Fund (SPWF) – The State of Oregon allocates a portion of state lottery revenues for economic development. The Oregon Economic Development Department provides grants and loans through the SPWF program to construct,

improve and repair infrastructure in commercial/industrial areas to support local economic development and create new jobs. The SPWF provides a maximum grant of $500,000 for projects that will help create or retain a minimum of 50 jobs.

Traffic Control Projects (TCP) – The State maintains a policy of sharing installation, maintenance, and operational costs for traffic signals and luminar units at intersections between State highways and city streets (or county roads). Intersections involving a State highway and a city street or county road that are included on the statewide priority list are eligible to participate in the cost sharing policy. ODOT establishes a statewide priority list for traffic signal installations on the State Highway System. The priority system is based on warrants outlined in the Manual for Uniform Traffic Control Devices. Local agencies are responsible for coordinating the statewide signal priority list with local road requirements.

State Highway Fund Bicycle/Pedestrian Program – ORS 366.514 requires at least 1percent of the Highway Fund received by ODOT, counties, and cities be expended for the development of footpaths and bikeways. ODOT administers its bicycle/pedestrian funds, handles bikeway planning, design, engineering, and construction, and provides technical assistance and advice to local governments concerning bikeways.

Immediate Opportunity Fund (IOF) – The IOF is intended to support economic development in Oregon by funding road projects that assures job development opportunities by influencing the location or retention of a firm or economic development. The fund may be used only when other sources of funding are unavailable or insufficient, and is restricted to job retention and committed job creation opportunities. To be eligible, a project must require an immediate commitment of road construction funds to address an actual transportation problem. The applicant must show that the location decision of a firm or development depends on those transportation improvements, and the jobs created by the development must be "primary" jobs such as manufacturing, distribution, or service jobs.

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 $25,000 each.

Local Revenue Sources

System Development Charges (SDCs) – Systems Development Charges are fees paid to local jurisdictions by developers and are

intended to reflect the increased capital costs incurred by a jurisdiction or utility as a result of a development. Development charges are calculated to include the costs of impacts on adjacent areas or services, such as parks and recreation use, streets or utilities. The SDC typically varies by the type of development. Within the RVMPO, virtually all jurisdictions now have SDCs in place, at varying levels.

Street Utility Fees (SUFs) – Most city residents pay water and sewer utility fees. Street utility fees apply the same concepts to city streets. A fee is assessed to all businesses and households in the city for use of streets based on the amount of traffic typically generated by a particular use. Street utility fees differ from water and sewer fees because usage cannot be easily monitored. Street user fees are typically used to pay for maintenance projects.

Revenue Bonds – Revenue bonds are financed by user charges, such as service charges, tolls, admissions fees, and rents. Revenue bonds could be secured by a local gas tax, street utility fee, or other transportation-related revenue stream.

Special Assessments/Urban Renewal Agency/Local Improvement Districts (LIDs) – Special assessments are charges levied on property owners for neighborhood public facilities and services, with each property assessed a portion of total project cost. They are commonly used for such public works projects as street paving, drainage, parking facilities and sewer lines. The justification for such levies is that many of these public works activities provide services to or directly enhance the value of nearby land, thereby providing direct financial benefits to its owners.

Urban renewal agencies are essentially a form of a special assessment district. Areas having thus funding mechanism in place include Medford, Talent, Jacksonville, Phoenix and the White City Area of Jackson County.

Local Improvement Districts are legal entities established by local government to levy special assessments designed to fund improvements that have local benefits. Through an LID, streets or other transportation improvements are constructed and a fee is assessed to adjacent property owners. LIDs are currently being used by MPO jurisdictions.

Developer-Paid Improvements – To an increasing degree, developers are funding the entire or a major portion of transportation improvements required to make a specific development project possible. Many Tier 2 projects assume developer financing that is not yet committed. This financial plan

includes only developer-funded projects for which written agreements have already been put in place.

Street System Revenue Projections – 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.

Table 6.3 on the following page 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. The estimated non-capital needs (e.g., operation and maintenance) are then subtracted to yield the final column – "capital funds available" - which will be used to fund RTP projects.

Because the RVMPO comprises only a portion of the Jackson County and Oregon Department of Transportation (ODOT) jurisdictional boundaries, revenue estimates have not been similarly identified for these agencies. Rather, projections of capital funding availability for RVMPO projects funded by these agencies have been made based on agency-provided documentation and historical revenues. Capital funding availability for Jackson County and ODOT assumes that non-capital (operation and maintenance) needs are fully funded, consistent with Jackson County and ODOT policies.

In addition to 25-year revenue projections, Table 6.3 shows estimated costs for implementation of the RTP Tier 1 projects. On the following pages, Table 6.4 describes the financial assumptions made by the RVMPO to calculate revenues.

The analysis shows an anticipated shortfall in 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, which is discussed in detail in Chapter 7.4: Future Challenges.

Amounts shown in the table are in $1,000's.

Table 6.3: Projected Capital Funding Scenario – Regional Transportation System Project List (x$1,000)

Jurisdiction	Time Frame	Revenues						Non-Capital Needs	Capital Funds Avail.	Tier 1 Projects (financially-constrained)	Tier 2 Projects (unfunded)
		Federal	State	Local			Total				
				SDCs	Fees	Other					
Ashland	short	$1,614	$5,535	$1,676	$5,522	$1,275	$15,622	$12,157	$3,465	$2,040	$6,048
	medium	$735	$7,219	$2,306	$7,967	$1,530	$19,757	$16,823	$2,935	$586	
	long	$2,900	$21,003	$7,506	$28,851	$3,825	$64,085	$55,958	$8,127	$3,100	
Central Point	short	$2,175	$4,357	$2,602	$2,250	$1,424	$12,807	$3,705	$9,102	$1,900	$12,000
	medium	$735	$5,687	$3,585	$0	$443	$10,451	$5,233	$5,218	$760	
	long	$2,900	$16,590	$9,675	$0	$12,653	$41,818	$17,965	$23,853	$2,810	
Eagle Point	short	$496	$2,192	$3,341	$656	$478	$7,162	$5,524	$1,639	$465	$21,300
	medium	$710	$2,859	$4,388	$901	$90	$8,948	$7,594	$1,354	$693	
	long	$2,507	$8,317	$14,284	$2,935	$225	$28,268	$24,724	$3,544	$2,314	
Jacksonville	short	$197	$677	$50	$689	$50	$1,663	$1,372	$291	$200	$7,032
	medium	$735	$882	$63	$876	$0	$2,557	$1,886	$671	$0	
	long	$2,900	$2,566	$175	$2,434	$0	$8,076	$6,141	$1,935	$0	
Medford	short	$5,288	$19,365	$13,694	$32,108	$15,750	$86,205	$43,125	$43,080	$13,325	$102,350
	medium	$735	$25,257	$13,950	$33,294	$18,900	$92,137	$57,756	$34,381	$12,348	
	long	$2,900	$73,482	$39,971	$95,399	$12,600	$224,353	$175,980	$48,373	$14,584	
Phoenix	short	$1,954	$1,244	$325	$521	$350	$4,395	$1,868	$2,526	$750	$23,440
	medium	$735	$1,623	$470	$755	$503	$4,086	$2,569	$1,517	$1,339	
	long	$2,900	$4,719	$1,702	$2,734	$1,807	$13,862	$8,363	$5,499	$2,872	
Talent	short	$1,028	$1,670	$289	$552	$1,237	$4,776	$1,915	$2,861	$2,861	$879
	medium	$735	$2,178	$397	$759	$500	$4,569	$2,633	$1,937	$1,937	
	long	$2,900	$6,336	$1,192	$2,276	$0	$12,704	$8,570	$4,134	$4,134	
Jackson Co. (RVMPO Area)	short	These figures are not applicable to the MPO area - see assumptions table.							$5,500	$5,180	$0
	medium	These figures are not applicable to the MPO area - see assumptions table.							$2,200	$2,050	
	long	These figures are not applicable to the MPO area - see assumptions table.							$3,000	$2,700	
ODOT (RVMPO Area)	short	These figures are not applicable to the MPO area - see assumptions table.							$143,771	$143,771	$84,150
	medium	These figures are not applicable to the MPO area - see assumptions table.							$15,000	$14,500	
	long	These figures are not applicable to the MPO area - see assumptions table.							$67,500	$67,500	
Totals		$14,513	$125,690	$70,112	$164,811	$49,910	$425,037	$289,661	$443,413	$304,719	$257,199

Table 6.4: 2009-2034 Revenue Assumptions

Jurisdiction	Revenues					Non-Capital Needs	Capital Funds Avail.
	Federal	State	Local				
			SDCs	Fees	Other		
Ashland	ODOT (December 2008) estimates that $51.5 million STP funds available to the RVMPO 2009-2034. 50% of these funds are committed to transit (RVTD) through 2020 and are assumed to be allocated through 2034. $4.1M of the MPO's short range STP has been programmed for specific projects in the RTP. $250K in STP is not programmed through the short-range (2013). Short-range unprogrammed STP, and all medium and long-range STP funds are assumed to be available for projects in the RTP. Other federal sources assumed for the short-range only, including CMAQ ($3.72M), Transportation Enhancement ($580K) and $1.25M earmark for sidewalk projects in Medford.	ODOT (April 2008) has provided estimates for 2009-2034 as follows: $1.278M each year for Capital Projects within the MPO; $990K each year for Operations Funding; $1.1M each year for Safety Funding; $4M each year for paving on state highways; and, $25M total (2009-2034) for interstate paving projects.	SDC's are expected to be about $318K per year in 2009 and increase at 3% through 2013, 2.5% thereafter.	Street Utility Fees are expected to be about $1044K per year in 2009 and increase by 2.5% per year through 2013, 3.5% thereafter.	Other revenues include intergovernmental and misc. and are expected to average about $255K per year and contribute about $6.63 million between 2009 and 2034.	2009 expenses include: admin ($857K), maintenance ($1.177M) and RVTD service ($275K). An annual increase of 3.5% and 2.5% is assumed for admin &maintenance expenses, respectively, through 2034.	Capital funds available for cities in the RVMPO equal the amounts in the "Revenues" column minus the amounts in the "Non-Capital Needs" column.
Central Point			SDC's are expected to be about $520K per year in 2009 and increase by about 1% per year through 2034.	Street Utility Fees are expected to be $450K per year in the short term, then the fee will sunset.	Other revenues are expected to be 285K in 2009, then increase by about .5% per year through 2034.	2009 expenses include administration and maintenance ($698K). An annual increase of 3% has been assumed for these expenses through 2034.	

Eagle Point			SDC's are expected to be about $607K per year in 2009 and increase at 2.5% per year. Includes about $650K in accumulated revenues for short-term projects.	Street Utility Fees are expected to be about $125K per year in 2009 and increase by 2.5% per year.	Other revenues will contribute about $15K per year and total about $390K between 2009 and 2034. Also includes $153K in accumulated revenues and $250K from developers for short-range projects.	2009 expenses include: admin ($206K) and maintenance ($844K). An annual increase of 2.5% has been assumed for these expenses through 2034. Also includes $212K debt service in short-range.	
Jacksonville			SDC's are expected to be about $10K per year in 2009 and increase at 1.0% per year.	Franchise Fees are expected to be about $135K per year in 2009 and increase by 1.0% per year.	There are no "other" revenues expected.	2009 expenses include: admin ($33K) and maintenance ($228K). An annual increase of 2.5% has been assumed for these expenses through 2034.	
Medford			SDC's are expected to be about $2.384M per year in 2009 and increase at about 3.0% per year.	Street Utility Fees are expected to be about $5.874M per year in 2009 and increase by bout 3.0% per year.	Short-range includes $12M gas tax; $1.25M CBDG, grants, MURA; and, $2.5M State Transportation Revenue Increase, plus, $4 million bond (sidewalks), $3.5M from OTIA III (Owens Dr.). Due to cuts in timber monies, jurisdiction transfers from county of $2.25M have been dropped.	2009-2013 expenses include: admin ($6.82M), and maintenance ($24.9M). Annual 5%increase has been assumed for these expenses through 2034. Other expenses include $10.6M for debt service and $4M for local match payments.	

Phoenix			SDC's are expected to be about $61K per year in 2009 and increase at an average of 2.5% per year.	Street Utility Fees are expected to be about $98K per year in 2009 and increase by about 2.5% per year.	Includes $100K in developer contributions, $503K in developer contributions in medium range and $1.807M from Urban Renewal long range.	2009 expenses include: admin ($33K), maintenance ($322K). An annual increase of 2.5% has been assumed for these expenses through 2034.	
Talent			SDC's are expected to be about $55K per year in 2009 and increase at 2.5% in the short/medium terms, dropping to 1.5% increase in the long term.	SUFs are expected to be about $105K/yr in 2009, increase 2.5%/yr in the short/medium terms: increase 1.5%/yr in long term.	Includes $375K for jurisdictional transfer, $862K in urban renewal funds for short-range projects. Medium-range includes $500K in urban renewal funds.	2009 expenses include: admin ($110K) and maintenance ($254K). An annual increase of 2.5% has been assumed for these expenses through 2034.	

Analysis of revenue sources and non-capital needs has been limited to agencies with jurisdictional boundaries entirely within the RVMPO area. Projects in the Regional Transportation Plan that fall under the jurisdiction of either Jackson County or the Oregon Department of Transportation (ODOT) have been financially constrained based on the following assumptions:

Jackson Co. (MPO Area)	Based on historic allocations, capital funding availability is assumed to be $.8 million per year in short term years, $1.0 million in medium term years, and $1.2 million in long-term years. Added to short-term funding availability is: $2.874 million White City Urban Renewal (WCUR) for Atlantic, Ave. A to Ave G; $2.6 million WCUR for Ave G, Hwy 62 to Atlantic; $400k WCUR for Ave H, Wilson to WCUCB; $1.5 million ODOT jurisdictional exchange for North Ross Lane; $152.5k (CMAQ) for street sweeper replacement; $458k (CMAQ) Peachy, Walker to Hillview; $495.3k (CMAQ) Pine Street congestion relief.
ODOT (MPO Area)	Short term (2009-2013) funding is $143, 771,000 and includes money for a portion of the Fern Valley Interchange, and Highway 62 #2. Medium term (2014-2019) funding is $15,000,000. Long term (2020-2034) funding is $67,000,000. Funding includes money for all modifications, operations, safety, and preservation (at $4,000,000/year for preservation alone).

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 have been estimated for this plan in Table 6.5 and are described below. Further information on the assumptions used to estimate revenues are located at the end of this section.

Table 6.5: RTP Projected Transit Revenue (x$1,000)

Revenue Source	Fund	Time Frame			Totals
		Short (2005-2009)	Medium (2010-2015)	Long (2016-2030)	
Federal	S5307	$9,418	$13,306	$45,679	$68,402
	Title XIX	$165	$223	$801	$1,198
	TDM/Rideshare	$711	$1,003	$3,442	$5,156
State	STF	$1,162	$1,622	$5,282	$8,067
	In-Lieu-of (Tax)	$1,751	$2,471	$8,433	$12,705
Local	Property Taxes	$10,172	$14,367	$49,328	$73,868
	Farebox Returns	$6,074	$8,578	$29,453	$44,105
	RVMPO STP	$3,997	$5,045	$17,402	$26,444
	Other	$2,319	$3,273	$11,237	$16,829
Totals		$35,769	$49,898	$171,107	$256,774

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 all but one source (TDM/Rideshare) of federal funding to the RVTD. The FTA's programs of financial assistance to the RVTD include Section 5307 and Title XIX programs. TDM/Rideshare funding is provided by the Federal Highway Administration (FHWA). Federal grant funds are allocated to transit districts and other eligible providers by ODOT through the State Transportation Improvement Plan (STIP) process.

Transit Section 5307 and 5309 – The Section 5307 Formula Grant Program makes funds available based on a statutory formula to urbanized areas (over 50,000 population); when the local urban population reaches 200,000 Section 5309 Formula Grant Program takes over where 5307 is then dropped. For this RTP analysis, it is assumed this change will occur in 2020. For capital projects, the match rate is 80 percent federal, 20 percent state or local. Capital funds can be used for any capital and planning activity. For operating assistance, the match rate is 50 percent, 50 percent state or local operating assistance is capped at a percentage of the total federal, Section 5307/5309 apportionment for each urban area.

Title XIX – This fund source pays for non-medical transportation services for those with disabilities.

TDM/Rideshare – This funding is received from the Federal Highway Administration to promote Transportation Demand Management and Ridesharing activities managed by RVTD. Ridesharing activities sponsored by RVTD include their carpool matching service for commuters in the transit district. Other TDM activities undertaken by RVTD include the monitoring and promotion of the group pass program such as those offered by Bear Creek Corporation and Rogue Community College and the School Education Program.

RVMPO STP Funding – In April 2002, the Land Conservation and Development Commission (LCDC) approved the RVMPO's "Alternative Measures" proposal (described in detail in Appendix B). One of the approved measures directs half of the RVMPO's STP funds to alternative transportation projects through the year 2020. The measure (see Alternative Measure 7 in Appendix B) stipulates that funds are used to expand transit service, or, if RVTD is successful with a local funding package, to fund bicycle/pedestrian projects and projects that support transit- and pedestrian-oriented mixed use developments ("TOD"-type development). The RTP assumes this funding for RVTD will continue through 2034.

The RVMPO's STP funding availability is estimated to be approximately $45.4 million between 2005 and 2030. Thus, assuming that RVTD will continue to receive half this amount, this would provide nearly $23 million in funding over the planning period of this RTP. STP 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.

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. RVTD uses their allocation for Valley Lift operational support. A competitive process has been established for awarding STF funds, which are programmed on an annual basis.

In-Lieu-of (Tax) – In some areas of Oregon, a payroll tax is levied to support transit. In areas without this payroll tax, such as the area within the RVTD boundaries, the state pays an "in-lieu of" tax to

transit districts equal to the amount that would have been paid by state employees who work within district boundaries.

Local Revenue Sources

Property Taxes – Within the Rogue Valley Transportation District, a portion of the property tax revenue (18 cents per $1000 assessed valuation) collected by the county goes to RVTD. RVTD currently levies a property tax base of about $1.9 million, which can increase 3 percent each year.

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 20 percent of RVTD's operating costs.

Other – Other funding includes interest on investments, sale of surplus equipment, sale of compressed natural gas (CNG), vehicle leasing, advertising, marketing, and an STF administrative allotment.

Transit System Implementation Costs

Like street system projects, the transit program consists of two "tiers" or funding scenarios. The Tier 1 transit system is the financially constrained system. This system represents a minimal level of transit service levels, given the lack of funding available for transit operations in the RVMPO area.

Table 6.6: Projected 25-year Transit Expenses (x$1,000)

Expenses	Time Frame			Totals
	Short (2009-2013)	Medium (2014-2019	Long (2020-2034)	
Operations	$11,709	$16,476	$52,239	$80,425
Alt Operations	$8,951	$12,602	$45,177	$66,730
Maintenance	$7,890	$10,978	$39,585	$58,453
Administration	$7,057	$9,650	$33,625	$50,334
Capital Match	$160	$192	$480	$832
Totals	**$35,769**	**$49,898**	**$171,107**	**$256,774**

In contrast to the capital projects listed for the street system, implementing the transit system primarily involves operational expenditures. Table 6.6 shows the costs of implementing the financially constrained (Tier 1) transit system. Federal law requires Tier 1 revenues to exceed or match Tier 1 expenses. Therefore, the RTP proposes cuts in RVTD's future Tier 1 program.

More details about RVTD's operations may be found in the district's "Five-Year Business and Strategic Operations Plan," which can be viewed at: www.rvtd.org.

A potential, Tier 2 transit program, using additional funding not presently available to RVTD is described in Future Challenges Chapter 7.4.

Transit System Financial Assumptions

Table 6.7 describes the assumptions used to estimate RVTD's future revenues and expenses for the 2034 RTP.

Table 6.7: RVTD Revenue and Expenses Assumptions

Revenues	
S5307 & S5309 in 2020	$1.8M in 2009; 3% annual increase
Title XIX	$31K in 2009; 3% annual increase
TDM/Rideshare	$134K in 2009; 3% annual increase
STF	$219K in 2009; 2.5% annual increase
In-Lieu-of (Tax)	$330K in 2009; 3% annual increase
Property Taxes	$1.9M in 2009; 3% annual increase
Farebox Returns	$1.14M in 2009; 3% annual increase
RVMPO STP	50% of RVMPO projected STP allocation through 2034
Other	$437K in 2009; 3% annual increase
Expenses	
Operations	$2.2M in 2009; 5% annual increase
Alt Operations	$1.7M in 2009; 5% annual increase
Maintenance	$1.5M in 2009; 5% annual increase
Administration	$1.3M in 2009; 5% annual increase
Capital Match	$32K per year

Part 7

Evaluation & System Performance

Chapter 7.1, Air Quality

Introduction to Part 7

Evaluation divides into two areas: input evaluation and outcome evaluation. Input evaluation is about evaluating the merits of and prioritizing, the various projects and programs for funding and for inclusion in the plan. These are the criteria and review procedures described in Part 4: Plan Implementation. Part 7 looks at some results of the decisions made, the projects funded and included in the plan. This part describes air quality impacts, relationship of projects to a variety of environmental features, and impacts on future travel conditions—specifically on congestion. Finally, the last chapter address some anticipated unmet and future needs, including funding for new roadways and addressing climate change.

Introduction

To receive transportation funding or approvals from the Federal Highway Administration and the Federal Transit Administration, 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 set in specific federal and state transportation conformity rules. To meet the requirements, Metropolitan Planning Organizations (MPOs) must explicitly 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.

Within the RVMPO area, demonstrations of conformity to two SIPs is required: a carbon monoxide maintenance plan, or SIP, within the Medford urban growth boundary (UGB), and a particulate (PM10) plan within the entire RVMPO planning area. The RVMPO is required to show through analysis that through the horizon of the plan 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. 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.

Conformity Findings

Table 7.1.1: Estimates of carbon monoxide emissions

Analysis Year	2015	2020	2026	2034
Estimated CO Emissions	16,547 lbs/day	15,886 lbs/day	16,179 lbs/day	17,531 lbs/day
CO Budget	26,693 lbs/day	32,640 lbs/day	32,640 lbs/day	32,640 lbs/day

The AQCD shows that with the implementation of the Rogue Valley Metropolitan Planning Organization (RVMPO) 2009-2034 Regional Transportation Plan and 2008-2011 Amended Metropolitan Transportation Improvement Program the current federal air quality standards will continue to be met in Medford and in the Medford-Ashland Air Quality Maintenance Area.

Analysis of future travel conditions shows that estimates of emissions of carbon monoxide within the Medford urban growth boundary and particulate matter within the Air Quality Maintenance Area are lower than permitted in correspondin g state maintenance plans. The maintenance plans set on-road emissions budgets. Tables below summarize estimated emissions.

Table 7.1.2: Estimates of particulate emissions

Analysis Year	2015	2020	2026	2034
Estimated PM_{10} Emissions	1,737 tons/year	1,864 tons/year	2,030 tons/year	2,218 tons/year
PM_{10} Budget	3,754 tons/year	3,754 tons/year	3,754 tons/year	3,754 tons/year

Why the RVMPO Demonstrates Conformity

An AQCD is required whenever the Regional Transportation Plan (RTP) or Metropolitan Transportation Improvement Program (MTIP) is updated, or every four years, whichever comes first. A conformity determination must be adopted as part of the approval process for the draft 2034 RTP and 2010 amended MTIP. The U.S. Department of Transportation (USDOT) must approve the conformity determination before the plan and program can go into effect.

In the Rogue Valley Metropolitan Planning Organization area, the conformity document must show that through the horizon of the plan and program air quality standards will be maintained for carbon monoxide (CO) and particulate matter (PM10). 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 the emissions budget shown above for CO from transportation (mobile) sources was deemed adequate to maintain air quality.

PM10—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 2005, and the emissions budget shown above for PM10 from transportation (mobile) sources was deemed adequate to maintain air quality.

Although the conformity area for each pollutant differs, the process for showing conformity is similar. Analysis by the RVMPO has found that through the horizon of the RTP (2034) and the MTIP (2010), and in intervening years, emissions from transportation will not exceed emission budgets, as shown in the tables above.

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 USEPA confer on the analysis. Ultimately, USDOT will make a conformity determination based on this document. At that time, the RVMPO's plan goes into effect.

Basis of the analysis

The analysis uses computer models to project the amounts of CO and PM10 anticipated in the respective control areas from 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). From these calculations, future emissions are estimated. The models take 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

The AQCD shows that with the implementation of the 2034 RTP and the amended 2010 MTIP all current federal air quality standards will be met. For the Medford UGB area, this means that transportation-related emissions of CO will not exceed the budget for CO established by EPA in 2002. For the entire Medford-Ashland Air Quality Maintenance Area, an area within the RVMPO planning area, PM10 emissions from transportation will not exceed the budget set by EPA in 2005. This means that transportation projects will not compromise health standards.

In addition to the analysis itself, the AQCD details how required consultation among appropriate agencies and organizations and the public occurred.

Part 7

Evaluation & System Performance

Chapter 7.2, Environmental Considerations

Introduction

The Environmental Considerations 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 SAFETEA-LU, signed into law in 2005.

This discussion was developed in consultation with federal, state and tribal wildlife, land management, and regulatory agencies, as shown on Table 7.2.1 on the next page.

Consultation

RVMPO consulted with the agencies listed in table 7.2.1 to both write and review this chapter.

Environmental mitigation activities are defined in SAFETEA-LU 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).

Table 7.2.1: RTP Environmental Considerations Agency Consultation

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

SAFETEA-LU 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 my 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.

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.

SAFETEA-LU 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, regionally significant projects for air quality purposes and

projects that require federal approval for environmental reasons. Certain environmental laws and regulations are applicable only to projects that receive federal funds, while other environmental laws and regulations are applicable regardless of the funding source. This chapter will outline the applicability of those laws and regulations as related to expected funding.

Inventory and Mapping

The RVMPO inventoried historic and natural resources within the MPO planning boundary. The work was coordinated with the appropriate Federal, State, Tribal wildlife, land management and regulatory agencies.

The RVMPO collaborated with consultation partners to identify and obtain the most current, complete and accurate data possible from which to develop the inventory in this chapters. Data was incorporated into geographical information system mapping layers (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 7.2.1 through 7.2.13 provide information pertaining to:

- Minority and low-income groups
- Soil classes
- Locally and nationally identified wetlands
- Floodplains and natural areas
- Critical Habitats, Threatened species and Sensitive Areas
- Impaired water bodies and dams
- National historic sites, districts and roads.

In addition, a cumulative map (Map 7.2.13) shows RTP projects that intersect environmental or historic areas. Details about selected maps appear below, with more in depth discussion of issues surrounding environmental features in the sections that follow.

Irrigated Soil Classes, Map 7.2.3 -- RTP projects that are located on Class 1 or 2 Soils are located in higher grade agricultural areas. This soil information is derived from U. S. Department of Agriculture (USDA) soils data, which categorize soils into eight capability classes. According to USDA, Class 1 soils have slight limitations that restrict their use; whereas, Class 2 soils have moderate limitations that reduce the choice of plants or require

moderate conservation practices. Ultimately, Class 1 and 2 soils have the least amount of restrictions to their use; subsequently they are considered valuable soils for agricultural and conservation.

Wetlands, Floodplain and Natural Areas Inventory, Map 7.2.4 – illustrates RTP projects that intersect the National Wetlands Inventory, Medford Local Wetlands Inventory, FEMA's 100 Year Floodplain and Jackson County's Goal 5 Inventory of Natural

Percent of Hydric Soils, Map 7.2.5 – shows projects that intersect areas with a high percentage of hydric soils present. These soils are either saturated or inundated long enough during the growing season to support the growth.

Critical wildlife habitats, **Map 7.2.6 –** threatened species and sensitive wildlife areas that were readily available via GIS are depicted in. This map does not represent a comprehensive inventory of sensitive habitat. Vernal pools and spotted owl are the critical habitats mapped from US Fish and Wildlife in the RVMPO.

National Oceanic and Atmospheric Administration (NOAA) Fisheries identify the Coho Salmon as a threatened species inside the MPO. Oregon Department of Fish and Wildlife (ODFW) identify sensitive wildlife areas for Black-tailed Deer and Roosevelt Elk Winter Ranges. RTP projects only intersect the U.S. Fish and Wildlife Service (USFWS) Vernal Pools Critical Habitat and the NOAA Coho Salmon runs.

Streams for which management plans (Total Maximum Daily Load action plans) have been approved are shown on Map 7.2.7.

National Historic Sites, Districts and Road, Map 7.2.12 – The National Parks Service National Register of Historic Places and the Medford, Ashland and Jacksonville National Historic Districts are mapped with the RTP projects. The majority of projects that intersect the National Historic Districts are in Ashland.

The RTP projects are color-coded according to which environmental or historic area they intersect. RTP project numbers are labeled. Although a project does not intersect with one of the environmental or historic layers, this does not mean that the project will not have impacts that will require compliance with environmental laws or regulations. This is simply an indication of known resources as they relate to proposed projects in the RTP.

Environmental Justice

Maps that address environmental justice questions are the Minority Populations Map 7.2.1, and Poverty Map 7.2.2. These maps shows RTP projects located in census blocks that contain

various percentages of targeted populations. Data are derived from the 2000 US Census. Environmental Justice is an integral part of the chapter; therefore, efforts in avoiding disproportionate impacts to minority and low-income groups will occur. The RVMPO planning process includes both outreach and planning that is based on identifying applicable areas and assessing projects.

Environmental Justice encompasses three fundamental principles, listed in the box at right. 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.

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.

One of the Rogue Valley 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. Through constant and consistent assessment the RVMPO will work to assure Environmental Justice.

Environmental Considerations in Planning

It is both possible and appropriate to begin considering the environmental consequences of any policy, project, and/or program for addressing 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 receiving either Federal Highway Administration (FHWA) or Federal Transit Administration (FTA) funding.

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.

Use of Environmental Information – A lot of environmental information, such as population and land use projection data, is typically collected and analyzed in the transportation planning process. The RVMPO maintains a GIS (Geographic Information System) source 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**.**

Maps 7.2.3, 7.2.4, 7.2.5 and 7.2.6 have information related to irrigated soil classes, wetlands and vernal pools, hydric soils, and wildlife critical habitats and sensitive areas, respectively.

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 (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
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 or minimize environmental impacts. Where impacts cannot be avoided, efforts will be made to ensure appropriate mitigation. 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.

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. 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 specie(s). 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. 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 measure, 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 larger habitat areas that provide greater environmental benefits.

Mitigation Bank Areas in the RVMPO

SAFETEA-LU 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 Bank

Wildlands Rogue Valley Vernal Pool Bank – A private vernal pool mitigation bank being developed near Eagle Point. Wildlands, Inc. has been discussing conservation easement options w/ Southern Oregon Land Conservancy (SOLC) and private landowners in the area. Phase one of bank will be 154 acres. Later phases will be developed totaling 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 selected vernal pool complex site (Bank) is located near the intersection of Newland and Truax Roads, in White City, Jackson County, Oregon. The two parcels that comprise the 80.23 acre site are 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.

The adjacent preserve's acreage is approximately 144 acres of which roughly 80 acres is high functioning. Cumulatively, once bank establishment is complete approximately 160 acres of contiguous high functioning vernal pool complex will be protected and under management to sustain wetland functions and values.

Wildlife Habitat

Cover of The Oregon Conservation Strategy guide

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.

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 purpose 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/contents.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/document_pdf/b-eco_km.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 (KM-08) – This unique area provides important low elevation habitat for and includes the Denman Wildlife Area, Upper and Lower Table Rocks, Agate Desert Preserve, and the Whetstone Savannah Preserve.

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 (KM-09) – 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.

Identified in other planning efforts:

- 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 (KM-13) – 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 Ecoregional 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.

Example of wildlife passageway under busy highway in Florida

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.

ODOT is a cooperator on the Oregon Wildlife Movement Strategy, 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 wildlife and roads, click on the links below:

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

http://www.defenders.org/programs_and_policy/habitat_conservation/habitat_and_highways/index.php

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, such as increased temperatures, 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) have been approved that meet the requirements of Section 303(d) of the Federal 1972 Clear Water Act.

Table 7.2.2: 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

S=summer June 1st - September 30th FWS = fall/winter/spring October 1st - May 31st . Source: Rogue Basin TMDL – ODEQ, Dec. 22, 2008

Map 7.2.11 illustrates TMDL water bodies and dams; Tables 7.2.2 and 7.2.3 list TMDL stream segments within the RVMPO (Bear Creek and Rogue River Basins) along with their identified impairments. See Table 7.2.4 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.).

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

Stream Segments (All listed streams are from mouth to headwaters, unless otherwise stated)	Parameters Covered in 2004 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									

Y=year round; S=summer June 1-September 30; I = irrigation Season May1-November 30; FWS = fall/winter/spring October 1-May 31; * Status change; sediment and habitat modification are considered a source of pollution but not a pollutant, and therefore are not parameters covered in the 2004 TMDL. [Source: Rogue Basin TMDL – ODEQ, December 22, 2008

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 management, 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 biota.

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 flows (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.

Impacts to habitats and the 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. Therefore, care in the design of the transportation system is important.

Historic and Archeological Considerations

Protection of historic and archeological resources must be considered as part of the decision-making process for transportation projects. Map 7.2.12 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.are undertaken with federal funds.

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:

1. There is no feasible and prudent alternative to the use of land, and
2. 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.

RTP Projects and Environmental Features

Table 7.2.4 below lists 2009-2034 projects that intersection with a resource identified in this chapter. The projects are identified with RTP project number, location, jurisdiction and timing, and the corresponding environmental resource or feature. The seven environmental and historic resources and concerns addressed in the chapter and listed in the tables below are: wetlands listed in the Medford Local Wetlands Inventory and/or National Wetlands Inventory; vernal pool Critical Habitat; 100-year floodplain; Irrigated Soils Class I and II; Threatened Coho Salmon; Natural Areas Inventory; and National Historic District.

Table 7.2.4: RTP Projects, environmental considerations

National Wetland Inventory (NWI) Wetlands			
RTP #	Project Location	Timing	Jurisdiction
568	Lear Way, Coker Butte to Vilas	long	Medford
Vernal Pool Critical Habitat			
101	Jackson Rd. to Laurel Street	short	Ashland
809	Foothill, Corey to Atlantic	short	Jackson County
100-Year Floodplain			
101	Jackson Rd. to Laurel Street	short	Ashland
131	Tolman Creek Rd, Greenmeadows to Siskiyou Blvd	long	Ashland
133	N Mountain Av, Bear Ck Bridge to E Nevada St	long	Ashland
219	Table Rock Rd. & Vilas Rd. Intersection	long	Central Point
227	W. Pine St., Hanley St. to Haskell Street	long	Central Point
812	Table Rock Rd, Antelope to Wilson	short	Jackson County
815	Bear Creek Greenway: Upton to Seven Oaks	short	Jackson County
821	Table Rock Road, Bear Creek to Pine/Biddle	medium	Jackson County
902	I-5: Fern Valley Interchange, Unit 2	short	ODOT
933	OR 66: Neil Creek Bridge Replacement	short	ODOT
Wildlife Movement Areas			
101	Jackson Rd. to Laurel Street	short	Ashland
102	Plaza Ave: Nezla Ave to Verda St.	short	Ashland
119	N. Main at Hersey St. and Wimer St.	medium	Ashland
131	Tolman Creek Rd., Greenmeadows Way to Siskiyou	long	Ashland
809	Foothill, Corey to Atlantic	short	Jackson County
815	Bear Creek Greenway: Upton to Seven Oaks	short	Jackson County
904	Oregon 140 Freight Extension	short	ODOT
913	I-5 Siskiyou Rest Area (Ashland)	short	ODOT
933	OR 66: Neil Creek Bridge Replacement	short	ODOT

Table 7.2.4: RTP Projects, environmental considerations

Natural Areas Inventory			
RTP #	Project Location	Timing	Jurisdiction
809	Foothill, Corey to Atlantic	short	Jackson County
854	Peachy Rd., Walker to Hillview	short	Jackson County
National Historic District			
100	C St., Eureka St. and Walnut St.	short	Ashland
103	B St., Fifth St. to Third St., Oak St. to First St.	short	Ashland
Threatened Chinook			
101	Jackson Rd. to Laurel Street	short	Ashland
815	Bear Creek Greenway: Upton to Seven Oaks	short	Jackson County
902	I-5: Fern Valley Interchange, Unit 2	short	ODOT
Threatened Coho Salmon			
101	Jackson Rd. to Laurel Street	short	Ashland
133	N Mountain Av, Bear Ck Bridge to E Nevada St	long	Ashland
902	I-5: Fern Valley Interchange, Unit 2	short	ODOT

ENDANGERED SPECIES ACT OF 1973

Text of the Act is printed below for reference.

FINDINGS.— The Congress finds and declares that:

Various species of fish, wildlife, and plants in the United States have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation;

Other species of fish, wildlife, and plants have been so depleted in numbers that they are in danger of or threatened with extinction;

These species of fish, wildlife, and plants are of esthetic, ecological, educational, historical, recreational, and scientific value to the Nation and its people;

The United States has pledged itself as a sovereign state in the international community (to conserve to the extent practicable the various species of fish or wildlife and plants facing extinction, pursuant to:

Migratory bird treaties with Canada and Mexico;

The Migratory and Endangered Bird Treaty with Japan;

The Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere;

The International Convention for the Northwest Atlantic Fisheries;

The International Convention for the High Seas Fisheries of the North Pacific Ocean;

The Convention on International Trade in Endangered Species of Wild Fauna and Flora; and

Other international agreements; and

Encouraging the States and other interested parties, through Federal financial assistance and a system of incentives, to develop and maintain conservation programs which meet national and international standards is a key to meeting the Nation's international commitments and to better safeguarding, for the benefit of all citizens, the Nation's heritage in fish, wildlife, and plants.

PURPOSES.—The purposes of this Act are to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in subsection (a) of this section.

POLICY.—(1) It is further declared to be the policy of Congress that all Federal departments and agencies shall seek to conserve endangered species and threatened species and shall utilize their authorities in furtherance of the purposes of this Act. (2) It is further declared to be the policy of Congress that Federal agencies shall cooperate with State and local agencies to resolve water resource issues in concert with conservation of endangered species.

Download the entire ESA in PDF [147 kb]

Federally listed Threatened, Endangered, Proposed, Candidate Species and Species of Concern under the jurisdiction of the Fish and Wildlife Service (FWS) which may occur within Jackson County, Oregon are listed below.

Listed Species

- Birds: northern spotted owl
- Crustaceans: vernal pool fairy shrimp
- Plants: Gentner's fritillary, large-flowered woolly meadowfoam; Cook's lomatium; and Kincaid's lupine

Candidate Species

- Mammals: fisher
- Insects: Mardon skipper

- Plants Siskiyou mariposa lily

Species of Concern

Mammals: Pallid bat; Red tree vole; Townsend's western big-eared bat; California wolverine; silver-haired bat; long-eared myotis bat; fringed myotis bat; long-legged myotis bat; Yuma myotis bat

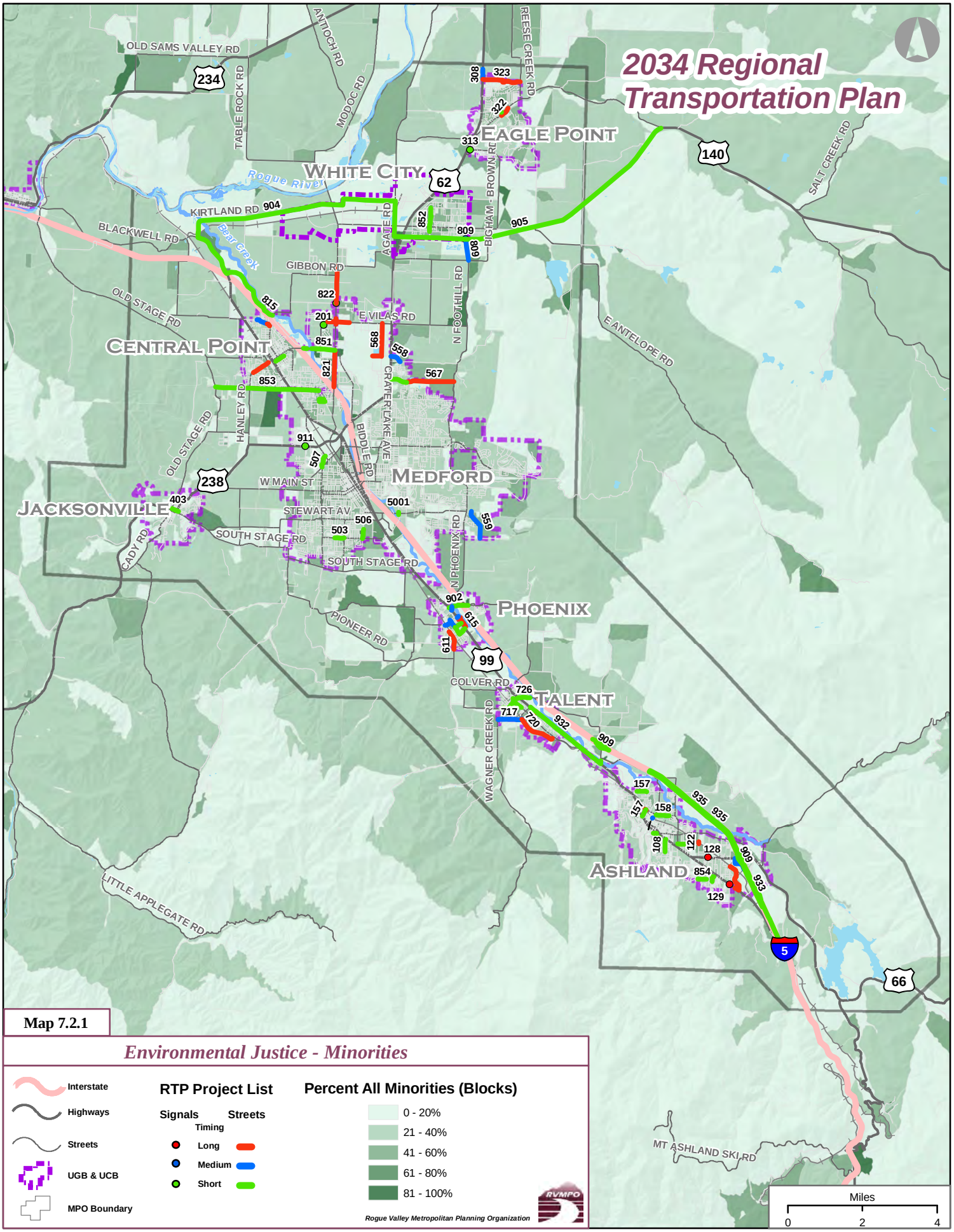
Birds: northern goshawk; tricolored blackbird; western burrowing owl; olive-sided flycatcher; yellow-breasted chat; acorn woodpecker; Lewis' woodpecker; mountain quail; band-tailed pigeon; white-headed woodpecker; Oregon vesper sparrow; purple martin

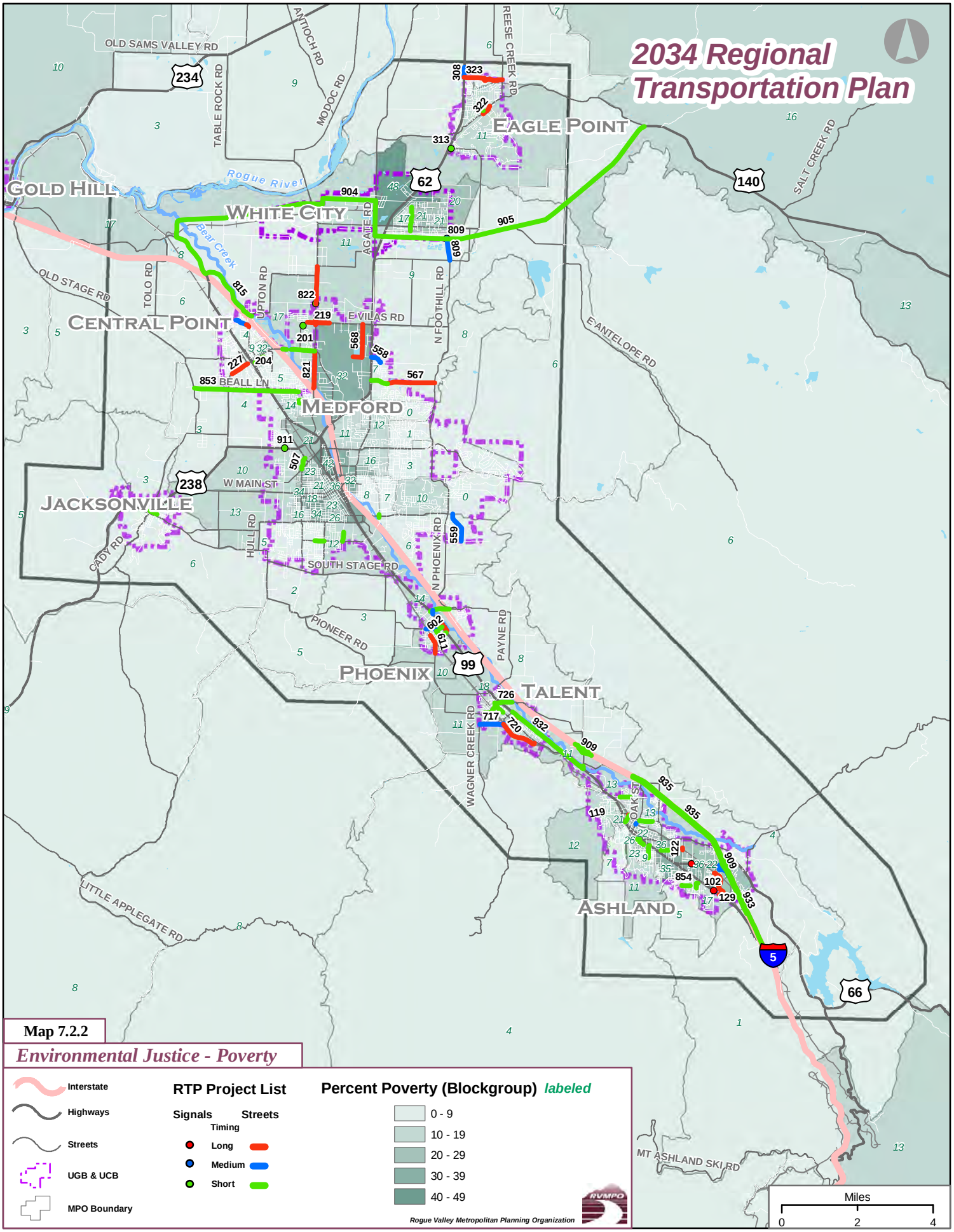
Reptiles and Amphibians: Northern Pacific pond turtle; coastal tailed frog; common king snake; California mountain king snake; Del Norte salamander; Siskiyou Mountains salamander; Northern red-legged frog; foothill yellow-legged frog; Cascades frog.

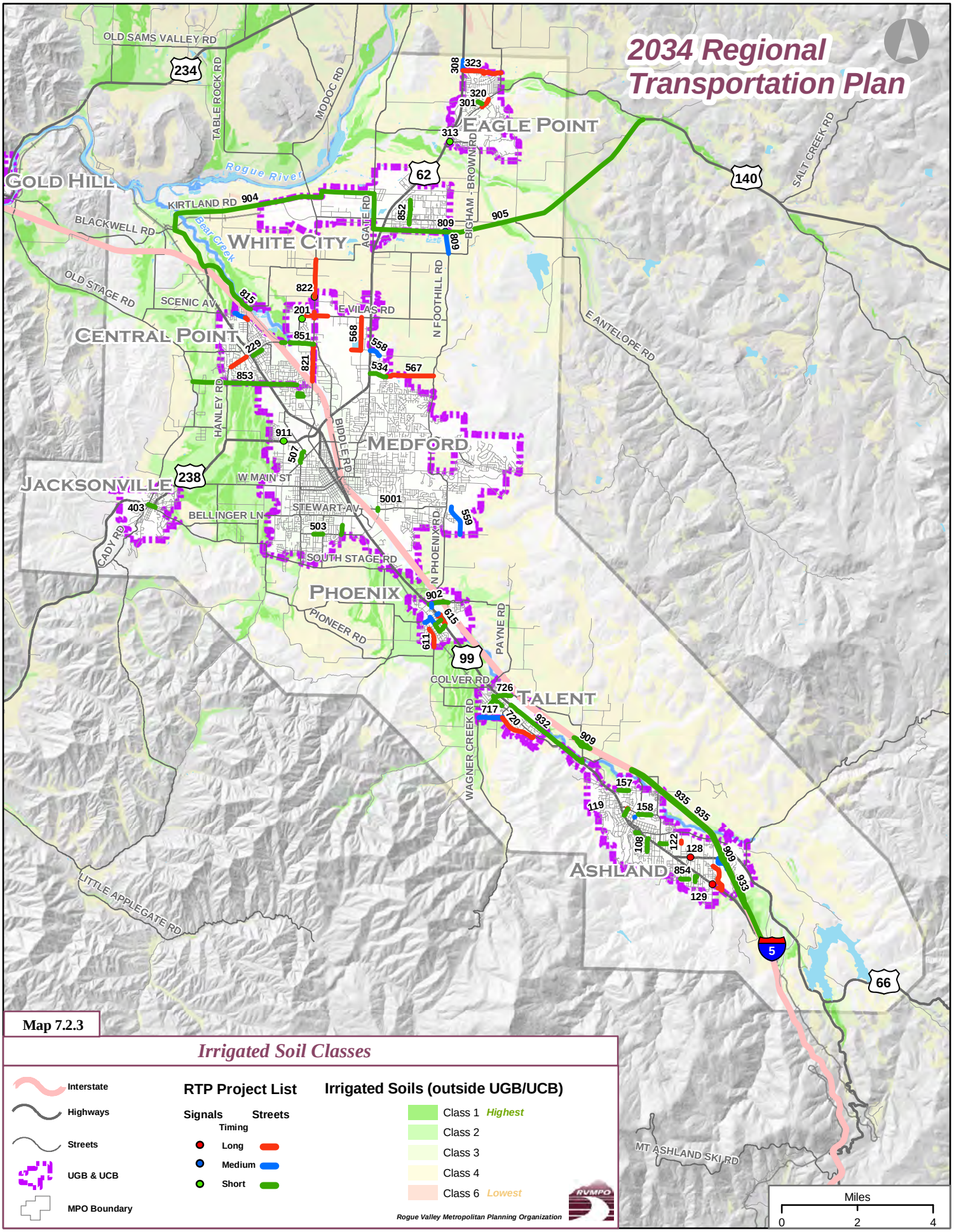
Fish: Jenny Creek sucker; Pacific lamprey; coastal cutthroat trout.

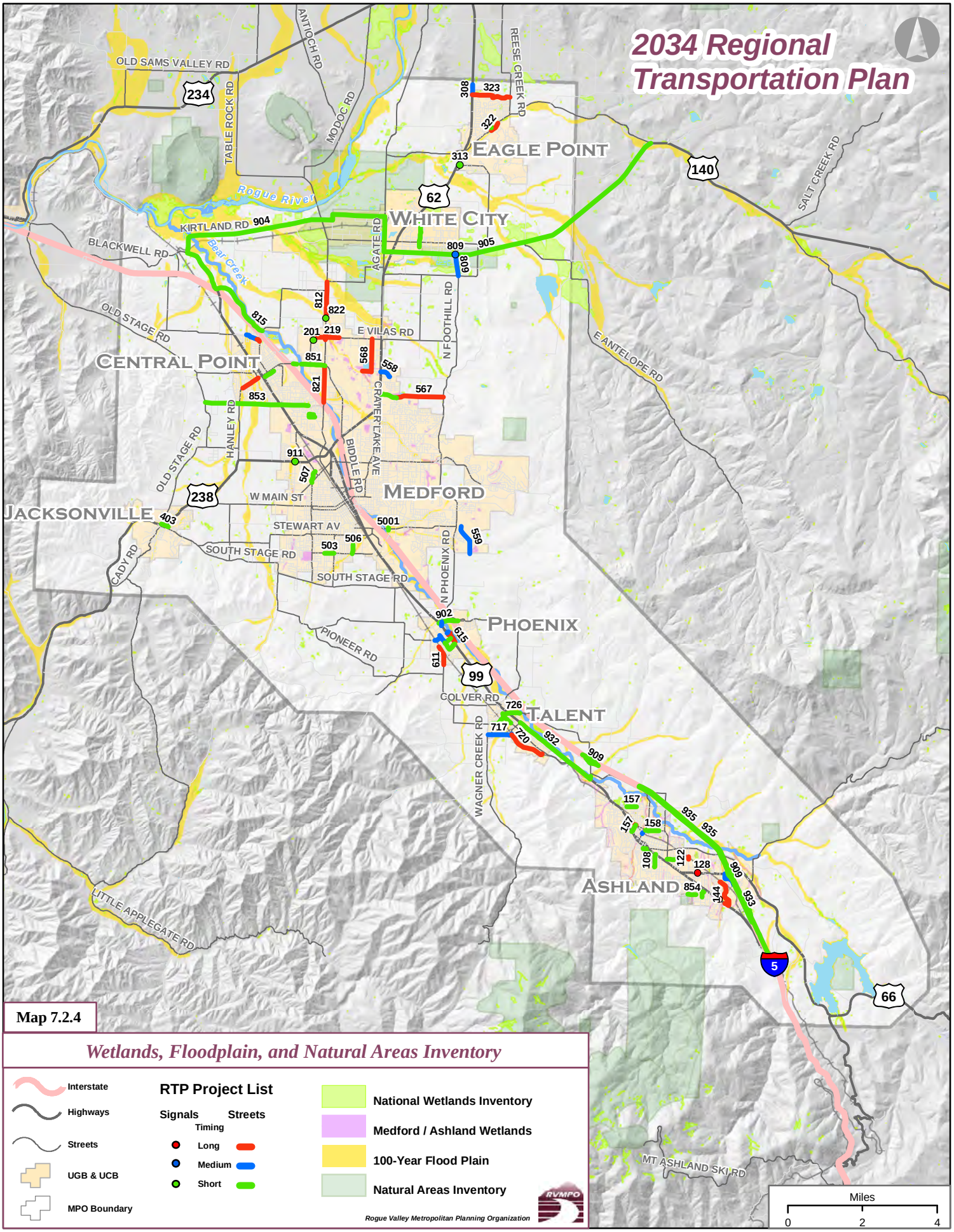
Insects: Denning's agapetus caddisfly; Franklin's bumblebee; Siskiyou chloealtis grasshopper; Green Springs Mountain farulan caddisfly; Sagehen Creek goeracean caddisfly; Schuh's homoplectran caddisfly; Siskiyou carabid beetle.

Plants: Rogue canyon rock cress; Crater Lake rock-cress; Greene's mariposa lily; broad-fruit mariposa lily; Umpqua mariposa-lily; Howell's camassia; Baker's cypress; clustered lady's-slipper; Siskiyou willow-herb; wayside aster; Henderson's horkelia; Bellinger's meadowfoam; dwarf woolly meadowfoam; Mt. Ashland lupine.


2034 Regional Transportation Plan
EAGLE POINT
WHITE CITY
CENTRAL POINT
MEDFORD
JACKSONVILLE
PHOENIX
TALENT
ASHLAND
OLD SAMS VALLEY RD
TABLE ROCK RD
ANTIOCH RD
MODOC RD
REESE CREEK RD
BIGHAM - BROWN RD
SALT CREEK RD
KIRTLAND RD
BLACKWELL RD
Bear Creek
AGATE RD
GIBBON RD
OLD STAGE RD
E VILAS RD
N FOOTHILL RD
E ANTELOPE RD
CRATER LAKE AVE
HANLEY RD
BIDDLE RD
W MAIN ST
STEWART AV
SOUTH STAGE RD
CADY RD
N PHOENIX RD
PIONEER RD
COLVER RD
WAGNER CREEK RD
LITTLE APPLEGATE RD
MT ASHLAND SKI RD
Rogue River
234
62
140
238
99
5
66
Map 7.2.1
Environmental Justice - Minorities
Interstate
Highways
Streets
UGB & UCB
MPO Boundary
RTP Project List
Signals
Streets
Timing
Long
Medium
Short
Percent All Minorities (Blocks)
0 - 20%
21 - 40%
41 - 60%
61 - 80%
81 - 100%
Rogue Valley Metropolitan Planning Organization
RVMPO
Miles
0
2
4


2034 Regional Transportation Plan
Map 7.2.2
Environmental Justice - Poverty
Interstate
Highways
Streets
UGB & UCB
MPO Boundary
RTP Project List
Signals
Streets
Timing
Long
Medium
Short
Percent Poverty (Blockgroup) labeled
0 - 9
10 - 19
20 - 29
30 - 39
40 - 49
Rogue Valley Metropolitan Planning Organization
RVMPO
Miles
0
2
4
EAGLE POINT
GOLD HILL
WHITE CITY
CENTRAL POINT
MEDFORD
JACKSONVILLE
PHOENIX
TALENT
ASHLAND
Rogue River
Bear Creek
OLD SAMS VALLEY RD
TABLE ROCK RD
ANTIOCH RD
MODOC RD
REESE CREEK RD
SALT CREEK RD
AGATE RD
OLD STAGE RD
TOLO RD
UPTON RD
E VILAS RD
N FOOTHILL RD
E ANTELOPE RD
W MAIN ST
HULL RD
CADY RD
SOUTH STAGE RD
N PHOENIX RD
PIONEER RD
PAYNE RD
WAGNER CREEK RD
OAK ST
BEALL LN
LITTLE APPLEGATE RD
MT ASHLAND SKI RD
234
62
140
238
99
5
66


2034 Regional Transportation Plan
OLD SAMS VALLEY RD
234
TABLE ROCK RD
MODOC RD
EAGLE POINT
GOLD HILL
Rogue River
62
140
SALT CREEK RD
KIRTLAND RD
904
BLACKWELL RD
Bear Creek
WHITE CITY
AGATE RD
852
809
905
BIGHAM - BROWN RD
608
OLD STAGE RD
SCENIC AV
822
815
201
E VILAS RD
N FOOTHILL RD
E ANTELOPE RD
CENTRAL POINT
851
568
558
534
567
229
821
853
HANLEY RD
911
507
MEDFORD
BIDDLER RD
238
JACKSONVILLE
W MAIN ST
403
BELLINGER LN
STEWART AV
5001
569
503
CADY RD
SOUTH STAGE RD
N PHOENIX RD
PHOENIX
902
615
611
PIONEER RD
PAYNE RD
99
COLVER RD
726
TALENT
717
720
932
909
WAGNER CREEK RD
157
119
158
935
935
108
122
128
909
854
933
129
ASHLAND
LITTLE APPLEGATE RD
5
66
MT ASHLAND SKI RD
Map 7.2.3
Irrigated Soil Classes
Interstate
Highways
Streets
UGB & UCB
MPO Boundary
RTP Project List
Signals
Streets
Timing
Long
Medium
Short
Irrigated Soils (outside UGB/UCB)
Class 1 Highest
Class 2
Class 3
Class 4
Class 6 Lowest
Rogue Valley Metropolitan Planning Organization
RVMPO
Miles
0
2
4



Map 7.2.4

Wetlands, Floodplain, and Natural Areas Inventory

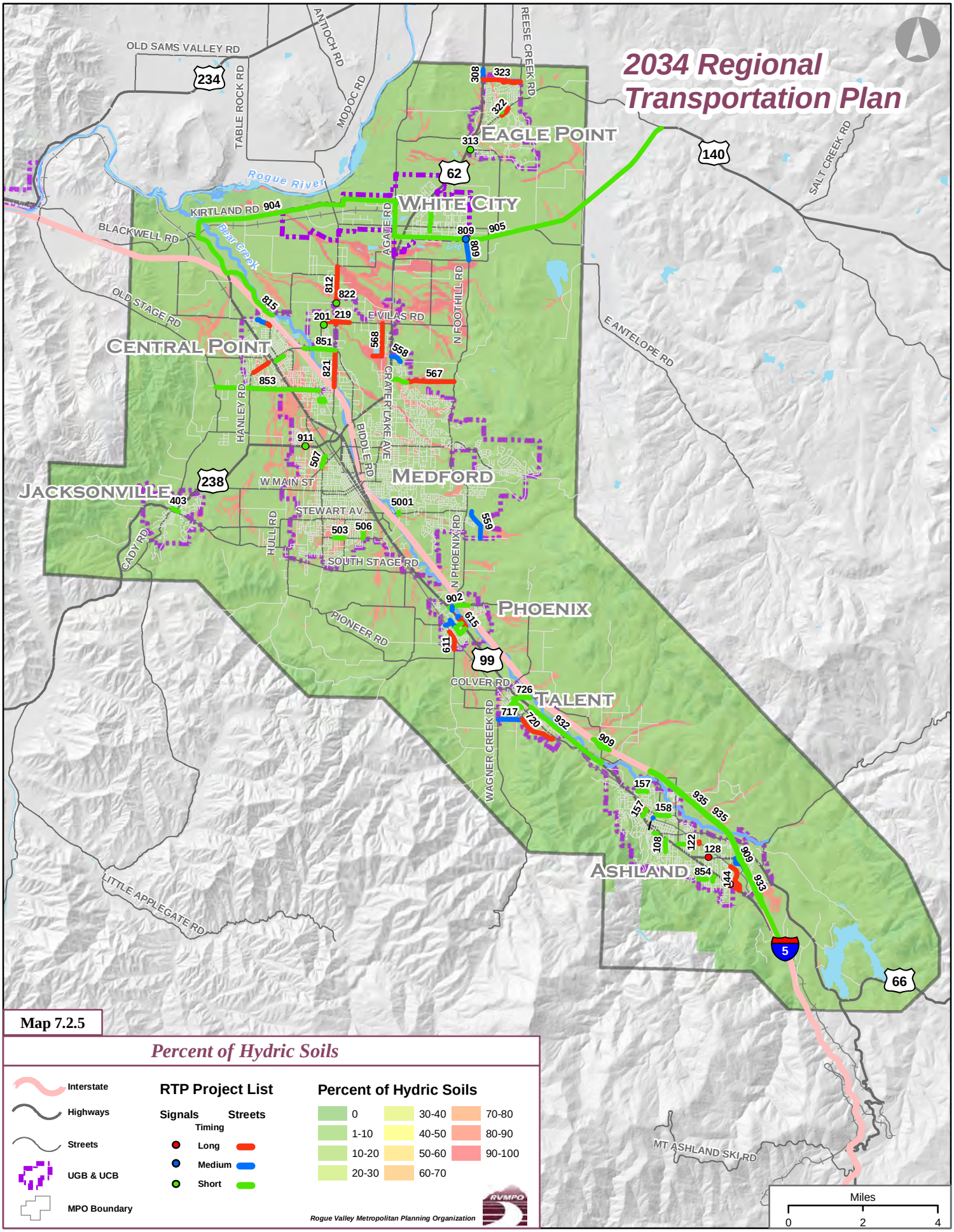
Interstate
Highways
Streets
UGB & UCB
MPO Boundary

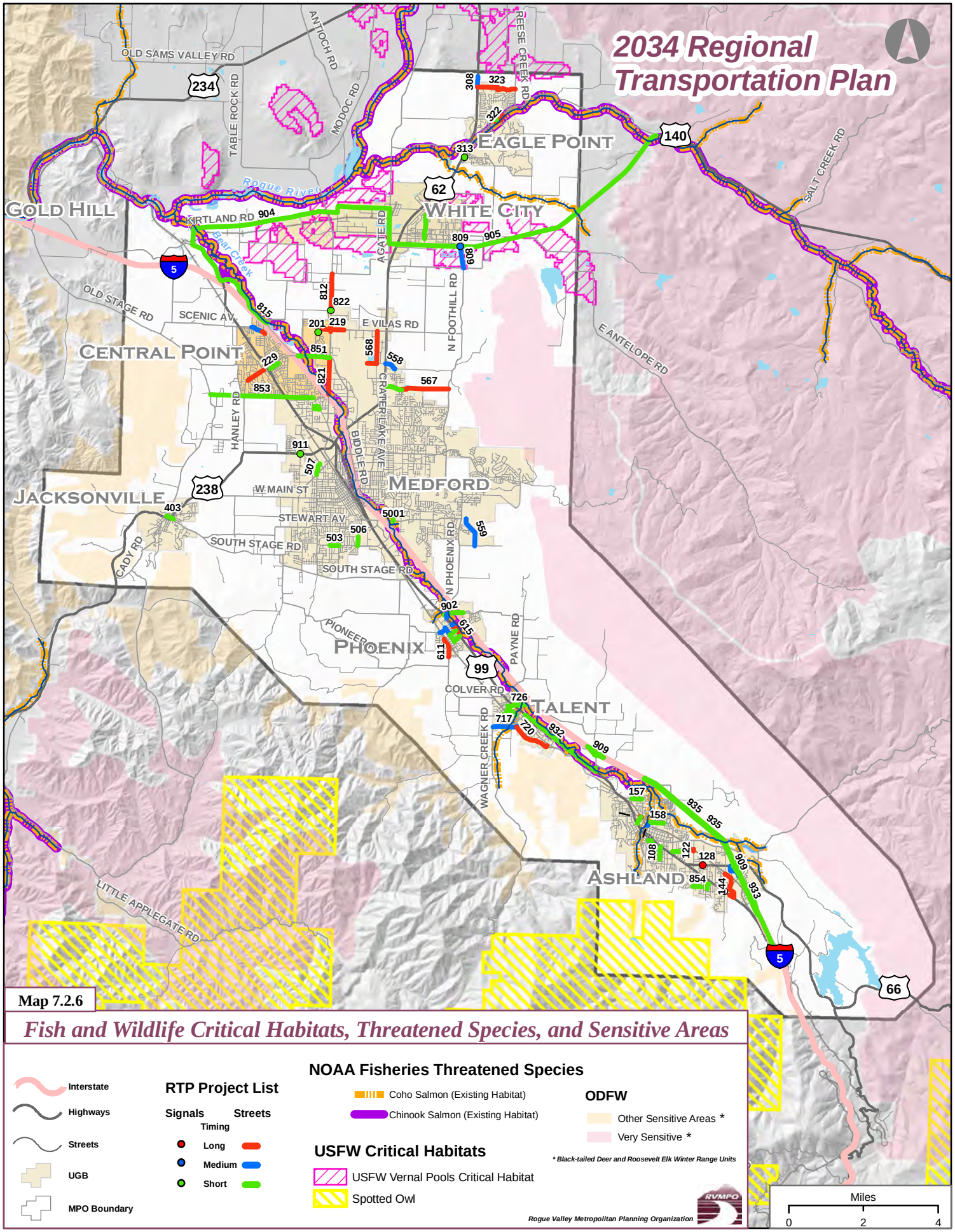
RTP Project List

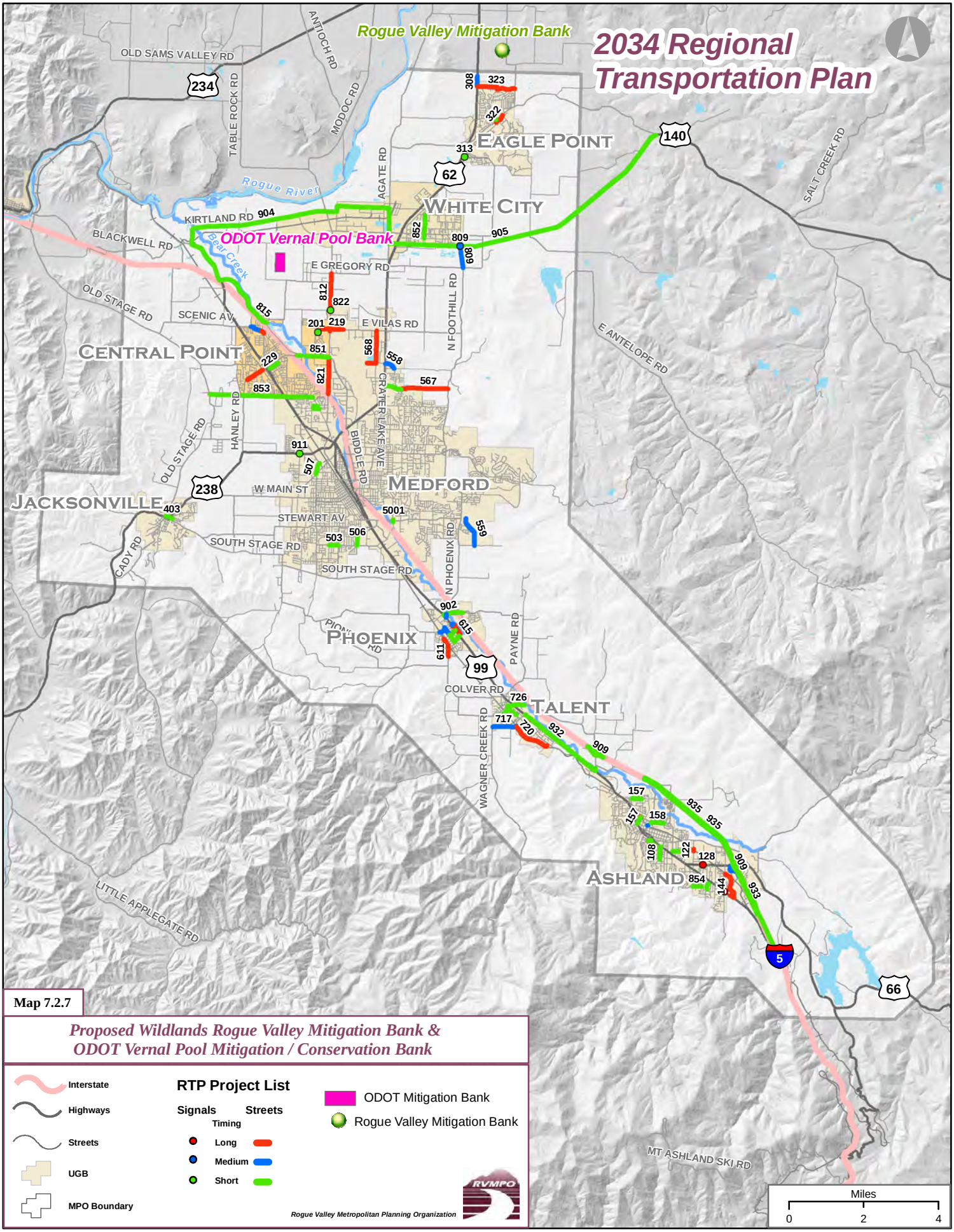
Signals Streets
Timing
Long
Medium
Short

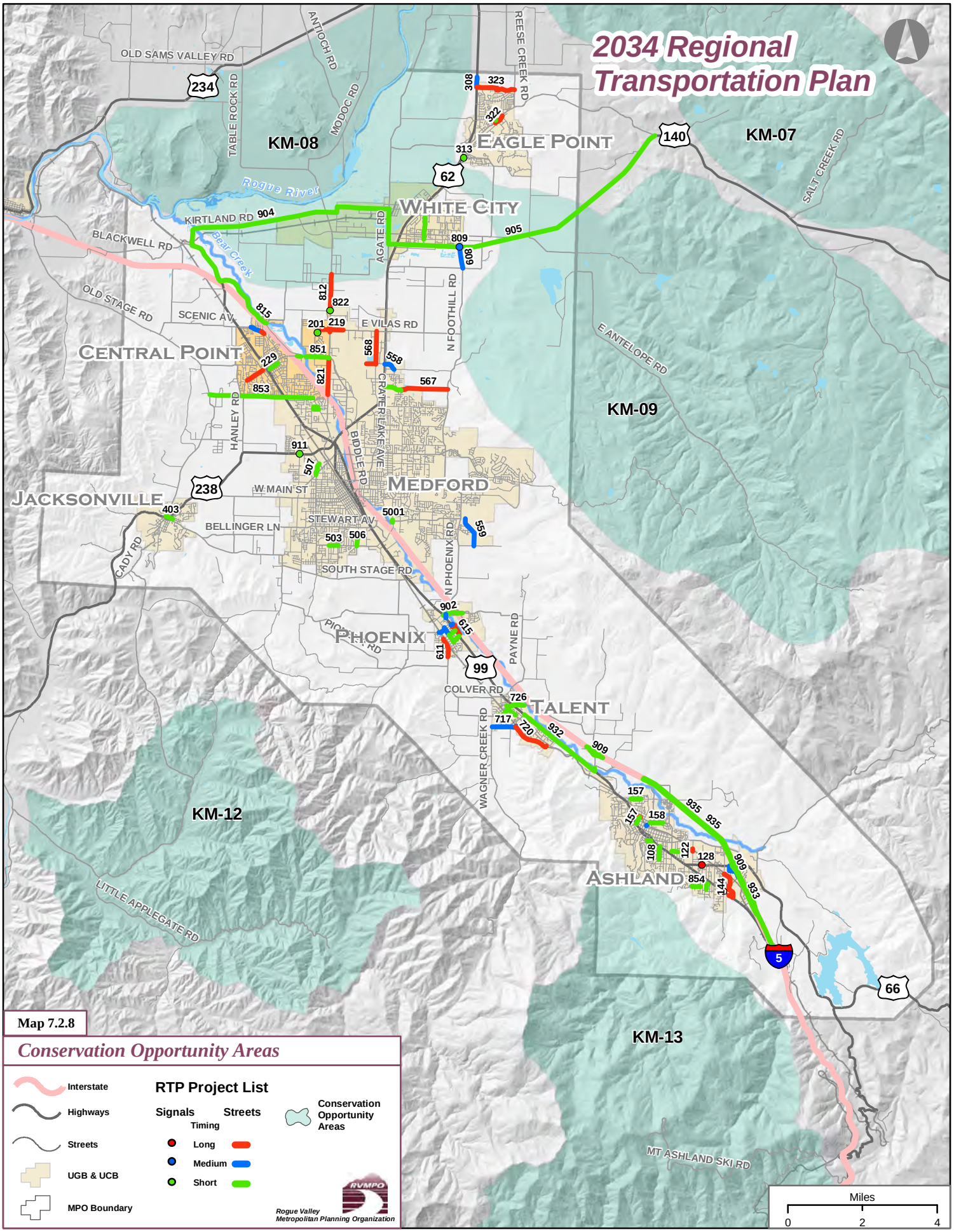
National Wetlands Inventory
Medford / Ashland Wetlands
100-Year Flood Plain
Natural Areas Inventory

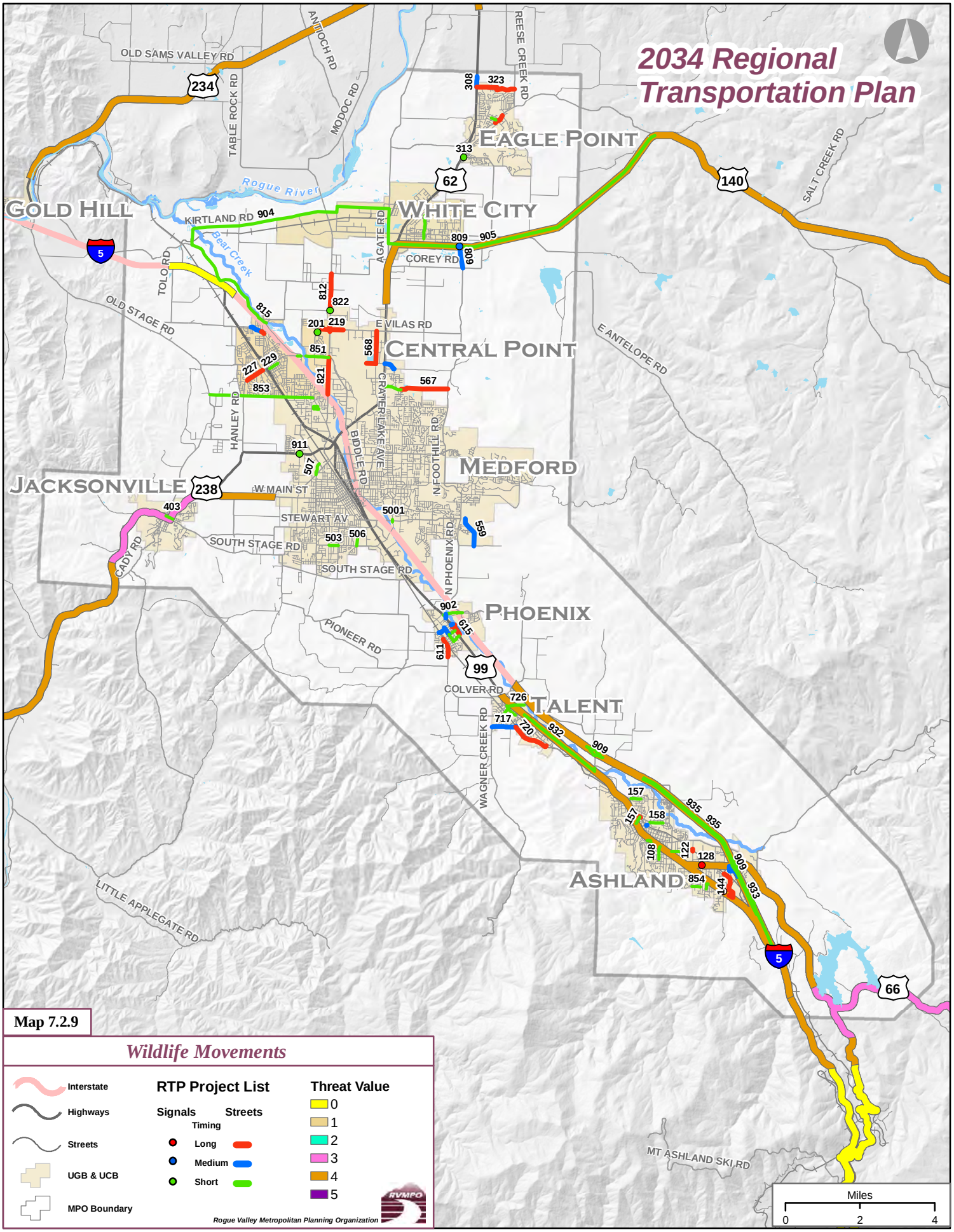
Rogue Valley Metropolitan Planning Organization

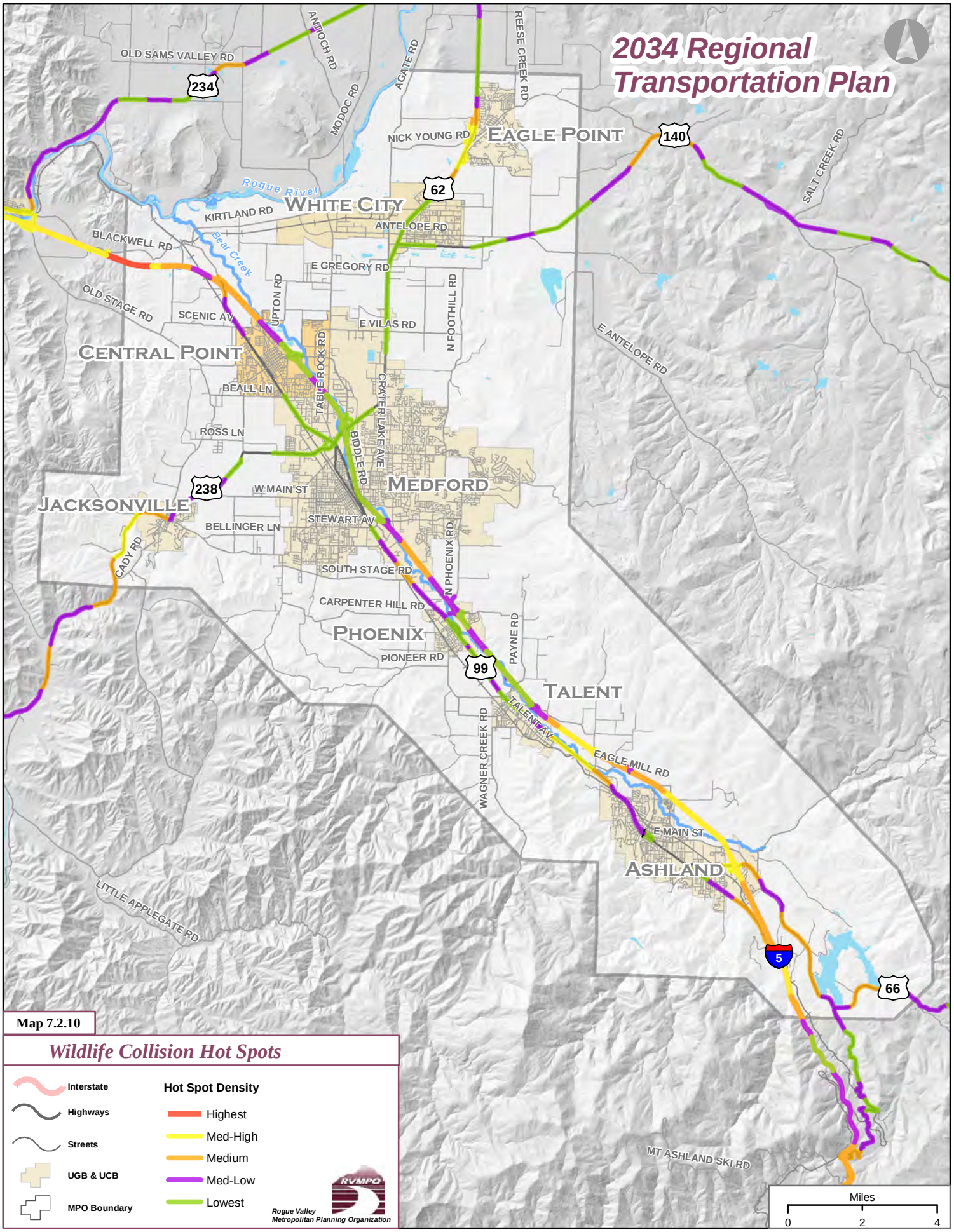

2034 Regional Transportation Plan
EAGLE POINT
WHITE CITY
CENTRAL POINT
MEDFORD
JACKSONVILLE
PHOENIX
TALENT
ASHLAND
OLD SAMS VALLEY RD
TABLE ROCK RD
ANTIOCH RD
MODOC RD
REESE CREEK RD
SALT CREEK RD
Rogue River
KIRTLAND RD
BLACKWELL RD
Bear Creek
AGATE RD
N FOOTHILL RD
OLD STAGE RD
E VILAS RD
E ANTELOPE RD
CRATER LAKE AVE
HANLEY RD
BIDDLE RD
W MAIN ST
STEWART AV
HULL RD
CADY RD
SOUTH STAGE RD
N PHOENIX RD
PIONEER RD
COLVER RD
WAGNER CREEK RD
LITTLE APPLEGATE RD
MT ASHLAND SKI RD
234
62
140
238
99
5
66
Map 7.2.5
Percent of Hydric Soils
Interstate
Highways
Streets
UGB & UCB
MPO Boundary
RTP Project List
Signals
Streets
Timing
Long
Medium
Short
Percent of Hydric Soils
0
1-10
10-20
20-30
30-40
40-50
50-60
60-70
70-80
80-90
90-100
Rogue Valley Metropolitan Planning Organization
RVMPO
Miles
0
2
4

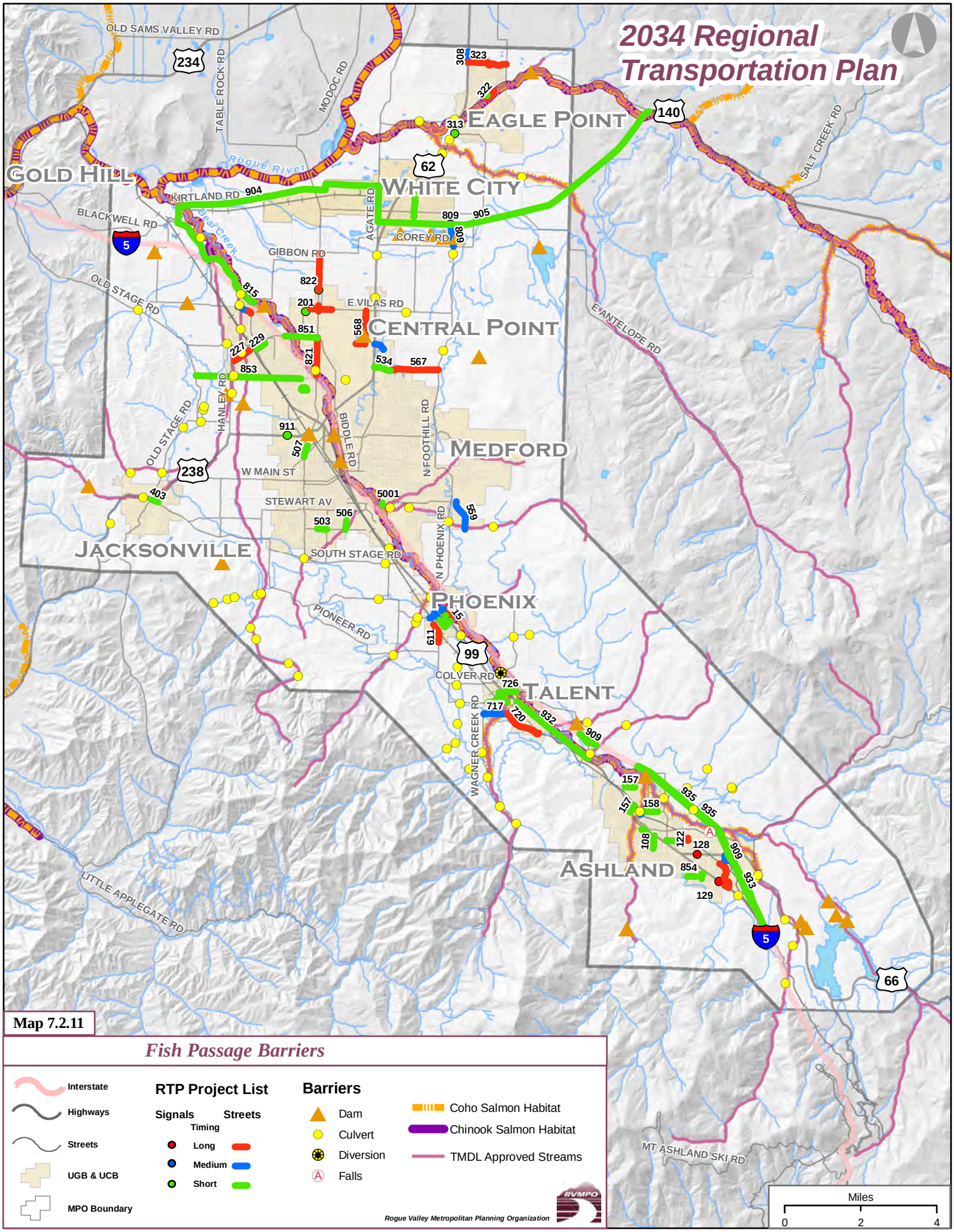

2034 Regional Transportation Plan
OLD SAMS VALLEY RD
ANTIOCH RD
REESE CREEK RD
TABLE ROCK RD
MODOC RD
234
EAGLE POINT
140
SALT CREEK RD
Rogue River
62
GOLD HILL
WHITE CITY
KIRTLAND RD
904
Bear Creek
AGATE RD
809
905
808
5
OLD STAGE RD
SCENIC AV
812
822
815
201
219
E VILAS RD
N FOOTHILL RD
E ANTELOPE RD
CENTRAL POINT
851
568
558
229
821
567
853
CRATER LAKE AVE
HANLEY RD
911
507
BIDDLE RD
MEDFORD
JACKSONVILLE
238
W MAIN ST
403
5001
STEWART AV
506
559
503
SOUTH STAGE RD
CADY RD
N PHOENIX RD
902
615
PIONEER
PHOENIX
611
PAYNE RD
99
COLVER RD
726
TALENT
717
720
932
909
WAGNER CREEK RD
157
158
935
935
108
122
128
909
ASHLAND
854
144
933
LITTLE APPLEGATE RD
5
66
Map 7.2.6
Fish and Wildlife Critical Habitats, Threatened Species, and Sensitive Areas
Interstate
Highways
Streets
UGB
MPO Boundary
RTP Project List
Signals
Streets
Timing
Long
Medium
Short
NOAA Fisheries Threatened Species
Coho Salmon (Existing Habitat)
Chinook Salmon (Existing Habitat)
USFW Critical Habitats
USFW Vernal Pools Critical Habitat
Spotted Owl
ODFW
Other Sensitive Areas *
Very Sensitive *
* Black-tailed Deer and Roosevelt Elk Winter Range Units
Rogue Valley Metropolitan Planning Organization
RVMPO
Miles
0
2
4

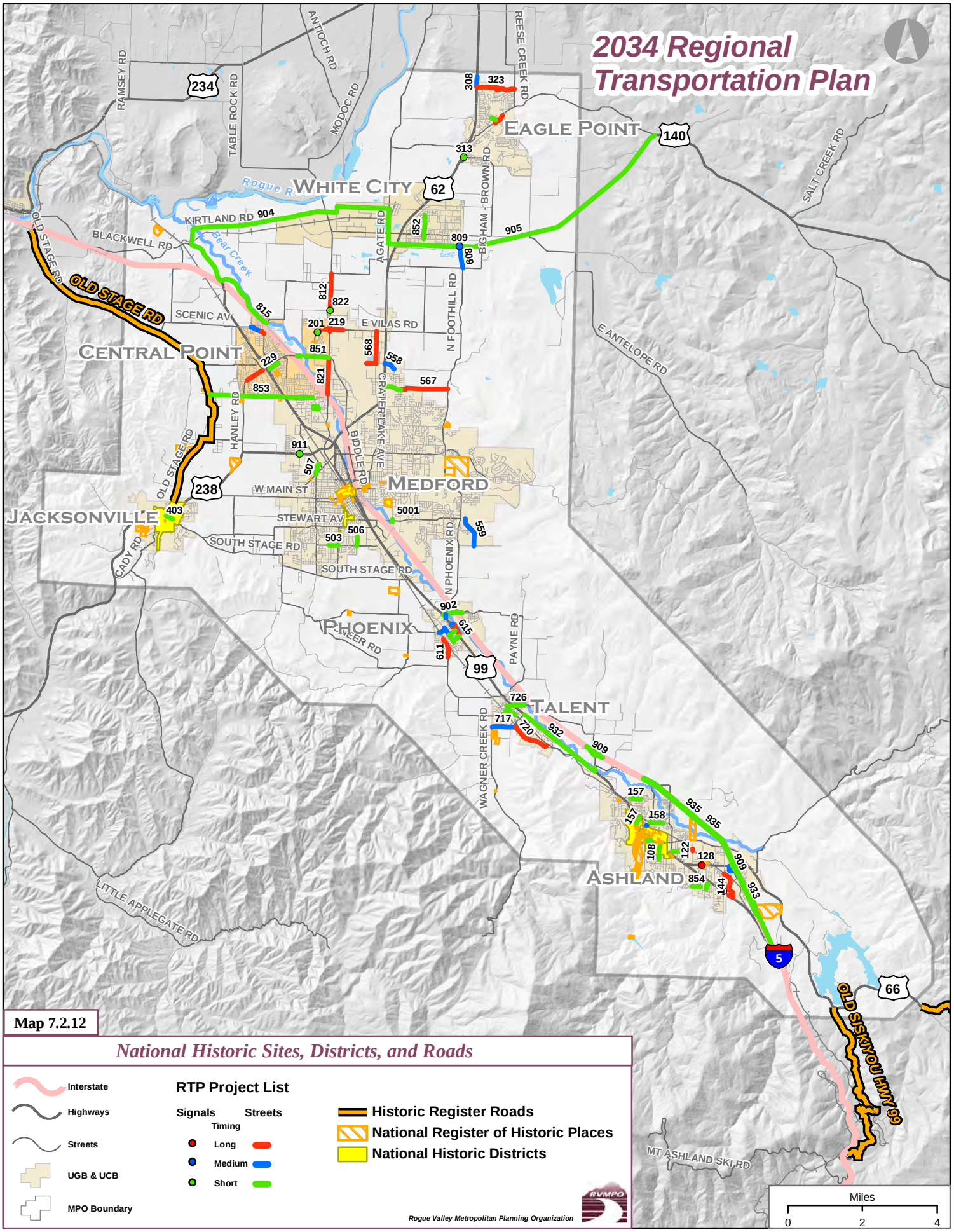

2034 Regional Transportation Plan
Rogue Valley Mitigation Bank
ODOT Vernal Pool Bank
EAGLE POINT
WHITE CITY
CENTRAL POINT
MEDFORD
JACKSONVILLE
PHOENIX
TALENT
ASHLAND
OLD SAMS VALLEY RD
ANTIOCH RD
TABLE ROCK RD
MODOC RD
AGATE RD
SALT CREEK RD
Rogue River
KIRTLAND RD
BLACKWELL RD
Bear Creek
E GREGORY RD
OLD STAGE RD
SCENIC AV
E VILAS RD
N FOOTHILL RD
E ANTELOPE RD
HANLEY RD
CRATER LAKE AVE
BIDDLE RD
W MAIN ST
STEWART AV
SOUTH STAGE RD
CADY RD
N PHOENIX RD
PAYNE RD
COLVER RD
WAGNER CREEK RD
LITTLE APPLEGATE RD
MT ASHLAND SKI RD
234
62
140
238
99
5
66
Miles
0
2
4
Map 7.2.7
Proposed Wildlands Rogue Valley Mitigation Bank & ODOT Vernal Pool Mitigation / Conservation Bank
Interstate
Highways
Streets
UGB
MPO Boundary
RTP Project List
Signals
Timing
Streets
Long
Medium
Short
ODOT Mitigation Bank
Rogue Valley Mitigation Bank
Rogue Valley Metropolitan Planning Organization
RVMPO

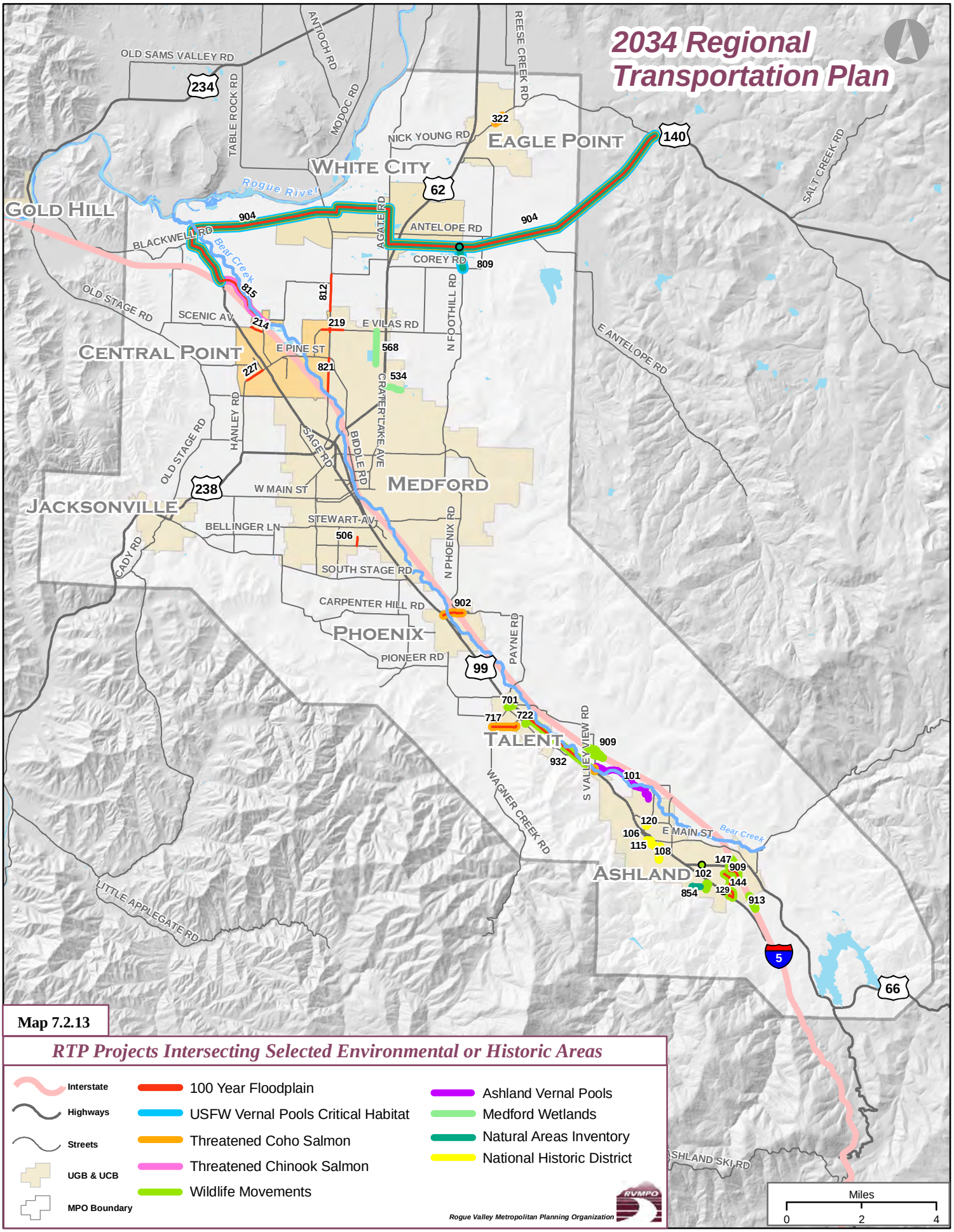

2034 Regional Transportation Plan
OLD SAMS VALLEY RD
ANTIOCH RD
REESE CREEK RD
TABLE ROCK RD
MODOC RD
234
KM-08
EAGLE POINT
140
KM-07
62
Rogue River
WHITE CITY
SALT CREEK RD
KIRTLAND RD
BLACKWELL RD
Bear Creek
AGATE RD
OLD STAGE RD
SCENIC AV
E VILAS RD
N FOOTHILL RD
E ANTELOPE RD
CENTRAL POINT
CRATER LAKE AVE
KM-09
HANLEY RD
BIDDLE RD
MEDFORD
JACKSONVILLE
238
W MAIN ST
STEWART AV
BELLINGER LN
CADY RD
N PHOENIX RD
SOUTH STAGE RD
PHOENIX
PAYNE RD
99
COLVER RD
TALENT
WAGNER CREEK RD
KM-12
LITTLE APPLEGATE RD
ASHLAND
5
66
MT ASHLAND SKI RD
KM-13
Miles
0
2
4
Map 7.2.8
Conservation Opportunity Areas
Interstate
Highways
Streets
UGB & UCB
MPO Boundary
RTP Project List
Signals
Timing
Long
Medium
Short
Streets
Conservation Opportunity Areas
Rogue Valley Metropolitan Planning Organization
RVMPO


2034 Regional Transportation Plan
GOLD HILL
EAGLE POINT
WHITE CITY
CENTRAL POINT
MEDFORD
JACKSONVILLE
PHOENIX
TALENT
ASHLAND
Rogue River
Bear Creek
OLD SAMS VALLEY RD
ANTIOCH RD
TABLE ROCK RD
MODOC RD
REESE CREEK RD
SALT CREEK RD
KIRTLAND RD
TOLO RD
OLD STAGE RD
AGATE RD
COREY RD
E VILAS RD
E ANTELOPE RD
HANLEY RD
CRATER LAKE AVE
BIDDLE RD
N FOOTHILL RD
N PHOENIX RD
W MAIN ST
STEWART AV
SOUTH STAGE RD
CADY RD
PIONEER RD
COLVER RD
WAGNER CREEK RD
LITTLE APPLEGATE RD
MT ASHLAND SKI RD
234
62
140
5
238
99
66
Map 7.2.9
Wildlife Movements
Interstate
Highways
Streets
UGB & UCB
MPO Boundary
RTP Project List
Signals
Streets
Timing
Long
Medium
Short
Threat Value
0
1
2
3
4
5
Rogue Valley Metropolitan Planning Organization
RVMPO
Miles
0
2
4


2034 Regional Transportation Plan
OLD SAMS VALLEY RD
234
ANTIOCH RD
MODOC RD
AGATE RD
REESE CREEK RD
NICK YOUNG RD
EAGLE POINT
140
SALT CREEK RD
62
Rogue River
WHITE CITY
KIRTLAND RD
ANTELOPE RD
BLACKWELL RD
Bear Creek
E GREGORY RD
OLD STAGE RD
SCENIC AV
UPTON RD
E VILAS RD
N FOOTHILL RD
E ANTELOPE RD
CENTRAL POINT
BEALL LN
TABLE ROCK RD
CRATER LAKE AVE
ROSS LN
BIDDLE RD
238
W MAIN ST
MEDFORD
JACKSONVILLE
STEWART AV
BELLINGER LN
CADY RD
N PHOENIX RD
SOUTH STAGE RD
CARPENTER HILL RD
PHOENIX
PAYNE RD
PIONEER RD
99
TALENT
TALENT AV
WAGNER CREEK RD
EAGLE MILL RD
E MAIN ST
ASHLAND
LITTLE APPLEGATE RD
5
66
MT ASHLAND SKI RD
Map 7.2.10
Wildlife Collision Hot Spots
Interstate
Highways
Streets
UGB & UCB
MPO Boundary
Hot Spot Density
Highest
Med-High
Medium
Med-Low
Lowest
RVMPO
Rogue Valley Metropolitan Planning Organization
Miles
0
2
4


2034 Regional Transportation Plan
EAGLE POINT
WHITE CITY
GOLD HILL
CENTRAL POINT
MEDFORD
JACKSONVILLE
PHOENIX
TALENT
ASHLAND
OLD SAMS VALLEY RD
TABLE ROCK RD
MODOC RD
Rogue River
KIRTLAND RD
BLACKWELL RD
Bear Creek
AGATE RD
COREY RD
GIBBON RD
OLD STAGE RD
E VILAS RD
E ANTELOPE RD
SALT CREEK RD
HANLEY RD
BIDDLE RD
N FOOTHILL RD
W MAIN ST
STEWART AV
SOUTH STAGE RD
N PHOENIX RD
PIONEER RD
COLVER RD
WAGNER CREEK RD
LITTLE APPLEGATE RD
MT ASHLAND SKI RD
234
62
140
5
238
99
66
Map 7.2.11
Fish Passage Barriers
Interstate
Highways
Streets
UGB & UCB
MPO Boundary
RTP Project List
Signals
Streets
Timing
Long
Medium
Short
Barriers
Dam
Culvert
Diversion
Falls
Coho Salmon Habitat
Chinook Salmon Habitat
TMDL Approved Streams
Rogue Valley Metropolitan Planning Organization
RVMPO
Miles
0
2
4


2034 Regional Transportation Plan
EAGLE POINT
WHITE CITY
CENTRAL POINT
MEDFORD
JACKSONVILLE
PHOENIX
TALENT
ASHLAND
OLD STAGE RD
OLD SISKIYOU HWY 99
RAMSEY RD
TABLE ROCK RD
ANTIOCH RD
MODOC RD
REESE CREEK RD
BIGHAM - BROWN RD
SALT CREEK RD
Rogue R.
KIRTLAND RD
BLACKWELL RD
Bear Creek
AGATE RD
SCENIC AV
E VILAS RD
N FOOTHILL RD
E ANTELOPE RD
CRATER LAKE AVE
BIDDLE RD
HANLEY RD
W MAIN ST
STEWART AV
SOUTH STAGE RD
CADY RD
N PHOENIX RD
PAYNE RD
WAGNER CREEK RD
LITTLE APPLEGATE RD
MT ASHLAND SKI RD
234
62
140
238
99
5
66
Map 7.2.12
National Historic Sites, Districts, and Roads
Interstate
Highways
Streets
UGB & UCB
MPO Boundary
RTP Project List
Signals
Streets
Timing
Long
Medium
Short
Historic Register Roads
National Register of Historic Places
National Historic Districts
Rogue Valley Metropolitan Planning Organization
RVMPO
Miles
0
2
4



Map 7.2.13

RTP Projects Intersecting Selected Environmental or Historic Areas

- Interstate
- Highways
- Streets
- UGB & UCB
- MPO Boundary
- 100 Year Floodplain
- USFW Vernal Pools Critical Habitat
- Threatened Coho Salmon
- Threatened Chinook Salmon
- Wildlife Movements
- Ashland Vernal Pools
- Medford Wetlands
- Natural Areas Inventory
- National Historic District

Rogue Valley Metropolitan Planning Organization

Part 7

Evaluation & System Performance

Chapter 7.3, Performance Measures

Introduction

Performance measures in this chapter are forecasts of future travel conditions—specifically traffic congestion. The forecasts are estimates produced by the RVMPO's 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.

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. The process of updating the model is described in Chapter 2.2, Future Conditions. 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 for a variety of analyses. Cities, developers and transportation project managers use the model to estimate such conditions 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 asked to provide answers to some basic questions about performance of the transportation system in future years, given the plan's forecasts for growth. Results are described in the following sections.

Future Congestion

Generally, travel demand model analysis shows that the region can expect congestion to increase. Table 7.3.1 shows conditions throughout the RVMPO at present and into the future.

Table 7.3.1: Future Conditions

Scenario Year	2009	2020	2034	2034 w/ 2006 Network(2)
Lane Miles	952	962	972	948
Lane Miles Congested (1)	8	23	49	54
Percent Lane Miles Congested	1%	2%	5%	6%
Mean Travel Time (min):	6.42	6.47	6.61	6.65
Vehicle Miles Traveled (3)	254,630	305,562	367,087	366753
Vehicle Hours Traveled	5,806	7,015	8,595	8625

(1) Congestion defined as volume to capacity ratio (V/C) of 0.9 or greater. To compare, 1.0 indicates a failing intersection where vehicles are delayed for more than a single signal cycle. The standard for mobility on I-5 and many major roads is less than the 0.9 standard used here).
(2) This is a scenario indicating possible conditions with the growth anticipated by 2034, but none of the transportation projects in the RTP -- Basically this is a no-change, or do-nothing, scenario.

(3) The total number of miles driven by all motorists.

Planned roadway capacity projects alone are not expected to keep pace with the region's anticipated growth. Through 2034, this plan anticipates an expansion of the regional transportation system of 20 lane miles, or roughly a 2 percent increase. Meanwhile, population is expected to increase by nearly 44 percent (from about 172,665 in 2009 to 248,325 in 2034), and

employment expected to increase by just over 30 percent (from about 115,430 jobs in 2009 to 150,665 jobs in 2034).

As Table 7.3.1 shows, with implementation of the 2034 RTP the amount of congested roadways will increase from about 8 lane miles today to 49 lane miles in 2034. If no improvements were made to roads (none of the RTP projects implemented, congested lane miles would increase to 54 by 2034, as shown in the column on the far right in Table 7.3.1.

Table 7.3.2: RTP Projections for Population, Employment, System Capacity Increases

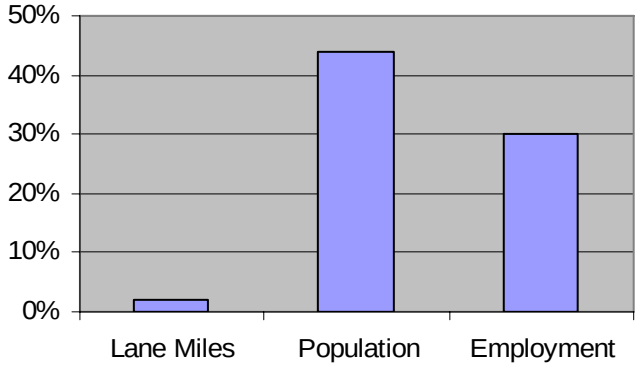


Chart compares projected growth in the region to planned expansion (in lane miles) of the regional transportation system.

Traffic ebbs and flows given the time of day. Locally, most roads at most times of the day are – and will continue to be – fairly clear and free-flowing. To look at congestion, the times of highest, or peak, travel are isolated. Traffic counts are taken continuously over multiple days, show that the peak hour in most cases is late afternoon to very early evening – the evening commute hours. Because of this travel pattern, many transportation demand management programs seek to offer travel alternatives so that fewer motorists are driving at the peak hours.

Performance Comparison

In considering how good or bad delay conditions are here, it can be helpful to look at conditions forecasted for other areas. In this case, the RVMPO is comparing model estimates to similar estimates for RTPs in two other Oregon MPOs — Bend MPO (BMPO) and Corvallis Area MPO (CAMPO). Both of these MPOs are smaller than RVMPO in terms of population as well as geographic area. Table 7.3.3 show the comparison, with future year forecasts in all cases assuming full build out of funded RTP projects.

Table 7.3.3: Congestion Comparison, Rogue Valley, Bend, Corvallis areas

Location	Current Population	2030 Population(1)	Total Lane Miles - Current	Total Lane Miles - 2030(1)	Total Congested Lane Miles- Current (2)	Total Congested Lane Miles- 2030(1)	Percent Congested 2030 (1)
RVMPO	172,593	248,324	952	972	8	49	5%
BMPO	75,290	119,009	578	759	1	43	6%
CAMPO	64,159	86,638	411	421	24	75	18%

(1) For RVMPO 2034 population estimate is used for consistency with RTP
(2) Congestion in all instances is same as above, v/c ratio of 0.9 and greater

Congested Roads

Travel conditions on several key roads were examined with the model. Results on Table 7.3.4 and .5 show estimated existing and future conditions (existing conditions are from 2006 to reflect the travel demand model's base year). 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 are the number of lane miles on a particular road that are at the traffic volume ranges indicated in the first column.

Table 7.3.4: Model-estimated traffic volumes, 2006

Demand/Capacity Ratios	Hwy 62	I-5	Foothill Rd	N Phoenix Rd	Hwy 99 South	Hwy 99 North	Table Rock Rd	Hwy 238
0 – 0.59	20	86	12	6	46	5	22	26
0.59 – 0.69	8	11	0	2	2	2	1	0
0.69 – 0.79	12	1	0	2	2	0	0	0
0.79 – 0.89	8	1	0	0	1	0	0	0
0.89 – 0.99	2	1	0	0	0	0	0	0
0.99 – 9.99	1	1	0	0	0	0	0	0
Total Lane Miles	51	101	12	10	51	7	23	26

Table 7.3.5: Model-estimated traffic volumes, 2034

Demand/Capacity Ratios	Hwy 62	I-5	Foothill Rd	N Phoenix Rd	Hwy 99 South	Hwy 99 North	Table Rock Rd	Hwy 238
0 – 0.59	7	40	0	4	40	1	25	24
0.59 – 0.69	7	25	2	1	4	3	2	1
0.69 – 0.79	8	8	1	0	2	1	1	1
0.79 – 0.89	12	25	4	1	0	0	0	0
0.89 – 0.99	9	1	4	0	4	0	0	0
0.99 – 9.99	9	2	1	2	1	2	1	0
Total Lane Miles	52	101	12	8	51	7	29	26

Congestion is expressed as a ratio of vehicles to roadway capacity for accommodating vehicles, the volume to capacity ratio, or V/C. On the two tables in this section, roadway congestion is increasing as you read down the table. A V/C of 0.0 to 0.8 or so is generally free flowing. Delays begin occurring around 0.9. A V/C of 1 indicates too many vehicles attempting to travel on the segment of road, so vehicles are delayed. An example of a volume-capacity ratio of 1 is an intersection where motorists wait through more than one traffic signal cycle.

Locations for estimated future congestion are identified by year on the maps on the following pages.

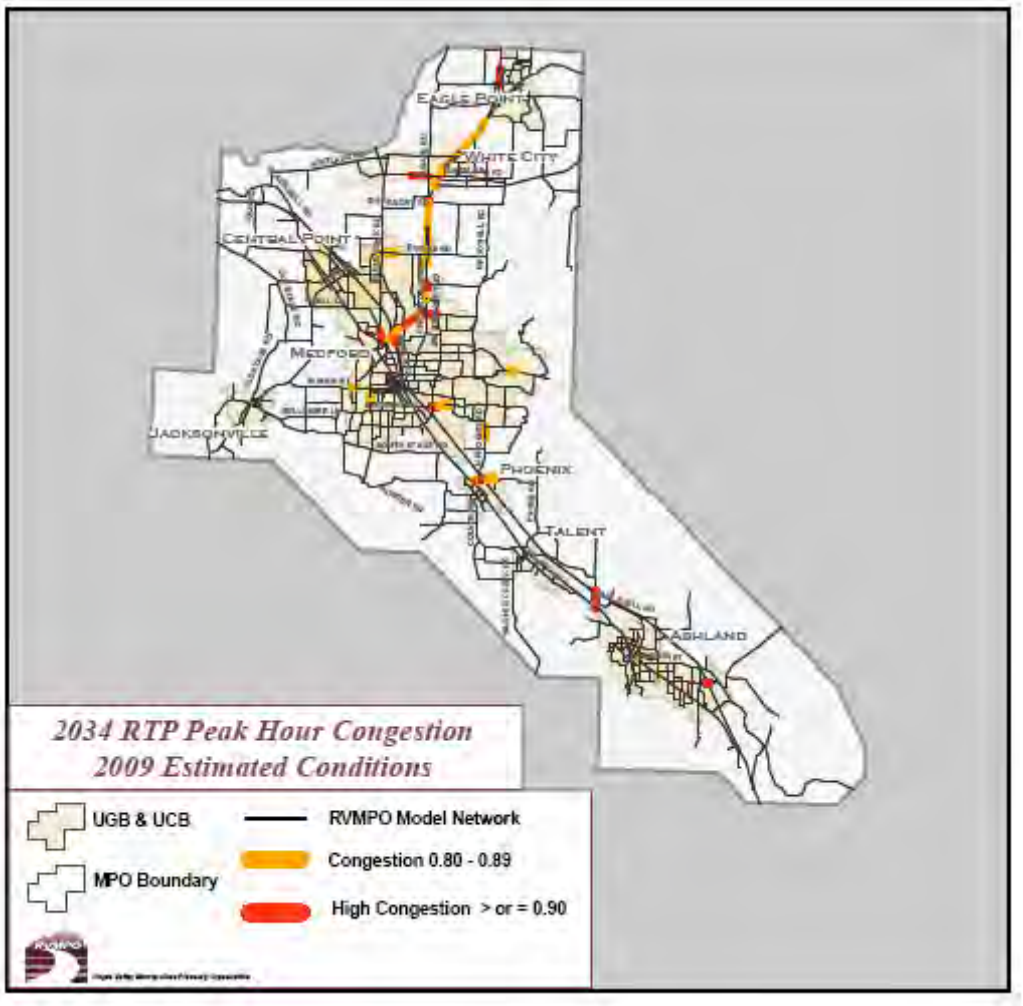
Congestions Maps

Maps on these pages indicate locations where the RVMPO travel demand model estimates potential for congestion in future years.

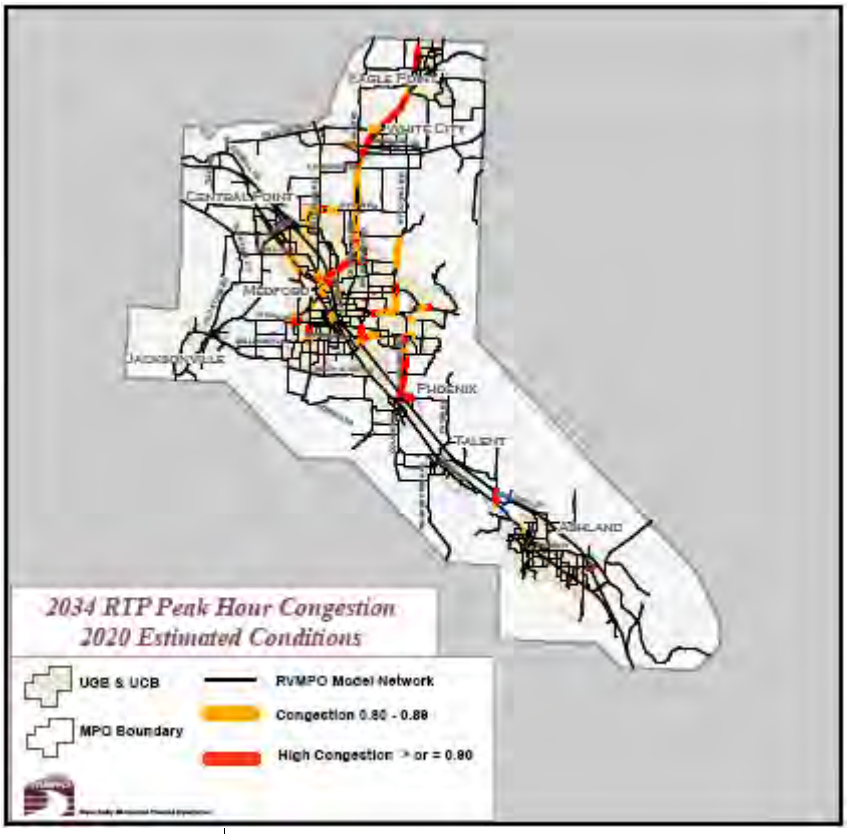
Years shown are current (2009) estimates; 2020 and 2034 conditions are show on the following page.

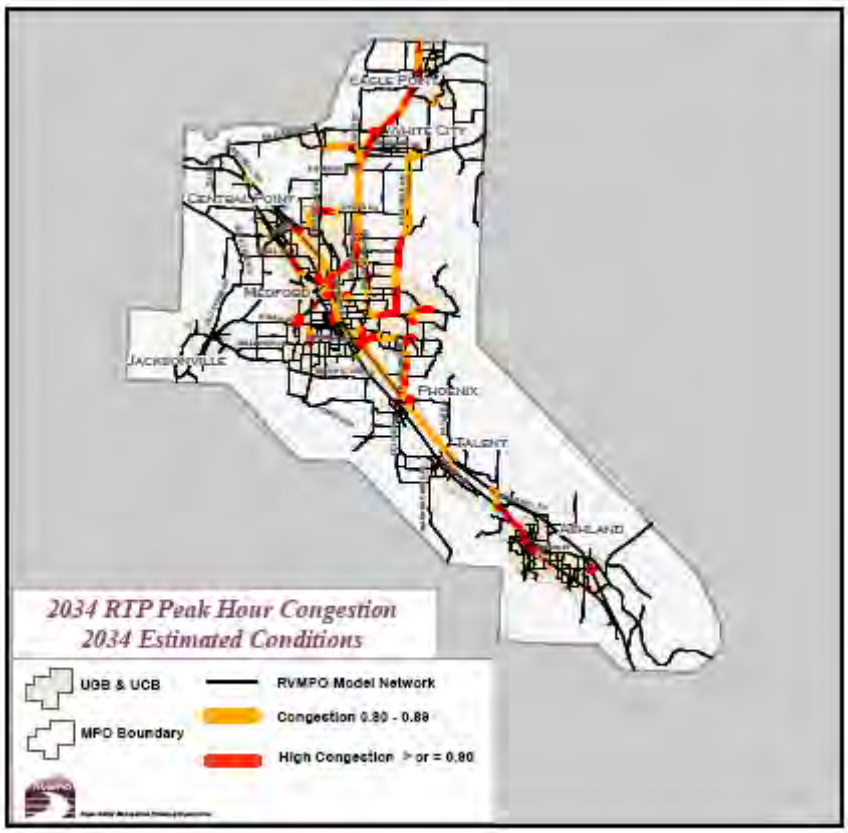
By viewing these maps in succession, it's possible to see how, where and when congested conditions are likely to expand.

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 indentified for future transportation projects. Beyond that, there are projects being planned, but are not included in this analysis because RTP projects must be financially constrained, as described in Part 6: Financial Plan.



Projects that would help address congestion shown here, but do not have identified funds are presented in Chapter 7.4, Future Challenges. In some instances, projects are being planned to address anticipated congestion indicated on these maps. For instance, ODOT has been developing an Environmental Impact Statement for alternatives to address safety and congestion on the Hwy. 62 corridor from Medford to White City. A project could be selected in 2010. Presently, construction funds are not identified in this plan, however $76 million is planned for completing acquisition of right of way for a four-lane, controlled access expressway roughly parallel and west of the existing highway. Facility construction has been estimated to cost $400 million.





Also with the potential for reducing future congestion are services such as expanded transit, and actions such as changes in development patterns to put more dwellings closer to jobs and other activities so that people may choose to drive less.

Part 7

Evaluation & System Performance

Chapter 7.4, Future Challenges

Introduction

Just as every possible improvement to the transportation system isn't contained in the RTP, not all issues that are bound to occur between now and 2034 can be identified. This chapter highlights some issues and concerns that are beginning to take shape now on the horizon and presents them in terms of how they may impact future transportation planning.

The topics are:

Unfunded, but identified and needed projects

Projects of long-term regional potential

Potential new air quality requirements

Integration of the Regional Problem Solving project.

Unfunded Street System Projects

Federal planning requirements limit RTP projects to those for which full funding has been identified. Both the cost estimates and the anticipated funding must be reasonable and based on accepted guidelines. However, many more projects are planned by RVMPO member jurisdictions, as shown on Table 7.4-1 below.

Table 7.4-1: Tier 2, Not Funded Projects

PROJECT NUMBER	LOCATION	DESCRIPTION	COST
Ashland			
137	Normal Ave., from current terminus to E. Main St.	Extend street	$1,479,064
139	Nevada St. at Bear Creek	Bridge construction	$3,164,400
140	E. Nevada St., Bear Creek to N. Mountain Ave.	Extend street	$1,404,056
			$6,047,520
Central Point			
234	E-W Hamrick Rd. Extension (S. of E. Pine St.)	Extend to intersect with Penninger Dr.	$1,200,000
240	Penninger Rd. Extension South	Extend Penninger Rd. from E. Pine St. south across B/C to Hamrick	$145,800
245	Penninger Rd. Extension North	Extend from E. Pine St. to Beebe Rd.	$10,566,108
			$11,911,908
Eagle Point			
318	N. Shasta Ave. to Teakwood Ave.	Add bridge connecting Teakwood Ave. and Shasta Ave.	$3,950,000
324	Lava Street to Stevens Rd. Arterial extension	Extend Lava St. to Stevens Rd.	$2,610,600
325	Linn Rd. from Hwy 62 to Buchanan	Widen Linn Rd to arterial standards from Buchanan Ave to Hwy 62	$1,074,000
326	Onyx St. Extension - Shasta to Tabor	Extend Onyx Road from Shasta Avenue to Tabor	$212,000
327	Rolling Hills Drive east of Reese Creek Road	Extend Rolling Hill Drive east of Reese Creek Road (collector)	$1,780,000
328	Barton Road east of Reese Creek Road	Extend Barton Road east of Reese Creek Road (collector)	$670,000
329	Stevens Road East of Riley Rd	Upgrade Stevens Road to collector east of Riley Road	$1,357,000
330	Alta Vista Rd from Shasta Ave. to Bigham Brown	Upgrade Alta Vista to arterial from Shasta Avenue to Bigham Brown Road	$1,974,000
331	Shasta Avenue from Main to Alta Vista	Upgrade Shasta Avenue to arterial from Main Street to Alta Vista	$2,451,000
332	Alta Vista Road from Robert Trent Jones to Bigham Brown	Upgrade Alta Vista from Robert Trent Jones to Bigham Brown	$932,000
333	Alta Vista Road from Robert Trent Jones Jr. to Riley Road	Upgrade Alta Vista from Robert Trent Jones to Riley Road	$1,786,000
334	Riley Road from Stevens Road to Alta Vista Road	Upgrade Riley Road from Stevens Road to Alta Vista Road	$2,492,000
			$21,288,600
Jacksonville			
401	Pair-a-Dice Ranch Rd., OR 238 to city limits	Construct two-lane arterial connector (city share w/ in UGB)	$7,032,000
Medford			
582	Manzanita St. to Spring St. connection, crossing with I-5	Construct new grade-separated crossing	$24,360,000
583	Lone Pine Rd., Foothill Rd. to Cherry Ln.	Construct new three lane street with bike lanes and sidewalks	$13,316,800
584	Tamarack Rd., Mc Andrews Rd. to Lone Pine Rd. extension	Construct new two lane street with bike lanes and sidewalks	$9,500,400
585	Bellinger-Cunningham, Hull Rd. to Orchard Home Rd.	Construct new three lane street with bike lanes and sidewalks	$5,326,720
586	Springbrook Rd., Blackthorn Way to Coker Butte Rd.	Construct new three lane street with bike lanes and sidewalks	$4,660,880
587	Ross Ln., Jacksonville Highway to McAndrews Rd.	Widen to five lanes with bike lanes and sidewalks	$4,157,440
588	Manzanita St., extension from Riverside Rd. to Spring St.	Construct new five lane street with bike lanes and sidewalks	$4,060,000
589	Diamond St., Orchard Home Dr. to Peach St.	Construct new two lane street with bike lanes and sidewalks	$3,800,160
590	McAndrews Rd., Ross Ln. to Jackson St.	Widen to five lanes with bike lanes and sidewalks	$2,598,400
591	Cherry Ln., Hillcrest St. to Lone Pine Rd.	Construct new two lane street with bike lanes and sidewalks	$2,533,440
592	Cunningham Rd., Orchard Home Dr. to Columbus Ave.	Widen to five lanes with bike lanes and sidewalks	$2,078,720
594	Stewart Ave., Lozier Ln. to Dixie St.	Widen to five lanes with bike lanes and sidewalks	$1,559,040
596	South Stage Rd., OR 99 to east of I-5	Construct three lane street and overpass (city share w/ in UGB)	$24,360,000
			$102,312,000
Phoenix			
625	Oak St., OR 99 to Fern Valley Rd.	Extension of Oak St., including I-5 overcrossing	$23,440,000
Talent			
723	Belmont R/R X-ing	Construct new R/R X-ing w/ gates, new collector street	$879,000
Jackson County			
	None		
ODOT			
940	Valley View Dr., Realignment	Realign Valley View Dr @ OR-99 and replace bridge	$20,000,000
941	I-5: Interchange 35 Unit 2	Add additional ramp, local street network, access control	$15,000,000
942	OR 140 Freight Extension Unit 2	Lane and shoulder widening for freight movements	$30,000,000
914	OR 238 Unit 2 - Hanley Rd.and Rossanley Dr.	Widen to add center turn lane (w/ bike lanes and sidewalks on R	$14,650,000
932	OR 99, Rapp Rd. to southern city limits (Talent)	Widen to add center turn lane, with urban upgrade and consolidated acce	$4,500,000
			$84,150,000
		Tier 2 Total	**$257,061,028**

These projects are in local Transportation System Plans (TSPs), and the communities are anticipating that they will occur. Once funding is identified, the RVMPO may list them in the RTP projects list; before then the RVMPO lists this projects as "Tier 2." Tier 2 projects cannot be relied upon for metropolitan planning purposes. They are not considered to be planned projects in the RTP. However, they can be analyzed and listing these projects here serves to identify unmet transportation system needs.

RTP Funding Shortfall and Potential Revenue Sources

Table 7.4.2 shows the revenue shortfall that is anticipated in order to fund both Tier 1 and 2 Street System projects. Revenue sources that can potentially be used to make up the funding shortfall for Tier 2 projects are shown and summarized below by jurisdiction. The column "25-Year Potential Funding" shows that the potential "Increased annual funding" will cover the anticipated revenue shortfalls over the 23-year planning period. Discussion of potential funding by jurisdiction follows.

Table 7.4-2: Potential Revenue Sources for Tier 2 Projects (x$1,000)

Jurisdiction	Fund Source	Current Annual Revenue	Annual Funding Increase	25-Year Potential Funding	Revenue Shortfall
Ashland	System Development Charges	$318	$118	$5,924	$5,924
	Street Utility Fee	$1,044	$118		
Central Point	System Development Charges	$510	$220	$10,994	$10,994
	Street Utility Fee	$0	$220		
Eagle Point	System Development Charges	$607	$413	$20,633	$20,633
	Street Utility Fee	$125	$413		
Jacksonville	System Development Charges	$10	$59	$2,960	$2,960
	Street Utility Fee	$0	$59		
Medford	System Development Charges	$2,384	$2,047	$102,350	$102,350
	Street Utility Fee	$5,874	$2,047		
Phoenix	System Development Charges	$61	$443	$22,171	$22,171
	Street Utility Fee	$98	$443		
Talent	System Development Charges	$55	$92	$4,614	$4,614
	Street Utility Fee	$105	$92		
ODOT (MPO Area)	Gas Tax Increase	n/a	$3,366	$84,150	$84,150
Totals				$236,879	$236,879

Ashland – The funding required to construct Tier 2 regionally-significant projects over the 25-year planning period in Ashland exceeds their projected revenues by almost $6 million. Ashland's current system development charge (SDC) generates approximately $318,000 per year and their street utility fee (SUF) generates approximately $1,044,000 per year. An increase in each of these revenue sources by $118,000 per year would generate approximately $6 million over the 25-year planning period.

Central Point – The funding required to construct Tier 2 regionally-significant projects over the 25-year planning period in Central Point exceeds their projected revenues by over $10 million. Central Point's current SDC generates approximately $510,000 per year. Unlike most RVMPO jurisdictions, there is currently no street utility fee (SUF) in Central Point. An increase in SDC revenue of $220,000 per year along with the establishment of an SUF of $220,000 per year would generate approximately $11 million over the 25-year planning period.

Eagle Point – The funding required to construct Tier 2 regionally-significant projects over the 25-year planning period in Eagle Point exceeds their projected revenues by nearly $20 million. Eagle Point's current SDC generates approximately $607,000 per year and their SUF generates approximately $125,000 per year. An increase in the SDC of $413,000 per year plus an increase in the SUF of $413,000 per year would generate an additional $20 million over the 25-year planning period.

Jacksonville – The funding required to construct Tier 2 regionally-significant projects over the 25-year planning period in Jacksonville exceeds their projected revenues by nearly $3 million. Jacksonville’s current SDC generates approximately $10,000 per year. Unlike most RVMPO jurisdictions, there is currently no street utility fee (SUF) in Jacksonville. An increase in SDC revenue of $59,000 per year along with the establishment of an SUF of $59,000 per year would generate approximately $3 million over the 25-year planning period.

Medford – The funding required to construct Tier 2 regionally-significant projects over the 25-year planning period in Medford exceeds their projected revenues by about $102 million. Medford's current SDC generates approximately $2.4 million per year and their SUF generates approximately $6 million per year. An increase in each of these revenue sources by about $2 million per year would generate an additional $102 million over the 25-year planning period.

Phoenix – The funding required to construct Tier 2 regionally-significant projects over the 25-year planning period in Phoenix

exceeds their projected revenues by nearly $22 million. Phoenix's current SDC generates approximately $61,000 per year and their SUF generates approximately $98,000 per year. An increase in the SDC of $443,000 per year plus an increase in the SUF of about $443,000 per year would generate an additional $22 million over the 25-year planning period.

Talent – The funding required to construct Tier 2 regionally-significant projects over the 25-year planning period in Talent exceeds their projected revenues by nearly $5 million. Talent's current SDC generates approximately $55,000 per year and their SUF generates approximately $105,000 per year. An increase in the SDC of $92,000 per year, as well as an increase in the SUF of $92,000 per year would generate an additional $4.6 million over the 25-year planning period.

ODOT (RVMPO area) – The funding needed to construct Tier 2 regionally-significant projects over the 25-year planning period for which ODOT is the lead jurisdiction exceeds their projected revenues by about $84 million. A 2.1 cent per gallon raise in the State's gas tax would result in an annual funding increase of about $3.4 million in the RVMPO area. Over the 25-year planning period this would amount to an additional $84 million available to fund Tier 2 projects.

ODOT's ability to fund local projects could also be dramatically affected by Federal earmarks in future transportation legislation. Historically, earmarks have reached levels of up to $20 million per legislative period. There will be four opportunities for earmarks during the 25-year planning period. If earmarks were granted during each of these legislative periods at historic funding levels, ODOT would have an additional $80 million for projects in the RVMPO.

Unfunded Transit System Projects

A significant gap exists between projected revenues described in Part 6 Financial Plan and the projected implementation costs for Rogue Valley Transportation District's desired additional service, identified as the Tier 2 transit system. RVTD has identified two very theoretical sources of potential funding for the Tier 2 system: property tax increases and/or implementation of a new payroll tax. The payroll tax would assess a fixed amount to be paid for each dollar of covered payroll within the district solely for the transit system.

A transit excise tax functions as the major funding mechanism for transit services in Portland and Eugene. Implementation of either

increased property taxes or a new payroll tax would require approval by local voters.

Table 7.4.3 shows the possible Tier 2 revenue sources and total amounts it has been estimated those programs would generate for transit service.

Table 7.4-3: Possible Revenue Sources for Tier 2 Transit Projects (x$1,000)

Revenues	Time Frame			Totals
	Short (2009-2013)	Medium (2014-2019)	Long (2020-2034)	
Property, State, & Payroll Taxes	$11,919	$16,834	$57,798	$86,552
Federal/State Operating Grants	$15,466	$21,844	$74,996	$112,305
Local Government Contracts	$928	$1,310	$4,499	$6,738
Charges for Services	$5,999	$8,473	$29,092	$43,565
In-Kind Resources	$7,831	$11,061	$37,974	$56,866
Other	$377	$532	$1,828	$2,737
Totals	$42,520	$60,055	$206,187	$308,762

Table 7.4.4 provides a summary of the estimated costs associated with providing the Tier 2 expanded transit services.

Additional information about potential future transit service is contained in RVTD's 10-Year Long-Range Plan, posted on the web at www.rvtd.org.

Table 7.4-4: Expanded Service Implementation Costs, In 2009 Dollars (x$1,000)

Expenses	Time Frame			Totals
	Short (2009-2013)	Medium (2014-2019)	Long (2020-2034)	
Fixed Route Operations Costs	$20,780	$38,179	$224,240	$283,199
Non-Fixed Route Operating Costs	$1,532	$4,623	$64,819	$70,975
Alternative Trans.(Valley Lift)	$11,151	$17,987	$80,684	$109,822
General Administration	$4,509	$7,866	$41,468	$53,842
Support Services	$2,893	$5,047	$26,605	$34,544
Expanded Services	$16,752	$29,226	$154,077	$200,055
Other Expanded Services Costs	$9,267	$16,437	$91,460	$752,437
Sub-total	$66,883	$119,364	$683,354	$1,504,873
Funding Shortfall	($24,363)	($59,309)	($477,167)	($1,196,111)

Table 7.4.5 on the following page gives a summary of all the assumptions used to estimate all RVTD revenues (existing and potential) and expenses.

Table 7.4.5: RVTD Revenue and Expenses Assumptions

Revenues	Tier 1 Assumptions	Tier 2 Assumptions
S5307 & S5309 in 2020	$1.8M in 2009; 3% annual increase	Unless otherwise noted, Tier 2 assumptions were created through review of RVTD's Long Range Plan and through consultation with RVTD accounting staff.
Title XIX	$31K in 2009; 3% annual increase	
TDM/Rideshare	$134K in 2009; 3% annual increase	
STF	$219K in 2009; 2.5% annual increase	
In-Lieu-of (Tax)	$330K in 2009; 3% annual increase	not applicable due to payroll tax
Property Taxes	$1.9M in 2009; 3% annual increase	Unless otherwise noted, Tier 2 assumptions were created through review of RVTD's Long Range Plan and through consultation with RVTD accounting staff.
Farebox Returns	$1.14M in 2009; 3% annual increase	
RVMPO STP	50% of RVMPO projected STP allocation through 2034	
Payroll Tax	not applicable	$2.25M in 2009; 3% annual increase
Other	$437K in 2009; 3% annual increase	same as Tier 1
Expenses	Tier 1 Assumptions	Tier 2 Assumptions
Operations	$2.2M in 2009; 5% annual increase	Unless otherwise noted, Tier 2 assumptions were created through review of RVTD's Long Range Plan and through consultation with RVTD accounting staff.
Alt Operations	$1.7M in 2009; 5% annual increase	
Maintenance	$1.5M in 2009; 5% annual increase	
Administration	$1.3M in 2009; 5% annual increase	
Capital Match	$32K per year	same as Tier 1

Projects of Long-Term Regional Potential

Beyond Tier 2 projects, which are the product of local planning and are listed in adopted TSPs, are a few projects that have been only generally discussed. These projects of long-term regional potential address several regional concerns about how to approach possible future projects that do not yet appear, or appear only partially, in an adopted TSP and yet are still may be important to remember as plans are refined.

The Jackson County TSP contains a policy regarding Long-Term Potential corridors (LTPs) as a method of addressing conceptual projects that may also be of value to the RTP process. From the Jackson County TSP:

Policy 4.2.1-M Jackson County establishes Long-term Potential (LTP) Comprehensive Plan corridor areas where planning for future road connections beyond the planning horizon of the TSP are probable."

Strategies:

Review LTP overlay designations at least once every ten years to determine whether protection of the corridor is still warranted based on an analysis that determines if the corridor is still a probable location for a future road connection.

If a road is planned at a future time within a LTP corridor, then the LTP corridor designation will be removed. The presence of an LTP designation provides no 'special status' for planning a transportation improvement, such as the need for exceptions to the Statewide Planning Goals. Where a proposed transportation connection passes through both city and county jurisdictions, coordination and consensus are required for the project to become part of the regional transportation plan. For the city portion of a proposed new route to have any viability it must be connected to a Jackson County portion. Under RVMPO procedures, such a route, even if funding were available, could not be in the Tier 1 regional project list unless the County TSP includes it in its adopted Tier 1 plan.Specific Selected LTPs

Two LTPs are addressed here:

Jacksonville Arterial Connector Refinement Plan; and

South Stage Road Long-Term Potential Corridor.

Jacksonville Arterial Connector Refinement Plan --
Jacksonville's TSP identifies an alternative connection for through traffic on Hwy 238 and contemplates a northern arterial connector being extended from the current intersection of Hwy 238 and west to Pair-a-dice Ranch Road on the north of Jacksonville. The connection has been considered for over 40 years with both a northerly and southerly route analyzed. Either alignment would require crossing resource land, although in different proportions, outside the acknowledged urban growth boundary. Jacksonville's TSP finds that the alternative connection is needed to address livability issues, in particular the downtown area.

Downtown Jacksonville is nationally recognized as Oregon's, "most extensive and complete example of late 19th century inland commercial and mining community" (National Park Service). It

attracts many high-end retail and dining establishments and it's a regional entertainment destination during the summer months. Through traffic on the highway that runs through the center of the downtown – particularly heavy truck traffic – is seen as detrimental to the unique character of the city. In 2004, the Oregon Department of Transportation formally recognized downtown Jacksonville as a Special Transportation Areas (STA). The livability needs identified in Jacksonville's TSP remain unmet.

While construction of any facility is not expected to be necessary within the planning horizon, preservation and recognition of this connection is important now to protect what may be a critical connection some time in the future. A significant portion of this area is currently zoned Exclusive Farm Use (EFU) and therefore is protected from residential and commercial development under current EFU land use protections. However, this protection is not entirely complete. EFU allows for substantial structural improvements to occur when in conjunction with a farm use.

Stage Road Long-Term Potential Corridor – Medford's TSP contemplates South Stage Road being extended from its current terminus at Hwy. 99 to east of I-5, with an overcrossing of the freeway. A corridor overlay described in Jackson County's TSP protects the area where an arterial extension of South Stage Road east of I-5 to North Phoenix Road (not including the freeway overcrossing) would be located. The corridor overlay will protect the area necessary to connect the facility contemplated in the Medford TSP, creating a link between Hwy. 99 and North Phoenix Road. From a connectivity standpoint, an arterial in this area would provide a well-spaced connection across I-5 and Bear Creek between the South Medford Interchange and the Fern Valley Interchange. The ongoing development in southeast Medford and northeast Phoenix is going to continually increase the need for an additional connection in this area. While construction of any facility is not expected to be necessary within the planning horizon, preservation and recognition of this connection is important now to protect what is likely to be a critical connection some time in the future.

This area is currently zoned EFU and therefore is protected from residential and commercial development under current EFU land use protections. However, this protection is not entirely complete. EFU allows for substantial structural improvements to occur when in conjunction with a farm use. Prevention of development that would be incompatible with a future transportation connection within this corridor is the primary reason for this overlay.

Potential New Air Quality Requirements

Two air quality issues are the subject of growing interest and, in some areas, new controls to protect human health and the environment. For one, $PM_{2.5}$, laws already are in place, and some Oregon communities have be found in violation of air quality standards. For the other, climate change, discussion and proposed controls are being discusses at both the state and federal level. Looking at these issues separately:

$PM_{2.5}$ – These are the very fine particles that can lodge deeply in the lungs and cause health problems. The RVMPO region has limits in place for the larger PM_{10} particles, but not for 2.5. So far the region has not violated the federal standards for 2.5, but the state continues monitoring. So far, voluntary controls adopted by most RVMPO cities, have been effective in reducing 2.5 levels. As long as standards are not violated, controls like the Air Quality Conformity process required for PM_{10} will not be established.

Climate Change – The Oregon governor's advisory group has issued recommendations to reduce greenhouse gas emissions from all sources including transportation. The state estimates that roughly 17 percent of Oregon greenhouse gas emissions come from transportation. The advisory group's recommendations include greater use of transit in urban areas and more use of low-emitting vehicles. Emission reporting requirements for industry already have been established in the state. The governor has set a goal of beginning to reduce greenhouse gas emissions by 2010, by 2020 to achieve greenhouse gas levels 10 percent less than 1990 levels, and by 2050 to achieve greenhouse gas levels 75 percent below 1990 levels.

Regional Problem Solving Process

Since 2000, the RVMPO jurisdictions have been collaborating on a long-range regional plan intended to accommodate a population of 270,000 over an estimate 50-year plan horizon. Through the Oregon Regional Problem Solving Process, the jurisdictions are creating a Greater Bear Creek Valley Regional Plan to indentify lands for development beyond the horizon of conventional plans, including the Regional Transportation Plan.

The RPS plan will have to be adopted into the Jackson County Comprehensive Plan before it can go into effect. The county may begin the adoption process later in 2009.

The RTP doesn't accommodate provisions of the RPS plan because there is not yet an official RPS plan. Also, the horizon of the RPS plan extends well beyond the RTP planning horizon. By 2034, the RTP anticipates a population of fewer than 250,000,

consistent with the county comprehensive plan. Nonetheless, there is an expectation among RVMPO jurisdictions that RPS outcomes will guide future growth in the RVMPO planning area. Therefore, the RVMPO anticipates planning in the coming years to begin addressing the transportation impacts of RPS. This work would be incorporated into the next RTP update. Issues to be addressed are expected to include: identifying future congestion points, and developing potential multi-modal solutions including new transportation corridors and their funding.

RVMPO has had input into the RPS plan. Land use scenarios were analyzed to help policy makers evaluate the impacts various land use decisions may have on transportation. Procedures for protecting future transportation corridors and funding future transportation needs were identified and evaluated. As RPS growth areas begin to be developed, additional demands for transportation planning are anticipated.

Implementation planning has started with RPS master planning and implementation projects. The RVMPO is conducting a demonstration master planning process, which identifies transportation and land uses in one identified growth area. Master planning is expected to be required in all RPS growth areas. From the demonstration master planning work, the RVMPO will publish a guide for other RPS cities use as they begin urbanizing growth areas.

Appendices

2009-2034
Regional Transportation Plan

Appendix A

TRANSPORTATION PLANNING ACRONYMS AND TERMS

ACT:	Area Commission on Transportation
ADA:	Americans with Disabilities Act
ADT:	Average Daily Traffic
AQMA:	Air Quality Maintenance Area
CAAA:	Clean Air Act Amendments
CBD:	Central Business District
CMAQ:	Congestion Mitigation & Air Quality
CO:	Carbon Monoxide
COATS:	California Oregon Advanced Transportation Systems
DLCD:	Department of Land Conservation and Development
EMME/2:	Computerized Transportation Modeling Software
EPA:	Environmental Protection Agency
FFY:	Federal Fiscal Year: from October 1 to September 31.
FHWA:	Federal Highway Administration
FTA:	Federal Transit Administration
FTZ:	Foreign Trade Zone
FY:	Fiscal Year: (Oregon state fiscal year from July 1 to June 30)
GCP:	General Corridor Planning
GIS:	Geographic Information Systems
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
ISTEA:	Intermodal Surface Transportation Efficiency Act (1991), replaced by **TEA-21**, the Transportation Equity Act for the 21st century, expired in 2003
ITS:	Intelligent Transportation Systems
JJTC:	Jackson-Josephine Transportation Committee
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
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
MTIP:	Metropolitan Transportation Improvement Program (same as TIP)
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
ODFW:	Oregon Department of Fish and Wildlife
ODOT:	Oregon Department of Transportation
ORS:	Oregon Revised Statutes
OTC:	Oregon Transportation Commission, ODOT's governing body
OTP:	Oregon Transportation Plan
PC:	MPO Policy Committee
PL Funds:	Public Law 112, Federal Planning Funds
PM_{10}:	Particulate Matter of less than 10 Micrometers
$PM_{2.5}$:	Particulate Matter of less than 2.5 Micrometers
RTP:	Regional Transportation Plan
RVACT:	Rogue Valley Area Commission on Transportation
RVCOG:	Rogue Valley Council of Governments
RVIA:	Rogue Valley International Airport
RVTD:	Rogue Valley Transportation District
SAFETEA-LU	Safe Accountable Flexible Efficient Transportation Equity Act: A Legacy for Users, the current 6-year surface transportation act, expires Sept. 2009
SIP:	State Implementation Plan
SMSG:	Statewide Modeling Steering Group
SMP:	Statewide Modal Planning
SOV:	Single Occupancy Vehicle
STA:	Special Transportation Area
STIP:	Statewide Transportation Improvement Program
STP:	Surface Transportation Program
TAC:	Technical Advisory Committee
TAZ:	Transportation Analysis Zones
TCM:	Traffic Control Measures
TDM:	Transportation Demand Management
TEA-21:	Transportation Equity Act for the 21st Century
TIP:	Transportation Improvement Program
TOD:	Transit Oriented Development
TPAU:	Transportation Planning Analysis Unit
TPR:	Transportation Planning Rule
TRADCO:	Transportation Advisory Committee
TSM:	Transportation Systems Management
TSP:	Transportation System Plan
UGB:	Urban Growth Boundary
UPWP:	Unified Planning Work Program
US DOT:	U.S. Department of Transportation
VMT:	Vehicle Miles of Travel

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.

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.

Appendix B

Reporting on RVMPO Alternative Measures and Alternative Mobility Standards

Appendix B addresses state requirements for Alternative Measures and Alternative Mobility Standards. Status report on the region's conformity with these requirements is given.

Alternative Measures

In April 2002 the Land Conservation and Development Commission (LCDC) approved Alternative Measures to bring the RVMPO's 2000 Regional Transportation Plan interim update into compliance with the state's Transportation Planning Rule (TPR). The RVMPO developed these measures because modeling of the 2000 RTP showed that the region could expect a 2.5% per capita VMT reduction over the 20-year planning period, falling short of the TPR's 5% per capita VMT reduction requirement. The Alternative Measures meet requirements for an alternative measure of reduced reliance on the automobile, as specified in section 660-012-0035(5).

LCDC's approval, however, was conditioned on completion of certain tasks to clarify the manner in which compliance would be measured. The RVMPO completed that work in 2004, and findings are at the end of this section.

This appendix contains:

1. Alternative Measures Development
2. Selection of Measures
3. Alternative Measures Summary (table)
4. RVMPO Findings
5. LCDC Findings Regarding Alternative Measures
6. RVMPO Alternative Measures Implementation
7. Technical Memorandum: Refine Tracking Criteria, Alternative Measures
8. Technical Memorandum: Determination of Development that Satisfies Tracking Criteria

1. Alternative Measures Development

In April 2000, the RVMPO adopted an "Interim Update" of the Rogue Valley Regional Transportation Plan (RTP). The updated RTP contained a financially constrained project list, including projects identified in local TSPs from the cities of Medford (draft version), Central Point (draft version), and Phoenix (final version). Projects from Jackson County and ODOT, as well as a financially constrained transit plan from the Rogue Valley Transportation District (RVTD) were also included in the updated RTP.

Although the update of the RTP brought the region into compliance with Federal planning requirements, the RTP's compliance with the State's Transportation Planning Rule (TPR) remained an outstanding issue.

The RVMPO's development of an alternative measure began with an inventory of possible measures. Early in the development process, the RVMPO chose to a select a set of measures as an alternative to the TPR's per capita VMT measure. Table B-1 lists the measures and the source from which six of the seven alternative measures were selected. The measure of alternative transportation funding was developed later in the process.

Table B-1 Potential Alternative Measures Used in Selection Process

Type	Measure	Source
Alt. Modes	Mode share (alternative modes & SOV)	TPR 0035 (5)(d)
	Percent non-SOV commuter during peak-hour	Oregon Benchmark #73/ TPR 0035 (5)(d)
	Percent non-auto trips	Lane Council of Governments
Transit	Transit service hours per capita	RVTD
	Percent of population with access to public transit	RVRTP Evaluation Criteria/TPR 0035 (5)(d)
	Transit ridership, service hours, and frequency	RVRTP Evaluation Criteria
	Percent transit mode share on congested corridors	Lane Council of Governments
TDM	Percent employees participating in a trip-reduction program	Staff
	Percent employees participating in Trans. Mgmt. Assoc. (TMAs)	Staff
Automobile	Per capita vehicle trips	TPR 0035 (5)(d)
	Per capita vehicle occupancy	2000-2020 Interim RVRTP, Appendix G
	Per capita vehicle miles of travel (VMT)	RVRTP Evaluation Criteria/TPR 0035 (4)(a)
	Per capita vehicle-hours traveled (VHT)	RVRTP Evaluation Criteria/TPR 0035 (5)(d)
Infrastructure	Proportion of collectors and arterials w/ wide curb/bike lanes	RVRTP Evaluation Criteria/TPR 0035 (5)(d)
	Priority bikeway miles	Lane Council of Governments
	Proportion of collectors and arterials w/ sidewalks	RVRTP Evaluation Criteria/TPR 0035 (5)(d)
	Priority sidewalk miles	Staff
	Acres of zoned Transit-Oriented Development (TOD)	Lane Council of Governments
	Percent of dwelling units built in TODs	Lane Council of Governments
	Percent of new "total" employment in TODs	Lane Council of Governments

Throughout the development of the RVMPO's alternative measures, extensive meetings were held to solicit input from the public and RVMPO member jurisdictions. Table B-2 below summarizes the public participation and agency coordination effort that accompanied the development and approval of the RVMPO's alternative measures.

Table B-2 RVMPO Alternative Measures Public Participation Meetings

Entity	Date of Meeting	Purpose of Meeting/Outcome
Public Advisory Council	March 20, 2001	Update/Discussion
	May 15, 2001	Discussion/Recommendation to Policy Committee for approval
	July 24, 2001	
RVMPO Technical Advisory Committee	February 14, 2001	Update/Discussion
	March 14, 2001	
	April 11, 2001	
	May 2, 2001	
	June 20, 2001	
	August 8, 2001	Discussion/Recommendation to Policy Committee for approval
RVMPO Policy Committee	February 27, 2001	Update/Discussion
	March 27, 2001	
	April 24, 2001	
	May 22, 2001	
	June 26, 2001	
	September 6, 2001	Discussion/Approval/Forward Alternative Measures proposal to LCDC
Jackson County Bicycle Advisory Committee	March 28, 2001	Update/Discussion
Transportation Advocacy Committee (TRADCO)	April 16, 2001	Update/Discussion
	May 15, 2001	
	June 12, 2001	
	July 10, 2001	
RVTD	May 29, 2001	Discussion of use of Surface Transportation Program (STP) funds for increased transit service (with RVTD Staff)
Phoenix	May 30, 2001	Discussion of use of Surface Transportation Program (STP) funds for increased transit service (with RVMPO representatives)
Jackson County	May 31, 2001	
Central Point	June 5, 2001	
Medford	June 5, 2001	
Jackson County Board of Commissioners	June 12, 2001	Discussion of use of Surface Transportation Program (STP) funds for increased transit service

2. Selection of Measures

Based on the input received from RVMPO member jurisdictions, the public, DLCD staff and other State and Federal agencies that participated in the development process, seven measures of reduced automobile reliance were adopted as an alternative to the TPR's per capita VMT reduction measure. Each of the seven measures is discussed below in detail. Adopted 5-year benchmarks and 20-year targets for each of the measures are summarized at the beginning of the measure descriptions and again at the end of the chapter in Table B-13.

Measure 1: Transit, bicycle and walking mode share

As with the per capita VMT reduction measure, this measure is intended to demonstrate a shift in travel behavior away from the automobile. This shift is anticipated to result from the region's planned improvements in the transit, bicycle and pedestrian infrastructure, as well as from the implementation of planned Transit-Oriented Developments (TODs). The benchmarks and target for this measure are shown in Table B-3. A three-fold increase in transit mode share (from 1% to

3%) and a 35% increase in bicycle and walking (non-motorized) mode share (from 8.2% to 11%) have been set as 20-year targets for this measure.

Progress on this measure would be determined at 5-year intervals using the best available information at that time. Today's best information source is the RVCOG travel demand model, which can be (and has been) used to predict mode share over the 20-year planning period. Current modeling of the financially constrained RTP indicates that, in 20 years, transit mode share will remain about the same (increase to 1.2%) and bicycling and walking mode share will decrease from 8.2% to 7.7%. This modeling effort assumed that transit service levels will be reduced and that only three of the seven proposed TOD sites will be developed. Conservative assumptions concerning bicycling and walking were also implemented in the model.

Given the mode share levels predicted by the RVCOG travel demand model, the benchmarks and target identified for the mode share measure represent significant increases in alternative mode use. It is believed that changes in the urban environment to which the model currently lacks a high degree of sensitivity, such as the development of mixed-use, pedestrian friendly areas, (as described later in this proposal) will result in the higher figures shown in Table B-3. Due to the timing of construction of the mixed-use, pedestrian friendly areas, changes in travel behavior will proceed more slowly in the first 10 years of the planning period than in the final 10 years.

Table B-3 Adopted 20-Year Target for Mode Share

Measure	How Measured	2000	2005	Benchmark 2010	Benchmark 2015	Target 2020
Measure 1: Transit and bicycle/pedestrian mode share	The percent of total daily trips taken by transit and the combination of bicycle and walking (non-motorized) modes. Determined from best available data (e.g., model output and/or transportation survey data).	% daily trips transit: 1.0 bike/ped: 8.2	% daily trips transit: 1.2 bike/ped: 8.4	% daily trips transit: 1.6 bike/ped: 8.4	% daily trips transit: .2 bike/ped: 9.8	% daily trips transit: 3.0 bike/ped: 11

Measure 2: Percentage of Dwelling Units within ¼-Mile Walking Distance of 30-Minute Transit

This measure is intended to demonstrate improvements in transit accessibility. A walking distance of ¼ mile from a dwelling is assumed to provide reasonable pedestrian access to a transit line. Only those transit lines that provide at least 30-minute service will be counted towards meeting the benchmarks and target shown in Table B-4. Progress on this measure would be tracked through GIS.

A GIS analysis of current tax lot, street, geographic and transit data was used to determine the percentage of dwelling units in the MPO that are within ¼ mile walking distance to RVTD transit lines. The result of this effort is shown on a map included as Attachment A – Existing and Future Transit Service. The GIS analysis showed that 12% of dwelling units in the MPO are currently within ¼ mile walking distance to 30-minute transit service.

Today, two of RVTD's transit lines provide 30-minute service, one provides 45-minute service, three provide 60-minute service, and one provides 90-minute service. During the 20-year planning period, all of these routes are planned to go to at least 30-minute service frequency with 15-minute service during the peak hours to routes serving TOD areas (assuming increased transit

revenues). In addition, a large percentage of new development in the RVMPO area is planned to occur along existing or future transit lines. These changes are expected to result in an increase in the transit accessibility measure from 12% to 50% over the 20-year planning period. Table B-4 shows the 5-year benchmarks and 20-year target for the adopted measure.

Table B-4 Adopted 20-Year Target for Transit Accessibility

Measure	How Measured	2000	2005	Benchmark 2010	Benchmark 2015	Target 2020
Measure 2: % Dwelling Units (DUs) w/in ¼ mile walk to 30-min. transit service	Determined through GIS mapping. Current estimates are that 12% of DUs are within ¼ mile walking distance of RVTD transit routes.	12%	20%	30%	40%	50%

Measure 3: Percentage of collectors and arterials with bicycle facilities

The RVMPO programs projects along collector and arterial streets within the MPO 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 measure is intended as a way to track the progress of including these facilities on the MPO's street network and as a way to demonstrate improved accessibility for bicyclists.

Progress on this measure would be determined through GIS analysis. 21% of collectors and arterials in the MPO have provisions for cyclists, i.e., 4 foot or greater shoulders or bike lanes. Projects included in the latest Draft RVRTP project listing show that these figures will increase to approximately 60%. Proposed 5-year benchmarks and 20-year targets are shown below in Table B-5.

Table B-5 Proposed 20-Year Target for Bicycle Facilities

Measure	How Measured	2000	2005	Benchmark 2010	Benchmark 2015	Target 2020
Measure 3: % Collectors and arterials w/ bicycle facilities	Determined through GIS mapping. Current estimates are that 21% of collectors and arterials in the MPO have provisions for bicyclists.	21%	28%	37%	48%	60%

Measure 4: Percentage of collectors and arterials in TOD areas with sidewalks

The RVMPO has identified seven areas that are currently planned for mixed-use, pedestrian friendly development or are in downtown areas (Table B-1). This measure is intended to demonstrate improvements in pedestrian accessibility in these portions of the MPO area - where pedestrian access is most critical.

Attachment C - *Existing and Future Pedestrian Facilities* - shows that 47% of the collectors and arterials in the TOD/Downtown areas of Central Point, Medford, and Phoenix have sidewalks. Analysis of the projects planned in the draft RVRTP Street System (Attachment D), shows that another 29% of these facilities will have sidewalks by the year 2020. This brings the total sidewalk coverage within the TOD/Downtown areas in the MPO to approximately 75%. Proposed 5-year benchmarks and 20-year targets are shown below in Table B-6.

Table B-6 Adopted 20-Year Target for Pedestrian Facilities

Measure	How Measured	2000	2005	Benchmark 2010	Benchmark 2015	Target 2020
Measure 4: % Collectors and arterials in TOD areas w/ sidewalks	Determined through GIS mapping. Current estimates are that 46% of collectors and arterials in TOD areas have sidewalks.	47%	50%	56%	64%	75%

Table B-7 shows how the number of bicycle/pedestrian projects in the draft RVRTP project list compares to all the projects listed in the RTP. All projects are included on the financially constrained (Tier 1) project list.

Table B -7 – Draft RVRTP Street System Project List Statistics

Jurisdiction	Total Projects	Bike/Ped Projects	% Bike/Ped Projects	Bike/Ped Project Costs
Jackson County	55	27	49%	$22,320,000
Medford	79	15	19%	$7,375,000
Central Point	41	9	22%	$3,864,000
Phoenix	33	26	79%	$4,004,000
MPO Total	**208**	**77**	**37%**	**$37,563,000**

Measure 5: Percent of New Dwelling Units in Mixed Use/Pedestrian-Friendly Areas and Measure 6: Percent of New Employment in Mixed Use/Pedestrian-Friendly Areas

The objective of these measures is to demonstrate progress towards creating mixed use, pedestrian-friendly developments in the MPO. Progress towards meeting the benchmarks and targets for this measure would be determined by monitoring development after the appropriate land use and development regulations have been adopted. Mixed use, pedestrian-friendly development occurring within downtown areas in Medford, Central Point, and Phoenix, as well as within proposed TOD sites, would count towards meeting the benchmark and target figures shown below in Table B-8. The benchmarks and targets shown in the table represent the accumulated development occurring since year 2000.

Table B -8 Adopted 20-Year Targets for Mixed-Use Pedestrian Friendly Development

Measure	How Measured	2000	2005	Benchmark 2010	Benchmark 2015	Target 2020
Measure 5: % Mixed-use DUs in new development	Determined by tracking building permits - the ratio between new DUs in TODs and total new DUs in the region.	0%	9%	26%	41%	49%
Measure 6: % Mixed-use employment in new development	Estimated from annual employment files from State – represents the ratio of new employment in TODs over total regional employment.	0%	9%	23%	36%	44%

Tables B-9 and B-10 show mixed-use housing (dwelling unit) and employment projections by RVMPO jurisdiction. Numbers shown in the tables represent the accumulated increase from year 2000 "base year" conditions. The unincorporated portion of Jackson County is not anticipated to include any mixed-use development during the planning period. Detailed population, employment, and housing information from the 2000-2020 RVMPO travel demand model was

used to estimate the figures shown in these tables. Downtown and future TOD areas were analyzed for new dwelling units and employment. Agricultural and industrial employment was not included in the calculations due to the unlikelihood of these uses locating in either a downtown or a TOD.

Table B -9 Mixed Use Housing Projections – RVMPO Jurisdictions

Jurisdiction	Category	2005	2010	2015	2020	2020%
Medford	New DU (total)	1578	4126	5667	7581	61%
	Mixed-Use DU	158	1238	2834	4604	
Central Point	New DU (total)	555	1098	1715	2423	39%
	Mixed-Use DU	55	274	600	945	
Phoenix	New DU (total)	179	345	514	738	41%
	Mixed-Use DU	18	103	180	302	
Jackson County	New DU (total)	386	638	930	1225	0%
	Mixed-Use DU	0	0	0	0	
MPO Total	New DU (total)	2697	6206	8827	11967	49%
	Mixed-Use DU	231	1616	3614	5851	

Table B -10 Mixed Use Employment Projections – RVMPO Jurisdictions

Jurisdiction	Category	2005	2010	2015	2020	2020%
Medford	New Emp (total)	3078	6156	9234	12312	48%
	Mixed-Use Emp	308	1539	3694	5956	
Central Point	New Emp (total)	405	811	1216	1622	48%
	Mixed-Use Emp	41	243	486	778	
Phoenix	New Emp (total)	165	330	495	660	26%
	Mixed-Use Emp	8	50	99	173	
Jackson County	New Emp (total)	273	546	820	1093	0%
	Mixed-Use Emp	0	0	0	0	
MPO Total	New Emp (total)	3922	7843	11765	15686	44%
	Mixed-Use Emp	357	1832	4279	6907	

RVMPO Transit-Oriented/Mixed-Use, Pedestrian-Friendly Development
(For the purposes of this proposal, the term "TOD" is used interchangeably with the "Mixed-Use, Pedestrian Friendly Development" term used in the Transportation Planning Rule (TPR).)

Transit-oriented development (TOD) is a way to locate people near transit services while decreasing their dependency on automobiles. While sprawling development patterns necessitate use of automobiles for virtually every trip, TODs - through the creation of higher-density, mixed-use, pedestrian districts - increase the convenience of walking, bicycling, and transit and thereby reduce automobile dependency.

In 1999, the RVMPO undertook a Transit-Oriented Design and Transit Corridor Development Strategies Study (TOD Study). The TOD Study outlined recommendations for ten TOD sites in Central Point, Medford, Phoenix, and White City (in unincorporated Jackson County). The study was intended to provide an alternative land use scenario that would bring the MPO into compliance with the TPR's VMT reduction requirement. Although modeling of the TOD Study's recommended land use patterns did not yield the TPR-mandated 5% reduction in VMT per capita, many of the Study's land use recommendations are being implemented.

Ten candidate high-growth areas, previously identified in the 1995 RTP, were analyzed in the TOD Study. Of the original ten TOD sites, three are proceeding towards development, three are undergoing analysis and four have been removed from consideration. The three TOD sites closest to development are the Central Point TOD, the Medford SE Plan, and the Phoenix City Center Plan. The following is a brief summary of the current status of TOD development in the RVMPO.

Central Point TOD - Status
Central Point completed amendments to its official maps and implementing ordinances establishing a fully compliant TOD center in the northwest section of the city. Infrastructure needs, particularly transportation, have been thoroughly reviewed. Residential neighborhoods have been constructed in the southern half of the development, with public and commercial phases expected to be developed when a new rail crossing is completed.

Medford TOD Development - Status
The City of Medford has applied for a TGM grant to implement the four TOD sites under consideration within the City. These four sites include Downtown, Southeast, Delta Waters and West Medford. The City is committed to TOD concepts, and is already working to implement its adopted Southeast Plan, a large development employing Smart Development principles.

Phoenix City Center TOD - Status
Phoenix has developed a mixed-use plan for the City Center area that incorporates TOD policies and standards consistent with the MPO's TOD Study. The TOD site includes much of the existing downtown area, and the City is committed to urban-centered, pedestrian-friendly growth. The City has conducted a marketing feasibility study for an independently prepared City Center Plan and will adopt amendments to its municipal code that foster transit-oriented development.

Measure 7: Alternative Transportation Funding
This measure has been developed to demonstrate the RVMPO's commitment to implementing the alternative transportation projects upon which many of the proposed measures rely. Funds made available to the RVMPO through the Surface Transportation Program (STP) are the only funds over which the RVMPO has complete discretion. RVMPO jurisdictions have agreed to direct 50% of this revenue stream, historically used for vehicular capacity expansion projects, towards alternative transportation projects. STP funds would be used to expand transit service, or, if RVTD is successful with a local funding package, to fund bicycle/pedestrian and TOD-development supportive projects. Table B-12 shows adopted 5-year benchmarks and 20-year targets for this measure.

Table B-11 – Adopted 20-Year Target for Alternative Transportation Funding

Measure	How Measured	2000	2005	Benchmark 2010	Benchmark 2015	Target 2020
Measure 7: Alternative Transportation Funding	Funding committed to transit or bicycle/pedestrian/TOD projects. Amounts shown represent ½ of the MPO's estimated accumulation of discretionary funding (STP).	N/A	$950,000	$2.5 Million	$4.3 Million	$6.4 Million

*STP revenue estimates developed by Oregon Department of Transportation.

Without the additional operating revenues provided through this measure (or through some other source), current revenue projections show that RVTD will be required to cut service and eliminate routes in the MPO. The RTP identifies a financially constrained (Tier 1) transit system that provides greatly reduced service in the MPO, along with a "preferred" (Tier 2) transit system, providing several additional routes as well as faster headways. RVTD will be pursuing a local funding package in the near future to finance the Tier 2 transit plan. If voters approve this package, RVTD will not require STP funds in order to cover funding shortfalls. It is therefore proposed that, should RVTD's new fund source become a reality, the STP transit allocation proposed in this measure instead be directed to RTP bicycle/pedestrian projects and projects that facilitate the development of TOD sites.

The following list of priorities for STP–funded transit projects has been developed in consultation with MPO jurisdictions. The list is intended as a starting point for determining how STP funds will be spent by the Rogue Valley Transportation District. Projects are not listed in any particular order.

STP Funding Priorities for Rogue Valley Transportation District (RVTD):

Central Point

- RVTD will increase service on Route 40 (Central Point) to 30 minute headways and provide service to the TOD site when feasible.

Medford

- RVTD will serve the Southeast Plan Area (Medford TOD) when feasible.

Phoenix

- RVTD will improve transit stops within Phoenix.
- RVTD will explore ways to improve Hwy 99 (Main Street) pedestrian crossing to a northbound transit stop, and in the interim, will provide shuttle service for this purpose.

Jackson County

- RVTD will increase transit service to White City (unincorporated Jackson County).

3. Alternative Measures Summary (Table)

Table B-13 summarizes the seven adopted alternative measures along with 5-year benchmarks and 20-year targets. Five findings based on the requirements of the Transportation Planning Rule's section 660-012-0035(5) conclude the RVMPO's alternative measures proposal.

Table B-12 - RVMPO Adopted Alternative Measures for TPR Compliance

Measure	How Measured	2000	2005	Benchmark 2010	Benchmark 2015	Target 2020
Measure 1: Transit and bicycle/pedestrian mode share	The percent of total daily trips taken by transit and the combination of bicycle and walking (non-motorized) modes. Determined from best available data (e.g., model output and/or transportation survey data).	% daily trips transit: 1.0 bike/ped: 8.2	% daily trips transit: 1.2 bike/ped: 8.4	% daily trips transit: 1.6 bike/ped: 8.4	% daily trips transit: .2 bike/ped: 9.8	% daily trips transit: 3.0 bike/ped: 11
Measure 2: % Dwelling Units (DUs) w/in ¼ mile walk to 30-min. transit service	Determined through GIS mapping. Current estimates are that 12% of DUs are within ¼ mile walking distance of RVTD transit routes.	12%	20%	30%	40%	50%
Measure 3: % Collectors and arterials w/ bicycle facilities	Determined through GIS mapping. Current estimates are that 21% of collectors and arterials in the MPO have provisions for bicyclists.	21%	28%	37%	48%	60%
Measure 4: % Collectors and arterials in TOD areas w/ sidewalks	Determined through GIS mapping. Current estimates are that 46% of collectors and arterials in TOD areas have sidewalks.	47%	50%	56%	64%	75%
Measure 5: % Mixed-use DUs in new development	Determined by tracking building permits - the ratio between new DUs in TODs and total new DUs in the region.	0%	9%	26%	41%	49%
Measure 6: % Mixed-use employment in new development	Estimated from annual employment files from State – represents the ratio of new employment in TODs over total regional employment.	0%	9%	23%	36%	44%
Measure 7: Alternative Transportation Funding	Funding committed to transit or bicycle/pedestrian/TOD projects. Amounts shown represent ½ of the MPO's estimated accumulation of discretionary funding (STP).	N/A	$950,000	$2.5 Million	$4.3 Million	$6.4 Million

4. RVMPO Findings

1. Achieving the targets for the adopted alternative measures will result in a reduction in reliance on automobiles.

2. Achieving the targets for the adopted alternative measures will accomplish a significant increase in the availability and convenience of alternative modes of transportation.

3. Achieving the targets for the adopted alternative measures is likely to result in a significant increase in the share of trips made by alternative modes, including walking, bicycling, and transit.

4. VMT per capita is unlikely to increase by more than 5%.

5. The adopted alternative measures are reasonably related to achieving the goal of reduced reliance on the automobile as described in OAR 660-012-0000.

5. Alternative Measures Implementation

Since LCDC's approval of the Alternative Measures, the RVMPO and member jurisdictions have undertaken a number of projects to implement the measures. Several cities are, or are planning to, update Transportation System Plans. Phoenix and Central Point, as this RTP update

goes to adoption, are revising their zoning ordinances to include conditions that are expected to foster compliance with the measures.

Prior to this RTP update two projects have been undertaken by the RVMPO to directly address the commission's conditions: refinement of Alternative Measures 5 and 6; and creation and adoption of an Integrated Land Use Plan (ILUTP). Refinement of Measures 5 and 6 is contained in the following two sections. These sections include a city-by-city report on activities that support the measures. The RVMPO is working with member cities to draft an ILUPT. The ILUTP work is to be completed by June 2005.

Both of these projects address LCDC concerns about Alternative Measure 3 and the need for a safe, convenient network of bicycle facilities within the planning horizon. Bicycle system features addressed in the refinement of Measures 5 and 6 and the ILUTP include bicycle routes on roadways as well as routes off the road system, establishment of connections to key community and regional destinations, and secure bicycle parking.

6. Benchmark status

Several Alternative Measures relate to land use and, therefore, are closely linked with work of the RVMPO and member jurisdictions to develop and implement integrated land use and transportation plans. In particular, two measures set benchmarks for the percentage of new dwelling units and employment growth that must occur within compact, mixed-use, pedestrian, and transit-friendly neighborhoods. By 2007, this kind of development must have accounted for 9 percent of development in the RVMPO since 2000. Each of the seven measures has such interval benchmarks standards to gauge the region's progress toward meeting the measure's intended outcome. This memo reports on analysis conducted in summer 2008 into whether the benchmarks are being achieved. It provides RVMPO member jurisdictions with a progress report on the extent to which the region is consistent with the Alternative Measures.

This analysis encompasses the entire RVMPO and all seven measures where previous analyses have focused on various RVMPO jurisdictions and a limited number of measures. Appendix C of the 2005 Regional Transportation Plan (RTP) contains discussion of the Alternative Measures and also contains The LCDC Order approving the measures. The "Findings of Fact and Conclusions of Law" regarding the Measures. Conclusion 6.c. states that: "The alternative measures shall be used to measure progress towards achieving reduced automobile reliance unless the adopted MPO plan achieves a 5 percent reduction in VMT per capita within 20 years of the adoption of the plan." Analyses contained in this memo serve to meet this finding.

Summary Findings

The analyses described in this memorandum show that the region, for the most part, is meeting or exceeding the Alternative Measures benchmarks. As shown on the summary table on page 2, the only measure the region is failing to meet is transit, bicycle and walking mode share (Measure 1). A significant reduction in transit service in 2006 because of a funding shortfall could be the cause of the ridership decline recorded here.

Table 1, below, shows the degree to which the RVMPO is meeting goals established in the Alternative Measures. The requirements will grow more demanding in the future, which may necessitate adoption of new provisions in local land use codes.

Table B-13: RVMPO Alternative Measures and 2007 Benchmark Analysis

Measure	How Measured	2000	2005	Measured 2007	Benchmark 2010	Benchmark 2015	Target 2020
Measure 1: Transit and bicycle/pedestrian mode share	The percent of total daily trips taken by transit and the combination of bicycle and walking (non-motorized) modes. Determined from best available data (e.g., model output and/or transportation survey data).	%daily trips transit: 1.0 bike/ped: 8.2	%daily trips transit: 1.2 bike/ped: 8.4	%daily trips transit: 0.9 bike/ped: 7.3	% daily trips transit: 1.6 bike/ped: 8.4	% daily trips transit: 2.2 bike/ped: 9.8	% daily trips transit: 3.0 bike/ped: 11
Measure 2: % Dwelling Units (DUs) w/in ¼ mile walk to 30-min. transit service	Determined through GIS mapping. Current estimates are that 34% of DUs are within ¼ mile walking distance of RVTD transit routes.	12%	20%	34%	30%	40%	50%
Measure 3: % Collectors and arterials w/ bicycle facilities	Determined through GIS mapping. Current estimates are that 37% of collectors and arterials in the MPO have provisions for bicyclists.	21%	28%	37%	37%	48%	60%
Measure 4: % Collectors and arterials in TOD areas w/ sidewalks	Determined through GIS mapping. Current estimates are that 56% of collectors and arterials in TOD areas have sidewalks.	47%	50%	55%	56%	64%	75%
Measure 5: % Mixed-use DUs in new development	Determined by tracking building permits - the ratio between new DUs in TODs and total new DUs in the region.	0%	9%	10%	26%	41%	49%
Measure 6: % Mixed-use employment in new development	Estimated from annual employment files from State – represents the ratio of new employment in TODs over total regional employment.	0%	9%	17%	23%	36%	44%
Measure 7: Alternative Transportation Funding	Funding committed to transit or bicycle/pedestrian/TOD projects. Amounts shown represent ½ of the MPO's estimated accumulation of discretionary funding (STP).	N/A	$950,000	$1.4 Million	$2.5 Million	$4.3 Million	$6.4 Million

Table B-13 shows the measures and benchmarks as they were adopted. The "as measured" numbers in the 2007 column are the results of recent measurements made as described in the "How Measured" column of the Table. Through this analysis, staff discovered that almost all benchmarks are being met. Measure 1 is a sticking point and conjecture is that this is mainly due to the Rogue Valley Transit District's (RVTD) ongoing funding problems. Further contributing to this shortfall in meeting benchmarks for Measure 1 is the fact that the valley simply does not experience the congestion levels one might consider necessary in order to get people to abandon their automobiles for the longer commutes associated with transit.

The following section contains description of each measure and how the benchmark analysis was performed.

MEASURE 1: TRANSIT AND BICYCLE/PEDESTRIAN MODE SHARE

Performance here was measured and determined by utilizing the best available data such as model output and/or by researching available transportation survey data. According to Table B-13 in 2007, .9% of RVMPO daily trips were conducted on the local transit system (Rogue Valley Transportation District – RVTD) and bicycle/pedestrian trips accounted for 7.3% of the total daily trips. This data was acquired by analyzing transportation model output and through analysis of results generated by review of transportation survey results. As can be further seen in Table I, these percentages fall short of measurements taken in similar fashion in 2005.

There could be several reasons for this fall in percentages, but as it relates to transit, RVTD has endured some difficult budget times. There have been both route and service cuts making an increased ridership all but impossible to achieve. Reasons for the dip in the bicycle/pedestrian percentages can be tied to the booming economy experienced between 2005 and 2007 when people felt more "cash flush" and opted to drive their cars with little care for gas prices. While this circumstance has abated since mid-2007, another factor possibly contributing to the lower percentages of bike riding and walking could be the fact that the RVMPO simply does not experience sufficient amounts of congestion that might force people to decide to leave their cars home and walk or bike to work.

As can be seen in Table B-13 , these percentages are needing to be increased in order to meet 2010, 2015, and 2020 benchmarks and targets. It is likely that even with RVTD funding being problematic these days that the higher price of gasoline will contribute to an increase in percentage shares of these modes of travel. This thought is supported by a June 22, 2008 article in the local Mail Tribune newspaper which detailed a recent increase in RVTD ridership, most likely due to the escalating price of gasoline. The article further noted that ridership could be increased even further with expansion of RVTD service which is a lofty goal in the face of RVTD's current funding and route/service cuts.

MEASURE 2: PERCENT OF DWELLING UNITS WITHIN ¼ MILE WALK OF THIRTY MINUTE TRANSIT SERVICE

Results here were measured through Geographic Information System (GIS) mapping software. The data was compiled by utilizing GIS and Jackson County Assessor Tax Codes for (existing) 2008 taxlots to determine non-vacant housing in the RVMPO in 2007. The study found that there were 51,883 dwelling units in the RVMPO and that 17,684 of those dwelling units were within ¼ mile of RVTD transit service. In the year 2000, MPO staff measured 12% of all RVMPO dwelling units within the prescribed ¼ mile distance. By 2007, this figure had jumped to 34%, exceeding the established 2010 benchmark of 30%.

MEASURE 3: PERCENTAGE OF COLLECTORS/ARTERIALS WITH BICYCLE FACILITIES

Results related to this measure were also measured by utilizing GIS software. Through this measurement, RVMPO staff found that 37% of MPO roadways had bike lanes on at least one side of RVMPO collector and arterial roadways. As measured for 2007, out of a total of 3,866,156 linear feet of collectors and arterials in the MPO, 1,422,583 linear feet, or 37%, were collectors and arterials with bike lanes. The MPO has already attained the 2010 benchmark percentage. For purposes of these analyses, state and city standards for bike facilities may differ. However, if a local jurisdiction considers a facility a bike path, it was counted. Furthermore, if a bike facility met state standards, RVMPO staff counted those facilities as well.

MEASURE 4: PERCENTAGE OF COLLECTORS AND ARTERIALS IN TOD AREAS WITH SIDEWALKS

For purposes of this entire analysis, not just this specific measure, a TOD area is considered to be one of three things: a transit-oriented development, an activity area, and/or a downtown/central business district. Again, goals established here were measured by utilizing GIS software. In the year 2000, approximately 47% of collector and arterial streets in TODs (Transit Oriented Developments) had sidewalks on at least one side. As measured for 2007, this figure had risen to 55%. In 2007, the RVMPO had 93,925 total linear feet of collectors and arterials in designated TOD areas. Of that total, at least 51,678 linear feet were improved with sidewalks on at least one side. This 55% figure for 2007 is edging extremely close to the 56% benchmark set for 2010.

MEASURE 5: PERCENTAGE OF NEW DWELLING UNITS IN MIXED-USE/PEDESTRIAN-FRIENDLY AREAS

Measurements here were determined by tracking building permits and comparing the ratio between new dwelling units in TODs (considered a mixed-land-use overlay) and total new dwelling units in the MPO. From 2000 through 2007, 8,609 new dwelling units were permitted inside the RVMPO boundary. Of those, 863 dwelling units were permitted at a density of 10 units per acre or greater (lot size no larger than 4,356 square feet per unit) within designated TODs, downtowns and activity centers. This represents a figure of 10% in 2007. The 10%

figure slightly exceeds the 2005 benchmark, but falls far short of the 2010 benchmark percentage of 26%.

It is reasonable to conclude that the 26% benchmark may not be attainable based on past development trends. However, RVMPO staff will continue to monitor the situation. It is conceivable that petrol prices will cause any permits issued to be within established TODs or at least within ¼ mile of qualifying commercial buildings. Anticipated dwelling location within these areas could be expected with the rising cost of gasoline. Additionally, smaller lot sizes may become more attractive as the trend toward an aging population continues.

MEASURE 6: PERCENTAGE OF NEW EMPLOYMENT IN MIXED-USE/PEDESTRIAN FRIENDLY AREAS

Data and measurements here were estimated through review of annual employment files issued from the State of Oregon. The percentages quoted here represent a ratio of new employment in TODs (mixed-use developments) as compared with total new employment in the MPO. According to assumptions contained in the currently adopted Regional Transportation Plan (RTP) for the MPO, a total of 13,256 new jobs were created in the MPO in the period 2000-2007. Of this total, 2,257 jobs have been created in qualified TOD/downtown/activities center locations. The ratio represented here is 17% which is well above the 2005 benchmark of 9% and a little short of the 2010 benchmark of 23%.

MEASURE 7: ALTERNATIVE TRANSPORTATION FUNDING

This represents funding committed to transit or bicycle/pedestrian/TOD projects. Amounts listed are intended to represent half of the RVMPO's established accumulation of discretionary Surface Transportation Program (STP) funding. As of 2007 this amount was determined to be $1.4 million. The specific sums shown as benchmarks and the target for this measure are estimates based on the best financial forecasts available at the time the measure was adopted (2002). The actual financial commitment of this measure is half of the total STP allocation.

The RVMPO has fulfilled this measure by allocating the funding to RVTD for enhanced transit service. The measure calls for the funds to "be used to expand transit service, or, if RVTD is successful with a local funding package, to fund bicycle/pedestrian and TOD-development supportive projects."

Table B-14 below summarizes RVMPO funding to RVTD since the measures were acknowleged.

.Table B-14- RVMPO Funding to RVTD, 2002-2012 (as of Feb. 18, 2009)

Key #	Project Description	Year	Fund Source	RVMPO Share
	MPO STP Transfer	2002	STP	$252,022
	MPO STP Transfer	2003	STP	$368,077
13243	MPO STP Transfer	2004	STP	$563,380
13244	MPO STP Transfer	2005	STP	$607,439
13365	MPO STP Transfer[1]	2006	STP	$644,533
13366	MPO STP Transfer	2007	STP	$593,720
14435	MPO STP Transfer	2008	STP	$582,083
14436	MPO STP Transfer	2009	STP	$655,926
15661	MPO STP Transfer	2010	STP	$666,509
15662	MPO STP Transfer	2011	STP	$688,237
New	MPO STP Transfer	2012	STP	$710,674
New	MPO STP Transfer	2013	STP	$733,842
			Total STP	**$7,066,442**
13548	RVTD Employer Trip Reduction Incentive Programs	2006	CMAQ	$59,222
13549	RVTD Rogue Valley TMA Programs	2006	CMAQ	$109,471
13552	RVTD Multi-modal Enhancement Programs	2006	CMAQ	$21,535
13554	RVTD Passenger Information Systems Programs	2006	CMAQ	$325,720
15246	Diesel Bus Replacement	2008	CMAQ	$1,047,587
15666	RVTD On-board Diagnostic System - ITS	2011	CMAQ	$98,703
			Total CMAQ	**$1,662,238**
	Total STP and CMAQ 2002 to 2013			**$8,728,680**

Status of RVTD CMAQ-Funded Projects

KN 13548- Funds have offset costs for 5 new bus pass programs in 2008. Fund also supports 10% of Nathan Broom's staff position. Approximately $40,000 is remaining.

KN 13549- RVTD is looking to partner with the Chamber to create RVTMA. Approximately $60,000 is remaining to fund a portion of Nathan Broom's salary in the current next FY and establish association.

KN 13552- Project expected to be complete March 09- One of Two covered bicycle facility is being installed directly across from the Front Street Transfer Station. Project only covered the cost of one facility and went over budget by about $2,000 (pulled from RVTD funds).

[1] This 2006 MPO STP transfer amount includes $65,000 for the operation of RVTD Route 4 for the month of August 2006.

KN 13554- RVTD awarded contracting services to JRH in fall 2008 to oversee selection of technologies through installation. Project expected to be completed by the end of 2009.

KN 15246- Buses were ordered in 2008 and are expected to arrive July 2009.

KN1034- This is a 2011 project and funds are not available yet

If it's of any interest, RVTD will be submitting CMAQ applications for the following projects:

-Complete the second of the two bicycle parking structures.
- Launch a High school Carbon Footprint and Interactive transit education class
- Increase headways to 15 min. on Route 10
- Add 2.5 miles of new service area to the East Medford Route
- Purchase 3 alt. fuel vehicles
- purchase 30 3-bike bike racks for all of fixed-route fleet (possibly covered through stimulus bill)

SUMMARY:

In conclusion, 2007 measurements of the RVMPO's achievements at attaining Alternative Measure goals reveal generally good success. All but one of the 2005 benchmarks have been exceeded and two 2010 benchmarks have already been exceeded or equaled as well. Four other 2010 benchmarks are shown to be attainable.

Appendix B

Alternative Mobility Standards

Preface

In December 2000, the Oregon Transportation Commission (OTC) approved a request by the RVMPO to reduce State mobility standards near the South Medford Interchange. OTC approval of lowering the highway mobility standards near the South Medford Interchange was granted on the condition that a set of actions assuring continued safe traffic operations was implemented in a timely manner. The "action plan" approved by the OTC consists of thirteen specific actions and requires that a monitoring plan be developed to track their implementation. The monitoring plan, called for in action #13 of the plan, has the specific objectives of: 1) Tracking the development that occurs as a result of changing the mobility standards in the South Medford Interchange area; and 2) Tracking the results of the 12 other action items.

Several actions have been completed and will not require future monitoring. Other actions will be monitored using a separate process. Seven actions have been identified that will require some degree of monitoring and/or follow-up. In these cases, a proposed timeline and methodology was established for how and when implementation of the actions will be monitored. This document is an update of a document completed in May 2003. Revisions reflect information provided by Medford Planning Department and Engineering Department staff.

Construction of the new South Medford Interchange to address capacity needs is to be completed in mid 2009.

Alternative Mobility Standards Action Plan

Action #1:
Work completed as part of the South Medford Interchange (SMI) Project will address deficiencies in the bicycle/pedestrian network in the vicinity of the interchange. Improvements may include extensions and/or improved access to the Bear Creek Greenway, bicycle lanes and other improvements along Barnett Avenue and improved pedestrian crossings and access to businesses.

Progress to Date:

The following bicycle/pedestrian projects have been planned to be implemented in coordination with the SMI project. Some projects will occur prior to the construction of the interchange and are not directly associated with the new interchange.

- **Highland:** Add sidewalk to west side from Barnett to Siskiyou; design to include a 10' planted buffer between curb and sidewalk; re-stripe from Greenwood to Siskiyou to provide for on-street bike lanes on both sides.

- **Bear Creek Greenway:** extend south from Barnett Road through the interchange area, under I-5, and continuing south along the west side of I-5; construct 2 connections to the Greenway at Barnett.

- **New SMI:** include standard sidewalks and bike lanes on Garfield, Highland, Barnett, Center, and Highway 99.

- **Garfield:** separate sidewalk from curb with 10' planter.

- **Highway 99:** separate sidewalk with 3' planter; west side of Highway 99 to include addition of bike lane.

- **Barnett Rd.:** Add sidewalk to the north side between Bear Creek and Highland Design to include a 10' planted buffer between curb and walk; re-stripe over I-5; modify bridge curbs/walks for standard sidewalks and bike lanes; extend bike lanes to Ellendale.

Timeline for Completion:

The SMI project is scheduled for construction in mid-2009. The bicycle/pedestrian projects identified are to be completed either prior to or concurrent with construction of the SMI project.

Monitoring Schedule:

This action requires that bicycle/pedestrian projects be included as part of the SMI project. As such, no continual monitoring of progress is necessary prior to construction of the SMI. An assessment of progress on the SMI and the bicycle/pedestrian projects linked with its construction was reported to ODOT and the RVMPO by June 30, 2006, prior to the start of construction.

2009 Update:

The project is expected to be completed in mid-2009, therefore information below appears for historical purposes only. Actions listed were completed on dates shown.

Action #2:
The City of Medford RTP projects will be implemented to provide local connectivity, facilitate the use of alternative modes, and reduce demand on state highways. Several of these projects will specifically address congestion problems in the SMI area.

Progress to Date:

The following projects have been completed:

- **Delta Waters**, Haul to Lear - New roadway;

- **Garfield**, Holly to Hwy 99 - New roadway;

- **Hillcrest**, Valley View to Black Oak - Sidewalks/bike lanes;

- **Juanipero**, Olympic to Golf View - New roadway;
- **McAndrews**, Brookdale to Foothill - New roadway;
- **McAndrews**, Foothill to Tamarack - New roadway;
- **Miscellaneous locations** - City-wide sidewalk improvements.

The following projects are scheduled for completion by 2005:

- **Holly**, Garfield to Holmes - New roadway;
- **Jackson**, Berkeley to Valley View – Widening;
- **Lozier**, Cunningham to Stewart - New roadway;
- **Peach**, Stewart to Garfield – Widening;
- **Poplar**, McAndrews to Progress – Widening;
- **Columbus**, Service Center to Sage - Realign & new roadway;
- **N. Phoenix**, Cherry to Hillcrest - New roadway.

The following projects are scheduled for completion between 2006-2010:

- **South Medford Interchange** - New Interchange;
- **Garfield**, Peach to King – Widening;
- **Black Oak**, Hillcrest to Acorn – Widening;
- **Delta Waters Rd**, Provincial to Foothill – Widening;
- **Springbrook**, Cedar Links to Delta Waters – Widening;
- **Highland**, Keene to Main – Widening;
- **Table Rock**, Merriman to I-5 – Widening.

The following projects are scheduled for completion between 2011-2023:

- **Spring**, Crater Lake to Sunrise – Widening;
- **Spring**, Sunrise to Pierce – Widening.

This project has been eliminated due to the accelerated timing of the new interchange:

- **S. Medford Interchange**, SB off-ramp - Add left-turn lane.

Timeline for Completion:

Seven projects are scheduled for completion by 2005, seven projects are scheduled for completion by 2010, and two others are scheduled for completion before the end of the RTP planning horizon (2023).

Monitoring Schedule:

Continual monitoring of the progress on these projects is part of on-going RVMPO planning responsibilities. Therefore, no additional monitoring of these projects should be necessary. An assessment of progress on these projects will be made and reported to ODOT and the RVMPO by June 30, 2006.

2004 Update:

Several projects differ from the original progress report:

2005 projects:

- Jackson, Berkeley to Valley View – Widening. This project is scheduled in the MTIP to let in 2006.
- Lozier, Cunningham to Stewart – New roadway. The MTIP shows that this project was completed in FY 2003.
- Peach, Stewart to Garfield – Widening. This project is scheduled in the MTIP to let in 2006.
- Poplar, McAndrews to Progress – Widening. The MTIP shows this project was completed in FY 2003.
- Columbus, Service Center to Sage – Realign and new roadway. This project is not in the MTIP and will not be constructed in this timeframe.
- N. Phoenix, Cherry to Hillcrest – new roadway. The MTIP shows this project was completed in FY 2003.

With these changes, seven projects are scheduled for completion by 2005, seven projects are scheduled for completion by 2010, and two others are scheduled for completion before the end of the RTP planning horizon (2023).

Action #3:
If the SMI project is not included in the 2002-2005 STIP, the City of Medford will develop an access management plan that will include projects to control access in the vicinity of the current interchange. Project implementation will begin following adoption of the access management plan and be complete by 2010 or when the SMI project is funded in a subsequent STIP, whichever comes first.

Progress to Date:

The SMI project has been included in the 2002-2005 STIP (Key # 10964).

Timeline for Completion:

The SMI project is currently scheduled for completion by 2007. The requirements of this action have been fulfilled.

Monitoring Schedule:

This action requires no further monitoring.

2004 Update:

The action is complete. No further monitoring is required.

Action #4:

Funding of RVTD's TDM program shall continue at existing levels and increase as funds become available.

Progress to Date:

Funding for the TDM/Rideshare program (operated by RVTD) went from $89,000/year in 2000 to $131,000 in 2003. The Draft 2004-2007 STIP estimates this funding to increase to $146,000 in 2005 and continue at that level through 2007. There is no indication at this time that funding for this program will decrease at any time in the future.

Timeline for Completion:

Funding allocations for RVTD's TDM/Rideshare program will be tracked until the SMI project has been completed. To date, this action has been successfully implemented.

Monitoring Schedule:

As long as alternative mobility standards remain in place at the South Interchange, the RVMPO shall insure that funding for the TDM program remains at current, or increased funding levels. An assessment of progress on this action will be made and reported to ODOT and the RVMPO by June 30, 2006.

2004 Update:

Funding of the TDM is continuing. The most recent version of the STIP allocates $146,000 per year through the planning period.

Action #5:
A study (currently underway) will be completed to examine the feasibility and determine possible locations for Park-and-Ride facilities within the Rogue Valley Transportation District's service boundary. Particular emphasis will be made to reduce peak-hour demand on state highways. Funding has been allocated in the 2000-2003 STIP ($800,000) for construction of park-and-ride facilities.

Progress to Date:

The park-and-ride study for RVTD has been completed. This study examined the feasibility of park-and-ride facilities and recommended locations for their placement. Based on the findings in the study, the recommendations were as follows:

1) The construction of any park-and-ride facilities in the Rogue Valley should be part of an integrated transport package with clear objectives. The combined effect of these measures should be to reduce dependency on the single occupant vehicle.

2) Until park-and-ride facilities can offer time and/or cost savings to commuters, RVTD should pursue leased (or joint-use) as opposed to owner-operated arrangements when considering the development of park-and-ride facilities.

3) Parking fees and/or parking space reductions at the destination of transit patrons should be implemented as part of the development of park-and-ride facilities serving that destination.

4) RVTD should investigate the feasibility of direct (or "shuttle") service to employment centers or other major destinations as part of any effort to establish park-and-ride facilities

Due, in part, to the study's findings relative to the lack of demand for park-and-ride facilities in the Rogue Valley area, approximately $420,000 of the funding previously allocated in the 2000-2003 STIP was diverted at ODOT's request to other projects. This action left funding for park-and-rides facilities in both Ashland and Talent (total cost of $337,000) but eliminated funding for park-and-rides in Medford and Central Point.

Timeline for Completion:

The study has been completed. The study's findings did not support the present viability of park-and-ride facilities to reduce peak-hour travel demand near the interchange. There are no plans at this time to construct park-and-ride facilities in the vicinity of the SMI.

Monitoring Schedule:

This action requires no further monitoring.

2004 Update:

This action requires no further monitoring.

Action #6:
The City of Medford will work with RVTD and area employers to establish a Transportation Management Association (TMA) that will address employee-related congestion problems in the SMI area. Efforts will focus on the implementation of TDM programs.

Progress to Date:

The RVTMA has been formed with its current membership consisting of RVTD and RVCOG. Discussions are ongoing with the City of Medford, Jackson County and ODOT concerning their

membership in the TMA. Monthly meetings started in June of 2002, with discussions about the intent and structure of the TMA. Staff from the City of Medford, Jackson County, RVCOG, and RVTD are regular participants at TMA meetings. Beginning with the November meeting, an effort has been made to bring additional employers into the group. Participants to date have included Providence Medford Medical Center, Rogue Community College, Bear Creek Operations, the Bureau of Land Management, and ODOT.

In the last three months, the TMA has heard a series of informational presentations. In November, ODOT presented on upcoming I-5 viaduct construction impacts. December's meeting saw Rick Williams, director of what is probably Oregon's most successful TMA, talk about the challenges and successes of the Lloyd District TMA. In January, Kathy King from the Oregon Office of Energy talked about the Oregon Business Energy Tax Credit (BETC).

RVTD has applied for CMAQ funding to pay for three years of TMA staffing and activities. Recruiting additional members and encouraging public sector employer members to actually implement TDM strategies are the near term challenges for the RVTMA.

Timeline for Completion:

The alternative mobility standards action plan set a January 2003 timeline for establishment of a TMA and adoption of a TDM program. Although the TMA has been established, its membership is limited to only two government organizations and a TDM program has not been adopted. In the years 2004-2007, funding will be made available through CMAQ to boost the TMA's efforts. This funding would serve to build membership and begin to assist employers in implementing various TDM strategies with an initial focus on the South Medford Interchange area. Staff proposes that a June 30, 2004 deadline be established for adoption of TDM program.

Monitoring Schedule:

Quarterly monitoring of this task is proposed beginning in FY 2004. A memorandum will be prepared in the first through fourth quarters detailing progress made in boosting membership in the TMA and implementing TDM programs. Monitoring of this task will continue on this basis until the SMI project is complete.

2004 Update:

The City of Medford has now joined the TMA program and is in discussion regarding TDM measures. Reserved parking spaces for those carpooling will be parked, along with a guarantee of a ride home in the case of an emergency. The program was anticipated to begin in June 2004. Other discussion continues regarding incentives for using alternative modes to get to work, including the feasibility of RVTD providing free bus passes for City employees on a trial basis.

Action #7:
The RVMPO will comply with the Transportation Planning Rule's (TPR) requirement to demonstrate a reduced reliance on the automobile. Work is scheduled to be completed by May of 2001 on an alternative to the TPR measurement of 5% VMT reduction. The alternative measure will use benchmarks to demonstrate greater usage of alternative modes such as bicycling, walking, and transit. Benchmarks will also demonstrate a reduced reliance on the automobile.

Progress to Date:

In December of 2001, the Land Conservation and Development Commission (LCDC) approved RVMPO's proposal for adopting an alternative to the TPR's 5% VMT/capita reduction requirement. The RVMPO proposed a set of seven measures as follows:

Measure 1: Transit and bicycle/pedestrian mode share: Increase transit's mode share from 1% to 3% and bicycle/pedestrian mode share from 8.2% to 11% over a 20-year planning period.

Measure 2: Percentage Dwelling Units (DU's) w/in ¼ mile walk to 30-min. transit service: Increase from 12% to 50%.

Measure 3: Percentage Collectors and arterials w/ bicycle facilities: Increase from 21% to 60%.

Measure 4: Percentage Collectors and arterials in TOD areas w/ sidewalks: Increase from 46% to 75%.

Measure 5: Percentage Mixed-use DUs in new development: 49% of new development between 2000 and 2020.

Measure 6: Percentage Mixed-use employment in new development: 44% of new development between 2000 and 2020.

Measure 7: Alternative Transportation Funding: Provide $6.4 million for transit, bicycle and pedestrian projects (represents ½ of the MPO's estimated accumulation of discretionary funding (STP) from 2000 to 2020).

Timeline for Completion:

Implementation of this action has been completed.

Monitoring Schedule:

This action requires no further monitoring. Implementation of the alternative measures will be monitored through a separate process at 5-year intervals beginning in 2005 and continuing through 2020.

2004 Update:

This action requires no further monitoring.

Action #8:
The RVMPO will identify funding possibilities to increase transit service frequency within the MPO to a minimum of 30 minutes headway during peak hours and add transit service to the Southeast Medford area.

Progress to Date:

In 2001, the RVMPO approved funding "priority" transit routes (serving TOD areas as well as White City) using one-half of the MPO's share of STP funds through the year 2020. These funds will pay for 30-minute transit service on Route 40 (Central Point) and add transit service to the Southeast Medford area.

It remains a top priority for RVTD to insure 30-minute headways on all routes during peak hours. Although potential funding to accomplish this goal has been identified in the RTP, it will most likely be necessary for a local revenue source (such as a property tax increase or a new payroll tax) to be implemented.

Timeline for Completion:

Implementation of this action has been completed.

Monitoring Schedule:

This action requires no further monitoring.

2004 Update:

This action requires no further monitoring.

Action #9:
The City of Medford will explore signal prioritization, queue jumper lanes, bus rapid transit facilities, increased hours of service, increased service frequency, and increased transit coverage options in order to increase the attractiveness of transit in the City.

Progress to Date:

The City is working with RVTD to explore possibilities for improving transit service in Medford as specified in this action. The majority of this work is being coordinated through the Medford TSP process. Nothing has been formalized to date. A signal prioritization project is being explored through the Rogue Valley Intelligent Transportation Systems (RVITS) committee, a subcommittee to the RVMPO Policy Committee.

Timeline for Completion:

The Medford TSP is scheduled to be partially adopted by the end of FY 2003. At this time, a formal evaluation of potential transit improvements as specified in this action will have been explored by Medford.

Monitoring Schedule:

This action requires no further monitoring.

2004 Update:

The Medford TSP was adopted by the City Council in November 2003. It was partially acknowledged by the Department of Land Conservation and Development on June 17, 2004. Areas needing additional work include (1) a plan to revise land uses to reduce reliance on the

automobile, and (2) a parking plan to assist planned efforts to reduce reliance on the automobile. The compliance order requires submission of a work program to reduce reliance on the automobile by December 31, 2005, and development of a parking plan by June 30, 2005.

Action #10:
The RVMPO will continue to implement the recommendations made in the Transit Oriented Development or "TOD Study" completed in August 1999. The objectives of the study were to: 1) reduce reliance on the automobile in order to meet the Oregon Transportation Planning Rule's (TPR) mandated 5% vehicle miles traveled (VMT) reduction; and 2) identify alternative land use strategies to meet 060 analysis of the TPR. TGM grants are currently being used to implement TOD sites in Phoenix, Medford, and Central Point.

Progress to Date:

Ten candidate high-growth areas, previously identified in the 1995 RTP, were analyzed in the TOD Study. Of the original ten TOD sites, three are proceeding towards development, three are undergoing analysis, and four have been removed from consideration. The three TOD sites closest to development are the Central Point TOD, the Medford SE Plan, and the Phoenix City Center Plan. The following is a brief summary of the status of TOD development in the RVMPO.

- **Central Point TOD – Status.** Central Point has adopted changes to its comprehensive plan map and implementing ordinances to establish a fully compliant TOD center in the northwest section of the city. Transportation infrastructure needs are currently being programmed in the 2002-2005 TIP/STIP.

- **Medford TOD Development – Status.** The four sites currently being planned for TOD development include: Downtown, Southeast, Delta Waters and West Medford. The Medford Urban Renewal Agency has secured a TGM grant that will aid in the development of codes and standards for the Downtown TOD. The City of Medford has secured a TGM grant to implement the Southeast TOD development. Much of the planning for this development has been completed and portions will soon be under construction. Preliminary plans have been developed through the Medford TSP for implementing the other TOD areas near Delta Waters and West Medford.

- **Phoenix City Center TOD – Status.** Phoenix has developed a mixed-use plan for the City Center area that incorporates TOD policies and standards consistent with the MPO's TOD Study. The TOD site includes much of the existing downtown area, and the City is committed to urban-centered, pedestrian-friendly growth. The City has conducted a marketing feasibility study for an independently prepared City Center Plan and will adopt amendments to its municipal code that foster transit-oriented development.

Timeline for Completion:

TOD developments will be implemented in the MPO over the course of several years. No timeline has been developed for their completion.

Timeline for Completion:

TOD developments will be implemented in the MPO over the course of several years. No timeline has been developed for their completion.

Monitoring Schedule:

Monitoring of TOD development in the MPO area will be accomplished through the alternative measures monitoring plan. This action requires no further monitoring.

2004 Update:

The Southeast Plan Area TOD is nearing completion of a special plan and code standards to implement its function. Adoption is anticipated in late 2004

The Downtown TOD implementation is contained in the City Center 2050 Plan now being prepared to start the formal adoption process. Adoption is anticipated in summer 2004.

Work on the West Main Street TOD and the Delta Waters TOD has not begun, other than many of the standards identified in the other two TODs will be useful for these. Medford applied for a Technical Assistance Grant for work on the West Main Street TOD, and while it was not approved, the city was informed that TGM funds not expended in FY 2004 may be available to assist in the evaluation.

Action #11:
ODOT and the City of Medford will implement portions of a Congestion Management System which will include: 1) frequent (semi-annual) optimization of signalized intersections in the South Medford Area; and 2) construction of variable message signs in the vicinity of the SMI. Other possibilities include live camera monitoring, media alerts, and other methods of informing travelers of possible delays and detours awaiting them ahead. [There is currently a message sign display installed on Southbound I-5 between Central Point and Medford. Funding has been programmed for the construction of an additional sign south of the interchange.]

Progress to Date:

The Congestion Management System called for in the above action has been implemented as follows:

The City currently reviews signal timing on a regular basis, as directed by the Manual for Uniform Traffic Control Devices. Although the signal timing is not optimized on a semi-annual basis, it is optimized frequently enough to account for any significant variations in travel patterns in the SMI area. The City has indicated that semi-annual signal optimization would not be practical or logical.

Variable Message Signs have been located at both ends of Medford, within close proximity to the SMI.

Medford has a traffic camera installed at the SMI and they currently do traffic news alerts. Work on the I-5 Viaduct has also provided many avenues for driver notification along with ODOT's trip check site on the internet.

Other improvements, consistent with improvements called for in this action, will be identified within the Medford TSP, scheduled for partial adoption during FY 2003.

Timeline for Completion:

Implementation of this action has been completed.

Monitoring Schedule:

This action requires no further monitoring.

2004 Update:

The Medford TSP identified congestion management projects for the South Medford interchange area.

Action #12:
The City of Medford will address possible solutions for the Highway 99 @ Stewart Avenue intersection, as well as other nearby intersections, as part of their TSP adoption process.

Progress to Date:

The transference of ownership of the Highway 99 and Stewart Avenue intersection was one of the conditions of approval of the alternative mobility standards. The following language was included in the proposal to the Oregon Transportation Commission:

Technical analysis by ODOT did not reveal a potential solution for the intersection of Highway 99 @ Stewart Avenue. The new South Medford Interchange project, which will solve v/c problems at the interchange, does not solve problems here. However, considering the urban nature of the proposed and existing development surrounding the intersection, and the proximity of the intersection to City-owned portions of Highway 99, there is a strong argument to be made that ownership of the intersection should be transferred to the City of Medford and so conform to the City's mobility standards. Under this scenario, the intersection would no longer need to operate under the State's mobility standards and would instead revert to the City's standards. It's important to note that the safety issues related to lowering mobility standards on the I-5 off-ramps, i.e., high speed differentials, are not a factor for this intersection.

The proposed alternative mobility standard of v/c >1.0 for two hours per day would remain in place until ownership of the intersection could be transferred to the City. This transference of ownership would likely occur in the next five years and possibly before exceedence of the current State mobility standard (v/c .90) for this intersection.

Although the Draft Medford TSP does not address the intersection of Hwy 99 and Stewart Ave., ODOT and the City are currently working on the jurisdictional exchange for this intersection, currently scheduled to occur by the end of this summer. ODOT also is developing plans to construct dual left turn lanes onto Stewart for northbound traffic. The turn lanes will be completed as part of the SMI project and will be done concurrently with the SMI project. The turn lanes should enable the intersection to function according to ODOT highway mobility standards until 2030.

Timeline for Completion:

The jurisdictional exchange for the Highway 99 and Stewart Avenue intersection should be complete by the end of summer 2003. Dual left turn lanes, designed to allow the intersection to function according to ODOT mobility standards, are scheduled for construction concurrently with the SMI project in 2006.

Monitoring Schedule:

This action requires that congestion problems be addressed at the Highway 99 and Stewart Avenue intersection. Additionally, the OTC anticipated that the intersection would be transferred to City ownership prior to exceedence of State mobility standards. Both of these requirements are on-track to completion and therefore further monitoring should not be necessary. An assessment of progress on the SMI and the related construction of dual-left turn lanes will be reported to ODOT and the RVMPO by June 30, 2006, when the SMI project is scheduled to be nearing construction.

2004 Update:

Not action is required at this time. Work will be completed with the SMI project.

The project is scheduled to be let in February 2006 and should take two years to complete.

Action #13:
The RVMPO, in conjunction with the City of Medford and ODOT, will develop a monitoring plan with the objectives of: 1) Tracking the development that occurs as a result of changing the mobility standards in the SMI area; and 2) Tracking the results of the 12 action items proposed above. An expected outcome is that new development is consistent with policies as set forth in the Oregon Highway Plan (e.g. OHP Policy 1B).

Progress to Date:

This memo will serve to implement Action #13.

Timeline for Completion:

Refer to "monitoring schedule" below.

Monitoring Schedule:

Task one of this action - tracking development related to changing the mobility standards - has been identified as a work task in RVMPO's FY2004 Unified Planning Work Program (UPWP). The work will be done according to the following methodology and schedule:

Collect documentation (applications, etc.) associated with any developments potentially affected by a lowering in the mobility standard at the SMI.

Timeline: Complete by end of first quarter FY 2004.

Deliverable: Tech memo summarizing completed and proposed developments affected by lowering of State mobility standard in the SMI area.

Report on the development's consistency with policies in the Oregon Highway Plan.

Timeline: Complete by end of second quarter FY 2004.

Deliverable: Tech memo summarizing consistency issues relating to Oregon Highway Plan and development in the SMI area affected by lowering of State mobility standards.

These work tasks will serve to track developments completed and proposed from the time when the lowering of mobility standards occurred (December 2000) until the second quarter of FY 2004 (December 2003). Further monitoring will be required on a periodic basis until the construction of the SMI. Staff proposes to continue this monitoring on an annual basis beginning in FY 2005.

Task two of this action has been addressed with the completion of this document.

2004 Update:

According to the City, no comprehensive plan or zoning map amendments have been approved since Alternative Measures were approved.

Table B-15: Summary of Action Plan and Monitoring Schedule

#	Summary of Action	Monitoring Schedule
1	Address bicycle/pedestrian deficiencies at or near SMI	Report progress to ODOT and RVMPO by June 30, 2006.
2	Implement City of Medford planned projects to improve connectivity and address congestion problems near SMI.	Report progress to ODOT and RVMPO by June 30, 2006.
3	Include SMI project in 2002-2005 STIP or develop access management plan.	This action requires no further monitoring.
4	Insure funding of RVTD's TDM program.	Report progress to ODOT and RVMPO by June 30, 2006.
5	Complete park-and-ride study and construct facilities near SMI if feasible.	This action requires no further monitoring.
6	City of Medford to work with RVTD and area employers to establish a TMA focusing on implementation of TDM programs.	Report progress to ODOT and RVMPO on a quarterly basis.
7	Develop alternative measures to demonstrate reduced reliance on auto.	This action requires no further monitoring.
8	RVMPO to identify funding possibilities to increase transit service within the MPO to minimum 30-minute peak-hour headways and add service to Southeast Medford.	This action requires no further monitoring.
9	City of Medford to explore strategies to increase attractiveness of transit.	This action requires no further monitoring.
10	Continue to implement recommendations from TOD study.	This action requires no further monitoring.
11	ODOT and City of Medford to implement Congestion Management System.	This action requires no further monitoring.
12	City of Medford to address solutions for Hwy 99/Stewart Ave. intersection as part of TSP.	Report progress to ODOT and RVMPO by June 30, 2006.
13	RVMPO to track development near SMI and develop monitoring plan.	Complete tech memos by June 2004; report on annual basis beginning in FY 2005.

Implementing Action 13 (1) of the Alternative Mobility Standards Action Plan requires development of a Monitoring Plan to track development that occurs as a result of changing the mobility standards in the South Medford Interchange area. The process involves developing a methodology for determining the location and effect of any new development that has been approved as a result of the change in mobility standards.

The area of concern in the South Medford Interchange area is an approximately ¾ mile radius around the existing interchange. The chief areas of concern are the southbound off-ramp, the northbound off-ramp, and Highway 99 at the Stewart Avenue intersection.

During fiscal year 2001, the Rogue Valley Metropolitan Planning Organization (RVMPO) amended the Regional Transportation Plan (RTP) to include an Action Plan for the South Medford Interchange area, until a new interchange can be constructed. The RTP amendments were required at the time because, although the project had an unusually high local financial commitment, state funding in the near term was considered unlikely – possibly not until 2010. Because of growing congestion near the existing interchange, alternative mobility standards were therefore proposed to be adopted for the 2000-2020 time period, with the provision that they would be in place only until the new interchange is constructed. Phasing of the projects to

achieve the standards was proposed to coincide with the STIP update process so that, when the new interchange project was included in the STIP. The measures would cease.[1] The interchange project was included in the 2002-2005 STIP, with construction anticipated to be completed in 2007.

The City's Transportation System Plan includes access management plan includes a discussion of the access management conditions in the vicinity of the South Medford Interchange. As a condition of receiving OTIA funding for the interchange, the City is required to develop land use and subdivision ordinances that address access control measures and signal spacing standards consistent with the functional classification of roads, and standards to protect the future operation of state highways. Progress in developing these ordinances must be made prior to contracting for interchange construction. Draft access management and signal spacing standards are currently under development by the City's Public Works Department.

Tracking development related to the revised mobility standards was identified in the RVMPO's FY2004 Unified Planning Work Program (UPWP). The work was to be done according to the following methodology:

Collect documentation (applications, etc.) associated with any developments potentially affected by a lowering in the mobility standard at the SMI, summarizing completed and proposed developments affected by lowering of State mobility standard in the SMI area.

Report on the development's consistency with policies in the Oregon Highway Plan, summarizing consistency issues relating to Oregon Highway Plan and development in the SMI area affected by lowering of State mobility standards.

The Medford City Planning staff reported that no new developments have been approved that required application of the alternative mobility standards established in December 2000. Staff indicated that the only developments affected by the standards are those that require zone changes to increase the intensity of development, such as higher density residential or increased development in commercial or industrial zones. No such zone changes have been approved.

Monitoring will continue on an annual basis until construction is completed.