CENTRAL LANE

REGIONAL TRANSPORTATION PLAN

MPO

Moving Transportation into the Future

CENTRAL LANE METROPOLITAN PLANNING ORGANIZATION

REGIONAL TRANSPORTATION PLAN

LANE COUNCIL OF GOVERNMENTS
859 WILLAMETTE STREET, SUITE 500
EUGENE, OREGON 97401

DECEMBER 2011

REGIONAL TRANSPORTATION PLAN

The Central Lane Metropolitan Planning Organization (MPO) is the lead agency for Regional Transportation Planning for the Central Lane County Area. The MPO works with following jurisdictions and agencies in this capacity.

LANE COUNTY OREGON

SPRINGFIELD

EUGENE

Lane Transit District

Oregon Department of Transportation

LCOG

Federal Highway Administration

COBURG OREGON

Federal Transit Agency

Oregon Land Conservation and Development Commission

DECEMBER 2011

CENTRAL LANE METROPOLITAN PLANNING ORGANIZATION

CENTRAL LANE MPO

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Context of Transportation Planning in the Central Lane Metropolitan Planning Organization (MPO) Area

There are four adopted transportation plans which cover the Central Lane MPO area, each representing a process to meet specific federal, state, or local requirements:

TransPlan

Adopted in July 2002, this plan covers the Eugene-Springfield area and was meant to address two separate requirements – federal and state requirements for an MPO Regional Transportation Plan, and state requirements for local agency Transportation System Plans. This plan has been adopted by the cities of Eugene and Springfield, Lane County, Lane Transit District and Lane Council of Governments. TransPlan continues to serve as the local agency Transportation System Plan (TSP) for Eugene and Springfield. Updates to the Eugene and Springfield TSPs are currently under way.

Central Lane MPO Regional Transportation Plan (this document)

The Central Lane MPO Regional Transportation Plan (RTP) represents a required update to the federal RTP . As noted in Chapter 1, the RTP is adopted by the Metropolitan Policy Committee. Additional information on the federal requirements for MPO areas is provided in Chapter 1.

Lane County Transportation System Plan (TSP)

Adopted in May, 2004, this plan covers Lane County and is meant to address state requirements for County TSPs.

City of Coburg TSP

Adopted in September, 1999, this plan covers the City of Coburg and is meant to address state requirements for city TSPs. An update to the Coburg TSP is currently under way.

Clarifying Language on Federal and State Plan Interaction

The 2011 update to the RTP extends the document's planning horizon from 2031 to 2035. Thus, like the update adopted in 2007, the RTP has a planning horizon that goes beyond the planning horizons of the Eugene-Springfield Metropolitan Area General Plan (Metro Plan), the Eugene-Springfield Transportation System Plan (TransPlan) and the City of Coburg's Comprehensive Plan (Coburg Plan). While this update to the RTP accommodates potential future development patterns beyond the planning horizons in the other plans, once the local jurisdictions provide policy and planning direction beyond those planning horizons, the RTP will be updated to reflect that new direction. Thus, even though the RTP has a planning horizon that extends beyond TransPlan, the Metro Plan, and the Coburg Plan, the local jurisdictions will provide the transportation planning and policy direction in accordance with state and local regulations beyond the current planning horizons in the Metro Plan, TransPlan and the Coburg Plan.

In recognition of the fact that the local jurisdictions direct transportation policy and planning, through adoption of their comprehensive plans and transportation system plans, rather than the MPC through adoption of the RTP, this RTP models a range of development patterns to address the 2035 planning horizon. The models used in the RTP are illustrative and are not intended to bind the local jurisdictions transportation policies and/or land use planning. While the RTP's 2035 planning horizon is based on guidance from the local jurisdictions' current comprehensive plans, the 2035 planning horizon is modeled <u>only for the purposes of the RTP</u>. The modeling in the RTP that is beyond the local jurisdictions' planning horizons should not be interpreted as direction/analysis of future land use planning by the local jurisdictions.

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CHAPTER ONE

INTRODUCTION

Chapter 1: Introduction

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The Importance of Transportation

Transportation is one of the key contributors to the Central Lane Metropolitan Planning Organization (CLMPO) region's quality of life and economic viability. Generally, the need for transportation stems from our need to access goods, services, and other people within and beyond the region. The ease by which we are able to get from home to school, to a job, to medical services, to shopping and back again is dependent upon the efficiency and effectiveness of the region's transportation system.

As the region grows, additional demands are put on the system. With limited resources, determining the best means for improving the system and meeting future demand is challenging. The framework for making decisions on the future of the region's transportation system has become more complex in recent years. Federal, state, and local policy calls for consideration of a wide range of factors in the preparation of a regional transportation plan, including:

- ⇨ Identifying the means to reduce reliance on the automobile by increasing the transportation choices available in the region,
- ⇨ Consideration of the interrelationships among the region's land use and transportation,
- ⇨ Consideration of the financial, environmental, and neighborhood impacts of future plans, and
- ⇨ Identifying strategies to maintain and improve the safety of the transportation system.

Ultimately, the most successful transportation plan will be one that enables us to minimize the time and resources required in the future to access the goods and services we need.

Trends and Issues

The region is anticipating significant population and employment growth. The population of the CLMPO area is expected to grow by 25 percent by 2035 from the 2010 base year. Employment in the region is expected to grow by 40 percent during that same period. Should land use patterns and travel behavior continue as they exist today, a forecast of trends from 2010 (the base year for much of the current data) to 2035 points to several issues:

- ⇨ Congestion would rise dramatically, increasing the cost of travel and reducing the efficiency of the region's roadway network. Congested miles of travel would increase from 4.3 percent of total miles traveled to 12 percent, a 182 percent increase. However, vehicle miles traveled per capita would go from 11.73 to 11.69, a slight decrease.
- ⇨ One of the primary roles played by public agencies is in the provision of transportation system infrastructure. Without a balanced approach to the development of future improvements, little change will be made in the transportation choices available to the region and the proportion of drive alone auto trips would increase while the proportion of alternative modes use would decrease. The Regional Transportation Plan strives to achieve a balanced approach, and the proportion of drive alone auto trips is projected to decrease slightly from 2010 to 2035, from 43.9 percent to 43.6 percent.
- ⇨ Shorter trip distance is one factor that contributes to making the use of alternative modes more attractive. The percentage of total trips less than one mile in length would increase by 7 percent.

Overview of the MPO's Regional Transportation Plan

The *Central Lane Metropolitan Planning Organization Regional Transportation Plan (RTP)* guides regional transportation system planning and development in the CLMPO metropolitan area. The RTP includes provisions for meeting the transportation demand of residents over a 20-year planning horizon while addressing transportation issues and making changes that can contribute to improvements in the region's quality of life and economic vitality.

The Metropolitan Policy Committee (MPC) adopts the RTP as the federal Regional Transportation Plan. Federal, state, regional, and local requirements comprise the regulatory framework that shapes the Eugene-Springfield region's transportation planning process. The two most influential pieces of regulatory guidance are the federal *Safe Accountable Flexible Efficient Transportation Equity Act – A Legacy for Users* (SAFETEA-LU) and the Oregon *Transportation Planning Rule (TPR).* Urbanized areas with a population of 50,000 or more people are required by federal statute to have a regional transportation plan that demonstrates consideration of several factors, such as system preservation and efficiency, energy conservation, and congestion relief. The plan must also be in compliance with National Ambient Air Quality Standards and be constrained to financial resources reasonably expected to be available.

In compliance with provisions in SAFETEA-LU and the TPR, the RTP contains transportation policies and expected actions and is financially constrained to revenues reasonably expected to be available. The RTP includes demonstration of compliance with federal and state air quality requirements, a description of the plan amendment process, and documentation of the plan update public involvement process.

The ongoing nature of regional transportation planning allows the RTP to be a dynamic plan of action for the future transportation system, rather than a static snapshot in time. The range of implementation actions and plan amendment and update processes ensure that the RTP will adapt to meet changing conditions within the region, as well as adapt to residents' changing needs. The plan's implementation and further refinement will continue through the collaborative efforts of citizens and organizations that own, operate, regulate, and use the transportation system.

The RTP is particularly important for guiding transportation public policy and investment decision making over the three- to five-year period following plan adoption, until the next plan update. Federal metropolitan planning regulations require the transportation plan to be reviewed and updated at least every four years in maintenance and nonattainment areas and at least every five years in attainment areas. The Eugene-Springfield region (the area within the combined Eugene-Springfield Urban Growth Boundaries) is designated as a maintenance area for carbon monoxide and designated as a nonattainment area for particulate matter (PM_{10}).

Figure 2, Context for the RTP, illustrates how the RTP is integrated into the overall transportation planning regulatory framework.

The RTP establishes the framework upon which the region's public agencies can make consistent and coordinated planning decisions regarding inter- and intrajurisdictional transportation. The regional planning process ensures that the planning activities and investments of the local jurisdictions are coordinated in terms of intent, timing, and effect. The RTP sets forth the long-range policy framework for decision making for the following elements of the region's multi-modal transportation system:

- ⇨ Regional roadways,
- ⇨ Regional transit system,
- ⇨ Regional bikeways and pedestrian circulation,
- ⇨ Regional goods movement (multiple modes), and
- ⇨ Regional aspects of other modes, including air, rail, and inter-city bus service.

Other policy documents and ordinances, such as refinement plans and transportation system plans (TSPs), set forth guidelines for elements of the transportation system that are local rather than regional in nature.

Implementation actions accompany the **policy element** as a core component of the RTP. The implementation actions consist of adopted multi-modal capital investment actions and recommended (optional) planning and program actions for carrying out plan policies. The range of implementation actions ensures that local jurisdictions have flexibility in implementing regional policies.

The adopted RTP's key transportation planning conclusions are summarized below:

The region can lessen the impact of the transportation challenges by implementing a balanced and integrated set of land use, transportation demand management (TDM), and transportation system improvement strategies.

The RTP strategies include nodal development and transit-supportive land use patterns, new and expanded TDM programs, and Bus Rapid Transit, in addition to roadway projects that benefit pedestrians, bicyclists, and motorists. All of these strategies can increase the attractiveness of transportation modes other than the single-occupant vehicle. The integration of transportation and land use planning is especially important to support compact urban growth, which provides for more pedestrian, bicycle, and transit-friendly environments, rather than urban sprawl that supports auto dependency.

The RTP recognizes that sole reliance on more and bigger roadways to meet the transportation demand is shortsighted. Even if adequate funding was available, given the growth anticipated in the region, it is unreasonable to assume the region can build its way out of traffic congestion. The technical evaluation of *TransPlan* alternatives indicated that the travel demand associated with growth will overload the transportation system, even with major capacity-increasing projects. Experience from cities all over the world suggests that building roads encourages more people to use cars, thereby perpetuating the transportation challenges. In addition, public sentiment indicates resistance to expanding existing roadways and building new roads that would impact open space and neighborhoods.

The technical evaluation of the alternative plan concepts indicated that implementation of a balanced set of strategies, such as those mentioned above, will enable the region to reduce reliance on the auto. Projections indicated fewer VMT system-wide, fewer miles of the transportation system experiencing traffic congestion, decreased number of drive-alone auto trips, increased amounts of shared auto trips, and an increase in shorter trip lengths.

The ability of the region to fund capacity-increasing roadway projects will be limited by other allocation decisions.

The region lacks the financial capacity to add enough streets and highways to maintain existing levels of service. Funding for capacity-increasing projects is impacted by other funding decisions, including the priority and the amount of resources allocated to operations, maintenance, and preservation of the existing system.

Implementation and expansion of TDM strategies can contribute to greater use of transportation modes other than the single-occupant vehicle.

It is unrealistic to assume that automobile dependency can be eliminated, but it can be managed and complemented with cost-effective modes of transportation other than autos. Encouraging the use of transportation modes other than the single-occupant vehicle will become more important as the region grows and traffic congestion levels increase. The technical evaluation of alternative plan concepts indicated that TDM strategies can contribute to greater use of modes such as bicycling, walking, transit, and carpooling.

The RTP focuses on voluntary demand management strategies, such as incentives, i.e., free or reduced-cost bus pass programs. In the future, the region may explore opportunities to establish market-based, user-pay programs to offset subsidization of the true cost of automobile use.

The region can maintain conformity with air quality standards over the next 20 years.

The travel forecasting model indicated that the region would be able to maintain conformity with existing national air quality standards through implementation of any of the alternative plan concepts. Despite traffic growth, the offsetting effects of less-polluting and more fuel-efficient new vehicles will cause a net decline in emissions, even under trend conditions. The attainment and maintenance of air quality standards is primarily due to improved auto emission technology, rather than reduced reliance on autos.

Participating Agencies and Geographic Area

The RTP represents a coordinated effort of public agencies and citizens. The local jurisdictions involved in regional transportation planning include the Lane Council of Governments (LCOG), the cities of Eugene, Springfield and Coburg, Lane County, and Lane Transit District (LTD). Other agencies involved in the planning process include the Oregon Department of Transportation (ODOT), the Lane Regional Air Pollution Authority (LRAPA), Oregon Department of Land Conservation and Development (DLCD), Federal Highway Administration (FHWA), and the Federal Transit Agency (FTA).

The RTP study area is illustrated in Figure 1.

A 2035 planning horizon has been developed to meet federal requirements for maintaining at least a 20-year financial constraint and air quality conformity determination. Revenue and cost estimates used in the RTP are through 2035, expressed in 2011 dollars.

Fundamental Components of Transportation Planning

The RTP **Policy Framework** (Chapter Two) and **Implementation Actions** (Chapter Three) are structured around three fundamental components of transportation planning:

1. Land use,

2. Transportation demand management, and
3. Transportation system improvements.

The RTP uses these components in a balanced and integrated manner to achieve results. These components can be visualized as the three sides of a balanced triangle, as illustrated in Figure 3. The triangle is supported by a foundation of finance policies and implementation actions. Finance policies provide the direction needed to fund implementation of the land use, demand management, and system improvement policies.

The **land use** component of transportation planning is addressed by the RTP policies and implementation actions that encourage meeting the need for transportation-efficient development patterns, such as nodal development and transit-supportive land use patterns. These development patterns reduce trip lengths and auto dependency and support transit, bicycling, and walking.

The **demand management** component is supported by the RTP policies and implementation actions that strive to meet the need to reduce demand on the transportation system. This reduced demand can occur through actions that eliminate the need for vehicle trips and increase the use of transit, carpooling and vanpooling, bicycling, and walking.

System improvements are supported by the RTP policies and implementation actions that address the need for improved operations and maintenance of the existing system and investments in system infrastructure and services. The RTP emphasizes the integration and coordination of system improvements and development patterns.

The RTP Update Process

To keep the plan relevant to current conditions, federal legislation requires an update of the plan every four years. Specifically, the federal guidelines state that:

> *"The MPO shall review and update the transportation plan at least every four years . . . to confirm the transportation plan's validity and consistency with current and forecasted transportation and land use conditions and trends and to extend the forecast period to at least a 20-year planning horizon."*

The planning process envisioned in SAFETEA-LU) is a dynamic activity that effectively integrates current operational and preservation considerations with longer term mobility, environmental, and development concerns. This more frequent update requirement reflects the perspective that the function of the RTP is moving from a documentation of system development to contemporary decision tool. The four-year update cycle maintains the technical utility of the plan and its ability to serve the needs of local decision makers.

The table below shows the anticipated update schedule, with the RTP adoption in November 2011. At a minimum, updates will extend and adjust forecasts of land uses and the transportation system. Major updates may add a review of policies, priorities, and major projects.

Amendments to the RTP may occur at any time during an update cycle, with proper public notice and involvement. Air quality conformity analysis and financial constraint analysis will be prepared for each update or amendment as required by federal legislation. All updates and amendments will be adopted by the MPO policy body (MPC) and will include public involvement and outreach as required by federal regulations.

Schedule for RTP Updates

Year	Update
2011	Update Required
20120 8	*Amendments, as needed*
2013	*Amendments, as needed*
2014	*Amendments, as needed*
2015	Update Required
2016	*Amendments, as needed*
2017	*Amendments, as needed*
2018	*Amendments, as needed*
2019	Update Required

The City of Coburg's TSP is scheduled for completion of an update in 2012. The Eugene TSP is scheduled for completion of an update in 2013. The Springfield TSP is scheduled for completion of an update in 2012.

Plan Organization and Contents

The remaining sections in the RTP are summarized below:

Chapter Two: Policy Element

- Presents goals, objectives, and policies that comprise the regional transportation planning policy framework for the region

Chapter Three: Plan Implementation

- Describes adopted Capital Investment Actions
- Describes optional Planning and Program Actions
- Presents a financial plan
- Describes air quality conformity
- Presents a parking management plan
- Presents a Regional Transportation Plan amendment process
- Summarizes the Intelligent Transportation System Operations and Implementation Plan

Chapter Four: Plan Performance and Implementation Monitoring

- Describes anticipated plan impacts and achievements
- Discusses the program for monitoring plan progress over time
- Describes the Congestion Management Process

Appendix A: Maps

Contains the following maps:

- Potential Nodal Development Areas
- Financially Constrained Roadway Projects
- Illustrative Roadway Projects
- Federally Designated Roadway Functional Classification
- Current Lane Transit District System (within the MPO area)
- Bus Rapid Transit System
- Financially Constrained Bikeway System Projects
- Priority Bikeway System Projects
- Illustrative Bikeway System Projects
- Goods Movement and Intermodal Facilities
- Transportation Demand Management/Commuter Solutions
- Congestion Management System Maps

Appendix B: Level of Service Standards

- Describes application of the level of service policy.

Appendix C: List of Supporting Documents

- Lists supporting documentation developed throughout the history of the Central Lane RTP.

Appendix D: Glossary and Acronyms

- Provides acronyms and glossary of key transportation and land use terms used in the RTP.

Appendix E: Executive Summary: Regional ITS Operations and Implementation Plan for the Eugene-Springfield Metropolitan Area

Appendix F: Environmental Consultation Materials

Figure 1

MPO Map

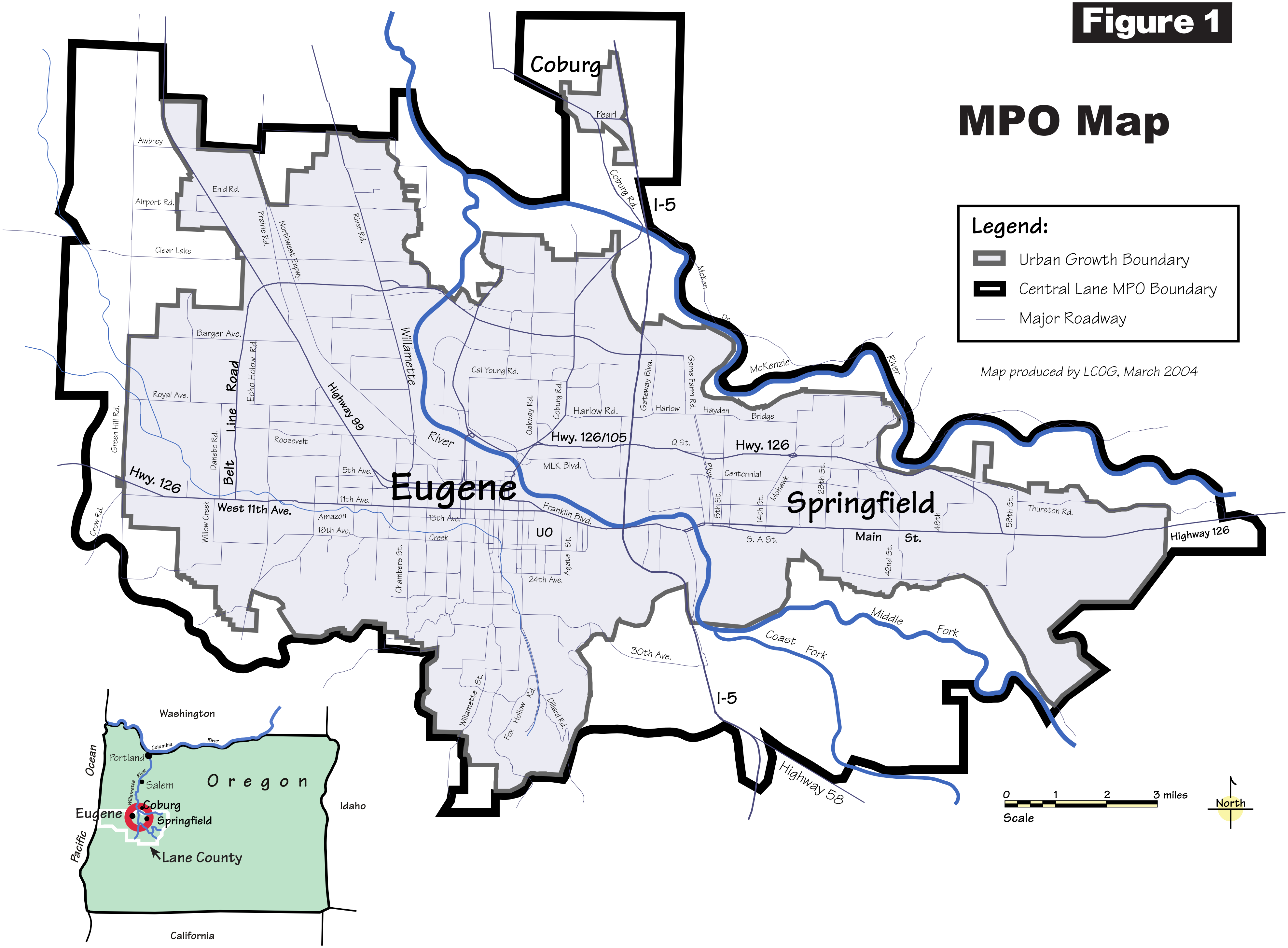


Figure 2

Context for the Regional Transportation Plan

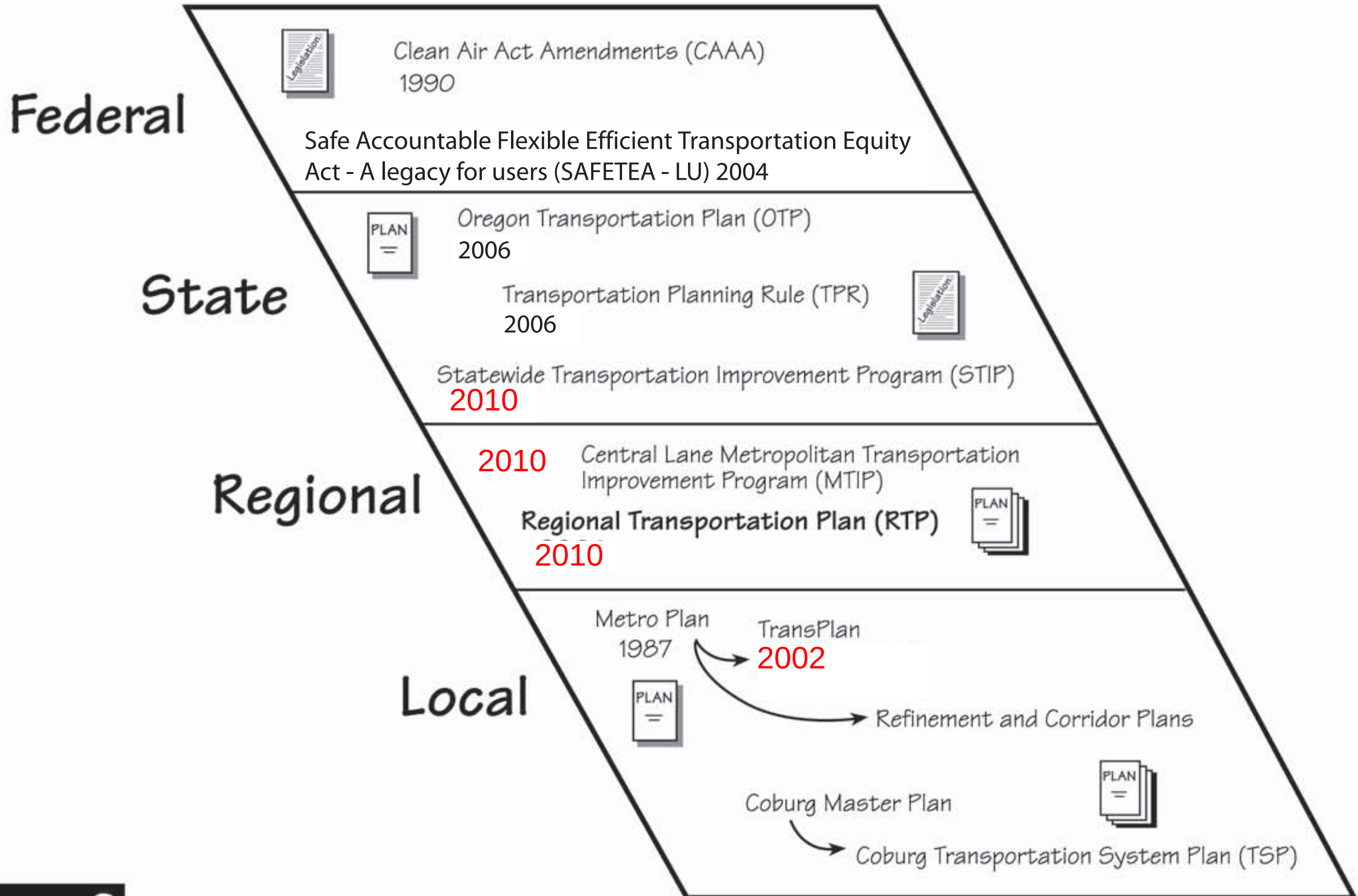
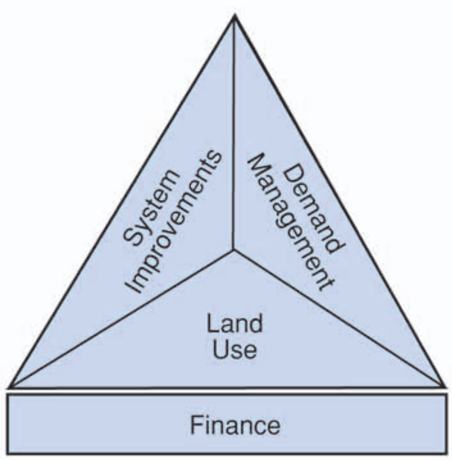


Figure 3

Fundamental Components of Transportation Planning



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CHAPTER TWO

POLICY ELEMENT

Chapter 2: Policy Element

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Introduction

The *RTP* policy element guides transportation system planning in the Eugene-Springfield metropolitan area. A basic assumption in the development of the RTP policy element is that transportation systems do more than meet travel demand; they have a significant effect on the physical and socioeconomic characteristics of the areas they serve. Transportation planning must be viewed in terms of regional and community goals and values such as protection of the environment, impact on the regional economy, and maintaining the quality of life that area residents enjoy.

The policy element consists of the following components:

- Goals (2),
- Objectives (7), and
- Policies (37).

The RTP policy element is consistent with the region's overall policy frameworks for regional planning as set forth in the *Eugene-Springfield Metropolitan Area General Plan* and other City of Coburg and Lane County planning documents.

Part One: Goals

The following definition is used for the RTP goals:

> **Broad statement of philosophy that describes the hopes of the people of the community for the future of the community. A goal may never be completely attainable but it is used as a point towards which to strive.**

Goal #1: Integrated Transportation and Land Use System

Integrate transportation and land use to support transportation choices, promote all modes of transportation, reduce our reliance on any single mode of travel, and enhance community livability.

Definition/Intent: This goal recognizes the need to integrate transportation and land use planning to enhance livability, economic opportunity, and quality of life. Integration supports transportation-efficient development patterns and choices in transportation modes that reduce reliance on fossil fuels.

Reference: Based in part on *Oregon Transportation Plan* (OTP) (1992) Goal 3 (currently OTP 2006, Goal 4).

Goal #2: Sustainability and Transportation

a) Support regional sustainability by providing a transportation system that considers economic vitality, environmental health, and social equity.

Definition/Intent: The purpose of this goal is to reflect the region's commitment to considering the three tenets of sustainability in planning a regional transportation system: economic, environmental, and social costs and benefits.

Part Two: Objectives

The following definition is used for the RTP objectives:

An objective is an attainable target that the community attempts to reach in striving to meet a goal. An objective may also be considered as an intermediate point that will help fulfill the overall goal.

Objective #1: Connectivity

Support an interconnected multi-modal transportation system that provides residents with access to a range of transportation choices.

Definition/Intent: This objective stresses the importance of an interconnected transportation system that provides for ease of transfer between modes of travel, such as auto to bus or bicycle to rail, and a system that provides users with a range of transportation choices.

Objective #2: Accessibility and Mobility

Provide adequate levels of accessibility and mobility for the efficient movement of people, goods, and services within the region.

Definition/Intent: **Accessibility** refers to physical proximity and ease of reaching destinations throughout the urban metropolitan area. This objective supports the need for multimodal accessibility to employment, shopping, other commerce, medical care, housing, and leisure, including adequate public transit access for people who are transportation disadvantaged. This objective also supports the need for improved access for tourists to destinations. **Mobility** is the ease with which a person is able to travel from place to place. It can be measured in terms of travel time.

Access and mobility are provided at different levels on different classes of transportation facilities. For example, a local street has a high level of accessibility for adjacent residences and businesses, with a low level of mobility for non-local traffic. An arterial street has a lower level of accessibility, with a higher level of mobility for through movement of travelers. Local jurisdictions will determine what constitutes adequate levels of accessibility and mobility and what is efficient movement of people, goods, and services within the region.

Reference: Based on OTP (1992) Policy 1C (currently OTP 2006, Policies 1.1 and 1.2); *Transportation Equity Act for the 21st Century* (TEA 21) Metropolitan Planning Factor E (currently SAFETEA-LU planning factor D).

Objective #3: Safety

Improve safety for users of all transportation modes through design, operations, maintenance, improvements, public information, and law enforcement.

Definition/Intent: Safety is a key characteristic of our desired transportation system. This objective supports the need for taking a comprehensive approach to building, operating, and regulating the transportation system so that people feel confident, safe and secure around all modes of travel.

Reference: Based on OTP (1992) Policy 1G (currently OTP 2006 Policy 5.1); TEA 21 Metropolitan Planning Factor B (currently SAFETEA-LU planning factor B).

Objective #4: Environment

Provide a transportation system that reflects our commitment to environmental quality.

Definition/Intent: This objective places a priority on fulfilling the need to protect the region’s natural environment and conserving energy in all aspects of transportation planning processes. The primary intent of this objective can be met through compliance with all federal and state regulations relevant to environmental impact and consideration of applicable environmental impact analyses and practicable mitigation measures in transportation decision-making processes. Significant benefits can be achieved from coordinating the environmental process with the transportation planning process, such as early identification of issues and resources, development of alternatives that avoid or minimize impacts early in the project development process, and more rapid project delivery.

The region’s desire to reduce transportation-related energy consumption can be met through increased use of transit, telecommuting, zero-emissions vehicles, ridesharing, biking and walking, and through increased efficiency of the transportation network to diminish delay and corresponding fuel consumption.

Reference: Based on OTP (1992) Policy 1D (currently OTP 2006 Policy 4.1); TEA 21 Metropolitan Planning Factor D (currently SAFETEA-LU planning factor E); Statewide Planning Goal 5: Open Spaces, Scenic, and Historic Areas, and Natural Resources; Goal 6: Air, Water, and Land Resources Quality.

Objective #5: Economic Vitality

Support transportation strategies that improve the economic vitality of the region, enhance economic opportunity, and increase the reliability and efficiency of our freight system.

Definition/Intent: The region's economy is highly dependent upon its transportation system for the circulation of goods, services, and passengers. An efficient transportation system promotes new business and encourages existing business; contributes to improved employee recruitment and retention; and supports freight movement and intermodal transfer points within the region. Investments in transportation infrastructure can support and promote regional economic objectives.

Reference: Based on OTP (1992) Goal 3 (currently OTP 2006 Goal 3); Statewide Planning Goal 9: Economic Development; TEA 21 Metropolitan Planning Factor A (currently SAFETEA-LU planning factor A).

Objective #6: Equity

Conduct planning, analysis, and public involvement to ensure that the benefits and impacts of transportation decisions are distributed fairly to all people.

Definition/Intent: This objective communicates our desire to ensure that the benefits and the impacts of our transportation system are socially equitable and respect basic civil rights. An equitable transportation system allows people to gain access to good jobs, education, and needed services as affordably as possible.

Objective #7: Public Health

Expand transportation decision-making to meet related public health objectives, including reduced crashes, cleaner air, and increased physical activity.

Definition/Intent: This objective recognizes the relationship of our transportation system to a number of public health issues, including access to clean air and water and support for active lifestyles that include walking and biking.

Objective #8: Greenhouse Gas (GHG) Emissions Reduction

Consider strategies to reduce transportation sector greenhouse gas emissions in compliance with current legislation and as aligned with the region's other transportation system goals and objectives.

Definition/Intent: This objective is to communicate our region's participation in the reduction of statewide greenhouse gas emissions within the transportation sector as described in recent Oregon legislation. This includes relevant sections of HB 2001, the Jobs and Transportation Act and HB 1059, legislation that established the Oregon Sustainable Transportation Initiative.

Objective #9: Transit

Provide an effective and efficient transit system with stable capital and operating resources.

Definition/Intent: This objective recognizes our strong commitment to a sustainable public transit system, including standard bus services, bus-rapid transit, and the provision of accessible transportation for seniors and people with disabilities.

Objective #10: Rapid Passenger Rail

Promote Oregon's development of reliable and efficient rapid passenger rail as part of the Cascadia rail corridor from Eugene to Vancouver, BC.

Definition/Intent: This objective is included as part of our region's commitment to the development of a statewide plan for improved passenger rail service, and participation in improving service and infrastructure along the internationally significant Cascadia rail corridor that connects Eugene/Springfield to Portland, OR, Seattle, WA and Vancouver, BC.

Objective #11: Public Involvement

Provide citizens with information to increase their awareness of transportation issues, encourage their involvement in resolving the issues, and assist them in making informed transportation choices.

Definition/Intent: This objective supports the need for early and continuing public participation in transportation planning, programming, and implementation. It also supports a proactive public involvement process that provides complete information, timely public notice, and full public access to key decisions. To understand and support the RTP policies, residents need reliable information and opportunities to participate in the further development and implementation of the plan.

Reference: Based on OTP (1992) Policy 4N (currently OTP 2006 Policy 7.3); TEA 21 Public Involvement Requirements (currently SAFETEA-LU public participation requirements); Statewide Planning Goal 1: Citizen Involvement.

Objective #12: Coordination/Efficiency

Coordinate among agencies to facilitate efficient planning, design, operation, and maintenance of transportation facilities and programs.

Definition/Intent: The primary intent of this objective is to ensure that public agencies involved with the region's transportation coordinate to meet the need for efficiency. A second aspect of this objective is to support opportunities for coordination between the public and private sectors, which results in transportation efficiencies. Although the infrastructure for the transportation system of the 21st century is largely in place, the system must be managed more efficiently as it is used more intensively. This objective supports the research, evaluation, and implementation of innovative management practices, land use patterns, and new technologies.

Reference: Based on *TransPlan* (RTP) 1986 Policy PC3; OTP (1992) Policy 1B (currently OTP 2006 Policy 7.A); Transportation Planning Rule (TPR) 660-12-050(2); TEA 21 Metropolitan Planning Factors F and G (currently SAFETEA-LU planning factors F and G); Statewide Planning Goal 11: Public Facilities and Services.

Objective #13: Implementation

Implement a range of actions as determined by local governments, including land use, demand management, and system improvement strategies, to carry out transportation policies.

Definition/Intent: This objective supports the integration of land use, system improvements, and demand management strategies to meet the region's transportation needs. The region will continue to implement these three types of strategies and reliance on any one type of strategy will be avoided. The range of RTP implementation actions provides local governments with the flexibility needed to implement the regional policies. Due to limited resources, not all RTP policies and implementation actions will be implemented simultaneously.

Reference: Based on *TransPlan* (RTP) 1986 Planning and Coordination Policy section.

Part Three: Policies

The following definition is used for the RTP policies:

> **A policy is a statement adopted as part of *TransPlan* to provide a consistent course of action, moving the community towards attainment of its goals.**

The policies presented in this chapter are structured in the following categories:

1. Land Use
2. Transportation Demand Management
3. Transportation System Improvements
   a) System-Wide
   b) Roadways
   c) Transit
   d) Bicycle
   e) Pedestrian
   f) Goods Movement
   g) Other Modes
4. Finance

A consolidated list of RTP policies is followed by expanded policy sections. Each section includes *Findings* that provide the factual basis for the policies. The policy *Definition/Intent* statements provide explanations for the policy statement, but do not represent adopted policy.

The policies are direction statements that guide present and future decisions on how the goals will be achieved. The transportation policies represent an integrated and balanced approach to transportation planning in the Central Lane MPO area. This integration was developed by considering the interaction among land use, demand management, and transportation system improvements strategies. Consistent with requirements in the state TPR, the policies support a coordinated network of transportation facilities adequate to serve state, regional, and local transportation needs. The policies are applicable to the entire MPO region and can be applied in a variety of ways, using a range of specific actions. Implementation actions are set forth in Chapter Three. These actions provide individual jurisdictions with the flexibility to implement RTP policies using methods most suitable to a particular circumstance. It is important to note that policy implementation is limited by considerations such as fiscal constraint and identification of competing concerns.

Not all RTP policies will apply to a specific transportation-related decision. For a decision where conformance with adopted policy is required, policies in the RTP and other adopted policy documents within the MPO area will be examined to determine which policies are relevant and can be applied. In the event that the application of policies leads to the identification of policies that support varying positions, decision makers will work to achieve a balance of all applicable policies. Whereas goals are timeless, some policies will expire as they are implemented. Amendments and future updates of the RTP will ensure that policies are current.

Consolidated List of Policies

Land Use Policies

Land Use Policy #1: Nodal Development
Apply the nodal development strategy in areas selected by each jurisdiction that have identified potential for this type of transportation-efficient land use pattern.

Land Use Policy #2: Support for Nodal Development
Support application of the nodal development strategy in designated areas through information, technical assistance, or incentives.

Land Use Policy #3: Transit-Supportive Land Use Patterns
Provide for transit-supportive land use patterns and development, including higher intensity, transit-oriented development along major transit corridors and near transit stations; medium- and high-density residential development within ¼ mile of transit stations, major transit corridors, employment centers, and downtown areas; and development and redevelopment in designated areas that are or could be well served by existing or planned transit.

Land Use Policy #4: Multi-Modal Improvements in New Development
Require improvements that encourage transit, bicycles, and pedestrians in new commercial, public, mixed-use, and multi-unit residential development.

Land Use Policy #5: Implementation of Nodal Development
Within three years of TransPlan adoption, apply the ND, Nodal Development designation to areas selected by each jurisdiction, adopt and apply measures to protect designated nodes from incompatible development and adopt a schedule for completion of nodal plans and implementing ordinances.

TDM Policies

TDM Policy #1: TDM Program Development
Expand existing TDM programs and develop new TDM programs. Establish TDM bench marks and if the benchmarks are not achieved, mandatory programs may be established.

TDM Policy #2: Parking Management
Increase the use of motor vehicle parking management strategies in selected areas throughout the Central Lane MPO area.

TDM Policy #3: Congestion Management
Implement TDM strategies to manage demand at congested locations.

TSI System-Wide Policies

TSI System-Wide Policy #1: Transportation Infrastructure Protection and Management
Protect and manage existing and future transportation infrastructure.

TSI System-Wide Policy #2: Intermodal Connectivity
Develop or promote intermodal linkages for connectivity and ease of transfer among all transportation modes.

TSI System-Wide Policy #3: Corridor Preservation
Preserve corridors, such as rail rights-of-way, private roads, and easements of regional significance, that are identified for future transportation-related uses.

TSI System-Wide Policy #4: Neighborhood Livability
Support transportation strategies that enhance neighborhood livability.

TSI System-Wide Policy #5: *TransPlan* Project Lists
Adopt by reference as part of the *Metro Plan* the 20-Year Capital Investment Actions project lists contained in *TransPlan*. Project timing and estimated costs are not adopted as policy.

TSI Roadway Policies

TSI Roadway Policy #1: Mobility and Safety for all Modes
Address the mobility and safety needs of motorists, transit users, bicyclists, pedestrians, and the needs of emergency vehicles when planning and constructing roadway system improvements.

TSI Roadway Policy #2: Motor Vehicle Level of Service

1. Use motor vehicle level of service standards to maintain acceptable and reliable performance on the roadway system. These standards shall be used for:

    a. Identifying capacity deficiencies on the roadway system.
    b. Evaluating the impacts on roadways of amendments to transportation plans, acknowledged comprehensive plans and land-use regulations, pursuant to the TPR (OAR 660-12-0060).
    c. Evaluating development applications for consistency with the land-use regulations of the applicable local government jurisdiction.

2. Acceptable and reliable performance is defined by the following levels of service under peak hour traffic conditions: Level of Service E within Eugene's Central Area Transportation Study (CATS) area, and Level of Service D elsewhere.

3. Performance standards from the Oregon Highway Plan shall be applied on state facilities in the Eugene-Springfield metropolitan area.

    In some cases, the level of service on a facility may be substandard. The local government jurisdiction may find that transportation system improvements to bring performance up to standard within the planning horizon may not be feasible, and safety will not be compromised, and broader community goals would be better served by allowing a substandard level of service. The limitation on the feasibility of a transportation system improvement may arise from severe constraints including but not limited to environmental conditions, lack of public agency financial resources, or land use constraint factors. It is not the intent of TSI Roadway Policy #2: Motor Vehicle Level of Service to require deferral of development in such cases. The intent is to defer motor vehicle capacity increasing transportation system improvements until existing constraints can be overcome or develop an alternative mix of strategies (such as: land use measures, TDM, short-term safety improvements) to address the problem.

TSI Roadway Policy #3: Coordinated Roadway Network
In conjunction with the overall transportation system, recognizing the needs of other transportation modes, promote or develop a regional roadway system that meets combined needs for travel through, within, and outside the region.

TSI Roadway Policy #4: Access Management
Manage the roadway system to preserve safety and operational efficiency by adopting regulations to manage access to roadways and applying these regulations to decisions related to approving new or modified access to the roadway system.

TSI Transit Policies

TSI Transit Policy #1: Transit Improvements
Improve transit service and facilities to increase the system's accessibility, attractiveness, and convenience for all users, including the transportation disadvantaged population.

TSI Transit Policy #2: Bus Rapid Transit
Establish a Bus Rapid Transit (BRT) system composed of frequent, fast transit service along major corridors and neighborhood feeder service that connects with the corridor service and with activity centers, if the system is shown to increase transit mode split along BRT corridors, if local governments demonstrate support, and if financing for the system is feasible.

TSI Transit Policy #3: Transit/High-Occupancy Vehicle (HOV) Priority
Implement traffic management strategies and other actions, where appropriate and practical, that give priority to transit and other HOVs.

TSI Transit Policy #4: Park-and-Ride Facilities
Expand the Park-and-Ride system within the metropolitan area and nearby communities.

TSI Bicycle Policies

TSI Bicycle Policy #1: Bikeway System and Support Facilities
Construct and improve the region's bikeway system and provide bicycle system support facilities for both new development and redevelopment/expansion.

TSI Bicycle Policy #2: Bikeways on Arterials and Collectors
Require bikeways along new and reconstructed arterial and major collector streets.

TSI Bicycle Policy #3: Bikeway Connections to New Development
Require bikeways to connect new development with nearby neighborhood activity centers and major destinations.

TSI Bicycle Policy #4: Implementation of Priority Bikeway Miles
Give funding priority (ideally within the first 3 to 5 years after adoption of TransPlan, subject to available funding) to stand-alone bikeway projects that are

included in the definition of "Priority Bikeway Miles" and that increase the use of alternative modes.

TSI Pedestrian Policies

TSI Pedestrian Policy #1: Pedestrian Environment
Provide for a pedestrian environment that is well integrated with adjacent land uses and is designed to enhance the safety, comfort, and convenience of walking.

TSI Pedestrian Policy #2: Continuous and Direct Routes
Provide for a continuous pedestrian network with reasonably direct travel routes between destination points.

TSI Pedestrian Policy #3: Sidewalks
Construct sidewalks along urban area arterial and collector roadways, except freeways.

TSI Goods Movement Policies

TSI Goods Movement Policy #1: Freight Efficiency
Support reasonable and reliable travel times for freight/goods movement in the Central Lane MPO region.

TSI Other Modes Policies

TSI Other Modes Policy #1: Eugene Airport
Support public investment in the Eugene Airport as a regional facility and provide land use controls that limit incompatible development within the airport environs. Continue to use the Eugene Airport Master Plan as the guide for improvements of facilities and services at the airport.

TSI Other Modes Policy #2: High Speed Rail Corridor
Support provision of rail-related infrastructure improvements as part of the Cascadia High Speed Rail Corridor project.

TSI Other Modes Policy #3: Passenger Rail and Bus Facilities
Support improvements to the passenger rail station and inter-city bus terminals that enhance usability and convenience.

Finance Policies

Finance Policy #1: Adequate Funding
Support development of a stable and flexible transportation finance system that provides adequate resources for transportation needs identified in the RTP.

Finance Policy #2: Operations, Maintenance, and Preservation
Operate and maintain transportation facilities in a way that reduces the need for more expensive future repair.

Finance Policy #3: Prioritization of State and Federal Revenue
Set priorities for investment of Oregon Department of Transportation (ODOT) and federal revenues programmed in the region's Metropolitan Transportation Improvement Program (MTIP) to address safety and major capacity problems on the region's transportation system.

Finance Policy #4: New Development
Require that new development pay for its capacity impact on the transportation system.

Finance Policy #5: Short-Term Project Priorities
Consider and include among short-term project priorities, those facilities and improvements that support mixed-use, pedestrian-friendly nodal development and increased use of alternative modes.

Finance Policy #6: Eugene-Specific Finance Policy
The City of Eugene will maintain transportation performance and improve safety by improving system efficiency and management before adding capacity to the transportation system under Eugene's jurisdiction.

Land Use Policies

Land Use Policies encourage design and development of land use patterns that support the increased use of alternative modes of travel (e.g., transit, biking, walking, carpooling) and reduce the dependence on the automobile. Favorable impacts of implementing these policies with regard to improving transportation efficiency will be realized over a 40- to 50-year period. These policies support the fundamental principle of compact urban growth contained within the Oregon Statewide Planning Goals.

Land Use Findings

1. The OTP, 2006, recognizes that Oregon's land use development patterns have tended to separate residential areas from employment and commercial centers, requiring people to drive almost everywhere they go; that the results have been increased congestion, air pollution, and sprawl in the metropolitan areas and diminished livability; that these auto-dependent land use patterns limit mobility and transportation choices; and that reliance on the automobile has led to increased congestion, travel distances, and travel times.

2. Studies annotated in the *Land Use Measures Task Force Report Bibliography* have found that land use development patterns have an impact on transportation choices; that separation of land uses and low-density residential and commercial development over large areas makes the distance between destinations too far apart for convenient travel by means other than a car; and that people who live in neighborhoods with grid pattern streets, nearby employment and shopping opportunities, and continuous access to sidewalks and convenient pedestrian crossings tend to make more walking and transit trips. The *Market Demand Study for Nodal Development*, ECO Northwest and Leland Consulting Group, 1996, recommended that the public strategy for nodal development should be flexible and opportunistic and include use of financial incentives, targeted infrastructure investments, public-private partnerships, and an inviting administrative atmosphere.

3. The *Oregon Highway Plan* (OHP) (January 1999, as amended through January 2006) states that focusing growth on more compact development patterns can benefit transportation by: reducing local trips and travel on state highways; shortening the length of many vehicle trips; providing more opportunities to walk, bicycle, or use available transit services; increasing opportunities to develop transit, and reducing the number of vehicle trips to shop and do business.

4. OTP policies emphasize reducing reliance on the automobile and call for transportation systems that support mixed land uses, compact cities, and connections among various transportation modes to make walking, bicycling and the use of public transit easier. The OTP provides that the state will encourage and give preference to projects and grant proposals that support compact or infill development or mixed-use projects. The OTP also contains actions to promote the design and development of infrastructure and land use patterns that encourage alternatives to the single-occupant automobile.

5. The Oregon Transportation Planning Rule [OAR 660-012-0060 (1)(c,d)(5)] encourages plans to provide for mixed-use, pedestrian-friendly development based on information that documents the benefits of such development and the Land Conservation and Development Commission's policy interest in encouraging such development to reduce reliance on the automobile. The rule [OAR 660-012-0045 (4)(a and e)] requires local governments to adopt land use regulations that allow transit-oriented developments on lands along transit routes and require major developments to provide either a transit stop on site or connection to a transit stop when the transit operator requires such an improvement. The rule [OAR 660-012-0045 (3)] also requires local governments to adopt land use regulations that provide for safe and convenient pedestrian and bicycle access within new developments and from these developments to adjacent residential areas and transit stops and to neighborhood activity centers.

6. Nodal development is consistent with the policy direction of Policy 1B of the *Oregon Highway Plan* to coordinate land use and transportation decisions to efficiently use public infrastructure investments to:
    - Maintain the mobility and safety of the highway system,
    - Foster compact development patterns in communities,
    - Encourage the availability and use of transportation alternatives, and
    - Enhance livability and economic competitiveness.

7. Nodal development is consistent with the Special Transportation Area (STA) designation defined in the draft OHP. The designation is intended to guide planning and management decisions for state highway segments inside nodal development areas.

8. Nodal development supports the fundamental principles, goals, and policies of the adopted Eugene-Springfield *Metro Plan* to achieve compact urban growth, increase residential densities, and encourage mixed-use developments in designated areas. The *Land Use Measures Strategies Document* found that nodal development also supports increased use of alternative modes of transportation and increased opportunities for people to live near their jobs and to make shorter trips for a variety of purposes.

9. Based on the analysis of the *Regional Travel Forecasting Model* results for the 2010-2035 time period, an overall outcome of nodal development implementation will be that the percentage of person trips under one mile can be increased to approximately 18.6 percent of all trips; and, on a regional basis, that trip lengths will remain essentially unchanged in 2035 compared to 2010.

10. Based on the analysis of the Regional Travel Forecasting Model results for the 2010-2035 time period, investments in non-auto modes, particularly BRT, and implementation of nodal development strategies will lead to improved transportation choices by helping to increase the percentage of non-auto trips from 14.9 percent to 15.6 percent by the year 2035.

11. Prior to adoption of the 2002 *TransPlan*, the public review of the nodal development strategy resulted in many comments that identified the need for incentives for developers, builders, property owners, and neighborhoods to ensure that nodal developments would be built consistent with design guidelines. The type of support and incentives suggested ranged from public investments in infrastructure to technical assistance and economic incentives.

Land Use Policy #1: Nodal Development

Apply the nodal development strategy in areas selected by each jurisdiction that have identified potential for this type of transportation-efficient land use pattern.

Policy Definition/Intent: Nodal development supports mixed land uses in designated areas to increase opportunities for people to live near their jobs and to make shorter trips for a variety of purposes. Nodal development also supports the use of alternative modes of transportation. Each jurisdiction will select the most appropriate implementation actions to carry out this policy.

This policy refines and expands existing *Eugene-Springfield Metro Plan* concepts and policy direction that provide for mixed-use development and higher average residential densities in certain areas of the Eugene-Springfield area. The nodal development strategy is consistent with the definition of STAs, included in the adopted OHP. STAs include central business districts, transit-oriented development areas, and other activity or business centers that emphasize non-auto travel.

This policy is not intended to limit the types of nodal development patterns. Nodal development areas may vary in the amount, type, and orientation of commercial, civic, and employment uses; building size; amount and types of residential uses; and commercial intensity. The nodes will be pedestrian-friendly environments with a mix of land uses, including public open spaces that are pedestrian-, transit-, and bicycle-oriented. Nodes will have commercial cores that contain a compatible mix of retail, office, employment, and civic uses. The amount and types of commercial and civic uses in the core should be consistent with the type of nodal development center. The core should be adjacent to a frequently serviced transit stop. Nodal development centers will include a mix of housing types that achieve at least an average density that is within the medium-density range for residential uses.

This policy supports the growth of downtown Eugene and Springfield as commercial, residential, civic, and employment centers. The intent of this policy is to support development of the downtowns as vital urban centers by encouraging a compatible mix of uses, including housing. In doing so, more people may choose to live near their jobs, accomplish more trip objectives without needing to travel away from the downtowns, and use transit for external trips.

This policy supports the growth and diversification of employment centers by allowing a mix of new commercial, governmental, and light industrial uses and, where appropriate, residential uses in close proximity.

Reference: Summary Description of Proposed Nodal Development Areas (August 1995); *Policy Makers' Decision Package for Draft Plan Direction* (Decision Package), November 1996, Strategy 1; *Metro Plan* Transportation Element Policy 2; Statewide Planning Goal 2: Land Use, Goal 10: Housing.

Land Use Policy #2: Support for Nodal Development

Support application of the nodal development strategy in designated areas through information, technical assistance, or incentives.

Policy Definition/Intent: The intent of this policy is to encourage nodal development through public support and incentives, recognizing that there is public benefit to the transportation and land use efficiencies of nodal development. Although a market exists for this type of development, nodal development is relatively new to this region and may involve more perceived risk than typical development. Many developers, builders, and lenders lack knowledge and experience with nodal development. Consequently, it is important that public bodies be supportive partners and help mitigate uncertainties and perceived risks. Examples of support include design guidelines, streamlined review processes, marketing assistance, and public infrastructure improvements.

Reference: Based on Decision Package, November 1996, Strategies 1 and 12; *Market Demand Study for Nodal Development.*

Land Use Policy #3: Transit-Supportive Land Use Patterns

Provide for transit-supportive land use patterns and development, including higher intensity, transit-oriented development along major transit corridors and near transit stations; medium- and high-density residential development within ¼ mile of transit stations, major transit corridors, employment centers, and downtown areas; and development and redevelopment in designated areas that are or could be well served by existing or planned transit.

Policy Definition/Intent: The intent of this policy is to encourage more concentrated development and higher density housing in locations that are or could be served by high levels of transit service. By doing so, transit will be more convenient for a greater number of businesses and people and, in turn, the higher levels of transit will be supported by more riders.

Reference: Based on *Metro Plan* 1987 Transportation Policies 2c, 2f, and 2e; TPR 660-12-045(4)(g); Statewide Planning Goal 2: Land Use.

Land Use Policy #4: Multi-Modal Improvements in New Development

Require improvements that encourage transit, bicycles, and pedestrians in new commercial, public, mixed-use, and multi-unit residential development.

Policy Definition/Intent: This policy supports efforts to improve the convenience of using transit, biking, or walking to travel to, from, and within newly developed and redeveloped areas. This policy recognizes the importance of providing pedestrian and bikeway connections within the confines of individual developments to provide direct, safe, and convenient internal pedestrian and bicycle circulation. This policy supports implementation of code amendments, such as those made through the Transportation Rule Implementation Project (TRIP) in Eugene. Note that private industrial development is not covered under this policy.

Reference: Based on *Metro Plan* 1987 Transportation Policy 5; Decision Package, November 1996; TPR 660-12-045(3)(b); Statewide Planning Goal 2: Land Use.

Land Use Policy #5: Implementation of Nodal Development

Within three years of TransPlan adoption, apply the ND, Nodal Development designation to areas selected by each jurisdiction, adopt and apply measures to protect designated nodes from incompatible development and adopt a schedule for completion of nodal plans and implementing ordinances.

Policy Definition/Intent: This policy was added at the request of the Department of Land Conservation and Development Commission. The nodal development strategy anticipates a significant change in development patterns within proposed nodes.

Development of these areas under existing plan designations and zoning provisions could result in development patterns inconsistent with nodal development. This policy documents a commitment by the elected officials to apply the new /ND nodal development Metro Plan designation and new zoning regulations to priority nodal development areas within three years of TransPlan adoption, subject to available funding.

Reference: Based on DLCD testimony; Joint Adopting Official review.

Transportation Demand Management Policies

Transportation demand management (TDM) policies direct the development and implementation of actions that encourage the use of modes other than single-occupant vehicles to meet daily travel needs. The TDM policies support changes in travel behavior to reduce traffic congestion and the need for additional road capacity and parking and to support desired patterns of development.

TDM Findings

1. TDM addresses federal SAFETEA-LU and state TPR requirements to reduce reliance on the automobile, thus helping to postpone the need for expensive capital improvements. The need for TDM stems from an increasing demand for and a constrained supply of road capacity, created by the combined effects of an accelerated rate of population growth (24% projected increase from 20104 to 2035) and increasing highway construction and maintenance costs; for example, the City of Eugene increased the Transportation systems development charges by a total of 15 percent to account for inflation from 1993-1996.

2. The *Regional Travel Forecasting Model* revealed that average daily traffic on most major streets was growing by 2-3 percent per year prior to the 2002 adoption of *TransPlan*. Based on *1994 Commuter Pack Survey* results, half of the local residents find roads are congested at various times of the day; and the vast majority finds roads are congested during morning and evening rush hours.

3. The *COMSIS TDM Strategy Evaluation Model*, used in August, 1997 to evaluate the impact of TDM strategies, found that vehicle miles traveled (VMT) and vehicle trips are reduced up to 3 percent by voluntary strategies (e.g., employer-paid bus pass program) and up to 10 percent by mandatory strategies (e.g., mandatory employer support); that requiring employers to increase the cost of employee parking is far more effective than reducing employee transit costs; and that a strong package of voluntary strategies has a greater impact on VMT and vehicle trips than a weak package of mandatory strategies.

4. Lane Transit District (LTD) system ridership increased 133 percent from fiscal year 1987 (prior to the implementation of the first group pass program with University of Oregon students and employees in 1988) to fiscal year 2011.

5. The OHP recognizes that TDM strategies can be implemented to reduce trips and impacts to major transportation facilities, such as freeway interchanges, postponing the need for investments in capacity-increasing projects.

6. The study, *An Evaluation of Pricing Policies for Addressing Transportation Problems* (ECONorthwest, July 1995), found that implementation of congestion pricing in the Eugene-Springfield area would be premature because the level of public acceptance is low and the costs of implementation are substantial; and that parking pricing is the only TDM pricing strategy that would be cost-effective during the 20-year planning period.

TDM Policy #1: TDM Program Development

Expand existing TDM programs and develop new TDM programs. Establish TDM bench marks and if the benchmarks are not achieved, mandatory programs may be established.

Policy Definition/Intent: This policy supports expansion and development of a broad spectrum of local and regional TDM programs at varying levels of implementation. TDM programs will focus on reducing trips for nonwork purposes, as well as for work commutes. Voluntary participation in TDM programs will be encouraged through marketing and incentives to target audiences, including the general public, developers, employers, employees, school administrators, and students. An adequate funding program must be developed to support implementation of TDM programs. This policy also supports the exploration of opportunities to establish a market-based, user-oriented approach to TDM through the use of transportation pricing measures.

Reference: *TransPlan* 1986, Policies AM3, AM7, TSM2; Decision Package, November 1996, Strategy 2; TPR 660-12-045(5)(b).

TDM Policy #2: Parking Management

Increase the use of motor vehicle parking management strategies in selected areas throughout the Eugene-Springfield metropolitan area.

Policy Definition/Intent: Parking management strategies address both the supply and demand for vehicle parking. They contribute to balancing travel demand within the region among the various modes of transportation available. To promote parking equity in the region, consideration should be given to applying parking management strategies at a region-wide level, in addition to downtown centers.

Reference: *TransPlan* 1986 Parking Policy section; Decision Package, November 1996, Strategy 4; TPR 660-12-045(5)(c).

TDM Policy #3: Congestion Management

Implement TDM strategies to manage demand at congested locations.

Policy Definition/Intent: Encouraging the use of alternative modes will become more important as the region grows and traffic congestion levels increase. A variety of strategies can be employed to help maintain mobility in congested locations as the area develops. TDM strategies implemented to manage demand at congested locations will be coordinated with other types of congestion management strategies, such as access management. This policy supports selective application of mandatory TDM strategies to manage demand at congested locations. For example, local jurisdictions could be allowed to require employers to designate an employee transportation coordinator and to implement programs that encourage employees to use alternative modes.

Reference: Based on Decision Package, November 1996, Strategy 2.

Transportation System Improvements: System-Wide Policies

Transportation System Improvement System-Wide Policies contain policy direction that is applicable to planning and implementation for all transportation system modes in the Central Lane MPO area. In general, the transportation system improvement policies support choices in modes of travel and desired patterns of development through efficient use of the existing system infrastructure and design and implementation of appropriate system improvements.

TSI System-Wide Findings

1. The number of vehicles, VMT, and use of the automobile are all increasing while use of alternatives is decreasing. Between 1970 and 2000, the number of vehicles in Lane County increased by 110 percent, while the number of households increased by 91 percent. Between 1980 and 1990, VMT grew at a rate seven times that of the population growth. The *Regional Travel Forecasting Model* projected that, by the year 2015, without implementation of proposed RTP projects, non-commercial VMT will increase 52% while the percentage who bike will drop from 3.7% to 3.3%, walk from 8.9% to 7.9%, and the percentage who bus will increase only slightly from 1.8% to 1.9%.

2. The OHP recognizes that access management strategies can be implemented to reduce trips and impacts to major transportation facilities, such as freeway interchanges, and that communities with compact urban designs that incorporate a transportation network of arterials and collectors will reduce traffic impacts on state highways, postponing the need for investments in capacity-increasing projects.

3. *Oregon Highway Plan* (January 1999, as amended) policy supports investment in facilities that improve intermodal linkages as a cost-effective means to increase the efficient use of the existing transportation system.

4. Current literature and research speaks to the relationship between street design and travel behavior, finding that neighborhood impacts, such as through-traffic and speeding on neighborhood streets, are affected by street design. For example, research by Richard Dowling and Steven Colman reported in the article, *Effects of Increased Highway Capacity: Results of a Household Travel Behavior Survey*, 1998, found that drivers' number one preferred response to congestion was to find a faster route if the current one becomes congested; and Calthorpe and Duany/Platter-Zybecks and Anton Nelleson have found that the layout and design of buildings and streets will influence user behavior and that streets can be designed to reduce travel speeds and reduce cut-through trips.

TSI System-Wide Policy #1: Transportation Infrastructure Protection and Management

Protect and manage existing and future transportation infrastructure.

Policy Definition/Intent: This policy calls for the protection and management of transportation facilities for all modes, within the limits of available funding, in a way that sustains their long-term capacity and function. Given the limited funding for future transportation projects and operations, maintenance and preservation activities, the need to protect and manage existing and future transportation investments and facilities is crucial. Strategies related to access management, TDM, and land use can be implemented to reduce trips and impacts to major transportation facilities, such as freeway interchanges, thereby postponing the need for investments in capacity-increasing projects.

Reference: TPR 660-12-045(2), TPR 660-12-060 (Plan and Land Use Regulation Amendments); OTP (1992) Policy 1B (currently OTP 2006 Policy 2.1); ISTEA Section 450.316(a) Metropolitan Planning Organization (MPO) Planning Factor 4.

TSI System-Wide Policy #2: Intermodal Connectivity

Develop or promote intermodal linkages for connectivity and ease of transfer among all transportation modes.

Policy Definition/Intent: An intermodal transportation system is one that includes all forms of transportation in a unified, connected manner. An intermodal trip is one that involves two or more modes between the trip origin and destination. Intermodal linkages are the transfer points along the way, such as Park-and-Ride lots. In transit, intermodal transfers allow providers to serve a greater segment of the population. For freight, intermodal transfers allow shippers to take advantage of the economies of each mode, such as truck and rail, to achieve the most cost-effective and timely deliveries of goods.

Reference: Based on OTP (1992) Policy 1F (currently OTP 2006 Policy 3.1).

TSI System-Wide Policy #3: Corridor Preservation

Preserve corridors, such as rail rights-of-way, private roads, and easements of regional significance, that are identified for future transportation-related uses.

Policy Definition/Intent: This policy supports the preservation of corridors not in public ownership that connect existing streets or paths or provide alternate routes to existing streets or paths.

Reference: Based on OTP (1992) Action 1B.4; ISTEA Section 450.316(a) MPO Planning Factor 10.

TSI System-Wide Policy #4: Neighborhood Livability

Support transportation strategies that enhance neighborhood livability.

Definition/Intent: Transportation-related impacts on neighborhood livability include excessive intrusion of regional vehicle movement on local residential streets, excessive vehicle speeds, and excessive traffic noise. Strategies aimed at improving flow on arterials, such as access management measures, may draw traffic from neighborhood streets that, based on travel characteristics, should be properly using the arterial.

Local governments will implement strategies to address neighborhood traffic impacts, but personal attitudes and behavior are the major factors in determining how residents travel around the region and the impact this travel has on neighborhoods. Choosing to shop locally, walking or cycling children to school, riding the bus to work, combining trips, driving slowly on residential streets, and avoiding short cuts through neighborhoods are examples of how individuals can help to reduce neighborhood traffic impacts.

Reference: Based on *TransPlan* 1986 Policy LU5; OTP (1992) Policy 1D (currently OTP 2006 Policy 4.3).

TSI System-Wide Policy #5: TransPlan Project Lists

Adopt by reference as part of the Metro Plan the 20-Year Capital Investment Actions project lists contained in *TransPlan*. Project timing and estimated costs are not adopted as policy.

Definition/Intent: This policy defines the adopted portions of the *TransPlan* 20-year Capital Investment Action project lists. Consistent with the requirements of Goal 11, Administrative Rule OAR660, Division 11. This policy was added to make it clear that the project lists in TransPlan, along with the policies in TransPlan, are adopted by ordinance as part of Metro Plan. An adopted project list is a requirement of the Transportation Planning Rule (TPR) (OAR 660-012-0020). The fiscally constrained project list identifies projects as being of higher priority than those on the future project lists. The TPR is structured so that issues not considered at the plan level are addressed during the Project Development Phase. OAR 660-012-0050 Transportation Project Development addresses the concerns raised here. Many of the details of the projects are not known at this time and will be addressed during the Project Development phase of project implementation. The Project Development Process contains specific requirements for public involvement, notice, and findings of compliance with applicable land use and environmental rules.

Reference: This policy was added after Draft *TransPlan* Planning Commission review based on advice from legal counsel.

Transportation System Improvements: Roadway Policies

Roadway Policies are relevant to the region's roadway system, which is comprised of arterial and collector streets. The policies refer to a multi-modal roadway system with infrastructure that serves the needs of all modes. The automobile continues to be the dominant form of passenger travel and much of the region's roadway system was designed to accommodate increasing automobile use. However, roadways serve the transit system and most modern roadways are built to serve bicycle and pedestrian travel. Roadways also play a role in the movement of freight and are the backbone of commerce in the region. In serving these varied needs, the region must continue to move towards a multi-modal roadway system that responds to the needs of all forms and purposes of travel.

TSI Roadway Findings

1. The *Regional Travel Forecasting Model* forecasted increased traffic congestion on roadways from 2010 to 2035, which indicate a 182 percent increase over existing congestion levels.

2. Level of service (LOS) standards are a nationally accepted means for measuring the performance of roadway facilities. LOS analysis methods are standardized through the Transportation Research Board's *Highway Capacity Manual*.

3. The OHP establishes performance standards for all state highways in Oregon. OAR 660-012-0015 requires coordination of transportation system plans with the state.

TSI Roadway Policy #1: Mobility and Safety for all Modes

Address the mobility and safety needs of motorists, transit users, bicyclists, pedestrians, and the needs of emergency vehicles when planning and constructing roadway system improvements.

Policy Definition/Intent: This policy supports the design and construction of systems and facilities that accommodate multiple modes. It also supports consideration of the needs of emergency vehicles in the design and construction of system improvements.

Reference: Based on OTP (1992) Policy 1A (currently OTP 2006 Policy 1.2); TEA 21 Metropolitan Planning Factors F and G (currently SAFETEA-LU planning factors B and D).

TSI Roadway Policy #2: Motor Vehicle Level of Service

1. Use motor vehicle level of service standards to maintain acceptable and reliable performance on the roadway system. These standards shall be used for:
   a. Identifying capacity deficiencies on the roadway system.
   b. Evaluating the impacts on roadways of amendments to transportation plans, acknowledged comprehensive plans and land-use regulations, pursuant to the TPR (OAR 660-12-0060).
   c. Evaluating development applications for consistency with the land-use regulations of the applicable local government jurisdiction.

2. Acceptable and reliable performance is defined by the following levels of service under peak hour traffic conditions: Level of Service E within Eugene's Central Area Transportation Study (CATS) area, and Level of Service D elsewhere.

3. Performance standards from the OHP shall be applied on state facilities in the Eugene-Springfield metropolitan area.

In some cases, the level of service on a facility may be substandard. The local government jurisdiction may find that transportation system improvements to bring performance up to standard within the planning horizon may not be feasible, and safety will not be compromised, and broader community goals would be better served by allowing a substandard level of service. The limitation on the feasibility of a transportation system improvement may arise from severe constraints including but not limited to environmental conditions, lack of public agency financial resources, or land use constraint factors. It is not the intent of TSI Roadway Policy #2: Motor Vehicle Level of Service to require deferral of development in such cases. The intent is to defer motor vehicle capacity increasing transportation system improvements until existing constraints can be overcome or develop an alternative mix of strategies (such as: land use measures, TDM, short-term safety improvements) to address the problem.

Policy Definition/Intent: *Level of service* is a concept that is used to assess roadway system performance and to describe operational conditions from the perspective of motorists. Detailed descriptions of LOS and its application are provided in Appendix B.

The policy sets standards for acceptable levels of roadway performance (LOS) and supports maintaining a system of streets to meet those standards. By defining acceptable levels of service, the policy provides direction for identifying roadway system deficiencies. It does not, however, determine what actions should be taken to address deficiencies. Such actions are guided by the full range of RTP policies including policies on Land Use, TDM, Transportation System Improvements (TSI), and Transit.

For state highways, performance standards contained in the adopted Oregon Highway Plan are used to evaluate the need for roadway capacity improvements.

Reference: *TransPlan* (RTP) 1986 Plan Assumptions. Additions to policy based on advice from legal council.

TSI Roadway Policy #3: Coordinated Roadway Network

In conjunction with the overall transportation system, recognizing the needs of other transportation modes, promote or develop a regional roadway system that meets combined needs for travel through, within, and outside the region.

Policy Definition/Intent: The regional roadway system must meet the travel needs of motorists, transit users, bicyclists, pedestrians, and commercial vehicles. Characteristics of such a roadway system include adequate capacity and connections to roads entering the region. The RTP roadways will be coordinated with the Lane County, Eugene-Springfield and Coburg Transportation System Plan (TSP) roadways and ODOT corridor studies and facility plans. All roadway system improvements will also be consistent with other adopted policies in the RTP.

Reference: Based on TPR 660-12-020; TEA 21 Metropolitan Planning Factor E (currently SAFETEA-LU planning factor F).

TSI Roadway Policy #4: Access Management

Manage the roadway system to preserve safety and operational efficiency by adopting regulations to manage access to roadways and applying these regulations to decisions related to approving new or modified access to the roadway system.

Policy Definition/Intent: Access management is balancing access to developed land while ensuring movement of traffic in a safe and efficient manner. This policy supports local access management ordinances called for in the TPR.

The TPR (OAR 660-012-0045 (2) states: "Local governments shall adopt land use or subdivision ordinance regulations, consistent with applicable federal and state requirements, to protect transportation facilities, corridors, and sites for their identified functions. Such regulations shall include:

(a) Access control measures, for example, driveway and public road spacing, median control and signal spacing standards, which are consistent with the functional classification of roads and consistent with limiting development on rural lands to rural uses and densities;"

These regulations are adopted by individual jurisdictions. ODOT has adopted Access Management policies and regulations in the recently adopted Oregon Highway Plan and

OAR 734.051. To varying degrees, Eugene, Springfield, and Lane County address access management in current land use codes.

Reference: Joint Adopting Official review.

Transportation System Improvements: Transit Policies

Transit policies are designed to support improvement of the transit system to make it a more viable transportation alternative for a greater segment of the population. The policies focus on enhancements to the convenience of the transit system through improved facilities, more frequent service, and faster service. These policies are also intended to create a transit system that supports and is integrated with planned land use patterns.

TSI Transit Findings

1. The *2000 U.S. Census of Population* reported that about 9 percent of all households in the Eugene-Springfield area did not own a vehicle; these residents have limited transportation choices.

2. Transit services are particularly important to the transportation disadvantaged population: persons who are limited in meeting their travel needs because of age, income, location, physical or mental disability, or other reasons. The Americans with Disabilities Act (ADA) requires fixed-route systems like (LTD to provide a comparable level of service to the elderly and persons with disabilities who are unable to successfully use the local bus service. LTD's *Americans with Disabilities Act Paratransit Plan, 1994-1995 Update*, January 18, 1995, was found to be in full compliance with the ADA by the Federal Transit Administration.

3. The role of urban public transit in meeting trip needs has increased within the metropolitan area since 1970. In 1971, there were 2,260 LTD passenger trips on a weekday and, in 2004, ridership had increased to 20,736 per day, or approximately 2% of all metropolitan trips. The Regional Travel Forecasting Model forecasts transit use to increase to 3.1 percent of all trips by 2035 with proposed RTP projects and policy implementation.

4. The *Urban Rail Feasibility Study Eugene/Springfield Area* (July 1995) concluded that projected 2015 ridership for an urban rail system was too low to be competitive with other cities seeking federal rail transit funding; and that BRT could significantly improve transit service for substantially less capital investment and lower operational costs than urban rail.

5. OHP policy supports investment in Park-and-Ride facilities as a cost-effective means to increase the efficient use of the existing transportation system.

TSI Transit Policy #1: Transit Improvements

Improve transit service and facilities to increase the system's accessibility, attractiveness, and convenience for all users, including the transportation disadvantaged population.

Policy Definition/Intent: Continued improvements to the transit system, including enhancements to the existing transit service, exploration of transit fare alternatives that increase ridership and new and improved transit facilities for passengers, will make transit a more attractive transportation alternative and encourage increased use of transit. This policy also supports maintaining existing facilities in good condition.

Reference: Based on TEA 21 Metropolitan Planning Factor C.

TSI Transit Policy #2: Bus Rapid Transit

Establish a Bus Rapid Transit (BRT) system composed of frequent, fast transit service along major corridors and neighborhood feeder service that connects with the corridor service and with activity centers, if the system is shown to increase transit mode split along BRT corridors, if local governments demonstrate support, and if financing for the system is feasible.

Policy Definition/Intent: BRT is, in essence, the use of buses to emulate the positive characteristics of a rail system, but at a fraction of the cost of a rail system. The BRT system will include:

- Exclusive busways along the majority of each corridor,
- Faster boarding through low-floor, multiple door vehicles,
- Minimum ten minute frequency during peak hours,
- Increased convenience and comfort,
- Limited stops,
- Improved travel time through reduction of impact from normal traffic congestion through bus priority treatment
- A connected system of BRT corridor and neighborhood routes

BRT, when combined with other system improvement, land use, and demand management strategies, is expected to increase the share of riders who use public transportation. BRT is also expected to help the region maintain conformity with federal air quality standards. BRT, combined with nodal development, is a key strategy in the regions compliance with alternative performance measures for the Transportation Planning Rule. Commitment by the region to full system build out of BRT is essential to meeting the alternative performance measures. The full system will include 61 miles of BRT corridor service. The majority of each corridor will include exclusive busways. When funding or traffic conditions restrict implementation of exclusive busways within a corridor, priority should be given to improvements providing the greatest benefit to travel timesavings. The BRT strategy will be implemented to the extent that planning and engineering studies show that the system would increase the use of transit, is supported by the community, and can be funded. As BRT is implemented, LTD, Springfield, Eugene, Lane County, and ODOT will consider neighborhood impacts when designing elements of specific segments.

Reference: Based on Decision Package, November 1996, Strategy 5; TEA 21 Metropolitan Planning Factor C.

TSI Transit Policy #3: Transit/High-Occupancy Vehicle Priority

Implement traffic management strategies and other actions, where appropriate and practical, that give priority to transit and other HOVs.

Policy Definition/Intent: Various traffic management techniques, such as transit signal priority, bus queue jumpers, and exclusive bus lanes, can be used to improve transit travel time, reduce operating costs, and make transit a more attractive transportation alternative. Implementation of priority treatment for transit and other HOVs must not impair bicycle and pedestrian mobility. Local jurisdictions will determine when and where it is appropriate to give priority to transit and HOVs.

Reference: Based on *TransPlan* 1986 Policy TSM3, AM2.

TSI Transit Policy #4: Park-and-Ride Facilities

Expand the Park-and-Ride system within the metropolitan area and nearby communities.

Policy Definition/Intent: Park-and-Ride lots provide access to the transit system for people who cannot conveniently access the bus system on foot. Common reasons for using Park-and-Ride lots are that there is no bus service near a person’s home, the nearby service is not convenient, or a car is needed before or after the bus trip (such as to drop a child off at day care). Regular Park-and-Ride users are almost always commuters (to work or to school) who use the service daily. The destination of Park-and-Ride customers is almost always to a location where parking is expensive and/or in short supply. Increased use of the Park-and-Ride system will reduce traffic congestion and parking demand in the city centers and other intensely developed areas. Expansion of the Park-and-Ride system in outlying communities will be consistent with the Lane County TSP and small city TSPs.

Reference: *TransPlan* 1986 Policy AM5, IC2.

Transportation System Improvements: Bicycle Policies

Bicycle policies address the need to improve the region's bicycle system and associated facilities to increase the choice of modes available for travel in the region. The policies are focused on directing bicycle system improvements, such as expansion of the existing regional network, the provision of safety improvements, and the addition of adequate support facilities. The policies also respond to the region's need to comply with federal and state requirements that call for a greater emphasis on the use of alternative modes of transportation, including bicycles.

TSI Bicycle Findings

1. In 1995, there were 126 miles of bikeways in the metropolitan area. Implementation of proposed RTP projects would approximately double the lane miles for bicycles.

   Over the past 20 years, Eugene and Springfield have built an extensive bikeway system. The focus over the next 20 years is on the construction of "Priority Bikeway Projects" which consist of those projects that are along an essential core route on which the overall system depends, fill in a critical gap in the existing bicycle system, or overcome a barrier where no other nearby existing or programmed bikeway alternatives exist, or significantly improve bicycle users safety in a given corridor.
2. OAR 660-012-0045 (3) requires local governments to adopt land use regulations to require bikeways along new and reconstructed arterial and major collector streets and to connect new development with nearby neighborhood activity centers and major destinations.

TSI Bicycle Policy #1: Bikeway System and Support Facilities

Construct and improve the region's bikeway system and provide bicycle system support facilities for both new development and redevelopment/expansion.

Policy Definition/Intent: Over the past 20 years, local jurisdictions have invested in a system of designated bikeways that provide access to many regional destinations. This policy supports the continued construction of bikeway facilities that provide regional connectivity and access to neighborhoods, schools, and parks, as well as recreational, retail, and employment areas. The bicycle projects included in the RTP are significant components of the regional bikeway system because they fill gaps in the existing system, provide access to neighborhoods or activity centers, improve overall system safety, or overcome significant barriers, such as rivers and highways.

Bikeways include multiple-use paths, striped lanes or shoulders, and signed routes on local streets. In order to encourage walking and bicycling trips by those not currently using those modes and an overall increase in trips and safety for those modes, it is preferable, when practical, that bicycles and pedestrians be as physically separated as possible from the flow of motorized traffic. All streets in the metropolitan area should be designed to safely accommodate bicyclists. If a street cannot safely accommodate bicycle travel and reconstruction is not feasible, an alternate parallel bikeway should be designated. This policy also supports the construction of multiple-use bicycle/pedestrian paths along the Willamette River within the Willamette River Greenway and along the McKenzie River and other major drainageways where practicable. Land use activities along these corridors should be done in a manner that allows the possibility of future bikeway construction.

In conjunction with bikeway system improvements, adequate bicycle system support facilities should be provided, including secure bicycle parking areas (e.g., covered racks, cages, and lockers), signage, and lighting. In particular, bicycle support facilities should be provided at government offices, downtowns, employment areas, shopping centers, parks, libraries, athletic stadiums, and schools, and along heavily used bikeways.

Reference: Based on TPR 660-12-045(3 and 6).

TSI Bicycle Policy #2: Bikeways on Arterials and Collectors

Require bikeways along new and reconstructed arterial and major collector streets.

Policy Definition/Intent: In compliance with the TPR, this policy requires the provision of bikeways, normally bike lanes, on arterial and major collector streets. Bicycle lanes can be provided on existing streets through the reallocation of road space, including narrowing motor vehicle travel lanes and removing on-street parking. In special cases, circumstances such as safety issues or physical limitations may prevent the provision of on-street bike lanes. In these cases, alternate parallel routes shall be provided as part of the same project to ensure access to residences and services found on the collector and arterial streets.

The 1999 Eugene Arterial and Collector Street Plan (ACSP) describes the public involvement process in the design of Eugene projects, including adding bicycle lanes to existing streets (pp. 44-45). When bike lanes are proposed to be added to existing streets, staff would work with residents, property owners and the neighborhood association to conduct a design charrette or similar process for citizen input. Various options would be evaluated for implementing the bike lanes while enhancing the maximum amount of on-street parking, and addressing other city and neighborhood goals. Design standards in the ACSP would be used as desirable guidelines –for example, width of bicycle lanes and parking areas, etc. The process would focus on reaching consensus on optimum design for safety, mobility and livability.

Reference: Based on *TransPlan* (RTP) 1986 Policy I7; TPR 660-12-045(3)(b)(B); OTP (1992) Policy 2D (currently OTP 2006 Policy 4.3), Action 2D.1, Eugene ACSP.

TSI Bicycle Policy #3: Bikeway Connections to New Development

Require bikeways to connect new development with nearby neighborhood activity centers and major destinations.

Policy Definition/Intent: This policy recognizes the importance of providing bicycle connectivity between new development, neighborhood activity centers, and major destinations. When new development occurs, connectivity to the regional bikeway system must be provided. In cases where the existing or planned street network does not adequately provide bicycle connectivity, paved bikeways should be provided within residential developments and should extend to neighborhood activity centers or to an existing bikeway system within one-half mile of residential developments. Major destinations may include, but are not limited to, nodal development centers, schools, shopping centers, employment centers, transit stations, and parks. This policy does not imply that a developer would be required to provide bikeways through undeveloped adjoining properties.

Reference: Based on TPR 660-12-045(3)(b).

TSI Bicycle Policy #4: Implementation of Priority Bikeway Miles

Give funding priority (ideally within the first 3 to 5 years after adoption of TransPlan subject to available funding) to stand-alone bikeway projects that are included in the definition of "Priority Bikeway Miles" and that increase the use of alternative modes.

Policy Definition/Intent: This policy supports consideration and programming of stand-alone "priority bikeway miles" bikeway facilities in the first 3-5 years following adoption of TransPlan. Stand-alone bike projects are those listed in TransPlan not associated with roadway projects (Multi-Use Paths Without Road Projects and On-Street Lanes or Routes Without Roadway Projects.)

A key alternative measure for demonstrating reduced reliance on the auto is the building of Priority Bikeway Miles. Priority bikeway projects consist of those projects that:

- Are along an essential core route on which the overall bicycle system depends; and
- Fill in a critical gap in the existing bicycle system; or
- Overcome a barrier where no other nearby existing or programmed bikeway alternatives exist (e.g., river, major street, highway); or
- Significantly improves bicycle users' safety in a given corridor.

The intent of this policy is to maximize the impact of bicycle projects in the RTP by implementing the most important bike projects early in the period following adoption of the RTP. This policy also provides additional policy direction in support of Finance Policy #5: Short-Term Project Priorities.

Reference: Based on TPR 660-12-0040(2)(d). Also see Finance Policy #5.

Transportation System Improvements: Pedestrian Policies

Walking is still the most important mode of travel. All trips, whether by car, bus, or bike, involve at least two pedestrian trips: one at the beginning and one at the end. Without pedestrian facilities, the transportation system could not function. Pedestrian facilities are critical to provide access to neighborhood destinations, including schools, parks, recreation, and shopping. Pedestrian policies focus on closing gaps and improving the quality of the pedestrian system in the region. These policies are closely related to RTP land use policies that support pedestrian-oriented design.

TSI Pedestrian Findings

1. OAR 660-012-0045 (3) requires local governments to adopt land use regulations to provide for a pedestrian environment that is well integrated with adjacent land uses and designed to enhance the safety, comfort, and convenience of walking; a continuous pedestrian network with reasonably direct travel routes between destination points; and sidewalks along urban arterial and collector roadways, except freeways.

TSI Pedestrian Policy #1: Pedestrian Environment

Provide for a pedestrian environment that is well integrated with adjacent land uses and is designed to enhance the safety, comfort, and convenience of walking.

Policy Definition/Intent: This policy supports the provision of pedestrian connections between adjacent land uses, improved pedestrian access to transit stops and stations, safe and convenient pedestrian street crossings, and pedestrian amenities, including lighting. In more developed areas, such as downtowns, pedestrian design features improve the accessibility of destinations.

Reference: Based on TPR 660-12-045.

TSI Pedestrian Policy #2: Continuous and Direct Routes

Provide for a continuous pedestrian network with reasonably direct travel routes between destination points.

Policy Definition/Intent: This policy supports an active program to develop pedestrian pathways (e.g., sidewalks), especially in proximity to major activity centers. A continuous pedestrian network is free of gaps and deadends and overcomes physical barriers that inhibit walking. Direct routes between destination points are important because out-of-direction travel discourages walking. “Reasonably direct” means either a route that does not deviate unnecessarily from a straight line or a route that does not involve a significant amount of out-of-direction travel for likely users.

Reference: Based on TPR 660-12-045(3)(d)(B).

TSI Pedestrian Policy #3: Sidewalks

Construct sidewalks along urban area arterial and collector roadways, except freeways.

Policy Definition/Intent: This policy supports the construction of sidewalks during roadway construction or reconstruction, as well as the prioritized retrofitting of corner sidewalks with curb ramps, and infill of missing sidewalk sections. Specific design standards for sidewalks along collectors and arterials and local street sidewalk policies and requirements are established by local jurisdictions.

Reference: Based on TPR 660-12-045(3)(b)(B).

Transportation System Improvements: Goods Movement Policies

The RTP supports the integration of goods movement considerations into the regional transportation planning process. Goods movement of all types makes a significant contribution to the region's economy and wealth and contributes to residents' quality of life. Truck routes, rail corridors, aviation facilities, and pipelines must all function cohesively if the region's goods movement system is to operate efficiently. There are no maritime port or navigation facilities in the RTP study area. The region seeks to maintain and enhance its competitive advantage in freight distribution through efficient use of a flexible, seamless, and multi-modal transportation network that offers competitive choices for freight movement. Goods movement is directly supported by TSI System-Wide and TSI Roadway policies.

TSI Goods Movement Findings

1. The OTP recognizes that goods movement of all types makes a significant contribution to the region's economy and wealth and contributes to residents' quality of life. OTP Policy 3A promotes a balanced freight transportation system that takes advantage of the inherent efficiencies of each mode.

2. There are no maritime port or navigation facilities in the MPO area.

3. Goods movement is directly supported by system-wide and roadway transportation system improvements.

TSI Goods Movement Policy #1: Freight Efficiency

Support reasonable and reliable travel times for freight/goods movement in the Central Lane MPO region.

Policy Definition/Intent: This policy supports a high degree of mobility for goods movement within and through the region in freight transportation corridors and high-quality access between freight transportation corridors and the region's markets, inter-modal facilities, and industrial developments. This policy supports the development of collaborative strategies between public agencies and freight transportation providers to improve the efficiency of roadway, rail, air, and pipeline goods movement.

Reference: Based on OTP (1992) Policy 3A (currently OTP 2006 Policy 3.1); TEA 21 Metropolitan Planning Factor E (currently SAFETEA-LU planning factors D and F).

Transportation System Improvements: Other Modes Policies

This section sets forth policy for other modes, including air, rail, and inter-city bus service. Collaboration between the public and private sectors is imperative for effective implementation of policies that directly impact private transportation providers. These other modes are supported by the TSI System-Wide policies.

TSI Other Modes Findings

1. The Eugene Airport is located outside the Eugene urban growth boundary (UGB) to protect it from incompatible development as well as to reduce airport-related impacts on development within the UGB. The area of the Airport designated Airport Operations in the *Eugene Airport Master Plan* receives municipal water, wastewater, fire, and police services.

2. The *Pacific Northwest High Speed Rail Southern Terminus Study*, Wilbur Smith Associates, 1995, found that rail-related infrastructure improvements needed along the corridor include improved signals, grade crossings, track, and depots. These improvements are important to the success of high speed rail because Eugene-Springfield is the southern terminus to the high speed rail corridor.

3. OTP (1992) Policy 1F (currently OTP 2006 Policy 1.3) provides for a transportation system with connectivity among modes within and between urban areas, with ease of transfer among modes and between local and state transportation systems.

TSI Other Modes Policy #1: Eugene Airport

Support public investment in the Eugene Airport as a regional facility and provide land use controls that limit incompatible development within the airport environs. Continue to use the *Eugene Airport Master Plan* as the guide for improvements of facilities and services at the airport.

Policy Definition/Intent: The Eugene Airport/Mahlon Sweet Field is the major airport that provides commercial passenger, cargo, mail, and general aviation services to the metropolitan area. This airport also provides major services to Lane County residents outside of the metropolitan area. The airport is located outside the urban growth boundary (UGB), to protect the airport from incompatible development or development that would have incompatible operational characteristics, as well as to reduce airport-related impacts on development within the airport environs.

Reference: Based on TPR 660-12-045(2)(c); *Metro Plan* 1987 Transportation Element Policies 8-17.

TSI Other Modes Policy #2: High Speed Rail Corridor

Support provision of rail-related infrastructure improvements as part of the Cascadia High Speed Rail Corridor project.

Policy Definition/Intent: This policy demonstrates local jurisdiction support for improvements to the passenger rail system. High speed rail corridor development is a cooperative effort involving the states of Oregon and Washington, the Province of British Columbia, and Burlington Northern Railroad, Southern Pacific Railroad, and Amtrak. Rail-related infrastructure improvements needed along the corridor include improved signals, grade crossings, track, and depots. As the corridor's southern terminus, the provision of a station and train servicing facilities and connections to other transportation modes are issues for the Central Lane MPO region that contribute to the overall success of the corridor.

Reference: *Pacific Northwest High Speed Rail Southern Terminus Study*, July 1995.

TSI Other Modes Policy #3: Passenger Rail and Bus Facilities

Support improvements to the passenger rail station and inter-city bus terminals that enhance usability and convenience.

Policy Definition/Intent: This policy promotes the growth of inter-city bus and passenger rail facilities and services. Amtrak provides passenger rail service through the region and Greyhound is the primary provider of inter-city bus service. Intermodal connections play an important role in the usability and convenience of passenger rail and bus service.

Reference: Based on *TransPlan* 1986 Policy IC1; based on OTP (1992) Action 3B.2 (currently OTP 2006 Policy 1.3).

Finance Policies

The finance policies will guide the development and allocation of funding for transportation services, facilities, and projects. Characteristics of the desired transportation finance system include:

1. Incorporation of federal, state, local, and private funding;
2. Funding for operations and maintenance, preservation, and modernization of the transportation system for all transportation modes and jurisdictions;
3. Funding for incentives to implement the nodal development strategy;
4. Funding for the development, implementation, and operations of TDM programs;
5. Funding for efficient and effective system improvements (OTP Policy 4B);
6. Funding for the improvement of collector and arterial streets within the Eugene, Springfield and Coburg UGBs to urban standards;
7. Modernization and extension of the user pays concept to reflect the full costs and benefits of uses of the transportation system and to reinforce the relationship between the user fees and uses of the related revenues (OTP Policy 4C); and
8. Provision of equity among competing users, payers, beneficiaries, and providers of the transportation system (OTP Policy 4F).

A cost-effective transportation system will provide adequate levels of accessibility and mobility to users, while minimizing the overall cost of the system and therefore reducing the need for public investment. Certain situations require increased investments in one area to save a greater amount of capital cost in another area. However, *TransPlan* places emphasis on the preservation and efficient use of existing facilities as the preferred approach to provide an adequate transportation system.

Finance Findings

1. Transportation costs are rising while revenues are shrinking and this trend is expected to continue. The *1999 Oregon Highway Plan* (as amended through January 2006) estimated total 20-year highway needs of about $29 billion, but projected revenues of only about $14 billion.

2. The RTP estimates that operations, maintenance, and preservation of the metropolitan transportation system will cost approximately $1.77 billion in 2011 dollars to maintain at current levels to the year 2035, while revenues for this purpose, including a regularly increasing state gas tax or other comparable source of revenue at the state level, and federal forest receipts at current non-guaranteed levels after the guarantee expires, are estimated at $1.61 billion, leaving a conservative estimated shortfall of about $160 million over the planning period before the implementation of fiscal constraint strategies.

3. The projects proposed in the RTP demonstrate that nearly all of the region's travel over the next 20+ years will rely on existing streets, highways, and bicycle and pedestrian facilities, emphasizing the importance of preservation and maintenance of these facilities.

4. Historically, the State Highway Trust Fund (SHTF) and Federal Forest Receipts, significant sources of transportation revenues, have funded operations and maintenance and preservation of the regional transportation system. Currently, SHTF revenues are not increasing with inflation and Federal Forest Receipts are declining.

5. Funding allocations of State cigarette tax revenues designated for special need transit services are guided by the Special Transportation Fund Advisory Committee per ORS 391.800-391.830 and OAR 732-05, 732-10, 732-20 governing the Special Transportation Fund Program.

6. Currently, systems development charge (SDC) methodologies charge new development only for the city's portion of the arterial-collector system; state and county facilities within the metropolitan area are excluded from the calculation of SDC rates; and assessments only partially fund projects that are improving existing facilities to urban standards.

7. Under SAFETEA-LU), 10 percent of Surface Transportation Program funds allocated to the state must be used for transportation enhancement activities, including construction of facilities for bicycles and pedestrians, but a local match is required. State funding for bikeways is primarily limited to ODOT Highway Funds, which are used mainly for adding bicycle lanes to existing and new streets, but may be used for other bicycle projects in the right-of-way. Local jurisdictions may also fund bikeways through the local road construction and maintenance budget and from general funds, park district funds, special bond levies, and SDCs. Regarding transit, the RTP anticipates that discretionary federal grant funds will pay for up to 80 percent of the capital cost of the BRT system, based on trends in federal funding for LTD capital projects over the last ten years.

Finance Policy #1: Adequate Funding

Support development of a stable and flexible transportation finance system that provides adequate resources for transportation needs identified in the RTP.

Policy Definition/Intent: This policy supports development of a stable set of revenue sources to adequately fund the full range of regional transportation needs for all modes, including operations and maintenance, preservation, and modernization. This policy also supports the creation of funding for incentives to implement nodal development and funding for the development, implementation, and operation of TDM programs.

The current structure and level of transportation funding is inadequate to meet the needs of either the individual publicly funded modes of transportation or the system as a whole. Many transportation revenue sources are restricted to expenditure on particular types of projects either by mode or activity. Local jurisdictions may seek changes in current restrictions on transportation funding. The current shortfall in revenues available for road preservation activities is evidence of a mismatch between revenue availability and need.

Reference: Based on OTP (1992) Policy 4A (currently OTP 2006 Policy 6.1); Decision Package, November 1996, Strategies 10, 13, and 14; *TransPla*n 1986 Policy I3 (Criteria C) and Street and Highway Element Category of Short-Range Need.

Finance Policy #2: Operations, Maintenance, and Preservation

Operate and maintain transportation facilities in a way that reduces the need for more expensive future repair.

Policy Definition/Intent: This policy emphasizes the importance of adequate resources to operate and maintain the existing transportation system at a level that avoids more costly reconstruction. Preservation and efficient use of existing facilities is preferred versus expanding the transportation system when there is a choice. The impact of this policy is limited by the fact that some transportation revenue sources are dedicated to modernization activities.

Nearly all of the region's travel during the next 20+ years and beyond will rely on the existing system of streets, highways, and bicycle and pedestrian facilities. Therefore, it is critical to ensure that current and future funding and resource allocation decisions address the ongoing operation, maintenance, and preservation of this system. To minimize costs, it is important to maintain and preserve the system at a level such that at least 80 percent of the system's pavement condition is rated fair or better. If this happens, more expensive preservation activities, such as reconstruction of a facility, are postponed.

Reference: Based on *TransPlan* 1986 Policy I4; Decision Package, November 1996, Strategy 8; TEA 21 Metropolitan Planning Factor G (currently SAFETEA-LU planning factors G and H) .

Finance Policy #3: Prioritization of State and Federal Revenue

Set priorities for investment of Oregon Department of Transportation (ODOT) and federal revenues programmed in the region's Transportation Improvement Program (TIP) to address safety and major capacity problems on the region's transportation system.

Policy Definition/Intent: This policy supports the development and application of a process for prioritizing regional system improvements funded by state and federal revenues. Safety and major capacity issues will be emphasized in this process. Local jurisdiction funding sources, including federal payments to the County road fund, are allocated through local agency Capital Improvement Programs (CIPs) and are not subject to a regional prioritization process.

Reference: Based on *TransPlan* 1986 Policies I2, I3, and I13; TEA 21 Metropolitan Planning Factor F (currently SAFETEA-LU planning factors B and D); Decision Package, November 1996, Strategy 11.

Finance Policy #4: New Development

Require that new development pay for its capacity impact on the transportation system.

Policy Definition/Intent: This policy supports expanding SDC methodologies to address new developments' impacts on state, county, and transit facilities. Currently, SDC methodologies adopted by the cities of Eugene and Springfield charge new development only for the City's portion of the arterial-collector system. Additional charges to mitigate onsite or adjacent impacts may be necessary.

Reference: Finance Committee.

Finance Policy #5: Short-Term Project Priorities

Consider and include among short-term project priorities, those facilities and improvements that support mixed-use, pedestrian-friendly nodal development and increased use of alternative modes.

Policy Definition/Intent: This policy supports consideration and programming of facilities and improvements that support nodal development and the increased use of alternative modes. Examples of such investments include funding incentives for implementation of nodal development, funding of TDM programs, and improvements made to the transit and bike systems.

Reference: Based on TPR 660-12-0040(2)(d).

Finance Policy #6: Eugene-Specific Finance Policy

The City of Eugene will maintain transportation performance and improve safety by improving system efficiency and management before adding capacity to the transportation system under Eugene's jurisdiction.

Policy Definition/Intent: Use the following priorities for developing the Eugene Capital Improvement Program (CIP) and Eugene projects for the Metropolitan Transportation Improvement Program (MTIP). Implement higher priority measures unless a lower priority measure is clearly more cost-effective or unless it clearly better supports safety, growth management, or other livability and economic viability considerations. Plans must document the justification which supports using lower priority measures before higher priority measures. This policy does not apply to any other jurisdiction or agency.

1. Protect the existing system.

   The highest priority is to preserve the functionality of the existing transportation system by means such as access management, comprehensive plans, transportation demand management, improved traffic operations, and alternative modes.

2. Improve the efficiency and capacity of existing transportation facilities.

   The second priority is to make minor improvements to existing highway facilities such as widening highway shoulders or adding auxiliary lanes, providing better access for alternative modes (e.g.,bike lanes, sidewalks, bus shelters), extending or connecting local streets, and making other off-system improvements.

3. Add capacity to the existing system.

   The third priority is to make major improvements to existing transportation facilities such as adding general purpose lanes and making alignment corrections to accommodate legal-sized vehicles.

4. Add new facilities to the system.

   The lowest priority is to add new transportation facilities such as a new roadway.

Reference: Eugene City Council action.

CENTRAL LANE
REGIONAL TRANSPORTATION PLAN
MPO
Moving Transportation into the Future

CHAPTER THREE

PLAN IMPLEMENTATION

Chapter 3: Plan Implementation

Table of Contents

Chapter Overview

Chapter Three is comprised of actions that implement the regional transportation policy framework set forth in Chapter Two and elements related to plan implementation that are required by federal and state legislation.

- **Part One: Capital Investment Actions** presents transportation system improvement (TSI) projects for motor vehicles, transit, bicycles, pedestrians, goods movement, and other modes that require significant capital investment.

- **Part Two: Financial Plan** describes total Capital Investment Action project costs, anticipated revenues from existing sources, the expected gap in revenues, potential yields from new revenue sources, factors to consider in determining project priorities, and the Financially Constrained RTP.

- **Part Three: Air Quality Conformity** follows the Financial Plan. This section summarizes the air quality conformity analysis required by federal legislation.

- **Part Four: Planning and Program Actions** presents a range of regionally significant planning, administrative, and support actions that might be used to implement RTP policies. The Planning and Program Actions are not adopted, meaning they are not binding or limiting to any implementing jurisdiction.

- **Part Five: Parking Management Plan** presents parking management strategies and demonstrates how the region will achieve the state requirement to reduce parking spaces per capita by 10 percent.

Part One: Capital Investment Actions

Capital Investment Actions are TSI projects for motor vehicles, transit, bicycles, pedestrians, goods movement, and other modes that require significant capital investment. *Chapter Two TSI System-Wide Policy #1 Transportation Infrastructure Protection and Management* calls for "…the protection and management of transportation facilities for all modes…in a way that sustains their long-term capacity and function." This policy is combined with RTP policies and implementation actions for transportation demand management (TDM), land use, and transit. Its purpose is to guide the management of existing and future transportation infrastructure in ways that will reduce the need to construct new roadway capacity improvements. The effects of these management policies and implementation actions on travel demand have been included in the RTP technical analysis that was conducted to identify existing and future transportation system needs. As a result, the Capital Investment Actions Project Lists reflect the RTP's balanced approach to long-range transportation planning. The projects selected for inclusion as Financially Constrained Capital Investment Actions establish a network of facilities that meet overall transportation needs for the planning period.

Summary of Needs Analysis

Transportation needs for the Central Lane area were assessed using standard methods typically employed in regional transportation planning. The analysis of needs was based on population and employment growth forecasts consistent with statewide forecasts. The population and employment forecasts were used to establish overall demand for transportation.

In the development of the 2001 TransPlan, a wide range of strategies were identified to address this demand, including land use, TDM, and TSI strategies. Different combinations of these strategies were formulated as alternative plan concepts and tested using a computer-based travel-forecasting model. The alternative plan concepts ranged from a Base Case consisting of trends to an alternative designed to meet the vehicle miles traveled reduction targets of the Transportation Planning Rule. These strategies are reflected in this Regional Transportation Plan.

The alternatives development and evaluation included consideration of state and local needs consistent with the Oregon Transportation Plan, *Metro Plan*, and state and local improvement programs. Surveys were conducted to provide data on travel behavior and input on a wide range of alternative strategies.

Transportation needs associated with the movement of goods and services were identified as part of the technical analysis and public involvement process. Commercial vehicle movements on the regional transportation network were estimated using the regional travel-forecasting model. The segments of the national highway system within the MPO area were used as part of this analysis.

The needs of the transportation disadvantaged are assessed under a separate planning process leading to the development of the Metro-Area Paratransit Plan. This plan has been adopted by the Lane Council of Governments (LCOG), the Eugene-Springfield Metropolitan Planning Organization (MPO), and Lane Transit District (LTD). Strategies and recommendations in this plan are consistent with the RTP update. Implementation of this plan is carried out in coordination with implementation of the RTP through the Metropolitan Transportation Improvement Program (MTIP). The Paratransit plan provides strategies for improvements to the existing Ride*Source* service. Amendments to the RTP will be made as necessary to maintain consistency between the two planning efforts.

Capital Investment Action Implementation Process

The Financially Constrained Capital Investment Action project lists will be adopted, making them legislatively binding. However, the specific timing, design, and financing provisions of the RTP's recommended projects are not formally adopted. The project lists are not intended to serve as an exclusive long-range programming document in the manner of the MTIP, nor do they formally approve or commit any funding. Illustrative maps that illustrate the regional roadway, transit, and bicycle projects are included in Appendix A.

After a project has been identified as a Capital Investment Action in the RTP, the responsible agency begins the process of project refinement and programming. Programming refers to development of local agency capital improvement programs (CIPs), the Central Lane Metropolitan Transportation Improvement Program (MTIP) at the regional level, and the Oregon Department of Transportation's (ODOT) Four-Year Statewide Transportation Improvement Program (STIP). Projects that use federal funds or that are regionally significant for air quality purposes must be included in the MTIP and the STIP. Some funding sources in the RTP are beyond immediate local control, such as state and federal funding. Local input into state and federal funding programs is advisory, and, therefore, the availability of funds for particular projects may not necessarily coincide with the RTP.

The CIP's are approved by local and appointed officials on an annual basis. Public hearings are held prior to adoption to allow the public to comment on the proposed expenditures. Media advertisements, press releases, and notifying interested parties are used to inform the public about the CIP public hearings.

In the recent past, ODOT and the Oregon Transportation Commission have endeavored to place a higher degree of decision-making on state projects and policies at the local level. Local policy advice has been facilitated through the formation of Area Commissions on Transportation (ACT). These area commissions are chartered by the Oregon Transportation Commission and are meant to provide a more direct communication link between local communities and the OTC.

The formation of an ACT in Lane County was completed in November, 2010. As a new ACT, formal processes for interaction with the Central Lane MPO have yet to be established. Prior to the formation of the LaneACT, the process in place for prioritizing projects on a countywide basis, including projects adopted as part of the RTP was as follows:

1. MPC adopted Coburg-Eugene-Springfield metro area priorities based on TPC and CAC recommendations and public input (prior to this meeting, MPC members

optionally get direction on project priorities from their respective Boards and Councils).

2. MPC forwarded the metro priority list to the Lane County Board of County Commissioners with the understanding that the Board of County Commissioners would not reorder the metro priorities, only blend rural priorities into the list.
3. Lane County Public Works, on behalf of the Board of County Commissioners, sent notices to small cities, ports or other organizations explaining that the County would be assembling a county-wide ODOT STIP priority list and requesting input.
4. Small cities, etc. sent project priorities to Lane County Public Works.
5. The Transportation Planning Committee (TPC) developed a "blended" rural and metro list for review. Lane County Public Works staff or small city administrators would represent the non-metro jurisdictions.
6. Lane County representatives took the countywide priority list to MPC for review and discussion (prior to this meeting, MPC members optionally get direction on the countywide project priorities from their respective Boards and Councils).
7. The Board of County Commissioners adopted a blended county-wide priority list.
8. One County Commissioner served as the Lane County area representative at the ODOT Region 2 roundtable priority setting meeting. This representative may be one of the two Lane County representatives to MPC.

As of the development of this RTP, the MPO and the LaneACT are developing the process by which they will interact while developing priorities and other input to the Oregon Department of Transportation and the Oregon Transportation Commission.

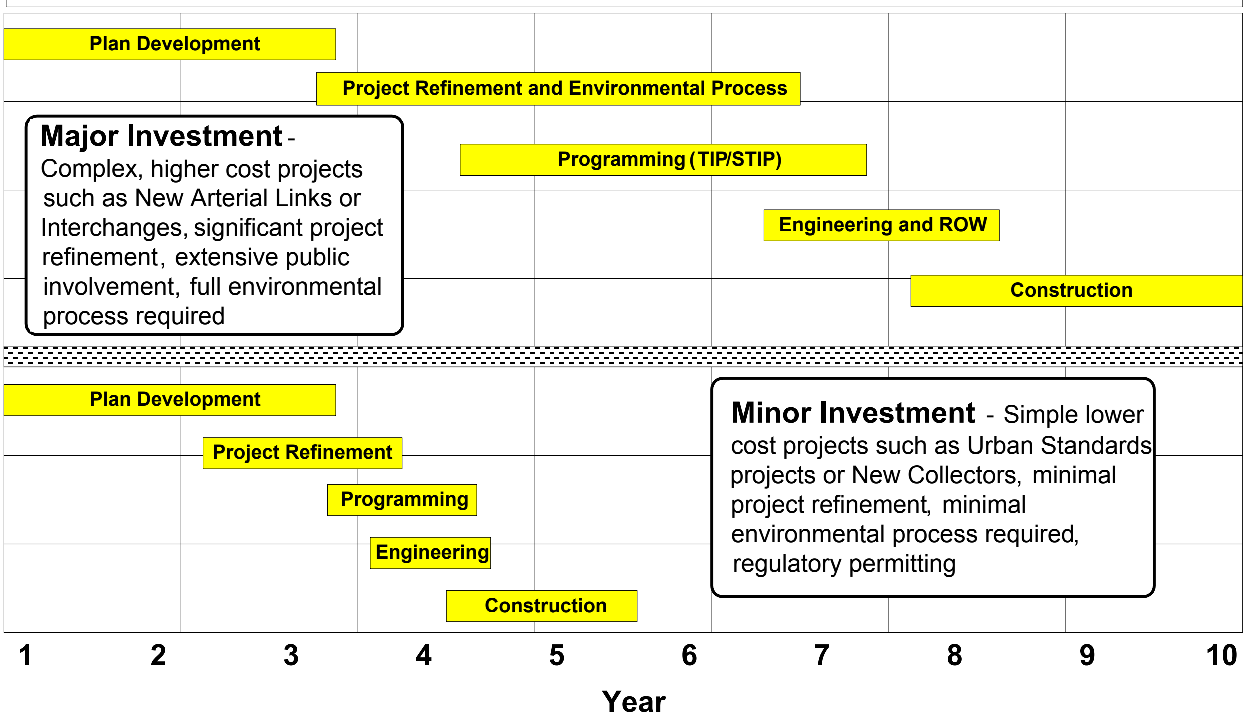
MTIP projects were also prioritized by the Metropolitan Policy Committee following the process outlined above and adopted into the STIP. Federal public involvement guidelines state that there must be reasonable opportunity for public comment prior to approval. Media advertisements, press releases, and notifying interested parties are used to inform the public about the MTIP public hearings. ODOT conducts a public meeting in the Eugene-Springfield area to provide information and gather comments from the public prior to adoption of the STIP by the Oregon Transportation Commission (OTC). The public is invited to make comments directly to the OTC prior to adoption.

Projects proposed for amendment into the RTP from local jurisdictions through local agency TSP or CIP processes are subject to the decision-making and public involvement processes of the respective agencies, as required by applicable federal, state and local requirements. The allocation of locally-controlled funding is decided by the policymakers of the individual jurisdiction, and not at the MPO policy level.

Project refinement and programming can vary depending on the complexity of the project. Depending upon the scope of the project, environmental analyses and public hearings may be needed. Engineering requirements and right-of-way needs vary depending on the type of project. After right-of-way is acquired and final plans and contract documents are prepared, construction can begin. Figure 5 describes the typical process taken between the time a transportation need is identified and when project construction is complete. **Major projects** (complex, higher cost projects such as many Added Freeway Lanes or New Arterial Links or Interchanges that require significant project refinement and a full environmental process), can take as long as ten years to complete (more if there are several project phases). **Minor projects** (simple, lower-cost projects such as many Urban Standards projects, New Collectors, or Studies that require little project refinement and minimal environmental process) may be completed within two to five years.

While local jurisdictions vary in their public involvement process, each agency has developed a program for involving the citizens affected by transportation projects and provide opportunity for public input on project alternatives and design decisions. Depending on the size or impact of the project, the citizen involvement process for project implementation may include advisory committees, neighborhood meetings, open houses, mailings to affected property owners and interested parties, or public hearings.

Figure 4
Typical Process for Implementation of Roadway System Improvements



Overview of Capital Investment Action Project Lists

The Capital Investment Actions are presented in five tables/lists:

1a. Financially Constrained Capital Investment Actions: Roadway Projects
1b. Illustrative Capital Investment Actions: Roadway Projects
2. Financially Constrained Capital Investment Actions: Transit Projects
2b. Illustrative Capital Investment Actions: Transit Projects
3a. Financially Constrained Capital Investment Actions: Bicycle Projects
3b. Illustrative Capital Investment Actions: Bicycle Projects

Projects are listed in the MPO's Regional Transportation Plan as part of a long-range planning effort. To meet state requirements, additional action by local agencies may be required prior to programming and proceeding with implementation of projects. Listing of projects in the RTP does not necessarily constitute fulfillment of the requirements of the Oregon Transportation Planning Rule.

Project Implementation Phases

The Roadway and Bicycle project lists are subdivided into Financially Constrained and Illustrative implementation phases. Illustrative projects are projects for which a need has been identified but for which the funding, at this time, is not reasonably expected to be available. The illustrative projects may fall within the plan horizon, or they may be projects anticipated beyond the plan horizon. These projects are not part of the financially constrained plan. However, these projects could be implemented if additional funding is identified.

As described in the Capital Investment Action Implementation Process on page 4, in all cases, inclusion of a project in a particular phase does not represent a commitment to complete the project during that phase. It is expected that some projects may be accelerated and others postponed due to changing conditions, funding availability, public input, or more detailed study performed during programming and budgeting processes.

The columns/fields of information common to each table are defined below.

Column 1: Name

The name of the Capital Investment Action helps to identify the location of the project. Most Capital Investment Actions are named after the roadway on which the project is located.

Column 2: Geographic Limits

The geographic limits define the geographic beginning and ending points of the project.

Column 3: Description

The description field provides a summary overview of each Capital Investment Action.

Column 4: Jurisdiction

Project jurisdictions shown in the RTP identify the agency or agencies that presently have responsibility for the street, highway, or bicycle facility; have indicated a commitment to assist in a project; or have an intergovernmental agreement to assume some responsibility for a road during the planning period.

In some cases, multiple jurisdictions are indicated if sections of a project are the responsibility of different agencies. In other cases, multiple jurisdictions are shown because changes in jurisdictional responsibility are expected or because more than one agency may participate in the project's funding. Because project timing and financing is not binding, the jurisdictional listing does not represent a commitment by a particular agency to construct that project.

LTD is the lead agency in all transit projects and thus the Jurisdiction field is not provided on the Transit Projects lists.

Column 5: Estimated Cost

This field provides a determination of planning cost estimates. The estimated costs are not precise engineering estimates, but are used as planning estimates to assist in determining the financial impacts. Cost estimates are provided in 2011 dollars, consistent with revenue estimates used in the plan. Projects proposed for inclusion on a financially constrained project list must have up-to-date complete scope and cost estimate information available in order to be considered during the financial constraint process. ODOT cost estimates for the 2011 RTP update considered the project scope, current full-cost estimates for activities necessary to implement each project, adjusting cost estimates to reflect current 2011 dollars.

Providing both the cost and revenue estimates in current 2011 dollars allows for an analysis of the financial constraint of the plan in current, or today's, dollars. However, very few, if any, of the projects listed in the plan will actually be built in 2011. Cost estimates for individual projects may be estimated in future year dollars by multiplying the 2011 dollar cost estimate by the current statewide inflation rate assumption of 3.1 percent per year over the number of years from 2011 to the future year when it is assumed that the project may be built. For example, if a project is listed in the plan at a 2011 estimated cost of $1,000,000, and there is an assumption that the project will be built in 2016, then you can estimate the 2016 dollar cost of the project by multiplying $1,000,000 by the 3.1 percent annual compounded inflation each year for five years. Mathematically, this example would be calculated as $1,000,000*(1.031^5). As another example, illustrating the potential future cost of the projects should any be delayed to the plan horizon of 2035 can be calculated by multiplying the 2011 estimated cost by (1.031^24) – the 3.1 percent inflation factor compounded over the 24 year horizon of the plan.

Column 6: Length

The project length is calculated in miles for roadway and bicycle projects. The project length is one of the factors used in determining the estimated cost. This field is not provided on the Transit Projects list.

Column 7: Number

The project number uniquely identifies each project. For roadway and bicycle projects, the project number facilitates locating the project on the maps for roadways and bicycles in Appendix A. The project numbers are based on eleven geographic districts:

- Projects 100-199 are located in District 1 (Central Eugene).
- Projects 200-299 are located in District 2 (Southeast Eugene).

- Projects 300-399 are located in District 3 (Southwest Eugene).
- Projects 400-499 are located in District 4 (Northwest Eugene-Bethel/Danebo).
- Projects 500-599 are located in District 5 (River Road/Santa Clara).
- Projects 600-699 are located in District 6 (Northeast Eugene-Willakenzie/Ferry Street Bridge).
- Projects 700-799 are located in District 7 (Northwest Springfield-Gateway/Hayden Bridge).
- Projects 800-899 are located in District 8 (Central Springfield).
- Projects 900-999 are located in District 9A (Central/East Springfield).
- Projects 0-99 are located in District 9B (East Springfield).
- Projects 1000-1099 are located in District 10 (Coburg).

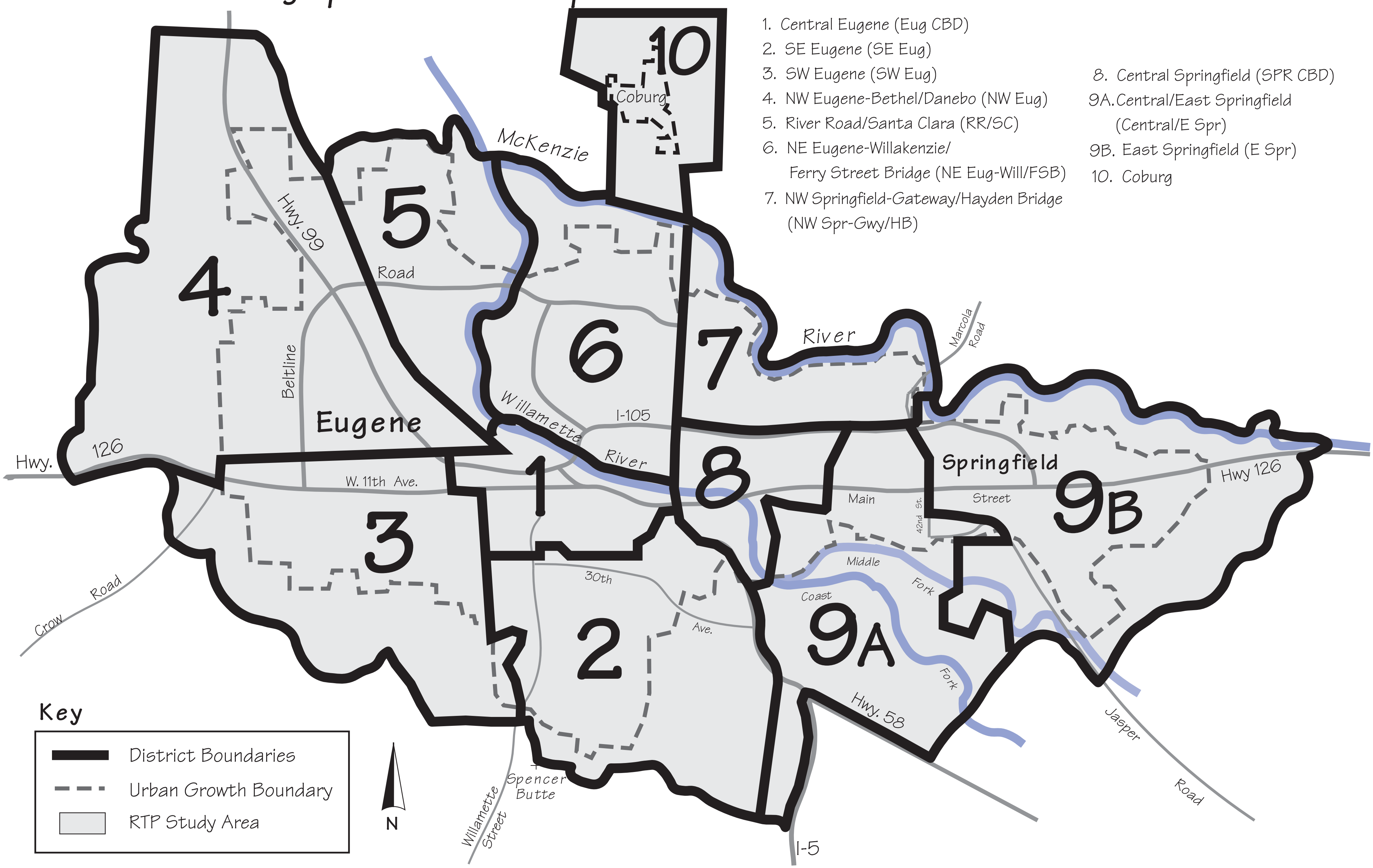
In some instances, a roadway project is coordinated with an on-street bicycle project. Where the roadway project and the bicycle project are contiguous, the project numbers are identical.

The following map of Geographic Districts is useful for determining the geographic location of roadway and bicycle projects.

Figure 5

Coburg-Eugene-Springfield Metropolitan Area

Geographic Districts Map



Capital Investment Actions: Roadway Projects

The following project categories are included in the Capital Investment Action Roadway Projects list:

1. **New Arterial Link or Interchange –** These projects add new links or interchanges to the arterial or freeway systems in the region. Projects typically consist of any required right-of-way acquisition, general roadway construction, and addition of pedestrian and bicycle facilities either adjacent or parallel to the roadway.
2. **Added Freeway Lanes or Major Interchange Improvements –** These projects add capacity to existing freeways or freeway interchanges in the region. Projects typically consist of added freeway lanes or interchange reconstruction and expansion.
3. **Arterial Capacity Improvements –** These projects add capacity to existing arterials in the region. Projects typically consist of improvements to traffic control, the safety of the corridor, additional turn lanes, or reconstruction, including additional lanes.
4. **New Collectors –** All new collector projects will generally be constructed to the implementing jurisdiction's urban standards.
5. **Urban Standards –** Projects with this description consist of rebuilding an existing roadway to upgrade it to urban standards, with curbs, sidewalks, and bicycle facilities.
6. **Study –** These types of projects are detailed studies that identify and offer solutions to specific problems related to multi-modal traffic flow and safety along the corridor. Improvements identified by these studies are expected to be added to the RTP project list through the amendment process.

The Capital Investment Action Roadway Projects are part of the regional roadway system. The regional roadway system is comprised of streets with a functional classification of arterial or collector. A map that shows functional classifications of the regional roadway system is provided in Appendix A. Functional classification is the process by which streets and highways are grouped into classes, or systems, according to the character of service they are intended to provide. Other criteria used to identify roadways that make up the regional roadway system include service and connection to regional facilities and the amount of existing and projected use by various modes.

Several major transportation corridors within the Central Lane MPO area require additional, corridor-level analyses to address existing and future capacity, safety, and operational problems over the next 20-30 years. In some cases, the costs of addressing anticipated problems on these corridors are included in the Capital Investment Action project lists, with the understanding that some of these projects are *placeholders* pending further study and public input. In other cases, the specific project-level solutions have not yet been proposed, so the project list includes only the estimated cost of the corridor study itself. Specific projects that are developed as a result of the corridor-level analyses will require an amendment to the RTP in order to be added to the Capital Investment Action project lists.

Many of the corridors that require further study are state facilities, while others are local jurisdiction facilities. While each corridor presents unique challenges, all of them have at least two or more of the following characteristics in common:

- Use as the means for cross-regional travel, often connecting to important regional attractions (shopping, airport, downtowns, freight transfer sites, etc.);
- High traffic volume and traffic congestion;
- Need for both short- and long-range investments;
- Issues requiring complex, multi-project, high-cost solutions;
- Project scale that may require major investment studies or environmental impact studies, including extensive public involvement; and
- Long lead times necessary before construction can begin.

The following corridors are anticipated to require further study and major investments:

- Interstate 5
- Interstate 105/Oregon 126 (Eugene-Springfield Highway)
- Beltline Road (Highway 99 to Interstate 5)
- Main Street/McKenzie Highway (20th Street to 70th Street)
- McVay Highway (Franklin Boulevard to 30th Avenue interchange)
- Franklin Boulevard (Glenwood section)
- West 11th Avenue (Beltline to Chambers)
- Coburg Road (Crescent to Oakway)
- 18th Avenue (Bertelsen to Agate)
- Southeast Eugene corridor (Willamette, Amazon Parkway, Patterson/Hilyard, from 13th to 33rd Avenue)
- Beltline Road/Pioneer Parkway (Beltline to Hayden Bridge Road)
- Ferry Street Bridge (long-range capacity needs)
- South Bank Street Improvements (Mill Street to Hilyard Street)
- West Eugene Transportation Improvements

In the case of the West 11th Avenue and Coburg Road corridors (items #7 and #8), studies are proposed to address access, safety, and operational problems. In the case of 18th Avenue and the Southeast Eugene corridors (items #9 and #10), studies are proposed to address major capacity issues, as well as safety, access, and operational problems. In the case of Interstate 5 (item #1), a comprehensive study of I-5 interchanges from the interchange with I-105 south to the interchange with Highway 58 is proposed to address major capacity, safety, access and operational problems. The extent of further study that each corridor requires will depend on the level of analysis completed to date, the level of specificity of any proposed solutions, and the level of environmental analysis required for a project to proceed. Examples of typical studies prepared prior to construction of a system improvement include the Beltline/I-5 refinement study, the Ferry Street Bridge Study and the Jasper Extension design study.

RTP Table 1a-Financially Constrained
Capital Investment Actions: Roadway Projects

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
Project Category: New Arterial Link or Interchange						
30th Ave Off Ramp to Gonyea Road	MP 0.5 to MP 1.0	Reconstruct the existing NE clover leaf off ramp to a folded diamond off ramp. This project would eliminate the traffic weaving at the cloverleaf ramps. With improved ramp access, more traffic is likely to use the ramp instead of making left at the congested Eldon Schaffer Dr intersection.	Lane County	$544,000	0.33	201
Eugene-Springfield Highway (SR-126)	at Main Street	Construct interchange	ODOT	$50,000,000	0	27
Eugene-Springfield Highway (SR-126)	at 52nd Street	Construct interchange	ODOT	$40,000,000	0	30
Centennial Boulevard/ Industrial Avenue	28th Street to 35th Street	Construct 3-lane urban facility	Springfield	$4,350,000	0.5	930
		Project Category Subtotal		***$94,894,000***		

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
Project Category: Added Freeway Lanes or Major Interchange Improvements						
Delta/ Beltline Interchange		Interim/safety improvements; replace/revise existing ramps; widen Delta Highway bridge to 5 lanes	Lane County	$8,800,000	0.25	638
North Eugene Transportation Improvements	River Road to Coburg Road	Enhance safety and mobility within N. Eugene Area, specifically for Beltline Corridor	ODOT	$60,000,000	1.76	506
I-5	@ Beltline Highway	Unit 3 and Unit 4. Reconstruct interchange and I-5, upgrade Beltline Road East to 5 lane urban facility.	ODOT	$110,000,000	0	606
		Project Category Subtotal		***$178,800,000***		

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
Project Category: Arterial Capacity Improvements						
Bob Straub Parkway	57th Street to Jasper Road@ Brand S Rd	Phase 2: Widen to 4-lane plus a median	Lane County, Springfield	$4,000,000	1.9	66
Eugene-Springfield Highway (SR-126)	@ Mohawk Boulevard Interchange	Add lanes on ramps	ODOT	$310,000	0.68	821
W. 11th Avenue	Green Hill Road toTerry Street	Upgrade to 5-lane urban facility	ODOT, Eugene	$20,000,000	1.51	333
Main Street	@ 48th Street	Traffic control improvements	Springfield	$290,000	0	69
Main Street	@ Mountaingate Drive	Traffic control improvements	Springfield	$290,000	0	75
42nd Street	@ Marcola Road	Traffic control improvements	Springfield	$290,000	0	712
Harlow Road	@ Pheasant Boulevard	Traffic control improvements	Springfield	$290,000	0	744
Gateway Street	@ Harlow Road	Traffic control improvements	Springfield	$2,910,000	0.5	785
Gateway/ Beltline Intersection Improvements	International Way to Postal Way	Improve intersections and realign Gateway	Springfield	$30,000,000	0.9	789
Centennial Boulevard	Prescott Lane to Mill Street	Reconstruct section to 4-5 lanes	Springfield	$1,450,000	0.3	818
Q Street Intersection Improvements	Intersection of Q Street and 5th	Intersection improvements	Springfield	$1,170,000	0.5	828
Glenwood Blvd	Franklin Blvd to I-5	Upgrade to 3 to 5 lane urban facility	Springfield	$2,210,000	0.5	836
Centennial Boulevard	@ 28th Street	Traffic control improvements	Springfield	$290,000	0	924
Centennial Boulevard	@ 21st Street	Traffic control improvements	Springfield	$290,000	0	927
S 42nd Street at Daisy Street	S. 42nd St/ Daisy Street	Traffic control improvments	Springfield	$290,000	0	951
42nd Street at Highway 126 Westbound Ramp	42nd st/Hwy 126	Traffic control improvements	Springfield, ODOT	$500,000	0	799
I-5	@ City of Coburg interchange (Phase 1)	Construct local network urban improvements west side of I-5 only.	ODOT	$13,000,000	0	1003
		Project Category Subtotal		***$77,580,000***		

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
Project Category: New Collectors						
W. 13th Avenue (Future Collector E)	Bertelsen Road to Bailey Hill Road	New major collector	Eugene	$4,172,000	1	318
Roosevelt Extension (Future Collector F)	Royal Avenue to Terry Street	New major collector	Eugene	$4,520,000	0.7	429
Legacy Extension (Future Collector H)	Avalon Street to Royal Avenue	New major collector	Eugene	$3,594,000	0.5	435
Future Collector J	Awbrey Lane to Enid Road	New major collector	Eugene	$3,338,000	0.8	441
Haviture Way/ Heath Dr (Future Collector O)	Barger Drive to Excalibur Lane	New neighborhood collector	Eugene	$540,000	0.13	447
Colton Way (Future Collector P)	Avalon Street to Roosevelt Ext (Future Collector F)	New neighborhood collector	Eugene	$5,572,000	1.11	449
Hyacinth Street	Brotherton Avenue to Argon Avenue	New neighborhood collector	Eugene	$1,391,000	0.08	537
Avengale Dr (Future Collector A)	870 feet east of Walton Lane to County Farm Road @ Wildish Lane	New neighborhood collector	Eugene	$2,921,000	0.7	651
McKenzie- Gateway Loop collector	MLK Jr. Parkway to Beltline/Baldy View/Deadmond Ferry	Collector loop to serve McKenzie/Gateway area	Private Funding, Springfield	$6,000,000	0.57	756
79th Street	Thurston Road to Main Street	New 2 to 3-lane collector	Springfield	$1,450,000	0.37	18
Future Collector C1	Linda Lane - Bob Straub Parkway	New 2 to 3-lane urban collector	Springfield	$1,960,000	0.5	33
Future Collector C2	Jasper Road - Mountaingate	New 2 to 3-lane urban collector	Springfield	$5,080,000	1.3	36
Future Collector C3	Bob Straub Parkway - East Natron	New 2 to 3-lane urban collector	Springfield	$2,740,000	0.7	39
Future Collector C4	East-west in Mid-Natron site	New 2 to 3-lane urban collector	Springfield	$2,350,000	0.6	42
Future Collector C5	Loop Rd in South Natron Site	New 2 to 3-lane urban collector	Springfield	$3,910,000	1	45

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
Future Collector C6	Mt Vernon Road - Bob Straub Parkway	New 2 to 3-lane urban collector	Springfield	$3,910,000	1	48
Future Collector C7	North-south in mid-Natron site	New 2 to 3-lane urban collector	Springfield	$2,190,000	0.56	51
Glacier Drive	48th Street to 55th Street	Develop new, 2-lane urban facility	Springfield	$2,660,000	0.92	57
Mountaingate Drive	Forest Ridge to Mt Vernon Road	New 3-lane collector	Springfield	$3,520,000	0.43	78
Mt Vernon Road	Weyerhaeuser Haul Rd to Mountaingate Drive	Extend existing street as 2-lane collector	Springfield	$780,000	0.2	81
54th Street	Main Street to Daisy Street	New 2-lane collector	Springfield	$1,090,000	0.28	87
19th Street	Hayden Bridge Road to Yolanda Avenue	Extend existing street as 2-lane collector	Springfield	$1,290,000	0.33	703
37th Street	Ambleside Drive to Marcola Road	Extend existing street as 2-lane collector per Local Street Plan.	Springfield	$2,000,000	0.63	709
V Street	31st Street to Marcola Road	New 2 to 3-lane collector	Springfield	$2,540,000	0.65	777
Yolanda Avenue	31st Street to 34th Street	Extend existing street as 2-lane collector	Springfield	$780,000	0.2	783
North Gateway Collector/Maple Island Rd	Sports Way to International Way	Collector to serve Campus Industrial parcels	Springfield	$1,750,000	0.63	798
19th Avenue	Glenwood Boulevard to Henderson Avenue	2-3 lane collector	Springfield	$2,340,000	0.2	861
Franklin Riverfront Collector	Franklin Blvd/McVay to west portion of Franklin riverfront	Collector to serve Glenwood redevelopment area along riverfront north of Franklin Blvd.	Springfield	$6,500,000	0.7	897
48th Street	Aster Street to Daisy Street	Extend existing street as 2 lane collector	Springfield	$430,000	0.3	901

Project Category Subtotal ***$81,318,000***

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
Project Category: Urban Standards						
Agate Street	31st Avenue to Black Oak Road	Upgrade to 2-lane urban facility	Eugene	$905,000	0.39	215
Dillard Road	E. Amazon Drive to UGB	Upgrade to urban facility	Eugene	$7,021,000	1.34	298
South Willamette Street	Spencer Crest Drive to UGB	Upgrade to urban facility	Eugene	$495,000	0.2	299
Bertelsen Road	18th Avenue to Bailey Hill Road	Upgrade to 2 to 3-lane urban facility	Eugene	$2,369,000	0.6	315
Willow Creek Road	W. 18th Avenue to UGB	Upgrade to 2-lane urban facility	Eugene	$2,457,000	1.06	342
Bailey Hill Road	Bertelsen to UGB	Upgrade to urban facility	Eugene	$3,962,000	1.2	343
Bethel Drive	Highway 99 to Roosevelt Blvd	Upgrade to 2-lane urban facility	Eugene	$7,386,000	1.68	414
Summit Avenue	Fairmount to Floral Hill Dr.	Upgrade to urban facility	Eugene	$1,854,000	0.3	287
Royal Avenue	Green Hill Road to Terry Street	Upgrade to 3-lane urban facility	Eugene	$7,512,000	1.01	481
Division Avenue	Division Place to River Avenue	Upgrade to 2 to 3-lane urban facility	Eugene	$2,658,000	0.86	509
Goodpasture Island Road	Delta Highway to Happy Lane	Upgrade to 2-lane urban facility	Eugene	$511,000	0.19	664
Jeppesen Acres Road	Gilham Road to Providence Street	Upgrade to 2-lane urban facility	Eugene	$1,423,000	0.35	670
Van Duyn Road	Western Drive to Harlow Road	Reconstruct to 2-lane urban facility	Eugene	$579,000	0.25	696
Highway 99	Roosevelt Boulevard to Garfield Street	Upgrade to urban facility	ODOT		1.14	148
Fox Hollow Road	Donald Street to UGB (Christensen Road)	Upgrade to 2-lane urban facility	Eugene, Lane County	$4,402,000	0.86	245
Green Hill Road	Airport Road to Barger Drive	Rural widening and intersection modifications	Lane County	$3,150,000	2	485
Hunsaker Lane / Beaver Street	River Road to Division Avenue	Upgrade to 2-lane urban facility	Lane County	$3,590,000	1.14	527
Wilkes Drive	River Road to River Loop 1	Upgrade to 3-lane urban facility	Lane County	$3,024,000	0.93	554
Game Farm Road South	Beltline Road to Harlow Road	Upgrade to 2-lane urban facility	Lane County	$3,000,000	0.93	737
Hayden Bridge Road / 23rd St	Yolanda Avenue to Marcola Road	Reconstruct to 2-lane urban facility	Lane County	$5,824,000	1.78	747

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
31st Street	Hayden Bridge Road to U Street	Upgrade to 2 to 3-lane urban facility	Lane County	$1,700,000	0.58	765
Green Hill Road	Barger Drive to West 11th Avenue	Upgrade to 2 to 3-lane urban facility	Lane County, Eugene	$8,400,000	2.27	454
County Farm Road	North-to-South Section	Upgrade to 3-lane urban facility	Lane County, Eugene	$3,078,000	0.62	631
County Farm Road	West-to-East Section	Upgrade to 2-lane urban facility	Lane County, Eugene	$2,418,000	0.53	632
Laura Street	Old Laura Street to Scotts Glen Drive	Widen to 3-lane urban facility	Lane County, Springfield	$1,025,000	0.4	750
Aspen Street	Centennial Boulevard to West D Street	Reconstruct to 2 to 3-lane urban facility	Lane County, Springfield	$1,456,000	0.44	809
48th Street	G Street to Main Street	Upgrade to 2-lane urban facility	Springfield	$1,040,000	0.48	3
52nd Street	Eugene-Springfield Highway (SR 126) to G Street	Upgrade to 2-lane urban facility	Springfield	$430,000	0.2	6
79th Street	Main Street to Glacier Drive	Upgrade to 2 lane urban facility	Springfield	$1,770,000	0.46	20
G Street	48th Street to 52nd Street	Upgrade to 2-lane urban facility	Springfield	$670,000	0.31	54
Thurston Road	72nd Street to UGB	Upgrade to urban facility	Springfield	$1,770,000	0.61	98
42nd Street	Marcola Road to Railroad Tracks	Reconstruct to 3-lane urban facility	Springfield	$2,980,000	1.03	713
Baldy View Lane/ North link	Deadmond Ferry Road to RiverBend	Upgrade to urban standards	Springfield	$2,000,000	0.28	715
Deadmond Ferry Road	International Way to McKenzie River	Upgrade to urban standards	Springfield	$1,590,000	0.73	724
28th Street	Centennial Boulevard to Main Street	Widen/ provide sidewalks and bike lanes; provide intersection and signal improvements at Main Street	Springfield	$1,520,000	0.7	909
35th Street	Olympic Street to Commercial	Upgrade to 3-lane urban facility	Springfield	$1,330,000	0.46	918
Commercial Street	35th Street to 42nd Street	Upgrade to 3-lane urban facility	Springfield	$2,340,000	0.81	933
S. 28th Street	Main Street to Millrace	Upgrade to 2 to 3-lane urban facility	Springfield	$2,900,000	0.67	945
21st Street	D Street to Main Street	Upgrade to urban facility	Springfield	$1,170,000	0.2	962

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
		Project Category Subtotal		***$101,709,000***		

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
Project Category: Study						
18th Avenue	Bertelsen Road to Agate Street	Corridor study to determine safety and capacity improvements	Eugene	$310,000	4.71	118
Chambers Street	8th Avenue to 18th Avenue	Corridor Study to Determine Improvements	Eugene	$310,000	0.8	136
Willamette Street/ Amazon Parkway/Patterson Street/Hilyard Street	13th Avenue to 33rd Avenue	Corridor study to determine improvements	Eugene	$600,000	5.55	187
Coburg Road	Crescent Avenue to Oakway Road	Access management/safety-operational study	Eugene	$124,000	2.24	619
Beltline Highway	River Rd to Coburg Rd	D-STIP Development Work	ODOT	$7,000,000	3.46	555
I-5 Interchange Study	I-105 to Highway 58	Comprehensive study of I-5	ODOT, Springfield	$2,000,000	6	250
Beltline Highway	Roosevelt Boulevard to W. 11th Ave	Study	ODOT, Eugene	$500,000	1.14	312
Main St. and 52nd St./Hwy 126 Int.	52nd to Main	Interchange Plans	ODOT, Springfield	$250,000	1.5	96
Eugene-Springfield Hwy.	I-5 to Main	Facility Plan	ODOT, Springfield	$750,000	6.5	835
Franklin Blvd.	Jenkins Dr. to Mcvay Rail Trustle	Facility Plan / NEPA	Springfield	$1,300,000	1.2	802
Main Street/Highway 126	I-5 to UGB	Access management plan	Springfield, ODOT	$150,000	6	838
		Project Category Subtotal		***$13,294,000***		

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
Project Category: Nodal Development Implementation						
Eugene Nodal Development Infrastructure Funding	Various Locations	Differential Nodal Development Infrastructure Cost*	Eugene	$2,500,000		
Planning	Various Locations	Planning for implementation of nodal development zoning	Eugene, Springfield	$6,200,000		
		Project Category Subtotal		***$8,700,000***		
		Financially Constrained Roadway Projects		***$556,295,000***		

RTP Table 1b-Illustrative
Capital Investment Actions: Roadway Projects

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
Project Category: New Arterial Link or Interchange						
Beaver Street Arterial	Hunsaker Lane to Wilkes Drive	R.O.W Acquisition. General construction.	Lane County	$ 6,000,000	0.84	503
Division Avenue	Beaver Street to Delta Highway	Construct new bridge with up to 4 lanes over the Willamette River	Lane County	$32,000,000	0.89	512
Irving Road @ NW Expressway	Gansborough entrance to Prairie Road	Construct overpass over NW Expressway and railroad. Signalize access on north side.	Lane County	$7,000,000	0.3	530
		Project Category Subtotal		***$ 45,000,000***		

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
Project Category: Added Freeway Lanes or Major Interchange Improvements						
I-5	@ Willamette River/ Franklin Boulevard Interchange @ Glenwood Interchange	Interchange reconstruction to create one full interchange to improve operations and safety, reconstruct ramps and bridges to modern standards, and provide for 6 lanes on I-5.	ODOT	$45,000,000	0	150
I-105	Washington/ Jefferson Street Bridge	Add lane to 6th Ave. off-ramp	ODOT	$6,200,000	0.25	151
I-105	Washington/ Jefferson Street Bridge	Extend third NB lane over bridge to Delta Highway exit ramp	ODOT	$8,400,000	0.75	154
I-5	30th Avenue/McVay Highway I-105 to Highway 58 (Goshen)	Interchange reconstruction to improve operations and safety, reconstruct ramps and bridges to modern standards, and provide for 6 lanes on I-5.	ODOT	$65,000,000	5.66	257
Beltline Highway	Roosevelt Boulevard to W. 11th Ave	Enhance safety and mobility within N. Eugene Area, specifically for Beltline Corridor.	ODOT, Eugene	$25,000,000	1.14	312
Eugene-Springfield Highway (SR-126)	Pioneer Parkway/ Q Street	Interchange improvements	ODOT	$21,700,000	0	727
Eugene-Springfield Highway (SR-126)	I-5 to Mohawk Boulevard	Widen to 6 lanes	ODOT	$29,000,000	2.6	728
I-5	@ City of Coburg interchange (Phase 2)	Interchange improvements	ODOT	$23,000,000	0	1004
		Project Category Subtotal		***$223,300,000***		

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
Project Category: Arterial Capacity Improvements						
Franklin Blvd.	Alder Street to Walnut Street	Upgrade to multiway blvd with 2 vehicular lanes in each direction, two EmX lanes, and a planted median	Eugene	$ 16,000,000	1	119
Bob Straub Parkway	@ Jasper Rd and UP Mainline	Construct grade-separation over Jasper Rd and UP Mainline	Lane County	$ 10,000,000	0.3	67
Springfield Main Street	Springfield bridges to 21st Street	Convert Springfield Main Street to 2-way traffic	Springfield	$ 3,000,000	1.6	803
Springfield 2-way S. 'A' Street	Springfield bridges to 21st Street	Convert Springfield S. 'A' Street to 2-way traffic	Springfield	$ 6,000,000	1.6	801
		Project Category Subtotal		***$ 35,000,000***		

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
Project Category: Urban Standards						
Jasper Road	S. 42nd Street to Bob Straub Parkway	Upgrade to 2 to 3-lane urban facility	Lane County, Springfield	$6,501,000	3.5	60
McVay Highway	I-5 to Franklin Boulevard	Upgrade to 3-lane urban facility; intersection improvements at I-5 and Franklin Boulevard	ODOT	$20,000,000	1.5	833
Franklin Blvd.	Jenkins Drive to Mill St.	Upgrade to urban facility	ODOT	$6,191,000	1.2	839
		Project Category Subtotal		***$32,692,000***		
		Illustrative Roadway Projects		***$335,992,000***		

Capital Investment Actions: Transit Projects

The following project categories are included in the Capital Investment Action Transit Projects list:

1. **Buses and Bus Maintenance -** These projects include new buses for expansion of service, replacement buses, expansion of bus maintenance facilities, and bus components such as radios, automated passenger counters, and fareboxes.

2. **Bus Rapid Transit -** These projects include the planning, engineering, and construction of the Bus Rapid Transit (BRT) corridors.

3. **Stops and Stations -** These projects include transit stations, Park-and-Ride lots, bus shelters, and other passenger boarding improvements.

The Capital Investment Action Transit Projects are integrated with the Planning and Program Actions for transit that implement the proposed BRT system. See page 69 for a description of the Bus Rapid Transit Implementation Process.

RTP Table 2a-Financially Constrained
Capital Investment Actions: Transit Projects

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	RTP #
Project Category: Buses and Bus Maintenance					
Bus Purchases		New & replacement buses	Lane Transit District	$ 90,000,000	1110
		Project Category Subtotal		***$ 90,000,000***	
Project Category: Bus Rapid Transit					
BRT BusPlus	corridors totaling 30 miles	Express bus progressive corridor enhancement	Lane Transit District	$ 60,000,000	1117
Bus Rapid Transit (EmX)	corridors totaling 30 miles	Express bus corridor	Lane Transit District	$ 240,000,000	1115
		Project Category Subtotal		***$ 300,000,000***	
Project Category: General Stops and Stations					
5 Park and Ride Lots	Various	Park and ride lots along major corridors	Lane Transit District	$ 15,000,000	1105
Passenger Boarding Improvements	Various	Pads, benches, and shelters	Lane Transit District	$ 5,000,000	1130
		Project Category Subtotal		***$ 20,000,000***	
Project Category: Nodal Development Transit System Investment					
Stations	4 at various locations	Transfer station	Lane Transit District	$ 6,000,000	1300
		Project Category Subtotal		***$ 6,000,000***	
		Financially Constrained Transit Projects		***$ 416,000,000***	

RTP Table 2b-Illustrative
Capital Investment Actions: Transit Projects

Name	Geographic Limits	Primary Jurisdiction	Estimated Cost		RTP #
Project Category: Bus Rapid Transit					
Bus Rapid Transit (EmX)	Gateway-Beltline Hwy-W. 11th-30th-I-5-Springfield Station	Lane Transit District	$	160,000,000	1116
Bus Rapid Transit (EmX)	Bob Straub Parkway	Lane Transit District		$24,000,000	904
	Project Category Subtotal		***$***	***184,000,000***	
	Illustrative Transit Projects		***$***	***184,000,000***	

Capital Investment Actions: Bicycle Projects

The Capital Investment Action Bicycle Project Lists are organized by project status – Programmed, Unprogrammed, or Future. The following project categories are included in the lists:

1. **Multi-Use Paths Without Road Project** – These projects will be constructed independent of a Roadway Project.
2. **Multi-Use Paths With Road Project** – These projects are new off-road facilities designated for non-motorized, bicycle, and pedestrian use only. The project number provided refers to the associated Roadway Project.
3. **On-Street Lanes or Routes With Road Project** – These bicycle projects will be constructed in conjunction with a Roadway Project. The project number provided refers to the associated Roadway Project.
4. **On-Street Lanes or Routes Without Road Project** – These projects consist of adding a striped bike lane to the roadway or adding *Bicycle Route* signs along the designated corridor. Projects in this category will be constructed independent of a Roadway Project.

For many bicycle projects, a *$0* shows in the Estimated Cost field. These bicycle projects may require no capital expenditure because they can be implemented with operating funds or they are planned for construction as part of a roadway project. Thus, the cost estimates are included as part of the roadway project cost estimate.

RTP Table 3a-Financially Constrained Capital Investment Actions: Bicycle Projects

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost		Length	RTP #
Project Category: Multi-Use Paths Without Road Project							
5th Avenue	Garfield Street to Chambers Street	Route, Multi-Use Path	Eugene	$	189,000	0.21	127
South Bank Path	Autzen Connector to Rail underpass	Multi-Use Path	Eugene	$	5,770,000	0.51	169
Westmoreland Park Paths	Fillmore Street to Taylor Street	Multi-Use Path	Eugene	$	295,000	0.41	181
Spring Boulevard (B)	29th Avenue to 30th Avenue	Multi-Use Path	Eugene	$	850,000	0.22	281
Fern Ridge Path - Commerce Street Connector	Fern Ridge Path to Commerce Street	Multi-Use Path and Bridges	Eugene	$	1,200,000	0.11	350
Avalon Street (A)	Candlelight Drive to Beltline Path	Multi-Use Path/Route	Eugene	$	700,000	0.36	403
West Bank Path	Formac to approx. 1000ft north of Owosso Bridge	Construct new concrete multi-use path for Riverbank trail system	Eugene	$	1,950,000	0.59	556
Q Street Channel	Centennial Loop to Garden Way Path	Multi-Use Path	Eugene	$	1,118,000	1.42	682
Valley River Connector (B)	Valley River Way to North Bank Trail	Multi-Use Path	Eugene	$	167,000	0.12	692
Jessen Path	Green Hill Road to Beltline Road	Multi Use Path	Eugene	$	3,400,000	1.81	463
North Bank Path Rehabilitation and Lighting Project	Peter DeFazio Bridge to Leisure Lane	Multiuse path	Eugene	$	1,340,686	0.66	601
Fern Ridge Path Rehabilitation and Lighting Project	Arthur Street to Chambers Street	Multiuse path	Eugene	$	843,703	0.27	102

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost		Length	RTP #
Beltline Path	Roosevelt Boulevard to W. 11th Avenue	Multi-Use Path	ODOT	$	2,500,000	1.13	411
MLK Parkway/ Peace-Health Path multi-use path	Riverbend Drive to Deadmond Ferry Rd.	Construct new multi-use path	Springfield	$	105,000	0.55	736
McKenzie River Path	42nd Street to 52nd Street	Multi-Use Path and Striped Lane	Springfield	$	3,796,000	1.55	753
Peace-Health Master Plan multi-use path	Riverbend Loop Road to Baldyview/ Deadmond Ferry intersection	Construct new multi-use path	Springfield	$	117,000	0.66	755
Booth Kelly Road	28th Street to Weyerhauser Truck Road	Multi-Use Path	Springfield	$	355,000	2.14	921
Glenwood Riverfront Path (A)	I-5 to Springfield Bridges	Multi-Use Path	Springfield, Willamalane	$	3,102,000	1.22	851
Thurston Hills Ridgeline Trail	Potato Hill Loop to 79th	Multi-Use Path	Willamalane	$	1,310,000	1.12	794
Moe Mountain Path	V Street to Marcola Rd	Multi-Use Path	Willamalane	$	667,000	0.57	797
EWEB Path Extension West	East of Pioneer Parkway to Laura St	Multi-Use path	Willamalane	$	800,000	0.15	863
Middle Fork Willamette River Loop Path	South 2nd Street to Clearwater Park: Phase 1 - MF Will. R , Dorris Ranch to Clearwater Park; Phase 2 - Clearwater Park to S.32nd St; Phase 3 - S. 32nd St to S. 28th St; Phase 4 - 28th St. to S. 2nd St.	Multi-Use Path	Willamalane, Springfield	$	6,000,000	8	21
By Gully Extension	Mill Street to 8th Street	Multi-Use Path	Willamalane, Springfield	$	128,700	0.11	812

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
Springfield - Mt. Pisgah Connector	Jasper Road to Buford Park Road	Route, Multi-Use Path, Bridge	Willamalane, Springfield	$ 4,423,000	2.78	960

Project Category Subtotal ***$ 41,127,089***

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
Project Category: Multi-Use Paths With Road Project						
Bob Straub Parkway	57th Street to Jasper Road@ Brand S Rd	Phase 2: Off-road multiuse path inside city limits; 8' shoulders outside	Lane County	$0	1.9	66
I-5 Path	Chad Drive to Harlow Road	Multi-Use Path (part of roadway project 606)	ODOT, Eugene	$0	0.89	668
		Project Category Subtotal		***$0***		

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
Project Category: On-Street Lanes or Routes With Road Project						
Summit Avenue	Fairmount Boulevard to Floral Hill Drive	Route	Eugene	$ -	0.31	287
Dillard Road	E. Amazon Drive to UGB	Striped Lane	Eugene	$ 706,000	1.34	298
Bertelsen Road	18th Avenue to Bailey Hill Road	Striped Lane	Eugene	$ -	0.6	315
Bethel Drive	Highway 99 to Roosevelt Blvd	Striped Lane or Route	Eugene	$ -	1.69	414
Legacy Extension (Future Collector H)	Avalon Street to Royal Avenue	Striped Lane or Route	Eugene	$ -	0.47	435
Haviture Way/ Heath Dr (Future Collector O)	Barger Drive to Excalibur Lane	Striped Lane or Route	Eugene	$ -	0.13	447
Royal Avenue	Green Hill Road to Terry Street	Striped Lane	Eugene	$ -	1.01	481
Goodpasture Island Road	Delta Highway to Happy Lane	Striped Lane	Eugene	$ -	0.19	664
Van Duyn Road	Western Drive to Harlow Road	Route	Eugene	$ -	0.25	696
Fox Hollow Road	Donald Street to Cline Road	Striped Lane, shoulders	Eugene, Lane County	$ -	0.5	245
Green Hill Road	Airport Road to Barger Drive	Shoulder	Lane County	$ -	1.98	485
Hunsaker Lane / Beaver Street	River Road to Division Avenue	Striped Lane	Lane County	$ -	1.14	527
Wilkes Drive	River Road to River Loop 1	Striped Lane	Lane County	$ -	0.93	554
Game Farm Road South	Beltline Road to Harlow Road	Striped Lane	Lane County	$ -	0.93	737
Hayden Bridge Road / 23rd St	Yolanda Avenue to Marcola Road	Striped Lane	Lane County	$ -	1.78	747
31st Street	Hayden Bridge to U Street	Striped Lane	Lane County	$ -	0.58	765
Green Hill Road	Barger Drive to West 11th Avenue	Striped Lane	Lane County, Eugene	$ -	2.27	454

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
County Farm Road	North-to-South section	Striped lane	Lane County, Eugene	$ -	0.62	631
County Farm Road	West-to-East section	Striped Lane	Lane County, Eugene	$ -	0.53	632
Laura Street	Old Laura Street to Scotts Glen Drive	Striped Lane	Lane County, Springfield	$ -	0.4	750
Aspen Street	Menlo Loop to West D Street	Striped Lane	Lane County, Springfield	$ -	0.58	809
Jasper Road (B)	Mt. Vernon Road to UGB South	Striped Lane	Lane County		2.2	63
W. 11th Avenue	Green Hill Road to Terry Street	Striped Lane	ODOT, Eugene		1.06	333
51st / 52nd Street	High Banks Road to Main Street	Route, Striped Lane	Springfield	$ -	1.2	6
79th Street	Main Street to Glacier Drive	Striped Lane	Springfield	$ -	0.46	20
Glacier Drive	48th Street to 57th Street	Striped Lane	Springfield	$ -	0.91	57
37th Street	Ambleside Drive to Marcola Road	Striped Lane	Springfield	$ -	0.63	709
42nd Street	Marcola Road to Railroad Tracks	Striped Lane	Springfield	$ -	1.1	713
Glenwood Boulevard	Glenwood Drive to Judkins Road	Striped Lane	Springfield	$ -	0.42	827
19th Avenue	Glenwood Boulevard to Henderson Avenue	Striped Lane	Springfield	$ -	0.2	861
48th Street	Aster Street to Daisy Street	Striped Lane	Springfield	$ -	0.3	901
28th Street	Centennial Boulevard to Main Street	Striped Lane	Springfield	$ -	0.7	909
35th Street	Olympic Street to Commercial Avenue	Striped Lane	Springfield	$ -	0.57	918
Commercial Street	35th Street to 42nd Street	Striped Lane	Springfield	$ -	0.7	933
S. 28th Street	Main Street to Millrace	Striped Lane	Springfield	$ -	0.51	945
21st Street	D Street to Main Street	Striped Lane	Springfield	$ -	0.2	962
Virginia / Daisy Bicycle Boulevard	S. 32nd Street to Bob Straub Parkway	Bicycle and traffic safety improvements	Springfield	$ 1,000,000	2.58	903

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
D Street / E Street Bicycle Boulevard	D Street River Path to 28th Street	Bicycle and traffic safety improvements	Springfield	$ 1,000,000	2.52	805
		Project Category Subtotal		***$ 2,706,000***		

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost		Length	RTP #
Project Category: On-Street Lanes or Routes Without Road Project							
11th Avenue	Chambers Street to Lincoln Street	Striped Lane	Eugene	$	37,000	1.04	106
13th Avenue	Chambers Street to Lawrence Street	Striped Lane	Eugene	$	37,000	0.96	109
24th Avenue	Chambers Street to Jefferson Street	Striped Lane or Route	Eugene	$	74,000	0.82	121
2nd Avenue	Polk Street to Van Buren Street	Route	Eugene	$	-	0.25	124
Garfield Street	Roosevelt Boulevard to 14th Avenue	Striped Lane	Eugene	$	163,000	1.29	145
Lincoln Street / Lawrence Street	5th Avenue to 18th Avenue	Route	Eugene	$	-	1.14	160
McKinley Street	5th Avenue to 7th Avenue	Route	Eugene	$	-	0.19	163
Mill Street	10th Avenue to 15th Avenue	Route	Eugene	$	495,000	0.38	166
Polk Street	6th Avenue to 24th Avenue	Striped Lane	Eugene	$	495,000	1.39	175
High Street	3rd Avenue to 5th Avenue	Striped Lane or Route	Eugene	$	-	0.25	185
30th Avenue / Amazon Parkway	Agate Street to 29th Avenue	Striped Lane	Eugene	$	654,000	0.91	209
Augusta Street	I-5 Ramp to Floral Hill Drive	Striped Lane or Route	Eugene	$	-	0.98	218
Donald Street	39th Avenue to Fox Hollow Road	Route	Eugene	$	-	0.62	236
Emerald Street / 29th Avenue	24th Avenue to Laurelwood Golf Course and University Street	Route	Eugene	$	-	0.82	242
Spring Boulevard (A)	Fairmount Boulevard to 29th Avenue	Route	Eugene	$	-	1.07	278
Tyler Street	24th Avenue to 28th Avenue	Route	Eugene	$	-	0.37	290
Walnut Street	15th Avenue to Fairmount Boulevard	Route	Eugene	$	-	0.25	295
Willamette Street	18th Avenue to 32nd Avenue	Striped Lane	Eugene	$	490,000	1.3	296

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
7th Avenue	Bailey Hill Road to McKinley Street	Striped Lane or Route	Eugene	$ -	0.9	306
Bailey Hill Road	5th Avenue to W. 7th Avenue	Striped Lane	Eugene	$ -	0.09	309
Seneca Road	7th Place to W. 11th Avenue	Striped Lane	Eugene	$ -	0.27	324
Candlelight Drive / Danebo Avenue	Barger Avenue to Royal Avenue	Route	Eugene	$ -	1.01	417
Golden Gardens	Jessen Drive to Barger Drive	Route	Eugene	$ -	0.5	451
Prairie Road	Maxwell Road to Highway 99	Striped Lane	Eugene	$ 72,000	0.15	495
Silver Lane	Grove Street to River Road	Striped Lane	Eugene	$ -	0.89	548
Clinton Drive / Debrick Road	Cal Young Road to Willagillespie Road	Route	Eugene	$ -	0.51	616
Lakeview/ Parkview	Gilham Road to County Farm Road	Striped Lane or Route	Eugene	$ -	0.79	644
Gilham Road	Torr Avenue to Ayers Road	Striped Lane or Route	Eugene	$ -	0.25	662
Kinsrow Avenue	Martin Luther King Jr. Boulevard to Commons Drive	Route	Eugene	$ -	0.3	672
Minda Drive / Sally Way	Norkenzie Road to Norwood Street	Route	Eugene	$ -	0.51	674
Tandy Turn / Lariat Meadows	Oakway Road to Coburg Road	Route	Eugene	$ -	0.48	686
Torr Avenue	Gilham Road to Wildish Lane	Striped Lane or Route	Eugene	$ -	0.66	688
Valley River Way (A)	Valley River Drive to Valley River Connector	Striped Lane	Eugene	$ 248,000	0.23	694
Van Duyn Road / Bogart Road	Willakenzie Road to Western Drive	Route	Eugene	$ -	0.61	698

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost		Length	RTP #
Blair-Van Buren Streetscape and Active Transportation Corridor		On-street route and streetscape	Eugene	$	1,011,786	1	101
W. 11th Avenue	Danebo Avenue to Chambers Street	Striped Lane	Eugene, ODOT	$	-	3	334
Thurston Road	Billings Road to Highway 126	Route or Shoulder	Lane County	$	150,000	1.61	97
Green Hill Road	W. 11th Avenue to Crow Road	Striped Lane/Shoulder	Lane County	$	250,000	0.26	453
Grove Street	Silver Lane to Howard Avenue	Striped Lane or Route	Lane County	$	150,000	0.16	515
Hilliard Lane	N. Park Avenue to W. Bank Trail	Route	Lane County	$	1,000,000	1.09	518
Horn Lane	Lake Drive to River Road	Striped Lane or Route	Lane County	$	700,000	0.75	521
Howard Avenue	River Road to N. Park Avenue	Striped Lane or Route	Lane County	$	900,000	0.96	524
Lake Drive / Horn Ln/ N. Park Avenue	Howard Road to Northwest Expressway	Striped Lane or Route	Lane County	$	850,000	0.91	536
N. Park Avenue	Maxwell Road to Horn Lane	Striped Lane or Route	Lane County	$	950,000	1.02	539
Seavey Loop Road / Franklin Boulevard	Coast Fork of Willamette River to I-5	Route or Shoulder	Lane County	$	250,000	2.44	957
Franklin Blvd.	Brooklyn to Willamette River	Striped Lane or Multi-use Path	ODOT			0.25	807
McVay Highway	I-5 to 30th Avenue	Striped Lane	ODOT			0.71	834
66th Street	Thurston Road to Main Street	Striped Lane	Springfield	$	-	0.55	12
S. 67th Street	Ivy Street to Main Street	Striped Lane or Route	Springfield	$	61,000	0.3	92
S. 70th Street	Main Street to Ivy Street	Striped Lane	Springfield	$	166,000	0.6	94
Ivy Street	67th Street to 70th Street	Route	Springfield	$	-	0.3	99

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
EWEB Path Extension / 35th-37th Street	Bike Path to Ambleside	Striped Lane	Springfield	$ -	0.23	731
Yolanda Avenue	23rd Street to 31st Street	Striped Lane	Springfield	$ -	0.8	784
5th Street	Centennial Boulevard to G Street	Striped Lane	Springfield	$ -	0.35	806
Mill Street	Fairview Drive to S. A Street	Striped Lane	Springfield	$ -	0.99	837
Nugget, 15th, 17th, 19th in Glenwood		Route	Springfield	$ -	1.58	845
Rainbow Drive	Centennial Boulevard to West D Street	Striped Lane	Springfield	$ -	0.55	848
G Steet	5th Street to 28th Street	Striped Lane or Route	Springfield	$ 14,000	1.6	899
28th Street	Centennial Boulevard to Olympic Street	Striped Lane	Springfield	$ -	0.26	912
N. 36th Street	Commercial Street to Main Street	Striped Lane or Route	Springfield	$ 145,000	0.3	939

Project Category Subtotal ***$ 9,362,786***

Financially Constrained Bicycle Projects ***$ 53,195,875***

RTP Table 3b-Illustrative
Capital Investment Actions: Bicycle Projects

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost		Length	RTP #
Project Category: Multi-Use Paths Without Road Project							
16th Avenue Connector	Fern Ridge Path to Jefferson Street	Multi-Use Path	Eugene	$	170,000	0.09	112
Augusta Street Path	Laurel Hill Park to 30th Avenue	Multi-Use Path	Eugene	$	1,500,000	0.79	221
Deertrail Path	29th Avenue to Sundance Street	Multi-Use Path, Route	Eugene	$	3,500,000	1.85	230
Upper Amazon Path	Hilyard Street to Canyon Drive	Multi-Use Path	Eugene	$	3,700,000	1.95	293
South Hills Trail	Bailey Hill Road to Willamette Street	Multi-Use Path	Eugene	$	10,200,000	5.47	327
Meadowview Bike Path	Meadowview School to Fern Ridge Path	Multi-Use Path	Eugene	$	1,400,000	0.75	496
West Bank Path (B)	Hileman Co. Park to Beltline Highway	Multi-Use Path	Eugene	$	7,000,000	3.75	551
Delta Highway Path	Delta Ponds to Willagillespie School	Multi-Use Path	Eugene	$	2,129,000	0.47	636
Fern Ridge Path #3	Royal Avenue to Fern Ridge Reservoir	Multi-Use Path	Eugene, Lane County	$	6,891,000	0.91	426
Willamette McKenzie Path	Beltline Road to Armitage Park	Multi-Use Path	Eugene, Lane County	$	9,300,000	4.99	699
McKenzie-Gateway Path	Game Farm Road S. to Deadmond Ferry Road	Multi-Use Path	Springfield	$	-	1.7	759
Glenwood River Front Path (B)	Springfield Bridges to Seavey Loop Road	Multi-Use Path	Springfield	$	3,593,000	1.59	854
Glenwood Bicycle / Pedestrian Bridge	Island Park to Southwest bank of Willamette River	Newly constructed multiuse path bridge	Springfield, Willamalane	$	4,000,000	0.21	804

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
Game Bird Park Path	Flamingo Avenue to N. Cloverleaf Loop	Multi-Use Path	Willamalane	$ 724,000	0.1	734
SCS Channel Path	Guy Lee Park	Multi-Use Path	Willamalane	$ 316,000	0.27	738
Coburg Loop Path: Armitage Park Connector	McKenzie View Rd. Intersection at Coburg Rd. north (most likely) along former rail grade connecting adjacent to Roberts Rd. to Assessors Map 16-03- 33-40, Tax Lot 00700	A 10' wide hardsurface, multiuse path extending approximately one mile between Southern end of Roberts Rd., Coburg and ArmitageCounty Park, Eugene on the McKenzie River	Coburg	$865,000	1.3	1001
		Project Category Subtotal		***$ 55,288,000***		

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #

Project Category: Multi-Use Paths With Road Project

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
Bob Straub Parkway Multiuse Path	Mt Vernon Road to the City Limits	Extend the existing multiuse path to city limits	Lane County	$ 268,000	0.5	902

Project Category Subtotal $ 268,000

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost	Length	RTP #
Project Category: On-Street Lanes or Routes With Road Project						
Beaver Street Arterial	Hunsaker Lane to Wilkes Drive	Striped Lane	Lane County	$ -	0.84	503
Division Avenue	Beaver Street to Delta Highway	Striped Lane	Lane County	$ -	0.89	512
McVay Highway	I-5 to Franklin Boulevard	Striped Lane	ODOT	$ -	1.5	833
Franklin Blvd.	Jenkins Drive to Mill St.	Striped Lane	ODOT	$ -	1.2	839
		Project Category Subtotal		***$ -***		

Name	Geographic Limits	Description	Primary Jurisdiction	Estimated Cost		Length	RTP #
Project Category: On-Street Lanes or Routes Without Road Project							
Jefferson Street	18th Avenue to 28th Avenue	Striped Lane	Eugene	$	295,000	0.89	157
Broadway / Franklin Boulevard	Mill Street to East of I-5	Striped Lane	Eugene	$	-	1.91	182
Jefferson Street	13th Avenue to 18th Avenue	Striped Lane	Eugene	$	115,000	0.35	263
Jefferson / Washington	5th Avenue to 13th Avenue	Striped Lane	Eugene	$	124,000	0.53	266
Portland Street / 27th Avenue	Willamette Street to 29th Avenue	Route	Eugene	$	110,000	0.89	275
Bethel Connector	Rikhoff to Park Avenue	Multi-Use Path	Eugene	$	-	0.15	490
Spyglass Drive	Cal Young Road to Oakway Road	Route, Accessway	Eugene	$	192,000	1	684
		Project Category Subtotal		***$***	***836,000***		
		Illustrative Bicycle Projects		***$***	***56,392,000***		

Part Two: Financial Plan

This section provides the Financial Plan for the RTP. It presents:

- A summary of the **federal regulations for financial constraint**,
- A summary of **future cost and revenue estimate methodologies**,
- **Forecasts of revenue from existing sources**,
- An **assessment of the revenue shortfall**,
- A list of **strategies to address the shortfall**, and
- Development of the Constrained Plan.

Much of the financial plan analysis presented here was conducted for the major update of the RTP completed in 2002. The following sections describe both this prior work as well as the updates to the financial plan analysis implemented for the 2004, 2007, and 2011 RTP updates.

Forecasts of state and federal modernization revenue sources are developed cooperatively by a statewide working group consisting of ODOT staff and representatives from all Oregon MPOs. These forecasts have most recently been updated in 2010-2011 to reflect SAFETEA-LU and are the basis of the financial forecasts used in the 2011 update of the RTP.

Forecasts of local modernization (or "systems improvements") and all operations, maintenance and preservation (OM&P) revenues for the 2011 RTP update are based on an extension of the financial model used for the 2002 RTP, adjusted for the new time frame and for inflation.

Federal Regulations for Financial Constraint

Federal legislation sets forth guidelines that seek to ensure that the needs identified in the RTP are balanced with resources expected to be available over the planning period. Guidelines in the federal Safe Accountable Flexible Efficient Transportation Equity Act - A Legacy for Users (SAFETEA-LU) state that the RTP must include:

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

Furthermore:

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

Transportation costs can be viewed in many different ways, by jurisdiction, by mode, and by expenditure. Table 4 summarizes costs and revenues by transportation system (roadway, transit, and bicycle and pedestrian), by expenditure (OM&P and capital improvements), and by jurisdiction.

Future Cost and Revenue Estimate Methodologies

The estimation of future costs and revenues was guided by several sources. The Oregon Roads Finance Study (ORFS) estimated transportation system needs at the state level in 1993, and provided unit costs for the estimation of O&M, preservation, and capital needs for this region. ODOT developed *Financial Assumptions for the Development of Metropolitan Transportation Plans* in 1995 (updated in 2000, 2006, and 2011), providing estimates of future federal and state revenues. ODOT is continuously working with a statewide task force of MPO representatives to develop updated revenue forecasts.

Roadway System Costs

Roadway costs were divided into three categories:

1. Operations and Maintenance,
2. Preservation, and
3. Modernization.

O&M generally includes activities necessary to keep the transportation system safe and in repair. Preservation activities generally extend the useful life of a facility, and are larger in cost and scope than O&M. Modernization consists of major capital improvements that bring facilities to urban standards, or add capacity.

For the purpose of estimating operations and maintenance costs, the roadway system inventories were summarized in lane miles by functional class and pavement type. O&M unit costs from the ORFS were applied to these inventories. The unit costs were adjusted for inflation to reflect 2011 unit costs, and increased by 9 percent to account for administration costs.

With respect to preservation costs, jurisdictions coordinated condition-rating criteria so the categories were similar throughout the area. The percentages of the system in need of resurfacing or reconstruction were applied to system totals by functional class in centerline miles. This yielded an estimate of current preservation need for the 2002 TransPlan. For the 2004, 2007, and 2011 RTP updates, the preservation estimate has been updated, adjusting for inflation and extending the planning horizon.

To estimate modernization costs, data from Eugene, Springfield, and Lane County public works departments and the ORFS were used as the bases for developing unit cost assumptions for roadway improvement projects. Specific project scope cost estimates were also developed for many individual projects – all of the ODOT projects on the financially constrained roadway capital improvements list have cost estimates developed specifically for each project as part of the 2011 update of the RTP. These ODOT cost estimates considered the project scope, current full-cost estimates for activities necessary to implement each project, adjusting cost estimates to reflect current 2011 dollars and more. In the future, projects proposed for inclusion on a financially constrained project list must have up-to-date complete scope and cost estimate information available in order to be considered during the financial constraint process.

Proposed projects have been categorized according to *facility type* and *project type*. Actual construction cost data for a range of projects, as well as current unit cost assumptions, were obtained from local jurisdictions. These data were analyzed and average per-lane-mile unit costs were calculated for various facility/project types. This information was supplemented through direct conversation with local transportation officials regarding recent costs for smaller-scale projects such as traffic signals, intersection improvements, long-range capacity studies, etc.

Where project-specific cost analysis data were available from more detailed studies (i.e., I-5/Beltline Highway) these cost estimates were entered directly into the project database.

Total financially constrained roadway costs for the planning horizon through Fiscal Year 2035 are estimated to be approximately $1.46 billion. For details about which capital projects have been included in this total, see the Capital Investment Action project lists beginning on page 14.

Roadway System Revenues

Federal and state revenue projections were provided by ODOT in a document titled *Financial Assumptions for the Development of Metropolitan Transportation Plans* in 1995 (updated most recently in 2011). Most of the revenue projections of federal and state funds used in the RTP are based on the projections provided in this document. The RTP financial analysis is based on the latest ODOT projections available. Other local roadway revenue estimates were developed by an interjurisdictional staff team.

The estimate of **State Highway Trust Fund** revenues is based on the assumptions that the state gas tax would increase an average of 1.00¢ per gallon per year beginning July 1, 2005, and that the TPR requirements for reducing vehicle miles traveled (VMT) per capita would not be met. There is a further assumption that the biennial state vehicle registration fee would increase $15 every 8 years beginning July 1, 2013.

Lane County staff provided the estimate of federal forest receipts in 2002. In the 2004 update, the revenue was assumed to continue at federal guarantee levels through 2007. For the 2007 update of the RTP, the scenario was a four year extension of the guarantee legislation, with declining funding percentages of 90, 80, 70, and 40 percent. Beyond that, it was assumed that the federal timber payment guarantee legislation would be eliminated. This RTP continues the assumptions from the 2007 RTP, with the recognition that there is extreme uncertainty about this revenue source. Lane County is experiencing upward pressure on expenses with flat or declining revenues. Major changes in County revenue strategies and spending priorities will likely be needed to re-balance County Road Fund finances. The County-City Partnership payments were terminated in fiscal year 2006-07. Lane County's budgets for OM&P, as well as modernization, will be revised at the 2015 RTP update, when it is hoped that there will be better certainty regarding future revenue levels. For this update, text changes have been added that discuss the need for new revenues and reduced service levels.

Some revenues such as **assessments** and **systems development charges (SDCs)** may only be used for capital projects. These two revenues sources fund most of the city collector and arterial roadway projects that involve urban standards. Other revenues are flexible and may be used for any road-related purpose including O&M and capital projects. Revenues are summarized with the costs in Table 4.

Transit System Costs and Revenues

Transit system finances are largely independent of other transportation systems, and are therefore analyzed separately. Revenues and expenses are consistent with LTD's long-range financial plan. The capital costs and revenues are consistent with the long-range capital plan. Assumptions about grant revenue amounts are significantly different than they are in the Capital Plan as they have been reduced to cover only the first phase of the BRT project.

Transit System Costs

Transit capital cost estimates are based on the assumptions that the BRT project will proceed with primary focus on the development of an east-west pilot corridor, that Park-and-Ride facilities will be added on major corridors as the need is identified and suitable sites are selected, and that fleet expansion and vehicle replacement will continue at a rate determined by service level needs.

Transit costs include the third phase of the BRT project. BRT includes many potential elements that will need to be carefully reviewed and evaluated. Until this engineering work is completed and decisions are made on the extent and timing of the long-term development of the BRT corridors, it is very difficult to provide a more accurate cost estimate for the BRT system.

Transit System Revenues

Transit revenue estimates are based on assumptions that overall federal grant funds in support of capital projects will increase, that fare revenue will continue to increase as it has over the last two years, and that payroll tax receipts will increase over the planning horizon due to growth in employment and wages.

It is anticipated that discretionary federal grant funds will pay for up to 80 percent of the capital cost of the BRT system. This expectation is consistent with the District's previous success in obtaining federal funds. During the past ten years, the District has been awarded discretionary federal funds for a new downtown Eugene transit station ($9 million), a new downtown Springfield transit station ($5 million) and bus rapid transit planning and construction funds for the first two BRT corridors. In addition, there is considerable enthusiasm at the federal level for LTD's BRT project, as it is seen as a low-cost and effective alternative to light-rail. This enthusiasm should translate into funding support, as evidenced in the proposed transportation reauthorization bill which includes a "Small Starts" funding category within the federal 5309 discretionary program. This new category is being proposed to allow smaller projects, like BRT, to better compete for federal discretionary funding. Therefore this revenue source meets the legal requirement that it is reasonably expected to exist.

Bicycle and Pedestrian System Costs and Revenues

The RTP bicycle element estimates costs for bicycle projects that are independent of the road projects such as multiple-use paths and bridges and new on-street paths that do not happen to coincide with a roadway project. On-street bicycle lanes comprise a majority of the bicycle facilities recommended in the RTP and will for the most part be funded as a component of future roadway improvements or reconstruction. Signing designated bicycle routes is relatively inexpensive and is normally funded under the roadway maintenance budget.

Bicycle and Pedestrian System Costs

Approximately $51 million in bike projects have been identified in the fiscally constrained RTP. Most of the cost is in multiple use path, or bridge projects. Costs have also been estimated for other road-related bike projects that have not been included in road project costs.

Additional path, bridge, or connector projects have been designated in the RTP as being future projects, meaning that they are either strictly for recreational use, that land use activities such as active gravel mining currently do not allow them to be built, or that funds have not yet been identified for their completion. However, many of these projects could be built within the RTP planning horizon if additional funding sources emerge.

OM&P of the bike and pedestrian system within the road right-of-way is included in the costs for the street and highway system. There currently is no dedicated source of revenue or other special revenues for this work. A transportation utility fee (or transportation system maintenance fee) could be used to provide revenues for the OM&P of the off-street system.

Bicycle and Pedestrian System Revenues

Federal Funding

Currently under SAFETEA-LU, 10 percent of Surface Transportation Program (STP) funds allocated to the state must be used for transportation enhancement activities, including construction of facilities for bicycles and pedestrians. SAFETEA-LU's predecessor, TEA 21, has been the primary funding source for off-street projects built in the Eugene-Springfield area since its authorization in 1998. A major issue for local jurisdictions is identifying the required local match.

State Funding

State funding for bikeways is primarily limited to money from the ODOT Highway Fund. This funding is used mainly for adding bicycle lanes to existing and new streets. These funds may also be used for bicycle projects that are independent of other road construction as long as the project is within highway right-of-way. Highway Funds cannot be spent on paths in parks or anywhere else outside the highway, road, or street right-of-way.

Recently, ODOT funded independent bikeway projects in conjunction with highway modernization projects, including the I-5 path and bike bridge. It is expected that ODOT will finance the construction of the bike paths associated with later phases of Beltline.

Other Funding

Although State Highway Fund and SAFETEA-LU money provides the basic funding source for bikeways, local jurisdictions may also provide revenues from local sources such as general funds, park district funds, special bond levies, and systems development charges, as well as through the local road construction and maintenance budget.

Flexibility of Federal Surface Transportation Revenues

Federal STP funds are not restricted to roadway projects. They have been used in this region for TDM, bike, and transit projects. Local jurisdictions have the authority to allocate some of these revenues to local projects.

Assessment of Revenue Shortfall

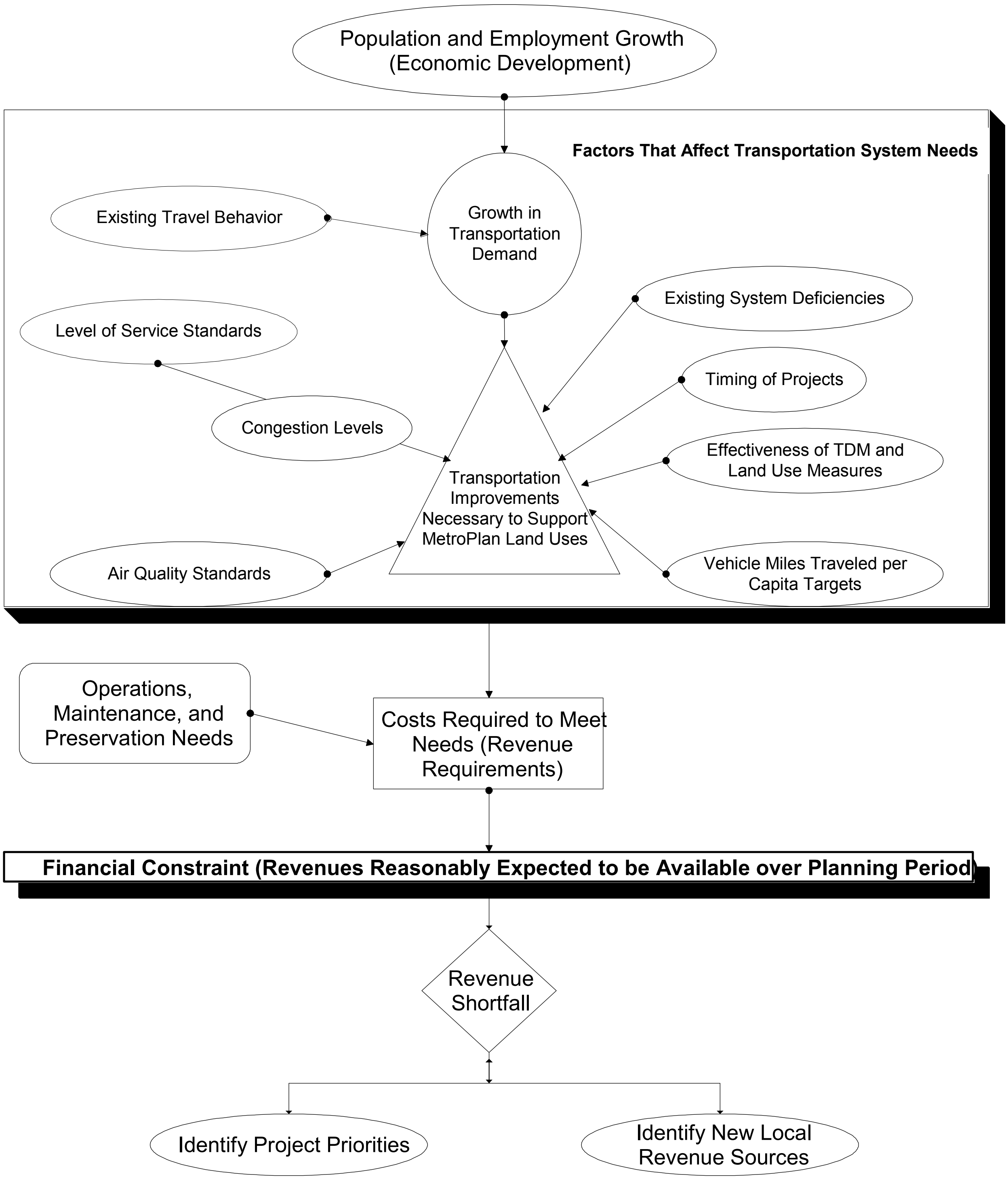
The level of transportation needs and the amount of revenues available to pay for the needs depend on several key factors such as the amount of congestion the region is willing to accept, and the timing and allocation of resources among the various components of the system. Figure 6 illustrates some of the interrelationships among key factors contributing to the RTP's financial constraint. In the process of making decisions on the package of transportation investments contained in the RTP, it is important to consider the tradeoffs that can arise from changes in individual factors. A discussion of these factors and tradeoffs and a description of the revenue shortfall under the RTP assumptions follows.

Factors That Affect the Revenue Shortfall

As presented, transportation improvements necessary to support the land use pattern established in the *Eugene-Springfield Metro Plan* and the Coburg comprehensive plan arise from several sources. Population and employment growth and existing travel behavior contribute to a growth in transportation demand. Increased demand necessitates adding to the existing system (road, bus, bike, and pedestrian) through specific system improvements. The need for system improvements is also affected by: deficiencies in the existing system, decisions about system standards (such as level of service/congestion and pavement condition) to be provided on the region's transportation facilities, and the level and effectiveness of strategies like TDM measures, investments in alternative modes, future land use patterns, and the timing of projects.

Figure 6

Key Factors That Affect Financial Constraint



System improvement needs can also be affected by the requirement to meet national air quality standards and the VMT per capita targets specified in the state's TPR. In some cases, where an improvement reduces congestion, air quality can be improved. An improvement that has the affect of significantly increasing the number of vehicle trips can cause a decrease in air quality. Overall, the Central Lane area is expected to experience improved air quality over the next 20 years. In isolation, major system improvements can appear to have the affect of increasing VMT per capita. These factors were considered in the technical analysis and identification of transportation system needs.

In addition to system improvements, the plan must also consider the resources required to adequately operate, maintain, and preserve the existing and future transportation system. The need for ongoing O&M applies to all parts of the overall system including roadways, transit vehicles, bikeways, and sidewalks. The level of O&M need is affected by the general size of the system, and the function of the roadway system (freeway, arterial, collector).

The level of roadway system preservation needs is affected by roadway preservation standards. The goal in the Central Lane area is to maintain, through OM&P activities, a level of 80 percent of the system miles rated at fair or better condition. Adequately funding OM&P needs avoids the much higher costs associated with reconstruction of the system.

The combination of system improvement costs and the costs of OM&P activities represents the total costs required to meet future transportation needs in the region. The region's ability to provide for these needs is constrained by the revenues reasonably expected to be available over the 20-year planning period.

The revenue shortfall can be addressed through the establishment of priorities or the development of additional revenue sources.

Conclusions About the Revenue Shortfall

The following conclusions are drawn from current analysis of the revenue shortfall:

1) Eugene and Springfield have the ability to fund most of their collector and arterial roadway projects involving upgrades to urban standards through the combined use of assessments and SDCs.
2) Eugene and Springfield *may* have more difficulty finding resources for new facilities (e.g., Booth Kelly Road).
3) The local cities have a significant shortfall in resources for OM&P of the current roadway system.
4) Lane County's current policy calls for the use of available resources for the OM&P of the current roadway system first, but reductions in federal timber guarantee funding (either immediate or delayed if continuing legislation is approved) will mean that a shortfall in OM&P will develop without increases in revenues or reduced service levels and costs.

5) Lane County has projected a shortfall in modernization funding. The Lane County Capital Improvement Program (CIP) has been reduced drastically in scope. Modernization funding levels will depend on congressional action on federal timber receipt issues, legislative action on the state-wide gas tax, development of local revenue sources, and priority-setting by the County Board of Commissioners. In this 2011 RTP update, Lane County has continued to place several large projects on the illustrative project list as a first response to a shortage of modernization funding.
6) ODOT lacks resources for modernization and OM&P, and a significant amount of the identified needs are on the ODOT arterial system, including the freeways.
7) LTD has projected sufficient resources to maintain the current transit service level and expects to be successful in obtaining federal resources to implement the BRT system.
8) There are no existing transportation resources for the OM&P of the off-street bike system outside of the public right-of-way.
9) Recent history indicates that federal enhancement resources should be reasonably available for the majority of the planned off-street bike path modernization projects.

Strategies to Address Revenue Shortfall

As described at the beginning of the financial plan, the RTP is required to be constrained by revenue "reasonably expected to be made available" (federal requirement) and demonstrate its ability to support the land use pattern present in the local comprehensive plans. The revenue shortfalls identified above can be addressed through either one of two primary means: a prioritization of needs (and the resulting movement of low-priority unfunded needs to a future project list), or the development of new revenue sources. This section presents possible strategies to address the anticipated revenue shortfall, suggesting factors to consider in establishing priorities and outlining the range of new revenue sources.

1. Increased Federal and State Taxes and Fees

Develop a united front to support state and federal efforts to develop additional transportation resources and obtain an equitable share of those resources for the metro area.

2. Accept Lower Level of Service

Establishing a set of needs within the limits of available resources can be accomplished by assigning a priority to specific projects or categories of projects. The major issues surrounding the level and priority of transportation system needs can be identified by assessing the tradeoffs that come with varying the acceptable level of congestion on roadways. A key policy tool in this discussion is level of service (LOS) standards. These standards are set to reflect the region's willingness to accept a certain level of congestion on its roadway system. Generally, lowering LOS standards will have the effect of reducing the need for system improvements. Accepting increased congestion allows some system improvements to be postponed. Conversely, maintaining higher LOS will require more system improvements to reduce the amount of congestion. The table below highlights some of the tradeoffs associated with different levels of congestion.

Policy Choice	Impact on Standard	Potential Tradeoffs
Accept More Congestion	**Lower Level of Service**	Reduce system improvement costs
		Reduce air quality in specific areas
		Increase hours of delay
		Increase vehicle operating costs
		Increase accidents
		Increase traffic infiltration into neighborhoods
		Increase use of alternative modes
Accept Less Congestion	**Raise Level of Service**	Increase system improvement costs
		Increase air quality in specific areas
		Reduce hours of delay
		Reduce vehicle operating costs
		Reduce accidents
		Reduce traffic infiltration into neighborhoods
		Reduce use of alternative modes

Other policy tools exist that can affect congestion levels. This plan is based on the use of a range of land use, TDM, and TSI measures to address the issues associated with congestion. In the long run (beyond the 20-year planning horizon), land use measures implemented in the planning period can have an affect on congestion levels. TDM measures can be used in the short run to affect demand at specific locations, though voluntary measures can only contribute to a reduction in congestion, not provide the full solution.

Thus, the primary set of actions available to address congestion in the planning period are the system improvement actions described in other sections of this chapter. Development of system improvement priorities should be based on a consideration of some of the tradeoffs highlighted above. In particular, it will be important to identify which projects can be postponed without significant degradation to the roadway system's LOS. These might include ODOT freeway projects, interchanges, or local projects without identified funding sources.

3. Special Road Funding Opportunities

Identify special road funding opportunities to take advantage of state and federal resources such as Immediate Opportunity Funds, federal demonstration grants, or state or federal economic development grants.

4. Stormwater Management

Establish a stormwater utility fee for the area between the city limits and the urban growth boundary (UGB) and apply user fee revenues to augment Lane County road fund expenditures on roadway drainage projects.

Use Eugene and Springfield stormwater SDCs for the eligible drainage component of Lane County road modernization projects within the UGB.

5. Transportation Utility Fee

A Transportation Utility Fee (TUF), or transportation system maintenance fee, is analogous to a stormwater user fee. Each developed property within an area is charged a monthly fee for their anticipated use of the transportation system. These fees are determined by a methodology that is usually based on the trip-making characteristics of the land use type and becomes a fixed fee for that user. The fees can be collected on water utility bills just as sanitary and stormwater fees are currently. The fees can be set to generate any amount of revenue but are typically designed to cover a portion of ongoing O&M or to pay for preservation activities. The revenue is flexible and may be used for any purpose reasonably related to use of the public-sector transportation system, including maintenance of off-street bike and pedestrian facilities. These fees are typically not used for capacity-increasing projects because they are paid by existing users of the system.

6. Increased Systems Development Charges

There are several potential revenue-enhancing revisions to the existing Coburg, Eugene and Springfield SDC methodologies and rate structures that could be explored.

The transportation SDC methodologies could be revised to include the impact on county arterials and collectors and to ensure that wherever possible, the combination of assessments and SDCs cover 100 percent of the costs of the local arterial and collector street projects. One estimate showed that such a revision in the Eugene-Springfield area would increase revenues by approximately $7.6 million over 20 years, increasing the transportation SDCs by about 21 percent.

The transportation SDC could also be expanded in the future to include capacity increasing transit facilities should transit revenues be insufficient to maintain the current level of service as growth occurs.

Another component that could be added to the local SDC rate structure would be one that addresses the local contributions Coburg, Eugene and Springfield make to state roadway projects. These local expenditures on state projects are not currently included in the calculation of the SDCs.

7. Transfer of Jurisdiction

A transfer of certain ODOT facilities to local jurisdictions in exchange for state assumption of locally owned segments of the National Highway System might allow for the use of local revenues (assessments and SDCs) on facilities that are unlikely to be improved by the state during the planning period.

Modernization projects could then be funded from a combination of assessments, transportation, and storm water SDCs and possible Lane County Road Fund contributions—revenue sources that are currently unavailable at the state level. However, in addition to handing over responsibility for costs, a transfer of ODOT facilities would also result in a reduction in revenues to the local ODOT district office because those revenues are partly dependant on total lane miles within the district. This reduction in revenue would result in the ODOT system improvements line item still showing a shortfall.

8. Accept Lower Standards in Operations, Maintenance, and Preservation

The standards applied to the OM&P of the transportation system determine the need for transportation revenues. This strategy consists of revisiting those standards to determine whether or not they are in line with priorities. In addition to the LOS (congestion) standard discussed above, other OM&P standards could be changed. Two possible strategies of this type are to eliminate maintenance on local gravel roads or on unimproved streets (streets with a thin surface treatment). Eliminating maintenance on metro area gravel local roads would save an estimated $1.6 million over 20 years. Eliminating maintenance on unimproved local streets would save about $5.8 million over the same period.

9. Bond Measures

Property-tax based measures, including capital bonds and levies, may be used to fund transportation activities. Both Eugene and Springfield have recently included street preservation projects in a bond levy. The City of Salem has used property-tax based serial levies a number of times in the past decade for preservation and modernization. Under Ballot Measure 50, capital bonds can be issued for a maximum of ten years and must be approved by the voters at a general election or with 50 percent turnout.

10. Regional Transportation Taxes

Eugene and Springfield currently impose local gas tax equivalents of 5¢ and 3¢ per gallon, respectively. Coburg currently imposes a local gas tax equivalent of 3¢ per gallon (non-diesel). Additional local or regional gas taxes and/or vehicle registration fees, or an increase in the existing tax, could be developed to fund the remainder of the gap in financing for the non-state road network. Each 1¢ of gas tax would generate about $1.2 million countywide. The current state tax is 30¢ and is shared among the state, counties, and cities. A simple gas tax does not include a comparable weight-mile tax for trucks, such as what the state currently has.

Motor vehicle registration fees may be imposed by counties with a county-wide vote. The registration fee may not exceed that of the state, currently $86 per two-year period for a passenger car. The funds must be shared with the cities within the county. Two or more counties may act jointly. A $15 vehicle registration fee in Lane County would generate about $5 million annually.

11. Bridge Tolls

Bridge tolls may be used to provide revenues for the construction of specific bridges. For example, tolls could be used to fund the construction of new river crossings. These tolls could be removed when construction has been paid in full, or could remain in place to fund OM&P of the bridge.

12. Broadened Assessment Practices

Under Oregon law, local improvement districts may be used to assess property owners for improvements that benefit the properties. Local agencies use local improvement districts to assess property owners for the initial street improvement resulting in a fully improved street, usually including, curbs, gutters, and sidewalks. Some jurisdictions have begun using improvement districts to assess property owners for preservation and reconstruction projects. Other jurisdictions are using them to fund ongoing O&M activities through an annual assessment. These may occur when streets need pavement overlays or when the street has reached the end of its useful life and needs to be reconstructed. The potential yield from this policy has not been estimated but potentially could fund a significant portion of the preservation needs. Remonstrance provisions in local codes may preclude the use of this tool unless property owners approve.

13. Postpone Project to Illustrative Projects List

Prioritize projects and postpone projects based on availability of revenue. Postponed projects would be moved to the appropriate illustrative project list within the RTP, pending availability of additional revenues.

Development of Constrained Plan

Table 4 shows that under current RTP assumptions about standards, priorities, and timing, the region faces a $773-798 million revenue shortfall over the planning horizon through Fiscal year 2035. The majority of the shortfall occurs in two areas—OM&P in general, and ODOT System Improvements.

To arrive at a financially constrained plan, a process was developed to consider the applicability of the various strategies to the individual line item revenue shortfalls shown in Table 4. The process included a determination of the regional priorities through the public review process and careful consideration by both inter-jurisdictional staff and policy groups of the applicability of individual strategies to each shortfall, among other steps. Not all of the strategies were considered appropriate for use (e.g., there was consensus that strategy #10 - *Regional Transportation Taxes* was not a viable local option and that the use of strategy #7 - *Transfer of Jurisdiction* would result in no net improvement in the cost/revenue picture). In most cases, packages of strategies were employed to address the shortfalls.

The Potential Strategies column in Table 4 shows the results of this process. Each line item revenue shortfall is addressed by one or more strategies. Where the *Postpone Projects* strategy is shown under System Improvements, the result is a movement of projects to the future projects list, thus removing the associated costs from the current plan.

Similar to the Postpone Projects strategy is the *Accept Lower Pavement Condition Ratings* strategy under OM&P. This strategy means that the overall pavement condition rating (PCR) standards will be lowered, resulting in a reduction in specific OM&P activities since the road surfaces will be maintained at a lower level. This results in a smaller percent of the road surface having a *fair* or *better* rating at any one time and reduces OM&P costs.

Other strategies are also intended to either directly reduce costs or increase revenues, resulting in a financially constrained plan. Table 5 and the following text describe the specific application of the strategy packages and show the resulting financially constrained costs and revenues.

TABLE 4
RTP COSTS & REVENUES and STRATEGIES
($ Millions)

Local (Coburg, Eugene, Lane County, Springfield) Components	Cost	Revenue	Shortfall	Potential Strategies
Operations, Maintenance & Preservation				
Eugene Operations, Maintenance & Preservation	$ 418	$ 240	$ 178	Implement New Local Revenue Source(s), Accept Lower Pavement Condition Rating(s) (PCR), Reduce Operations & Maintenance Service Levels
Springfield Operations, Maintenance & Preservation	$ 139	$ 90	$ 49	Implement New Local Revenue Source(s), Accept Lower PCR, Reduce Operations & Maintenance Service Levels, Use Bonding for Preservation
Lane County Operations, Maintenance & Preservation	$ 156	$ 139	$ 17	Increase in shortfall is expected as federal revenues decline and costs increase, but has not been calculated in this update due to extreme uncertainty. Implement new local revenue sources, accept lower pavement condition ratings, reduce maintenance service levels.
Subtotal	*$ 713*	*$ 469*	*$ 244*	
System Improvements				
City Arterial/Collector System Improvements	$ 214	$ 198	$ 16	Postpone Projects to Illustrative List
Lane County System Improvements	$ 105	$ 50	$ 55	Postpone Projects to Illustrative List
Subtotal	*$ 319*	*$ 248*	*$ 71*	
Bike System				
Local Bike/Ped Operations, Maintenance & Preservation	$ 7	$ 7	$ -	Include in New Local Revenue Source(s)
Local Off-Street & On-Street (without Road Project) Bike System Improvements	$ 107	$ 51	$ 56	Postpone Projects to Illustrative List or Do Not Build (note that additional Bike System improvements are incorporated in Road Projects)
Subtotal	*$ 114*	*$ 58*	*$ 56*	
Total	$ 1,146	$ 775	$ 371	
Lane Transit District (LTD)				
LTD Operations, Maintenance & Preservation (OM&P)	*pending*	*pending*		
LTD System Improvements	$ 600	$ 416	$ 184	Postpone Projects to Illustrative List and Pursue Additional Funding or Do Not Build
Total	$ 600	$ 416	$ 184	*without pending OM&P figures*
Oregon Department of Transportation (ODOT)				
ODOT Operations, Maintenance & Preservation	*pending*	*pending*		
ODOT Facility Planning Studies*	$ 10.5	$ 10.5	$ -	No Shortfall
ODOT System Improvements	$ 538	$ 295-320	$218-243	Postpone Projects to Illustrative List or Do Not Build
Total	$ 549	$ 306-331	$218-243	*without pending OM&P figures*
		$ 1,191	$ 555	
GRAND TOTAL	**$ 2,295**	**$1,486-1,522**	**$773-798**	*without pending LTD and ODOT OM&P figures*

All figures are rounded and are shown in 2011 dollars and are for the planning horizon through FY 2035.
**ODOT Facility Planning Studies are shown for information purposes only.*

TABLE 5
CONSTRAINED RTP COSTS & REVENUES
($ Millions)

Local (Coburg, Eugene, Lane County, Springfield) Components		Cost		Revenue		Shortfall	Comments on Constraint(s)
Operations, Maintenance & Preservation							
Eugene Operations, Maintenance & Preservation	$	418	$	418	$	-	Implement new locally controlled source of revenue
Springfield Operations, Maintenance & Preservation	$	134	$	134	$	-	Apply Combination of Strategies
Lane County Operations, Maintenance & Preservation	$	156	$	156	$	-	No Shortfall. Adjusted maintenance budget not calculated in this update, but budget will decline if revenues do not cover this amount or projected cost. Apply strategies shown in Table 4.
Subtotal	*$*	*708*	*$*	*708*	*$*	-	
System Improvements							
City Arterial/Collector System Improvements	$	198	$	198	$	-	Postpone Projects to Illustrative List
Lane County System Improvements	$	50	$	50	$	-	Postpone Projects to Illustrative List
Subtotal	*$*	*248*	*$*	*248*	*$*	-	
Bike System							
Local Bike/Ped Operations, Maintenance & Preservation	$	7	$	7	$	-	Include in New Local Revenue Source(s)
Local Off-Street & On-Street (without Road Project) Bike System Improvements	$	51	$	51	$	-	Postpone Projects to Illustrative List or Do Not Build (note that additional Bike System improvements are incorporated in Road Projects)
Subtotal	*$*	*58*	*$*	*58*	*$*	-	
Total	$	1,014	$	1,014	$	-	
Lane Transit District (LTD)							
LTD Operations, Maintenance & Preservation		*pending*		*pending*			
LTD System Improvements	$	416	$	416	$	-	Postpone Projects to Illustrative List and Pursue Additional Funding or Do Not Build
Total	$	416	$	416	$	-	*without pending OM&P figures*
Oregon Department of Transportation (ODOT)							
ODOT Operations, Maintenance & Preservation		*pending*		*pending*			
ODOT Facility Planning Studies*	$	10.5	$	10.5	$	-	No Shortfall
ODOT System Improvements	$	295-320	$	295-320	$	-	Postpone Projects to Illustrative List or Do Not Build
Total	$	306	$	306-331	$	-	*without pending OM&P figures*
GRAND TOTAL	**$**	**1,736**		**$1,736-1,761**	**$**	**-**	*without pending LTD and ODOT OM&P figures*

All figures are rounded and are shown in 2011 dollars and are for the planning horizon through FY 2035.
**ODOT Facility Planning Studies are shown for information purposes only.*

The text below provides an expanded explanation of the specific strategies shown on each line item in Table 4.

<u>Operations, Maintenance & Preservation</u>

Eugene

- Increase revenues through a locally controlled source of revenue equitably tied to all users of the transportation system that would provide revenues that could be used to address OM&P needs. Revenues shall be set at a level that ensures that the improved roadway and bike system at least falls no further behind in its condition of repair. As needed to maintain system condition, the Eugene City Council shall adopt at least one revenue source such as:

    1. Assessments
        a. Broadened assessment practices/local improvement district
        b. Broadened use of system development charges
    2. Property Taxes
        a. General obligation bonds backed by a property tax levy
        b. Local option property tax levy
    3. Excise Taxes
        a. Business tax on fuel distribution
        b. Local option motor vehicle fuel tax
        c. Parking tax
        d. Carbon-based fuel tax
        e. Motor vehicle excise tax
        f. Vehicle registration fees
    4. User/Utility Fees
        a. Transportation utility fee
        b. Street improvement fee
        c. Municipal sticker fee (local vehicle public parking permit)
        d. Tolls
        e. Fees to compensate for dedicated use of traffic lanes for transit purposes
        f. Employer payroll tax

Springfield

- Implement a locally controlled source of revenue equitably tied to all users of the transportation system that would provide revenues that could be used to address OM&P needs.
- Decrease costs via acceptance of reductions in the PCR indicators by functional class.
- Lower overall operations and maintenance service levels.

Lane County

- Implement a locally controlled source of revenue, such as a local option gas tax or motor vehicle registration fee, that could be used to address OM&P needs.
- Decrease costs via acceptance of reductions in the PCR indicators by functional class.
- Lower overall operations and maintenance service levels.

Transit

- *No revenue shortfall*

ODOT

- Decrease costs via acceptance of reductions in the metropolitan area PCR indicators by functional class.

<u>System Improvements</u>

Cities

- *No revenue shortfall*

Lane County

- Decrease costs by postponing or not building projects, moving those projects to an illustrative project list. Consider implementation of transportation System Development Charges (SDC).

Transit

- Decrease costs by postponing or not building projects, moving those projects to an illustrative project list.

ODOT

- Decrease costs by postponing or not building projects, moving those projects to an illustrative project list.

<u>Bike System</u>

Bike/Pedestrian OM&P

- Increase revenues through the inclusion of bike/pedestrian OM&P in a new locally controlled source of revenue

Local Off-Street Bike

- Decrease costs by postponing or not building projects, moving those projects to an illustrative project list.

Local On-Street Bike w/o Road

- Decrease costs by postponing or not building projects, moving those projects to an illustrative project list.

Application of Strategy Packages and Attainment of a Financially Constrained Plan

For those line items that show revenue shortfalls in Table 4, application of the strategy packages described above results in elimination of the shortfalls. This action achieves a *financially constrained* plan as required, one that plans for projects within the constraint of available revenues. Specifically:

<u>Operations, Maintenance & Preservation</u>

Eugene

- A new locally controlled source of revenue will be implemented to generate revenue to cover the shortfall over the planning time horizon.

Springfield

- Overall maintenance service levels are assumed to decrease by an amount equal to 10 percent of the shortfall, or approximately $12 million.
- A new locally controlled source of revenue will be implemented to generate revenue to cover the remainder of the shortfall over the planning time horizon.

Lane County

- Overall maintenance service levels are assumed to decrease by an amount necessary to resolve the shortfall, once it is calculated.
- A new locally controlled source of revenue will be considered, and if implemented, will allow restoration of previous service levels for maintenance.

ODOT

- The district ODOT office will decrease costs via acceptance of reductions in the metropolitan area PCR indicators by functional class. The current PCR on state facilities in the metropolitan area is 98 percent fair or better. The State plan indicates the state-wide system goal over the planning horizon is a measure of 77 percent fair or better. Reducing the ODOT OM&P costs by the amount of the shortfall will still allow the district to meet the state standard over the planning horizon, although the road condition ratings will be lower than they currently are.

<u>System Improvements</u>

ODOT

- The district ODOT office will decrease costs by postponing or not building projects, moving those projects to an illustrative project list. Pending additional revenues, these projects may be moved to a financially constrained project list in the future.

<u>Bike System</u>

Bike/Pedestrian OM&P

- The revenue shortfall in this area will be addressed by the inclusion of bike/pedestrian OM&P in a new locally controlled source of revenue.

The above strategy packages will result in a financially constrained RTP over the planning horizon through Fiscal year 2035. Transit activities, local system improvements, and most bike and pedestrian projects are not financially constrained and can be funded at the full level projected. OM&P in the city and state systems will be reduced somewhat, but still meet applicable policy standards. The cities, and perhaps Lane County, will also implement a new locally controlled source of revenue to raise additional OM&P revenues. State system improvement projects will be built on a priority basis as revenues allow, with the remaining unfunded improvement projects placed on a future projects list pending additional revenues.

Part Three: Regional Transportation Plan Amendment Process

This section outlines the process for amending the Regional Transportation Plan

Requirements

The Regional Transportation Plan (RTP) can be amended at any time consistent with CFR 450.322 – the federal guidelines on preparation of RTPs. Essentially, amendments must be shown to meet the same requirements as the original plan. These requirements include financial constraint, air quality conformity, and adequate public involvement.

In general, amendments would be processed by staff to assess financial constraint, air quality conformity, and establish appropriate public involvement. Draft amendments would be considered by both the Transportation Planning Committee (TPC) and the Citizen Advisory Committee (CAC). Recommendations from both committees would be forwarded to MPC for public hearing and final action. Typically, adoption of amendments would also require adoption of an updated air quality conformity determination. The existing state rule on air quality conformity requires that, with the exception of minor amendments, the Metropolitan Transportation Improvement Program (MTIP) be updated within six-months of updates to the RTP.

Categories of Amendments

Plan amendments would typically fall in to 4 categories:

a. Changes to the existing Financially Constraint project list – these changes could entail either dropping a project off the list or adding or reducing the level of funding assigned to a given project,
b. Addition of federally funded or regionally significant projects to the Financially Constraint project list – these changes would entail the addition of projects to the Constrained list from either the RTP Illustrative Project List or other sources,
c. Changes required to meet federal requirements – these changes would be in response to changes in federal requirements or could result from changes in federal funding (typically at points of reauthorization of federal transportation legislation). These changes could entail either changes to policy or projects.
d. Changes to local Transportation System Plans that need to be reflected in the RTP – these changes could be based upon changes in local comprehensive plans, or addition or deletion of federally-funded or regionally significant projects from the local TSP due to changes in local priorities.

Consistency between local Transportation System Plans and the Regional Transportation Plan

Local initiatives that prompt amendments to a local TSP commonly prompt amendments to the RTP. Changes in the RTP brought about by changes in federal or state requirements or by the addition of projects or policies can also lead to amendments to local TSPs. Differences between the federal and state requirements and timelines that govern the Regional Transportation Plan and the state and local requirements and timelines that govern local Transportation System Plans can sometimes lead to temporary inconsistencies between the RTP and the local TSPs.

With respect to RTP amendments, amendments that are not required to facilitate implementation of specific projects would normally be scheduled to take place as part of a regular 3-year update cycle. Amendments needed to facilitate the implementation of projects could be processed within the time it takes to conduct the required analyses (for financial constraint and air quality conformity) and public notice; typically 2-3 months.

Local TSPs are subject to the requirements of the Transportation Planning Rule and other state land use law. Amendments and the timing of those amendments would be in the context of meeting those requirements and other local needs. For example, if a change was made to the Regional Transportation Plan in order to meet federal requirements, an assessment would have to be made to determine if a corresponding change to the local transportation system plans would have to be made shortly after the RTP amendment or whether it could wait until the next regular update of the local TSP.

The need to coordinate changes to the plans stems primarily from the need to move the implementation of specific projects forward. The specific federal or state requirements for the RTP and TSPs determine whether the plans need to be made consistent in the short run (to allow projects to proceed) or whether inconsistencies can wait to be resolved until points of regular update.

Part Four: Air Quality Conformity

This section summarizes the air quality conformity analysis required by federal legislation.

Requirements

In nonattainment and maintenance areas, transportation plans and programs that are financed wholly or partly with federal funds are required to be in conformance with the transportation provisions of the State Implementation Plan (SIP) — the state-wide planning document that demonstrates how the state will attain the National Ambient Air Quality Standards (NAAQS). Conformity with a SIP means conformity to a SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of the standards. The Lane Council of Governments (LCOG), as the MPO for the Eugene-Springfield area, must make conformity determinations on the RTP and the MTIP to ensure they conform to the SIP. The Federal Highway Administration and the Federal Transit Administration must also review the RTP and the MTIP and make a conformity determination in order for the projects contained in these documents to be eligible for federal funding or approvals.

The Clean Air Act Amendments of 1990 set the NAAQS for key pollutants, including ozone, (O_3), carbon monoxide (CO), and particulate matter (PM_{10}). Areas that do not meet the NAAQS are designated in varying degrees of nonattainment, from *marginal* to *extreme* (depending on the pollutant). Nonattainment areas must submit air quality implementation plans and must integrate transportation and air quality planning in order to meet the standards. The Eugene-Springfield region is designated as a *maintenance area* for CO and designated as a nonattainment area for PM_{10}.

The region has successfully petitioned the Environmental Protection Agency (EPA) that highway and off-highway vehicles are not significant emissions sources of PM_{10}, and that transportation is therefore exempt from demonstrating area-wide conformity or from performing PM_{10} hot spot analysis within the air quality management region.

Regional emissions analysis for CO is required for all transportation plans, programs, and projects located within the Central Area Transportation Study (CATS) boundary. The CATS boundary encompasses the greater downtown Eugene area and is bounded by 5th Avenue on the north, 19th Avenue on the south, Lincoln Street on the west, and Agate Street on the east. The RTP is considered to conform when the annual tons of CO are below the Eugene-Springfield area motor vehicle emissions budget for CO. The motor vehicle emissions budget was filed with EPA and published in the Federal Register, Vol. 58, No. 232, page 64163, December 6, 1993.

The federal EPA has adopted new standards for ozone and fine particulate ($PM_{2.5}$) and based upon the existing LRAPA monitoring of these pollutants, this area is currently in attainment with these standards. Therefore, the RTP will not need to address these new standards. However, transportation plans, programs, and projects will continue to be subject to the existing carbon monoxide conformity rules in OAR 340-252.

Analysis

RTP conformity requires a technical analysis of the annual tons of CO generated by the transportation system. Based on the Capital Investment Actions project lists developed for the transportation system, an estimation of vehicle emissions of CO is calculated using the EPA's recommended guidelines. The emissions for the planning year are compared with the emissions budget established in the area's SIP.

The conformity analysis will be prepared based on a 24-year forecast (to 2035) of population, employment, and traffic. The analysis will use the RTP Financially Constrained Project Lists in development of the future year networks.

The formal conformity determination will be made as part of the MPO (i.e., MPC) adoption process.

Part Five: Planning and Program Actions

Planning and Program Actions represent a range of regionally significant planning, administrative, and support actions that might be used to implement RTP policies. Local jurisdictions will use their discretion to evaluate and prioritize Planning and Program Action implementation. The Planning and Program Actions are not adopted, meaning they are not binding or limiting to any implementing jurisdiction. Some Planning and Program Actions will lead to additional capital expenditures, others are examples of capital expenditures that might be implemented after further study. For example, a corridor study could lead to system improvements along the corridor. Planning and Program Actions are not subject to the same fiscal constraint requirements as the Capital Investment Actions. However, ongoing funding will be necessary to continue to implement actions such as the region's TDM program. Planning and program actions are presented for the following categories:

1. Land use,
2. Transportation demand management,
3. Transportation system improvements
   a) System-Wide
   b) Roadways
   c) Transit
   d) Bicycles
   e) Pedestrian
   f) Goods Movement
   g) Other Modes

The Planning and Program Actions listed in this chapter represent a small portion of all transportation planning actions undertaken in the region. Jurisdictions within the region undertake a variety of activities beyond the Planning and Program Actions that implement the RTP policies. Many federal and state requirements that the region must comply with are not included as Planning and Program Actions, as is the case with many ongoing transportation planning programs.

The region's Unified Planning Work Program (UPWP), an annual report that sets priorities for local transportation planning activities, is a key listing of additional actions. The UPWP describes ongoing programs conducted by the region's public agencies, including LCOG (Lane Regional Air Pollution Authority, LTD, ODOT, Lane County, and the cities of Coburg, Eugene and Springfield. The UPWP includes actions that the region is required to carry out due to federal and state requirements including those related to:

1. Surveillance, data maintenance, and modeling;
2. Long-range planning;
3. Short-range planning;
4. Refinement studies;
5. Programming;
6. Public involvement; and
7. Air quality.

Land Use Planning and Program Actions

This section provides recommended actions to implement transportation-related land use policies, including recommended approaches for implementing nodal development. The listed implementation actions respond to requirements contained in the state's TPR, as well as the RTP land use policies. Roadway, transit, and bicycle projects listed in the Capital Investment Actions project lists will help to implement land use policies. Additional Capital Investment Actions may be identified and implemented on a case-by-case basis to support nodal development as deemed appropriate by local jurisdictions.

1. Nodal Development *(Reference TPR 660-12-045(4)(g) and (5)(a))*

1.1. Prior to approving nodal development projects in designated areas, conduct a site analysis to evaluate infrastructure capacity, establish project boundaries, and ensure project compatibility with adjacent land uses.

1.2. Amend zoning and development codes to remove barriers to nodal development in designated areas.

1.3. Develop and apply a plan designation that allows development consistent with nodal development guidelines.

1.4. Prepare specific area plans (or specific development plans) to determine how to achieve the density, mixed-use, and design objectives of nodal development.

1.5. Develop an overlay zoning/development district for designated nodal development areas that includes guidelines and development or performance standards.

1.6. Selectively change plan and zoning designations to allow a mix of uses and housing types at higher average densities in areas designated for nodal development.

1.7. Amend zoning and development codes to add site, landscape, and architectural design objectives, standards, and guidelines for higher density, mixed-use development to ensure compatibility with surrounding uses.

1.8. Require developers to dedicate land, or money in lieu thereof, for public spaces in nodal development areas.

1.9. Apply site plan and design review procedures in designated nodal development areas.

1.10. Provide economic incentives, such as density bonuses and transfers, reduced SDCs, and property tax exemptions, to encourage nodal development.

1.11. Give priority to constructing and improving public facilities in areas designated for nodal development.

1.12. Establish a streamlined, coordinated development review process for nodal development.

1.13. Support public/private joint ventures and demonstration projects to provide successful local examples of nodal development.

1.14. Establish a marketing program that advertises and promotes developments that are consistent with nodal development guidelines.

2. Transit-Supportive Land Use

2.1. Designate areas along major transit corridors and near transit transfer stations for a mix of higher intensity commercial uses along with higher residential densities that achieve at least an average density within the medium-density range for residential uses. *(Reference TPR 660-12-045(4)(g))*

2.2. Amend zoning and development codes to add a transit-oriented development (TOD) district. *(Reference TPR 660-12-045(5)(a))*

2.3. Designate appropriate areas along major transit corridors and near transit transfer stations for TODs. *(Reference TPR 660-12-045(5)(a))*

2.4. Amend zoning and development codes to require all major new institutional and commercial development to provide facilities and access for transit, bicycles, and pedestrians. *(Reference TPR 660-12-045(4)(e) and (5)(d))*

2.5. Allow existing development to redevelop a portion of existing parking areas for transit-oriented uses, including bus stops and pullouts, bus shelters, Park-and-Ride stations, TODs, bicycle parking, and similar facilities, where appropriate. *(Reference TPR 660-12-045(4)(e) and (5)(d))*

3. Transportation Impacts

3.1. Establish a process for coordinated review of proposed land use decisions through intergovernmental agreements among local, regional, and state jurisdictions. *(Reference TPR 660-12-045(2)(d))*

3.2. Coordinate and collaborate with local jurisdictions and ODOT on review of proposed regional land use decisions that could significantly impact major regional transportation facilities. *(Reference TPR 660-12-045(2)(d))*

3.3. Coordinate and collaborate with ODOT on review of proposed local land use actions that could significantly impact state transportation facilities and systems. *(Reference TPR 660-12-045(2)(d))*

3.4. Refer land development proposals to appropriate local, regional, and state transportation agencies for review and comment on compatibility with and impact on transportation facilities, projects, and plans. *(Reference TPR 660-12-045(2)(d))*

3.5. Develop and apply conditions to approved developments when necessary to protect the functional capability of regional transportation facilities. *(Reference TPR 660-12-045(2)(e))*

3.6. Require traffic impact studies and mitigation measures where appropriate. *(Reference TPR 660-12-045(2)(e))*

3.7. Make certain that amendments to *Metro Plan* and land use regulations take into account the impact on regional transportation facilities and do not conflict with capacities and levels of service. *(Reference TPR 660-12-045(2)(g))*

Nodal Development Implementation Process

The Nodal Development Areas map included in Appendix A identifies areas in Eugene-Springfield that are considered to have potential for establishment of a nodal development land use pattern. Other potential areas may be identified in the future, and some of the identified areas may be considered unsuitable for nodal development upon further analysis or as a result of future land use changes in the area.

Property owners and developers are encouraged to consider following nodal development guidelines when developing or redeveloping parcels in these identified areas. When property owners and developers express interest in following nodal development guidelines in a designated area, local governments will provide assistance by identifying design/development objectives, guidelines, and standards; specifying any additional site analysis needed to establish project boundaries and related improvements; and generally facilitating project review and evaluation. In addition, local jurisdictions may initiate actions to establish nodal development land use patterns in these identified areas.

Approaches taken to establish nodal development land use patterns may need to be different for redevelopment, infill, and new growth areas. Implementation approaches adopted by each jurisdiction will likely include a combination of several methods and techniques. Actual development of an area consistent with nodal development patterns and the specific type of nodal development center will be based on further site analysis, owner/developer interest, and the support of individual jurisdictions. The process for establishing a nodal development area will include the following elements:

1. Confirm potential for nodal development based on established criteria;
2. Determine most appropriate type of nodal development pattern;
3. Identify needed public improvements;
4. Establish boundaries; and
5. Identify any potential conflicts with adjacent uses.

Establishment of new nodal developments will require an amendment to *Metro Plan*.

Nodal Development Implementation Schedule

Based on its review and approval of the 2002 TransPlan (RTP) Alternative Performance Measures for compliance with the TPR, LCDC adopted the following recommendations to provide guidance to local agencies in the development and implementation of TransPlan:

1. <u>LCOG should amend TransPlan (the RTP) to include a schedule for implementation of the nodal development strategy.</u> This schedule should incorporate the items listed below and the requirements for an "integrated land use and transportation plan" over the next three years.

2. <u>Eugene and Springfield need to specify specific areas for nodal development within one year</u>. TransPlan identifies approximately 50 areas as having potential for nodal development. Eugene and Springfield need to move quickly to pick

which of the 50 areas to designate as nodes and set general boundaries to guide subsequent detailed planning.

3. Eugene and Springfield need to adopt Metro Plan designations and zoning amendments for the specified nodes within two years after TransPlan adoption. Currently, most of the identified nodes are planned and zoned to allow continued auto-oriented development. This means inappropriate and poorly designed uses that could easily frustrate nodal development can be located in nodes. To be successful, nodes generally require a mix of mutually supportive pedestrian and transit-friendly uses and a good network of streets. If interim development includes inappropriate uses or is poorly laid out, the result could be to make a much larger area and perhaps a whole node unsuitable for nodal development.

4. Eugene, Springfield and Lane County need to review plan amendments and zone changes *outside* nodes to assure that they are consistent with the nodal development strategy. The success of nodal development strategy depends on attracting most of the higher density employment and residential development in nodes. Certain uses, such as neighborhood shopping centers are critical to the success of nodal development. Plan amendments to allow such uses outside of nodes undermine the nodal development strategy and hurt prospects for development in nodes.

The Integrated Land Use Transportation Plan referenced in the first recommendation is a requirement in the TPR (Section 0035(5)(c)) and includes the following elements:

(A) Changes to land use plan designations, densities, and design standards listed in 0035(2)(a)-(d) as follows:

  (a) Increasing residential densities and establishing minimum residential densities within one quarter mile of transit lines, major regional employment areas, and major regional retail shopping areas;

  (b) Increasing allowed densities in new commercial office and retail developments in designated community centers;

  (c) Designating lands for neighborhood shopping centers within convenient walking and cycling distance of residential areas;

  (d) Designating land uses to provide a better balance between jobs and housing considering:

(B) A transportation demand management plan that includes significant new transportation demand management measures;

(C) A public transit plan that includes a significant expansion in transit service;

(D) Policies to review and manage major roadway improvements to ensure that their effects are consistent with achieving the adopted strategy for reduced reliance on the automobile, including policies that provide for the following:

  (i) An assessment of whether improvements would result in development or travel that is inconsistent with what is expected in the plan;

  (ii) Consideration of alternative measures to meet transportation needs;

(iii) Adoption of measures to limit possible unintended effects on travel and land use patterns including access management, limitations on subsequent plan amendments, phasing of improvements. etc.

(For purposes of this section a "major roadway expansion" includes new arterial roads or streets and highways, the addition of travel lanes, and construction of interchanges to a limited access highway); and

(E) Plan and ordinance provisions that meet all other applicable requirements of this division.

Much of elements (B), (C), and (D) are addressed by components of the RTP. Other elements either are or will be addressed in subsequent implementation of the nodal development strategy.

The original schedule for implementation of nodal development incorporating LCDC's recommendations is outlined below. This schedule assumed funding available to carry out the tasks listed.

Table 6
Nodal Development Implementation and Integrated Land Use Transportation Plan Development Schedule

Task	Agency Responsible	Schedule
1. Specify specific areas for nodal development within one year	Eugene, Springfield	May 2002
2. Adopt Metro Plan designations and zoning amendments for the selected sites within two years after adoption of the RTP	Eugene, Springfield	September 2003
3. Review plan amendments and zone changes *outside* nodes to assure that they are consistent with the nodal development strategy	Eugene, Springfield, Lane County	As plan amendments and concurrent zone changes are submitted
4. Changes to land use plan designations, densities, and design standards listed in TPR Section 0035(2)(a)-(d). (If needed, in addition to work done through 2. Above)	Eugene, Springfield	September 2004
5. Policies to review and manage major roadway improvements to ensure that their effects are consistent with achieving the adopted strategy for reduced reliance on the automobile	Eugene, Springfield, Lane County	September 2004
6. Plan and ordinance provisions that meet all other applicable requirements of this division	Eugene, Springfield, Lane County	September 2004

Transportation Demand Management Planning and Program Actions

TDM actions encourage the use of travel options other than single-occupant vehicles to achieve reductions in VMT and reduce reliance on the automobile.

Overview of Existing TDM Programs

TDM programs are implemented at various levels by local agencies. Ongoing TDM planning efforts include coordination by local jurisdiction staff subcommittee of the TPC, the TDM Advisory Committee. The committee's purpose includes regional TDM project development; monitoring the performance and providing guidance of the regional TDM program; and educating local agency staff on current TDM programs in the region, state, and nationwide. In addition, LCOG provides technical analysis of the impacts of various TDM actions as part of the planning process.

LTD initially formalized a TDM program in Fall 1994, when it started a new program called Commuter Solutions. Since that time, the Commuter Solutions program has grown to a regional program in scope extending beyond the LTD service boundary, and has changed its name to point2point Solutions. point2point Solutions offers the region's businesses, organizations, and educational institutions a comprehensive set of travel options programs and services for their employees, staff, and students. TDM strategies incorporated in the point2point Solutions program include discounted group bus pass programs, parking management, a regional emergency ride home program, transit vouchers, ridesharing and vanpools, Park-and-Ride facilities, bicycling, walking, teleworking, and creative work scheduling. point2point Solutions coordinates and implements these primary regional TDM programs, services, and projects. point2point Solutions reports the progress and results of its work and effect on the region's travel to the TDM Advisory Committee. Regional TDM programs and services are described below.

point2point Solutions Travel Options Programs and Services

Regional Outreach

The primary mission of the point2point Solutions program is to offer the region viable travel options to single-occupancy vehicle travel. Its main audiences include employers, educational institutions, and organizations. Outreach methods include direct mail, business referrals, newsletter and media coverage, leads from local planning staff, public service campaigns, tax benefits and credits information, individualized marketing strategies, advertising, presentations, and telephone contact. The benefits, both to the individual and the business/ organization, are magnified in the results the community receives from successful travel options programs. In addition, community wide use of travel options programs prolong the public investment in the region's roadway infrastructure. For example, point2point Solutions provides congestion mitigation strategies before, during, and after major regional transportation infrastructure construction projects.

Rideshare Services

When the point2point Solutions program was created at LTD in 1994, funding was made available to install and operate a new carpool matching software program. In 2003, point2point Solutions made a significant infrastructure investment and updated the rideshare services with RidePro3 software. With an on-line application, the software provides individual and group rideshare matching services. In addition, it has the capability to produce a comprehensive regional summary of emissions and VMT reduction as a result of ridesharing. Still in its infancy, Ridepro3 now has over 300 registrants.

Vanpool Matching Services and Support

point2point Solutions provides assistance for any group of individual or employers wishing to form a vanpool. Vanpool participants are matched through the RidePro3 software with assistance and guidelines to help get the vanpool operational. Vanpools are cost effective to operate if the daily work commute is more than 20 miles and six or more individuals join the vanpool. In addition, point2point Solutions assists in the coordination of the Valley VanPool service between Salem to Eugene and all major jurisdictions in between. Currently, Valley VanPool has over 100 participants.

Regional Emergency Ride Home Program

point2point Solutions offers a regional Emergency Ride Home (ERH) program that offers free transportation in case of a family emergency or sudden illness for employees who use alternative modes of transportation for their work commute. Research has shown t hat the desire to have a vehicle at work in case of a family emergency is the main reason workers continue to drive alone. A taxi voucher is supplied to designated staff, and the voucher is signed for the employee needing the taxi ride. The taxi company then completes and signs the voucher, keeping a copy, and point2point Solutions for the taxi ride. Employers participating in an ERH program are provided with four (4) emergency taxi rides per person, per year; however, actual usage has been minimal. Instead of using a taxi, some employers either provide a vehicle for the employee or allow a coworker to take the employee to his or her destination. For the employee who is considering riding the bus, carpooling, vanpooling, biking, or walking, the ERH program provides an answer to the question of, “what if?”

School Trip Management

In 2003, point2point Solutions began an intensive school transportation management program, Smart Ways to School. The Oregon Department of Energy provided seed money to research the effectiveness of travel option programs aimed at reducing the energy consumption associated with the school commute. Currently in the research phase, the pilot Smart Ways to School program works with the region’s three largest school districts, Eugene 4J, Springfield, and Bethel. At present, participation includes *approximately 11,000 students* representing elementary, middle and high school populations. Interventions included promotion of escorted walking and cycling school groups, carpool matching service (SchoolPool), and a trial regional youth bus pass program aimed at high school students. Future direction of the program will include involvement of the region’s traffic engineering for improved school pedestrian access and the health community to promote benefits of exercise for youth.

Marketing

Marketing the services provided by the point2point Solutions program is critical to the success of the program. The region's trip attractors and generators (e.g., the U of O, PeaceHealth, Gateway area) need to be informed of the services provided by point2point Solutions and of the benefits received by participating; personally, locally, and globally. Marketing efforts include workshops, conferences, direct mail, telephone contact, news releases, newsletter articles, site visits, paid print advertising, group presentations, referrals, and public service announcements (television, radio, and print). Internal research, marketing, and incentive programs are conducted at participating work sites.

Creative Work Weeks

point2point Solutions staff assists and helps educate employers and employees on creative work schedules that can result in reduced peak-hour travel demand. Creative work schedules are an effective congestion management strategy. Elements in the program include staggered work hours, compressed work weeks, and flextime. Encouraging an employer to consider on-site day care, food services, and shopping services also is promoted by point2point Solutions program.

Teleworking

Teleworking is using telephones, computers, and other equipment to work at home, usually one to three days a week. point2point Solutions offers information and referral services to businesses and individuals inquiring about telecommuting. Business and individual tax credit information also is available.

Coordination with Transit

Group Pass Program

point2point Solutions program advertises LTD's Group Bus Pass program that offers employers with at least 10 employees a discounted bus pass program called the Group Pass Program. Group Pass Program participants sign an annual contract with LTD, and photo identification for each employee is required. Transportation education fairs and employee surveys are conducted annually at each work site to maintain visibility and encourage increased participation in alternative modes programs. The total number of local area employees with group pass benefits is approximately 41,000.

Commuter Club Program

point2point Solutions offers a transit voucher program called the Commuter Club. Businesses request transit vouchers from LTD to distribute to their employees who purchase monthly LTD bus passes. The employee pays up to 50 percent of the cost of the bus pass, and the employer is invoiced for the remaining amount. With the new federal transportation fringe benefit tax law, costs for the purchase of transit passes or vouchers (up to a maximum of $60 per employee per month) are a business expense, and the employee benefit is tax-free. LTD's monthly adult bus passes are only $35 (prices effective September 2004); therefore, an employer can purchase bus passes for employees and not reach the maximum allowable expenditure under federal law.

Bicycle Commuting Programs

Programs and assistance are available to employers on how to facilitate the needs of bicycle commuters as well as how to promote and encourage bicycling as an alternative to the solo auto commute. point2point Solutions works closely with the City of Eugene's Bicycle Coordinator and with the City of Springfield's transportation planning staff to encourage safe bicycle access and secure bicycle parking facilities. In addition, coordination with state bicycle safety groups, such as the Bicycle Transportation Alliance, with the Smart Ways to School program assists in promotion of youth bicycling.

Bicycles on Buses Program

LTD added bicycle racks to all LTD buses in June 1996. Bicycle racks on transit buses encourage bicycle use in our community by meeting the needs of bicycle riders. Increased bicycle use reduces the number of VMT in the area, is one of the cleanest and healthiest ways to get around, and is rapidly becoming a way to get to work. LTD currently transports 20, 464 bicycles monthly.

Bicycle Lockers Available

LTD has prototype bicycle lockers available at the Amazon Station. Bicycle riders need to supply their own locks. Analysis will determine additional placement of lockers at other locations. The current lockers are well used by bicyclists using transit.

Parking

Parking Management

Parking Management and Transportation Management staff from the cities of Eugene and Springfield and point2point Solutions works closely on transportation management strategies to encourage the use of alternative modes of transportation in our metropolitan area point2point Solutions works with local agencies to ensure that adequate carpool spaces are available in new and upgraded parking lots and reviews development plans for transit access, bicycle and pedestrian access, and parking needs. The City of Eugene also provides preferential carpool spaces in its parking garages.

Park & Ride Program

LTD operates more than 25 Park & Ride locations throughout the area. Park & Ride lots are conveniently located along 44 minor and major bus routes, and many locations are served by express or direct bus service, limiting the travel time to destinations. Park & Ride lots also are popular meeting places for carpools and vanpools.

TDM Implementation Process

Funding for the point2point Solutions program described above is primarily provided through two funding processes, the STIP and local MPO STP allocation with local match is provided by the jurisdictions of LTD, cities of Eugene and Springfield, Lane County, and LCOG. It is important to note that any rideshare activity does not require any local match. point2point

Solutions has STIP dollars programmed until 2013. point2point Solutions currently receives an annual allocation of $300,000 in STP dollars through the local MPO STP allocation process.

TDM Planning and Program Actions

The success of TDM efforts is dependent upon the availability and quality of alternative mode infrastructure. Thus, TDM Planning and Program Actions should be closely coordinated with the transit and bicycle/pedestrian Capital Investment Actions.

1. TDM Programs and Services

- 1.1. Require large employers (25 or more).
- 1.2. Require state and local government agencies to implement TDM programs for their employees.
- 1.3. Require employers of a certain size (25 or more) to develop TDM programs for employees.
- 1.4. Require that large special events in the community, such as the Lane County Fair, sporting events, and concerts, provide transit shuttle service.
- 1.5. Reduce required number of employees necessary for a group bus pass program to expand program.
- 1.6. Evaluate potential impact of telecommunication technology applications to minimize future travel demand on the region's infrastructure. Refine regional transportation modeling and forecasting appropriately.
- 1.7. Evaluate various transportation system pricing strategies, appropriate applications, potential revenue-enhancing capabilities, institutional and legislative changes necessary for implementation, and public support programs. Transportation pricing measures can be applied to highly congested bridges and corridors where warranted by economic feasibility and to partially support financing of future infrastructure and transportation services.
- 1.8. Establish Transportation Management Associations (TMA's) in nodal developments, along BRT corridors, and highly congested areas. TMA's are voluntary or mandatory organizations of developers and/or employers in a particular subarea or impact zone, working together to solve transportation problems. TMA's would interact with public agencies and point2point Solutions to develop viable travel option programs. point2point Solutions would promote and provide travel options strategies in that area.
- 1.9. Develop regional policies in partnership with public school districts, private educational institutions, and youth recreational programs to reduce VMT's associated with school commute or after-school activities.
- 1.10. Implement traffic calming measures on roads to encourage the use of alternative modes.
- 1.11. Implement dialog marketing (e.g., TravelSmart) throughout region's appropriate neighborhood.
- 1.12. Build ridesharing program within region and target commuters outside the MPO with vanpooling.

2. Educational and Awareness

2.1. Develop a multimodal *Share the Road* public awareness campaign to foster increased courtesy and respect among all modes. Program elements could include public service announcements and installation of *Share the Road* signs at key locations.

2.2. Implement a public awareness campaign to alert people that they must yield to buses re-entering traffic.

2.3. Provide multi-modal information at LTD stations, Amtrak, and large regional trip generators and attractors.

2.4. Reinforce public understanding of the law concerning pedestrian rights-of-way, transit yield law, and school zone speed laws.

2.5. Promote enforcement of traffic laws that prohibit unlicensed and uninsured motorists from driving to increase safety and use of alternative modes.

2.6. Promote school trip management through education and monthly pass programs. point2point Solution's Smart Ways to School program developed a pilot regional youth bus pass program with assistance from LTD. LTD has a current reduced youth bus pass rate.

2.7. Promote car sharing. Car sharing is joint access to a fleet of vehicles located close to neighborhoods and businesses. Members pay for the hours and miles they drive. This provides a strong financial incentive to use alternative modes for most trips while having access to a vehicle when needed. Portland and Seattle have car sharing programs established.

2.8. Develop a comprehensive congestion mitigation program to assist public agencies and the public to reduce congestion during large infrastructure projects.

3. Incentives

3.1. Collaborate with bicycle shops to sponsor bicycle maintenance clinics, training rides, and other events and to offer discounts on bicycling gear to employees who commute by bicycle.

3.2. Provide incentives to employers who implement TDM programs for their employees. (Based on *TransPlan* 1986, Policy AM3, Policy PK5.)

3.3. Provide incentives, such as SDC credits or reductions in minimum auto parking requirements, to developers who construct bicycle support facilities such as lockers, changing rooms, shower facilities, and sheltered parking, beyond ordinance requirements.

4. **Parking Management:** For actions related to parking management, see Chapter 3, page 96.

Transportation System Improvements Planning and Program Actions

The TSI Planning and Program Actions are presented in the following categories:

1. System-Wide
2. Roadways
3. Transit
4. Bicycles
5. Pedestrian
6. Goods Movement
7. Other Modes

TSI System-Wide

This section provides Planning and Program Actions related to the transportation system as a whole.

1. Intermodal Linkages

1.1. Evaluate the need for improved intermodal linkages.

2. System Efficiency

2.1. Improve system efficiency without major additions in infrastructure through intersection modification, roadway modification, increased preservation efforts, restructuring area-wide transit service, and priority treatment for transit vehicles. (Based on *TransPlan* 1986 Policy TSM1.)

3. Right of Way

3.1. Inventory, purchase, and improve private roads, rail rights-of-way, and easements of regional significance for public use and benefit. (Based on Oregon Transportation Plan (OTP) *Action 1B.4.*)

3.2. Obtain right-of-way or building setbacks to provide for future capacity in transportation corridors. (*TransPlan* 1986 Policy LU3.)

4. Standards

4.1. Establish standards for minimum levels of service and system design for passengers and freight for all modes. (Based on OTP *Action 1C.1.*)

5. Environmental

5.1. Regulate truck freight in sensitive environmental areas, such as Springfield's drinking water protection zones. (Springfield staff)

5.2. Retrofit existing transportation facilities to reduce environmental or social impacts (e.g., polluting runoff, noise).

6. Intelligent Transportation Systems

6.1. Research, test, and implement as appropriate Intelligent Transportation Systems technology, including: arterial traffic signal and freeway-arterial interconnection programs, high-occupancy vehicles and transit enhancements, en-route trip guidance programs, automated support for TDM programs, and traffic incident response systems.

TSI Roadways

This section provides Planning and Program Actions related to the regional roadway system.

1. Access Management

Access Management techniques can offer significant operational and safety benefits for arterial roadways. Access management has the potential to decrease accidents and to preserve mobility without large system expansions.

1.1. Develop access management plans for key transportation facilities.

1.2. Implement access management (access control) techniques, for example, driveway and public road spacing, median control, and signal spacing standards, that are consistent with the functional classification of roads and consistent with limiting development on rural lands to rural uses and densities. (Supported by *TransPlan* 1986 Policy LU1; TPR 660-12-045(2))

2. Neighborhood Traffic Calming

2.1. Develop neighborhood traffic-calming plans.

2.2. Implement traffic-calming techniques, such as restricted turn movements, traffic diverters, bulb-outs (landscaped or narrowed entrances), traffic circles or roundabouts, woonerfs, narrowed streets, truck restricted areas, and vehicle weight limitations. (Based on *TransPlan* 1986 Policy LU5.)

3. Design Considerations for all Modes

3.1. Provide sidewalks on urban streets, including arterials, collectors, and local streets, and bridges. Sidewalk separation from the curb should be provided on arterial streets and major collectors. (*TransPlan* 1986 Policy I8; TPR 660-12-045 (3)(b)(B))

3.2. Assign a higher priority to road projects that have a bicycle component.

3.3. Limit or eliminate on-street auto parking when necessary for the safe and convenient movement of bicycles.

3.4. Provide bicycle safety devices such as bicycle-proof drain grates, rubberized pads at railroad crossings, and appropriate signage in conjunction with reconstruction or new construction of the street system and in other areas as needed. (Based on *TransPlan* 1986 Policy AM4.)

3.5. Evaluate the need to improve roadway access for fire/emergency medical services and transit vehicles in low-density areas, such as the Eugene South Hills. (*South Hills Refinement Planning Committee Report*, July 1997.)

3.6. Evaluate the potential for construction of roundabouts at intersections.

TSI Transit

This section provides Planning and Program Actions related to transit service and facilities.

1. Transit Service Improvements

1.1. Provide service every ten minutes along major corridors. (*TransPlan* 1986, Policy AM1.)

1.2. Implement a shuttle that connects the downtown Eugene area with other major activity centers.

1.3. Conduct feasibility studies on expanding transit service operations to nearby communities.

1.4. Implement operating procedures and monitor design guidelines to minimize security and safety concerns at transit stops/stations and on vehicles.

1.5. Acquire low-floor buses to improve and speed access by riders.

1.6. Acquire smaller buses to serve neighborhoods on local streets and connect the neighborhood service with the corridor service at nearby land use nodes.

1.7. Establish a prepaid fare system along the BRT corridors to speed rider boarding.

2. Transit Facility Improvements

2.1. Construct transit stations in newly developed areas in the Eugene-Springfield area and in nearby communities. (Based on *Metro Plan* 1987 Transportation Policy 3.)

2.2. Implement a transit signal priority system along major transit corridors. (Based on *TransPlan* 1986 Policy TSM3, AM2.)

2.3. Support transit use through provision of bus stops, pullouts and shelters, optimum road geometrics, on-road parking restrictions, and similar facilities, as appropriate. (TPR 660-12-045(4)(a))

2.4. Implement transit-priority techniques, such as exclusive bus lanes, restricted turn movements at appropriate intersections for all vehicles except buses, queue-jumpers, and separate access ramps, along major transit corridors. (Based on *TransPlan* 1986 Policy TSM3, AM2.) Give priority to transit/carpools during the peak hour at appropriate ramps to limited access facilities. (*TransPlan* 1986 Policy TSM3, AM2.)

2.5. Provide transit facility improvements, such as shelters, benches, lighting, and transit schedule information, at major bus stops.

2.6. Provide transit schedule information at all transit shelters.

3. Park-and-Ride Facilities

3.1. Provide multiple Park-and-Ride facilities along major corridors and BRT corridors.

3.2. Establish Park-and-Ride facilities in nearby communities for commuters into the metro area. (*TransPlan* 1986, Policy IC2.)

3.3. Develop Park-and-Ride facilities that make use of existing public and private parking lots, where use by Park-and-Ride commuters complements existing parking use (e.g., churches or retail establishments with evening or weekend peak demand) (*TransPlan* 1986 Policy AM5.)

3.4. Consider establishment of a Park-and-Ride facility at Autzen Stadium with a direct link to the University/Sacred Heart/Riverfront Research Park area.

Bus Rapid Transit Implementation Process

BRT is, in essence, using a bus system to emulate the positive characteristics of a light rail system. BRT can be implemented at a fraction of the cost of light rail, and can be implemented incrementally. In addition, BRT can lay the foundation for a future light rail system. The BRT system travel times are expected to be competitive with single-occupant vehicle travel times.

The BRT concept consists of high-frequency, fast transit service along major transportation corridors, with small bus service in neighborhoods that connects with the BRT corridor service and with nearby activity centers. The following are potential elements of a BRT system:

1. Exclusive bus lanes,
2. A bus guideway system,
3. Traffic signal priority for transit,
4. Low-floor buses for faster boarding,
5. Pre-paid fares for faster boarding,
6. Greater spacing between bus stops,
7. Improved stops and stations (shelters, lighting, information, etc.), and
8. Park-and-Ride lots along BRT corridors.

It should be noted that some of these elements, such as low-floor buses, signal priority, and Park-and-Ride system expansion, while part of a BRT system, would also be part of improvements that could be made to the existing LTD system, even if BRT were not pursued.

Specific determination of which of the BRT elements are used and where they are used will require a significant amount of research and analysis. The research will include consideration of impacts on transit ridership, traffic flow, cost, the environment, and land uses. Also to be investigated are funding sources to pay for the improvements.

The BRT system would be implemented on a corridor-by-corridor basis. The first corridor was an east/west line between Springfield and Eugene along Main Street, Franklin Boulevard, and West 11th. This corridor was selected based on an analysis of several factors, including transit ridership, car and bus travel times, population, employment, and coordination with planned nodal development. The second corridor extended that line from the Springfield Transit Station to the Gateway area, serving several regional facilities including the regional hospital at RiverBend and the Gateway Mall.

The research and analysis process for determining future BRT corridors will include community involvement, with an emphasis on encouraging participation by those who work, live, or travel along the pilot corridor. There will also be extensive participation by technical staff from appropriate jurisdictions. The BRT improvements will not be implemented without the approval of both the LTD Board of Directors and the policy board with jurisdiction over the road under consideration.

TSI Bicycles

This section provides Planning and Program Actions related to the regional bicycle system and support facilities.

1. Bicycle System Improvements

1.1. Acquire land at market value, or secure dedications of land or access easements for bikeways in connection with utility rights-of-way, drainage ditches, rivers, rail lines, and other corridors. (Based on *TransPlan* 1986 Policy LU9.)

1.2. Retrofit local streets that are designated bicycle routes with bicycle-friendly traffic-calming devices such as traffic circles, curb extensions, and diverters that allow through movements for bicyclists.

1.3. Improve safety and convenience of bicycle-pedestrian crossings at major streets.

2. Bicycle System Support Facilities

2.1. Improve lighting and signage on off-street, multi-use paths and install adequate lighting and signage at street or bike path intersections or other segments of the bicycle system where significant numbers of bike-bike, bike-pedestrian, or bike-motor vehicle conflicts occur.

2.2. Provide bicycle parking facilities at all new multi-family residential developments of four or more units; new retail, office, and institutional developments; public facilities; regional activity centers; public events; and all transit transfer stations and Park-and-Ride lots. (*TransPlan* 1986 Policy PK4; TPR 660-12-045(3)(a))

2.3. Modify development regulations for new construction and major renovation projects to mandate the provision of showers and bicycle storage facilities in public buildings with at least 50 employees.

2.4. Design and place a series of *you are here* bicycle system maps at major destinations and other strategic locations along the bicycle system.

2.5. Place bicycle route signage along designated routes in the metro area.

3. Bicycle Safety

3.1. Work with the state Legislature to add a non-motorized portion to the State Motor Vehicle test that includes questions on appropriate behavior of motorized vehicles towards bicyclists and pedestrians.

3.2. Work with public school districts to educate students about improving bicycle skills, increasing the observance of traffic laws and enhancing safety. Specific techniques include bicycle safety rodeos and transportation safety assemblies designed to teach safe riding habits and rules of the road to young cyclists.

3.3. Establish and publicize a *Close Call* hot line to better identify high hazard locations and to pinpoint violations that lead to accidents.

3.4. Work with local higher education institutions (e.g., University of Oregon, Lane Community College) to provide materials and instruction on bicycle safety to incoming students.

3.5. Collaborate with LTD to develop a training session, including a video, for LTD drivers. The focus of the training would be on sharing the road with cyclists.

3.6. Produce a video to educate bicyclists that commit traffic violations. The focus of the video would be on cyclists' rights and responsibilities.

3.7. Advise local school districts on ways to include bicycle education and awareness in driver education classes and testing and advise private driver training businesses on ways to include bicycle education and awareness in courses.

3.8. Adopt maintenance procedures for the bikeway system to ensure good pavement condition; visible striping and signage marking the route; and safe lanes unobstructed by leaves, gravel, and debris.

4. Bicycle Planning

4.1. Develop a process for assessing all planned and proposed bicycle projects to better determine their scope, feasibility, and cost.

4.2. Develop a bicycle transportation forecasting model.

4.3. Establish a comprehensive data collection system to: develop and regularly update a database of bicycle safety and use data; monitor bicycle and pedestrian accidents and injuries with local jurisdictions and health care facilities; conduct annual or seasonal bicycle counts along selected bikeways; and monitor pavement condition of bike lanes and paths.

4.4. Conduct a bicycle parking study that inventories existing structures and identifies the types and desired locations of additional structures.

TSI Pedestrian

This section provides Planning and Program Actions related to the pedestrian system and support facilities. The pedestrian actions will be implemented in large part through TSP land use actions and local jurisdiction design standards that support pedestrian-oriented design. Pedestrian actions will also be implemented through construction and reconstruction of roadways and small improvement projects.

1. Pedestrian System Improvements

1.1. Establish priorities for expenditure on routine, ongoing repair, and reconstruction of existing sidewalks and construction of new sidewalks. (Based on *TransPlan* 1986 Policy I5.)

1.2. Develop a plan for prioritized construction of sidewalk segments to fill gaps in the existing system of urban area roadways. (Based on *TransPlan* 1986 Policy I5.) Develop a plan for prioritized retrofitting of all corner sidewalks with curb ramps. (Based on *TransPlan* 1986 Policy AM4.)

1.3. Install audio/tactile pedestrian signal systems in areas with large elderly and disabled populations. Provide pedestrian push buttons (with visual wait signal) at intersections. (Based on *TransPlan* 1986 Policy AM4.)

1.4. Evaluate the need for new or improved treatments of pedestrian street crossings, such as small curb radii, taking into account the type of pedestrian facility, pedestrian volume, vehicle traffic, crossing distance, sight distance, accident data, and related factors.

1.5. Identify pedestrian *use paths*, determine which ones provide needed connectivity, and ensure their continued viability (e.g., north end of Friendly Street through the Lane County Fairgrounds to 13th Avenue and Monroe).

1.6. Require that on-site pedestrian systems connect with adjoining properties and the external pedestrian system. (TPR 660-12-045(4)(b)(B))

1.7. Require developers to provide adequate internal pedestrian circulation facilities within new subdivisions, multi-family developments, planned developments, shopping centers, and commercial districts. This can be accomplished through clustering buildings, constructing paved accessways and walkways and other techniques. (Reference TPR 660-12-045 (3)(b,e))

1.8. Provide paved pedestrian walkways between new commercial and residential developments and neighborhood activity centers (e.g., schools, parks, shopping areas, transit stops, and employment centers) and adjacent residential areas and transit stops and neighborhood activity centers within one-half mile of the development. Specific measures include constructing walkways between cul-de-sacs and adjacent roads, providing walkways between buildings, and providing direct access between adjacent uses. (Based on *TransPlan* 1986 Policy LU6; TPR 660-12-045 (3)(b,c,d,e))

1.9. Provide convenient pedestrian access to transit at new retail, office, and institutional buildings at or near major transit stops. This shall be accomplished by providing walkways between building entrances and streets adjoining the site and providing pedestrian connections from the on-site circulation system to adjoining properties. (TPR 660-12-045(4)(b))

1.10. Retrofit existing streets to be safer and friendlier for pedestrians (e.g., curb extensions, center refuge medians).

2. Pedestrian System Support Facilities

2.1. Require landscaped areas (planting strips) along sidewalks.

2.2. Require street furniture, such as benches.

2.3. Require lighting.

TSI Goods Movement

This section provides Planning and Program Actions related to goods movement. The Goods Movement and Intermodal Facilities Map in Appendix A shows the locations of bus and passenger rail service terminals, public use airports, mainline and branchline railroads and railroad facilities, and major regional pipelines and terminals. There are no port facilities in the Eugene-Springfield metropolitan area.

ODOT has the responsibility for developing the intermodal management system in the Eugene-Springfield area as part of the SAFETEA-LU planning guidelines. ODOT is focusing its efforts on the links between various modes of freight transportation. Examples of intermodal links are roadways between freight intermodal facilities and the National Highway System facilities. The metropolitan planning process should continue to support ODOT's planning and implementation actions.

1. Goods Movement Planning

1.1. Establish a freight task force (or freight planning committee) with members drawn from the freight-transport industry, local businesses, and other interested parties. Members should include senior public and private sector officials with decision-making authority.

1.2. Conduct a regional freight study to develop a thorough understanding of regional goods movement issues, needed data, travel patterns, and existing and future needs. The logistics requirements of major regional companies should be analyzed to identify the types of transportation on which they are most dependent, and to assess both deficiencies and opportunities. Freight mobility performance measures that are attentive to daily system reliability and the logistics needs of manufacturers and businesses should be developed.

1.3. Develop a database on freight movement and enhance the region's freight-travel modeling capability.

1.4. Study the feasibility of establishing a port authority to coordinate rail/truck intermodal goods movement.

1.5. Support actions that encourage goods movement by rail.

1.6. Encourage public and private partnerships to improve freight mobility.

2. Goods Movement System Improvements

2.1. Correct existing safety deficiencies on the freight network related to: roadway geometry and traffic controls; at-grade railroad crossings; truck traffic in neighborhoods; congestion on interchanges and hill climbs; and hazardous materials movement.

2.2. Identify priority freight projects. Review CIPs, including TIP, to ensure that the priority projects are included. Coordinate the scheduling of projects in the TIP and various capital budgets with related private projects.

TSI Other Modes

This section provides Planning and Program Actions related to other modes, including air, rail, and inter-city bus service.

1. Airport

1.1. Develop plans to ensure that future air transportation capacity needs are met.

2. Rail System Improvements

2.1. Purchase the Amtrak station site in downtown Eugene to preserve as the future high speed rail terminal.

2.2. Plan for future high-speed rail train servicing facilities.

3. Inter-City Bus Service

3.1. Support private sector efforts to improve inter-city bus terminals and service.

Part Six: Parking Management Plan

This plan discusses Capital Investment Actions and presents Planning and Program Actions related to parking management that meet the parking requirements of the TPR, while maintaining a parking supply that supports the economic health of the community. Parking management needs to be looked at regionally, while providing jurisdictional flexibility.

Parking management strategies are an important part of an integrated set of implementation actions that support nodal development, system improvements, and demand management. A vast supply of free and subsidized parking can encourage automobile use over transit use. A limited, rather than abundant supply of parking can encourage use of non-auto modes, especially transit. There is also a direct relationship between the price of parking and the use of public transit.

Parking management strategies address both the supply and demand for vehicle parking. They contribute to balancing travel demand with the region among the various modes of transportation available. Parking management strategies are effective in increasing the use of alternative modes, especially when combined with other TDM strategies. Supportive TDM programs include carpool/vanpool programs, preferential parking and reserved spaces for carpooling, and parking pricing.

TPR Requirements for Parking Space Reduction

The TPR requires a parking plan that achieves a 10 percent reduction in the number of parking spaces per capita in the metropolitan area over the 20-year planning period. For the Eugene-Springfield region, the TPR reduction goal is .514. If the level of parking density (spaces per developed acre) remains constant and land development and population forecasts are accurate, then the level of parking spaces per capita will be reduced by more than the 10 percent reduction required by the TPR.

Table 7
Estimated Parking Supply 1995 to 2015

	1995		2015		2015 TPR Goal	
Zone/Plan Designation	**Total Spaces**	**Spaces Per Capita**	**Total Spaces**	**Spaces Per Capita**	**Total Spaces**	**Spaces Per Capita**
Commercial	51,259	.229	57,865	.194	61,618	.207
Industrial	27,622	.124	30,200	.101	33,205	.111
Institutional	48,692	.218	49,067	.165	58,534	.196
Total	**127,573**	**.571**	**137,132**	**.460**	**153,357**	**.514**

Capital Investment Actions

Capital Investment Actions that support non-auto modes have an indirect impact on parking needs by lowering the demand for spaces in higher density areas. For example, Park-and-Ride facilities can contribute to lowering the demand for parking in downtown areas. Transit Capital Investment Actions call for the establishment of Park-and-Ride facilities throughout the Eugene-Springfield area.

Planning and Program Actions

RTP policy supports increased use of motor vehicle parking management strategies in selected areas throughout the Eugene-Springfield metropolitan area.

TDM Policy #2: Parking Management

Increase the use of motor vehicle parking management strategies in selected areas throughout the Eugene-Springfield metropolitan area.

The City of Eugene established policy that made specific recommendations regarding parking reduction with the Eugene city limits through the adoption of the CATS and the Transportation rule Implementation Project (TRIP). CATS recommended a range of parking policies and TRIP refined and implemented several of these strategies.

1. Supply Strategies

1.1. Establish maximum allotments for parking. (TPR 660-12-045(5)(c))

1.2. Increase the use of Park-and-Ride lots to reduce parking demand in the city centers and other intensely developed areas.

1.3. Allow parking exemptions.

1.4. Lower or eliminate minimum parking requirements. (*TransPlan* 1986 Policy PK3; TPR 660-12-045(5)(c))

1.5. Encourage construction of parking structures rather than surface parking.

1.6. Expand the number of carpool/vanpool parking spaces in City-owned lots and provide financial incentives to use those spaces.

2. Demand Strategies

2.1. Provide incentives, such as employer payroll tax reductions and automobile parking requirement reductions, to employers who implement preferential parking for carpools and vanpools in new developments with designated employee parking areas.

2.2. Shift free parking areas to paid parking where appropriate.

2.3. Encourage employers to charge fair market prices for employee parking. (*TransPlan* 1986 Policy PK6.)

2.4. Provide preferential parking for carpools and vanpools in new developments with designated employee parking areas. (TPR 660-12-045(4)(d))

2.5. Manage overflow parking impacts in residential areas through residential parking permit programs. (Based on *TransPlan* 1986 Policy PK7.)

2.6. Encourage adherence to parking regulations by expanding enforcement programs and increasing parking fines. (*TransPlan* 1986 Policy PK9.)

2.7. Establish shorter time limits on parking in high demand areas, such as on-street parking near employment centers. (*TransPlan* 1986 Policy PK8.)

Part Seven: Intelligent Transportation System Operations and Implementation Plan

In early 2003, ODOT commissioned the development of the *Regional Intelligent Transportation System (ITS) Operations & Implementation Plan for the Eugene-Springfield Metropolitan Area*. The final plan was presented to MPC in November 2003 and represents a collective effort by the Oregon Department of Transportation (ODOT), Lane County, the City of Eugene, the City of Springfield, the Lane Council of Governments (LCOG), and the Lane Transit District (LTD). This plan outlines the deployment of ITS projects, which include advanced technologies and management techniques, to improve the safety and efficiency of the transportation system over the long term. It is also consistent with similar efforts in other regions and statewide to ensure the ITS strategies utilized are integrated and complementary. The Executive Summary of the Final Report is provided in Appendix G.

Overview of Intelligent Transportation Systems

Intelligent Transportation Systems (ITS) involve the application of advanced technologies and proven management techniques to solve transportation problems, enhance safety, provide services to travelers, and assist transportation system operators in implementing suitable traffic management strategies. ITS focuses on increasing the efficiency of existing transportation infrastructure, which enhances the overall system performance and reduces the need to add capacity (e.g., travel lanes). Efficiency is achieved by providing services and information to travelers so they can (and will) make better travel decisions and to transportation system operators so they can better manage the system.

ITS applications provide a viable opportunity for improving the safety and efficiency of the surface transportation system in the Eugene-Springfield metropolitan area. These applications help improve transportation system operations by performing a function more quickly or reliably or by providing a service that was not previously available. In effect, ITS improves the mobility of people and goods on the existing roadways and also provides the potential for substantial savings on future construction, particularly of highways. It is often easy to overlook the importance of investing in operations, but it is necessary to ensure that the traveling public makes safe and efficient use of existing roadways.

ITS Projects

The ITS Operations and Implementation Plan identified several potential ITS projects. Table 5 in Appendix G summarizes the details for each of the proposed ITS projects. Figure 1 in Appendix G provides the location of proposed projects. These projects would be implemented primarily as part of existing projects or as funding becomes available.

The following information is provided for each project:

- Project Number (for reference)
- Project Title
- Project Description

- Priority (High, Medium, or Low)
- Relativity to Planned Projects
- Project Dependencies
- Capital Costs/O&M Costs
- Expected Benefits
- Technical and Institutional Feasibility

The project numbers are used for reference purposes only and do not indicate any type of priority. Within this table, the projects are described under one of the following six applicable categories:

- Travel & Traffic Management (TM)
- Communications (CO)
- Public Transportation Management (PTM)
- Emergency Management (EM)
- Information Management (IM)
- Maintenance & Construction Management (MC)

ITS Planning and Program Actions

To successfully implement the proposed ITS plan, the following steps are necessary:

ITS Program Continuation

The continuation of the ITS steering committee is possibly the most important item for the successful implementation of the ITS plan. This group should include the key stakeholders from the planning process and should be organized as a new subcommittee to the Transportation Planning Committee (TPC). This group will initiate the steps outlined in this plan, plan projects that fit agencies' needs, pursue Federal funding opportunities, and monitor/report progress and effectiveness. In addition, a representative from this ITS subcommittee should report current status of the plan implementation at least annually at the Metropolitan Policy Committee (MPC).

Deploy "Early Winner" Projects

Another key to the success of ITS in Eugene-Springfield will depend on the deployment of "early winner" projects. A potential "early winner" project includes the deployment of field devices (closed circuit television cameras, count stations, variable message signs, and ramp meters) on Beltline Highway to support regional freeway management and traveler information. This project would also support the current Statewide implementation of the 511 traveler information telephone number by providing real-time information from these field devices.

Incorporate the ITS Plan in the RTP Update Process

The ITS Steering Committee plans to incorporate this ITS Plan in the upcoming Regional Transportation Plan (RTP) update process. The ITS devices and communications infrastructure identified in this plan should be installed on corridors concurrently with traditional transportation construction and maintenance projects. This approach will minimize reconstruction, save time and money, and result in the modernization of the regional transportation system. Where applicable, relationships to currently planned regional projects have been identified in Table 5. In addition, the data collection, analysis, operational techniques and information sharing developed through the projects in this plan can become key elements of other regional efforts.

Do Not Overlook Future Needs if They Fit With Current Opportunities

The region should pursue a flexible approach to implementing the plan. Opportunities may become present in early years to implement elements of the plan identified for later deployment. These opportunities may be possible due to other funding sources, coordination with roadway construction, coordination with local agency/private initiatives and/or transit priorities. These opportunities should be seized when appropriate.

Define a Revenue Stream

The Central Lane MPO Area will need to define a revenue stream for construction, operations and maintenance. The ITS Operations and Implementation Plan provides the basis for the funding and identifies opportunities for regional coordination and cost-sharing. The region must dedicate funding sources to implement each increment of the 20-year plan. In addition to the traditional funding sources, other non-traditional sources for funding such as grants from non-profit agencies should be considered. The Central Lane MPO Area will need an on-going commitment to operations and maintenance of the equipment and software to maximize the benefits of the ITS program. The ITS elements proposed within this program require consistent staffing for effective system operation, as well as requiring trained staff to do routine maintenance.

CENTRAL LANE

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Moving Transportation into the Future

CHAPTER FOUR

PLAN PERFORMANCE AND IMPLEMENTATION MONITORING

Chapter 4: Plan Performance and Implementation Monitoring

Table of Contents

Introduction

This chapter describes how the RTP is projected to perform and sets forth a monitoring program to assess how the plan performs over time. The monitoring program ties plan goals, objectives, and policies presented in Chapter Two to the implementation of actions presented in Chapter Three. The program also aids in tracking the plan's performance in meeting federal and state requirements.

Findings that result from analysis of these performance measures will allow for informed decisions to be made as to how best implement the plan. For example, priorities or emphasis for implementation actions may be adjusted, policies may be amended and additional policies or implementation actions may be recommended due to performance measure outcomes. Findings may also influence budgeting and the type and phasing of capital projects included in the region's TIP.

At the time of this 2035 RTP update, the Coburg, Eugene, and Springfield Transportation System Plans (TSPs), and the Regional Transportation System Plan (RTSP) are all in the midst of updates. The local and regional TSPs are considering updates to their performance measures to address state requirements, as needed. At this time, federal and state requirements do not require the Regional Transportation Plan to include performance measures. In order to factilitate the local TSPs updates of their performance measures in accordance with state requirements, and the regional TSP then arriving at updated performance measures as needed, the 2035 federal RTP will maintain only a minimum set of performance measures. Following the completion of the updates to the local and regional TSPs, the 2039 RTP update scheduled for adoption in 2015 will then consider adoption of a new set of regional performance measures.

The remainder of this chapter provides a context for the performance assessment, a presentation of the performance of the plan, and an overview of the proposed program for monitoring the impacts of plan implementation.

Part One: Context for Assessment of Plan Performance

Regional transportation planning has been carried out in the Eugene-Springfield area since the mid 1960s beginning with the Eugene-Springfield Area Transportation Study (ESATS) in 1967. T-2000 in 1978 and *TransPlan* in 1986 followed ESATS. Between the time ESATS was completed and the current update of the RTP, there has been an evolution in what is expected from a region's transportation system and commensurately with the decision making for and content of the region's transportation plan. This evolution has included the following shifts:

From: Emphasis on methods and data in support of programming transportation system improvements.
To: Improved information on a wide-ranging set of impacts for a wide variety of capital, operational, pricing, lifestyle, and land-use strategies.

From: A focus on the efficiency of highway networks and corresponding levels of service (speed and travel time).
To: Multimodal systems operation and broad performance measurement.

From: A focus on how to get from point A to point B.
To: A broader context of transportation's role in a community and in the global, national, state, and local economic market.

From: Acceptance of land use patterns as a given and not part of the solutions set.
To: Use of land use strategies in connection with corresponding transportation policies as a major strategy.

From: A focus on transportation system user benefits and costs.
To: Broader concern for the equitable distribution of benefits and costs within the community.

These changes have led to consideration of a more complex set of relationships, which makes it important to consider a wide range of performance measures. The monitoring program provides for assessment of multiple performance measures to address the comprehensive, sometimes conflicting goals, objectives, and policies and to facilitate a broad discussion of issues among diverse users.

Performance measures are the primary tools for quantitatively assessing the impacts and achievements of plan implementation and are key criteria by which progress towards the plan goals can be assessed. The performance measures provide a framework within which data that are generated and collected can be presented in a meaningful way.

The performance measures are results-oriented, meaning they are focused on assessing the outcomes or effectiveness of transportation investments and other implementation actions. Results from the ongoing plan performance and implementation monitoring program will be compiled and presented to decision-makers as the plan is implemented.

Part Two: Projected Plan Performance

The main focus of reviewing the performance of the plan is to assess how the proposed investments and actions are either:

1) Improving existing conditions, or
2) Avoiding undesirable conditions that would be present without the planned investments and actions.

Table 8 shows data for existing conditions and projections for two future scenarios:

- **Existing Conditions 2010** shows system performance as of 2010.
- The future scenario, **2035 Financially Constrained *RTP*,** shows projected draft RTP performance for the year 2035 under conditions of financial constraint. This scenario assumes implementation of land use and TDM strategies. Transit, bicycle, and roadway capital actions are limited to financial resources expected to be available to the region as discussed in Chapter 3. Capital actions identified as illustrative in Chapter 3 are not included in this scenario.

For the 2035 Financially Constrained RTP scenario presented in Table 8, the amount for each performance measure is listed along with the percentage change in that performance measure from 2010 conditions.

In general, implementation of the 2035 Financially Constrained RTP is projected to serve the region's future travel needs for people and goods, while turning the transportation system and the service it provides in a more desirable direction. The proposed plan reflects a set of tradeoffs among the communities' goals and objectives. A comprehensive set of transportation system performance measures provides the framework for a meaningful discussion of those tradeoffs.

It should be noted that the performance measures generated for the RTP should not be compared to the measures presented in the 2001 TransPlan. The larger geographic area considered in the RTP has different travel behavior than the Eugene-Springfield area by itself. In particular, trip lengths in outlying areas are significantly higher, contributing to more VMT.

Nor should the performance measures in this RTP be compared directly with those in previous RTPs. Changes in modeling methodologies, geography, data quality, and other factors make any such direct comparison problematic at best. The Performance Measures shown in Table 8 allow only for the direct comparison of the measured 2010 figures and the modeled and projected 2035 figures.

Table 8
RTP 2010-2035 PERFORMANCE MEASURES

All statistics are pertinent to the Central Lane MPO Study area: the area defined by the Transportation Analysis Zones: an area including Eugene/Springfield/Coburg UGBs and a small area of surrounding County jurisdiction.

Category	Key	Description	2010	2035	% chg from 2010
Demographics		Population[1]	253,357	316,425	24.9%
		Employment[2]	116,561	163,290	40.1%
Congestion	PM1	Congested Miles of Travel (% total VMT)	4.3%	12.0%	182.3%
	PM2	Roadway Congestion Index	0.92	1.07	16.7%
	PM3	Network Vehicle Hours of Delay (daily)	15,459	28,573	84.8%
	PM4	%Peak Hour Transit Mode Share on Congested Corridors	8.1%	8.5%	4.7%
Vehicle Miles Traveled[4]	PM5a	Internal VMT (No commercial vehicles)	2,971,074	3,698,977	24.5%
and Trip Length	PM5b	Internal VMT/capita	11.73	11.69	-0.3%
-- within the MPO		Eug/Spr Home-Based VMT/Capita only	8.11	8.18	0.9%
		Coburg Home-Based VMT/Capita only	11.38	11.19	-1.7%
	PM6	Average Trip Length (miles)	3.45	3.45	0.1%
	PM7	% Person Trips under 1 mile	17.4%	18.6%	6.8%
Mode Shares - All Trips	PM8a	Walk	8.5%	8.8%	3.6%
(all trips **originating** within	PM8b	Bike	3.6%	3.6%	0.0%
the MPO area)	PM8c	Transit	2.7%	3.1%	14.4%
	PM8d	Shared Ride (2 or more)	41.3%	40.8%	-1.2%
	PM8e	Drive Alone	43.9%	43.6%	-0.5%
	PM8f	% Non-Auto trips	14.9%	15.6%	4.7%
	PM8g	Person Trips per Auto Trip	1.64	1.65	0.5%

[1] Source: 2035 Coordinated Population, Lane Co.; Census 2010

[2] This is covered employment: number of w orkers that have unemployment insurance

[3] RTP, November 2007. *NOTE: signficant changes have been made to the travel model since the 2007 RTP; as always,the most valid comparisons are those made between different forecasts using the same model.*

[4] No VMT reduction w as asserted for in mixed use centers in the 2035 forecast.

The data presented in this chapter stem from extensive computer modeling analyses of different combinations of land use, Transportation Demand Management, and Transportation System Improvements programs and capital investments. The analysis draws on recent surveys of transportation patterns and behavior in the Eugene-Springfield region. Readers should interpret the data as indicating the magnitude and general direction of change, and should not attach great significance to the apparent precision of the figures.

Traffic Congestion Measures

PM 1: Congested Miles of Travel

This measure represents congested miles of travel as a percentage of total vehicle miles traveled. High levels of congested miles of travel can indicate that the system is not operating efficiently. The evaluation of future plan alternatives shows that, regardless of the strategies employed, congestion will increase significantly over existing conditions. One objective of the planning effort is to minimize the increase in congested miles of travel. Under the 2035 Financially Constrained RTP, congested miles of travel is 12 percent of total miles traveled, an increase of 182 percent over 2010 conditions.

PM 2: Roadway Congestion Index

The Roadway Congestion Index (RCI) is a measure of congestion on the region's freeways and arterials. This measure is based on a method developed to estimate relative regional congestion for urbanized areas in the U.S. It is a measure of the regional system of freeways and arterials that does not account for specific bottlenecks. An index value greater than 1 indicates generally congested conditions area-wide. A value less than 1 means that, while congestion may occur during certain periods on specific facilities, on average, the freeways and arterials are relatively uncongested. The objective is to avoid area-wide congestion represented by values of 1 or greater. A lower index value relative to the trend indicates that the plan will have a positive impact on managing congestion. The 2035 Financially Constrained RTP RCI of 1.07 is more than 1 and thus indicates congestion will occur area-wide.

PM 3: Daily Vehicle Hours of Delay

Daily vehicle hours of delay provides another measure of the level of congestion. Very similar to congested miles of travel, it is expected to increase significantly in the future. Daily Vehicle Hours of Delay is expected to increase by 85 percent over 2010 conditions.

PM 4: % Transit Mode share on Congested Corridors

The % Transit Mode Share on Congested corridors is the ratio of transit person trips to total person trips on congested facilities during the PM peak hour. An increase in this measure is a direct indication of reduced reliance on the automobile. Transit mode share on the congested corridors is expected to increase by 4.7 percent over the 2010 base.

Vehicle Miles Traveled and Trip Length Measures

PM 5: Daily Vehicle Miles of Travel (VMT) Per Capita

PM 5a is a measure of the total daily VMT by trips made within the metropolitan area by area residents (internal trips) and PM 5b presents VMT divided by the region's population. Under the 2035 Financially Constrained RTP, VMT per capita decreases slightly.

PM 6 and PM 7: Average Trip Length and Percentage of Person Trips Under 1 Mile

Shorter trip distance is one factor that contributes to making the use of alternative modes more attractive. As presented in Table 8, trip length reflects the average distance for trips taken within the region by all modes and does not include trips made through the region. The objective is to reduce average trip length. Percentage of person trips under 1 mile provides a measure of the plan's specific impact on short trips. The objective here is to increase the percentage of trips under 1 mile.

Average trip length is projected to remain essentially unchanged under the 2035 Financially Constrained RTP.

The percentage of trips under 1 mile is expected to increase to 18.6 percent. This reflects the impact of the plan's proposed nodal development strategy.

Mode Choice Measures

PM 8: Mode Shares (All Trips)

This measure shows the relative share of the region's trips taken by each mode of transportation. The objective is to reduce drive-alone auto trips while increasing the number of trips taken by other modes. Measures PM 8a through PM 8e indicate the relative percentage share for walk, bike, bus, shared-ride auto, and drive-alone auto trips. The most significant changes are the 14.4 percent increase in transit mode share and the 3.6 percent increase in walk trips. As shown in PM 8f, there is a 4.7 percent overall increase in the use of alternative modes under the 2035 Financially Constrained RTP.

PM 8f is the sum of all non-auto (walk, bike, and bus) trips. Model analysis indicates that non-auto mode shares increase by about 4.7 percent under the 2035 Financially Constrained RTP. PM 8g provides an aggregate estimate of the region's reliance on the auto. Total person trips taken in the region are divided by the total number of auto trips. The objective is to increase the overall number of person trips taken relative to total auto trips. Model results suggest that person trips per auto trip will increase slightly by 2035.

Summary Assessment

This section provides an overall assessment of the plan's performance.

Over the past 25 years, growth in the Eugene/Springfield urban growth boundary (UGB) has been fairly compact. This is in part due to the limitations put on partitioning of parcels outside of city limits and allowing development to occur only with the extension of public facilities. Thus, infill and redevelopment have been taking place over time and, as a result, a large portion of future development will occur within the UGB on the edges of existing development. As demonstrated above, growth on the edges leads to longer overall trip lengths, which in turn makes non-auto modes less attractive. This makes it difficult to achieve VMT reductions within the planning period.

Investments in non-auto modes (particularly BRT) and implementation of nodal development strategies lead to improved choices available for travel and contribute to increased levels of non-auto mode share of all trips over existing conditions (increase from 14.9 percent to 15.6 percent). Increases in the percentage of roadway miles with sidewalks and a significant increase in the number of bikeway miles are also planned by 2035. As noted above, investments in alternative modes increase their convenience and practicality. This improves the transportation choices available to the region's residents.

Financial constraint limits the resources available to make improvements to the roadway system. This is the primary explanation for the increase in the region's congestion levels. Limited expansion of the roadway system is also a contributing factor to the reductions in the drive alone mode share. The increases in the region's congestion levels have the general effect of making the auto mode less attractive. However, congestion, in and of itself, is not a major determinant in shifts to alternative modes. Congestion increases in much higher proportion than the shifts to alternative modes. The primary factor contributing to the increase in use of alternative modes are the investments made directly in each alternative mode.

Continued development of the region's TDM program provides incentives that also make use of alternative modes more attractive. TDM also provides a low-cost means of helping to address transportation demand in specific areas surrounding congested facilities.

Overall, the performance measures presented in this chapter clearly point to a reduced reliance on the automobile. A longer timeframe than the planning period is required to accomplish the full benefits of several aspects of the proposed plan. Nodal development may take 30 to 40 years before its full benefits are realized in the region. BRT will be implemented incrementally over the planning period and will require additional time for its full benefits to be realized. It is important to pursue the balanced set of strategies in the proposed plan to set the stage for future benefits.

Part Three: Congestion Management Process

Federal regulations require urbanized areas with over 200,000 populations to develop and maintain a Congestion Management Process. A Congestion Management Process, or CMP, is a systematic approach to considering congestion in the long-term planning for a regional transportation system.

The Central Lane MPO's full Congestion Management Process is documented in Appendix G. The following provides context and background for the CMP.

A CMP provides a structure and a process for:

- evaluating the performance of the region's transportation system,
- implementing a wide range of strategies to address congestion, and
- monitoring results over time to improve long-term performance.

A Congestion Management System (CMS) Baseline Report was developed in September 2004 and represents the region's initial product within the overall CMP. The purpose of a Congestion Management Process is to provide a framework for addressing congestion on the regional transportation system. While in some cases congestion may be eliminated or significantly reduced, a more realistic goal is to improve the way we *manage* congestion, now and in the future. A CMP is meant to aid in better understanding where the worst congestion is located and what the best mix of strategies is likely to be for each situation.

The 2004 Baseline CMS report is structured around three main concepts:

- <u>Build on existing plans and capabilities:</u> the CMS makes use of the adopted Regional Transportation Plan, the regional traffic forecasting model, and existing performance measures to define the level of congestion on the system and evaluate alternative congestion management strategies.
- <u>Focus on major corridors, and a range of strategies:</u> the CMS identifies major congested corridors and a preliminary set of strategies for each congested corridor. The strategies include both short range and longer term actions, and a wide array of options including operations, TDM, access management, land use measures, and adding new capacity.
- <u>Improve the techniques for obtaining and analyzing information:</u> the CMS incorporates a process for monitoring and evaluating transportation system performance on a more systematic basis. Future efforts will need to focus on improved data collection and analysis, better modeling tools, and ongoing coordination among individual agencies that operate different pieces of the overall system.

The CMS collects and organizes various pieces of the RTP that are related to congestion—in effect, providing a view of the RTP through a "congestion filter" to better define the different components and their connections with one another.

Congestion Management Corridors

Using the most up-to-date inputs for land use allocation and network assumptions, the model was used to simulate traffic flow on the major roadway network and compare each roadway section with the level of service or volume-to-capacity measures discussed earlier. Based on a review of this information, nine roadways have been identified as congestion management corridors for the initial CMS:

1. Interstate 5, from OR 58 interchange at Goshen to north boundary of the TMA at Coburg
2. OR 126/I-105, from Garfield Street in Eugene to Main Street/McKenzie Highway in Springfield
    a. 6th-7th couplet from Garfield to Jefferson
    b. Washington-Jefferson Bridge (I-105) from 7th to Delta Highway
    c. I-105 from Delta Highway to Interstate 5
    d. Eugene-Springfield Highway from I-5 to Main Street/McKenzie Highway
3. Beltline Highway, from Highway 99 to Interstate 5
4. Main Street/McKenzie Highway, from Mill Street (downtown Springfield) to 70th Street
5. Broadway/Franklin Boulevard, from Mill St. (Eugene) to Springfield Bridge
    a. Broadway from Mill St. to Alder St.
    b. Franklin Blvd. from Alder St. to I-5
    c. Franklin Blvd. from I-5 to Springfield Bridge
6. West 11th Avenue, from Terry Street to Chambers Street
7. Ferry Street Bridge/Coburg Road, from Broadway to Crescent Avenue
8. Southeast Eugene corridor (Hilyard-Patterson-Am. Pkwy-Willamette) from 13th to 33rd Ave.
9. 18th Avenue, from Bertelsen Road to Agate Street

While the MPO is still in the process of developing a complete Congestion Management Process, this update of the RTP shows updated current and projected area-wide congestion performance measures in Table 10. (The initial model output for the corridors shown in Table 9, *Corridor Descriptions and Estimated 2004 and Forecasted 2031 Daily Traffic*, has not yet been updated for this 2031 RTP.)

Table 9 is a shorter version of a more comprehensive set of model output in the full 2004 CMS report. The primary indicator of congestion is the *Weighted PM Peak Average V/C Ratio* for each corridor or segment of a corridor, shown for both the base year of 2002 and the horizon year of 2021. (The volume- to-capacity ratio for the corridor is calculated by weighting the different sections within the corridor by vehicle-miles of travel.) Along with this overall V/C figure for each corridor, the *Maximum PM Peak V/C Ratio* is also important. In some cases the maximum congestion level occurs at only one or two intersections along the corridor, while in other cases the model shows very high congestion over a long section of corridor—for example, Beltline from Delta to River Road.

The full 2004 CMS report discusses a set of strategies for addressing congestion within each corridor, including land use strategies; transportation demand management (TDM); intelligent transportation system (ITS) techniques and operational tools; roadway projects to add capacity; transit strategies; and bicycle/pedestrian strategies. For each corridor, the list includes projects and actions from the adopted *TransPlan* as well as additional work being done in ongoing efforts, such as the ITS plan for the area.

Congestion on the Major Roadway Network

In addition to specific corridors, the CMS also serves the purpose of monitoring congestion on the overall network of major roadways. For the 2031 RTP update, the regional travel model was run to produce updated values for four of the Key Performance Measures: congested miles of travel, roadway congestion index, network vehicle hours of delay, and percent transit mode share on congested corridors. Table 10, *Area-Wide Performance Measures*, shows the model output for each of these four measures, for the base year at the time of 2004 and the RTP plan horizon year at the time of 2031.

PM 1: Congested Miles of Travel (per cent of total VMT) — The model forecasted a five-fold increase in congested miles of travel on the major roadway network, assuming construction of the financially-constrained roadway projects in the RTP. The 2031 forecast of 21.3 percent of daily VMT as congested is still relatively small, but represents major congestion at a number of key locations on the roadway system.

PM 2: Roadway Congestion Index (RCI) — The model forecasted an increase in the RCI from 0.92 in the 2004 base year to 1.26 in 2031. This measure defines any value over 1.0 as "congested." The RCI is useful for comparing relative congestion over time, as well as providing a quick comparison of our TMA's congestion level with that of other urban areas.

PM 3: Network Vehicle Hours of Delay (VHD) — On a daily basis, the model forecasted the hours of delay due to congestion in 2031 will be about two and a half to three times the 2004 level.

PM 4: Percent Transit Mode Share on Congested Corridors — Unlike the other three measures, higher values for this measure are desirable. The overall share of travel by transit on the congested corridors is forecasted to increase from 7.1 percent to 8.6 percent over the 24-year period. Some corridors will experience significantly more of an increase in transit ridership, based on planned implementation of BRT service.

The values in Table 10 can be viewed as a set of baseline measures of congestion on the overall roadway network in the Central Lane TMA. Over time, as the CMP corridor strategies are applied and better modeling tools are developed, one of the ongoing purposes of the CMP will be to provide a central framework for monitoring congestion on the region's major roadways. This should help technical staff, policy makers and the general public gain a better understanding of where and how congestion is occurring and how best to manage it, throughout the Central Lane TMA.

Table 9

Corridor Descriptions and Estimated* 2002 and Forecasted 2021 Daily Traffic

Corridor	S/W Limit	N/E Limit	Approximate Length (mi)	Direction	2002 Weighted PM Peak Avg V/C Ratio	2002 Maximum PM Peak V/C Ratio (Peak Dir)	2021 Weighted PM Peak Avg v/c Ratio
Interstate 5	Highway 58 Interchange	North Boundary of TMA	13.1	Northbound Southbound	0.71 0.71	0.98	0.92 0.90
Oregon Hwy 126 Corridor							
6th - 7th Couplet	Garfield Street	Jefferson Street	1.1	Eastbound Westbound	0.76 0.72	0.92	0.87 0.95
Washington-Jefferson Bridge	7th Ave	Delta Highway	1.0	Northbound Southbound	0.91 0.75	1.09	1.04 0.94
Interstate 105	Delta Highway	Interstate 5 Interchange	2.6	Eastbound Westbound	0.82 0.60	1.22	0.90 0.76
Eugene-Springfield Highway	Interstate 5 Interchange	Main Street / 58th	6.4	Eastbound Westbound	0.73 0.49	0.88	0.92 0.66
Beltline Highway	Highway 99 Interchange	Interstate 5 Interchange	6.3	Northbound Southbound	0.82 0.80	1.16	0.93 0.96
McKenzie Highway (Main/SA St)	Mill Street (Springfield)	70th Street	6.1	Eastbound Westbound	0.65 0.48	0.94	0.91 0.67
Broadway / Franklin Corridor							
Broadway	Mill Street (Eugene)	Alder Street	0.3	Eastbound Westbound	0.66 0.64	0.78	0.79 0.87
Franklin Boulevard (Eugene)	Alder Street	Interstate 5 Interchange	1.3	Eastbound Westbound	0.62 0.42	0.71	0.79 0.65
Franklin Boulevard (Glenwood)	Interstate 5 Interchange	Springfield Bridges	1.6	Eastbound Westbound	0.59 0.33	0.81	0.80 0.49
West 11th Avenue	Terry Street	Chambers Street	3.4	Eastbound Westbound	0.72 0.72	1.00	0.72 0.71
Ferry St Bridge / Coburg Rd	Broadway	Crescent Avenue	3.3	Northbound Southbound	0.88 0.76	1.3+	1.01 0.90
Southeast Eugene Corridor							
Willamette / Oak	33rd Ave	13th Street	1.7	Northbound Southbound	0.62 0.74	1.02	0.65 0.80
Pearl / High / Amazon	33rd Ave	14th Street	1.7	Northbound Southbound	0.38 0.61	0.93	0.44 0.71
Patterson / Hilyard	33rd Ave	15th Street	1.7	Northbound Southbound	0.51 0.71	0.77	0.57 0.85
18th Avenue	Bertelsen Road	Agate Street	4.6	Eastbound Westbound	0.67 0.72	1.01	0.72 0.80

*Based on Adjusted EMME/2 Model Results

Table 10

Area-Wide Performance Measures

	2004	2031
PM 1: Congested Miles of Travel (Percent of Weekday VMT)	**4.1%**	**21.3%**
PM 2: Roadway Congestion Index (RCI)	**0.92**	**1.26**
PM 3: Network Vehicle Hours of Delay (VHD)	**14,140**	**40,460**
PM 4: Peak Hour Transit Mode Shares on Congested Corridors	**7.1%**	**8.6%**
McKenzie Hwy	6.9%	9.2%
Broadway / Franklin	9.4%	16.7%
W. 11th Ave	4.1%	4.9%
Ferry St Bridge / Coburg Rd	9.3%	8.7%
Southeast Eugene	7.5%	9.0%
18th Ave	5.1%	5.5%

Table 2 Notes:
PM1: % of Weekday VMT at v/c = .87 or greater
PM2: Calculated on Freeways and Principal Arterials, per TTI Urban Mobility Study methodology
PM3: Vehicle Hours difference between congested speed and posted speed
PM4: EMME/2 Model Estimates: Percent Transit Person-Miles-Traveled (PMT) of total PMT in corridor segments where transit service is available

Part Four: Plan Implementation Monitoring

Plan implementation monitoring is an ongoing program of data collection and analyses for providing feedback to policy makers and the public on the progress of the policies and actions in the RTP. Monitoring allows local jurisdictions to assess how well the plan is performing and complying with federal and state requirements and to determine when steps need to be taken to keep the plan on course. Monitoring examines the effectiveness of policy implementation efforts through the collection and analysis of data for various performance measures. LCOG will coordinate the plan implementation monitoring program in cooperation with implementing agencies.

Plan Monitoring Process

The ongoing plan monitoring process includes the following components:

1. Review of trends, assumptions, and new opportunities;
2. Inventory of actions taken to implement RTP policies;
3. Analysis of transportation system performance using the performance measures presented above; and
4. Recommended actions and corrective steps, including potential plan amendments during the next update cycle.

The second component of the plan monitoring process involves tracking how local jurisdictions and regional and state agencies are applying RTP policies. Implementation of Planning and Program Actions and Capital Investment Actions from Chapter 3 will be summarized.

The third component of the plan monitoring process involves collecting data to assess transportation system performance in relation to the performance measures. This analysis will provide a comprehensive view of how the transportation system as a whole is performing. The analysis will indicate when additional actions need to be taken. The need may become apparent to identify different performance measures.

The fourth component of the plan monitoring process involves identifying actions and making recommendations as to how the plan can be implemented most effectively. In many cases, these actions will involve increased or decreased emphasis on existing policies and implementation actions. In other cases, plan monitoring will indicate that new or modified policies and implementation actions are necessary. Modifications to the plan will most often be made during the regular plan update process, occurring every three years. Should modifications need to be made to the plan between updates, the plan amendment process will be used. The RTP amendment and update processes are described in Chapter 3 Part Three Regional Transportation Plan Amendment Process.

CENTRAL LANE

REGIONAL TRANSPORTATION PLAN

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Moving Transportation into the Future

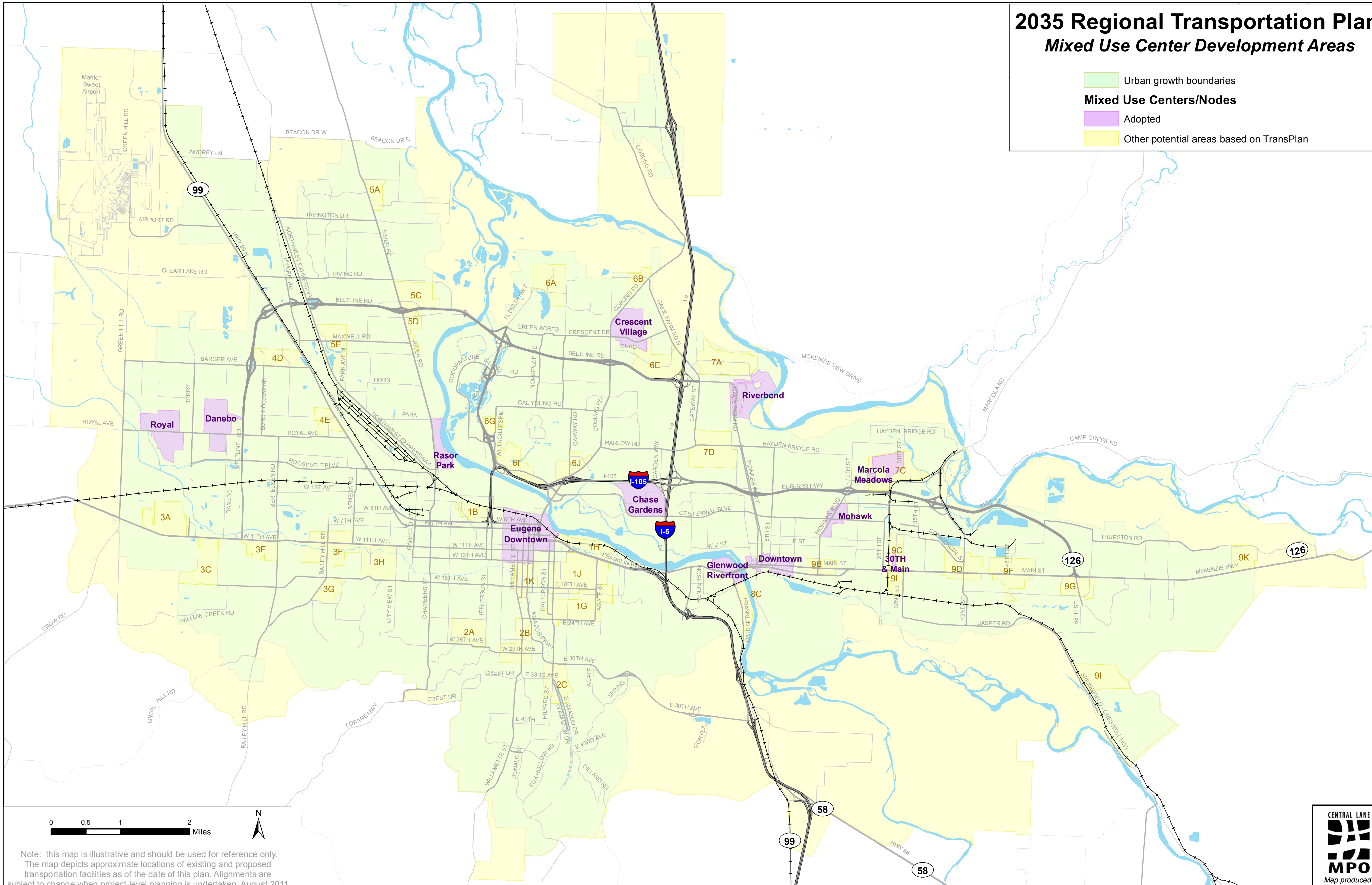
APPENDIX A

MAPS

- **PROPOSED MIXED USE CENTER DEVELOPMENT AREAS**
- **FINANCIALLY CONSTRAINED ROADWAY PROJECTS**
- **ILLUSTRATIVE ROADWAY PROJECTS**
- **FEDERALLY DESIGNATED ROADWAY FUNCTIONAL CLASSIFICATION**
- **BUS RAPID TRANSIT SYSTEM**
- **EXISTING LANE TRANSIT DISTRICT SYSTEM (within MPO)**
- **FINANCIALLY CONSTRAINED BIKEWAY PROJECTS**
- **PRIORITY BIKEWAY SYSTEM PROJECTS**
- **ILLUSTRATIVE BIKEWAY SYSTEM PROJECTS**
- **GOODS MOVEMENT AND INTERMODAL FACILITIES**
- **REGIONAL TRANSPORTATION DEMAND MANAGEMENT:**
  point2point SOLUTIONS REGIONAL PROGRAMS
- **CONGESTION MANAGEMENT SYSTEM:**
  PERCENT CHANGE IN CONGESTION 2004-2031

Note that the RTP Maps are available at:

www.theMPO.org/rtp



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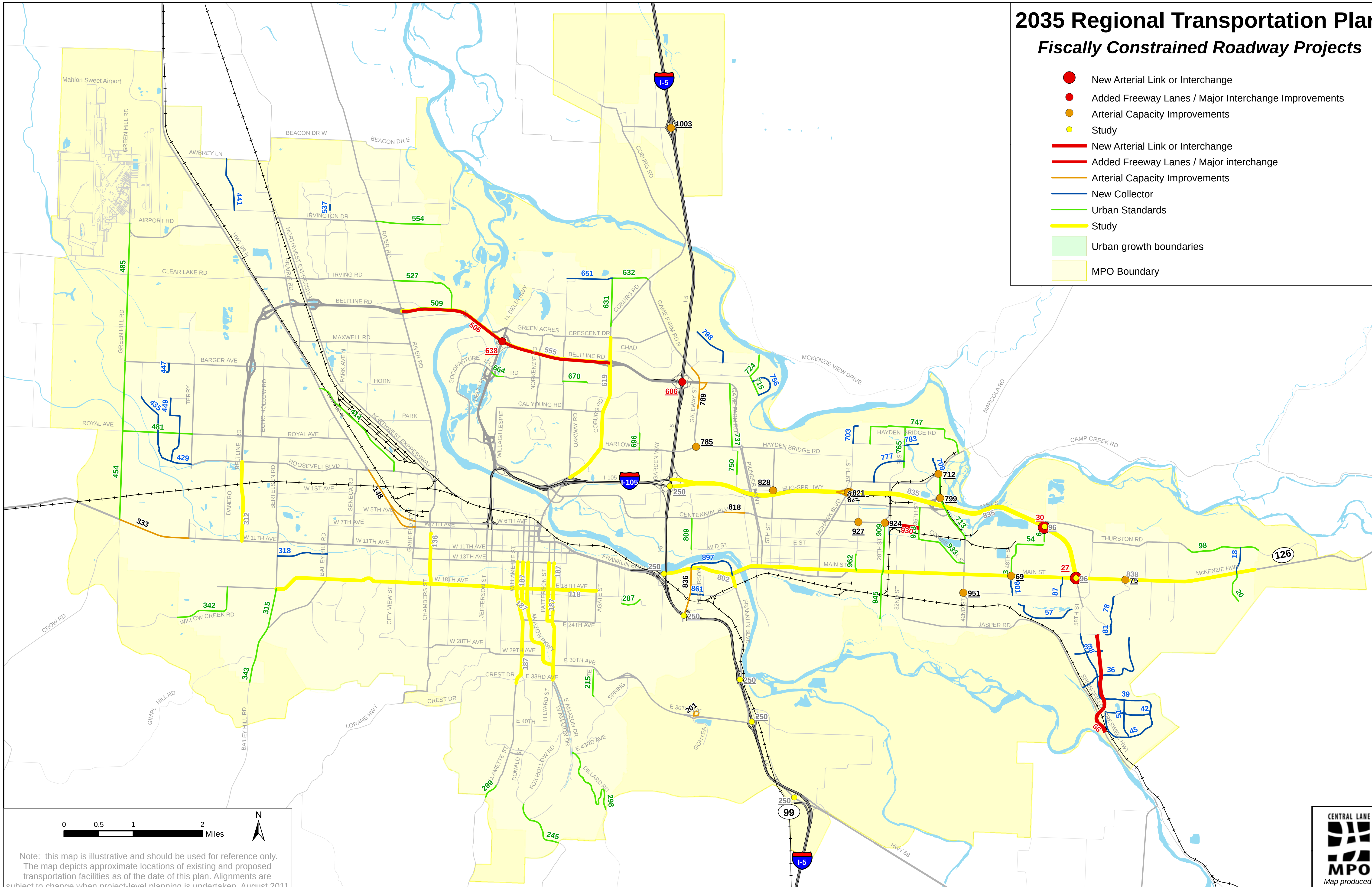
2035 Regional Transportation Plan

Fiscally Constrained Roadway Projects



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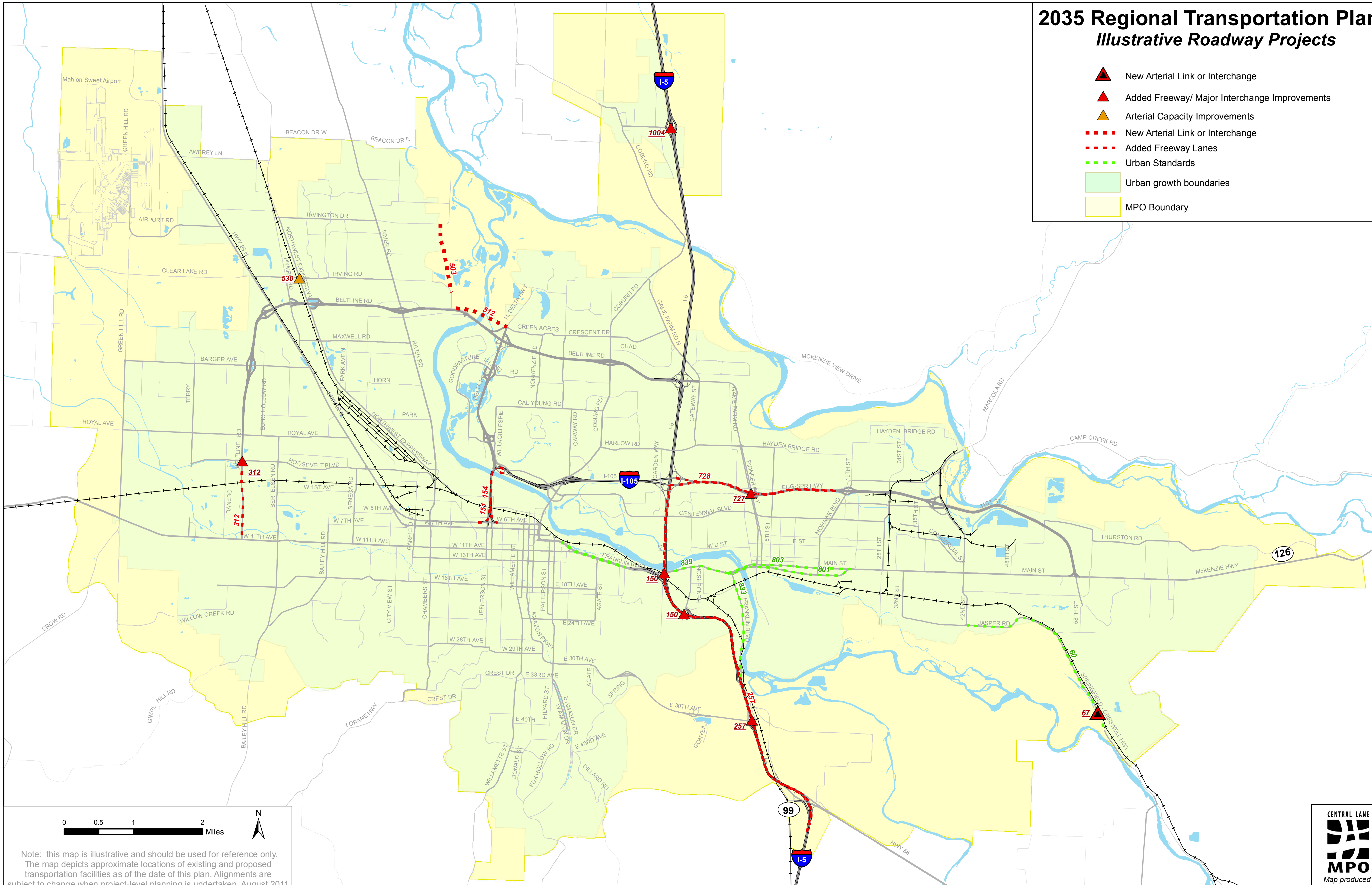

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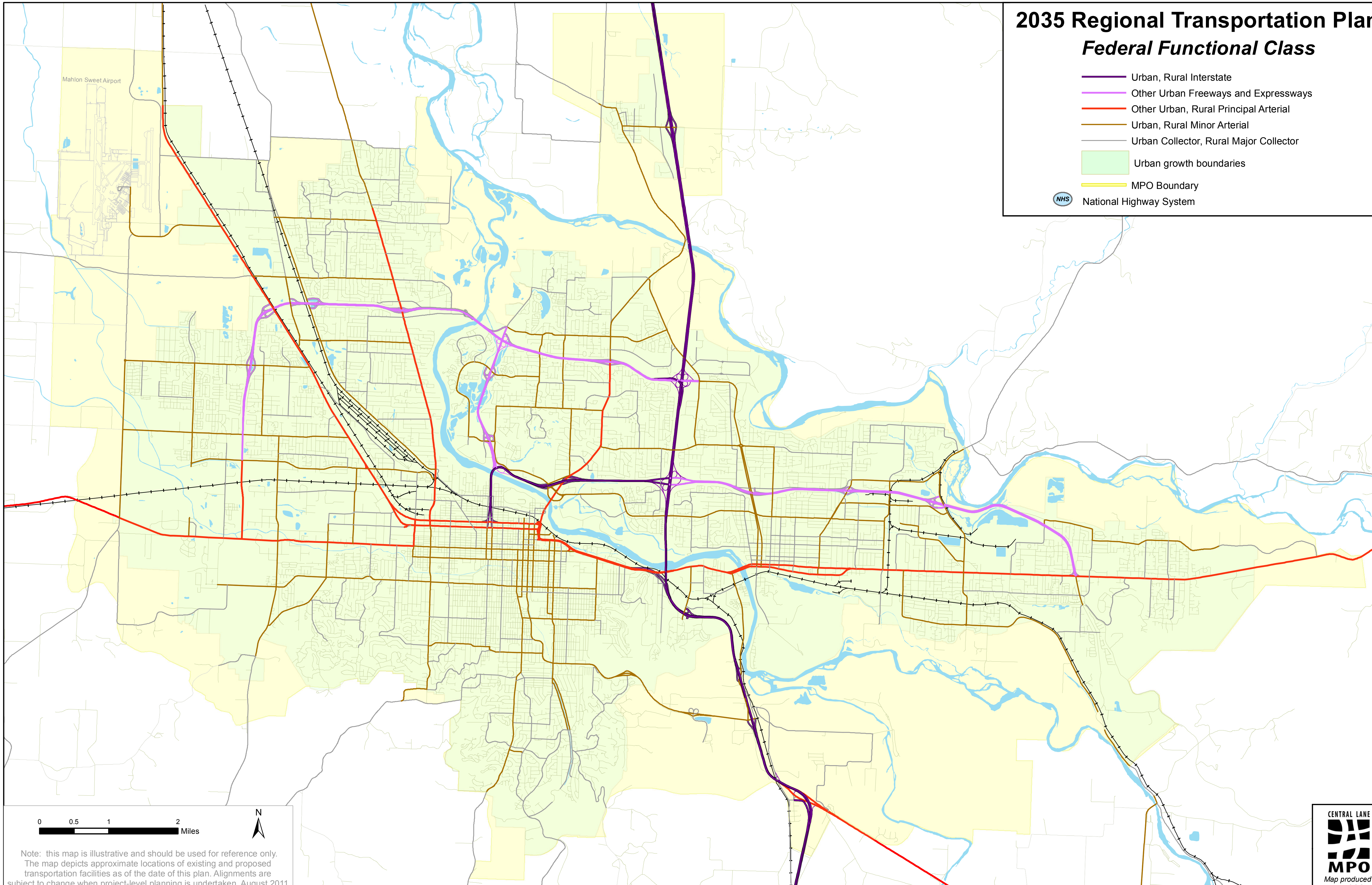

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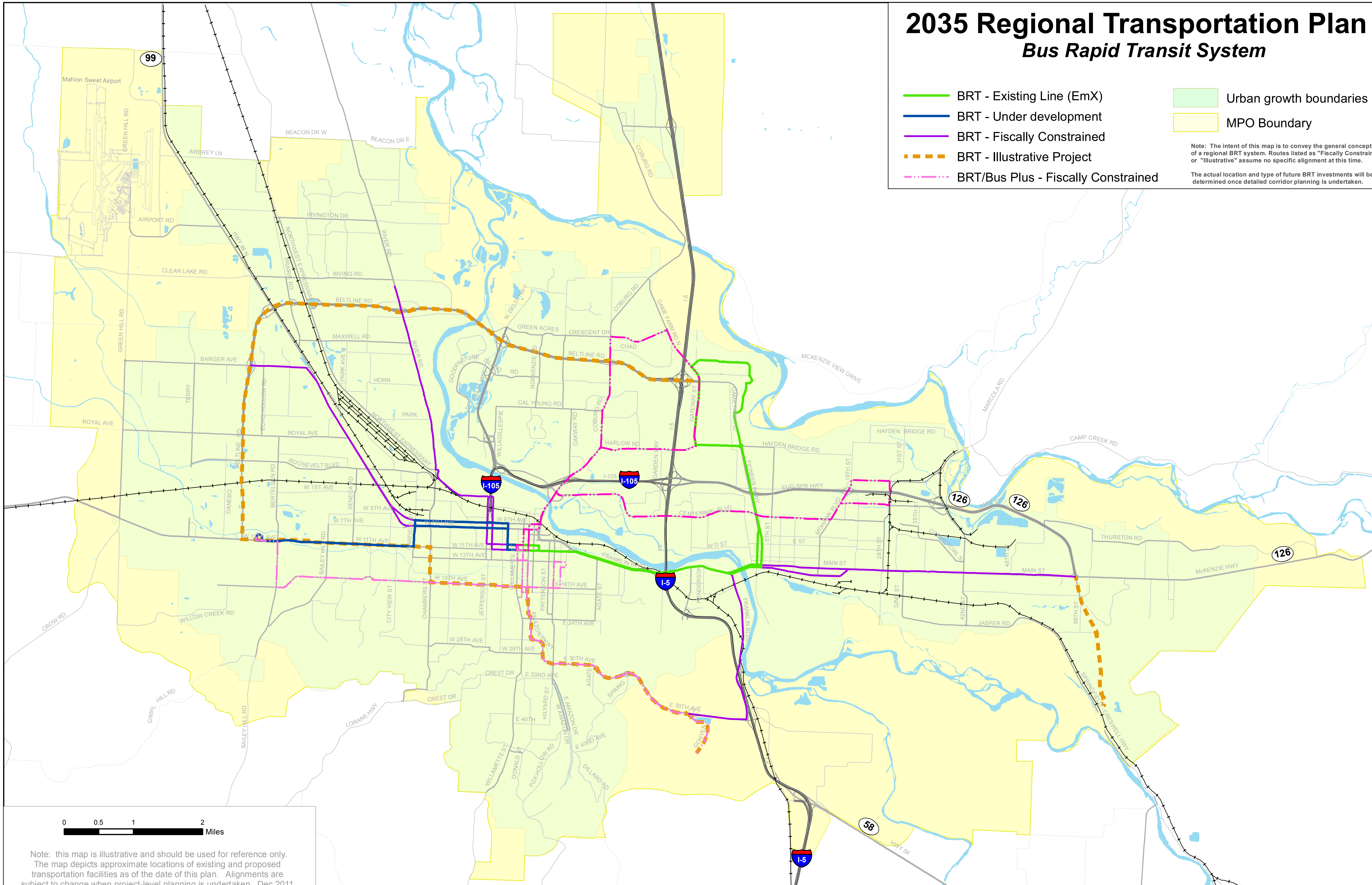
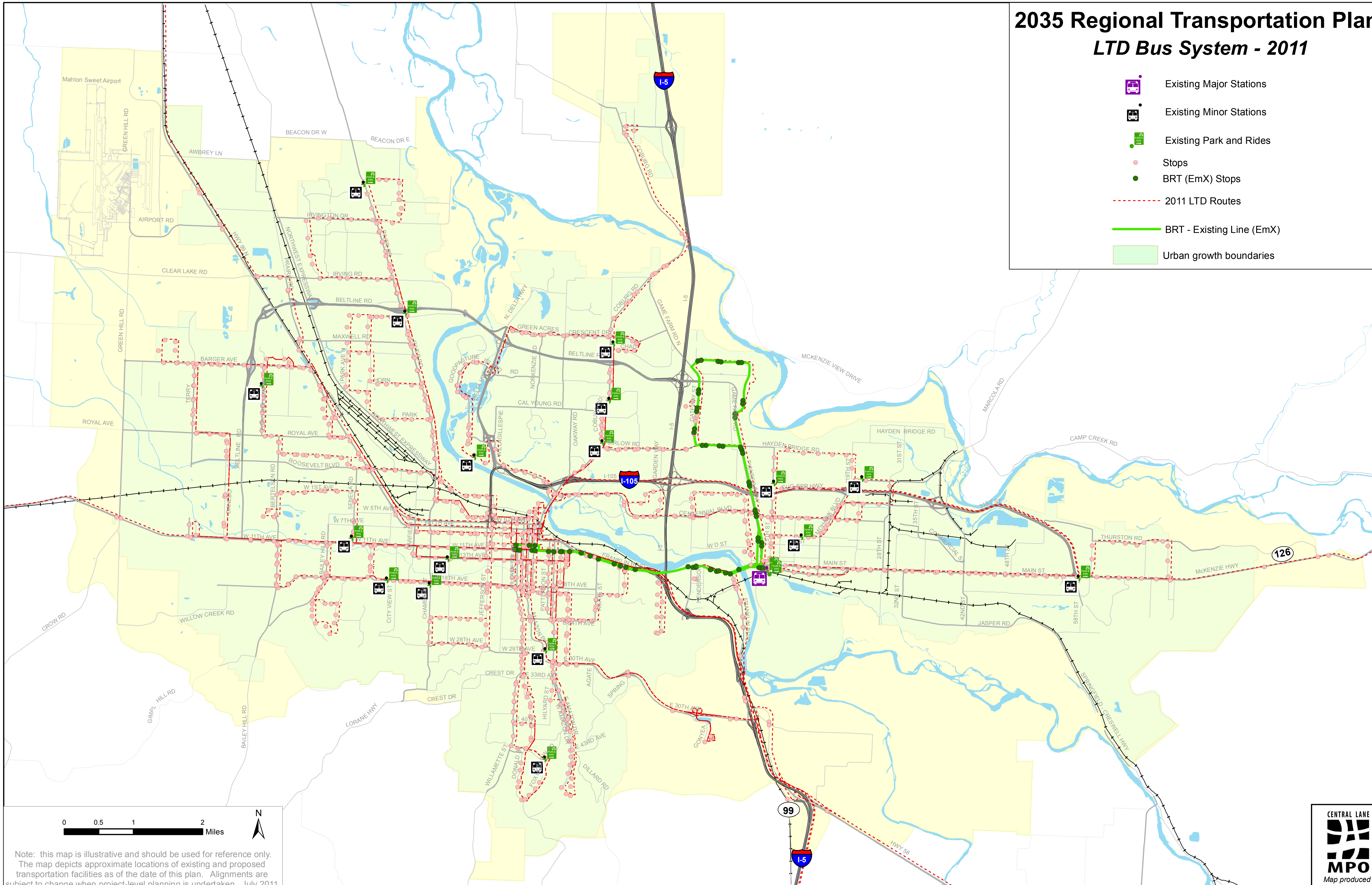


2035 Regional Transportation Plan
Bus Rapid Transit System
BRT - Existing Line (EmX)
BRT - Under development
BRT - Fiscally Constrained
BRT - Illustrative Project
BRT/Bus Plus - Fiscally Constrained
Urban growth boundaries
MPO Boundary
Note: The intent of this map is to convey the general concept of a regional BRT system. Routes listed as "Fiscally Constrained" or "Illustrative" assume no specific alignment at this time.
The actual location and type of future BRT investments will be determined once detailed corridor planning is undertaken.
0
0.5
1
2
Miles
Note: this map is illustrative and should be used for reference only. The map depicts approximate locations of existing and proposed transportation facilities as of the date of this plan. Alignments are subject to change when project-level planning is undertaken. Dec 2011.
99
126
58
I-5
I-105
Mahlon Sweet Airport
BEACON DR W
BEACON DR E
AWBREY LN
AIRPORT RD
IRVINGTON DR
CLEAR LAKE RD
IRVING RD
BELTLINE RD
MAXWELL RD
BARGER AVE
ROYAL AVE
ROOSEVELT BLVD
W 1ST AVE
W 7TH AVE
W 11TH AVE
W 18TH AVE
W 28TH AVE
W 29TH AVE
CREST DR
E 30TH AVE
E 40TH
GREEN ACRES
CRESCENT DR
CAL YOUNG RD
HARLOW RD
CENTENNIAL BLVD
HAYDEN BRIDGE RD
MCKENZIE VIEW DRIVE
CAMP CREEK RD
THURSTON RD
McKENZIE HWY
MAIN ST
JASPER RD
E ST
W D ST
FRANKLIN BLVD
WILLOW CREEK RD
CROW RD
LORANE HWY
HWY 58

2035 Regional Transportation Plan

LTD Bus System - 2011



Note: this map is illustrative and should be used for reference only. The map depicts approximate locations of existing and proposed transportation facilities as of the date of this plan. Alignments are subject to change when project-level planning is undertaken. July 2011.

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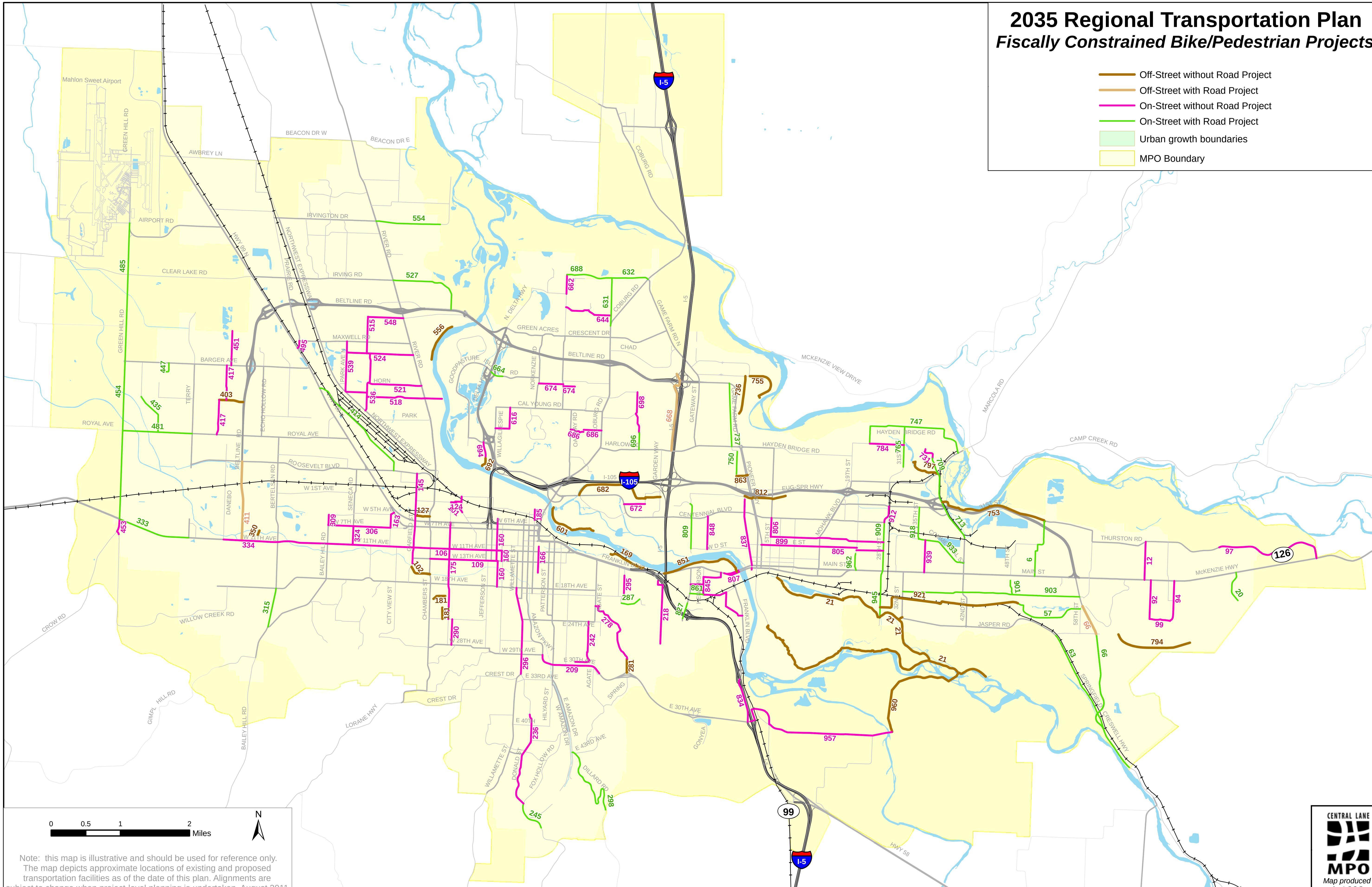
2035 Regional Transportation Plan
Fiscally Constrained Bike/Pedestrian Projects



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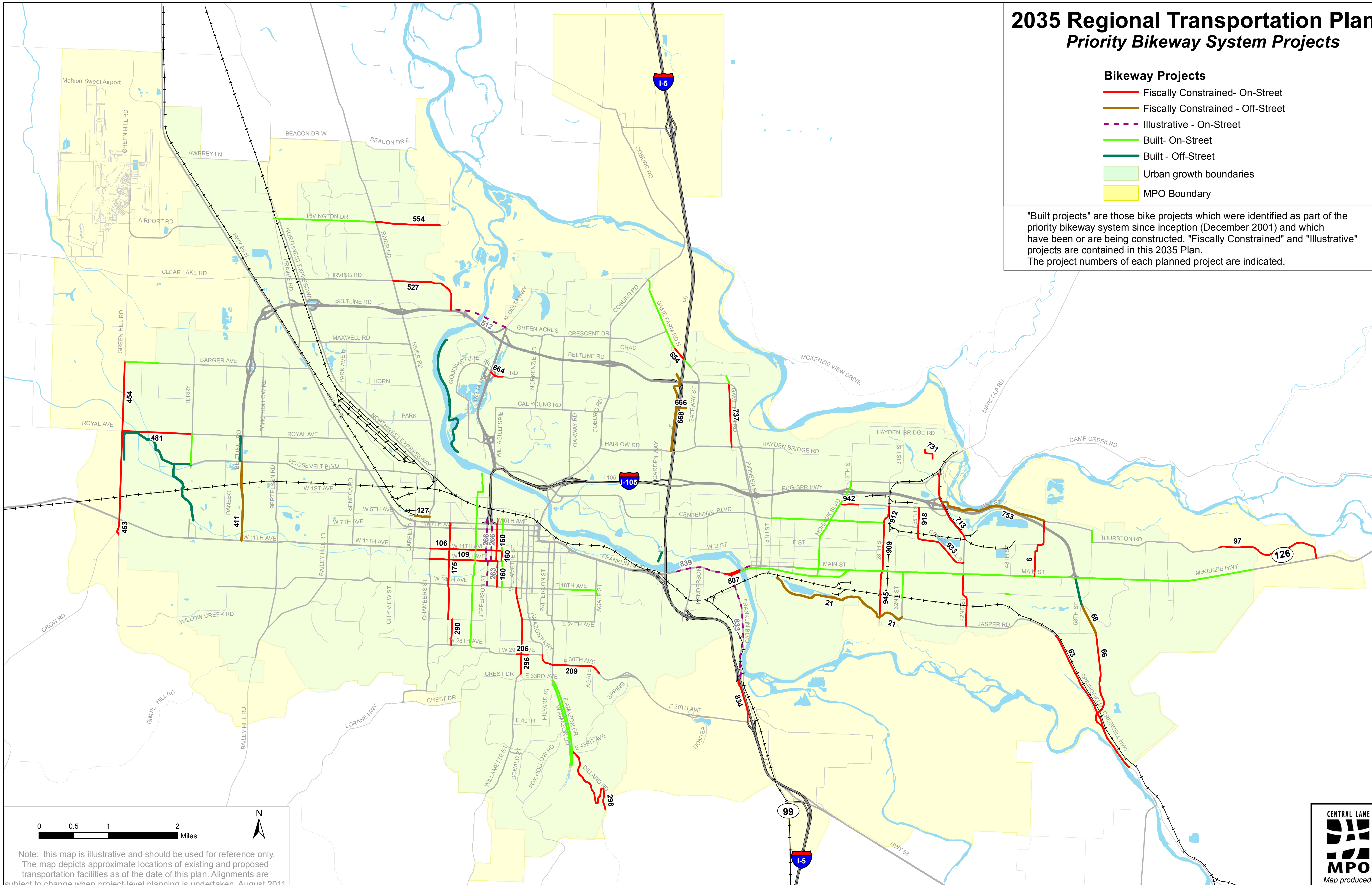
2035 Regional Transportation Plan

Priority Bikeway System Projects



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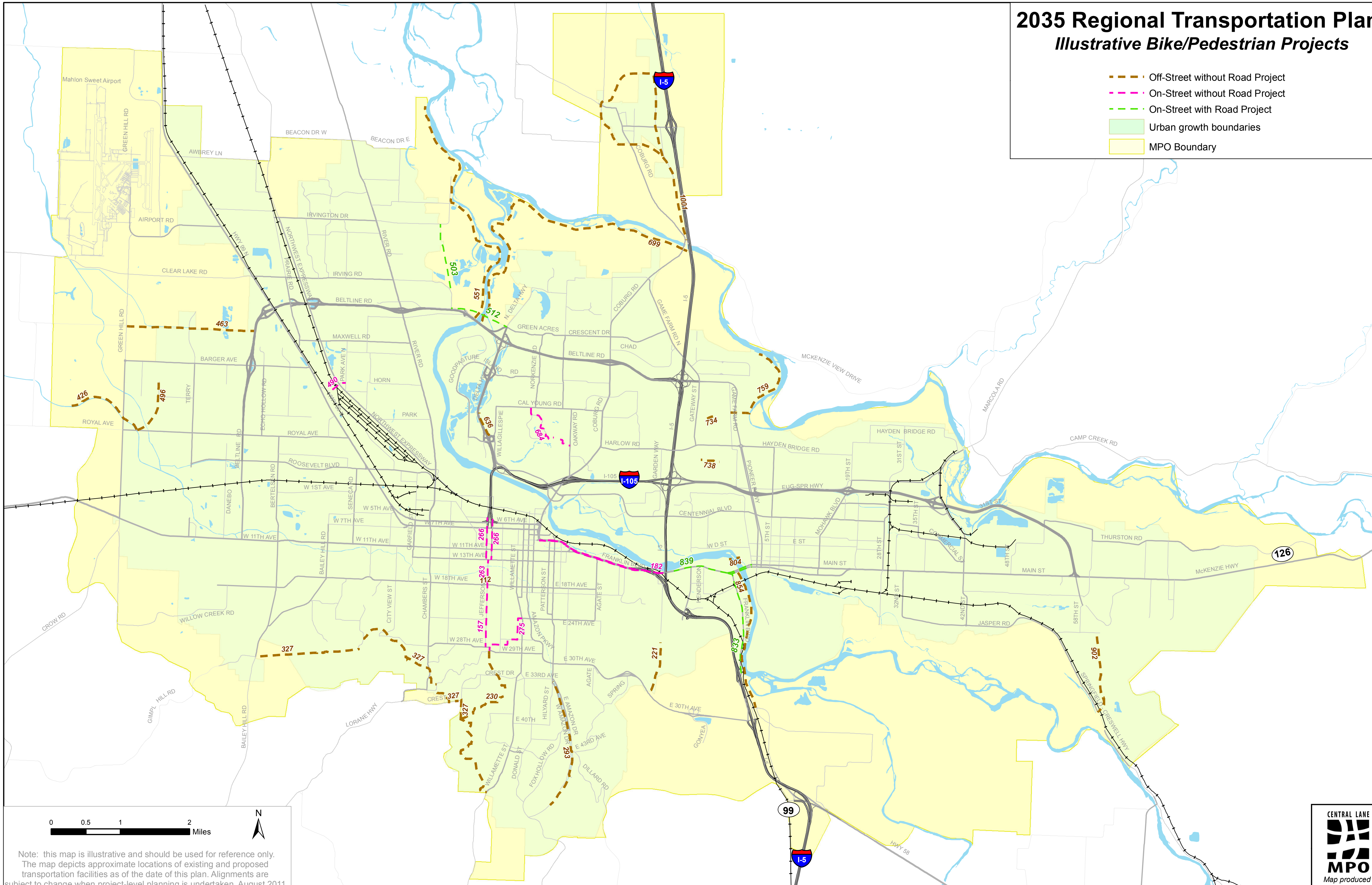
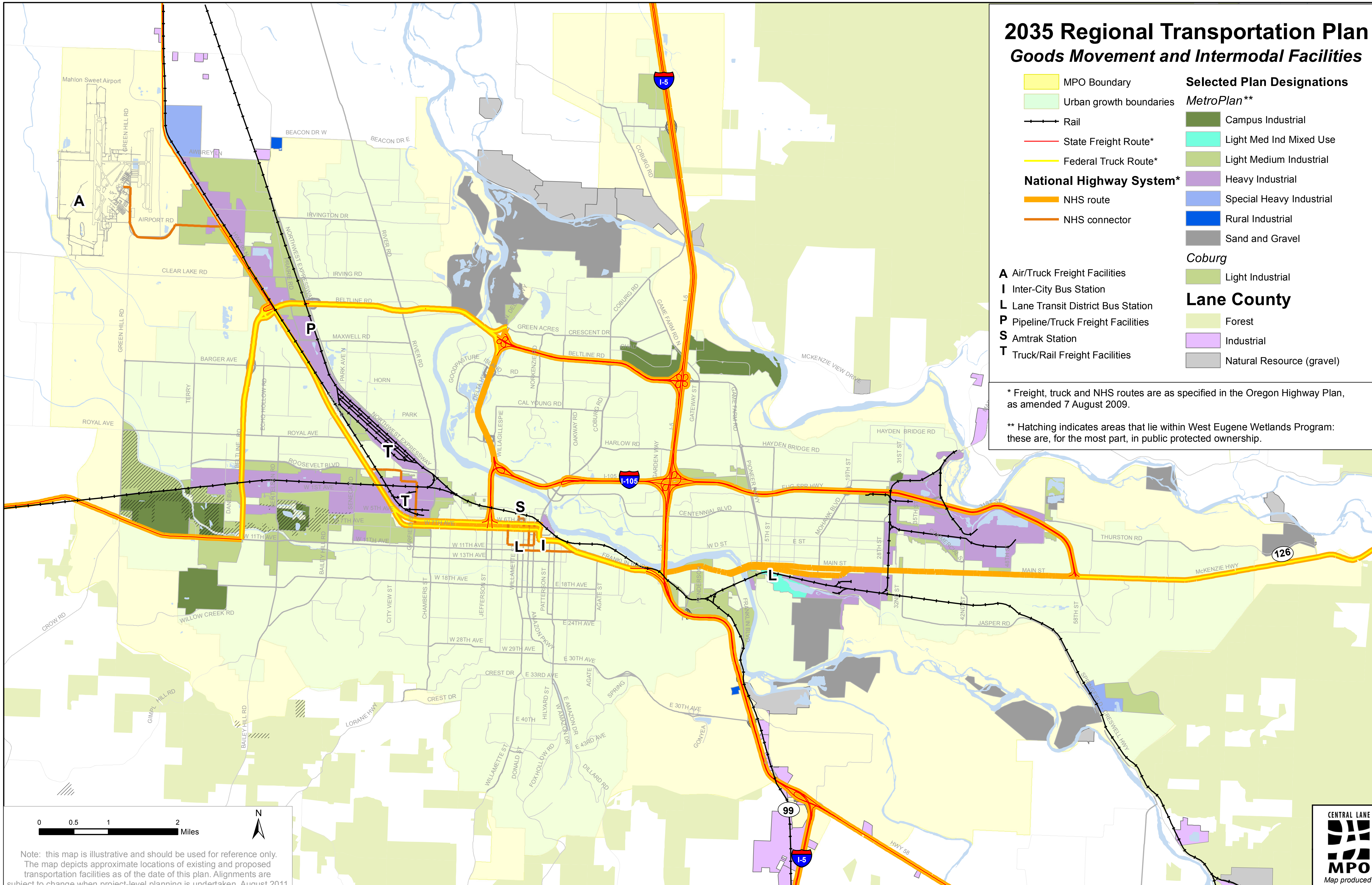
2035 Regional Transportation Plan

Illustrative Bike/Pedestrian Projects





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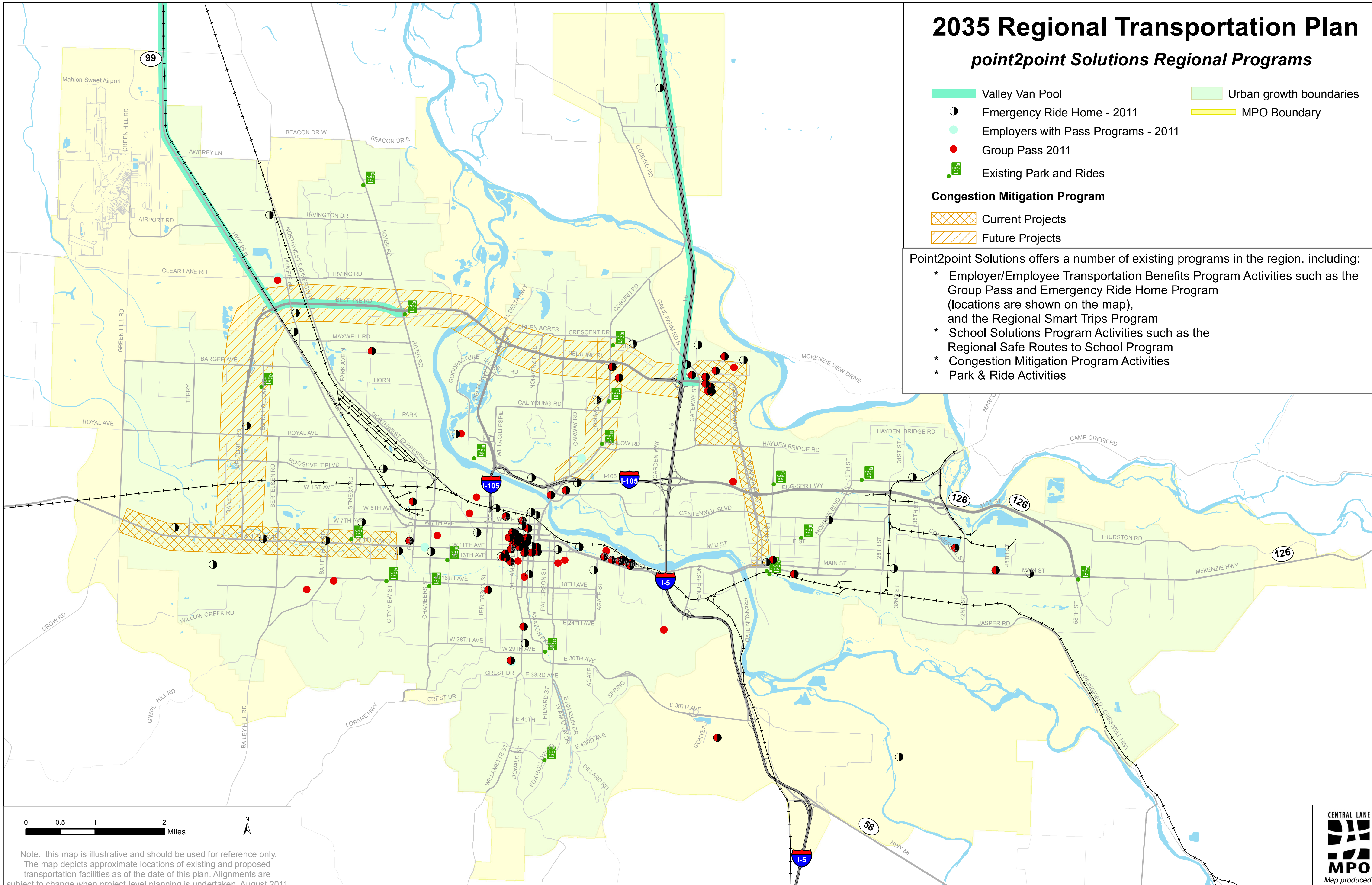
2035 Regional Transportation Plan

point2point Solutions Regional Programs



Point2point Solutions offers a number of existing programs in the region, including:

* Employer/Employee Transportation Benefits Program Activities such as the Group Pass and Emergency Ride Home Program (locations are shown on the map), and the Regional Smart Trips Program
* School Solutions Program Activities such as the Regional Safe Routes to School Program
* Congestion Mitigation Program Activities
* Park & Ride Activities

Note: this map is illustrative and should be used for reference only. The map depicts approximate locations of existing and proposed transportation facilities as of the date of this plan. Alignments are subject to change when project-level planning is undertaken. August 2011.

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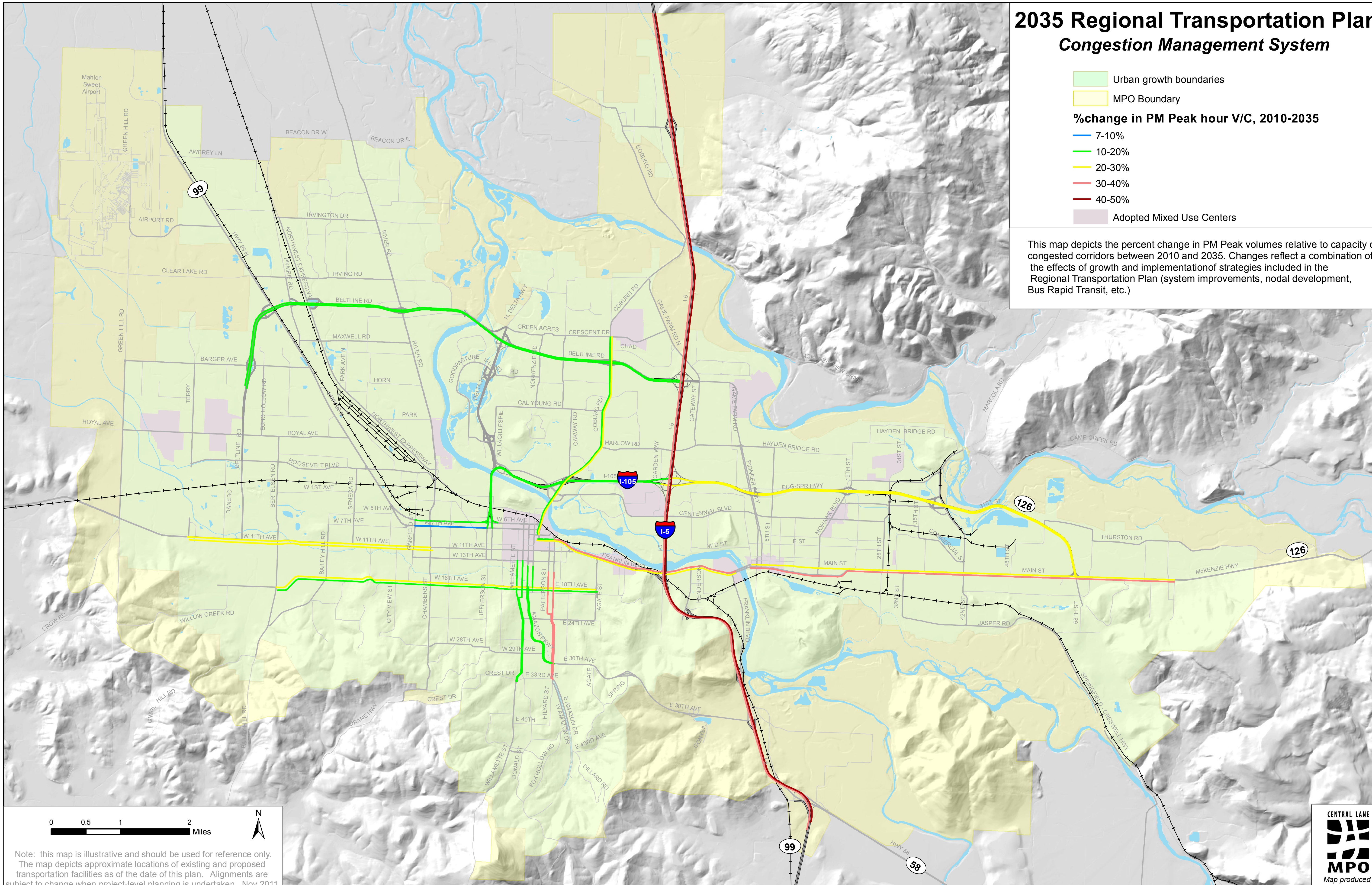

2035 Regional Transportation Plan
Congestion Management System
Urban growth boundaries
MPO Boundary
%change in PM Peak hour V/C, 2010-2035
7-10%
10-20%
20-30%
30-40%
40-50%
Adopted Mixed Use Centers
This map depicts the percent change in PM Peak volumes relative to capacity on congested corridors between 2010 and 2035. Changes reflect a combination of the effects of growth and implementationof strategies included in the Regional Transportation Plan (system improvements, nodal development, Bus Rapid Transit, etc.)
0 0.5 1 2 Miles
N
Note: this map is illustrative and should be used for reference only. The map depicts approximate locations of existing and proposed transportation facilities as of the date of this plan. Alignments are subject to change when project-level planning is undertaken. Nov 2011.
CENTRAL LANE MPO
Map produced by LCOG
Mahlon Sweet Airport
GREEN HILL RD
AWBREY LN
BEACON DR W
BEACON DR E
AIRPORT RD
IRVING DR
IRVINGTON DR
CLEAR LAKE RD
NORTHWEST EXPRESSWAY
PRAIRIE RD
RIVER RD
BELTLINE RD
MAXWELL RD
BARGER AVE
ROYAL AVE
GREEN ACRES
CRESCENT DR
COBURG RD
GAME FARM RD N
GOODPASTURE ISLAND RD
N. DELTA HWY
CHAD
HORN
PARK
PARK AVE
CAL YOUNG RD
WILLAGILLESPIE
NORKENZIE RD
OAKWAY RD
HARLOW RD
GARDEN WAY
GATEWAY ST
HAYDEN BRIDGE RD
ROOSEVELT BLVD
W 1ST AVE
W 5TH AVE
W 6TH AVE
W 7TH AVE
W 7TH AVE
W 11TH AVE
W 11TH AVE
W 13TH AVE
W 18TH AVE
E 18TH AVE
FRANKLIN BLVD
CENTENNIAL BLVD
EUG-SPR HWY
PIONEER PKWY
MOHAWK BLVD
19TH ST
31ST ST
35TH ST
28TH ST
32ND ST
42ND ST
48TH ST
58TH ST
5TH ST
E ST
W D ST
MAIN ST
MAIN ST
THURSTON RD
McKENZIE HWY
JASPER RD
MARCOLA RD
CAMP CREEK RD
DANEBO
BERTELSEN RD
SENECA
TERRY
ECHO HOLLOW RD
BAILEY HILL RD
CITY VIEW ST
CHAMBERS ST
GARFIELD ST
JEFFERSON ST
WILLAMETTE ST
PATTERSON ST
AGATE ST
HENDERSON
WILLOW CREEK RD
CROW RD
W 28TH AVE
W 29TH AVE
E 24TH AVE
E 30TH AVE
E 30TH AVE
CREST DR
E 33RD AVE
E 40TH
E 43RD AVE
HILYARD ST
E AMAZON DR
FOX HOLLOW RD
DONALD ST
DILLARD RD
SPRING
SPRINGFIELD CRESWELL HWY
HWY 58
I-5
I-105
99
126
58

CENTRAL LANE

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Moving Transportation into the Future

APPENDIX B

LEVEL OF SERVICE STANDARDS

Appendix B: Level of Service Standards

Table of Contents

Level of Service Concept

Level of service (LOS) is a concept that is used to assess roadway system performance. It measures traffic flow *quality* as experienced by motor vehicle drivers and passengers. Typically, six levels of service are defined and each is assigned a letter designation from A to F, with LOS A representing the least congested conditions and LOS F the most congested.

For the purpose of identifying capacity deficiencies in the 2001 Eugene-Springfield-Lane County local Transportation System Plan (*TransPlan*), a roadway's LOS is based on the ratio of its peak-hour traffic volume to the maximum hourly volume the roadway can accommodate. This is referred to as the roadway's *volume-to-capacity ratio* (V/C).

Roadway Congestion Impacts

When the volume of traffic using a roadway nears the roadway's capacity, the resulting congestion has several types of undesirable impacts:

- Travel speeds fall, which lengthens travel times and significantly increases the overall cost of transportation.
- Congestion on main routes causes traffic to spillover onto local routes through neighborhoods.
- Slowdowns and backups on high-speed freeway facilities can produce more frequent and severe vehicle collisions.
- Vehicle idling time caused by severe traffic congestion is a primary source of excessive auto emissions that degrade air quality.

Responses to Roadway Congestion

A key *TransPlan* strategy for meeting the region's mobility needs using available resources is to extract maximum value from the existing roadway system. Transportation System Improvements (TSI) System-Wide policies and implementation actions set a high priority on managing and protecting existing and future transportation infrastructure. When combined with policies and implementation actions for land use, transportation demand management and transit, TSI System-Wide polices provide direction for a wide range of actions that reduce the need to construct new roadway capacity improvements. Examples of such actions include the following:

- Reconfigure roadway accesses to minimize traffic conflicts at intersections;
- Limit parking near signalized intersections to increase intersection capacity;
- Coordinate and operate traffic signals to improve traffic progression;
- Relocate driveways and improve local street connections to direct traffic away from overburdened intersections and intersections where side-street capacity is limited in order to optimize traffic progression on arterials and collectors;
- Improve turning-radii at intersections that are heavily used by trucks to avoid lane blockages;
- Install raised medians to reduce traffic conflicts; and
- Improve accesses so that traffic can enter or exit the highway with minimal disruptions of flow.

Even with the above actions, significant components of the roadway system are forecast to fall below acceptable LOS standards. Where management actions have failed to produce acceptable LOS, construction projects to add roadway capacity must be considered.

LOS Standards – Application

TSI Roadway Policy #2: Motor Vehicle Level of Service guided *TransPlan's* transportation system needs analysis and is intended to guide the transportation aspects of future land use decisions. OAR 660-12-0060 (1) "Transportation Planning Rule" states that,

> "Amendments to functional plans, acknowledged comprehensive plans, and land use regulations which significantly affect a transportation facility shall assure that allowed land uses are consistent with the identified function, capacity, and performance standards (e.g., level of service, volume to capacity ratio, etc.) of the facility."

Capacity Analysis Methodologies

The most current Highway Capacity Manual (HCM), *Special Report 209, Transportation Research Board* is the standard reference for roadway capacity analysis methodology. The basic concepts of *capacity* and *LOS* are described in Chapter 1 of the HCM.

In general terms, the HCM defines roadway capacity as the maximum hourly rate at which vehicles can reasonably be expected to traverse a uniform section of roadway during a given time period under prevailing roadway, traffic, and control conditions. Capacity is often stated in terms of Passenger Cars Per Lane Per Hour (pcplph).

The Highway Capacity Software (HCS) package is a tool that implements the HCM analysis methods. The HCM/HCS package has been developed over time as an integrated, comprehensive package of analysis methods that are widely understood and accepted.

The Oregon Department of Transportation (ODOT) has developed special analysis tools for use in analyzing capacity issues for certain types of facilities on the state highway system. In particular, the SIGCAP2 and UNSIG10 software packages are used for signalized and unsignalized intersection capacity/LOS analysis, respectively. Other more specialized analysis methods are also used, depending on the nature of issues being analyzed.

Roadway System Needs Analysis

Transportation system needs analysis for the Central Lane MPO area's collector and arterial roadway network was conducted using a computer model (EMME/2). Output from this model was used as a primary source of information about locations on the roadway network where roadway volumes are forecast to exceed capacity.

The traffic volume forecasted to occur on each network link was compared to the link's assumed capacity to produce a V/C ratio. The following thresholds were established to relate these V/C ratios to the roadway LOS performance standards:

Facility Type	LOS D	LOS E
Freeways, 55 MPH	V/C ≤0.78	V/C ≤1.0
Non-freeways, 55 MPH	V/C ≤0.87	V/C ≤1.0
Other Arterials and Collectors	V/C ≤0.87	V/C = 0.88 - .97

Oregon Highway Plan Mobility Standards

Through the *Oregon Highway Plan* (OHP), ODOT establishes performance standards for the state highway system, including all state facilities considered in *TransPlan*. The adopted OHP sets V/C standards based on various combinations of highway and land use categories. Due to the prominent role that state facilities play in the local transportation system, these standards are reproduced below for reference. As referenced in *TSI Roadway Policy #2: Motor Vehicle Level of Service,* the OHP Mobility Standards are the operable standards on state facilities within the Central Lane MPO area.

Alternative Mobility Standards

The Oregon Highway Plan (OHP) Policy 1F establishes highway mobility standards to "maintain acceptable and reliable levels of mobility on the state highway system." The mobility standards are expressed as maximum allowable volume to capacity ratios in the peak hour. The standards vary by facility type, and different standards are applied to urban and to non-urban areas; to Portland Metro, to other Oregon MPO and to non-MPO urban areas; and to Special

Transportation Areas (STAs). The OHP recognizes that it may be infeasible, in some cases, to meet the standards in Policy 1F, and allows for the adoption of alternative mobility standards in metropolitan areas or portions thereof, provided that the local plan also includes specific actions to manage transportation demand and ensure efficient use of the capacity of the state highway system.

A TGM-grant funded project began the development of a set of Alternative Mobility Standards for the Central lane MPO area, where determined necessary by an alternative mobility standards analysis.

Maximum Volume-to-Capacity Ratios for Peak Hour Operating Conditions Through a Planning Horizon for State Highway Sections Located Outside the Portland Metropolitan Area Urban Growth Boundary*

Highway Category	Inside Urban Growth Boundary					Outside Urban Growth Boundary	
	Special Transportation Areas (STAs)	MPO	Non-MPO Outside of STAs where non-freeway posted speed <= 35 mph, or a Designated UBA	Non-MPO outside of STAs where non-freeway speed > 35 mph	Non-MPO where non-freeway speed limit >= 45 mph	Unincorporated Communities	Rural Lands
Interstate Highways	N/A	0.80	N/A	0.70	0.70	0.70	0.70
Statewide Expressways	N/A	0.80	0.70	0.70	0.70	0.70	0.70
Freight Route on a Statewide Highway	0.85	0.80	0.80	0.75	0.70	0.70	0.70
Statewide (not a freight route)	0.90	0.85	0.85	0.80	0.75	0.75	0.70
Freight Route on a Regional or District Highway	0.90	0.85	0.85	0.80	0.75	0.75	0.70
Expressway on a Regional or District Highway	N/A	0.85	N/A	0.80	0.75	0.75	0.70
Regional Highways	0.95	0.85	0.85	0.80	0.75	0.75	0.70
District / Local Interest Roads	0.95	0.90	0.90	0.85	0.80	0.80	0.75

Lane County Level of Service Standards

Lane County has developed a set of Level of Service Standards in it's adopted 2004 Transportation System Plan. Similar to ODOT's Mobility Standards, these standards apply on the County's roads within the Central Lane MPO area.

Lane Code 15.696 provides peak hour performance standards, and Lane Code 15.697 provides traffic impact analysis requirements. Traffic impact analyses, when required for proposed plan amendments, zone changes, or land developments, must demonstrate that the maximum volume to capacity ratios specified in Lane Code 15.696 will not be exceeded. Level of service calculations may also be useful in completing the analysis, and may be required by the County. The minimum peak hour level of service standard for Lane County is "LOS D." Where level of service analysis is required, both the v/c ratio standard and LOS D must be achieved or maintained. Achieving or maintaining the v/c standard means the v/c ratio is numerically equal to or less than the v/c ratio in the table in Lane Code (see below). Achieving or maintaining LOS D means the level of service is "D" or better, i.e. "A","B","C", or "D". Failure to meet the standard, or "exceedence" of the standard means that the predicted level of service is "E" or "F". The v/c ratio standards shown below are taken from the June 4, 2004 Lane County Transportation System Plan and are provided for informational purposes only.

Maximum Volume to Capacity Ratios for Peak Hour Operating Conditions on Lane County Roads

Highway Category	Land Use Type/Speed Limits					
	Inside Urban Growth Boundary				Outside Urban Growth Boundary	
	STAs	MPO	Non-MPO outside of STAs where non-freeway speed limit <45 mph	Non-MPO where non-freeway speed limit >= 45 mph	Unincorporated Communities	Rural Lands
Interstate Highways and Statewide (NHS) Expressways	N/A	0.80	0.70	0.70	0.70	0.70
Statewide (NHS) Freight Routes	0.85	0.80	0.75	0.70	0.70	0.70
Statewide (NHS) Non-Freight Routes and Regional or District Expressways	0.90	0.85	0.80	0.75	0.75	0.70
Regional Highways	0.95	0.85	0.80	0.75	0.75	0.70
District/Local Interest Roads	0.95	0.90	0.85	0.80	0.80	0.75

Notes:

- Interstates and Expressways shall not be identified as Special Transportation Areas (STAs).
- For the purposes of this policy, the peak hour shall be the 30th highest annual hour. This approximates weekday peak hour traffic in larger urban areas.

CENTRAL LANE
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APPENDIX C

LIST OF SUPPORTING DOCUMENTS

Appendix C: List of Supporting Documents

Doc No.	Title	Date Published	Location
1.	Eugene Bikeways Master Plan	November-74	LCOG, City of Eugene
2.	Eugene-Springfield Transportation Alternatives	September-75	LCOG
3.	Eugene-Springfield Area 2000 Transportation Plan	December-78	LCOG
4.	Evaluation of the Eugene Bikeways Master Plan	January-79	LCOG, City of Eugene
5.	Springfield Bikeway Plan	April-82	LCOG, City of Springfield
6.	Evaluation Report of the Eugene-Springfield Area 2000 Transportation Plan	May-84	LCOG
7.	Eugene-Springfield Area Metropolitan Area Transportation Plan	May-86	LCOG
8.	Eugene/Springfield Metro Area General Plan	April-87	LCOG
9.	Lane County Long Range Paratransit Plan - Final Metro Paratransit Plan	April-92	LCOG
10.	Lane Council of Governments TransPlan Update Base Line Data	April-93	LCOG
11.	Trends, Issues, and Opportunities	November-93	LCOG
12.	Glossary of Transportation and Land Use Terms	December-93	LCOG
13.	Eugene Sidewalk Program	December-93	LCOG, City of Eugene
14.	Transportation Rule Implementation Project (TRIP) Code Amendments as adopted by the Eugene City Council	December-93	LCOG, City of Eugene
15.	Picture Your Future - TransPlan Visual Preferences	February-94	LCOG
16.	Household Activity and Travel Survey Technical Memorandum, Stated Preference Focus Groups Report	March-94	LCOG
17.	LTD May 1994 Origin and Destination Survey: Summary Report	May-94	LCOG, LTD
18.	Transportation System Improvement Final Report	June-94	LCOG
19.	Land Use Measures Strategies Document	June-94	LCOG
20.	Transportation Demand Management Task Force Final Report	June-94	LCOG
21.	Proposed Design Principles for Nodal Development	September-94	LCOG
22.	Citizen’s Guide to Transportation Planning	November-94	LCOG
23.	Strategies to Balance and Improve Our Transportation System	December-94	LCOG
24.	1994 Commuter Pack Survey	January-95	LCOG
25.	LTD Market Area Survey	March-95	LCOG, LTD
26.	Household Activity and Travel Survey Final Report	March-95	LCOG
27.	Eugene/Springfield Urban Rail Feasibility Study - Potential Rail Corridor Screening	April-95	LCOG
28.	1994 Origin-Destination Surveys Final Report Volume II: Eugene Surveys	May-95	LCOG

29.	Nodal Development Strategy Implementation Options, Working Paper	June-95	LCOG
30.	Design Team Report and Recommendations to the Land Use Measures Task Force	June-95	LCOG
31.	Design Principles for Mixing Uses and Increasing Densities - Workshop Process, Key Findings, and Recommendations	June-95	LCOG
32.	A Comparison of Development Costs in Eugene/Springfield: Standard Subdivision vs Nodal Development	June-95	LCOG
33.	How Do We Grow From Here?	June-95	LCOG
34.	Regional Parking Inventory Eugene/Springfield Final Report	July-95	LCOG
35.	Pacific Northwest High Speed Rail Southern Terminus Study	July-95	LCOG
36.	Urban Rail Feasibility Study - Final Report	July-95	LCOG
37.	Transportation Demand Management Strategies: Technical Evaluation and Model Results	July-95	LCOG
38.	Eugene-Springfield Metropolitan Area Transportation Plan: Summary Descriptions of Proposed Nodal Development Areas	August-95	LCOG
39.	Pricing Study (Technical Memo)	September-95	LCOG
40.	TransPlan Focus Groups with Area Residents	February-96	LCOG
41.	User Manual for Land Use Allocation Spreadsheets	April-96	LCOG
42.	Transportation-Efficient Development	May-96	LCOG
43.	TransPlan Community Survey Report	June-96	LCOG
44.	Exploratory Research on TransPlan with Area Business Owners/Managers	June-96	LCOG
45.	Exploratory Research on Bus Rapid Transit Report	July-96	LCOG, LTD
46.	TransPlan Update 3rd Symposium Materials	August-96	LCOG
47.	Eugene Local Street Plan	August-96	LCOG, City of Eugene
48.	Market Demand Study for Nodal Development	October-96	LCOG
49.	Policy Makers' Decision Package for Draft Plan Direction	November-96	LCOG
50.	TransPlan and Metro Plan Periodic Review Future Land Use Assumptions	May-97	LCOG
51.	Improving Our Transportation Choices newsletter (Public Decision Document)	June-97	LCOG
52.	Springfield Conceptual Local Street Map	June-97	LCOG, City of Springfield
53.	Draft Design Guidelines for Multi-Unit Housing	June-97	LCOG
54.	Metro Area General Plan, 1987 Update with Amendments	July-97	LCOG
55.	Analysis and Findings on the Potential for Public Transportation in the Eugene-Springfield Area	August-97	LCOG
56.	Analysis of the Suitability and Effectiveness of Transportation Demand Management Strategies in Selected Areas	August-97	LCOG
57.	Eugene-Springfield Area Transportation Improvement Program FY 1997-98 to FY 2000-2001	September-97	LCOG
58.	Local Jurisdiction Review Edition Draft TransPlan	November-97	LCOG
59.	Evaluating Redevelopment Potential in the Eugene/Springfield Metropolitan Area	December-97	LCOG
60.	Draft TransPlan	February-98	LCOG

61.	Springfield Bike Plan	June-98	LCOG, City of Springfield
62.	Draft TransPlan Reference Materials for Joint Planning Commission/RAC Worksession	September-98	LCOG, managers and administors offices
63.	Revised Draft TransPlan	May-99	LCOG
64.	Oregon Highway Plan	May-99	LCOG, ODOT
65.	Residential Lands Study	August-99	LCOG, City of Eugene, City of Springfield
66.	Coburg Transportation System Plan	September-99	Coburg, LCOG
67.	Eugene Arterial and Collector Street Plan	November-99	LCOG, City of Eugene
68.	Public Testimony - Volumes I, II and Alternative Performance Measures	November-99	LCOG
69.	Land Use Code Update	February-01	City of Eugene
70.	TransPlan Update Public Involvement Documentation Working Paper	June-01	LCOG
71.	Joint Adopting Officials Schedule	June-01	LCOG
72.	Alternative Measures Approved by LCDC	June-01	LCOG
73.	Adopted TransPlan Update	December-01	LCOG
74.	TransPlan, as Ammended	July-02	LCOG
75.	TransPlan Transportation Demand Management Element Refinement Preliminary Draft	May-03	LCOG, LTD
76.	Regional ITS Operation and Implementation Plan for the Eugene-Springfield Metropolitan Area	November 2003	LCOG
77.	Willamalane Park and Recreation Comprehensive Plan	March-04	Willamalane, Lane County, LCOG
78.	Lane County Transportation System Plan	June-04	Lane County, LCOG
79.	Jasper-Natron Specific Development Plan	June-99	City of Springfield
80.	Chase Gardens Node (6K) Designation	November-02	City of Eugene
81.	Royal Node (4F) Designation	January-03	City of Eugene
82.	Crescent Village Node (6D) Designation	February-03	City of Eugene
83.	Danebo Node (4G) Designation	February-03	City of Eugene
84.	Rasor Park / Lower River Road (5F) Designation	May-03	City of Eugene
85.	Downtown and Southbank - Downtown Plan	April-04	City of Eugene
86.	City of Springfield Traffic Count Map	June-04	City of Springfield
87.	2004 Origin/Destination Study Research Report	September-04	Lane Transit District
88.	Lane County Coordinated Population Projections	February-05	LCOG
89.	ODOT Transportation Volume Tables, 2004	June-05	ODOT TSM Unit
90.	Employment Projections by Industry, 2004-2014	July-05	Oregon Employment Div
91.	Employment Projections by Occupation, 2004-2014	October-05	Oregon Employment Div
92.	City of Springfield and City of Eugene Nodal Development Assumptions	August-06	LCOG, Eugene, Springfield, Planners Work Product
93.	City of Eugene Traffic Flow Map	July-07	City of Eugene
94.	Glenwood Riverfront District (8A)	September-07	City of Springfield

NOTE: All documents show original references relied on for the development of the relevant RTP. The RTP adopted in December 2001 relied on documents #1-72. The 2002 RTP update additionally relied on document #73. The RTP update in 2004 added documents #74-78. The 2007 update lists additional supporting documents #79-94 (note that in an effort for completeness, this range of documents includes older documents that may have been referenced in earlier RTP updates). All subsequent RTP updates have also relied on the original or updated versions of documents used in earlier updates.

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APPENDIX D

GLOSSARY AND ACRONYMS

Appendix D: Glossary and Acronyms

Table of Contents

Glossary

Access management

Measures that regulate access to streets, roads, and highways from public roads and private driveways while simultaneously preserving traffic flow on the surrounding road system in terms of safety, capacity, and speed. Measures may include but are not limited to restrictions on the siting of interchanges, restrictions on the type and amount of access to roadways, and the use of physical controls, such as signals and channelization, including raised medians, to reduce impacts of approaching road traffic on the main facility.

Accessibility

Physical proximity and ease of reaching destinations throughout the urban metropolitan area.

Alternative modes

Means of travel such as rail, transit, bicycles, and walking that provide transportation alternatives to the use of the automobile.

Americans with Disabilities Act (ADA)

Federal civil rights legislation signed into law in 1990 that includes requirements for accessible public transportation services for persons with disabilities. Services include complementary or supplemental paratransit services for persons who are unable to use regular bus service due to a disability in areas where fixed-route transit service is operated. All new construction and modifications must be accessible to individuals with disabilities. For existing facilities, barriers to services must be removed if readily achievable.

Average daily traffic (ADT)

The average number of vehicles passing a specified point in a typical 24-hour timeframe.

Benchmarks

Target objectives for the RTP's Performance Measure assessment method. Benchmarks are required by the Transportation Planning Rule for use in evaluating progress at five-year intervals. Transportation system plans must be amended to include new or additional efforts where benchmarks are not met.

Bikeways

A facility intended to accommodate bicycle travel for recreational or commuting purposes. Examples include striped lanes, bike routes, and multi-use paths. Bikeways are not necessarily separate facilities; they may be designed and operated to be shared with other traffic modes.

Bus Rapid Transit (BRT)

High-frequency, fast bus service along major transportation corridors that is intended to emulate the positive characteristics of a light rail system. Feeder service in neighborhoods using small buses connect the BRT corridor service with nearby activity centers.

Clean Air Act Amendments of 1990 (CAAA)

Federal law that established criteria for attaining and maintaining National Ambient Air Quality Standards. A *nonattainment* area is a region that fails to meet one or more of the standards. CAAA shifts the emphasis of conformity analysis from a system-level review of the State Implementation Plan towards a more project-oriented approach. Transportation agencies are interested in projects that help to reduce pollutant levels by reducing vehicle congestion and vehicle miles traveled.

Capacity

The maximum rate of flow at which persons or vehicles can be reasonably expected to traverse a point or uniform segment of a lane or roadway during a specified time period under prevailing roadway, traffic, and control conditions; capacity is usually expressed as vehicles per hour or persons per hour.

Capital improvement program (CIP)

A plan for future capital infrastructure and program expenditures that identifies each capital project, its anticipated start and completion, and allocates existing funds and known revenue sources for a given period of time.

Conformity

Process to assess the compliance of any transportation plan, program, or project with air quality control plans. The Clean Air Act defines the conformity process.

Development review process

Process used by local governments to assess development proposals on a case-by-case basis.

Development standards

A measure of physical attributes and/or policy conformance that shall be satisfied to allow a proposed land use or development to be established or modified.

Differential nodal development infrastructure cost

The additional cost for infrastructure in nodal development areas that would not be built in typical development, such as street modifications, pedestrian amenities, transit centers and public open space. [Eugene-specific definition]

Functional classification

Street classification system that describes streets according to their purpose and capacity. The four main categories are detailed below.

Principal arterial

A street that serves the major centers of activity of a metropolitan area, the highest traffic volume corridors and the longest trip needs. Principal arterials should carry a high proportion of the total urban area travel on a minimum of mileage and provide important intra-urban as well as inter-city bus routes.

Minor Arterial

Includes all arterials not classified as principal arterials and offers a lower level of traffic mobility than the higher street classifications. Such facilities may carry local bus routes and provide intra-community continuity, but ideally should not penetrate identifiable neighborhoods.

Collector

A street designed to provide both land access service and traffic circulation within residential neighborhoods, commercial, and industrial areas. The primary function of a collector street is to distribute local trips to the arterial system.

Local

All streets that are not collectors or arterials. These facilities serve primarily to provide direct access to abutting land and access to the higher order systems. They offer the lowest level of mobility and usually contain no bus routes. Service to through traffic movement is usually discouraged.

The jurisdictions participating in the RTP have slightly differing classifications for arterial and collector streets. The breakdown and a source document for each are listed below.

City of Coburg:

City of Eugene: Major arterial, minor arterial, major collector neighborhood collector, and local (Eugene Arterial and Collector Street Plans, 1999)

City of Springfield: Major arterial, minor arterial collector, and local (Springfield Development Code Article 32)

Lane County: Principal arterial, minor arterial, major collector, minor collector, and local (Lane County Code, 15.010(3))

Oregon Department of Transportation: Interstate highway, state-wide highway, regional highway, and district highway. All Oregon Department of Transportation roads are arterials. (Oregon Highway Plan, 1992)

Goal

Broad statement of philosophy that describes the hopes of the community's residents for the community's future. A goal may never be completely attainable, but it is a point towards which to strive.

High-occupancy vehicle (HOV)

Any passenger vehicle carrying more than one person. The term HOV is sometimes used to refer to lanes on large-volume roadways that are specifically set aside for the exclusive use of carpools, vanpools, and buses.

Implementation actions

Specific measures for achieving RTP policies.

Infill development

Development that consists of either construction on one or more lots in an area that is mostly developed or new construction between existing structures. Development of this type can conserve land and reduce sprawl.

Intelligent Transportation Systems Technology (ITS)

Computer and communication technology that provide information to travelers about road and transit conditions. Research in the field may eventually lead to a system that monitors, guides, and/or controls the operation of vehicles.

Intermodal

Connecting individual modes of transportation and/or accommodating transfers between such modes. Intermodal transportation emphasizes the transfer of people or freight in a single journey through connections, provides options to facilitate trip making, and promotes coordination among transportation providers.

Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991

The 1991 federal transportation funding legislation that provides for a new direction in transportation planning, with an emphasis to protect the environment and reduce congestion, relying on the most efficient transportation mode, and providing increased flexibility to state and local governments on the use of federal funds.

Level of service

A qualitative rating of how well a unit of transportation supply (e.g., street, intersection, sidewalk, bikeway, transit route, ferry) serves its current or projected demand.

A: Free flow conditions, 32% of capacity

B: Reasonably free flow conditions, 51% of capacity

C: Operation stable, but becoming more critical, 75% of capacity

D: Lower speed range of stable flow, 92% of capacity

E: Unstable flow, 100% of capacity

F: Forced flow, +100% of capacity, stop-and-go operation

Major investment study (MIS)

A method of analyzing and evaluating the transportation needs and related problems of a corridor or subarea within a region. The MIS may identify a multi-modal set of investment and policy options to address identified needs and problems, develop measures of benefits, calculate costs, and determine impacts. The process is intended to provide decision makers with better and more complete information on the options available for addressing identified transportation problems before decisions are made.

Metro Plan

The *Eugene-Springfield Metropolitan Area General Plan, 1987 Update*, amendments incorporated as of July 1997, 1998 Reprint. The official document adopted by local governments that contains the general, long-range policies on how the community's future development should occur.

Metropolitan Planning Organization (MPO)

The organizational entity designated by law to have the lead responsibility for developing transportation plans and programs for urbanized areas of 50,000 or more in population. MPOs are established by agreement of the Governor and units of general purpose local government that together represent 75 percent of the affected population of an urbanized area. Lane Council of Governments is the MPO for the Eugene-Springfield metropolitan area.

Mixed-use development

A development that has a mixture of land uses that may include office and other commercial uses, residential uses, parks and public places, and supporting public facilities and services.

Mobility

The ease with which a person is able to travel from place to place. It can be measured in terms of travel time.

Modal split

The proportion of total persons using a particular mode of travel.

Mode

A means of moving people and/or goods. Modes may include motor vehicles, public transit, bicycles, railroads, airplanes, waterways, pipelines, and pedestrian walkways.

Multi modal

Refers to the diversity of transportation options for the same trip. Also, an approach to transportation planning or programming that acknowledges the existence of or need for transportation options.

Nodal development (Node)

Nodal development is a mixed-use, pedestrian-friendly land use pattern that seeks to increase concentrations of population and employment in well-defined areas with good transit service, a mix of diverse and compatible land uses, and public and private improvements designed to be pedestrian and transit oriented. Fundamental characteristics of Nodal development require:

- Design elements that support pedestrian environments and encourage transit use, walking, and bicycling;
- A transit stop which is within walking distance (generally 1/4 mile) of anywhere in the node;
- Mixed uses so that services are available within walking distance;
- Public spaces, such as parks, public and private open space, and public facilities, that can be reached without driving; and
- A mix of housing types and residential densities that achieve an overall net density of at least 12 units per net acre.

Nodal developments will vary in the amount, type, and orientation of commercial, civic, and employment uses; target commercial floor area ratios; size of buildings; and the amount and types of residential uses.

Objective

An attainable target that the community attempts to reach in striving to meet a goal. An objective may also be considered as an intermediate point that will help fulfill the overall goal.

1991 Oregon Highway Plan (OHP)

Document that outlines the policies and strategies that will guide the Highway Division's operation and fiscal activities during the 1991-2012 period. The current document represents an update to the 1985 Highway Plan.

Oregon Statewide Planning Goals

A mandated statewide program for land use planning in place since 1973. The foundation of the program is a set of 19 goals that express the state's policies on land use and related topics such as natural resources (Goal 5), housing (Goal 10), and transportation (Goal 12).

Oregon Transportation Plan (OTP)

The comprehensive, long-range plan for a multi-modal transportation system for the state that encompasses economic efficiency, orderly economic development, safety, and environmental quality. The OTP was adopted by the Oregon Transportation Commission in 1992.

Overlay zone

A set of zoning specifications that is imposed on an area, in addition to the underlying zoning district's requirements.

Paratransit

Transit alternative known as *special or specialized* transportation that often includes flexibly scheduled and routed transportation services that use low-capacity vehicles, such as vans, to operate within normal urban transit corridors or rural areas. Services usually cater to the needs of persons who cannot use standard mass transit services. Common patrons are the elderly and persons with disabilities.

Park-and-Ride

Public parking lots whose primary purpose is to provide access to public transportation services. These parking areas may function as shared use parking areas.

> **Major Park-and-Rides**
>
> Park-and-Rides provide public parking for access to public transportation. In general, this type of Park-and-Ride includes capacity for 100 cars or more. A major Park-and-Ride generally includes buses operating on-site and passenger amenities such as a larger style bus shelter, lighting, and passenger information and may include restrooms for operators. Major Park-and-Rides are not transfer points and usually are on-street bus stops.
>
> **Minor Park-and-Rides**
>
> A minor Park-and-Ride is smaller in scale than a major Park-and-Ride, with capacity for fewer than 100 cars. Buses typically will not operate on-site. Buses may serve the Park-and-Ride via an on-street bus stop, which may include a bus turnout and standard LTD bus shelter adjacent to the bus stop. A minor Park-and-Ride generally is a public parking lot less than two acres in size. These stops are not transfer points and the bus stop is on-street.

Parking management

Management strategies designed to address the supply and demand for vehicle parking. They contribute to balancing the travel demand within the region among the modes of transportation.

Pavement Condition Rating (PCR)

Pavement condition ratings provide an assessment of pavement condition. Local and state road agencies use a pavement management process that provides, analyzes, and summarizes information for use in selecting and implementing cost-effective pavement construction, rehabilitation, and maintenance programs designed to accommodate current and forecasted traffic.

Performance measure

Predetermined indicators monitored during the life of the RTP as a method of evaluating the plan'*s* effectiveness. To provide numerical targets needed to assess plan progression, *benchmarks* are established for each performance measure at five-year intervals.

Person trip

A movement from one address to another by one person by any mode.

Policy

Statement adopted as part of a plan to provide a specific course of action that moves the community towards attainment of its goals.

Regional roadway system

Streets with classifications of arterial and major collector.

Single-occupant vehicle (SOV)

A vehicle, usually referring to a private automobile, that is carrying only one person.

Special transportation area (STA)

As defined by the OHP, STAs are designated existing or future compact, mixed-use areas within an urban growth boundary in which growth management considerations outweigh the considerations underlying the highway level-of-service policy. STAs include central business districts, transit-oriented development areas and other activity centers that emphasize non-auto travel. They are high-density areas with an interconnected local street network. They are not located on interstates or limited-access highways and are not encouraged on major designated freight routes.

State implementation plan (SIP)

An air quality plan mandated by the Federal Clean Air Act that contains procedures to monitor, control, maintain, and enforce compliance with federal air quality standards.

Statewide Transportation Improvement Program (STIP)

Statewide budget and programming document for funding. Required by the ISTEA legislation as a prioritized, fiscally constrained list of transportation projects that covers, at a minimum, a three-year period. STIPs are compiled by the Oregon Department of Transportation in order to program authorized levels of federal funding.

Systems development charge (SDC)

A fee collected from new development by local governments to pay for offsite public facility improvements to mitigate impacts associated with development. SDCs are imposed on development projects by local governments to cover the capital costs for certain types of infrastructure and public facilities needed to serve those developments. Under Oregon's SDC Act of 1989, transportation facilities are eligible capital improvements that may be funded by SDCs. Examples include arterial and collector streets; acquisition of street rights-of-way, easements, and other property interests necessary to construct a capital improvement; and traffic control devices.

Traffic calming

A variety of techniques designed to reduce the speed and impacts of motor vehicle traffic. It is an attempt to mix the different modes of transportation and to create an efficient mix between them. Examples include road humps, roundabouts, and woonerfs.

Transit station

Major transit station

Provides room for three or more buses for customer transfers and facilitate bus operations. A major transit station typically includes a larger facility than minor stations to accommodate passenger transfers (to three or more routes and/or serves major destinations) and may include parking for customers and restrooms for Lane Transit District employees or the public. A major station is usually an off-street facility.

Minor transit station

Provides room for two or three buses. Minor transit stations are primarily large bus turnouts near key intersections to facilitate customer transfers (to two to four routes) or bus operations. Minor stations may include parking. Typically, a minor transit station is an on-street facility.

Transit-oriented development (TOD)

A mix of residential, retail, and office uses and a supporting network of roads, bicycle, and pedestrian ways focused on a major transit stop designed to support a high level of transit use. The key features of transit-oriented development include:

- A mixed-use center at the transit stop, oriented principally to transit riders and pedestrian and bicycle travel from the surrounding area;
- High density of residential development proximate to the transit stop sufficient to support transit operation and neighborhood commercial uses within the TOD; and
- A network of roads, and bicycle and pedestrian paths to support high levels of pedestrian access within the TOD and high levels of transit use.

TransPlan

The Eugene-Springfield Metropolitan Area Transportation System Plan (TSP). A policy document intended to guide transportation system planning in the Eugene-Springfield metropolitan area by setting forth goals, policies, and implementation actions.

Transportation Demand Management (TDM)

Demand-based techniques that are designed to change travel behavior in order to improve performance of transportation facilities and to reduce need for additional road capacity. Methods include the use of alternative modes, ride-sharing and vanpool programs, and trip-reduction ordinances.

Transportation disadvantaged

Persons who must rely on public transit or paratransit services for most of their transportation. Typically refers to individuals without access to a personal vehicle.

Transportation improvement program (TIP)

Required by the ISTEA legislation as a prioritized fiscally constrained list of transportation projects that covers, at a minimum, a three-year period. TIPs are compiled by a metropolitan planning organization in order to program authorized levels of federal funding.

Transportation Planning Rule (TPR)

A state planning administrative rule, adopted by the Land Conservation and Development Commission in 1991 and amended in 1995 and 1998, to implement state land use planning Goal 12, *Transportation*. The TPR requires metropolitan areas to show measurable progress towards reducing reliance on the automobile.

Transportation pricing measures

Market-based user fees used to manage traffic congestion and to partially support financing of future infrastructure and transportation services.

Transportation Rule Implementation Project (TRIP)

Document that contains recommended amendments to the Eugene code to address the requirements of the Transportation Planning Rule. The recommendations were prepared by a multijurisdictional team that consisted of staff from the City of Eugene, Lane County, and Lane Transit District.

Transportation System Improvements (TSI)

Supply side improvements of the transportation system. Strategies include the full range of system improvements from improving the capacity and efficiency of the existing system to the construction or expansion of a new facility. TSI strategies are not limited to improvements for the automobile but also incorporate system improvements, expansion, and construction for transit, bicycles, and pedestrians.

Transportation system plan (TSP)

A plan for one or more transportation facilities that are planned, developed, operated, and maintained in a coordinated manner to supply continuity of movement between modes, and within and between geographic and jurisdictional areas. Specific requirements are detailed in the Transportation Planning Rule.

Travel forecasting model

A technique for predicting future human choices in travel by using current travel trends in conjunction with future population, employment, and land use projections.

Unified Planning Work Program (UPWP)

An annual document that describes the transportation planning activities for a metropolitan area. ISTEA requires that each metropolitan planning organization develop this document as a prerequisite to obtaining federal planning funds.

Urban standards

Standards for all arterial and collector streets that include curb, gutter, underground drainage, and sidewalks, unless otherwise noted. When provisions for bicycles are anticipated, they are specifically mentioned.

Vehicle miles of travel (VMT)

Each mile traveled by a private vehicle. For example, one vehicle that makes a five-mile car trip would generate five vehicle miles of travel. A requirement of the state Transportation Planning Rule is to reduce vehicle miles traveled per capita.

Vehicle trip

Each time a private vehicle goes from one address to another for a purpose, a vehicle trip is counted, regardless of the number of people in the vehicle.

List of Acronyms

ADA	Americans with Disabilities Act
ADT	Average daily traffic
BRT	Bus Rapid Transit
CAAA	Clean Air Act Amendments of 1990
CATS	Central Area Transportation Study
CIP	Capital improvement program
Decision Package	Policy Makers' Decision Package for Draft Plan Direction
DEQ	Department of Environmental Quality
DLCD	Department of Land Conservation and Development
EPA	U.S. Environmental Protection Agency
EQC	Environmental Quality Commission
ESATS	Eugene-Springfield Area Transportation Study
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
HCM	Highway Capacity Manual
HCS	Highway Capacity Software
HOV	High-occupancy vehicle
ISTEA	Intermodal Surface Transportation Efficiency Act
ITS	Intelligent transportation systems technology
LCDC	Land Conservation and Development Commission
LCOG	Lane Council of Governments
LOS	Level of service
LRAPA	Lane Regional Air Pollution Authority
LTD	Lane Transit District
LUM	Land use measures
Metro Plan	Eugene-Springfield Metropolitan Area General Plan
MIS	Major investment study
MPC	Metropolitan Policy Committee
MPO	Metropolitan Planning Organization
NAAQS	National Ambient Air Quality Standards
NHS	National Highway System
O&M	Operations and maintenance
OM&P	Operations, maintenance, and preservation
OAR	Oregon Administrative Rules
ODOT	Oregon Department of Transportation
OHP	1991 Oregon Highway Plan

ORFS	Oregon Roads Finance Study
OTC	Oregon Transit Commission
OTP	Oregon Transportation Plan
PCR	Pavement Condition Rating
RAC	Lane County Roads Advisory Committee
RCI	Roadway Congestion Index
ROW	Right-of-way
SDC	Systems development charge
SHTF	State Highway Trust Fund
SIP	State Implementation Plan
SOV	Single-occupant vehicle
STA	Special transportation areas
STFAC	Special Transportation Fund Advisory Committee
STIP	Statewide Transportation Improvement Program
STP	Surface Transportation Program
TCM	Transportation control measure
TDM	Transportation demand management
TEA 21	Transportation Equity Act for the 21st Century
TIP	Transportation improvement program
TMA	Transportation Management Association
TOD	Transit-oriented development
TPC	Transportation Planning Committee
TPR	Transportation Planning Rule
TRIP	Transportation Rule Implementation Project
TSI	Transportation system improvements
TSP	Transportation system plan
TUF	Transportation utility fee
UGB	Urban growth boundary
UPWP	Unified Planning Work Program
V/C	Volume to capacity
VMT	Vehicle miles of travel

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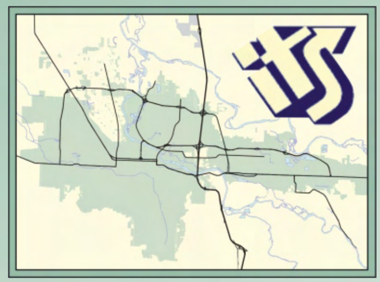
APPENDIX E

EXECUTIVE SUMMARY:

REGIONAL ITS OPERATIONS & IMPLEMENTATION PLAN FOR THE EUGENE-SPRINGFIELD METROPOLITAN AREA



Regional ITS Operations & Implementation Plan for The Eugene-Springfield Metropolitan Area

Executive Summary

November 2003

Prepared by

DKS *Associates*
TRANSPORTATION SOLUTIONS & IBI GROUP

In association with

ODOT
Lane County
City of Eugene
City of Springfield
Lane Council of Governments
Lane Transit District
Federal Highway Administration

Acknowledgements

Many people assisted with the preparation of the *Regional ITS Operations & Implementation Plan for the Eugene-Springfield Metropolitan Area*. DKS Associates wishes to acknowledge the Steering Committee, all of the workshop participants, and the following people for providing valuable input towards the preparation of this plan.

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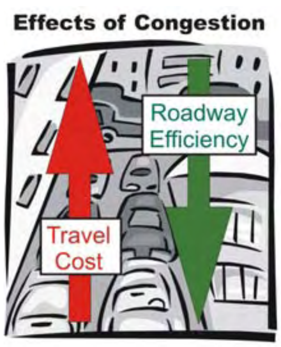
Project Background

A collective effort by the Oregon Department of Transportation (ODOT), Lane County, the City of Eugene, the City of Springfield, the Lane Council of Governments (LCOG), and the Lane Transit District (LTD) has led to the *Regional Intelligent Transportation System (ITS) Operations & Implementation Plan for the Eugene-Springfield Metropolitan Area*. This plan strives to deploy ITS projects, which include advanced technologies and management techniques, to improve the safety and efficiency of the transportation system over the long term. It is also consistent with similar efforts in other regions and statewide to ensure the ITS strategies utilized are integrated and complementary. This document provides the Executive Summary of the Final Report.

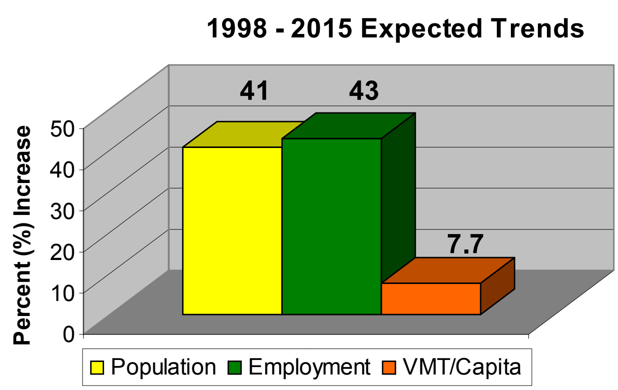
The Problem

From 1996 to 2001, the amount of annual delay increased from 595 to 1,236 person-hours in the Eugene-Springfield metropolitan area, according to an annual urban mobility report[1]. The report also estimates that the annual cost of congestion increased from $10 to $25 million during that same time period. Congestion results in travel delay, reduced productivity, and a frustrated driving public.



The population in Lane County grew 14 percent from 1990 to 2000 according to the *2000 Census*, and LCOG's forecasts in the *TransPlan* indicate that from 1998 to 2015 the population in the Eugene-Springfield metropolitan area will grow 41 percent and employment will grow 43 percent. Other trends predicted by LCOG include a 7.7 percent increase in vehicle miles traveled per capita and a 293 percent increase in congested miles traveled as a percent of total miles traveled (a jump from 2.7 percent of total miles traveled to 10.6 percent). The expected growth in population, employment, and vehicle miles of travel will place an enormous burden on the existing transportation infrastructure.

At the same time, public agencies have come to realize that building new transportation infrastructure as the single means of relieving congestion is not feasible, particularly due to high land and construction costs and environmental constraints. 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 includes applying Intelligent Transportation Systems (ITS) in conjunction with new roadway construction.



The Opportunity

ITS applications provide a viable opportunity for improving the safety and efficiency of the surface transportation system in the Eugene-Springfield metropolitan area. These applications help improve transportation system operations by performing a function more quickly or reliably or by providing a service that was not previously available. In effect, ITS improves the mobility of people and goods on the existing roadways and also provides the potential for substantial savings on future construction, particularly of highways. It is often easy to overlook the importance of investing in operations, but it is necessary to ensure that the traveling public makes safe and efficient use of existing roadways.

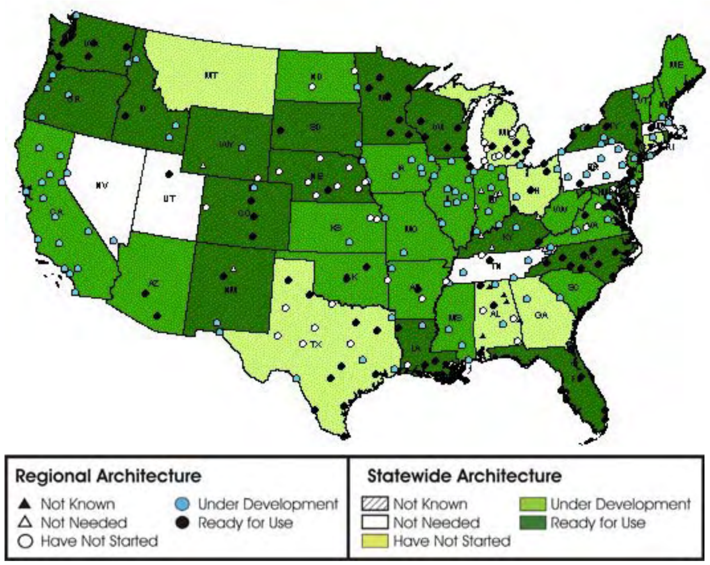
[1] Schrank, David and Tim Lomax. The 2003 Annual Urban Mobility Report, Texas Transportation Institute, Texas A&M University System, Sept. 2003.

Project Background

What is ITS?

Intelligent Transportation Systems (ITS) involve the application of advanced technologies and proven management techniques to solve transportation problems, enhance safety, provide services to travelers, and assist transportation system operators in implementing suitable traffic management strategies. ITS focuses on increasing the efficiency of existing transportation infrastructure, which enhances the overall system performance and reduces the need to add capacity (e.g., travel lanes). Efficiency is achieved by providing services and information to travelers so they can (and will) make better travel decisions and to transportation system operators so they can better manage the system.

Why Develop an ITS Plan?

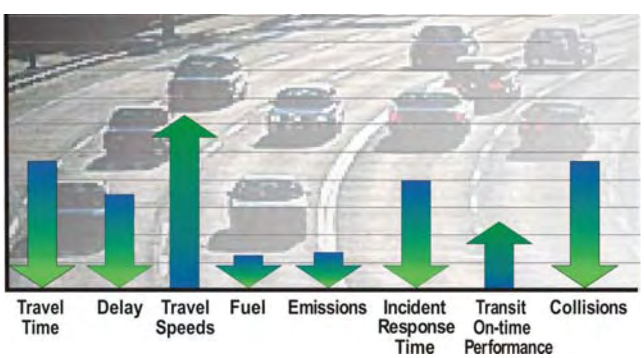


An ITS plan provides a framework of policies, procedures, and strategies for integration of a region's existing resources to effectively meet future regional transportation needs and expectations. The following reasons provide the basis for developing an ITS plan for the Eugene-Springfield metropolitan area:

- The region cannot build itself out of congestion.
- The region endeavors to maximize the efficiencies and improve the safety of the existing infrastructure.
- The public demands better information about traffic congestion.
- The plan fosters mulit-agency coordination for system operations.
- The Federal Highway Administration requires that all ITS projects funded through the Highway Trust Fund shall be in conformance with the National ITS Architecture and applicable standards.

What are the Expected Benefits?

Intelligent Transportation System projects are aimed at improving the safety and operational efficiency of our existing transportation infrastructure by reducing vehicle delays related to recurrent and non-recurrent congestion, reducing accidents and incident response times, and providing travelers with real-time information to make informed route and mode choice decisions. Quantifiable benefits resulting from Intelligent Transportation Systems include:



- Reduced vehicle delays
- Reduced accidents
- Improved air quality
- Reduced fuel consumption
- Improved travel times

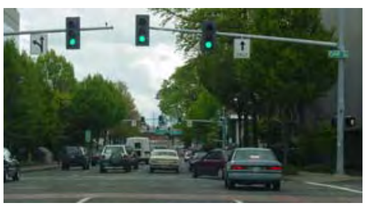
Other accrued benefits, which are more difficult to quantify, include reduced driver frustration and reduced driver anxiety from having real-time travel information. Additionally, improved efficiency due to coordinated and cooperative agency actions can produce long term savings, particularly in relation to coordinating regional projects and a coordinated regional response to incidents.

Project Background

To estimate the potential benefits resulting from the proposed projects within this plan, the ITS Deployment Analysis System (IDAS), developed by the Federal Highway Administration, was used. This software uses the regional travel demand model for the base conditions and proposed ITS projects can be deployed onto the existing Eugene-Springfield network. The software identifies the resulting potential reduction in delays, fuel consumption, emissions and accidents deployed within the network. Based on this benefits analysis, the potential benefits associated with the proposed 10-year deployment plan are significant. Overall, the expected benefit-to-cost ratio for the implementation of the full 10-year plan is approximately 10 to 1. The table at right summarizes the expected benefits for the forecast year 2015 as they relate to our project goals. This section also includes example benefits from other projects around the State and the County.

Benefits from 10-Year ITS Deployment Plan

Project Goal	Projected Benefit/Day
Improve and Maintain a Safe Transportation System	✓ 9 Percent Reduction in Crashes
Improve the Efficiency of the Transportation System	✓ 100 Hours Saved Daily by Travelers ✓ 24,000 Gallons Fuel Saved ✓ 10 Percent Reduction in Emissions ✓ Travel Time Reliability Improved 67 Percent
Deploy Functional and Cost Effective ITS Infrastructure	✓ 10-to-1 Benefit-to-Cost Ratio



Coordinated Signal Timings

State-of-the-art traffic signal systems, with communication to a central computer and coordinated signal timing plans have proven to produce substantial benefits to the public. Examples from local coordinated signal timing projects in Oregon have produced the following benefits:

- 10- to 40-percent reduction in stops
- 5- to 25-percent reduction in travel time
- 15- to 45-percent reduction in delay
- Up to 15-percent reduction in fuel consumption

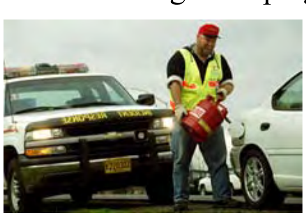
Ramp Meters

Ramp meters are used to regulate the flow of traffic onto a freeway. The purpose of a ramp meter is to smooth the flow of traffic on the freeway and to reduce accidents resulting from merging conflicts. In 2000, Minneapolis, Minnesota shut down all of its ramp meters and performed a benefits assessment. The results of this assessment showed ramp meters were responsible for:

- 21-percent reduction in crashes
- 22-percent decrease in travel times
- 10-percent increase in the volume of traffic accommodated by area freeways

Incident Management

The Oregon Department of Transportation in association with the Oregon State Police currently operates an incident management program in Region 2 to assist disabled vehicles. The incident management program includes incident response vehicles that patrol the Region 2 roadways to assist motorists and reduce the duration of incidents and reduce the resulting traffic congestion. Based on a recent evaluation of the program[2], the following benefits have been produced:



- 15-percent reduction in average incident duration
- 35-percent reduction in vehicle-hours incident delay

[2] *Evaluation of Region 2 Incident Response Program Using Archived Data*, Portland State University, June 30, 2001.

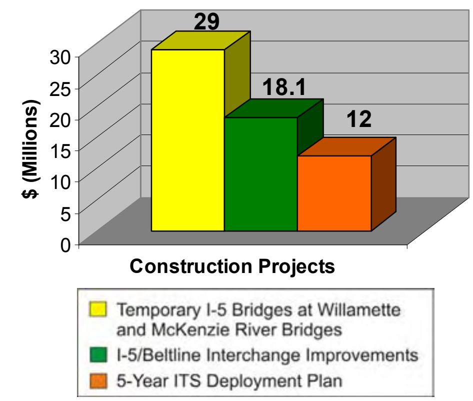
Project Background

Traveler Information

The dissemination of real-time traveler information provides travelers the ability to make informed travel choices, which could include changing a route, or selecting an alternate mode of travel. The resulting benefits include:

- 7- to 12- percent reduction in travel time
- Up to 33- percent reduction in emissions

Project Cost Comparison



Cost Comparison

ITS components can be deployed throughout the Eugene-Springfield Metropolitan area for a fraction of the cost of large construction projects.

Project Approach

The figure below illustrates the project approach for the development of an ITS plan for the Eugene-Springfield metropolitan area. The stakeholder outreach program has been an integral part of developing a cooperative plan that meets regional needs regardless of jurisdiction.

A Steering Committee composed of key stakeholders from regional transportation agencies guided the project with additional input from expanded stakeholders that represented local emergency management agencies, the City of Coburg, and the University of Oregon. Key stakeholder outreach activities included the following:

- Monthly Steering Committee meetings
- Interviews with key stakeholders to collect transportation user needs information
- Two expanded stakeholder meetings (User Needs and Deployment Plan)

The following sections describe the results of the plan process for the 20-year Eugene-Springfield ITS Plan, with particular focus on these six interest areas:

- Travel & Traffic Management
- Communications
- Public Transportation Management
- Emergency Management
- Information Management
- Maintenance & Construction Management

Key Stakeholders	Expanded Stakeholders
Oregon Department of Transportation Lane County City of Eugene City of Springfield Lane Council of Governments Lane Transit District Federal Highway Administration	City of Coburg University of Oregon Public Agency Network Central Lane Communications Oregon State Police City of Eugene Police Department City of Eugene Fire & EMS Department City of Springfield Police Department City of Springfield Fire & Life Safety

Mission, Goals & Objectives

Our Mission Statement is:

The Eugene-Springfield area strives to enhance the safety and efficiency of multi-modal travel through the use of advanced technologies, transportation management techniques, agency coordination, and partnerships.

The following project goals and objectives were developed to obtain our mission:

Goal #1: Build consensus and improve coordination among project stakeholders.

Build consensus among the Steering Committee members.
Build a coalition among all ITS stakeholders in the Eugene-Springfield metropolitan area.
Share resources between local and regional agencies.
Coordinate and integrate projects with other agencies.
Promote public and private partnerships for ITS deployment, operations, and maintenance.
Develop a concept of operations with a seamless interface between agencies.

Goal #2: Improve and maintain a safe transportation system.

Reduce frequency, duration, and effects of incidents.
Reduce emergency response times.
Reduce recurrent congestion.
Coordinate incident response with other local and regional agencies.

Goal #3: Improve the efficiency of the transportation system.

Improve travel time for vehicles, including transit vehicles.
Reduce travel time variability.
Reduce fuel consumption and environmental impacts.
Improve transit service reliability.
Improve maintenance and operations efficiencies.

Goal #4: Deploy functional and cost efficient ITS infrastructure.

Deploy systems that fit in with future improvements.
Deploy systems with a high benefit-to-cost ratio.
Deploy systems that maximize the use of existing infrastructure.
Deploy systems with minimal use of maintenance and operational support.
Integrate deployments with other local and regional projects.

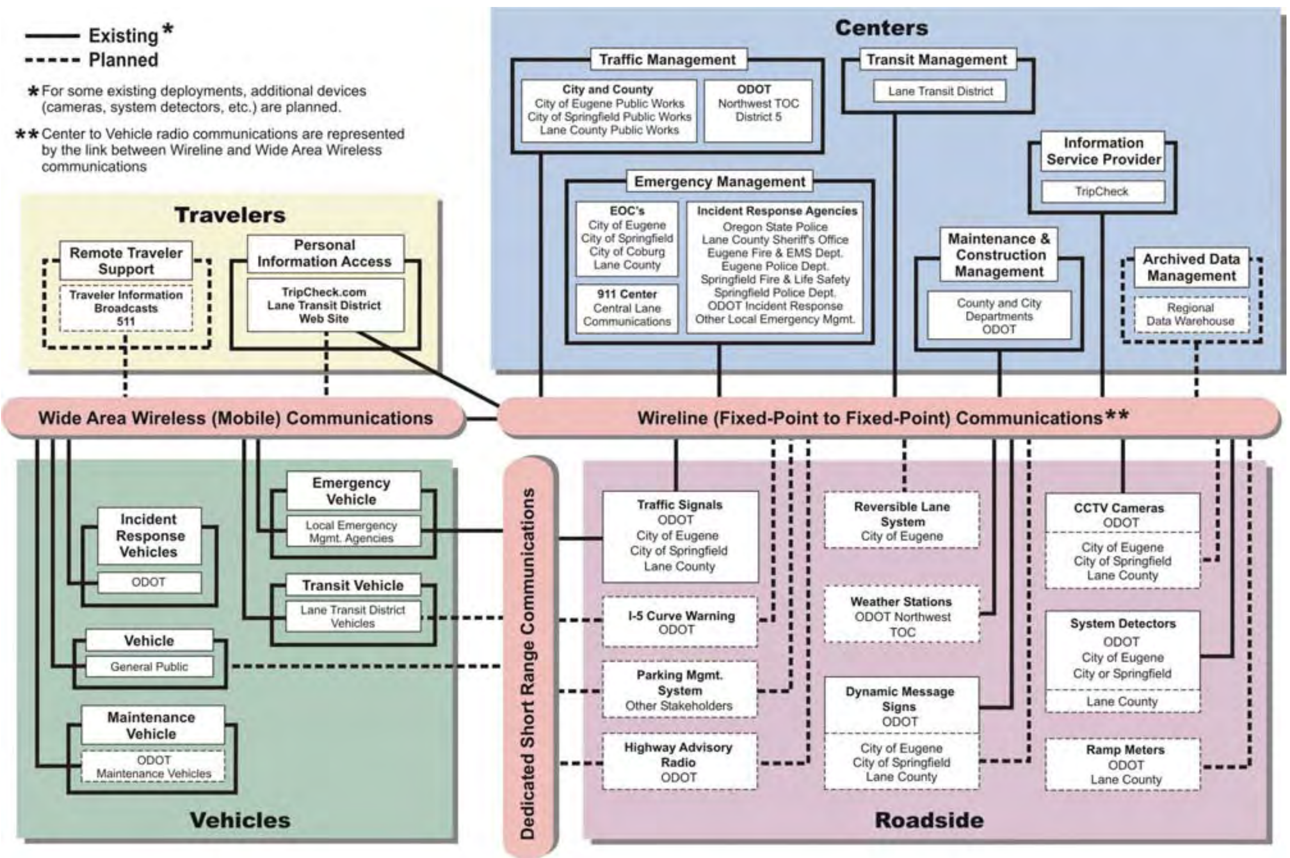
Goal #5: Develop a commitment to ITS deployment in the Eugene-Springfield area.

Create a regional architecture that complements the statewide architecture.
Develop a phased implementation process based on a prioritized project list.
Identify unique funding in addition to utilizing traditional funding sources.
Develop a process that ensures program continuation.
Integrate the ITS Plan with the Central Lane TMA regional transportation plan and other transportation plans in the region.

Eugene-Springfield ITS Architecture

The National ITS Architecture and the Oregon Statewide ITS Architecture provide the basis for the Eugene-Springfield ITS Architecture. The figure below depicts the physical architecture for the Eugene-Springfield metropolitan area and includes key stakeholders, existing and desired services (or ITS elements), and the necessary interconnections and information flows required to ensure system compatibility and interoperability.

Providing compatibility amongst jurisdictions will enable the region to fully maximize the use of ITS technologies. For example, an LTD bus traveling along ORE 126 must be able to communicate with the traffic signals in both the cities of Eugene and Springfield to allow for transit signal priority. The physical architecture ensures this happens by identifying the connection to the appropriate agencies (ie. LTD, City of Eugene, and City of Springfield) and their equipment (ie. traffic signals and transit vehicles) and the information required to provide the desired service (ie. transit signal priority).



Eugene-Springfield Physical ITS Architecture

Concept of Operations

The concept of operations, which supplements the ITS physical architecture, defines the roles and responsibilities of the participating transportation and public safety agencies and identifies information flows between the agencies in the Eugene-Springfield metropolitan area. The concept of operations defines the responsibilities of the various agencies providing ITS services in the region for activities such as design, construction, integration, planning, operations and maintenance. In addition, the concept of operations defines the level and types of information shared between agencies such as data, video, status, request and control.

ITS Deployment Plan

The Eugene-Springfield Deployment Plan is organized into three time frames: 0-5 years, 6-10 years, and 11-20 years. Based on stakeholder input and key findings from system evaluations, the projects recommended for implementation in the Eugene-Springfield metropolitan area have been organized and described by the following program areas:

- Travel & Traffic Management (TM)
- Communications (CO)
- Public Transportation Management (PTM)
- Emergency Management (EM)
- Information Management (IM)
- Maintenance & Construction Management (MC)

Each program area is described on the following pages, with additional details in Tables 1 - 4 about projects included in the 5-Year Plan. A key component of the 5-Year Plan is the implementation of traveler information collection devices on the primary corridors.

Table 5 summarizes the complete list of projects along with pertinent details. The project numbers used in this table are for reference purposes only and do not indicate any type of priority. A priority of high (H), medium (M), or low (L) is assigned to each project in the table and correlates to the 5-Year Plan, 10-Year Plan, and 20-Year Plan, respectively. Priorities are based on existing and future corridor operation, focusing on recurrent congestion, traffic data, bottlenecks and accident data. Figure 1 provides a graphic summary of the full 20-Year ITS Plan.

Travel & Traffic Management

Projects within this Program Area are focused on improving the efficiency and safety of our existing roadway system by providing tools to better manage the existing infrastructure, to coordinate with regional partners and to provide traveler information to the public. The following projects are part of the 5-Year Plan.

Regional Freeway Congestion Management

The purpose for these projects is to improve travel time, to reduce incident response time, and to reduce crashes and the effects of crashes. To accomplish this purpose the following items will be deployed in the 5-Year Plan.

Table 1. Capital Costs for 5-Year Regional Freeway Congestion Management Plan

Surveillance, Traffic Control & Management	Capital Cost
Beltline Highway (Install CCTV, dynamic message signs, ramp meters, system detectors, and communications from River Rd to I-5)	$3,250,000
I-5 (Install CCTV, dynamic message signs, and communications)	$1,400,000
I-105 (Install CCTV and communications)	$320,000
ORE 126 (Install CCTV, system detectors, and communications)	$820,000
Traveler Information	**Capital Cost**
Display CCTV images and congestion/incident information on TripCheck	$150,000
Install Highway Advisory Radio (HAR) for the metropolitan area	$350,000
Communications	**Capital Cost**
Install fiber optic communications to interconnect agencies as the base for the Virtual TOC	$2,000,000
Planning	**Capital Cost**
Develop Incident Management Operational Plans	$200,000
Develop an Evacuation Route Plan	$120,000
TOTAL:	**$8,610,000**

Northwest Transportation Operations Center (NWTOC)

Permanent Dynamic Message Sign

CCTV Camera

Regional Arterial Congestion Management

These projects are intended to improve travel time and reduce crashes and the effects of crashes. To accomplish this purpose the following 5-Year Plan items will be deployed.

Beltline Rd at Gateway St

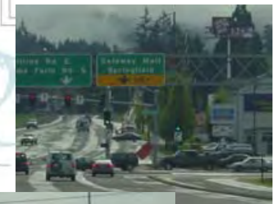
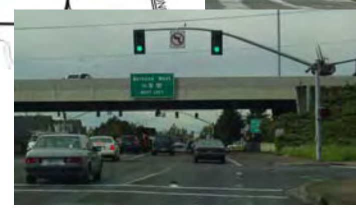


Table 2. Capital Costs for 5-Year Regional Arterial Congestion Management Plan

Surveillance, Traffic Control & Management	Capital Cost
Coburg Road (Install CCTV at key intersections, count stations for collection of congestion information, and fiber optic communications to traffic signals on Coburg Road and between Coburg Road and the City of Eugene; Update coordinated signal timings)	$500,000
Gateway Street (Install traffic responsive signal timings, count stations and fiber optic communications; Transmit existing video detection images to the City of Springfield)	$125,000
30th Avenue (Install coordinated signal timings near I-5)	$10,000
Traveler Information	**Capital Cost**
Display CCTV images and congestion/incident information on TripCheck	$100,000
TOTAL:	$735,000



Coburg Rd at Beltline Hwy

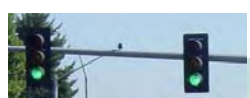
Fiber Optic Cable Terminations

Communications

The Communications system plays an integral part in the deployment of the projects in the other five program areas by providing a network for information flows to and from field devices and stakeholder agencies. There are two projects slated for deployment during the 5-Year Plan: (1) the documentation of communications standards to ensure standardization and compatibility throughout the region and (2) the integration of radio infrastructure amongst regional agencies. For the most part, the communications network needed to support the ITS Plan will be deployed on a project-by-project basis throughout the next 20 years.

Public Transportation Management

Public Transportation Management technologies address two major aspects of transit operations: (1) transit traveler information systems and (2) transit agency operations and management. The projects in this category build off of the current LTD effort to deploy vehicle location technologies and a new computer aided dispatch system. Some of the benefits of these projects include more reliable bus travel times and improved transit traveler information. These 5-Year Plan projects include:

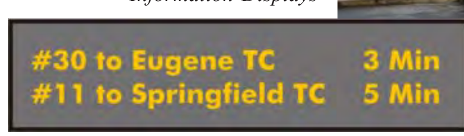


Transit Priority

Table 3. Capital Costs for 5-Year Public Transportation Management Plan

Management	Capital Cost
Deploy automated vechicle locators (AVL), automatic passenger counters (APC), and a computer-aided dispatch (CAD) system on all main fleet coaches	$1,800,000
Traveler Information	**Capital Cost**
Provide real-time transit arrival information at key bus stops/transit centers and at special events	$500,000
Provide real-time transit information on the Internet	$350,000
Provide automated passenger information systems	$500,000
Traffic Control	**Capital Cost**
Deploy transit priority on Franklin Boulevard, Coburg Road and Pioneer/MLK Parkway	$600,000
TOTAL:	$3,750,000

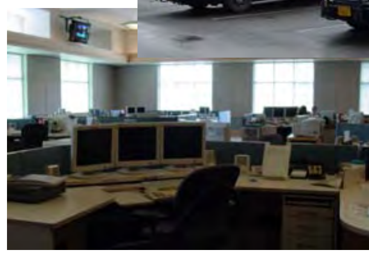
Real-Time Customer Information Displays



ITS Deployment Plan

Emergency Management

Central
Lane 911



ODOT Region 2
Incident Response

The purpose of the Emergency Management projects is to reduce emergency response times and to integrate emergency management with transportation and transit management. The emergency response projects included in the ITS Plan are highly dependent on the deployment of key travel and traffic management and communications projects, therefore none of these projects are included in the 5-Year Plan.

Information Management

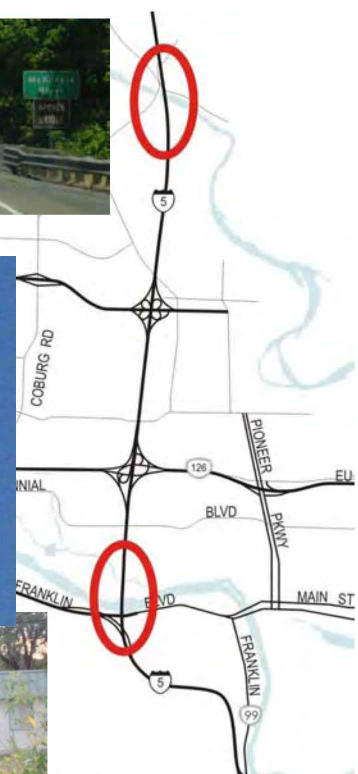
A critical part of this ITS Plan includes collecting, archiving, and managing all sorts of transportation-related data. Since much of the data collection is closely tied to projects that deploy field devices and systems to collect data, the main information management project has been included in the 10-Year Plan.

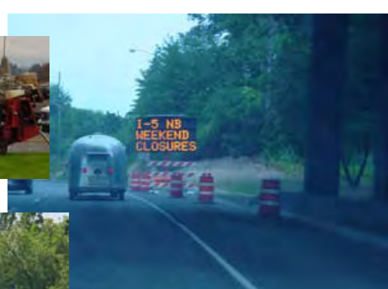
Maintenance & Construction Management

These projects are aimed at improving the safety of motorists and workers in construction zones. In addition, these projects are aimed at improving the efficiency of work zone management and control.

Table 4. Capital Costs for 5-Year Maintenance & Construction Management Plan

Surveillance	**Capital Cost**
Install CCTV on I-5 to monitor bridge reconstruction work zones and to provide traveler information	$75,000
Traveler Information	**Capital Cost**
Include driver feedback signs to display speed information and alert drivers traveling at a high rate of speed; Install portable dynamic message signs and install variable speed limit signs to dynamically adjust the speed limit through the work zones on I-5	$200,000
Communications	**Capital Cost**
Install fiber optic communications across the new bridges to connect to field devices on I-5	$125,000
Planning	**Capital Cost**
Develop work zone management standards	$50,000
TOTAL:	**$450,000**





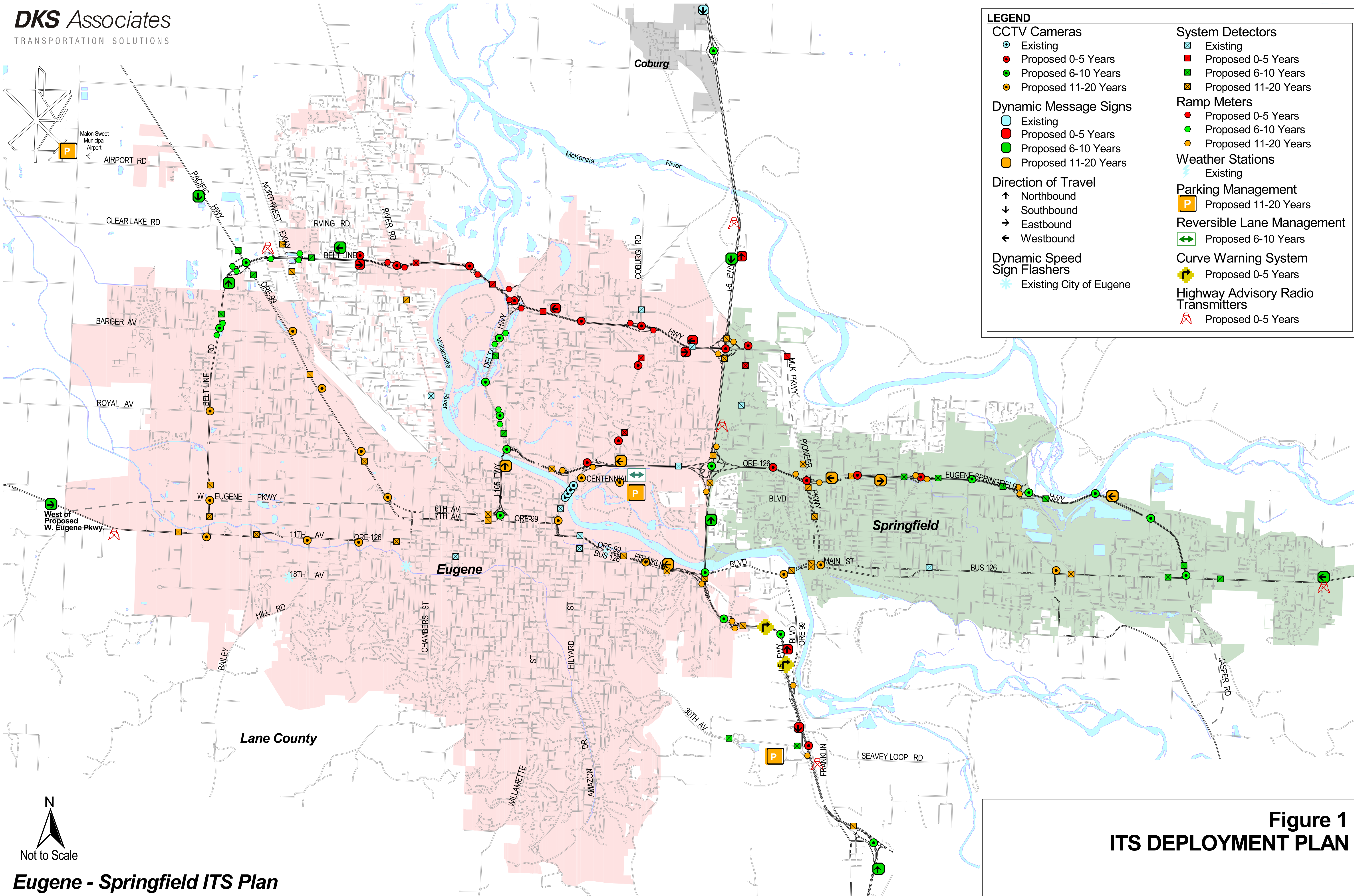

DKS Associates
TRANSPORTATION SOLUTIONS
LEGEND
CCTV Cameras
Existing
Proposed 0-5 Years
Proposed 6-10 Years
Proposed 11-20 Years
Dynamic Message Signs
Existing
Proposed 0-5 Years
Proposed 6-10 Years
Proposed 11-20 Years
Direction of Travel
Northbound
Southbound
Eastbound
Westbound
Dynamic Speed Sign Flashers
Existing City of Eugene
System Detectors
Existing
Proposed 0-5 Years
Proposed 6-10 Years
Proposed 11-20 Years
Ramp Meters
Proposed 0-5 Years
Proposed 6-10 Years
Proposed 11-20 Years
Weather Stations
Existing
Parking Management
Proposed 11-20 Years
Reversible Lane Management
Proposed 6-10 Years
Curve Warning System
Proposed 0-5 Years
Highway Advisory Radio Transmitters
Proposed 0-5 Years
Coburg
Eugene
Springfield
Lane County
West of Proposed W. Eugene Pkwy.
N
Not to Scale
Eugene - Springfield ITS Plan
Figure 1
ITS DEPLOYMENT PLAN

Table 5. Proposed Deployment Projects

Project Number	Project Title	Project Description	Priority	Relativity to Planned Projects	Project Dependencies	Capital Costs/ O&M Costs[1]	Expected Benefits	Technical and Institutional Feasibility
Travel & Traffic Management (TM)								
ES-TM-01	Regional Virtual Transportation Operations Center (TOC)	Project will determine the functional requirements for systems interfaces to traffic and transit management agencies, emergency management agencies, the NWTOC in Salem, and regional field devices.	M	ODOT Statewide TOC Software Project; This project relates to most of the Travel & Traffic Management projects included in this plan.	Depends on the planned communications installed between the NWTOC and ODOT District 5. Also depends on communications installed to field devices.	$200,000/ $125,000	● Information sharing capabilities ● Back-up capabilities ● More effective traffic management, incident management, and maintenance management ● Safety and efficiency improvements	Requires communications between City of Eugene, City of Springfield, Lane County, ODOT District 5, and the NWTOC.
ES-TM-02	Regional Freeway Surveillance and Management	Project will develop and deploy an integrated multi-jurisdictional regional freeway surveillance and management system that provides for traffic-responsive freeway control and sharing of roadside subsystems.	H, M, L	See Related ES-TM-02 Projects.	See Related ES-TM-02 Projects.	See Related ES-TM-02 Projects.	● Integration of multi-jurisdictional freeway and arterial systems ● Improved safety and efficiency of freeways, therefore reducing delay and emergency response times	See Related ES-TM-02 Projects.
ES-TM-02A	I-5 Freeway Surveillance and Management	Project includes the installation of the following devices on I-5: ● CCTV Cameras ● DMS ● System-Wide Ramp Meters & System Detection ● Curve Warning System	 H, M, L H, M L H	*TransPlan* Projects #250 & 606; ES-TM-07A	Requires communications connection to the NWTOC and ODOT District 5.	$4,900,000/ $125,000	● More effective traffic management, incident management, and maintenance management ● Timely and cost-effective complaint response ● Increase in information available to travelers through DMS and the TripCheck web site ● Availability of additional volume, speed, and occupancy data	Improvements at I-5/Beltline Hwy can be incorporated with planned capital improvements.
ES-TM-02B	Beltline Highway Freeway Surveillance and Management	Project includes CCTV cameras, DMS, system-wide ramp meters, and system detection on the following corridors: ● River Rd to I-5 ● Barger Rd to NW Expressway ● W 11th Ave to Barger Rd	 H M L	*TransPlan* Projects #312, 409, 506, 606, 607, 622 & 638; ES-TM-07C	Requires communications connection to the NWTOC and ODOT District 5.	$6,100,000/ $175,000		Parts of this project can be incorporated with planned capital improvements.
ES-TM-02C	Eugene-Springfield Highway (OR 126) Freeway Surveillance and Management	Project includes the installation of the following field devices: ● CCTV Cameras ● DMS ● System-Wide Ramp Meters & System Detection	 H, M L L	*TransPlan* Projects #96, 821 & 835; ES-TM-07B	Requires communications connection to the NWTOC and ODOT District 5.	$3,400,000/ $100,000		Parts of this project can be incorporated with planned capital improvements.
ES-TM-02D	I-105 Freeway Surveillance and Management	Project includes CCTV cameras, DMS, system-wide ramp meters, and system detection at the following locations: ● Delta Hwy Interchange ● Coburg Rd Interchange	 M, L M, L	*TransPlan* Project #151; ES-TM-07B	Requires communications connection to the NWTOC and ODOT District 5.	$1,620,000/ $40,000		Parts of this project can be incorporated with planned capital improvements.
ES-TM-02E	Delta Highway Freeway Surveillance and Management	Project includes CCTV cameras, ramp meters, and system detection.	M	*TransPlan* Project #638	Requires communications connection to the NWTOC and Lane County.	$980,000/ $35,000		The close proximity of Lane County's offices to Delta Highway will cut down on communications costs.
ES-TM-03	Regional Arterial Surveillance and Management	Project will develop and deploy an integrated multi-jurisdictional regional arterial surveillance and management system that provides for traffic-responsive corridor management and sharing of roadside subsystems.	H, M, L	See Related ES-TM-03 Projects.	See Related ES-TM-03 Projects.	See Related ES-TM-03 Projects.	● Integration of multi-jurisdictional arterial systems	See Related ES-TM-03 Projects.

Table 5. Proposed Deployment Projects

Project Number	Project Title	Project Description	Priority	Relativity to Planned Projects	Project Dependencies	Capital Costs/ O&M Costs[1]	Expected Benefits	Technical and Institutional Feasibility
ES-TM-03A	Pacific Highway (OR 99) Arterial Surveillance and Management	Project includes the following deployment elements: ● CCTV Cameras ● DMS ● System Detection ● Replacement of Twisted-Pair Copper with Fiber Interconnect ● Signal Timing Coordination	 M, L M M, L M M, L	ES-TM-07C	Requires communications to the City of Eugene Public Works Office and the NWTOC.	$940,000/ $40,000	● Improved safety and efficiency of arterial corridors, therefore reducing delay and emergency response times ● More effective traffic management, incident management, and maintenance management ● Timely and cost-effective complaint response ● Increase in information available to travelers through DMS and the TripCheck web site ● Availability of additional volume, speed, and occupancy data	The City of Eugene is currently planning to replace their twisted-pair copper interconnect with fiber.
ES-TM-03B	River Road Arterial Surveillance and Management	Project includes the following deployment elements: ● System Detection ● Signal Timing Coordination	 L M, L	Lane County *CIP* Projects; ES-TM-07C	None	$110,000/ $15,000		Parts of this project can be incorporated with planned capital improvements.
ES-TM-03C	Coburg Road Arterial Surveillance and Management	Project includes the following deployment elements: ● CCTV Cameras ● System Detection ● Signal Timing Coordination	 H H H	*TransPlan* Project #619; ES-TM-07A; ES-TM-07C	Requires communications to the City of Eugene Public Works Office and the NWTOC.	$470,000/ $30,000		The traffic signals are already interconnected and are part of the City of Eugene's QuicNet traffic signal system.
ES-TM-03D	6th Avenue/7th Avenue Arterial Surveillance and Management	Project includes the following deployment elements: ● CCTV Cameras ● System Detection	 M, L L	*TransPlan* Project #133; ES-TM-07A; ES-TM-07B; ES-TM-07C	Requires communications to the City of Eugene Public Works Office and the NWTOC.	$90,000/ $6,000		The traffic signals are already connected to the City of Eugene's QuicNet traffic signal system.
ES-TM-03E	W 11th Avenue (OR 126) Arterial Surveillance and Management	Project includes the following deployment elements: ● CCTV Cameras ● DMS ● System Detection ● Signal Timing Coordination	 L M L L	*TransPlan* Projects #332 & 333	Requires communications to the City of Eugene Public Works Office and the NWTOC.	$780,000/ $35,000		The traffic signals are already interconnected and are part of the City of Eugene's QuicNet traffic signal system.
ES-TM-03F	Franklin Boulevard (OR 126 Bus) Arterial Surveillance and Management	Project includes the following deployment elements: ● CCTV Cameras ● DMS ● System Detection ● Signal Timing Coordination	 L L L M, L	City of Eugene *Downtown Vision Study*; ES-TM-07A; ES-TM-07B	Requires communications to the City of Eugene Public Works Office and the NWTOC.	$500,000/ $20,000		The traffic signals are already interconnected and are part of the City of Eugene's QuicNet traffic signal system.
ES-TM-03G	Main Street/A Street (OR 126 Bus) Arterial Surveillance and Management	Project includes the following deployment elements: ● CCTV Cameras ● DMS ● System Detection ● Signal Timing Coordination	 M, L M M, L M, L	*TransPlan* Projects #69, 75 & 838; ES-TM-07A; ES-TM-07B; ES-TM-10	Requires interconnect to signals east of 28th St and communications to the City of Springfield Public Works Office and the NWTOC.	$1,220,000/ $60,000		The traffic signals west of 28th St are already interconnected and are part of the City of Springfield's QuicNet traffic signal system.
ES-TM-03H	Pioneer/MLK Parkway Arterial Surveillance and Management	Project includes system detection.	L	*TransPlan* Project #768; ES-TM-07A; ES-TM-07B	None	$510,000/ $25,000		Part of this project can be incorporated with the planned MLK Parkway construction.
ES-TM-03I	West Eugene Parkway Arterial Surveillance and Management	Project includes CCTV cameras, signal interconnect, and system detection that should be incorporated in the design of the West Eugene Parkway.	H, M	*TransPlan* Project #336	None	$360,000/ $20,000		This project can be incorporated with the design of West Eugene Parkway, a brand new roadway.
ES-TM-04	Reversible Lane Management on MLK/Centennial Boulevard	Project includes the deployment of reversible lane controls on MLK/ Centennial Boulevard for special events or emergency situations.	M	*TransPlan* Projects #818, 924, 927, & 930	Requires communications to the City of Eugene Public Works Office and an interface with affected traffic signals.	$600,000/ $5,000	● Improved use of existing capacity ● Improved safety and efficiency during special event management	This project will require software training.
ES-TM-05	Gateway Area Traffic Responsive Signal Timing	Project includes traffic responsive signal timing development, system detection deployment, and transmission of existing video detection images back to the City of Springfield's Public Works' office.	H	None	None	$130,000/ $7,500	● Improved safety and efficiency of the corridor, therefore reducing delay and emergency response times ● Reduced congestion	The traffic signals along Gateway Street are already interconnected as well as connected to the City of Springfield's central signal system.

Table 5. Proposed Deployment Projects

Project Number	Project Title	Project Description	Priority	Relativity to Planned Projects	Project Dependencies	Capital Costs/ O&M Costs[1]	Expected Benefits	Technical and Institutional Feasibility
ES-TM-06	30th Avenue Signal Timing Coordination near I-5	Project includes signal timing coordination of the two traffic signals on 30th Avenue at the east end of Lane Community College. Conduit currently exists between these two signals.	H	None	None	$10,000/ $750	● Improved safety and efficiency ● Reduced congestion and delay	Empty conduit is available between these two signals for the installation of interconnect cable.
ES-TM-07	Incident Management Operational Plans	Project includes the development of an incident management operational plan that includes the operational protocol for field devices (ie. CCTV cameras, DMS, and system detection on mainline and alternate routes), the development of incident signal timing plans on alternate arterial routes, and clearly defined agency roles and responsibilities for the following corridors:	H, M, L	ES-TM-01; ES-TM-02; ES-TM-03	Requires deployment of field devices and communications infrastructure. Some field devices or communications equipment may be installed as part of other freeway and arterial surveillance and management projects.	Note: All costs for field devices are included in ES-TM-02 and ES-TM-03.	● Availability of real-time freeway and arterial corridor information during incidents ● Increased capacity and throughput during incident conditions ● Improved integration of regional freeway systems with local signal systems ● Reduction in congestion and delay due to incidents ● Reduced incident response times ● Improved safety and efficiency	ODOT Region 1 and the City of Portland have successfully developed and deployed an incident management operational plan on the I-5/Barbur Boulevard corridor. - Alternate routes and some operational procedures have already been established for I-5 as part of the Major Incident Management Plan. The operational plan for I-5 can expand on this and focus on the metropolitan area.
ES-TM-07A		● I-5 (Alternate routes previously identified by local agencies)				$65,000/ $0		
ES-TM-07B		● Eugene-Springfield Highway				$55,000/ $0		
ES-TM-07C		● Beltline Highway				$85,000/ $0		
ES-TM-08	Incident Notification System	Develop an incident notification system that alerts subscribers when incidents occur as well as the location, the transportation impacts, and the expected duration. Subscribers may include public agencies as well as private companies such as companies representing the media.	H	None	Requires deployment of field devices and communications infrastructure to detect and verify incidents.	$70,000/ $0	● Availability of real-time incident information ● Media broadcast capabilities ● Reduced congestion and delay ● Customer satisfaction	ODOT Region 1 has successfully implemented a pager-based notification system that could be used as a model for the Eugene-Springfield metropolitan area.
ES-TM-09	Transit Signal Priority	Give priority at traffic signals only to buses that are behind schedule to support transit operations and schedule adherence. This project includes installing transit priority on the transit fleet as well as upgrading Opticom and traffic signal controllers (as needed) at traffic signals and developing signal timing plans on key corridors.		None	Requires upgrade to 700 series Opticom detectors at traffic signal with older models. Also requires the installation of emitters on the transit fleet.		● Reduced transit delay ● Schedule adherence and reliability ● Reduced operational costs ● Enhanced transit service ● Increased ridership	TriMet and the City of Portland have successfully deployed the technology on several corridors in the City of Portland.
		● Outfit transit fleet with transit priority emitters.	H,M,L			$500,000/ $7,500		
		● Franklin Blvd, Main St/S A St, Pioneer/MLK Pkwy, Gateway St, Game Farm Rd N, Harlow Rd	H			$300,000/ $1,000		
		● Coburg Rd, Crescent Ave, Harlow Rd	M			$55,000/ $1,000		
		● Centennial/MLK Blvd, Pacific Hwy, W 11th Av, W 13th Av, W 18th Av, River Rd, Pearl St, Willamette St, Amazon	L			$95,000/ $1,000		
ES-TM-10	Traffic Signal Interconnect	Install traffic signal interconnect and connect the signals to the QuicNet system at the following locations:	H, M, L		None	$1,000,000/ $10,000	● Capability for advanced operations and more flexibility ● Provides technology needed for other ITS projects in this plan	Sections of traffic signal interconnect can be added to the main system when other nearby projects are constructed. - Traffic signal interconnect should be included as part of the design of the new Jasper Road extension.
		● Valley River Dr/Willagillespie Rd/ Goodspasture Island Rd		ES-TM-02E				
		● Barger Rd		ES-TM-03A				
		● Royal Av/Roosevelt Blvd		ES-TM-03A				
		● Cal Young Rd/Gilham Rd		ES-TM-03C				
		● Green Acres Rd/Crescent Av		ES-TM-02E				
		● Chambers St		None				
		● Main St (28th Av to 69th Av)		ES-TM-03G				
		● Jasper Rd Extension		*TransPlan* Project #66				

Table 5. Proposed Deployment Projects

Project Number	Project Title	Project Description	Priority	Relativity to Planned Projects	Project Dependencies	Capital Costs/ O&M Costs[1]	Expected Benefits	Technical and Institutional Feasibility
ES-TM-11	Integrate Regional Virtual TOC with UO SOS Room	Provide an interface between the Regional Virtual TOC and the UO SOS Room that allows for two-way information sharing, monitoring, and control functions.	M	ES-TM-01; ES-TM-04	Requires communications between the Regional Virtual TOC and the UO SOS Room.	\$100,000/ \$1,000	● Information sharing capabilities ● More effective special event management	The development of the interface will be similar to the emergency management systems interface that will be developed as part of ES-EM-01
ES-TM-12	Beltline Highway Queue Warning System	Deploy a queue warning system on eastbound and westbound Beltline Highway near the Willamette River that includes dynamic signing to warn drivers of upcoming queues.	H, M	ES-TM-02B	None	\$85,000/ \$7,000	● Improved safety ● Reduced amount of rear-end collisions	This project only requires communications between field devices and only requires communications to the NWTOC if permanent DMS are incorporated.
ES-TM-13	I-5 Bridge Security	Project includes the deployment of a bridge surveillance system on the McKenzie River and Willamette River I-5 bridges.	H	I-5 Bridge Reconstruction	Needs to be deployed during I-5 bridge reconstruction.	\$430,000/ \$6,000	● Surveillance and monitoring capabilities ● Improved homeland security	FHWA plans to issue a technical advisory in 2004 regarding bridge security technology.
ES-TM-14	I-5 Bridge Weather Detection and Deicing System	Project includes the installation of a weather detection system and an automatic deicing system on the McKenzie River and Willamette River I-5 bridges.	H	I-5 Bridge Reconstruction	Needs to be deployed during I-5 bridge reconstruction.	\$540,000/ \$22,000	● Real-time weather and pavement conditions ● More efficient allocation of maintenance resources during inclement weather	This project can be incorporated with the design of the two I-5 Bridge modifications.
ES-TM-15	Highway Advisory Radio (HAR)	Deploy a highway advisory radio system that provides traveler information. Project includes both permanent and mobile installations. Permanent installations will be deployed at the five key entry points to the metropolitan area (north, northwest, south, east, and west) and at key central locations.	H	2004 – 2007 Draft STIP Key #12942	Depends on deployment of field equipment (CCTV cameras, system detectors, weather stations, etc…) to collect traveler information.	\$350,000/ \$10,000	● Real-time traveler information ● En-route information that allows users to make informed travel decisions ● Reduced congestion and delay ● Customer satisfaction	WSDOT has implemented highway advisory radio in southern Washington and can be used as a resource during design and construciton.
ES-TM-16	Integrate Regional Traveler Information with TripCheck, 511, and Highway Advisory Radio	Develop an integrated system for disseminating and posting traveler information to TripCheck, 511, and HAR.	H, M, L	National/State 511 Deployment Project; ES-TM-15 (2004 - 2007 Draft STIP Key #12942)	Depends on deployment of field equipment (CCTV cameras, system detectors, weather stations, etc…) to collect traveler information.	\$385,000/ \$10,000	● Real-time and static traveler information ● Pre-trip planning capabilities and en-route information that allow users to make informed travel decisions ● Reduced congestion and delay ● Customer satisfaction	Requires an interface between agencies in the Eugene-Springfield metropolitan area to TripCheck, the 511 system, and the HAR system.
ES-TM-17	Congestion/ Incident Information Mapping	Develop an incident and congestion flow mapping system that shows travel speeds on study area roadways.	H, M, L	ES-TM-02; ES-TM-03	Depends on deployment of system detectors to monitor travel speeds along roadways. Also depends on an interface with incident management personnel.	\$290,000/ \$5,000		The WSDOT Smart Trek (www.smarttrek.org) congestion and incident mapping system can be used as a model for the Eugene-Springfield metropolitan region.
ES-TM-18	Traveler Information at Rest Areas	Provide real-time traveler information at rest areas north and south of the metropolitan area: ● Oak Grove Rest Area (MP 207) ● Gettings Creek Rest Area (MP 177)	M	ES-TM-16	Depends on deployment of field equipment (CCTV cameras, system detectors, weather stations, etc…) to collect traveler information.	\$290,000/ \$10,000	● Pre-trip planning capabilities that allow users to make informed travel decisions prior to entering the metropolitan area ● Reduced congestion and delay ● Customer satisfaction	Real-time information can be disseminated by an internet link to ODOT's TripCheck web site and/or by a sign advertising the 511 traveler information phone number.
ES-TM-19	Rest Area Surveillance System	Deploy security surveillance systems, including several cameras, at rest areas north and south of the metropolitan area: ● Oak Grove Rest Area (MP 207) ● Gettings Creek Rest Area (MP 177)	L	None	None	Cost Included in ES-TM-18	● Surveillance and monitoring capabilities ● Improved security	ODOT Region 1 is currently installing security cameras on the I-5 Columbia River Bridge and similar technology will apply to the rest areas.

Table 5. Proposed Deployment Projects

Project Number	Project Title	Project Description	Priority	Relativity to Planned Projects	Project Dependencies	Capital Costs/ O&M Costs[1]	Expected Benefits	Technical and Institutional Feasibility
ES-TM-20	Advanced Parking Management and Information System	Deploy a parking management system at the following locations to collect real-time parking status information, provide en-route driver information, and electronically manage access to parking facilities: ● Planned UO Basketball/Event Center ● UO Autzen Stadium ● Lane Community College ● Eugene Airport	L	UO plans to construct a new Basketball/Event Center on their campus in downtown Eugene.	None	$750,000/ $20,000	● Real-time information so travelers can make informed decisions about mode choice and parking ● Reduced congestion and air pollution near parking lots ● More efficient use of parking spaces ● Reduced driver frustration when looking for parking	This project will require training staff at the University of Oregon, Lane Community College, and the Eugene Airport.
ES-TM-21	Road Weather Information Systems (RWIS or "Weather Stations")	Deploy road weather information sites that provide temperature and road conditions at the following locations: ● Beltline Highway on the Willamette River Bridge ● I-5 at Coburg Road	M, L	*TransPlan* Project #506	None	$140,000/ $5,000	● Real-time weather and pavement conditions ● More efficient allocation of maintenance resources during inclement weather	ODOT has previous experience with weather stations. - The Beltline Hwy RWIS can be incorporated with planned capital improvements.
ES-TM-22	Advanced Railroad At-Grade Crossings	Detection of an approaching train will allow the dissemination of advance information to emergency management personnel and travelers to allow them to make an informed decision about route choice. Deployment locations include: ● 28th St/Main St Crossing ● Centennial Blvd east of 28th St (not yet constructed) ● Olympic Blvd east of 28th St ● Irving Rd west of Northwest Expwy ● Irvington Rd west of Northwest Expwy ● 42nd St at Weyerhouser	L	*TransPlan* Project #930	None	$700,000/ $10,000	● Enhanced safety ● Real-time railroad activity information ● Alternate route information for travelers ● More efficient allocation of emergency response vehicles ● Reduced emergency response times ● More efficient transit routing	May be difficult to coordinate with railroad companies for the deployment of detectors within railroad right-of-way. Local agencies may be able to place detectors outside of the railroad right-of-way if the railroad companies are not cooperative. - The Centennial Blvd crossing can be incorporated with planned capital improvements.
ES-TM-23	Integrate Freeway Management Systems with Central Signal Systems	Integrate freeway management systems with the City of Eugene and City of Springfield central signal systems to provide seamless traffic flow between freeways and arterials, particularly during incident management.	L	ES-TM-02; ES-TM-06; ES-TM-07; ES-TM-27	This project should not be implemented until freeway management systems (Project ES-TM-02) are being deployed.	$1,100,000/ $40,000	● Integration of freeway and arterial systems ● Improved safety and efficiency, therefore reducing delay and emergency response times	The project will require software integration between freeway management systems and each City's central signal system.
ES-TM-24	Upgrade Central Signal System	Upgrade or replace the City of Eugene's and City of Springfield's central signal systems with a central signal system that can be integrated with transit systems (ie. AVL) and emergency management systems (ie. AVL)	L	ES-PTM-06	This project should not be implemented until the City of Eugene and the City of Springfield determine it is feasible to replace their current QuicNet central signal systems.	$505,000/ $20,000	● More efficient preemption of traffic signals ● Reduced emergency response times ● Improved transit schedule adherance	When the central signal system is upgraded, the technology will need to be available to integrate the signals with transit systems and emergency management systems.

Table 5. Proposed Deployment Projects

Project Number	Project Title	Project Description	Priority	Relativity to Planned Projects	Project Dependencies	Capital Costs/ O&M Costs[1]	Expected Benefits	Technical and Institutional Feasibility
ES-TM-25	Special Event Management Systems	Project includes the deployment of traffic signal timing plans, portable dynamic message signs, and parking management for the following special events: ● UO Sporting Events ● Lane County Fair ● Oregon Country Fair ● Eugene Celebration ● Springfield Cruise ● Springfield Christmas Parade ● Other Regional Special Events	L	ES-TM-02; ES-TM-03; ES-TM-04; ES-TM-20	None	$350,000/ $125,000	● Improved safety and efficiency, therefore reducing delay and emergency response times ● More effective traffic management and special event management ● Increase in information available to travelers through DMS and the TripCheck web site	Many of the traffic signals in downtown Eugene and Springfield and near UO where many special events take place are already interconnected, which means special event signal timing plans can be implemented without having to deploy communications infrastructure.
ES-TM-26	Integrate Eugene Airport Traveler Information with NWTOC	Provide traveler information about Eugene-Springfield roadways at the airport and provide airport information to travelers via TripCheck and dynamic message signs operated by the NWTOC.	L	ES-TM-16	Requires communications link and interface between the Eugene Airport and the NWTOC.	$280,000/ $20,000	● Real-time and static traveler information ● Pre-trip planning capabilities and en-route information that allow users to make informed travel decisions ● Reduced congestion and delay ● Customer satisfaction	Other agency interfaces are being developed as part of the ITS Deployment Plan that can be used as models for interface development.
ES-TM-27	Develop Evacuation Route Plan	Develop an operational plan for an evacuation of the metropolitan area in the case of a major emergency.	H	Lane County Hazard Mitigation Plan; ES-TM-02; ES-TM-02; ES-TM-07	None	$120,000/ $0	● Increased capacity and throughput during emergency evacuation conditions ● Improved safety and efficiency	This project should be included as part of the Lane County Hazard Mitigation Plan and should address ITS elements.
Communications (CO)								
ES-CO-01	Document Communications Design Standards	Document design standards for communications in the following areas to ensure standardization, compatibility, connectivity, and reliability between multiple jurisdictional agencies: ● Conduit construction ● Cable plant description ● Minimum number of fibers ● Network technology ● Junction boxes ● Fiber termination panels ● Fiber connectors ● Communication hub design ● Fiber optic testing specification ● Fiber optic installation specification ● End electronics	H	This project is essential for ensuring that the communications deployed with other projects in this ITS plan are consistent throughout the metropolitan area and with other regional agencies such as PAN and other fiber consortiums.	None	$75,000/ $2,500	● Set of standards ready for implementation on all new projects or reconstruction projects ● Standardization for multiple regional agencies	This documentation will establish the technical aspects required for establishing a communications network.
ES-CO-02	Communications Network	Provide a communications network throughout the Eugene-Springfield metropolitan area to allow communications between regional agencies and also ITS devices in the field.	H, M, L	This project is relative to most of the projects included in this ITS plan.	Each piece of the communications network is dependent on the pieces that link the communications line and field equipment back to the NWTOC or ODOT District 5 Offices.	$5,400,000/ $50,000	● Connection between agencies will allow for multi-jurisdictional control, management, coordination, and information sharing ● Connection to ITS field devices allows for innovative strategies such as arterial management and incident management	Requires the purchase of fiber optic maintenance tools and staff training for fiber maintenance for all new capital fiber installation.

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Project Number	Project Title	Project Description	Priority	Relativity to Planned Projects	Project Dependencies	Capital Costs/ O&M Costs[1]	Expected Benefits	Technical and Institutional Feasibility
ES-CO-03	Radio Infrastructure Integration	Develop a system for radio infrastructure expansion and sharing amongst regional agencies.	H	LTD Planned Radio Infrastructure Expansion	None	$2,300,000/ $50,000	● Expanded communications coverage ● Infrastructure cost-sharing	Intergovernmental agreements relating to operations and maintenance will need to be set up to enable sharing of radio infrastructure.
Public Transportation Management (PTM)								
ES-PTM-01	Real-Time Customer Information Displays	Deploy real-time dynamic message signs at key locations such as transit centers, park and rides, bus stops where multiple routes pass through, and at bus stops with large bus headways.	H, M, L	None	None	$1,055,000/ $190,000	● Real-time transit information to aid travelers with en-route planning ● Better information during service disruptions ● Reduction of perceived waiting times ● Removal of traveler "uncertainty" ● Improved customer satisfaction	TriMet has successfully implemented real-time customer information displays in the Portland metropolitan area using simple wireless communications.
ES-PTM-02	Portable Real-Time Customer Information Displays	Acquire and deploy portable real-time dynamic message signs for special events that include transit service.	H	ES-PTM-01	The systems interface between the displays and the transit fleet will be developed as part of ES-PTM-01.	$30,000/ $4,000		
ES-PTM-03	Integrate Transit Traveler Information with ODOT Transit Trip Planning Project	Integrate transit traveler information with the transit trip planning web site ODOT is currently developing.	H	ODOT Regional Trip Planner Project	None	$350,000/ $2,000	● Real-time transit information to aid travelers with pre-trip planning ● Removal of traveler uncertainty ● Improved customer satisfaction	The interface with LTD will be based on the statewide infrastructure ODOT develops as part of its Transit Trip Planning Project.
ES-PTM-04	Transit Buses as Traffic Probes	Use buses as traffic probes to determine travel speeds on key corridors for congestion monitoring and data collection and analysis purposes.	M, L	The roadways designated for arterial surveillance and management as part of ES-TM-03 should be the primary locations for the collection of traffic probe data.	None	$220,000/ $2,500	● Improved surveillance and congestion information on arterials ● More effective traffic management, incident management, and maintenance management ● Reduced data collection costs	TriMet has been testing this technology in the City of Portland.
ES-PTM-05	Electronic Fare Collection	Install an electronic fare collection system on the entire fleet of LTD buses.	H	None	None	$1,000,000/ $6,000	● Ability to automate data collection process, which enhances planning efforts ● Improved service and customer satisfaction	LTD will need to research the existing technologies to determine what works best with their fleet. The RFP to begin this study is anticipated for release in 2004.
ES-PTM-06	Automated Vehicle Location (AVL), Computer Aided Dispatch (CAD) and Automated Passenger Counting (APC) System for Fixed Route	Project implementation currently underway. Systems Acceptance anticipated for 2004.	H	This project is the 2002 – 2005 STIP Key #11366	None	$2,000,000/ $5,000	● More efficient allocation of transit resources ● Improved transit travel times ● Ability to automate data collection process, which enhances planning efforts	LTD is currently testing their new AVL/CAD/APC system and has TriMet available as a resource.
ES-PTM-07	Transit Fleet Maintenance	On-board system integration with vehicle diagnostics system and on-board computer (or vehicle logic unit) and wireless communications. Back office system includes vehicle maintenance software and integration with existing systems.	M	None	None	$200,000/ $5,000	● More efficient allocation of transit resources ● Improved maintenance management	LTD is currently exploring technology options for this project.

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ES-PTM-08	Automated Vehicle Location (AVL) System and Computer Aided Dispatch (CAD) System for Paratransit	Integration of CAD/AVL system developed by paratransit contractor with fixed route system. Expansion of vehicle location equipment to all paratransit vehicles fleet-wide.	M	ES-PTM-06	ES-PTM-06	\$500,000/ \$1,000	● More efficient allocation of transit resources ● Improved transit travel times	LTD paratransit contractor has developed a CAD/AVL system in-house. LTD wishes to integrate this with the fixed route system and expand fleet-wide.
ES-PTM-09	System Security and Integration of Bus Video Images with LTD Dispatch	Develop a system for transmitting video images from transit stations and buses back to LTD Dispatch for surveillance capabilities of the stations, roadway and passengers.	M	None	Requires fiber/communications connectivity between transit stations and LTD Dispatch system.	\$1,500,000/ \$25,000	● Improved surveillance and monitoring capabilities ● Increased security for passengers both on-board and waiting at transit stations	LTD buses and some transit facilities already include video systems. Project would require upgrade to wireless communictaions system to support video transport.
ES-PTM-10	Bus Rapid Transit (BRT)	LTD is currently developing a BRT system for the Eugene-Springfield metropolitan area that utilizes buses to increase service frequency, capacity, and speed.	H, M, L	This project is the 2002 - 2005 STIP Keys #11362, 11363, 11364, 11371, 11372, 12251, 12252, 12258	None	Final BRT system costs will be determined by LTD.	● Faster, more convenient transit service ● Alternative to single-occupant vehicle ● Customer satisfaction	LTD is currently planning and researching BRT implementation.
Emergency Management (EM)								
ES-EM-01	Integration Between Traffic/Transit Management Systems and Emergency Management Systems	Provide a two-way information flow (ie. CCTV camera images, congestion flow map, emergency calls) between transportation management systems (NWTOC, Virtual TOC, LTD, and UO SOS Room) and the metropolitan area 911 and emergency dispatch centers: ● Central Lane 911 ● Oregon State Police ● Springfield Police Department ● Coburg Police Department ● Lane County Sheriff's Office	M	ES-TM-01	A software interface will be required at the 911 and emergency dispatch centers, the traffic management centers, and the transit management systems for access between systems.	\$1,350,000	● Improved real-time traffic conditions information ● Information sharing between agencies ● More efficient allocation of emergency response resources ● Reduced emergency response times	ODOT and the Bureau of Emergency Communications (BOEC) are currently working on a proof-of-concept for 911 center integration. Evaluation of this proof-of-concept will help with 911 and emergency dispatch center integration in the Eugene-Springfield metropolitan area.
ES-EM-02	Provide Interface Between Traffic Management Systems and Emergency Operations Centers (EOC's)	Provide an interface between the Regional Virtual TOC or other traffic management systems and each of the regional emergency operations centers to allow access to traffic control devices during emergency situations at the EOC's as well as to share information between agencies. This project includes workstations, monitors, and a communications interface at the following EOC's: ● Eugene EOC ● Springfield EOC ● Coburg EOC ● Lane County EOC ● Planned ODOT EOC	M	ES-TM-01; ES-EM-01	A software interface will be required at the emergency operations centers, the traffic management centers, and the transit management centers for access between systems.	\$75,000	● Improved real-time traffic conditions information ● Information sharing between agencies ● More efficient allocation of emergency response resources ● Reduced emergency response times	The ES-EM-01 project regarding public safety integration will provide the basis for the deployment of regional emergency operations center integration.
ES-EM-03	Traffic Adaptive Emergency Response	Deployment of the "Right Route" en-route emergency guidance system (static route plan) throughout the metropolitan region. Project also includes interface between automated vehicle locators (AVL) on emergency vehicles and traffic signals.	M	LCOG's Right-Route Demonstration Project	Requires an interface between AVL and traffic signals.	\$420,000/ \$10,000	● Improved static traffic route information ● Reduced emergency response times	LCOG has already developed the technology and implemented a limited amount of equipment in rural areas. This same technology applies to the urban area.
ES-EM-04	Integration of Traffic Management Information with Mobile Data Terminals	Provide real-time traffic information to mobile data terminals housed in emergency response vehicles. Inventory existing emergency vehicle fleet to determine how many additional mobile data terminals need to be installed and install these as necessary.	L	ES-EM-03	None	\$200,000/ \$10,000	● Improved real-time traffic conditions information ● Reduced emergency response times	A number of emergency response vehicles already include in-vehicle mobile data terminals.

Table 5. Proposed Deployment Projects

Project Number	Project Title	Project Description	Priority	Relativity to Planned Projects	Project Dependencies	Capital Costs/ O&M Costs[1]	Expected Benefits	Technical and Institutional Feasibility
ES-EM-05	Incident Response Fleet Management System	Installation of automated vehicle locators (AVL) on incident response vehicles and dissemination of real-time vehicle locations at the NWTOC, and the emergency dispatch centers or EOC's for resource allocation during incidents or emergencies. Project also includes monitoring of incident response vehicle repairs and vehicle replacement schedules.	L	None	None	$350,000/ $80,000	• More efficient management of incident response fleet • Reduced emergency response times when incident response support is needed	LTD is currently installing automated vehicle locators on its transit fleet and will be a valuable resource for project implementation.
Information Management (IM)								
ES-IM-01	Regional Data Management System	Create a data management system for archiving data, collecting real-time data, and accessing data. The system should have geospatial capabilities and data should include traffic counts, speed data, accidents (vehicles, pedestrians, and bicycles), traffic enforcement data, and incident information.	M	This project closely relates to projects that deploy field devices and systems to collect transportation related data; ES-TM-01; ES-TM-02; ES-TM-03; ES-PTM-05; ES-PTM-06; ES-PTM-09	This project is dependent on interagency communications and the deployment of field devices to collect data.	$560,000/ $50,000	• Improved resources for regional modeling, research, analysis, planning, and design • Reduced cost of data collection	This project will make use of data already collected or planned for collection by agencies in the Eugene-Springfield metropolitan area.
ES-IM-02	Integrate Transportation Information with GIS Centerline Project	Update ITS transportation GIS data in accordance with the GIS Centerline Project once it is complete.	H, M, L	GIS Centerline Project	None	$50,000/ $5,000	• Improved mapping capabilities • Improved resources for analysis, planning, and design	The GIS Centerline Project is in the process of combining roadway centerline data and developing regional standards for creating attributable data.
Maintenance & Construction Management (MC)								
ES-MC-01	Maintenance Fleet Management System	Installation of automated vehicle locators (AVL) on maintenance vehicles and dissemination of real-time vehicle locations at the ODOT District 5 Office and emergency dispatch centers or EOC's for resource allocation during incidents or emergencies.	L	None	None	$170,000/ $5,000	• More efficient managagement of maintenance fleet • Reduced emergency response times when maintenance support is needed	LTD is currently installing automated vehicle locators on its transit fleet and will be a valuable resource for project implementation.
ES-MC-02	Construction Zone Safety Enhancements During I-5 Bridge Reconstruction	Deploy permanent and/or portable dynamic message signs and electronic driver feedback signs to alert motorists of their travel speed as they approach the work zone for the installation of the I-5 temporary bridges and reconstruction of the I-5 permanent bridges.	H	I-5 Bridge Reconstruction of the McKenzie and Willamette River Bridges	None	$200,000/ $45,000	• Improved construction zone safety and efficiency • Heightened safety awareness through driver feedback	New equipment and training would be required for this project. ODOT has acquired portable changeable speed limit signs that may be available for use on this project.
ES-MC-03	Maintenance, Construction, and Special Event Coordination System	Develop an information management system that contains details about regionwide maintenance and construction activities by public agencies, utility companies, and private contractors as well as special event information, including location and event duration.	M	None	Requires data and information from public and private agencies throughout the region.	$540,000/ $10,000	• Construction and maintenance scheduling capabilities • Improved resources for planning • Cost savings through project coordination	The system must allow for quick and easy data input and retrieval to make it efficient for affected agencies to use.
ES-MC-04	Develop Work Zone Management Standards	Develop standards for safety enhancements and management techniques in work zones such as the following: • Variable speed limits • Incident detection and management • Lane merge controls • Queue detection and electronic driver feedback signs	H	None	None	$40,000/ $0	• Improved construction zone safety and efficiency • Heightened safety awareness through driver feedback	The development of regional work zone management standards, that incorporate other statewide efforts, will make implementation easier during major construction projects. ODOT has acquired portable changeable speed limit signs that may be available for use in the region.

[1] The estimated operations & maintenance (O&M) costs listed in this table are for an annual basis once the project has been deployed

Table 6. DEPLOYMENT PLAN SCHEDULE (Page 1 of 2)

Ref. #	Project Title	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	Years	5-Year Plan					10-Year Plan					20-Year Plan									
Travel & Traffic Management																					
ES-TM-01	Regional Virtual Transportation Operations Center								■	■											
ES-TM-02	Regional Freeway Surveillance and Management	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
ES-TM-03	Regional Arterial Surveillance and Management	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
ES-TM-04	Reversible Lane Management on MLK/Centennial						■	■													
ES-TM-05	Gateway Area Traffic Responsive Signal Timing				■	■															
ES-TM-06	30th Avenue Signal Timing Coordination Near I-5	■																			
ES-TM-07	Incident Management Operational Plans				■	■				■	■				■	■				■	■
ES-TM-08	Incident Notification System							■	■												
ES-TM-09	Transit Signal Priority	■	■	■	■	■				■	■						■	■			
ES-TM-10	Traffic Signal Interconnect	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
ES-TM-11	Integrate Regional Virtual TOC with UO SOS Room									■	■										
ES-TM-12	Beltline Highway Queue Warning System					■	■														
ES-TM-13	I-5 Bridge Security				■	■	■	■													
ES-TM-14	I-5 Bridge Weather Detection and Deicing System				■	■	■	■													
ES-TM-15	Highway Advisory Radio (HAR)				□	□	□	□													
ES-TM-16	Integrate Traveler Information with TripCheck, 511, & Highway Advisory Radio		■	■	■	■	■	■	■	■	■	■	■								
ES-TM-17	Congestion/ Incident Information Mapping		■	■	■	■						■	■	■	■						
ES-TM-18	Traveler Information at Rest Areas									■	■										
ES-TM-19	Rest Area Surveillance System																			■	■
ES-TM-20	Advanced Parking Management & Information System											■	■			■	■			■	■
ES-TM-21	Road Weather Information Systems (RWIS)						■	■				■	■					■	■		
ES-TM-22	Advanced Railroad At-Grade Crossings											■	■								
ES-TM-23	Integrate Central Signal Systems with Transit & Emergency Management Systems																	■	■	■	■
ES-TM-24	Upgrade Central Signal System											■	■	■	■	■					
ES-TM-25	Special Event Management Systems																		■	■	■
ES-TM-26	Integrate Eugene Airport Traveler Information with Northwest Transportation Operations Center															■	■				
ES-TM-27	Develop Evacuation Route Plan		■	■																	
Communications																					
ES-CO-01	Document Communications Design Standards		■	■																	
ES-CO-02	Communications Network	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
ES-CO-03	Radio Infrastructure Integration		■	■	■																

■ Proposed Implementation
□ Currently Funded Projects

Table 6. DEPLOYMENT PLAN SCHEDULE (Page 2 of 2)

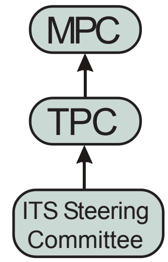
Ref. #	Project Title	5-Year Plan 1	2	3	4	5	10-Year Plan 6	7	8	9	10	20-Year Plan 11	12	13	14	15	16	17	18	19	20
Public Transportation Management																					
ES-PTM-01	Real-Time Customer Information Displays																				
ES-PTM-02	Portable Real-Time Customer Information Displays																				
ES-PTM-03	Integrate Transit Traveler Information with ODOT Transit Trip Planning Project																				
ES-PTM-04	Transit Buses as Traffic Probes																				
ES-PTM-05	Electronic Fare Collection																				
ES-PTM-06	Automated Veh. Location, Computer Aided Dispatch & Automated Passenger Counting Sys. for Fixed Route																				
ES-PTM-07	Transit Fleet Maintenance																				
ES-PTM-08	Automated Vehicle Location System and Computer Aided Dispatch System for Paratransit																				
ES-PTM-09	System Security & Integration of Bus Video Images with LTD Dispatch																				
ES-PTM-10	Bus Rapid Transit																				
Emergency Management																					
ES-EM-01	Integration Between Traffic/Transit Management Systems & Emergency Management Systems																				
ES-EM-02	Provide Interface Between Traffic Management Systems and Emergency Operations Centers																				
ES-EM-03	Traffic Adaptive Emergency Response																				
ES-EM-04	Integration of Traffic Management Information with Mobile Data Terminals																				
ES-EM-05	Incident Response Fleet Management System																				
Information Management																					
ES-IM-01	Regional Data Management System																				
ES-IM-02	Integrate Transportation Information with GIS Centerline Project																				
Maintenance & Construction Management																					
ES-MC-01	Maintenance Fleet Management System																				
ES-MC-02	Construction Zone Safety Enhancements During I-5 Bridge Reconstruction																				
ES-MC-03	Maintenance, Construction, and Special Event Coordination System																				
ES-MC-04	Develop Work Zone Management Standards																				

Proposed Implementation
Currently Funded Projects

Deployment Summary

To successfully implement the proposed ITS plan, the following steps are necessary:

ITS Program Continuation



The continuation of the ITS steering committee is possibly the most important item for the successful implementation of the ITS plan. This group should include the key stakeholders from the planning process and should be organized as a new subcommittee to the Transportation Planning Committee (TPC). This group will initiate the steps outlined in this plan, plan projects that fit agencies' needs, pursue Federal funding opportunities, and monitor/report progress and effectiveness. In addition, a representative from this ITS subcommittee should report current status of the plan implementation at least annually at the Metropolitan Policy Committee (MPC).

Eastbound Beltline Hwy On-Ramp at River Rd

Deploy "Early Winner" Projects

Another key to the success of ITS in Eugene-Springfield will depend on the deployment of "early winner" projects. A potential "early winner" project includes the deployment of field devices (closed circuit television cameras, count stations, variable message signs, and ramp meters) on Beltline Highway to support regional freeway management and traveler information. This project would also support the current Statewide implementation of the 511 traveler information telephone number by providing real-time information from these field devices.

Incorporate the ITS Plan in the RTP Update Process

The ITS Steering Committee plans to incorporate this ITS Plan in the upcoming Regional Transportation Plan (RTP) update process. The ITS devices and communications infrastructure identified in this plan should be installed on corridors concurrently with traditional transportation construction and maintenance projects. This approach will minimize reconstruction, save time and money, and result in the modernization of the regional transportation system. Where applicable, relationships to currently planned regional projects have been identified in Table 5. In addition, the data collection, analysis, operational techniques and information sharing developed through the projects in this plan can become key elements of other regional efforts.

TransPlan

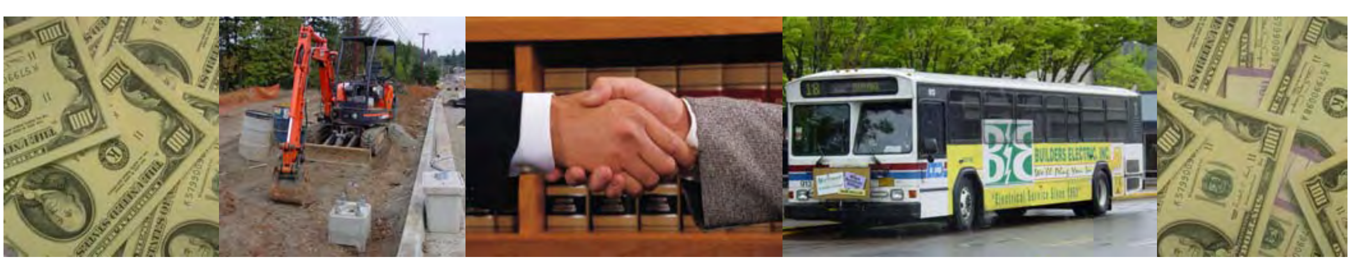
The Eugene-Springfield Transportation System Plan

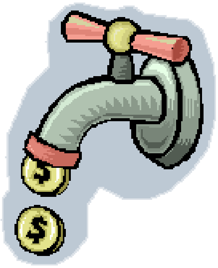
Lane Council of Governments
99 East Broadway, Suite 400
Eugene, Oregon 97401-3111
(541) 682-4283
www.lcog.org

December 2001

Do Not Overlook Future Needs if They Fit With Current Opportunities

The region should pursue a flexible approach to implementing the plan. Opportunities may become present in early years to implement elements of the plan identified for later deployment. These opportunities may be possible due to other funding sources, coordination with roadway construction, coordination with local agency/private initiatives and/or transit priorities. These opportunities should be seized when appropriate.





Define a Revenue Stream

The Eugene-Springfield Metropolitan Area will need to define a revenue stream for construction, operations and maintenance. This plan provides the basis for the funding and identifies opportunities for regional coordination and cost-sharing. The region must dedicate funding sources to implement each increment of the 20-year plan. In addition to the traditional funding sources, other non-traditional sources for funding such as grants from non-profit agencies should be considered.

The total capital, engineering and annual operations/maintenance costs for the ITS program are provided below. The Eugene-Springfield Metropolitan Area will need an on-going commitment to operations and maintenance of the equipment and software to maximize the benefits of the ITS program. The ITS elements proposed within this program require consistent staffing for effective system operation, as well as requiring trained staff to do routine maintenance.

Implementation Stage	*Estimated Implementation Capital Costs*	*Estimated Annual Operations & Maintenance Costs*
5-Year Plan: 0 - 5 Years	$18,355,000	$735,000
10-Year Plan: 6 - 10 Years	$16,240,000	$590,000
20-Year Plan: 11 - 20 Years	$15,550,000	$660,000
TOTAL	**$50,145,000**	**$1,985,000**

Costs above are per year for the associated phase

Glossary of Terms

AVL	Automated Vehicle Location
APC	Automated Passenger Counting
BOEC	Bureau of Emergency Communications
CAD	Computer Aided Dispatch
CCTV	Closed Circuit Television
CO	Communications
DMS	Dynamic Message Sign
EM	Emergency Management
EOC	Emergency Operations Center
ES	Eugene-Springfield
FHWA	Federal Highway Administration
GIS	Geographical Information System
H	High Priority
HAR	Highway Advisory Radio
IDAS	ITS Deployment Analysis System
IM	Information Management
ITS	Intelligent Transportation System
L	Low Priority
LCOG	Lane Council of Governments
LTD	Lane Transit District
M	Medium Priority
MC	Maintenance & Construction Management
MDT	Mobile Data Terminal
MP	Milepost
MPC	Metropolitan Policy Committee
NWTOC	Northwest Transportation Operations Center
O&M	Operations and Maintenance
ODOT	Oregon Department of Transportation
PAN	Public Agency Network
PTM	Public Transportation Management
RTP	Regional Transportation Plan
RWIS	Road Weather Information System
SOS	Stadium Operaitons and Security
STIP	Statewide Transportation Improvement Plan
TOC	Transportation Operations Center
TPC	Transportation Planning Committee
TM	Travel & Traffic Management
TMA	Transportation Management Area
UO	University of Oregon
VMT	Vehicle Miles Traveled
WSDOT	Washington Department of Transportation

CENTRAL LANE

REGIONAL TRANSPORTATION PLAN

MPO

Moving Transportation into the Future

APPENDIX F

Information Developed for Environmental Coordination Requirements of SAFETEA-LU §6001

Appendix F: Information Developed for Environmental Coordination Requirements of SAFETEA-LU §6001

<u>Note that the Environmental Consultation Maps are available at:</u> www.thempo.org/rtp

<u>Introduction</u>

<u>I. Base Data</u>

1. Context
2. 2035 Regional Transportation Plan Construction Projects
3. Federal Functional Class of Roadways

<u>II. Socioeconomic/Cultural Data</u>

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5. Elderly Population Concentration
6. Minority Population Concentration
7. Disabled Population Concentration
8. Zero Car Household Concentration
9. Limited English Proficiency Concentration
10. Communities of Concern
11. National Register Historic Districts and Historic Properties

<u>III. Environmental Quality</u>

12. Air Quality
13. Environmental Cleanup Sites
14. Toxic Release Inventory Permitted Sites

<u>IV. Waterways and Water Quality</u>

15. DEQ 303d Listed Streams and Southern Willamette Valley Groundwater Management Area
16. Navigable Rivers and Metro Waterways Study Areas
17. FEMA Flood Hazard
18. Watershed Boundaries and Stormwater Basins

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19. Federally Listed Threatened and Endangered Fish Species
20. Federal and/or State Listed Threatened and Endangered Species (non-fish)
21. Federal & State Threatened & Endangered Species, Sensitive Species, and Species of Concern
22. Oregon Conservation Strategy
23. Barriers to Fish Passage

<u>VI. Landuse/Planning</u>

24. Comprehensive Plans
25. Goal 3 & 4 Farm and Forest Lands
26. Goal 5 Natural Resources
27. Goal 15 Greenway – Recreation and Conservation Lands
28. Soils
29. Natural Hazards – Seismic Zones

<u>VII. Wetlands</u>

30. Wetlands—West Eugene Wetlands, Local Wetland Inventories, National Wetland Inventory

31. Mitigation Bank Service Areas
32. Mitigation Bank—Existing Sites

Introduction

The maps produced for this consultation superimpose transportation projects from the long range plan of the Central Lane Metropolitan Planning Organization (MPO) (2035 RTP) on top of environmental, cultural, and social data collected from other sources over the time period January – July 2011. The intent is to provide a scan that will enable potential issues relating to future transportation projects to be identified and explored prior to costing, alignment and other decisions that must be made during project development. The alignments and extents of the projects from the 2035 RTP are only approximate at this stage. Refinements would be typically made during project development.

The MPO maintains the transportation database only; all other data are created and maintained by the source agencies. To the best of our knowledge, these data bases are up to date as of 1 July 2011. If there is an error found in the display or implementation of any of the data bases, we request that you contact the MPO with your observations. Errors or omissions in the data per se can only be updated by the source agencies.

I. Base data

1. Context

The Central Lane Metropolitan Planning Organization (MPO) is located in the southern end of the Willamette Valley in Lane County, Oregon. The MPO contains the areas within the urban growth boundaries of the cities of Eugene, Springfield and Coburg, as well as surrounding rural lands. Under federal law, the MPO boundary is based on the urbanized area defined in the most recent Census. Since the population within this boundary exceeds 200,000, the MPO is a Transportation Management Area (TMA), and thus directly receives Federal Surface Transportation - Urban (STP-U) funds for funding transportation projects. It is the second largest MPO in Oregon, behind Portland Metro. The TMA contains 86% of jobs and 60% of the population of Lane County.

Lane Council of Governments (LCOG) was appointed by the Governor as the MPO for this area. The policy board of the MPO consists of elected representatives from Lane County, City of Eugene, City of Springfield, and City of Coburg, and appointed representatives from Oregon Department of Transportation (ODOT), and Lane Transit District (LTD).

The MPO is located at the base of the foothills of the Cascades and just east of the Coast Range at elevation of about 450 feet. It lies within the Willamette River Basin near the confluences of the McKenzie River with the mainstem Willamette River, and the confluence of the Coast and the Middle Forks of the Willamette. The area is mostly flat with the occasional volcanic butte, and is edged by the South Hills. The climate is one of cool, wet winters and warm, dry summers. Rainfall is about 45 inches per year, falling mostly from October through May.

The historic landscape of the area was a diverse combination of wet prairie, wetlands and ash swales on the valley floor, upland prairie, oak and pine savannas, and oak/fir woodlands on the thinner soils of the foothills, with floodplain forests along the major rivers. Poorly drained clay soils in the valley bottoms held standing water for many months during winter, and the rivers and creeks frequently flooded.

In addition to the impact of the floods, landscape diversity was maintained by the Kalapuya peoples who burned the prairies and savannas to enhance camas production and grasses for the deer and elk herds. This practice maintained the biodiversity and kept the firs from encroaching. White settlement began in 1840’s and in 1846 Eugene Skinner settled in what would become the City of Eugene. The early settlers turned the open prairies and savannas into farmlands, and tiled and drained wet areas. As the Kalapuya were displaced, annual burning ceased, and fir forests became established in the foothills replacing much of the oak woodland and savannas. It is estimated that over 99% of the historic prairie has been lost.

The Willamette Basin Project in the 1940’s built dams on the Willamette River (Fall Creek, Dexter and Lookout Point) and the Long Tom River (Fern Ridge Reservoir), as well as in the upper McKenzie River basin. This has greatly diminished the frequency and size of floods, and has allowed control of river levels. Revetments prevent river meanders, and the logging of large trees within the riparian floodplain forest has reduced the recruitment of large woody debris. Together, all these factors have simplified the rivers and reduced the off-channels habitat that once supported the rearing of fish.

Environmental issues in the MPO area today primarily revolve around wetland impacts. A number of endangered and threatened species have been protected in the West Eugene Wetlands, and the City operates a wetland mitigation bank located inside the MPO area. USFWS has designated critical habitat areas for three listed species (2 plants, 1 butterfly) associated with wet prairie habitats. Other significant concerns include stormwater discharge into the Willamette and McKenzie Rivers and tributaries with potential impact on the listed fish species. Interest in preserving and restoring upland prairie and oak savanna habitats is increasing within the community.

Data Sources:

Willamette River Basin Planning Atlas. Trajectories of Environmental and Ecological Change. Pacific Northwest Ecosystem Research Consortium. 2002. OSU Press.

City of Eugene, Parks and Open Space, West Eugene Wetlands: http://www.eugene-or.gov/portal/server.pt?space=CommunityPage&cached=true&parentname=CommunityPage&parentid=7&in_hi_userid=2&control=SetCommunity&CommunityID=667&PageID=1506)

2. 2035 Regional Transportation Plan Construction Projects

The MPO's federal Regional Transportation Plan (RTP) contains a list of transportation projects that are expected to be constructed within the MPO by the horizon year 2035. The project list is developed by the MPO partner agencies: Lane County, the Cities of Eugene, Springfield and Coburg, the Oregon Department of Transportation (ODOT), and Lane Transit District (LTD). The Willamalane Parks and Recreation District also contributes projects. The MPO itself conducts planning, and does not construct projects.

The projects are primarily drawn from these partners' long range plans (including Transportation System Plans, modal components of the Oregon Transportation Plan, LTD and Willamalane strategic plans and others). There are two sets: the "fiscally constrained" list contains projects for which the anticipated cost is reasonably expected to be covered by identified sources and strategies, and the "future" (or "illustrative") list which contains projects for which no funding source is yet identified. Fiscally constrained projects are the most likely to be built.

Each list is further divided into Roadway Projects, Transit Projects, and Bike/Pedestrian Projects. Planning projects are not required to be included. The list also does not include pavement resurfacing, bridge replacement, or safety projects that arise due to unanticipated circumstances.

This map shows all construction projects listed in the RTP, excluding transit projects that are highly unlikely to require new right-of-way or lane construction, and bike/pedestrian projects that occur on existing roadways. The former includes new stops, shelters, and new bus service utilizing operational enhancements only. The latter includes striping of bike lanes.

Most projects on the list will occur on existing roadways. Some new alignments are listed and are categorized on the maps as "Off-Street Bike/Ped", "New Arterial Link", and "New Collector". A "New Interchange" would likely be built on an existing road, but would require expanded right of way, as would "Added Freeway Lanes/Major Interchange Improvements". The locations shown for the projects at this time are approximate only. *During project-level planning and development, more intensive study of the area is made and alignments or project extents can change in order to avoid or minimize impact to environmental, cultural or social resources.*

The numbers on each mapped project refer to the RTP project id (identification). The description for each project can be located using this id by referring to the lists published on the MPO's RTP web site:www.thempo.org/rtp. These numbers are removed from all the other maps in this consultation to improve readability.

3. Federal Functional Class of Roadways

Roadways are classified as to the type of service intended and the amount of traffic they carry or will carry. Functional classification is used to determine the design standards, and also determines federal aid eligibility (federal funds cannot be used on "local roads" or "rural minor collectors"). Federal functional classification is assigned using federal guidelines, and is approved by Federal Highways Administration (FHWA). After each decennial census, the MPO consults with its partner agencies and submits updates to ODOT so as to include new roadways and reflect changes in use. Updates can also occur during interim years. This map shows the latest classifications within the Central Lane MPO.

In urbanized areas, the principal arterial system usually carries 40-65% of vehicles miles traveled (VMT); principal plus minor arterial system carries 65-80% VMT; collector street system 5-10% VMT, and local street system 10-30% VMT. In rural areas, VMT distribution is somewhat different with greater reliance on rural collectors.

Data Sources:

LCOG: Centerline Data Base, 2011.

Oregon Department of Transportation, Transportation Development – Transportation Data:
http://www.oregon.gov/ODOT/TD/TDATA/rics/FunctionalClassification.shtml

FHWA Functional Classification guidelines:
http://www.fhwa.dot.gov/planning/fcsec1_1.htm

II. Socioeconomic/Cultural Data

The MPO is required to consider the impact that projects may have on minority and low-income populations in consideration of environmental justice issues. In addition, elderly and disabled populations, zero car households, and limited English proficiency are also considered. The 2005-2009 American Community Survey has been used to obtain the majority of the demographic data for this mapping. Disability data are not available from the 2005-2009 American Community Survey data set due to changes in the disability questions in 2008. As a result, Census 2000 information has been used. (Note: at the time of the issuance of these maps, 2010 Census information is not available at the block group level, the geography used for mapping this socioeconomic data). Block groups generally contain between 600 and 3,000 people with an optimum size of 1,500 people, so that in rural areas, block groups tend to be large in area with low population density while in urban areas, block groups are smaller in area with more concentrated populations. For this analysis, all block groups intersecting the MPO boundary were considered.

4. Household Poverty Concentration

Within the MPO, slightly less than 15 percent of all households reported being in poverty status in the past 12 months. Poverty statistics in ACS products adhere to the standards specified by the Office of Management and Budget in Statistical Policy Directive 14. The Census Bureau uses a set of dollar value thresholds that vary by family size and composition to determine who is in poverty.

In determining the poverty status of families and unrelated individuals, the Census Bureau uses thresholds (income cutoffs) arranged in a two-dimensional matrix. The matrix consists of family size (from one person to nine or more people) cross-classified by presence and number of family members under 18 years old (from no children present to eight or more children present). Unrelated individuals and two-person families are further differentiated by age of reference person (RP) (under 65 years old and 65 years old and over).

To determine a person's poverty status, one compares the person's total family income in the last 12 months with the poverty threshold appropriate for that person's family size and composition (see example below). If the total income of that person's family is less than the threshold appropriate for that family, then the person is considered "below the poverty level," together with every member of his or her family. If a person is not living with anyone related by birth, marriage, or adoption, then the person's own income is compared with his or her poverty threshold. The total number of people below the poverty level is the sum of people in families and the number of unrelated individuals with incomes in the last 12 months below the poverty threshold.

Since ACS is a continuous survey, people respond throughout the year. Because the income questions specify a period covering the last 12 months, the appropriate poverty thresholds are determined by multiplying the base-year poverty thresholds (1982) by the average of the monthly inflation factors for the 12 months preceding the data collection. See the table in Appendix A titled "Poverty Thresholds in 1982, by Size of Family and Number of Related Children Under 18 Years (Dollars)," for appropriate base thresholds.

Under this methodology, the 2009 (as of December 2009) poverty status for a family of four with two children under 18 years old is $21,698

This map shows the distribution of these populations overlaid with the RTP projects. The block groups were arranged in descending order of the percent of households in poverty within the block group. The darker the color is, the greater the density of poor households.

The actual distance of a low income household from a particular project cannot be deduced from this map, since there is no information in the census data as to the location of the household within the block group. However, due to the density, the likelihood of impact is greatest in the darkest areas on this map.

Data Sources:

American Community Survey, 2005-2009. Table B17017, Sequence Number 50: POVERTY STATUS IN THE PAST 12 MONTHS BY HOUSEHOLD TYPE BY AGE OF HOUSEHOLDER:

http://www.census.gov/main/www/cen2000.html

U.S. Census Bureau, Household Income and Persons Below Poverty:

http://quickfacts.census.gov/qfd/meta/long_IPE120204.htm

5. Elderly Population Concentration

This map utilizes 2005-2009 American Community Survey block group data to map elderly population concentrations within the MPO. For this analysis "elderly" was assumed to consist of persons 65 years and older. Within the MPO, slightly less than 11 percent of the population was elderly. As was done for the Household Poverty mapping, block groups with the highest percent of elderly population were mapped in the darkest color.

Data Source:

American Community Survey, 2005-2009. Table B01001, Sequence Number 10: SEX BY AGE::
http://www.census.gov/main/www/cen2000.html

6. Minority Population Concentration

This map utilizes 2005-2009 American Community Survey block group data to map minority population concentrations within the MPO. For this analysis, "minority" was defined to be all persons who identified themselves as non-white or Hispanic. Within the MPO as a whole, a little more than 13.5 percent of the population belongs to a minority group. As was done for the Household Poverty mapping, block groups with the highest percent minority population were mapped in the darkest color.

Data Source:

American Community Survey, 2005-2009. Table B03002: HISPANIC OR LATINO ORIGIN BY RACE
http://www.census.gov/main/www/cen2000.html

7. Disabled Population Concentration

This map utilizes Census 2000 block group data to map disabled population concentrations within the MPO. For this analysis, "disabled" was defined to be all civilian non-institutionalized persons 5 years and older. Within the MPO as a whole, 18 percent of the population was identified as disabled. As was done for the Household Poverty mapping, block groups with the highest percent disabled population were mapped in the darkest color.

Data Source:

U.S. Census Bureau, Census 2000. Summary file SF3, table P42: Sex by Age by Disability Status by Employment Status for the Civilian Non-institutionalized Population 5 Years and Over:
http://www.census.gov/main/www/cen2000.html

8. Zero Car Household

The data on vehicles available were obtained from Housing Question 9 in the 2009 American Community Survey. The question was asked at occupied housing units. These data show the number of passenger cars, vans, and pickup or panel trucks of one-ton capacity or less kept at home and available for the use of household members. Vehicles rented or leased for one month or more, company vehicles, and police and government vehicles are included if kept at home and used for non-business purposes. Dismantled or immobile vehicles are excluded. Vehicles kept at home but used only for business purposes also are excluded.

The availability of vehicles provides information for numerous transportation programs; specifically, the absence of a vehicle available to household helps to identify those households that rely on alternative modes of transportation for their mobility needs, including transit, biking, and walking.

As was done for the Household Poverty mapping, block groups with the highest percent of households without access to a vehicle were mapped in the darkest color.

Data Source:

U.S. Census Bureau, Census 2000. Summary file SF3, table H44. TENURE BY VEHICLES AVAILABLE [15] - Universe: Occupied housing units
http://www.census.gov/main/www/cen2000.html

9. Limited English Proficiency

Respondents who reported speaking a language other than English were asked to indicate their English-speaking ability based on one of the following categories: “Very well,” “Well,” “Not well,” or “Not at all.” Respondents were not instructed on how to interpret the response categories in Question 14c. The map depicts those areas with a higher concentration of speakers who indicated that they spoke English less than “Well”.

The data on ability to speak English represent the person's own perception about his or her own ability or, because census questionnaires are usually completed by one household member, the responses may represent the perception of another household member. Respondents were not instructed on how to interpret the response categories in Question 14c.

People who reported that they spoke a language other than English at home, but whose ability to speak English was not reported, were assigned by the Census the English-language ability of a randomly selected person of the same age, Hispanic origin, nativity and year of entry, and language group.

People who use English as a second language come from a variety of lingual and cultural backgrounds. The Census groups these languages into three primary collectives including ‘Spanish’, ‘Other Indo-European’ language, and ‘Asian and Pacific Island’ languages. There is an additional category for Other. In both Lane County and the TMA areas, Spanish is the predominant second language to English. Asian and Pacific languages were spoken slightly more than Other Indo-European languages.

As was done for the Household Poverty mapping, block groups with the highest percent limited English proficient speakers were mapped in the darkest color.

Data Source: American Community Survey, 2005-2009. Table B16004, Sequence 42: AGE BY LANGUAGE SPOKEN AT HOME BY ABILITY TO SPEAK ENGLISH FOR THE POPULATION 5 YEARS AND OVER

10. Communities of Concern

Transportation disadvantaged citizens are those who because of physical or mental disability, income status, or age are unable to go where they need or want to and are, therefore, dependent upon others to obtain access to health care, employment, education, shopping, social activities, or other life-sustaining activities. This includes children. Disadvantaged status is multi-dimensional. Disadvantaged status evaluation should take into account the degree and number of these factors that apply. The greater their degree and the more factors that apply, the more disadvantaged an individual or group can be considered. Block groups with the highest number of potential disadvantages were mapped in the darkest color.

This map displays American Community Survey 2005-2009 or Census 2000 block groups for which a number of attributes (minority, poverty, disabled, elderly, no cars. Limited English Proficiency) exceed the MPO average.

Data Source: Same as Items 4 through 9 above.

11. National Register Historic Districts and Historic Properties

There are five National Register Historic Districts within the Central Lane MPO boundary.

- Coburg Historic District
- East Skinner Butte Historic District, Eugene
- Eugene Blair Boulevard Commercial Historic District
- Washburne Historic District, Springfield
- Dorris Ranch, Springfield

There are 70 National Register Historic Properties within the Central Lane MPO boundary, including Coburg, Eugene, Springfield and portions of Lane County. See Appendix for list.

In Oregon the National Register program is administered by the Oregon State Historic Preservation Office (SHPO). In some localities, which the National Park Service has designated Certified Local Governments (CLGs), the local government also manages aspects of the National Register program.

Eugene is a Certified Local Government, so the City's Historic Preservation Program is responsible for nominating local properties to the National Register and for monitoring compliance with regulations placed on Register properties. The S-H Historic Zoning designation is used selectively to help ensure the conservation of historic properties in Eugene. Before a property can receive the S-H Historic zoning designation it must first be designated as a City Landmark or be listed in the National Register of Historic Places. Eugene also regulates Heritage Trees in the rights-of-way and prohibits removal of trees for street widening within the historic city limits of 1915.

Springfield's Landmark Inventory consists of individual historic resources that the City of Springfield has determined, through historic resource surveys and subsequent additional research, have one or more characteristics of citywide, statewide, or national significance for their historic, cultural, archaeological, or architectural merit. Currently, there are 11 resources on the Landmark Inventory. All resources on the Landmark Inventory are subject to the Historic Overlay District regulations contained in the Springfield Development Code.

Data Sources:

Oregon Parks & Recreation Department, Heritage Programs: National Register:

http://www.oregon.gov/OPRD/HCD/NATREG/

National Register of Historic Places:

http://www.nationalregisterofhistoricplaces.com/OR/Lane/districts.html

City of Eugene, Planning and Development. Historic Preservation:

http://www.eugene-or.gov/portal/server.pt?space=CommunityPage&cached=true&parentname=CommunityPage&parentid=0&in_hi_userid=2&control=SetCommunity&CommunityID=318&PageID=0

City of Springfield, City Landmark Inventory

http://springfield-or.gov/dsd/Planning/hcommission/Site%26Bldgs/LandmarkInv.html

Staff Sources:

Julie Osborne, SHPO Preservation Specialist; Petra Schuetz, Coburg Planner; Kelly Whitmill, Lane Use & Planning Counter Specialist, City of Eugene

III. Environmental Quality

12. Air Quality

An MPO must make an air quality conformity determination for all regional transportation plans (RTPs) and all transportation improvement programs (TIPs) where an air quality management area has been defined and transportation sources have been identified as significant contributors to air pollution. USEPA, USDOT, and Oregon regulations describe the requirements.

In the Central Lane MPO area, an air quality management area (AQMA) was defined for carbon monoxide (CO) in 1980 and a transportation CO budget was established for a sub-area, the Eugene central business district. In 1993, the area was designated as in attainment of the national ambient air quality standards (NAAQS) for CO, and is now designated as a "maintenance area" for CO. There has not been a violation since 1980, and monitored data shows a steady decline in measured CO to almost background levels. There are no transportation control measures specified in the State Implementation Plan (SIP). Projects must comply with Lane Regional Air Protection Agency's Indirect Source rules (Title 20) prior to construction. Hot spot analyses are required for project-levels conformity. These studies are carried out by the agencies managing the project.

The Eugene-Springfield region was designated as a non-attainment area for PM 10 (particulate matter, 10 microns and less) in 1987. Analyses of sources revealed that home wood heating was the major source of this pollution. Emissions from motor vehicles were found to be insignificant. Transportation conformity is thus not required for PM10. Hot spot analyses are required.

Data Sources:

State Implementation Plans (SIPS), U.S. EPA Region 10:

http://yosemite.epa.gov/R10/AIRPAGE.NSF/webpage/SIP+-+General+Page

Transportation Air Quality Conformity, Central Lane MPO:

http://www.thempo.org/what_we_do/clean_air.cfm

Lane Regional Air Protection Agency. Title 20, Indirect Source rules:

http://www.lrapa.org/rules_and_regulations/title_20-Indirect_Sources.php

13. Environmental Cleanup Sites

This map shows the location where a release of hazardous substances has been documented as of April 21, 2011, and where, based on DEQ on-line data bases, a certificate of "No further action" has not yet been issued. The release sites are numbered using the ID provided within the DEQ data base referenced below. These sites can be entered into the search form for the ECSI Inventory to obtain further details.

The locations shown on the map are those of the actual release addresses. However, contamination may be spread over an area. In particular, ***Site 312*** (Eugene) refers to the Union Pacific Railroad – Eugene Yards. A ground water contamination plume has been mapped in this area. (See the Appendix for a map). ***Site 1713*** (Springfield) refers to the Weyerhaeuser mill site. A ground water contamination plume was detected in this area, with ongoing remedial action of ground water monitoring, maintenance and operation of the groundwater treatment system located at the SUB/Rainbow Water District well field.

Also shown on this map are leaking underground storage tanks (LUSTs) where releases of petroleum products have been reported through April 2001. These sites are numbered according to the DEQ LUST data base.

Finally, the map also depicts EPA-listed Treatment, Storage, Disposal facilities under the RCRA program, as well as EPA Brownfield Program sites.

Data Sources:

Oregon Department of Environmental Quality, Land Quality, Environmental Cleanup:
http://www.deq.state.or.us/lq/ecsi/ecsi.htm

Oregon Department of Environmental Quality, Environmental Cleanup, ECSI Search Form:
http://www.deq.state.or.us/lq/ecsi/ecsiquery.asp?listtype=ecsiinv.asp&listtitle=Inventory

Oregon Department of Environmental Quality, Land Quality, Leaking Underground Storage Tank (LUST) Program:
http://www.deq.state.or.us/lq/tanks/lust/index.htm

Oregon Department of Environmental Quality, Tanks, LUST Cleanup Site Database:
http://www.deq.state.or.us/lq/tanks/lust/LustPublicLookup.asp

U.S. Environmental Protection Agency, Geospatial Data Access Project
http://www.epa.gov/enviro/geo_data.html

14. Toxic Release Inventory Permitted Sites

The source for this data is the EPA Geospatial Data Access Project website which contains information about facilities or sites subject to environmental regulation, including the Toxic Release Inventory System.

Data are retrieved from EPA source databases and posted to the EPA Geospatial Data Access Project at various intervals. The information was collected through August 2, 2011.

Data Source:

U.S. Environmental Protection Agency, Geospatial Data Access Project
http://www.epa.gov/enviro/geo_data.html

IV. Waterways and Water Quality

15. DEQ 303d listed Streams and Southern Willamette Valley Groundwater Management Area

SWV Groundwater Management Area

Groundwater in the Willamette Valley between Eugene and Albany shows signs of contamination by human activities. Oregon Department of Environmental Quality (DEQ) declared a Groundwater Management Area (GWMA) on May 10, 2004 because of high concentrations of nitrate in the water. Oregon law requires that DEQ declare a groundwater management area when there is confirmation of nitrate contamination in the groundwater above 7.0 milligrams per liter (mg/L) and the suspected sources of nitrate are not facilities with permits, such as landfills or incinerators.

The Southern Willamette Valley Groundwater Management Area (GWMA) Action Plan has been finalized and will now serve to guide activities aimed at reducing nitrate contamination in the area's

groundwater. The Action Plan is available at the following website:
http://gwma.oregonstate.edu/sites/default/files/documents/GWMAActionPlan.pdf

Data Sources:

Southern Willamette Valley Groundwater Management Area:

http://www.deq.state.or.us/wq/groundwater/swvgwma.htm

LCOG: G:\projects\DEQ\GWMA_06

DEQ 303d listed Streams

Every two years, DEQ is required to assess water quality and report to EPA on the condition of Oregon's waters. DEQ prepares an integrated report that meets the requirements of the federal Clean Water Act (CWA) for Section 305(b) and Section 303(d).

- CWA Section 305(b) requires a report on the overall condition of Oregon's waters.
- CWA Section 303(d) requires identifying waters that do not meet water quality standards where a Total Maximum Daily Load (TMDL*) needs to be developed.

The Integrated Report includes an assessment of each water body where data are available, and the list of waters identified under Section 303(d) as water quality limited needing a TMDL.

DEQ completed an Integrated Report in May 2006 that was reviewed and approved by EPA in February 2007. The 2004/2006 Integrated Report Database contains the current and effective assessment information and 303(d) list. A draft 2010 Integrated Report has been released, but has not been approved by EPA as of the issuance of this analysis.

DEQ evaluated water quality data for Oregon's waters using the "decision rules" in the Assessment Methodology for Oregon's 2004/2006 Integrated Report on Water Quality Status. DEQ assigned an assessment status category to each water body where data were available to evaluate. Water bodies that do not meet water quality standards are Water Quality Limited and are assigned Category 4 or Category 5. Water bodies in Category 5 need pollutant Total Maximum Daily Loads (TMDLs) developed and comprise the Section 303(d) list.

Other Water Quality Limited Water Bodies

A water body in Oregon may be “water quality limited,” but not included on the State’s 303(d) List. This may occur because:

1. The segment has a TMDL approved by the EPA. Segments that have TMDLs established are removed from the 303(d) List but retain their Water Quality Limited status (per OAR 340-41-006(30)) until they meet water quality standards. Often TMDLs are developed on a watershed scale. All water bodies within these watersheds would be addressed by the TMDL and can be moved to the “TMDL Approved” category.

2. A pollutant does not cause the water body impairment. The EPA defines a pollutant according to Section 502(6) of the Clean Water Act. The DEQ previously placed water bodies on the 303(d) List based on habitat modification and flow modification. Habitat modification listings were based on information indicating inadequate pool frequency and lack of large woody debris. Flow modification listings were based on inadequate flow to maintain in stream water rights (IWR) purchased by Oregon Department of Fish and Wildlife. Because flow and habitat

are not considered pollutants under the Clean Water Act, these water bodies can be removed from the 303(d) List and placed in the category "water quality limited but a pollutant does not cause the impairment."

Data Source:

Oregon Department of Environmental Quality, Water Quality Assessment:

http://www.deq.state.or.us/wq/assessment/assessment.htm

Staff Source:

Karla Urbanowicz, Oregon Department of Environmental Quality

TMDLs

A TMDL is the calculated pollutant amount that a waterbody can receive and still meet Oregon water quality standards. The Central Lane MPO Boundary intersects four subbasins as defined in the TMDL Order These subbasins are the Upper Willamette (portions of Long Tom and Muddy Creek Watersheds), McKenzie (Mohawk River and Lower McKenzie Watersheds), Middle Fork Willamette (Lower Middle Fork Willamette Watershed), and Coast Fork Willamette (Lower Coast Fork Watershed). See Map # 18 Watershed Boundaries and Stormwater Basins for these watershed boundaries.

The Willamette Basin TMDL Order was approved by the U.S. Environmental Protection Agency (EPA) on Sept. 29, 2006. The Willamette Basin TMDL Executive Summary and details about each subbasin can be found at: http://www.deq.state.or.us/wq/tmdls/willamette.htm#w

16. Navigable Rivers and Metro Waterways Study Areas

Navigable Rivers

The Corps of Engineers is mandated to maintain navigation channels and harbors in a safe, cost-effective, environmentally acceptable manner. The Portland District of the U.S. Army Corps of Engineers provides a list of "Navigable Riverways within the State of Oregon" dated October 1993. Portions of two rivers within the Central Lane MPO boundary are classified as Navigable Riverways. These include the McKenzie River from its confluence with the Willamette River up to approximately 1.2 miles downstream of Leaburg Dam, declared navigable by 9th Circuit Court decision in 1982, and the Willamette River up to 1 mile upstream of I-5 bridge.

Data Source:

Navigable Rivers within the State of Oregon, Portland District Corps of Engineers, October 1993:

https://www.nwp.usace.army.mil/op/g/docs/Navigable%20Waterways%20Within%20the%20State%20of%20Oregon.pdf

Metro Waterways Study Areas

The purpose of the ***Metro Waterways Study*** is to provide a better understanding of existing problems and opportunities related to area waterways and to identify solutions to improve their function. The U.S. Army Corps of Engineers, in partnership with the cities of Eugene and Springfield, Eugene Water & Electric Board, and Lane County, with the Bureau of Land Management as a Cooperating Agency (2009), has been conducting a multi-year study in the Eugene-Springfield metropolitan area and surrounding rural lands.

The first phase of the study has focused on the Amazon Creek watershed in the Eugene area and the Cedar Creek watershed in the Springfield area, based on local sponsor priorities. A *Draft Feasibility Report with Integrated Programmatic Environmental Assessment* is currently in review.

Data Source:

Metro Waterways: A Study of the Eugene-Springfield Metropolitan Region:

http://www.metrowaterways.org/

17. FEMA Flood Hazard

The Flood Zones depicted on this map are derived from the Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM) or Flood Hazard Boundary Maps in the area of the Central Lane MPO. Flood zones are geographic areas that the FEMA has defined according to varying levels of flood risk. Each zone reflects the severity or type of flooding in the area. The label "100-year floodplain" denotes areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage as defined by FEMA. The areas labeled "Floodway" are river or stream flood hazard areas, and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet.

Data Sources:

Federal Emergency Management Agency (FEMA):

http://www.fema.gov/

FEMA, Definitions of FEMA Flood Zone Designations:

http://msc.fema.gov/webapp/wcs/stores/servlet/info?storeId=10001&catalogId=10001&langId=-1&content=floodZones&title=FEMA%20Flood%20Zone%20Designations

18. Watershed Boundaries and Stormwater Basins

(For discussion of TMDLs—See Map #15)

The MPO area is located within the Willamette River Basin. It lies within the fifth field watersheds of the Long Tom River (17090301), the Mohawk River (17090402), the Lower Coast Fork Willamette River (17090205), the Lower McKenzie River (17090401), the Lower Middle Fork Willamette River (17090101), and Muddy Creek (17090302). In the developed areas, the stormwater system of pipes and drainage ditches can direct runoff across natural watershed boundaries to drain into a different river system. This map overlays the natural watershed boundaries with the storm drain basins of the cities of Eugene and Springfield.

In Eugene, sub-basins have been mapped and sub-basin plans are in place for the entire area within the urban growth boundary. The map shows the receiving water and the relevant plan for each sub-basin.

Springfield's stormwater drainage system has two major drainages, one that flows to the Willamette River, and one that flows to the McKenzie River. The City is further broken down into 15 separate subbasins. A drainage basin can be described as a geographic area within which stormwater drains from many small systems converging on larger drainageways, ultimately culminating in outfalls to rivers or major drainageways. The character and condition of the drainageways varies significantly throughout the basins, depending on surrounding land uses and contributing drainages.

Sanitary sewers: Eugene and Springfield have sewer systems that transport wastewater to the regional treatment plant located at 410 River Avenue, Eugene. Here wastewater is treated in four separate processes before being discharged into the Willamette River. The removed solids are treated and converted for use as compost or fertilizer for agricultural fields. The treatment plant cleans 30 million gallons of wastewater a day for more than 220,000 customers in the Eugene-Springfield area.

The City of Coburg does not have a sewer system and, currently, all wastewater is treated by septic tanks. Development of a decentralized waste water system (STEP-effluent sewer system) is underway: this will involve city-wide collection of septic tank outflow with wastewater treatment and effluent reuse. At the plant, a Membrane Bio-reactor (MBR) system will treat the waste water before it is released back into the environment. This system will result in Class A effluent, the highest level possible in the Oregon Department of Environmental Quality's effluent rating system. Most of this effluent will be used for irrigation.

Data Sources:

Oregon Spatial Data Library:
http://spatialdata.oregonexplorer.info/GPT9/catalog/main/home.page
Oregon Division of State Lands, Fourth and Fifth Field Hucs within State of OR:
http://www.oregon.gov/DSL/PERMITS/docs/huc5.pdf
City of Eugene, Stormwater Planning, Stormwater Basin Master Plans:
http://www.eugene-or.gov/portal/server.pt?open=514&objID=4250&parentname=CommunityPage&parentid=1&mode=2&in_hi_userid=2&cached=true
City of Springfield, Environmental Services Division, Stormwater Management Plan:
http://springfield-or.gov/ESD/StormwaterMasterPlan.htm
Metropolitan Wastewater Management Commission:
http://www.mwmcpartners.org/
City of Coburg, wastewater project:
http://www.coburgoregon.org/home/cob/smartlist_144/wastewater__project.html

V. Fish & Wildlife Habitat

The State of Oregon and the federal government maintain separate lists of Threatened and Endangered (T & E) species. These are species whose status is such that they are at some degree of risk of becoming extinct.

Under State law (ORS 496.171-496.192) the Fish and Wildlife Commission through ODFW maintains the list of native wildlife species in Oregon that have been determined to be either "threatened" or "endangered" according to criteria set forth by rule (OAR 635-100-0105) (pdf).

Plant listings are handled through the Oregon Department of Agriculture.
Most invertebrate listings are handled through the Oregon Biodiversity Information Center.

Under federal law the U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration share responsibility for implementing the federal Endangered Species Act of 1973 (Public Law 93-205, 16 U.S.C. § 1531) (pdf), as amended. In general, USFWS has oversight for land and freshwater species and NOAA for marine and anadromous species. In addition to information about species already listed, the USFWS-Oregon Field Office maintains a list of Species of Concern.

Because of the number of Threatened and Endangered (T&E) Species that occur within the Central Lane MPO boundary, the set of maps concerning fish and wildlife habitats is designed to cover a range of issues. Map #19.1 shows Designated Critical Habitat for the three species of Federally-listed T&E species. The critical habitat for the species overlap in many cases, therefore to increase readability of the maps, the Essential Fish Habitat (distribution) data are shown on Map 19.2. Designated Critical Habitat for non-fish (plant and animal) T&E species were shown on Map #20.1. Map 20.2 depicts current distribution and high quality habitat for these non-fish species. Map #21 includes available GIS data showing potential and current habitats for all federal and state species listed as threatened, endangered, sensitive, or species of concern. Map #22 shows the context for the Central Lane MPO environmental issues in the Oregon Conservation Strategy, both the Conservation Opportunity Areas and the Conservation Strategy Habitats. Map #23 depicts ODFW's fish barriers data.

19.1. Threatened & Endangered Fish-Critical Habitat

The Endangered Species Act (ESA) requires the Federal government to designate "critical habitat" for any species it lists under the ESA. Critical habitat is defined as:

1. Specific areas within the geographical area occupied by the species at the time of listing, if they contain physical or biological features essential to conservation, and those features may require special management considerations or protection; and
2. Specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation.

Federally listed Threatened & Endangered Fish species within the Central Lane MPO Boundary include:

- Chinook salmon (Upper Willamette River),
- Oregon chub
- Bull trout (Columbia River Basin).

Available recovery and conservation plans:

- Proposed Upper Willamette River Conservation and Recovery Plan for Chinook Salmon and Steelhead, October 22, 2010

  http://www.nwr.noaa.gov/Salmon-Recovery-Planning/Recovery-Domains/Willamette-Lower-Columbia/Will/Will-plan.cfm
- Oregon Chub (Oregonichthys crameri) Recovery Plan 09/03/1998

  http://ecos.fws.gov/docs/recovery_plans/1998/980903b.pdf
- Bull Trout -- U.S.A., conterminous, lower 48 states Draft Recovery Plan for Three of the Five Distinct Population Segments of Bull Trout (Salvelinus confluentus) 11/29/2002

  http://ecos.fws.gov/docs/recovery_plans/2002/021129.pdf

Data Sources:

NOAA National Marine Fisheries Service, ESA Critical Habitat:

http://www.nmfs.noaa.gov/pr/species/criticalhabitat.htm

U.S. Fish & Wildlife Service Critical Habitat Portal

http://criticalhabitat.fws.gov/crithab/

19.2. Threatened & Endangered Fish-Distribution

The Magnuson-Stevens Act mandates identification of essential fish habitat for managed species. The act also requires measures to conserve and enhance the habitat needed by fish to carry out their life cycles. The Magnuson-Stevens Act requires cooperation among NOAA Fisheries Service, fishery management councils, fishing participants, federal and state agencies, and others in achieving EFH protection, conservation and enhancement.

Congress defined EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." The EFH guidelines further interpret the EFH definition as:

- Waters include aquatic areas and their associated physical, chemical, and biological properties that are used by fish and may include aquatic areas historically used by fish where appropriate
- Substrate includes sediment, hard bottom, structures underlying the waters, and associated biological communities
- Necessary means the habitat required to support a sustainable fishery and the managed species' contribution to a healthy ecosystem; and
- "Spawning, breeding, feeding, or growth to maturity" covers a species' full life cycle.

Essential fish habitat for Chinook and coho salmon was first established by the Pacific Fishery Management Council (Council) in 1999, in Appendix A to Amendment 14 of the Pacific coast salmon FMP (http://www.pcouncil.org/salmon/fishery-management-plan/adoptedapproved-amendments/amendment-14-to-the-pacific-coast-salmon-plan-1997/), and modified in 2008 as a result of the Idaho County versus Commerce court case.

The implementing regulations to the Magnuson-Stevens Fishery Conservation and Management Act (MSA) as amended in 2007, require regional fishery management councils and the National Marine Fisheries Service (NMFS) to periodically review the essential fish habitat (EFH) provisions of their fishery management plans (FMPs), and to revise or amend those provisions as warranted, based on available information (50 CFR 600.815(a)(10)). A complete review should be conducted at least once every five years. The review has been started, but no changes have been made to EFH provisions at this time.

Data Sources:

NOAA National Marine Fisheries Service, Northwest Regional Office, Salmon Essential Fish Habitat:

http://www.nwr.noaa.gov/Salmon-Habitat/Salmon-EFH/maps-GIS.cfm

20. Federal and/or State listed Threatened and Endangered Species (non-fish)

Federally listed Threatened & Endangered plant and animal species (non-fish) within the Central Lane MPO Boundary:

Northern Spotted Owl*	T	*Also listed by the State of Oregon as Threatened
Fender's Blue Butterfly	E	
Oregon Silverspot Butterfly	T	
Bradshaw's desert-parsley	E	
Kincaid's Lupine	T	*Also listed by the State of Oregon as Threatened
Willamette Daisy	E	

Note: Although Northern Spotted Owl habitat does not occur within the MPO boundary, recent habitat occurs just outside the boundary and is included in the map.

USFWS has designated Final Critical Habitat (CH) for Fender's Blue Butterfly, Kincaid's Lupine, and Willamette Daisy.

- Approximately 484 acres of Fender's Blue Butterfly Critical Habitat exist within the MPO boundary in the West Eugene wetlands area, next to approximately 200 acres which lie outside the boundary to the northwest. Approximately 54 acres of Fender's Blue Butterfly CH lie in the Coburg Hills approximately 1.2 miles from the MPO boundary to the northeast.
- In contiguous or overlapping locations, approximately 140 acres of Kincaid's Lupine exist within the MPO boundary, next to approximately 65 acres outside the boundary to the northeast.
- Approximately 378 acres of Willamette Daisy Critical Habitat lie within the MPO boundary in West Eugene wetlands, near approximately 38 acres outside the boundary to the southwest in the Coyote Creek watershed.

USFWS has also designated Critical Habitat for Oregon Silverspot Butterfly. The data used is a preliminary dataset that has not be finalized by the authoritative FWS field office.

Available recovery and conservation plans:

- Bradshaw's desert-parsley , Willamette daisy, Kincaid's Lupine, and Fender's blue butterfly:

  Final Recovery Plan for the Prairie Species of Western Oregon and Southwestern Washington
  http://www.fws.gov/oregonfwo/Species/PrairieSpecies/Documents/PrairieSpeciesFinalRecoveryPlan.pdf
- Northern spotted owl (OR, WA, CA) (Not within Central Lane MPO Boundary)
  Revised Recovery Plan for the Northern Spotted Owl

  http://www.fws.gov/oregonfwo/Species/Data/NorthernSpottedOwl/Recovery/Library/Documents/RevisedNSORecPlan2011.pdf
- Revised Recovery Plan for the Oregon Silverspot Butterfly (Speyeria zerene hippolyta)
  http://ecos.fws.gov/docs/recovery_plans/2001/010822.pdf

Data Sources:

U.S. Fish & Wildlife Service Threatened and Endangered Species System (TESS):
http://ecos.fws.gov/tess_public/pub/stateListingIndividual.jsp?state=OR&status=listed

U.S. Fish & Wildlife Service Critical Habitat Portal:
http://crithab.fws.gov

LCOG: G:\projects\onhp\OHNP2005

21. Federal & State Threatened & Endangered Species, Sensitive Species, and Species of Concern

This map includes all listed species, Federal and State, which occur or potentially occur in the Central Lane MPO area. See Appendix for the Oregon Sensitive Species list and USFW Federally Listed Threatened, Endangered, Candidate Species of Concern which may occur in the area of the Central Lane MPO.

Data Sources: Same as Maps #20.1 and 20.2.

22. Oregon Conservation Strategy

ODFW's Wildlife Conservation Strategy is an ambitious effort to synthesize the best available data, science, and knowledge into a broad vision and conceptual framework for long-term conservation of Oregon's native wildlife (including fish, wildlife (vertebrates and invertebrates) and plants.) It incorporates information and insights from a broad range of natural resources assessments and conservation plans, supplemented by the professional expertise and practical experiences of a cross-section of Oregon's resource managers and conservation interests.

The Conservation Strategy follows a "coarse filter" (habitat) – "fine filter" (species) approach to conservation planning. Conservation actions focused on the maintenance of natural habitats are likely to benefit a wider range of organisms than conservation actions developed for single species. It is the best way to maintain diverse and healthy wildlife communities. In addition, conserving larger areas of terrestrial or freshwater habitat preserves system-wide ecological processes critical to the viability of the ecosystems and the survival of wildlife species inhabiting them. These services benefit people as well. Strategy Habitats are the "coarse filters."

Species dependent on multiple habitats at different times during their life cycle, those that occur in a small geographic area, those with highly specialized needs, or those that travel across a large geographic area may require special attention. To ensure that the needs of "low and declining species" were addressed, Strategy Species include rare and/or at-risk fish, wildlife, invertebrates, and plants. Strategy Species are the "fine filters." In addition, the Conservation Strategy examines vulnerable animal concentrations and "Specialized and Local Habitats" that address particular landscape features. Used together, this "coarse filter/fine filter" approach is designed to best account for a wide variety of species and habitats in need of conservation attention.

Data Source:

Oregon Department of Fish and Wildlife (Wildlife Division) Conservation Strategy for Oregon:
http://www.dfw.state.or.us/conservationstrategy/contents.asp

23. Barriers to Fish Passage

This dataset depicts passable and impassable barriers to native migratory fish. Data from multiple agencies have been compiled into this standardized dataset that is stewarded by ODFW. Separate datasets exist for current barriers and removed / replaced barriers. Barrier types including dams, culverts, hatchery facilities and related structures, and the set of features described as cascades, gradient, velocity are represented in the dataset.

Data Source:

Oregon Department of Fish and Wildlife Natural Resources Information Management Program:
http://nrimp.dfw.state.or.us/nrimp/default.aspx?pn=fishbarrierdata

VI. Land Use/Planning

24. Comprehensive Plans

Currently, three comprehensive plans guide land use within the Central Lane MPO boundary. The jurisdictional plans cover Coburg, Eugene/Springfield Metropolitan Area, and Lane County.

Data Source:

LCOG: X:\data\boundary\plans\mtpds

25. Goal 3 & 4 Farm and Forest Lands

Properties that would potentially require goals exceptions are designated agricultural or forest resource lands. Goals 3 and 4 apply to lands outside of urban growth boundaries.

Data Source:

LCOG: X:\data\boundary\plans\lcpds

26. Goal 5 Natural Resources

Coburg, Eugene, and Springfield have designated Goal 5 natural resource areas, and Lane County takes the Safe Harbor approach to Goal 5 natural resource protection.

Within and outside the city limits of Eugene, the West Eugene Wetlands are recognized as a protected resource. Eugene has also designated other Goal 5 wetlands, as well as riparian and upland resources. In, 2005, the Eugene City Council adopted and applied the /WR Water Resources Conservation Overlay Zone measures to implement Statewide Planning Goal 5 inside Eugene city limits. The provisions went into effect on January 1, 2006. In 2006, the Lane County Board of Commissioners adopted Ordinance No. PA 1234, adopting the /WR Water Resources Conservation Overlay Zone and applying it to 463 tax lots between the Eugene city limits and the urban growth boundary. The new provisions went into affect in January 2007.

Springfield has designated Goal 5 uplands and wetlands, and has defined specific buffering formulas for protecting Goal 5 riparian resources. Coburg has designated Goal 5 wetlands. Lane County does not have a Local Wetland Inventory; therefore the map depicts the National Wetland Inventory for Lane County areas outside of UGBs. The safe harbor riparian areas within Lane County but outside the Metropolitan Plan boundary and outside the Coburg UGB are shown as designated buffer widths on fish-bearing streams.

For more information on protection status of Eugene Goal 5 resources:

http://www.eugene-or.gov/portal/server.pt?open=514&objID=4111&qid=32559554&rank=1&parentname=SearchResult&parentid=13&mode=2&in_hi_userid=2&cached=true

Springfield resources: http://www.ci.springfield.or.us/dsd/Planning/index.htm

Coburg resources:
http://www.coburgoregon.org/home/cob/smartlist_35/coburg_planning_department.html

Lane County resources: http://www.lcog.org/metro/default.htm#metdoc

Data Sources:

U.S. Fish & Wildlife Service Branch of Habitat Assessment Wetlands Information:
 http://wetlandsfws.er.usgs.gov

LCOG, City of Eugene, City of Springfield, City of Coburg.

27. Goal 15 Greenway – Recreation and Conservation Lands

Lands protected by Section 4(f) include publicly-owned parks, recreation areas, and wildlife and waterfowl refuges. There are no National Wildlife Refuges within or near the MPO boundary. Federal restrictions apply to Land & Water Conservation Funds properties owned by the USDA BLM. State land use Goal 15 protections apply to the Willamette River Greenway. Privately-owned conservation lands (The Nature Conservancy and McKenzie River Trust) are included to show context of other wildlife conservation habitat.

Data Sources:

U.S. Department of Agriculture Forest Service Lands and Realty Management:
 http://www.fs.fed.us/land/staff/LWCF/

U.S. Department of the Interior National Park Service Land & Water Conservation Fund:
 http://www.nps.gov/ncrc/programs/lwcf/

McKenzie River Trust:
 http://www.mckenzieriver.org/

The Nature Conservancy:
 http://www.nature.org/wherewework/northamerica/states/oregon/

LCOG: X:\data\parcel\taxlot

28. Soils

The most recent NRCS Lane County Soil Survey data are shown. This map represents general soil map units which typically consist of one or more major soils and some minor soils.

Data Sources:

U.S. Department of Agriculture Natural Resources Conservation Service Soil Survey:
 http://soils.usda.gov/survey

LCOG: X:\data\natural\soils\NRCS_Soils

29. Natural Hazards – Seismic Zones

These data are from the Oregon Department of Geology and Mineral Industries series "Relative Earthquake Hazard Maps for Selected Urban Areas in Western Oregon."

Data Source:

Oregon Department of Geology and Mineral Industries, Earthquakes and Other Natural Hazards in the Pacific Northwest:

http://www.oregongeology.com/sub/earthquakes/earthquakehome.htm

VII. Wetlands

30. Wetlands—West Eugene Wetlands, LWI, NWI

Local Wetlands Inventories (LWIs) are comprehensive maps and information about wetlands throughout a city which are approved by Oregon DSL. The LWIs replace the National Wetlands Inventory (NWI) in urban areas. An LWI aims to map all wetlands at least 0.5 acres or larger at an accuracy of approximately 25 feet on a parcel-based map. Actual map accuracy varies, and areas that could not be field verified will be less accurate. (The LWI is not a substitute for a detailed delineation of wetland boundaries.)

Note: For more information about protection status of wetlands or significant wetlands, refer to individual cities: http://www.eugene-or.gov/portal/server.pt?open=17&objID=15757&parentname=CommunityPage&parentid=14&mode=2&in_hi_userid=2&cached=true
http://www.ci.springfield.or.us/dsd/Planning/index.htm
http://www.coburgoregon.org/home/cob/smartlist_35/coburg_planning_department.html

Data Sources:

Oregon Department of State Lands Wetlands Program:

http://statelands.dsl.state.or.us/DSL/WETLAND/index.shtml

31. Wetland Mitigation Bank Service Areas

The Central Lane MPO Boundary overlaps eight existing Mitigation Bank Services Areas: Wilbur, City of Eugene, Evergreen, Muddy Creek, Mid Valley, Long Tom, Coyote Prairie North and Oak Creek.

Data Sources:

Oregon Department of State Lands Mitigation Banks Status Report and Contact Information:

http://www.oregon.gov/DSL/PERMITS/mitbank_status.shtml

Staff Sources:
Dana Field, Department of State Lands

32. Wetland Mitigation Bank—Existing Sites

Existing mitigation sites in or nearest to the Central Lane MPO boundary are West Eugene (over 200 ac.), Coyote Prairie North (approx. 165 acres), and Long Tom (approx. 135 acres) Another Mitigation Bank in progress is the Oregon Trail Heritage Bank near Junction City.

These banks may have various elevation limits within their service area.

Data Sources:

Oregon Department of State Lands Mitigation Banks Status Report and Contact Information:
http://www.oregon.gov/DSL/PERMITS/mitbank_status.shtml

Staff Sources:

Dana Field, Department of State Lands

Trevor Taylor and Paul Gordon, City of Eugene

APPENDIX

11. National Register Historic Districts and Historic Properties

Coburg Historic District
(added 1986 - **Lane County** - #86000036)
Also known as **See Also: Mathews, Nelson and Margaret, House**
Roughly bounded by Van Duyn Road, Diamond and Miller Streets, Dixon Street and Tax lots 1700 and 201, and Bottom Loop Road, Coburg
(1364 acres, 99 buildings)

Dorris Ranch
(added 1988 - **Lane County** - #88000724)
South Second Street at Dorris Avenue, Springfield
(1090 acres, 5 buildings, and 1 structure)

East Skinner Butte Historic District
(added 1982 - **Lane County** - #82003732)
Pearl and High Streets, and 2nd and 3rd Avenues, Eugene
(100 acres, 27 buildings)

Eugene Blair Boulevard Historic Commercial Area
(added 1993 - **Lane County** - #93000928)
Also known as **Blair Island; See Also: Hayse Blacksmith Shop**
Blair Boulevard between West 3rd and West 5th Avenues, including Van Buren Street between Blair and West 3rd, Eugene
(68 acres, 19 buildings, 3 structures)

Washburne Historic District
(added 1987 - **Lane County** - #87000042)
Roughly bounded by G, North Tenth, A, and North Second Streets, Springfield
(840 acres, 246 buildings)

Source: http://www.nationalregisterofhistoricplaces.com/OR/Lane/districts.html

City of Eugene Historic Properties

Hse No.	Suffix	Dir.	Street Name	St. Type	Map/Tax Lot #	Nat'l Reg	City Landmark	Historical Name	Neighborhood
AMAZON NEIGHBORHOOD									
2601			University	Street	18-03-05-42-04700	X	X	Masonic Cemetery	Amazon
2601			University	Street	18-03-05-42-04700	X	X	Hope Abbey Mausoleum	Amazon
CAL YOUNG NEIGHBORHOOD									
1610			Cal Young	Road	17-03-19-14-02212		X	Cal Young House	Cal Young
CREST NEIGHBORHOOD									
595			Crest	Drive	18-03-07-21-05200	X		Wayne Morse Farm	Crest
814			Lorane	Hwy	18-03-07-22-03501		X	Young-Pallett House /Kjaer House	Crest
DOWNTOWN NEIGHBORHOOD									
27		E	5th	Avenue	17-03-31-11-13801	X	X	Oregon Electric Railway Station	Downtown
182		W	5th	Avenue	17-03-31-12-05300	X	X	Pacific Coop Poultry Producers	Downtown
291		W	8th	Avenue	17-03-31-12-13600	X	X	Woodmen of the World Hall	Downtown
146		E	12th	Avenue	17-03-31-41-10700		X	Edward L Zimmerman House	Downtown

170		E	12th	Avenue	17-03-31-41-09800	X	X	Christian House	Downtown
160		E	Broadway		17-03-31-14-07500	X	X	Quackenbush Hardware	Downtown
222		E	Broadway		17-03-31-14-07800	X	X	Eugene Hotel	Downtown
614			Lawrence	Street	17-03-31-21-06901		X	Working Flats	Downtown
1143			Oak	Street	17-03-31-41-10500	X	X	Alpha Tau Omega House	Downtown
1263			Oak	Street	17-03-31-41-11100	X		Peterson Apartments	Downtown
532			Olive	Street	17-03-31-12-05300	X	X	Lane Co. Farmers Union	Downtown
449			Willamette	Street	17-03-30-44-09500	X	X	Southern Pacific Depot	Downtown
488			Willamette	Street	17-03-31-12-00300	X	X	Palace Hotel	Downtown
507			Willamette	Street	17-03-31-11-01200		X	Booth-Kelly Building	Downtown
DOWNTOWN NEIGHBORHOOD (Continued)									
520			Willamette	Street	17-03-31-12-06100	X	X	US Post Office	Downtown
767			Willamette	Street	17-03-31-11-09200	X	X	Smeede Hotel	Downtown
795			Willamette	Street	17-03-31-11-09400	X	X	McMorran & Washburne Store	Downtown
973			Willamette	Street	17-03-31-14-05700	X	X	Ax Billy Dept. Store	Downtown
1015			Willamette	Street	17-03-31-14-12500	X	X	Schaefers Building	Downtown
1004			Willamette	Street	17-03-31-13-01900	X	X	McDonald Theatre	Downtown
1280			Willamette	Street	17-03-31-42-		X	Kennell Ellis Building	Downtown

					01400				
FAIRMOUNT NEIGHBORHOOD									
1910		E	15th	Avenue	17-03-33-33-05300		X	Fairmount Presbyterian Church/Maude Kerns Art Center	Fairmount
1973			Garden	Avenue	17-03-32-32-10300	X		C S Williams House	Fairmount
1991			Garden	Avenue	17-03-33-32-10400	X		Howard Hall House	Fairmount
1662			Villard	Street	17-03-33-33-06600		X	Maude Shoup House	Fairmount
FRIENDLY NEIGHBORHOOD									
96		W	20th	Avenue	18-03-06-12-11000		X	Edgar Moore House	Friendly
447		W	22nd	Avenue	18-03-06-24-01400		X	Kerns/Chase House	Friendly
2050			Madison	Street	18-03-06-22-11200		X	Masterson House	Friendly
2077			Willamette	Street	18-03-06-11-08505	X		Civic Stadium	Friendly
HARLOW NEIGHBORHOOD									
2491			Harlow	Road	17-03-21-33-10500	X	X	Harlow House	Harlow
110		S	Garden	Way	17-03-28-40-01101	X		Jack Chase House	Harlow
274		S	Garden	Way	17-03-28-40-01900	X		Frank Chase House	Harlow
242		S	Garden	Way	17-03-28-40-02000	X		Gladys Chase House	Harlow

158		S	Garden	Way	17-03-28-40-02103	X		Harry Chase House	Harlow
HARLOW NEIGHBORHOOD (Continued)									
132		S	Garden	Way	17-03-28-40-02200	X		Chase Brenanen House	Harlow
150		N	Garden	Way	17-03-28-13-00104		X	Pengra House	Harlow
3055			Willakenzie	Road	17-03-21-22-00800	X	X	Willakenzie Grange	Harlow
JEFFERSON NEIGHBORHOOD									
360		W	13th	Avenue	17-03-31-42-09000	X		Rice Apartments	Jefferson
590		W	13th	Avenue	17-03-31-31-12900		X	Skinner Residence	Jefferson
740		W	13th	Avenue	17-03-31-32-09900	X	X	Lane County Clerk's Building	Jefferson
1308			Jefferson	Street	17-03-31-31-13000		X	G W Hunter Residence	Jefferson
1312			Lincoln	Street	17-03-31-42-10600	X	X	Ball House Ensemble	Jefferson
1330			Lincoln	Street	17-03-31-42-10500		X	Ball House Ensemble	Jefferson
1338			Lincoln	Street	17-03-31-42-10400		X	Ball House Ensemble	Jefferson
1611			Lincoln	Street	17-03-31-43-07800	X	X	Peters-Liston House	Jefferson
1718			Lincoln	Street	17-03-31-43-05200	X		Marx-Schaefer House	Jefferson
RIVER ROAD									

NEIGHBORHOOD									
120			Fir	Lane	17-04-25-12-02800	X		Potter House	River Road
370			River	Road	17-04-25-21-07404		X	Johansen/Moody House	River Road
390			River	Road	17-04-25-21-05404		X	Elgaard House	River Road
405			River	Road	17-04-25-12-01200		X	Lombard/Potter House	River Road
1410			River	Road	17-04-13-33-04602		X	Brunner-Schmitz House	River Road
SANTA CLARA NEIGHBORHOOD									
1151			Irving	Road	17-04-10-42-03000		X	Fred Chambers House	Santa Clara
3650			River	Road	17-04-02-34-14100	X		Jamieson House	Santa Clara
UNIVERSITY OF OREGON									
1098		E	13th	Avenue	17-03-32-00-00100	X	X	Johnson Hall	U of O
1170		E	13th	Avenue	17-03-32-00-00100		X	Collier House	U of O
		E	13th	Avenue	17-03-32-00-00100	X		Dad's Gates	U of O
1430			Johnson	Lane	17-03-32-00-00100	X	X	Museum of Art	U of O
1431			Johnson	Lane	17-03-32-00-00100	X		Susan Campbell Hall	U of O
1109			Old Campus	Lane	17-03-32-00-00100	X	X	Villard Hall	U of O
1201			Old Campus	Lane	17-03-32-00-00100	X	X	Deady Hall	U of O

1408			University	Street	17-03-32-00-00100	X		Hendricks Hall	U of O
1468			University	Street	17-03-32-00-00100	X		Gerlinger Hall	U of O
			University of Oregon		17-03-32-00-00100	X		Women's Memorial Quadrangle Ensemble	U of O
			University of Oregon		17-03-32-00-00100	X		Library/Memorial Quadrangle Ensemble	U of O
980		E	16th	Avenue	17-03-32-00-00600	X	X	Eugene Pioneer Cemetary	
SOUTH UNIVERSITY NEIGHBORHOOD									
1138		E	22nd	Avenue	18-03-05-13-07000	X		Boyer House	S. Univ.
1886			University	Street	18-03-05-12-02500		X	Beaver Club	S. Univ.
WEST UNIVERSITY NEIGHBORHOOD									
322		E	11th	Avenue	17-03-31-41-00200	X		Fuller/Slattery House	W. Univ.
588		E	11th	Avenue	17-03-32-32-02900	X	X	Calkins House	W. Univ.
379		E	12th	Avenue	17-03-32-32-19100	X		Beta Theta Pi House	W. Univ.
511		E	12th	Avenue	17-03-32-32-04600		X	Schwering House	W. Univ.
259		E	13th	Avenue	17-03-31-41-04200	X		Wilder Apartments	W. Univ.

492		E	13th	Avenue	17-03-32-32-11600	X	X	First Congregational Church	W. Univ.
WEST UNIVERSITY NEIGHBORHOOD (Continued)									
544		E	13th	Avenue	17-03-32-32-11900	X	X	Thompson-Roach Building	W. Univ.
244		E	16th	Avenue	17-03-31-44-10300	X	X	Christian/Patterson Rental	W. Univ.
707		E	17th	Avenue	17-03-32-34-04500	X		Benjamin Franklin Dorris House	W. Univ.
1461			Alder	Street	17-03-32-34-00400	X		PSI Alpha Chi Omega Sorority	W. Univ.
963			Ferry	Lane	17-03-32-23-04700	X		Dorris Apartments	W. Univ.
1018			Hilyard	Street	17-03-32-23-07700	X		Chi Psi Fraternity House	W. Univ.
1021			Hilyard	Street	17-03-32-24-02800	X		Gamma Phi Beta Sorority House	W. Univ.
1050			Hilyard	Street	17-03-32-23-07800	X		Alpha Phi Sorority House	W. Univ.
1280			Mill	Street	17-03-32-32-11000		X	Wetherbee/Winnard House	W. Univ.
1412			Pearl	Street	17-03-31-41-08500		X	Soults-Westfall Duplex	W. Univ.
1605			Pearl	Street	17-03-31-44-10400		X	Patterson/Stratton House	W. Univ.
WESTSIDE NEIGHBORHOOD									
673		W	10th	Avenue	17-03-31-24-09300		X	Beardsley House	Westside
650		W	12th	Avenue	17-03-31-31-05202	X		Lincoln School	Westside
531		W	Broadway		17-03-31-24-02300		X	Stickles/Schaefres House	Westside

996			Jefferson	Street	17-03-31-24-09200		X	Kaufman House	Westside
765			Monroe	Street	17-03-31-22-12100	X	X	Baldwin Market	Westside
1006			Taylor	Street	17-04-36-13-15300	X	X	Chambers House	Westside
WHITEAKER NEIGHBORHOOD: EAST SKINNER BUTTE HISTORIC DISTRICT									
205		E	2nd	Avenue	17-03-30-44-00600	X	X	Structure	Whiteaker
208		E	2nd	Avenue	17-03-30-44-03900	X	X	Colonial Bungalow	Whiteaker
215		E	2nd	Avenue	17-03-30-44-00700	X	X	Transitional Box	Whiteaker
215	1/2	E	2nd	Avenue	17-03-30-44-00700	X	X	Apartments	Whiteaker
224		E	2nd	Avenue	17-03-30-44-03800	X	X	Colonial Bungalow	Whiteaker
235		E	2nd	Avenue	17-03-30-44-00800	X	X	Apartments	Whiteaker
WHITEAKER NEIGHBORHOOD: EAST SKINNER BUTTE HISTORIC DISTRICT (Continued)									
240		E	2nd	Avenue	17-03-30-44-03700	X	X	Colonial Bungalow	Whiteaker
259		E	2nd	Avenue	17-03-30-44-01100	X	X	Colonial Bungalow	Whiteaker
260		E	2nd	Avenue	17-03-30-44-02800	X	X	Apartment	Whiteaker
175		E	3rd	Avenue	17-03-30-44-04300	X		Campbell Property Cottage	Whiteaker
205		E	3rd	Avenue	17-03-30-44-03500	X	X	Koppe House	Whiteaker
210		E	3rd	Avenu	17-03-30-44-	X	X	Apartment	Whiteaker

				e	06400				
211		E	3rd	Avenue	17-03-30-44-03500	X	X	Koppe House	Whiteaker
221		E	3rd	Avenue	17-03-30-44-03300	X	X	Koppe Carriage House	Whiteaker
221		E	3rd	Avenue	17-03-30-44-03300	X	X	Paul & Grace Koppe House	Whiteaker
235		E	3rd	Avenue	17-03-30-44-03200	X	X	Pironi House	Whiteaker
246		E	3rd	Avenue	17-03-30-44-06600	X	X	Cogswell-Miller House	Whiteaker
258		E	3rd	Avenue	17-03-30-44-06700	X	X	Bungalow	Whiteaker
340		E	3rd	Avenue	17-03-30-44-07700	X	X	Gothic Commercial Farmhouse	Whiteaker
344		E	3rd	Avenue	17-03-30-44-07700	X		Italianate Cottage	Whiteaker
347		E	3rd	Alley	17-03-30-44-80003	X		Ham House	Whiteaker
200			Cheshire	Avenue	17-03-30-44-00401		X	Apartments	Whiteaker
200			Cheshire	Avenue	17-03-30-44-00500		X	Vacant	Whiteaker
106			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
108			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
110			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
112			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
114			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
116			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker

118			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
120			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
122			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
124			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
126			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
128			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
WHITEAKER NEIGHBORHOOD: EAST SKINNER BUTTE HISTORIC DISTRICT (Continued)									
130			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
132			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
134			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
136			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
138			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
140			High	Street	17-03-30-44-00200		X	Condominium	Whiteaker
140			High	Street	17-03-30-44-00400		X	Vacant	Whiteaker
188			High	Street	17-03-30-44-01201	X	X	Victorian Cottage	Whiteaker
188			High	Street	17-03-30-44-01202	X	X	Vacant	Whiteaker
212			High	Street	17-03-30-44-02800	X	X	Hanson House	Whiteaker
240			High	Street	17-03-30-44-	X	X	Queen Ann Victorian	Whiteaker

					02900				
242			High	Street	17-03-30-44-02900	X	X	Queen Ann Victorian	Whiteaker
244			High	Street	17-03-30-44-02900	X	X	Queen Ann Victorian	Whiteaker
246			High	Street	17-03-30-44-02900	X	X	Queen Ann Victorian	Whiteaker
248			High	Street	17-03-30-44-02900	X	X	Queen Ann Victorian	Whiteaker
260			High	Street	17-03-30-44-03000	X	X	Henderson House	Whiteaker
262			High	Street	17-03-30-44-03000	X	X	Duplex	Whiteaker
264			High	Street	17-03-30-44-03000	X	X	Duplex	Whiteaker
286			High	Street	17-03-30-44-03100	X	X	McAlister House	Whiteaker
306			High	Street	17-03-30-44-06800	X	X	Hurschel Smith House	Whiteaker
315			High	Street	17-03-30-44-07700	X		A-1 Auto Glass	Whiteaker
320			High	Street	17-03-30-44-06900	X	X	Dixon Daughters House	Whiteaker
330			High	Street	17-03-30-44-07000	X	X	Mims House	Whiteaker
336			High	Street	17-03-30-44-07000	X	X	Mims House II	Whiteaker
341			High	Street	17-03-30-44-80001	X		Peoples Market	Whiteaker
343			High	Street	17-03-30-44-80002	X		Peoples Market	Whiteaker
347	1/2		High	Street	17-04-30-44-80003	X		Ham House	Whiteaker
212			Pearl	Street	17-03-30-44-04000	X	X	Ankeny House	Whiteaker

212			Pearl	Street	17-03-30-44-04000	X	X	Ankeny Garage	Whiteaker
245			Pearl	Street	17-03-30-44-03600	X	X	Wheeler House	Whiteaker
WHITEAKER NEIGHBORHOOD: EAST SKINNER BUTTE HISTORIC DISTRICT (Continued)									
245			Pearl	Street	17-03-30-44-03600	X	X	Wheeler House II	Whiteaker
252			Pearl	Street	17-03-30-44-04400	X		Campbell Property/Cottage	Whiteaker
252			Pearl	Street	17-03-30-44-04100	X	X	Campbell House	Whiteaker
284			Pearl	Street	17-03-30-44-04200	X	X	Bungalow	Whiteaker
298			Pearl	Street	17-03-30-44-04600	X	X	E and N Chase House	Whiteaker
335			Pearl	Street	17-03-30-44-06300	X	X	Watts House	Whiteaker
335			Pearl	Street	17-03-30-44-06300	X	X	Watts House Propery/Apartment	Whiteaker
WHITEAKER NEIGHBORHOOD: BLAIR BLVD. HISTORIC COMMERCIAL AREA									
1080		W	3rd	Avenue	17-04-25-44-02200	X	X	C O and F A Stratton House	Whiteaker
1110		W	3rd	Avenue	17-04-25-44-02400	X	X	Henzler House and Shop	Whiteaker
1211		W	3rd	Alley	17-04-25-44-07802	X	X	F P Allen House Apartments	Whiteaker
1213		W	3rd	Alley	17-04-25-44-07802	X	X	F P Allen House Apartments	Whiteaker
1215		W	3rd	Alley	17-04-25-44-07802	X	X	F P Allen House Apartments	Whiteaker

1217		W	3rd	Alley	17-04-25-44-07802	X	X	F P Allen House Apartments	Whiteaker
1219		W	3rd	Alley	17-04-25-44-07802	X	X	F P Allen House Apartments	Whiteaker
1022		W	4TH	Avenue	17-04-25-44-03900	X	X	Cash O. Smith House	Whiteaker
1100		W	4th	Avenue	17-04-25-44-10600	X	X	English Cottage Revival Res.	Whiteaker
1180		W	4th	Avenue	17-04-25-44-10601	X	X	Scobert Park	Whiteaker
1001		W	5th	Avenue	17-04-36-11-00200	X	X	Gibson House	Whiteaker
1125		W	5th	Avenue	17-04-36-11-01000	X	X	C W Powell House	Whiteaker
302			Blair	Blvd	17-04-25-44-07700	X	X	Surata Soy Foods	Whiteaker
312			Blair	Blvd	17-04-25-44-07802	X	X	F P Allen House	Whiteaker
314			Blair	Blvd	17-04-25-44-07802	X	X	Apartments	Whiteaker
325			Blair	Blvd	17-04-25-44-02500	X	X	Old Texas Steak House	Whiteaker
340			Blair	Blvd	17-04-25-44-07801	X	X	JESCO Club	Whiteaker
358			Blair	Blvd	17-04-25-44-10000	X	X	Earl Peterson House	Whiteaker
WHITEAKER NEIGHBORHOOD: BLAIR BLVD. HISTORIC COMMERCIAL AREA (Continued)									
400			Blair	Blvd	17-04-25-44-10201	X	X	Original Tiny Tavern	Whiteaker
407			Blair	Blvd	17-04-25-44-04301	X	X	Sam Bond's Garage	Whiteaker
440			Blair	Blvd	17-04-25-44-10202	X	X	Scobert House	Whiteaker
440	1/2		Blair	Blvd	17-04-25-44-	X	X	Agricultural Outbuildings	Whiteaker

					10600				
442			Blair	Blvd	17-04-25-44-10202	X	X	King Gillette Realty Office	Whiteaker
449			Blair	Blvd	17-04-25-44-04100	X	X	Burton's Saw Factory	Whiteaker
450	1/2		Blair	Blvd	17-04-25-44-10500	X	X	Bungalow	Whiteaker
450			Blair	Blvd	17-04-25-44-10600	X	X	Scobert Property	Whiteaker
451			Blair	Blvd	17-00-36-11-00300	X	X	Burton's Saw Factory Cottages	Whiteaker
458			Blair	Blvd	17-04-25-44-10300	X	X	Koepp Family House	Whiteaker
461			Blair	Blvd	17-00-36-11-00300	X	X	Burton's Saw Factory Cottages	Whiteaker
471			Blair	Blvd	17-00-36-11-00300	X	X	Burton's Saw Factory Cottages	Whiteaker
341			Van Buren	Street	17-04-25-44-02300	X	X	Ben White's Vulcanizing	Whiteaker
345			Van Buren	Street	17-04-25-44-02300	X	X	New Day Bakery	Whiteaker
357			Van Buren	Street	17-04-25-44-02300	X	X	Hayes Blacksmith Shop	Whiteaker
	Parking Lot on 4th Avenue				17-04-25-44-04201	X	X	Nedco Parking Lot	Whiteaker
	Parking Lot on 4th Avenue				17-04-25-44-04201	X	X	Nedco Parking Lot	Whiteaker
	Eugene to Booneville Territorial Highway/Blair Blvd.					X	X	Eugene to Booneville Territorial Hwy	Whiteaker
WHITEAKER NEIGHBORHOOD: INDIVIDUAL WHITEAKER NEIGHBORHOOD LISTINGS									
375		W	4th	Avenue	17-03-30-34-11000	X		McCracken Brothers Building	Whiteaker

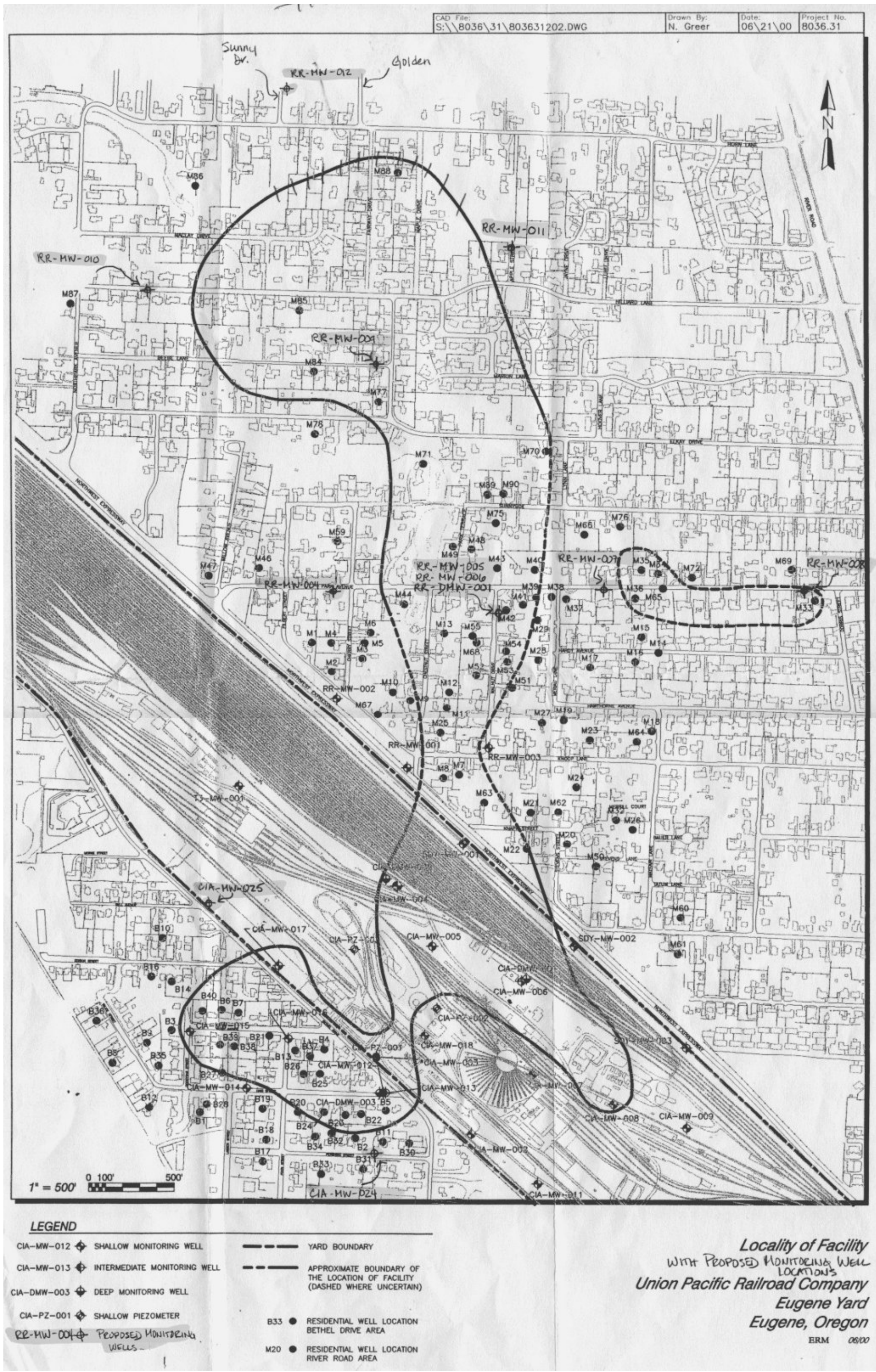
437			Lawrence	Street	17-03-30-34-13501		X	Eakins/Snodgrass House	Whiteaker
303			Willamette	Street	07-03-30-44-09200	X	X	Shelton-McMurphey House	Whiteaker
			Skinner Butte Park			X		The Big "O"	Whiteaker

City of Springfield Historic Properties

Hse No.	Suffix	Dir.	Street Name	St. Type	Map/Tax Lot #	Nat'l Reg	City Landmark	Historical Name
702		**N**	**A**	**Street**		**XX**		Springfield Buick Motors Dealership
1260			Main	Street		XX	XX	Brattain-Hadley House
890			Aspen	Drive		XX		Campbell House
590			Main	Street		XX	XX	Pacific Power and Light Building
101		S	A	Street		XX	XX	Southern Pacific Railroad Depot
846			F	Street		XX	XX	Springfield General Hospital
		S	2nd	Avenue		XX		Dorris Ranch
						XX		All properties within Washburne Historic District
532			C	Street			XX	Ebbert Memorial United Methodist
606			D	Street			XX	McKlin House
330			Main	Street			XX	Stevens & Perkins Building
342-346			Main	Street			XX	I.O.O.F. Building
214			Pioneer Parkway West				XX	Stewart House
6590			Thurston	Road			XX	Thurston Grange [Community] Hall
3362			Osage				XX	Douglas House

13. Environmental Cleanup Sites

Site 312 (Eugene) refers to the Union Pacific Railroad – Eugene Yards. A ground water contamination plume has been mapped in this area. This map was downloaded from Oregon Toxics Alliance web site: http://www.oregontoxics.org/railyard/rr_home.html, and is attributed on that site to ERM, UPRR's environmental consultant firm.



14. Toxic Release Inventory Permitted Sites –

FACILITY ID NUMBER	FACILITY NAME	ADDRESS	Map Label
97408GGSND952CB	EGGE SAND & GRAVEL	90520 COBURG RD	3
97402PTRSN2948A	PETERSON PACIFIC CORP	29408 AIRPORT RD	18
97402LDMCF90049	MCFARLAND CASCADE POLE & LUMBER CO	90049 HWY 99 N	14
97402GRGPC2665H	GEORGIA-PACIFIC CHEMICALS LLC	2665 HWY 99 N	7
97402GRGPC2665A	MURPHY PLYWOOD CO EUGENE OPERATIONS	2350 PRAIRIE RD	16
97404MDRSR11DIV	MDU RESOURCES EUGENE ASPHALT	1001 DIVISION AVE	15
97401GHNRR12438	GHEEN IRRIGATION WORKS INC	1248 WILLAGILLESPIE RD	8
97402BHMPR50NDA	FLAKEBOARD AMERICA LTD - EUGENE MDF	50 N DANEBO AVE	4
97402CSCDP3790C	CASCADE PLATING & MACHINE	3790 CROSS ST	2
97402JHBXT85NBA	J H BAXTER & CO	85 N BAXTER RD	11
97477SFTYK55SHE	SAFETY-KLEEN SYSTEMS (705401)	550 SHELLY ST SPACE A-E	20
97440PRCCR10NOR	PIERCE FITTINGS	10 N GARFIELD ST	19
97478KNGSF3315M	KINGSFORD MANUFACTURING CO	3315 MARCOLA RD	13
97402RGNRB3595W	OREGON RUBBER CO	3595 W 1ST AVE	17
97402SCNTF175SD	SCIENTIFIC DEVELOPMENTS INC	175 S DANEBO	21
97402WLLMT586MC	WILLAMETTE VALLEY CO	586 MCKINLEY ST	23
97402FRBDH4248W	FORBO ADHESIVES LLC	4248 W 6TH AVE	5
97402FRRST1011M	FORREST PAINT CO	1011 MCKINLEY ST	6
97477CHMBN475NO	ARCLIN USA LLC	475 28TH ST	1
97405CDRPD86470	JOHNSON CRUSHERS INTERNATIONAL INC	86470 FRANKLIN BLVD	12
97477BRDNN470SO	HEXION SPECIALTY CHEMICALS INC	470 S 2ND ST	9
97478WYRHS785N4	INTERNATIONAL PAPER CO	801 42ND ST	10
97402TRSJS195NB	VENEER TECHNOLOGIES EUGENE PLANT	195 N BERTELSEN RD	22

20. Federal and State T&E Species, Sensitive Species and Species of Concern

FEDERALLY LISTED THREATENED, ENDANGERED, CANDIDATE SPECIES AND SPECIES OF CONCERN

Threatened, Endangered, and Candidate Fish and Wildlife Species in Oregon

The State of Oregon and the federal government maintain separate lists of threatened and endangered (T&E) species. These are species whose status is such that they are at some degree of risk of becoming extinct.

Under State law (ORS 496.171-496.192) the Fish and Wildlife Commission through ODFW maintains the list of native wildlife species in Oregon that have been determined to be either “threatened” or “endangered” according to criteria set forth by rule (OAR 635-100-0105).

Plant listings are handled through the Oregon Department of Agriculture.

Most invertebrate listings are handled through the Oregon Natural Heritage Program.

Under federal law the U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration share responsibility for implementing the federal Endangered Species Act of 1973 (Public Law 93-205, 16 U.S.C. § 1531), as amended. In general, USFWS has oversight for land and freshwater species and NOAA for marine and anadromous species. In addition to information about species already listed, the USFWS-Oregon Field Office maintains a list of Species of Concern.

Additional information about the federal programs in place in Oregon can be found at the following websites:
- U.S. Fish and Wildlife-Oregon (http://www.fws.gov/oregonfwo)
- Northwest Region of NOAA-Fisheries (http://www.nwr.nmfs.noaa.gov)

Threatened, Endangered, and Candidate Fish and Wildlife Species in Oregon
(T=threatened, E=endangered, C=candidate, DPS=Distinct Population Segment)

Common Name	Scientific Name	State status	Federal status
FISH			
Borax Lake Chub	*Gila boraxobius*	E	E
Bull Trout (Range-wide)	*Salvelinus confluentus*		T
Columbia River Chum Salmon	*Oncorhynchus keta*		T
Foskett Speckled Dace	*Rhinichthys osculus* ssp	T	T
Green sturgeon (Southern DPS)	*Acipenser medirostris*		T
Hutton Spring Tui Chub	*Gila bicolor* ssp.	T	T
Lahontan Cutthroat Trout	*Oncorhynchus clarki henshawi*	T	T
Lost River Sucker	*Deltistes luxatus*	E	E
Lower Columbia River Chinook Salmon	*Oncorhynchus tshawytscha*		T
Lower Columbia River Coho Salmon	*Oncorhynchus kisutch*	E	T
Lower Columbia River Steelhead	*Oncorhynchus mykiss*		T
Middle Columbia River Steelhead	*Oncorhynchus mykiss*		T
Modoc sucker	*Catostomus microps*		E
Oregon Chub	*Oregonichthys crameri*		T
Oregon Coast Coho Salmon	*Oncorhynchus kisutch*		T
Pacific Eulachon/Smelt (Southern DPS)	*Thaleichthys pacificus*		T
Shortnose Sucker	*Chasmistes brevirostris*	E	E
Snake River Chinook Salmon (Fall)	*Oncorhynchus tshawytscha*	T	T
Snake River Chinook Salmon (Spring/Summer)	*Oncorhynchus tshawytscha*	T	T
Snake River Sockeye Salmon	*Oncorhynchus nerka*		E
Snake River Steelhead	*Oncorhynchus mykiss*		T
Southern Oregon Coho Salmon	*Oncorhynchus kisutch*		T
Upper Columbia River Spring Chinook Salmon	*Oncorhynchus tshawytscha*		E
Upper Columbia River Steelhead	*Oncorhynchus mykiss*		T
Upper Willamette River Chinook Salmon	*Oncorhynchus tshawytscha*		T

Common Name	Scientific Name	State status	Federal status
Upper Willamette River Steelhead	*Oncorhynchus mykiss*		T
Warner Sucker	*Catostomus warnerensis*	T	T
AMPHIBIANS AND REPTILES			
Columbia spotted frog	*Rana luteiventris*		C
Green Sea Turtle	*Chelonia mydas*	E	E
Leatherback Sea Turtle	*Dermochelys coriacea*	E	E
Loggerhead Sea Turtle	*Caretta caretta*	T	T
Oregon spotted frog	*Rana pretiosa*		C
Pacific Ridley Sea Turtle	*Lepidochelys olivacea*	T	T
BIRDS			
Bald Eagle	*Haliaeetus leucocephalus*	T	
Brown Pelican	*Pelecanus occidentalis*	E	E
California Least Tern	*Sterna antillarum browni*	E	E
Marbled Murrelet	*Brachyramphus marmoratus*	T	T
Northern Spotted Owl	*Strix occidentalis caurina*	T	T
Short-tailed Albatross	*Diomedea albatrus*	E	E
Streaked horned lark	*Eremophila alpestris strigata*		C
Western Snowy Plover	*Charadrius alexandrinus nivosus*	T	T (Coastal population only)
Yellow-billed cuckoo	*Coccyzus americanus*		C
MAMMALS			
Blue Whale	*Balaenoptera musculus*	E	E
Columbian White-tailed Deer(Lower Columbia River population only)	*Odocolieus virginianus leucurus*		E
Fin Whale	*Balaenoptera physalus*	E	E
Fisher	*Martes pennanti*		C
Gray Whale	*Eschrichtius robustus*	E	
Gray Wolf	*Canis lupus*	E	E
Humpback Whale	*Megaptera novaeangliae*	E	E
Kit Fox	*Vulpes macrotis*	T	
North Pacific Right Whale	*Eubalaena japonica*	E	E
Northern (Steller) Sea Lion	*Eumetopias jubatus*		T
Sea Otter	*Enhydra lutris*	T	T
Sei Whale	*Balaenoptera borealis*	E	E
Sperm Whale	*Physeter macrocephalus*	E	E
Washington Ground Squirrel	*Spermophilus washingtoni*	E	
Wolverine	*Gulo gulo*	T	

OREGON DEPARTMENT OF FISH AND WILDLIFE SENSITIVE SPECIES WHICH MAY OCCUR WITHIN OR NEAR CENTRAL LANE MPO BOUNDARY

Scientific Name	Common Name	State Rank	Federal Status	State Status	Family
Anaxyrus boreas	Western toad	S3		SV	Vertebrate Animal
Aneides ferreus	Clouded salamander	S3		SV	Vertebrate Animal
Ascaphus truei	Coastal tailed frog	S3	SOC	SV	Vertebrate Animal
Batrachoseps wrighti	Oregon slender salamander	S3	SOC	SV	Vertebrate Animal
Rana aurora	Northern red-legged frog	S3S4	SOC	SV	Vertebrate Animal
Rana boylii	Foothill yellow-legged frog	S2S3	SOC	SC/SV	Vertebrate Animal
Rana cascadae	Cascades frog	S3	SOC	SV	Vertebrate Animal
Rana pretiosa	Oregon spotted frog	S2	C	SC	Vertebrate Animal
Rhyacotriton cascadae	Cascade torrent salamander	S3		SV	Vertebrate Animal
Rhyacotriton variegatus	Southern torrent salamander	S3	SOC	SV	Vertebrate Animal
Accipiter gentilis	Northern goshawk	S3	SOC	SV	Vertebrate Animal
Aechmophorus clarkii	Clark's grebe	S3B,S2N			Vertebrate Animal
Aechmophorus occidentalis	Western grebe	S3B,S2S3N			Vertebrate Animal
Aegolius funereus	Boreal owl	S3?			Vertebrate Animal
Ammodramus savannarum	Grasshopper sparrow	S2B		SV	Vertebrate Animal
Athene cunicularia hypugaea	Western burrowing owl	S3B	SOC	SC/SV	Vertebrate Animal
Brachyramphus marmoratus	Marbled murrelet	S2	LT	LT	Vertebrate Animal
Branta canadensis occidentalis	Dusky Canada goose	S2S3N			Vertebrate Animal
Bucephala albeola	Bufflehead	S2B,S5N			Vertebrate Animal
Bucephala islandica	Barrow's goldeneye	S3B,S3N			Vertebrate Animal
Cerorhinca monocerata	Rhinoceros auklet	S2B		SV	Vertebrate Animal
Charadrius alexandrinus nivosus	Western snowy plover	S2	PS:LT	LT	Vertebrate Animal
Chlidonias niger	Black tern	S3B	SOC		Vertebrate Animal
Chordeiles minor	Common nighthawk	S5B		SC	Vertebrate Animal
Contopus cooperi	Olive-sided flycatcher	S3B	SOC	SV	Vertebrate Animal
Cypseloides niger	Black swift	S2B			Vertebrate Animal
Dryocopus pileatus	Pileated woodpecker	S4		SV	Vertebrate Animal
Elanus leucurus	White-tailed kite	S2B,S3N			Vertebrate Animal
Empidonax traillii brewsteri	Little willow flycatcher	S3S4B		SV	Vertebrate Animal
Eremophila alpestris strigata	Streaked horned lark	S2B	C	SC	Vertebrate Animal
Falco peregrinus anatum	American peregrine falcon	S2B		SV	Vertebrate Animal
Falco peregrinus tundrius	Arctic peregrine falcon	SNR		SV	Vertebrate Animal
Fratercula cirrhata	Tufted puffin	S1B		SV	Vertebrate Animal
Grus canadensis tabida	Greater sandhill crane	S3S4B		SV	Vertebrate Animal
Haematopus bachmani	Black oystercatcher	S3	SOC	SV	Vertebrate Animal
Haliaeetus leucocephalus	Bald eagle	S4B,S4N		LT	Vertebrate Animal
Histrionicus histrionicus	Harlequin duck	S2B,S3N	SOC		Vertebrate Animal
Icteria virens	Yellow-breasted chat	S4B	SOC	SC	Vertebrate Animal
Lanius ludovicianus	Loggerhead shrike	S3B,S2N		SV	Vertebrate Animal
Melanerpes formicivorus	Acorn woodpecker	S3	SOC	SV	Vertebrate Animal
Melanerpes lewis	Lewis's woodpecker	S2S3B	SOC	SC	Vertebrate Animal
Oreortyx pictus	Mountain quail	S4	SOC	SV	Vertebrate Animal
Parkesia noveboracensis	Northern waterthrush	S2B			Vertebrate Animal
Patagioenas fasciata	Band-tailed pigeon	S3B	SOC		Vertebrate Animal
Pelecanus occidentalis californicus	California brown pelican	S2N		LE	Vertebrate Animal
Picoides arcticus	Black-backed woodpecker	S3		SV	Vertebrate Animal
Picoides dorsalis	American three-toed woodpecker	S3		SV	Vertebrate Animal
Podiceps auritus	Horned grebe	S2B,S5N			Vertebrate Animal
Podiceps grisegena	Red-necked grebe	S1B,S4N		SC	Vertebrate Animal
Pooecetes gramineus affinis	Oregon vesper sparrow	S2B,S2N	SOC	SC	Vertebrate Animal
Progne subis	Purple martin	S2B	SOC	SC	Vertebrate Animal
Ptychoramphus aleuticus	Cassin's auklet	S2B		SV	Vertebrate Animal
Sialia mexicana	Western bluebird	S4B,S4N		SV	Vertebrate Animal
Sitta carolinensis aculeata	Slender-billed nuthatch	S3		SV	Vertebrate Animal
Strix nebulosa	Great gray owl	S3		SV	Vertebrate Animal
Strix occidentalis caurina	Northern spotted owl	S3	LT	LT	Vertebrate Animal
Sturnella neglecta	Western meadowlark	S4		SC	Vertebrate Animal
Acipenser medirostris	Green sturgeon	S3	SOC		Vertebrate Animal
Cottus bendirei	Malheur mottled sculpin	S4	SOC		Vertebrate Animal
Lampetra richardsoni	Western brook lamprey	S4		SV	Vertebrate Animal
Lampetra tridentata	Pacific lamprey	S3	SOC	SV	Vertebrate Animal
Oncorhynchus clarkii	Coastal cutthroat trout (Oregon Coast ESU)	S3	SOC		Vertebrate Animal
Oncorhynchus clarkii	Coastal cutthroat trout (Upper Willamette River ESU)	S3?	SOC		Vertebrate Animal
Oncorhynchus keta	Chum salmon (Pacific Coast ESU)	S2		SC	Vertebrate Animal
Oncorhynchus kisutch	Coho salmon (Oregon Coast ESU)	S2	LT	SV	Vertebrate Animal
Oncorhynchus mykiss	Steelhead (Oregon Coast ESU, summer run)	S2S3	SOC	SV	Vertebrate Animal
Oncorhynchus mykiss	Steelhead (Oregon Coast ESU, winter run)	S2S3	SOC	SV	Vertebrate Animal
Oncorhynchus tshawytscha	Chinook salmon (Upper Willamette River ESU, spring run)	S2	LT	SC	Vertebrate Animal
Oregonichthys crameri	Oregon chub	S2	LT	SC	Vertebrate Animal
Salvelinus confluentus	Bull trout (Willamette SMU)	S2	LT	SC	Vertebrate Animal
Thaleichthys pacificus	Eulachon	S3?	LT		Vertebrate Animal
Antrozous pallidus	Pallid bat	S2	SOC	SV	Vertebrate Animal
Arborimus albipes	White-footed vole	S3S4	SOC		Vertebrate Animal
Arborimus longicaudus	Red tree vole	S3S4	SOC	SV	Vertebrate Animal
Bassariscus astutus	Ringtail	S3		SV	Vertebrate Animal
Canis lupus	Gray wolf	S1S2	LE	LE	Vertebrate Animal
Corynorhinus townsendii	Townsend's big-eared bat	S2	SOC	SC	Vertebrate Animal
Eumetopias jubatus	Northern sea lion	S2	LT		Vertebrate Animal
Gulo gulo	Wolverine	S1	SOC	LT	Vertebrate Animal
Lasionycteris noctivagans	Silver-haired bat	S3S4	SOC	SV	Vertebrate Animal
Lasiurus cinereus	Hoary bat	S3		SV	Vertebrate Animal

Scientific Name	Common Name	State Rank	Federal Status	State Status	Family
Lepus californicus	Black-tailed jack rabbit	S4		SV	Vertebrate Animal
Lynx canadensis	Canada lynx	S1?	LT		Vertebrate Animal
Martes americana	American marten	S3S4		SV	Vertebrate Animal
Martes pennanti	Fisher	S2	PS:C	SC	Vertebrate Animal
Myotis californicus	California myotis	S3		SV	Vertebrate Animal
Myotis evotis	Long-eared myotis	S4	SOC		Vertebrate Animal
Myotis thysanodes	Fringed myotis	S2	SOC	SV	Vertebrate Animal
Myotis volans	Long-legged myotis	S3	SOC	SV	Vertebrate Animal
Myotis yumanensis	Yuma myotis	S3	SOC		Vertebrate Animal
Odocoileus virginianus leucurus	Columbian white-tailed deer	S2	PS:LE	SV	Vertebrate Animal
Sciurus griseus	Western gray squirrel	S4		SV	Vertebrate Animal
Tadarida brasiliensis	Brazilian free-tailed bat	S4			Vertebrate Animal
Thomomys bulbivorus	Camas pocket gopher	S3S4	SOC		Vertebrate Animal
Ursus arctos horribilis	Grizzly bear	SX	LT		Vertebrate Animal
Actinemys marmorata	Pacific pond turtle	S2	SOC	SC	Vertebrate Animal
Chrysemys picta	Painted turtle	S2		SC	Vertebrate Animal

Scientific Name	Common Name	State Rank	Federal Status	State Status	Category
Acalypta lillianus	Lillian's lace bug	S1			Invertebrate Animal
Anodonta oregonensis	Oregon floater (mussel)	S3			Invertebrate Animal
Boreostolus americanus	American unique-headed bug	S2?			Invertebrate Animal
Callophrys johnsoni	Johnson's hairstreak (butterfly)	S2			Invertebrate Animal
Capnia kersti	A stonefly	S1S2			Invertebrate Animal
Cicindela hirticollis siuslawensis	Siuslaw sand tiger beetle	S1S2			Invertebrate Animal
Derephysia foliacea	Foliaceous lace bug	S1			Invertebrate Animal
Euphydryas editha taylori	Taylor's checkerspot (butterfly)	S1	C		Invertebrate Animal
Farula reapiri	Tombstone Prairie farulan caddisfly	S3	SOC		Invertebrate Animal
Fluminicola nuttallianus	Dusky pebblesnail	SH			Invertebrate Animal
Gliabates oregonius	Salamander slug	SH			Invertebrate Animal
Gliabates sp. nov.	Cascades axetail slug	S1S2			Invertebrate Animal
Hebrus buenoi	Bueno's velvet water bug	S2			Invertebrate Animal
Hesperarion mariae	Tillamook westernslug	S3			Invertebrate Animal
Juga sp. nov.	Brown juga (snail)	S1			Invertebrate Animal
Macrotylus essigi	Essig's plant bug	S2			Invertebrate Animal
Malezonotus obrieni	Obrien's seed bug	S2			Invertebrate Animal
Margaritifera falcata	Western pearlshell	S4			Invertebrate Animal
Megomphix hemphilli	Oregon megomphix (snail)	S3			Invertebrate Animal
Moselyana comosa	A caddisfly	S3			Invertebrate Animal
Namamyia plutonis	A caddisfly	S3			Invertebrate Animal
Nebria piperi	Piper's gazelle beetle	S3?			Invertebrate Animal
Oligophlebodes mostbento	Tombstone Prairie caddisfly	S3	SOC		Invertebrate Animal
Physella hordacea	Grain physa	S1			Invertebrate Animal
Pinalitus solivagus	True fir plant bug	S2			Invertebrate Animal
Platylygus pseudotsugae	Douglas-fir plant bug	S2			Invertebrate Animal
Plebejus icarioides fenderi	Fender's blue (butterfly)	S1	LE		Invertebrate Animal
Plebejus saepiolus littoralis	Coastal greenish blue (butterfly)	S1	SOC		Invertebrate Animal
Polites sonora siris	Sonora skipper	S3?			Invertebrate Animal
Pomatiopsis californica	Pacific walker	S1			Invertebrate Animal
Pristiloma arcticum crateris	Crater Lake tightcoil (snail)	S1			Invertebrate Animal
Pristiloma johnsoni	Broadwhorl tightcoil (snail)	S3			Invertebrate Animal
Pristinicola hemphilli	Pristine springsnail	S2			Invertebrate Animal
Pterostichus johnsoni	Johnson's waterfall carabid beetle	S3			Invertebrate Animal
Rhyacophila chandleri	A caddisfly	S3			Invertebrate Animal
Rhyacophila leechi	A caddisfly	S3			Invertebrate Animal
Rhyacophila unipunctata	One-spot rhyacophilan caddisfly	S3	SOC		Invertebrate Animal
Scaphinotus hatchi	Hatch's carabid beetle	S3?			Invertebrate Animal
Speyeria zerene hippolyta	Oregon silverspot (butterfly)	S1	LT		Invertebrate Animal
Vanduzeeina borealis californica	California shield-backed bug	S1?			Invertebrate Animal
Vespericola sp. nov.	Bald hesperian (snail)	S1			Invertebrate Animal

Scientific Name	Common Name	State Rank	Federal Status	StateRank2
Delphinium oreganum	Willamette Valley larkspur	S1	SOC	C
Horkelia congesta ssp. congesta	Shaggy horkelia	S2	SOC	C
Asarum wagneri	Green-flowered wild-ginger	S3		C
Corydalis aquae-gelidae	Cold-water corydalis	S3	SOC	C
Frasera umpquaensis	Umpqua swertia	S3		C
Montia howellii	Howell's montia	S3S4		C
Cimicifuga elata var. elata	Tall bugbane	S4		C
Sidalcea campestris	Meadow checker-mallow	S4		C
Abronia umbellata ssp. breviflora	Pink sandverbena	S1	SOC	LE
Delphinium pavonaceum	Peacock larkspur	S1	SOC	LE
Erigeron decumbens	Willamette Valley daisy	S1	LE	LE
Lomatium bradshawii	Bradshaw's lomatium	S2	LE	LE
Lupinus sulphureus ssp. kincaidii	Kincaid's lupine	S2	LT	LT
Sericocarpus rigidus	White-topped aster	S2	SOC	LT
Eucephalus vialis	Wayside aster	S3	SOC	LT
Atriplex gmelinii var. gmelinii	Gmelin's saltbush	S1		
Carex diandra	Lesser panicled sedge	S1		
Carex retrorsa	Retrorse sedge	S1		
Eriophorum chamissonis	Russet cotton-grass	S1		
Hieracium horridum	Shaggy hawkweed	S1		
Navarretia willamettensis	Willamette navarretia	S1		
Ophioglossum pusillum	Adder's-tongue	S1		
Potentilla villosa	Villous cinquefoil	S1		
Pyrrocoma racemosa var. racemosa	Racemose pyrrocoma	S1		
Scirpus pendulus	Drooping bulrush	S1		
Sidalcea hendersonii	Henderson's sidalcea	S1	SOC	
Sisyrinchium hitchcockii	Hitchcock's blue-eyed grass	S1	SOC	
Utricularia gibba	Humped bladderwort	S1		
Utricularia ochroleuca	Northern bladderwort	S1		
Wolffia borealis	Dotted water-meal	S1		
Wolffia columbiana	Columbia water-meal	S1		
Carex scirpoidea ssp. stenochlaena	Alaskan single-spiked sedge	S1?		
Carex livida	Pale sedge	S2		
Carex macrocephala	Bighead sedge	S2		
Cicendia quadrangularis	Timwort	S2		
Gentiana newberryi var. newberryi	Newberry's gentian	S2		
Lathyrus holochlorus	Thin-leaved peavine	S2	SOC	
Lewisia columbiana var. columbiana	Columbia lewisia	S2		
Lycopodiella inundata	Northern bog clubmoss	S2		
Microseris bigelovii	Coast microseris	S2		
Pellaea andromedifolia	Coffee fern	S2		
Polystichum californicum	California sword-fern	S2		
Rhynchospora alba	White beakrush	S2		
Ribes divaricatum var. pubiflorum	Straggly gooseberry	S2		
Rotala ramosior	Toothcup	S2		
Scheuchzeria palustris ssp. americana	Scheuchzeria	S2		
Schoenoplectus subterminalis	Water clubrush	S2		
Utricularia minor	Lesser bladderwort	S2		
Abronia latifolia	Yellow sandverbena	S3		
Astragalus umbraticus	Woodland milk-vetch	S3		
Carex abrupta	Abrupt-beaked sedge	S3		
Carex gynodynama	Hairy sedge	S3		
Castilleja rupicola	Cliff paintbrush	S3	SOC	
Enemion stipitatum	Dwarf isopyrum	S3		
Epilobium luteum	Yellow willow-herb	S3		
Euonymus occidentalis	Western wahoo	S3		
Fritillaria glauca	Siskiyou fritillaria	S3		

Scientific Name	Common Name	State Rank	Federal Status	StateRank2
Heuchera merriamii	Merriam alumroot	S3		
Hierochloe odorata	Holy grass	S3		
Lycopodium annotinum	Stiff clubmoss	S3		
Phacelia verna	Spring phacelia	S3		
Poa laxiflora	Loose-flowered bluegrass	S3		
Romanzoffia thompsonii	Thompson mistmaiden	S3		
Scirpus pallidus	Pale bulrush	S3		
Lilaea scilloides	Flowering quillwort	S3?		
Cypripedium montanum	Mountain lady's-slipper	S3S4		
Darlingtonia californica	California pitcher-plant	S3S4		
Collomia larsenii	Talus collomia	S4		
Draba aureola	Golden alpine draba	S4		
Elmera racemosa var. racemosa	Elmera	S4		
Erigeron cascadensis	Cascade daisy	S4		
Erythronium revolutum	Pink fawn-lily	S4		
Gilia sinistra ssp. sinistra	Alva Day's gilia	S4		
Navarretia leucocephala ssp. leucocephala	White-flowered navarretia	S4		
Polystichum kruckebergii	Kruckeberg's sword-fern	S4		
Sidalcea cusickii	Cusick's mallow	S4		
Silene suksdorfii	Suksdorf's campion	S4		
Smelowskia ovalis var. ovalis	Shortfruited smelowskia	S4		
Vaccinium oxycoccos	Wild bog cranberry	S4		
Ceratophyllum echinatum	Prickly hornwort	SH		
Stellaria humifusa	Creeping starwort	SH		
Callitriche hermaphroditica	Northern water-starwort	SNR		
Carex infirminervia	A sedge	SNR		
Cyperus bipartitus	Shining cyperus	SNR		
Danthonia spicata	Poverty oatgrass	SNR		
Elodea nuttallii	Nuttall's waterweed	SNR		
Gnaphalium californicum	California cudweed	SNR		
Hieracium greenei	Greene's hawkweed	SNR		
Juncus hemiendytus var. hemiendytus	Dwarf rush	SNR		
Marsilea vestita	Hairy water-fern	SNR		
Orobanche californica ssp. californica	California broom-rape	SNR		
Orobanche californica ssp. grayana	Gray's broomrape	SNR		
Persicaria punctata	Dotted smartweed	SNR		
Piperia candida	White piperia	SNR		
Piperia elongata	Dense-flower rein orchid	SNR		
Poa chambersii	Chambers' bluegrass	SNR		
Poa stenantha	Narrow-flower bluegrass	SNR		
Poa suksdorfii	Suksdorf's bluegrass	SNR		
Polypodium calirhiza	Hotroot polypody	SNR		
Potamogeton praelongus	White-stem pondweed	SNR		
Potamogeton pusillus ssp. tenuissimus	Slender pondweed	SNR		
Potamogeton robbinsii	Flatleaf pondweed	SNR		
Puccinellia pumila	Dwarf alkali grass	SNR		
Ribes laxiflorum	Trailing blackberry	SNR		
Trichophorum cespitosum	Tufted clubrush	SNR		
Triglochin striata	Three-ribbed arrow-grass	SNR		

Scientific Name	Common Name	State Rank	Federal Status
Blepharostoma arachnoideum	Liverwort	S2	
Calypogeia sphagnicola	Liverwort	S2	
Cephaloziella spinigera	Liverwort	S1	
Chiloscyphus gemmiparus	Liverwort	S1	
Diplophyllum plicatum	Liverwort	S3	
Haplomitrium hookeri	Liverwort	S1	
Jamesoniella autumnalis var. heterostipa	Liverwort	S1	
Jungermannia polaris	Liverwort	S1	
Lophozia laxa	Liverwort	S2	
Marsupella emarginata var. aquatica	Liverwort	S1	
Metzgeria violacea	Liverwort	S1	
Scapania obscura	Liverwort	S1	
Schofieldia monticola	Liverwort	S1	
Andreaea nivalis	Moss	S1	
Bruchia bolanderi	Moss	S2	
Bruchia flexuosa	Moss	S1	
Bryum calobryoides	Moss	S2	
Buxbaumia aphylla	Moss	S2	
Campylopus schmidii	Moss	S2	
Ephemerum crassinervium	Moss	S1	
Ephemerum serratum	Moss	S1	
Grimmia anomala	Moss	S2	
Limbella fryei	Moss	S1	SOC
Plagiothecium cavifolium		S2	
Plagiothecium piliferum	Moss	S2	
Pohlia bolanderi	Moss	S1	
Pohlia cardotii	Moss	S1	
Pohlia sphagnicola	Moss	S1	
Polytrichastrum sexangulare var. sexangulare	Moss	S1	
Pseudephemerum nitidum	Moss	S1	
Rhytidiadelphus subpinnatus	Moss	S2	
Schistostega pennata	Moss	S2	
Sphagnum oregonense	Moss	S1	
Tayloria serrata	Moss	S2	
Tetraplodon mnioides	Moss	S3	
Thamnobryum neckeroides	Moss	S2	
Tomentypnum nitens	Moss	S2	
Trematodon asanoi	Moss	S1	
Trichostomum tenuirostre var. tenuirostre	Moss	S1	
Bryoria pseudocapillaris	Lichen	S3	
Bryoria subcana	Lichen	S2	
Calicium abietinum	Lichen	S3	
Erioderma sorediatum	Lichen	S2	
Heterodermia japonica	Lichen	S1	
Heterodermia leucomela	Lichen	S2S3	
Hypogymnia duplicata	Lichen	S2	
Hypogymnia subphysodes	Lichen	S1	
Hypotrachyna revoluta	Lichen	S1	
Lecanora caesiorubella ssp. merrillii	Lichen	S1	
Leioderma sorediatum	Lichen	S1	

Scientific Name	Common Name	State Rank	Federal Status
Leptogium cyanescens	Lichen	S1	
Leptogium platynum	Lichen	S1S2	
Microcalicium arenarium	Lichen	S1	
Nephroma occultum	Lichen	S3	
Niebla cephalota	Lichen	S2	
Pannaria rubiginosa	Lichen	S2	
Pilophorus nigricaulis	Lichen	S2	
Pseudocyphellaria mallota	Lichen	S2	
Pseudocyphellaria perpetua	Lichen	S3	
Pseudocyphellaria rainierensis	Lichen	S3	
Pyrrhospora quernea	Lichen	S3	
Ramalina pollinaria	Lichen	S1S2	
Schaereria dolodes	Lichen	S1	
Stenocybe clavata	Lichen	S3	
Stenocybe major	Lichen	S3	
Stereocaulon spathuliferum	Lichen	S1	
Sticta weigelii	Lichen	S2S3Q	
Sulcaria badia	Lichen	S3	
Usnea rubicunda	Lichen	S2	
Usnea subgracilis	Lichen	S3	
Vezdaea stipitata	Lichen	S1	
Albatrellus caeruleoporus	Fungus	S1	
Alpova alexsmithii	Fungus	S2	
Amanita novinupta	Fungus	S1	
Arcangeliella camphorata	Fungus	S2	
Boletus pulcherrimus	Fungus	S2	
Boletus regius	Fungus	S2?	
Bryoglossum gracile	Fungus	S1	
Choiromyces venosus	Fungus	S1	
Chroogomphus loculatus	Fungus	S1?	
Chrysomphalina grossula	Fungus	S1?	
Clavulina castaneopes var. lignicola	Fungus	S2?	
Cordyceps ophioglossoides	Fungus	S3S4	
Cortinarius valgus	Fungus	S3	
Cystangium idahoensis	Fungus	S1	
Dendrocollybia racemosa	Fungus	S1S2	
Destuntzia fusca	Fungus	S1	
Elaphomyces reticulatus	Fungus	S1	
Gastroboletus imbellus	Fungus	SH	
Gastroboletus ruber	Fungus	S3	
Gastroboletus vividus	Fungus	S1	
Gelatinodiscus flavidus	Fungus	S3	
Glomus radiatum	Fungus	S1S3	
Gomphus kauffmanii	Fungus	S3?	
Gymnomyces fragrans	Fungus	S1S3	
Helvella crassitunicata	Fungus	S2	
Helvella elastica	Fungus	S3	
Hemimycena pseudocrispula	Fungus	S1	
Hygrophorus albicarneus	Fungus	S1	
Leptonia rosea var. marginata	Fungus	SH	

Scientific Name	Common Name	State Rank	Federal Status
Leucogaster microsporus	Fungus	S3	
Leucogaster odoratus	Fungus	S1	
Macowanites chlorinosmus	Fungus	S3	
Mycena hudsoniana	Fungus	S1S2	
Mycena quiniaultensis	Fungus	S2S4	
Mycena tenax	Fungus	S2S3	
Mythicomyces corneipes	Fungus	S2?	
Octaviania cyanescens	Fungus	S1S2	
Phaeocollybia californica	Fungus	S2?	
Phaeocollybia dissiliens	Fungus	S2S3	
Phaeocollybia lilacifolia	Fungus	S1	
Phaeocollybia pseudofestiva	Fungus	S3?	
Phaeocollybia radicata	Fungus	S1	
Podostroma alutaceum	Fungus	S2	
Polyozellus multiplex	Fungus	S3	
Pseudorhizina californica	Fungus	S2	
Ramaria abietina	Fungus	S2	
Ramaria amyloidea	Fungus	S2?	
Ramaria aurantiisiccescens	Fungus	S3	
Ramaria conjunctipes var. sparsiramosa	Fungus	S2?	
Ramaria maculatipes	Fungus	S2?	
Ramaria rubella var. blanda	Fungus	S1?	
Rhizopogon abietis	Fungus	S1S3	
Rhizopogon atroviolaceus	Fungus	S2S3	
Rhizopogon exiguus	Fungus	S1S2	
Rhizopogon flavofibrillosus	Fungus	S2	
Rhizopogon subclavitisporus	Fungus	S1	
Rhizopogon subpurpurascens	Fungus	S2	
Rhizopogon truncatus	Fungus	S4	
Rickenella swartzii	Fungus	S2	
Sarcodon fuscoindicus	Fungus	S2S3	
Stropharia albovelata	Fungus	S3?	
Tuber pacificum	Fungus	S1	
Vibrissea truncorum	Fungus	S1S2	

CODES AND ABBREVIATIONS

FEDERAL STATUS

LE	Listed as an Endangered Species
LT	Listed as a Threatened Species
PE	Proposed as an Endangered Species
PT	Proposed as a Threatened Species
C	Candidate for Listing as Threatened or Endangered
SOC	Species of Concern - Taxa for which additional information is needed to support a proposal to list under the ESA

STATE STATUS – ANIMALS

LE	Listed as an Endangered Species
LT	Listed as a Threatened Species
PE	Proposed as an Endangered Species
PT	Proposed as a Threatened Species
SC	Sensitive - Critical
SV	Sensitive - Vulnerable

STATE STATUS – PLANTS

LE	Listed as an Endangered Species
LT	Listed as a Threatened Species
PE	Proposed as an Endangered Species
PT	Proposed as a Threatened Species
C	Candidate for Listing as Threatened or Endangered

ECOREGIONS

BM	Blue Mountains (includes High Lava Plains)
BR	Northern Basin and Range (includes Owyhee Uplands)
CB	Columbia Basin
CR	Coast Range
EC	East Cascades
KM	Klamath Mountains
ME	Marine and Estuarine
WC	West Cascades and Crest
WV	Willamette Valley

STATES AND PROVINCES

AB	Alberta	NV	Nevada
AK	Alaska	NJ	New Jersey
AZ	Arizona	NM	New Mexico
AR	Arkansas	NY	New York
BC	British Columbia	NC	North Carolina
CA	California	NT	NW Territories
CO	Colorado	NS	Nova Scotia
HI	Hawaii	ON	Ontario
ID	Idaho	QC	Quebec
KS	Kansas	SK	Saskatchewan
LA	Louisiana	TN	Tennessee
MB	Manitoba	UT	Utah
MA	Massachusetts	WA	Washington
MS	Mississippi	WI	Wisconsin
MT	Montana	WY	Wyoming

NATURAL HERITAGE RANKS

G1	Critically imperiled throughout its range
G2	Imperiled throughout its range
G3	Rare, threatened or uncommon throughout its range
G4	Not rare, apparently secure throughout its range
G5	Widespread, abundant and secure throughout its range
S1	Critically imperiled in Oregon
S2	Imperiled in Oregon
S3	Rare, threatened or uncommon in Oregon
S4	Not rare, apparently secure in Oregon
S5	Widespread, abundant and secure in Oregon
T	Rank for a subspecies, variety, or race
Q	Taxonomic questions
H	Historic, formerly part of the native biota with the implied expectation that it may be rediscovered
X	Presumed extirpated or extinct
U	Unknown rank
?	Not yet ranked
B	Rank of the breeding population (migratory birds)
N	Rank of the wintering population (migratory birds)

MISCELLANEOUS

ESA	Endangered Species Act
EPA	Environmental Protection Agency
FED	Federal
NOAA	National Oceanic and Atmospheric Administration
ODA	Oregon Department of Agriculture
ODFW	Oregon Department of Fish and Wildlife
OESA	Oregon Endangered Species Act
ORNHIC	Oregon Natural Heritage Information Center
sp. nov.	species novum (new species) - in the process of being described in the literature
ssp.	subspecies
ssp. nov.	subspecies novum (new subspecies) - in the process of being described in the literature
TNC	The Nature Conservancy
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
var.	variety
+	taxon occurs in additional states

HERITAGE LISTS

1	Threatened or Endangered Throughout Range
2	Threatened, Endangered or Extirpated from Oregon, but Secure or Abundant Elsewhere
3	Review
4	Watch
2-ex	Extirpated in Oregon
1-X	Presumed extinct

Native American Tribal Interests

There is no Native American/Indian reservation within or adjacent to the Central Lane MPO area. The following tribes may have an interest in activities occurring within the Central Lane MPO area: Confederated Tribes of the Siletz Reservation, Cow Creek Band of Umpqua Indians of Oregon, and the Confederated Tribes of the Grand Ronde Community of Oregon

Potential Mitigation Strategies

SAFETEA-LU requirements include the provision that the MPO's RTP shall provide information on potential environmental mitigation strategies and activities, and potential areas for those activities. This requirement has been met through the MPO's discussions and consultations with the Federal, State and local resource agencies. Two outcomes of these consultations are maps 31 and 32, related to mitigation bank activities.

Furthermore, the region needs to develop strategies and activities to minimize the impact of transportation projects on the environment. Given that budgets for transportation planning, construction, and maintenance are pinched already and concerns for climate change are on the rise, it would benefit the jurisdictions of the region to continue to support and enhance existing policies or strategies and develop new ones that reduce use of automobiles and encourage use of mass transit, carpooling, walking, bicycling, and telecommuting. Many of these strategies are discussed in the RTP and are promoted in the MPO area, as well as the surrounding area, by point2point Solutions, which is administered by the Lane Transit District.

One of the most effective ways to reduce costs, benefit the environment, and manage complex regulatory issues is to consider options at the outset that can reduce or eliminate environmental impacts and thus regulatory requirements. The Clean Water Act requires that those proposing projects focus first on avoiding impacts to water resources that may impact wetlands, streams, or rivers. Considering location and landscape features early in project placement and design can reduce the negative effects of construction activities and ultimately the use of a given facility, whether street, road, or bridge. Thoughtful planning to reduce erosion and sedimentation, impervious surface and other infiltration impediments, and wetland and stream impacts can eliminate the need for permits, saving time, money, and environmental degradation.

When impacts are unavoidable, there are a number of ways to improve the value of project mitigation. Traditionally, mitigation has been on a project-by-project basis to replace the same type of resource that was impacted by the development. More recent mitigation strategies have focused on the concept of mitigation banking. It may be beneficial for the MPO area to further develop wetland or conservation banks to be used for public and or private development mitigation as the area develops. The first step in determining the desirability of banking is to calculate the scale and type of development and the commensurate need for mitigation over the next several decades. Then, a determination of the number of credits that are likely to be coming online during that period and their anticipated costs will be made. If the number of credits required is equal to or greater than the number of credits available at the existing banks, it may be in the region's interest to develop a regional mitigation bank for all future projects.

Currently, the Department of State Lands and US Army Corps of Engineers require that when a project impacts a stream, the project owner (either the city or a private developer) must restore the adjacent

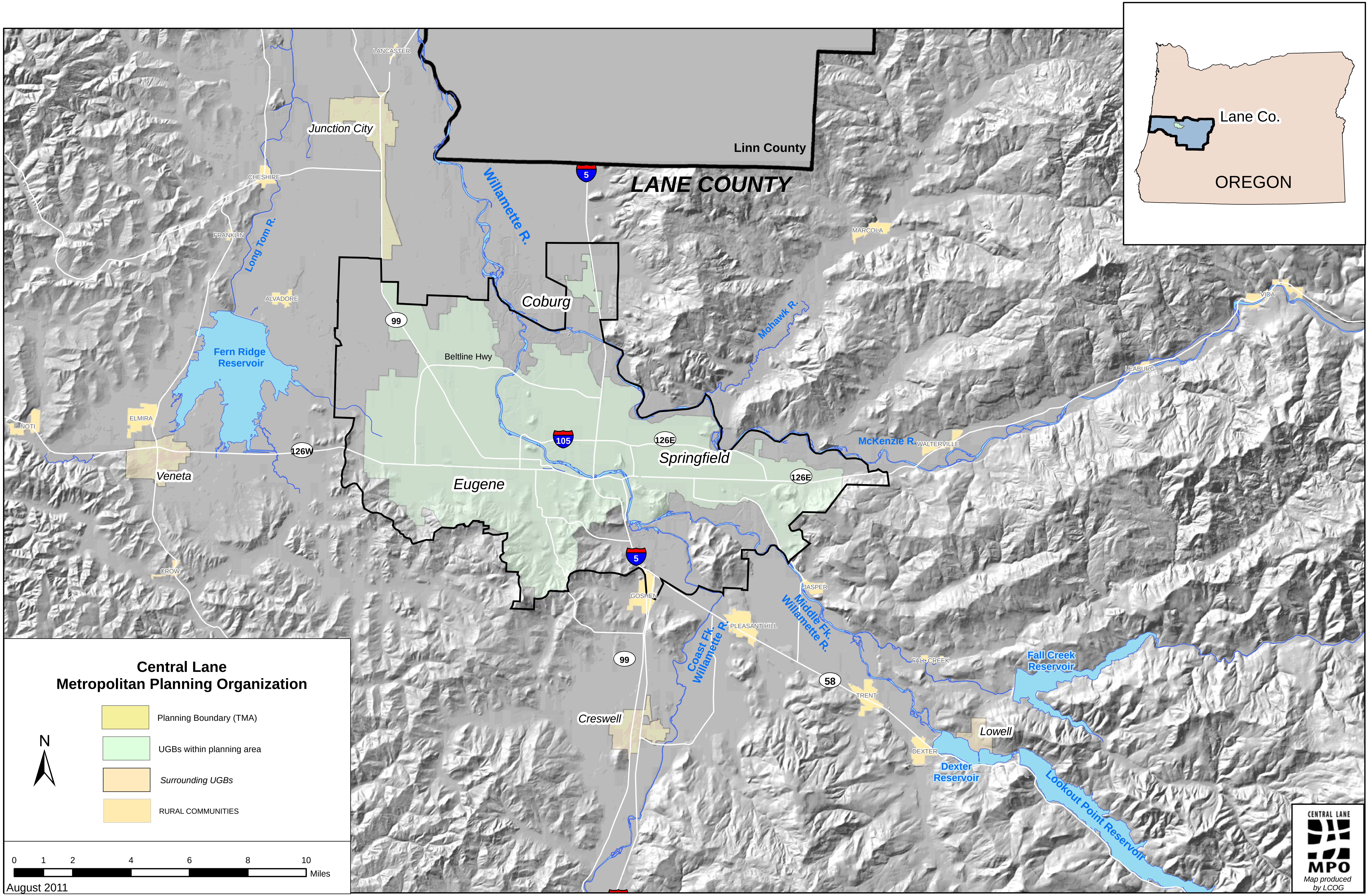
150-foot section of stream. The city or developer is then required to maintain that section for five years. One possible downfall of this policy is that it can create 150' pockets of restored but isolated habitat that are adjacent to weed patches. A new approach wherein a broader range of mitigation needs can be met by restoring streams at key sites may be preferable.

Thus far, there are few opportunities for conservation banking in Oregon. ODOT has developed a program in which they hope to mitigate for a variety of resources on several high value sites they have purchased throughout the state. At present, they are developing methods for valuing credits and creating the “currency” for these banks, a challenging endeavor. It would be wise for the MPO area to explore possible collaboration with ODOT, and certainly to explore the model that ODOT is developing. Once again, the jurisdictions within the region need to collectively assess their anticipated growth and mitigation need and make a cost/benefit analysis.

Over the past decade there have been many innovative approaches taken in constructing transportation systems to prevent negative effects on wildlife. Transportation planners have teamed with wildlife researchers to develop structures that help terrestrial wildlife cross roads, ranging from overpasses and underpasses to open-bottom culverts that function much like natural streambeds. In much of Oregon, transportation agencies are systematically removing barriers to fish migration. However, according to the Oregon Department of Fish and Wildlife, the MPO area will be hampered in providing wildlife habitat connectivity so long as there is no detailed species and habitat inventory for the metropolitan area. Such an inventory can help the region prioritize key habitats and natural areas and identify linkages and corridors to wildlife migration for both large and small species. State and federal wildlife management agencies encourage transportation planners to consult with them early and throughout project planning to identify need for accommodating wildlife movement and avoid other impacts to habitat.

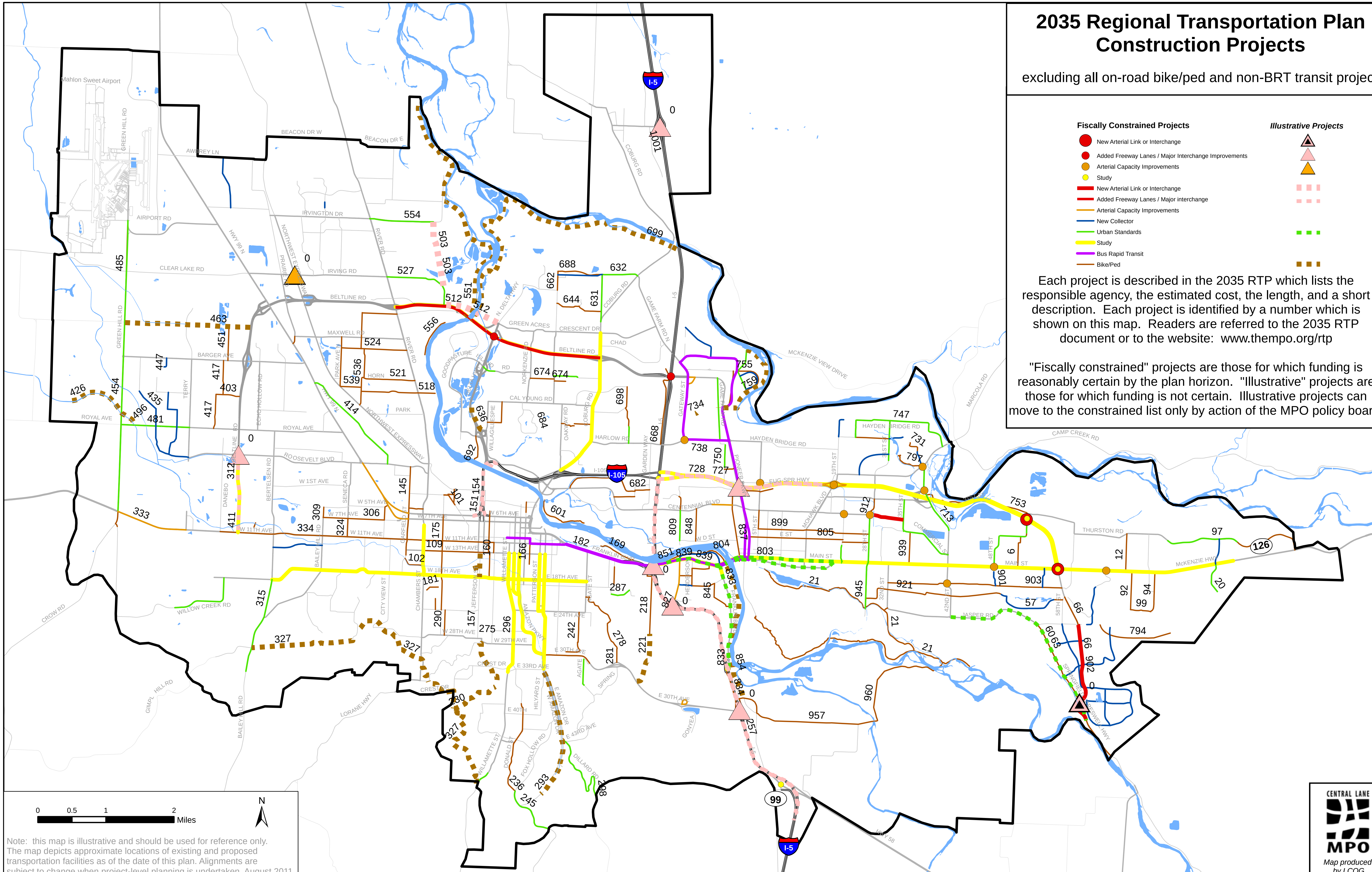
<u>Note that the Environmental Consultation Maps are available at:</u>

www.thempo.org/rtp


Central Lane
Metropolitan Planning Organization
Planning Boundary (TMA)
UGBs within planning area
Surrounding UGBs
RURAL COMMUNITIES
N
0 1 2 4 6 8 10 Miles
August 2011
LANE COUNTY
Linn County
Lane Co.
OREGON
Junction City
Coburg
Eugene
Springfield
Veneta
Creswell
Lowell
LANCASTER
CHESHIRE
FRANKLIN
ALVADORE
ELMIRA
NOTI
CROW
GOSHEN
PLEASANT HILL
JASPER
FALL CREEK
TRENT
DEXTER
MARCOLA
WALTERVILLE
LEABURG
VIDA
Willamette R.
Long Tom R.
Mohawk R.
McKenzie R.
Coast Fk. Willamette R.
Middle Fk. Willamette R.
Fern Ridge Reservoir
Fall Creek Reservoir
Dexter Reservoir
Lookout Point Reservoir
Beltline Hwy
5
105
99
126W
126E
58
CENTRAL LANE
MPO
Map produced by LCOG

2035 Regional Transportation Plan Construction Projects

excluding all on-road bike/ped and non-BRT transit projects

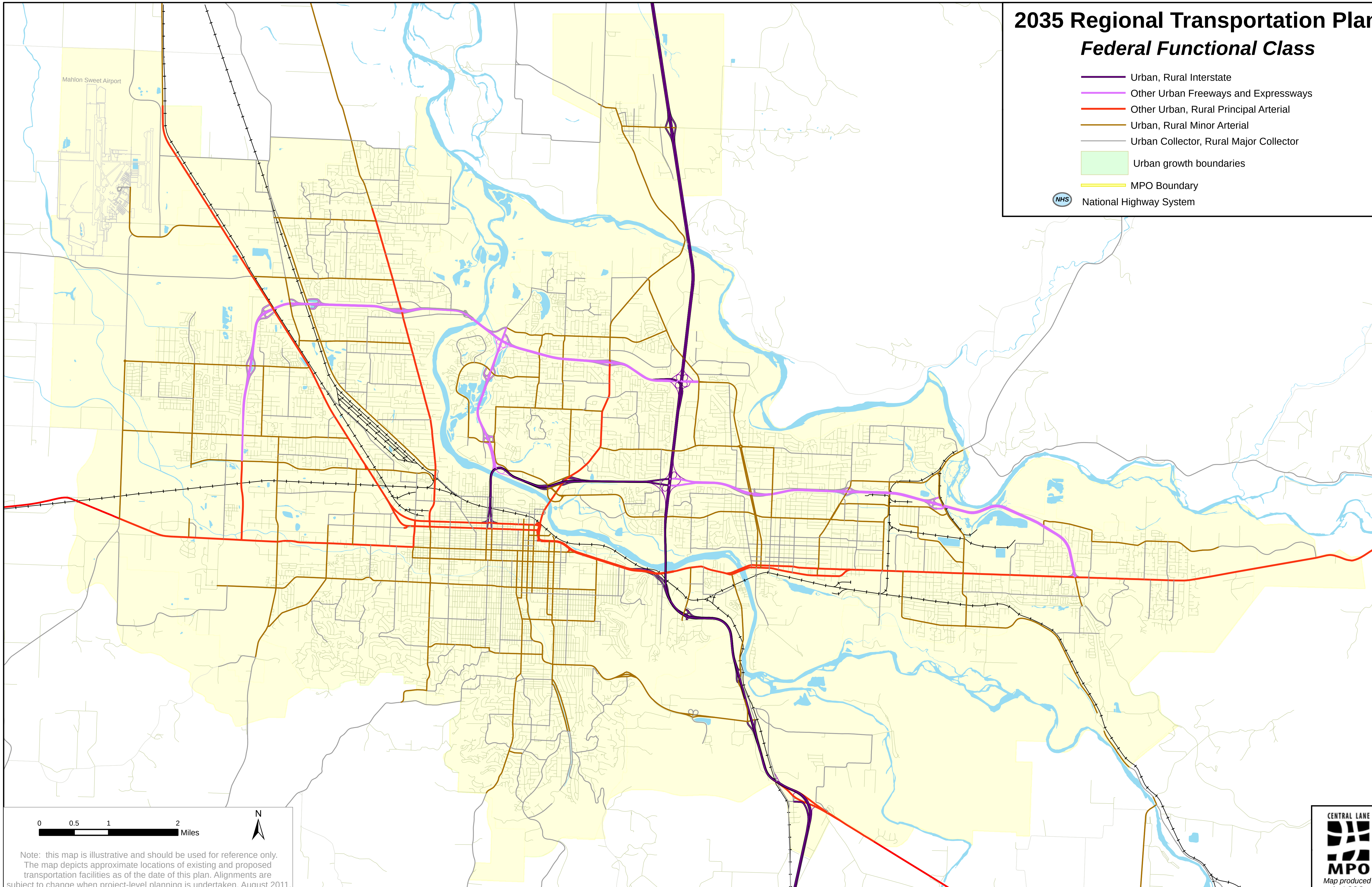


Each project is described in the 2035 RTP which lists the responsible agency, the estimated cost, the length, and a short description. Each project is identified by a number which is shown on this map. Readers are referred to the 2035 RTP document or to the website: www.thempo.org/rtp

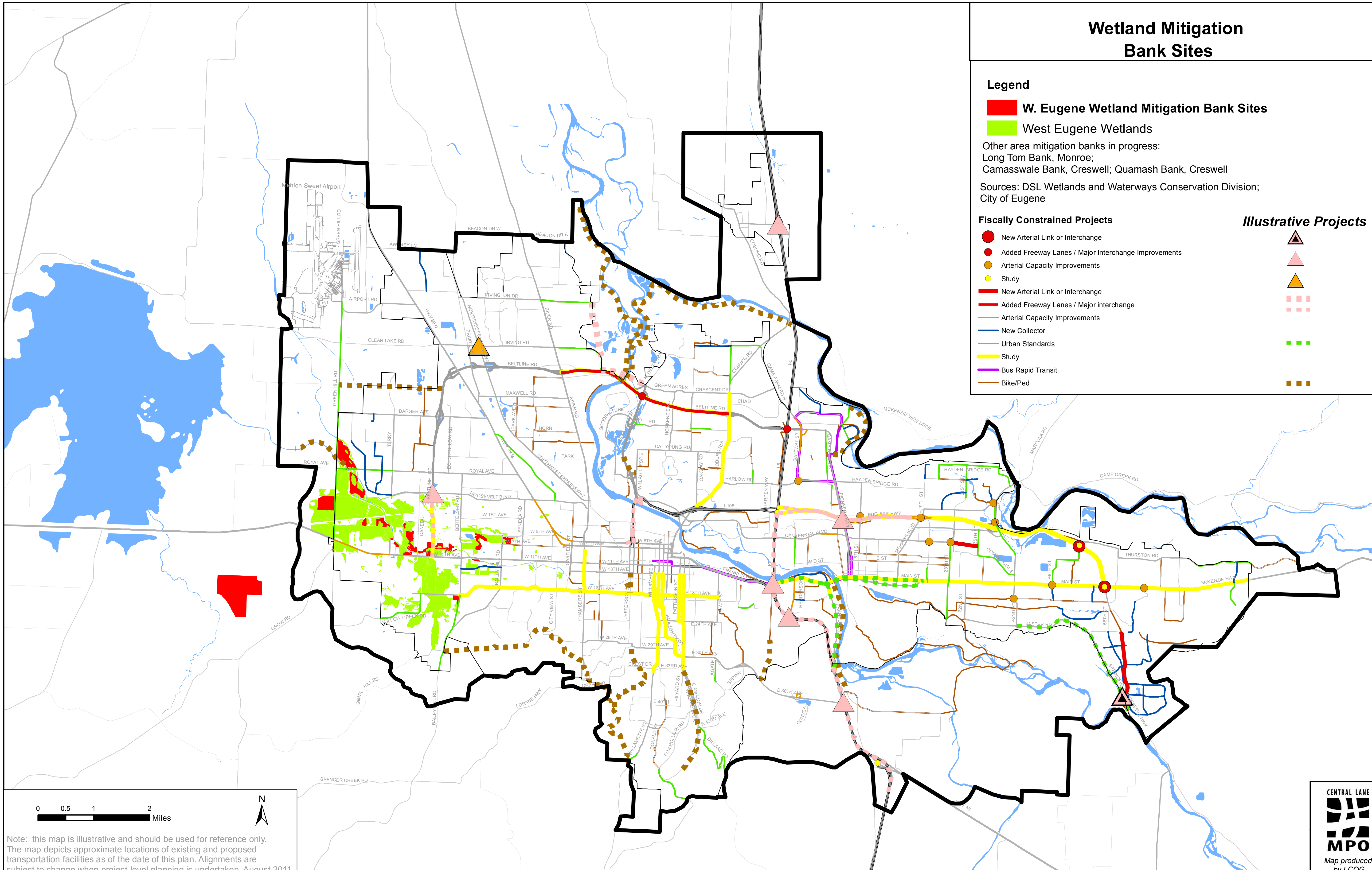
"Fiscally constrained" projects are those for which funding is reasonably certain by the plan horizon. "Illustrative" projects are those for which funding is not certain. Illustrative projects can move to the constrained list only by action of the MPO policy board.

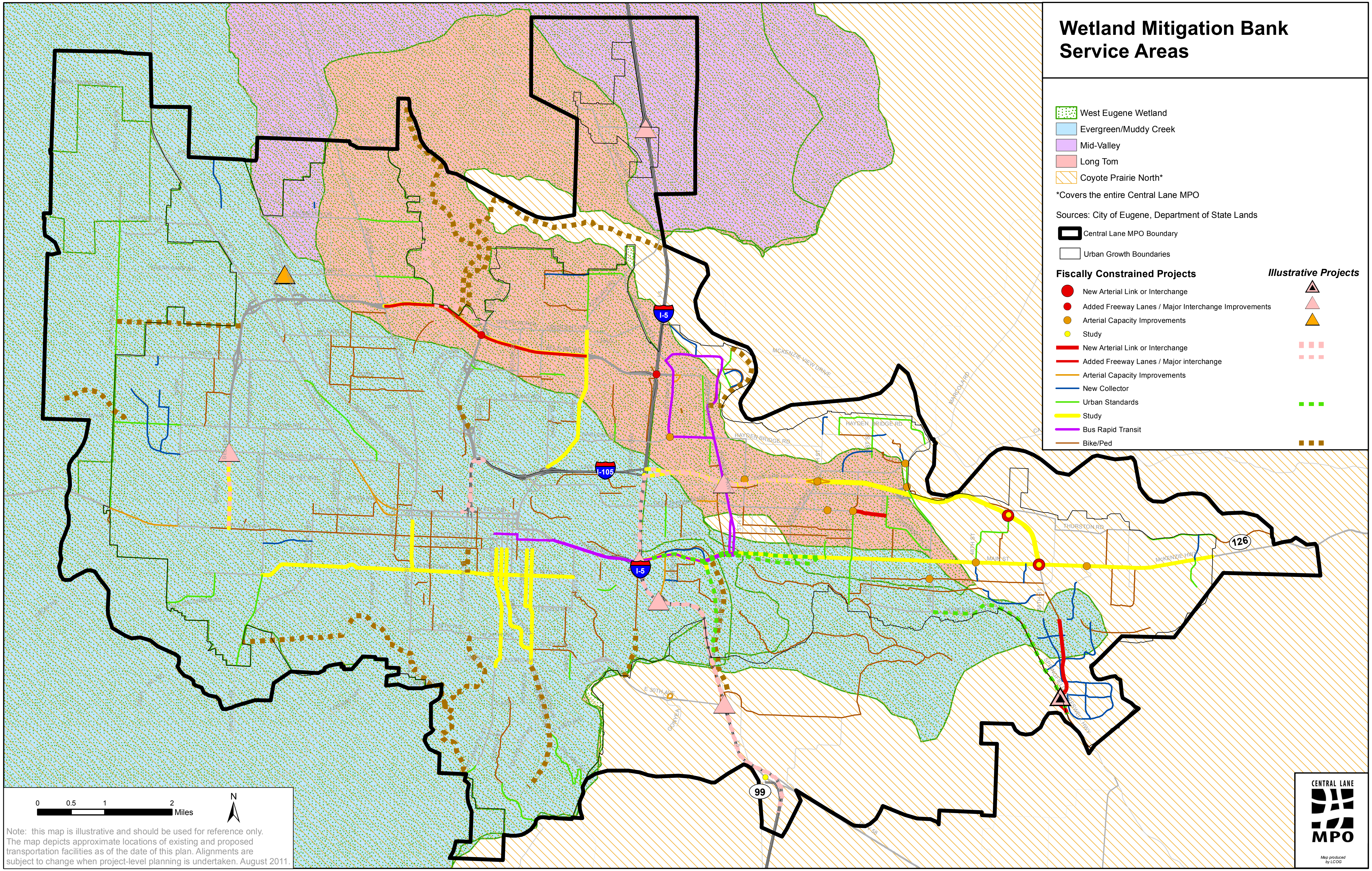
Note: this map is illustrative and should be used for reference only. The map depicts approximate locations of existing and proposed transportation facilities as of the date of this plan. Alignments are subject to change when project-level planning is undertaken. August 2011.

T:\MPO\RTP\FY11 2035 Update\Maps\Updated\F2_2035RegionalTransportationPlanConstructionProjects.mxd

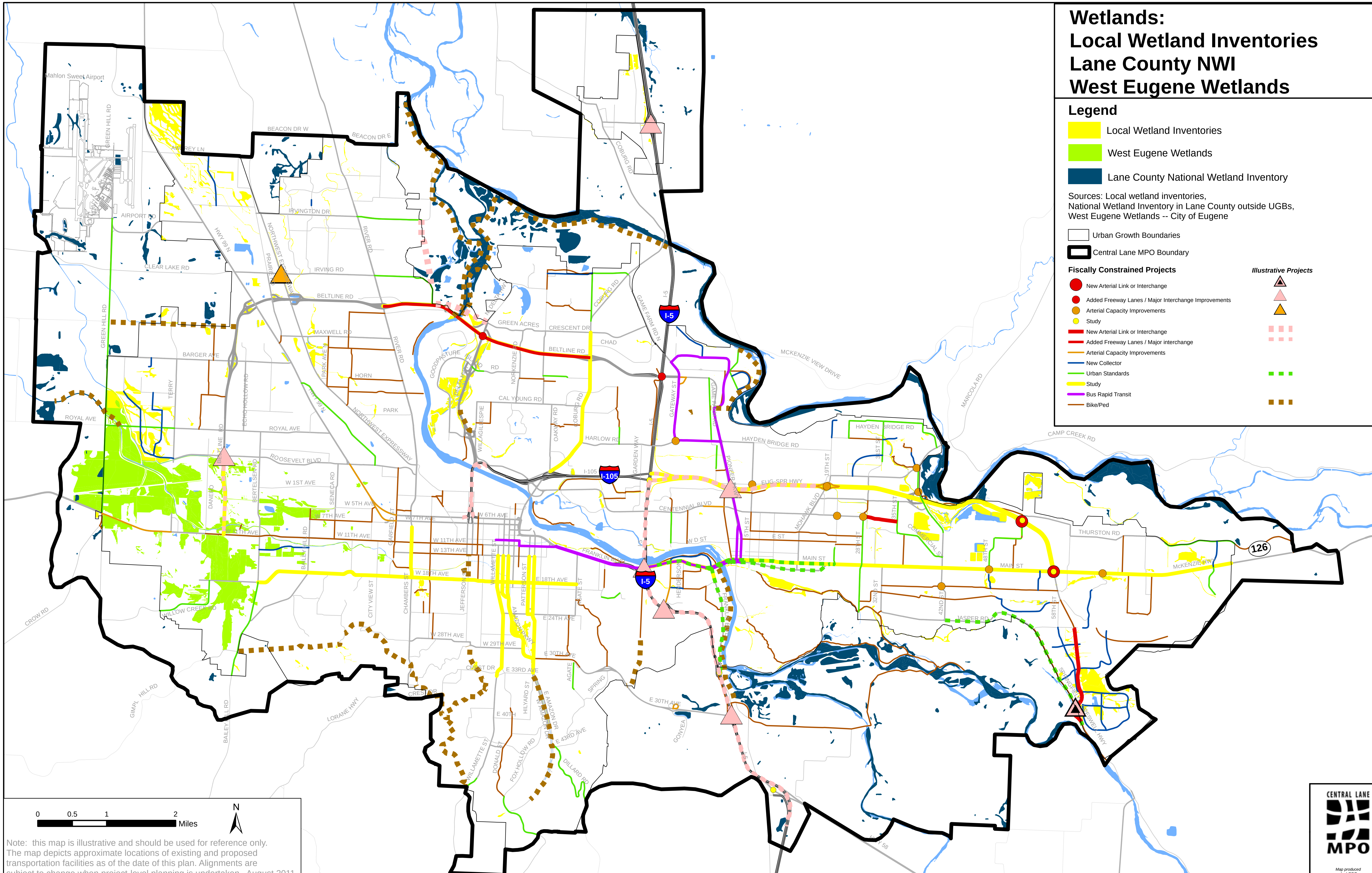


T:\MPO\RTP\FY11 2035 Update\Maps\Updated\F3_FederalFunctionalClass.mxd

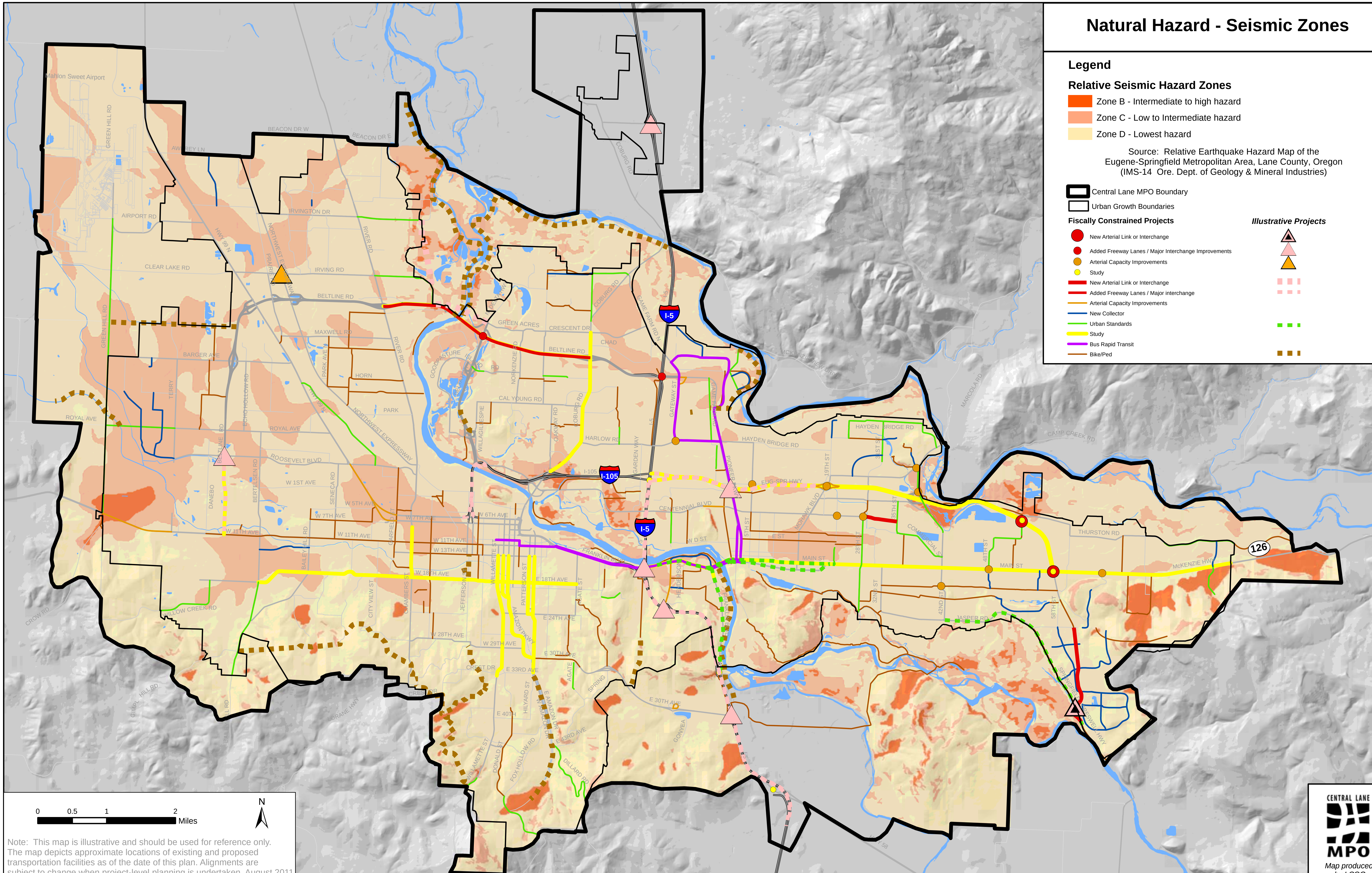

Wetland Mitigation
Bank Sites
Legend
W. Eugene Wetland Mitigation Bank Sites
West Eugene Wetlands
Other area mitigation banks in progress:
Long Tom Bank, Monroe;
Camasswale Bank, Creswell; Quamash Bank, Creswell
Sources: DSL Wetlands and Waterways Conservation Division;
City of Eugene
Fiscally Constrained Projects
Illustrative Projects
New Arterial Link or Interchange
Added Freeway Lanes / Major Interchange Improvements
Arterial Capacity Improvements
Study
New Arterial Link or Interchange
Added Freeway Lanes / Major interchange
Arterial Capacity Improvements
New Collector
Urban Standards
Study
Bus Rapid Transit
Bike/Ped
0 0.5 1 2
Miles
N
Note: this map is illustrative and should be used for reference only.
The map depicts approximate locations of existing and proposed
transportation facilities as of the date of this plan. Alignments are
subject to change when project-level planning is undertaken. August 2011.
CENTRAL LANE
MPO
Map produced
by LCOG

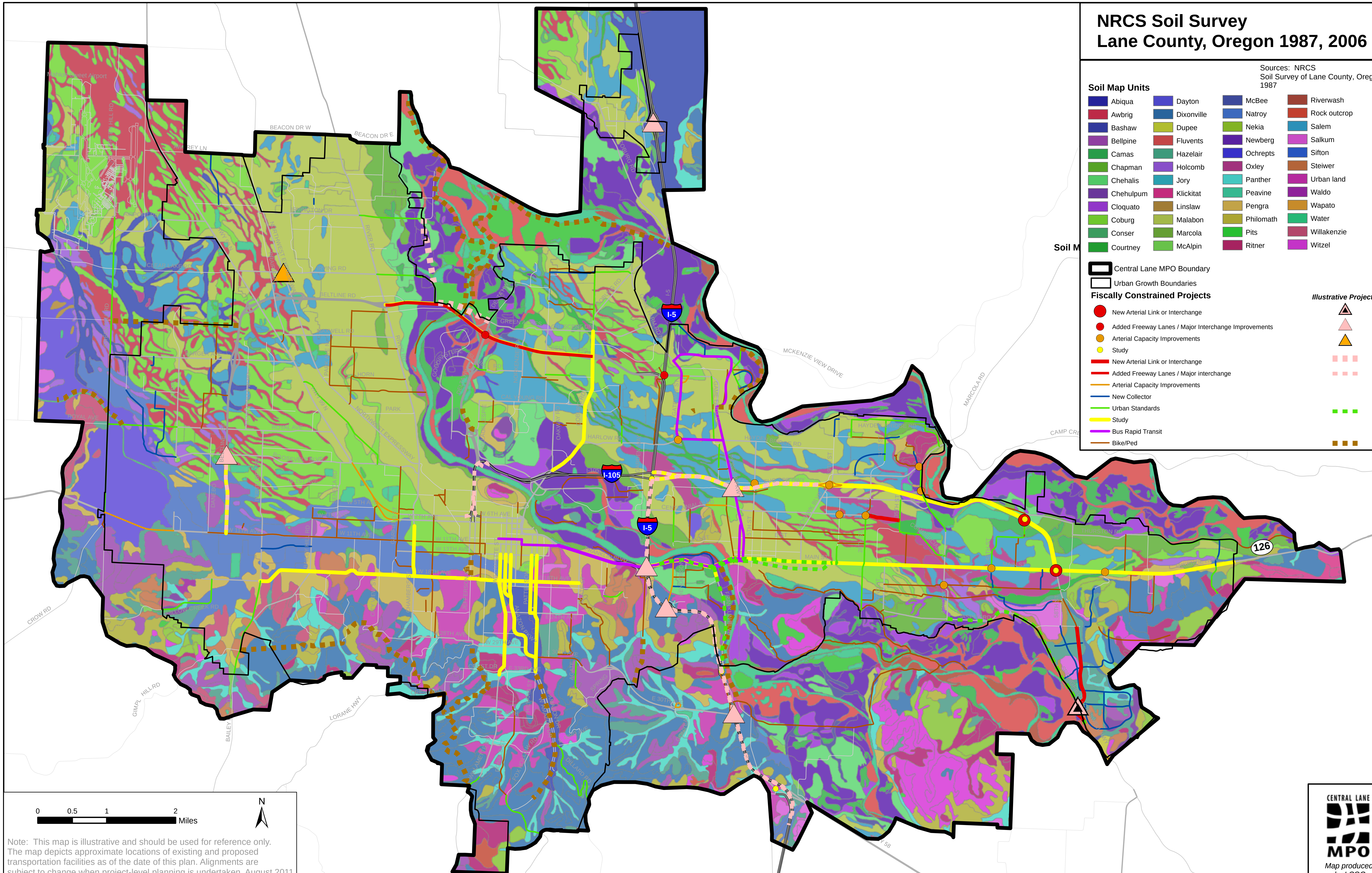


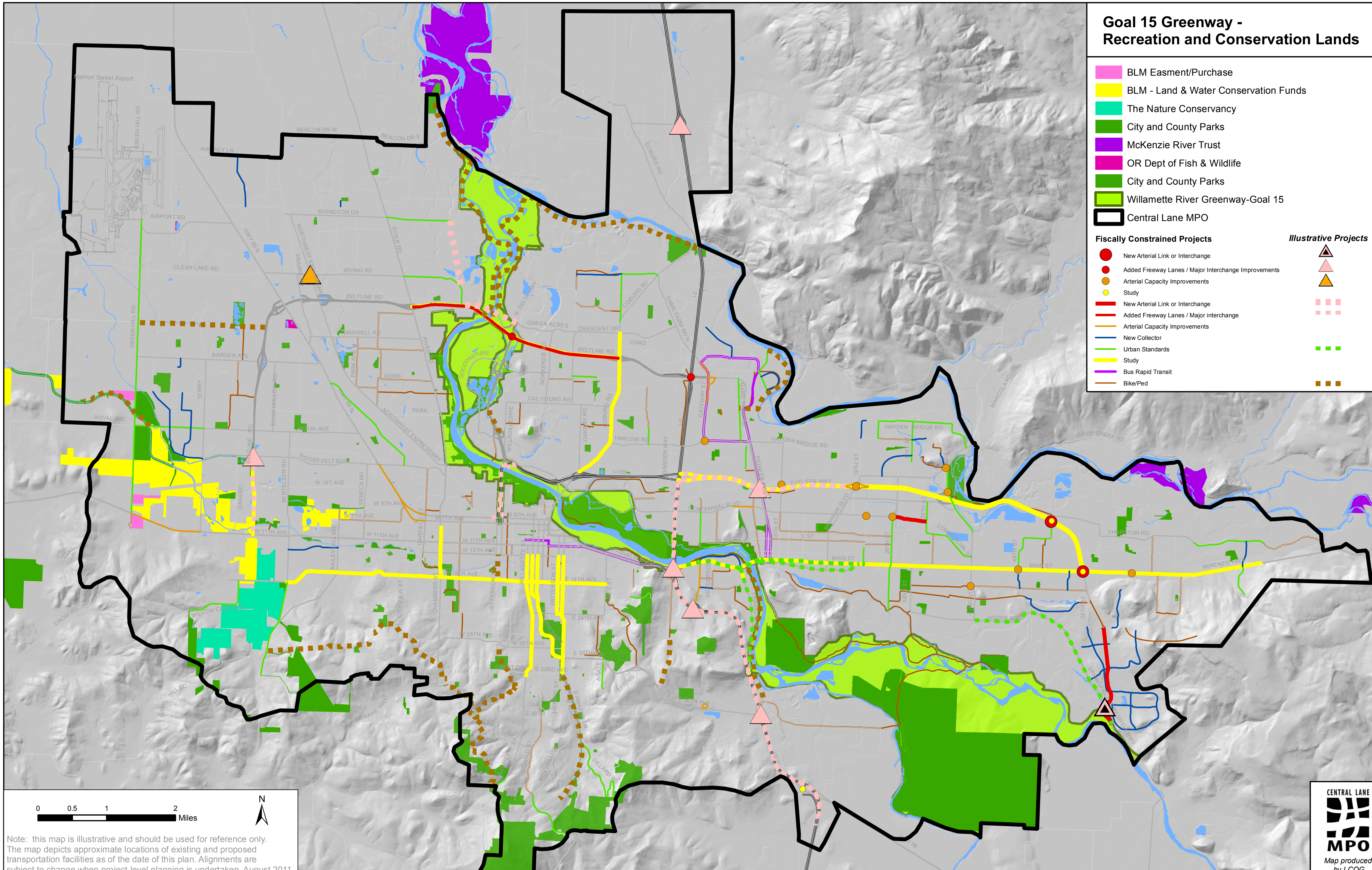
T:\MPO\RTP\FY11 2035 Update\Maps\Updated\F31_WetlandMitigationBnkSrvcAreas.mxd



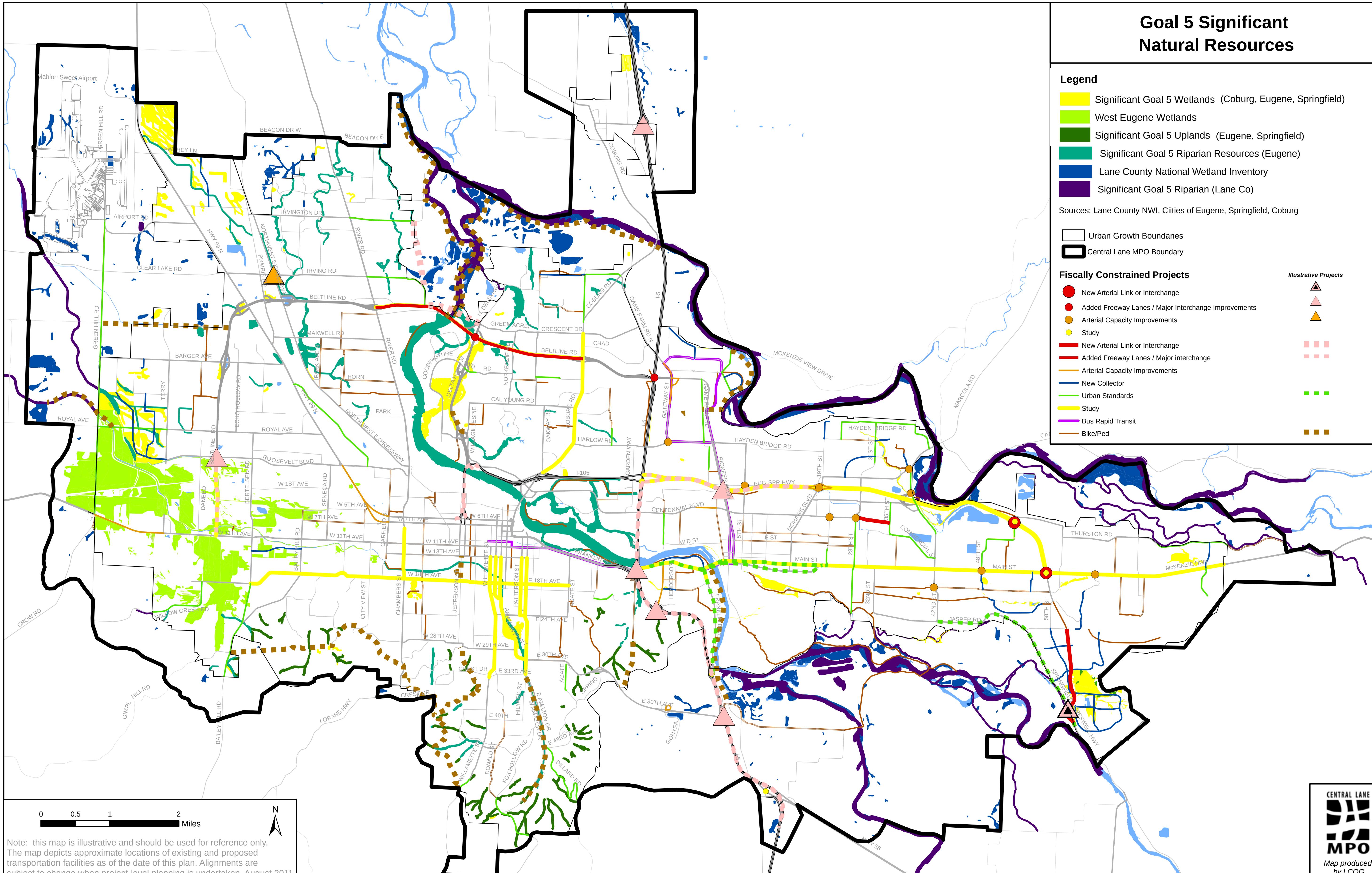
T:\MPO\RTP\FY11 2035 Update\Maps\Updated\F30_LocalWetlandInventories.mxd

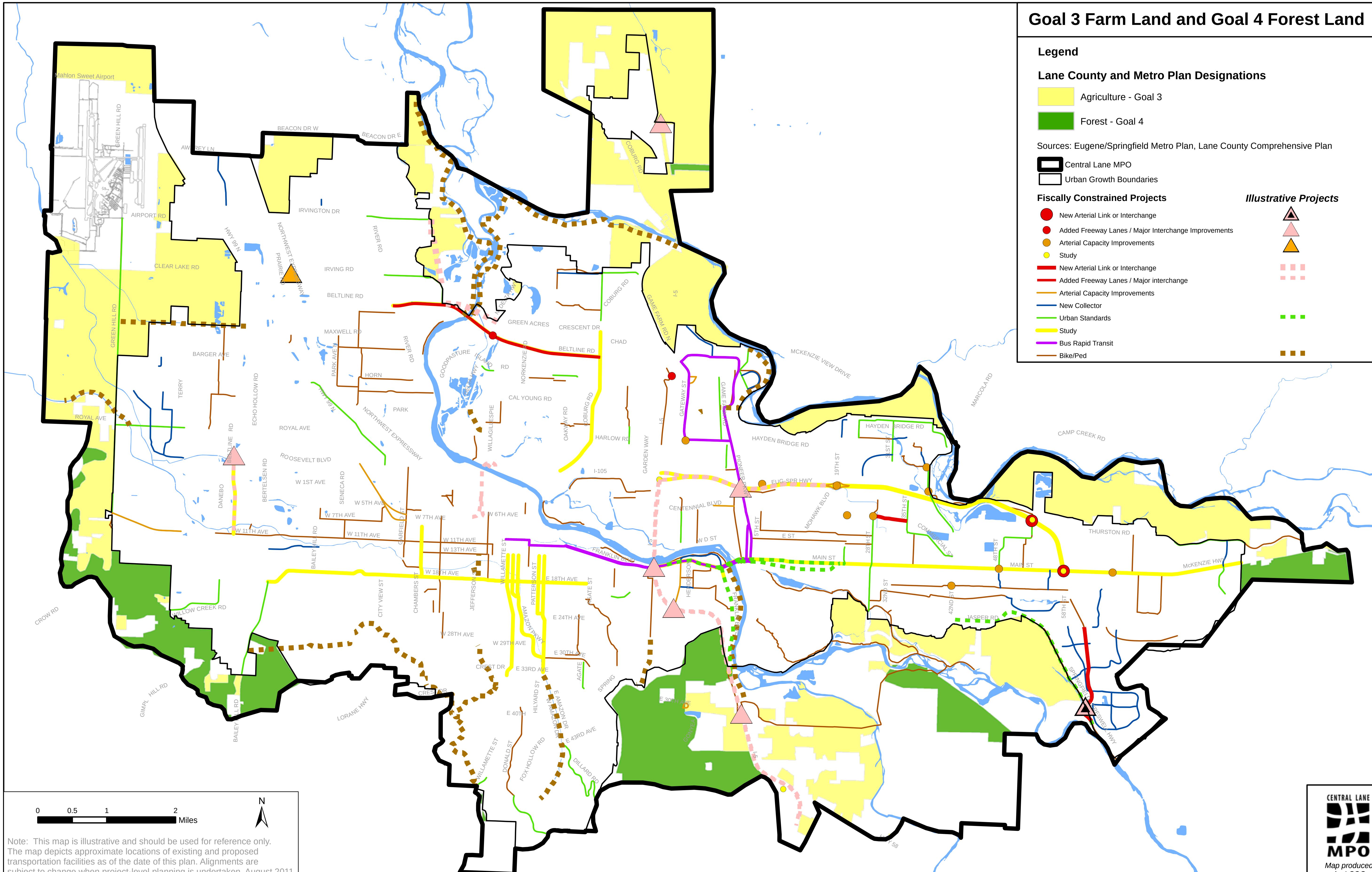

Natural Hazard - Seismic Zones
Legend
Relative Seismic Hazard Zones
Zone B - Intermediate to high hazard
Zone C - Low to Intermediate hazard
Zone D - Lowest hazard
Source: Relative Earthquake Hazard Map of the Eugene-Springfield Metropolitan Area, Lane County, Oregon (IMS-14 Ore. Dept. of Geology & Mineral Industries)
Central Lane MPO Boundary
Urban Growth Boundaries
Fiscally Constrained Projects
Illustrative Projects
New Arterial Link or Interchange
Added Freeway Lanes / Major Interchange Improvements
Arterial Capacity Improvements
Study
New Arterial Link or Interchange
Added Freeway Lanes / Major interchange
Arterial Capacity Improvements
New Collector
Urban Standards
Study
Bus Rapid Transit
Bike/Ped
0 0.5 1 2 Miles
N
Note: This map is illustrative and should be used for reference only. The map depicts approximate locations of existing and proposed transportation facilities as of the date of this plan. Alignments are subject to change when project-level planning is undertaken. August 2011
CENTRAL LANE MPO
Map produced by LCOG

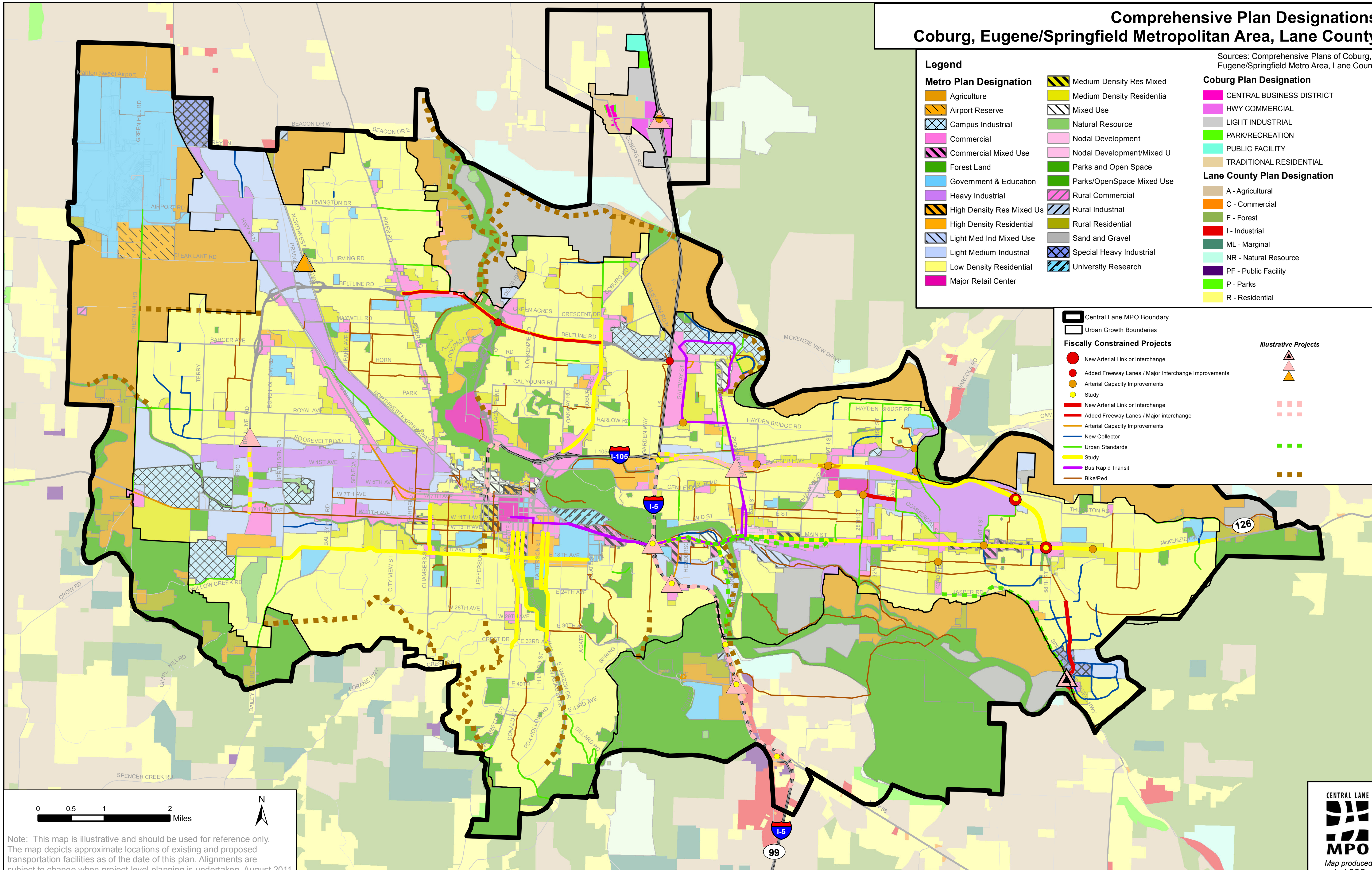

NRCS Soil Survey
Lane County, Oregon 1987, 2006
Sources: NRCS
Soil Survey of Lane County, Oregon
1987
Soil Map Units
Abiqua
Awbrig
Bashaw
Bellpine
Camas
Chapman
Chehalis
Chehulpum
Cloquato
Coburg
Conser
Courtney
Dayton
Dixonville
Dupee
Fluvents
Hazelair
Holcomb
Jory
Klickitat
Linslaw
Malabon
Marcola
McAlpin
McBee
Natroy
Nekia
Newberg
Ochrepts
Oxley
Panther
Peavine
Pengra
Philomath
Pits
Ritner
Riverwash
Rock outcrop
Salem
Salkum
Sifton
Steiwer
Urban land
Waldo
Wapato
Water
Willakenzie
Witzel
Central Lane MPO Boundary
Urban Growth Boundaries
Fiscally Constrained Projects
Illustrative Projects
New Arterial Link or Interchange
Added Freeway Lanes / Major Interchange Improvements
Arterial Capacity Improvements
Study
New Arterial Link or Interchange
Added Freeway Lanes / Major interchange
Arterial Capacity Improvements
New Collector
Urban Standards
Study
Bus Rapid Transit
Bike/Ped
I-5
I-105
126
0 0.5 1 2
Miles
N
Note: This map is illustrative and should be used for reference only.
The map depicts approximate locations of existing and proposed
transportation facilities as of the date of this plan. Alignments are
subject to change when project-level planning is undertaken. August 2011.
CENTRAL LANE
MPO
Map produced
by LCOG



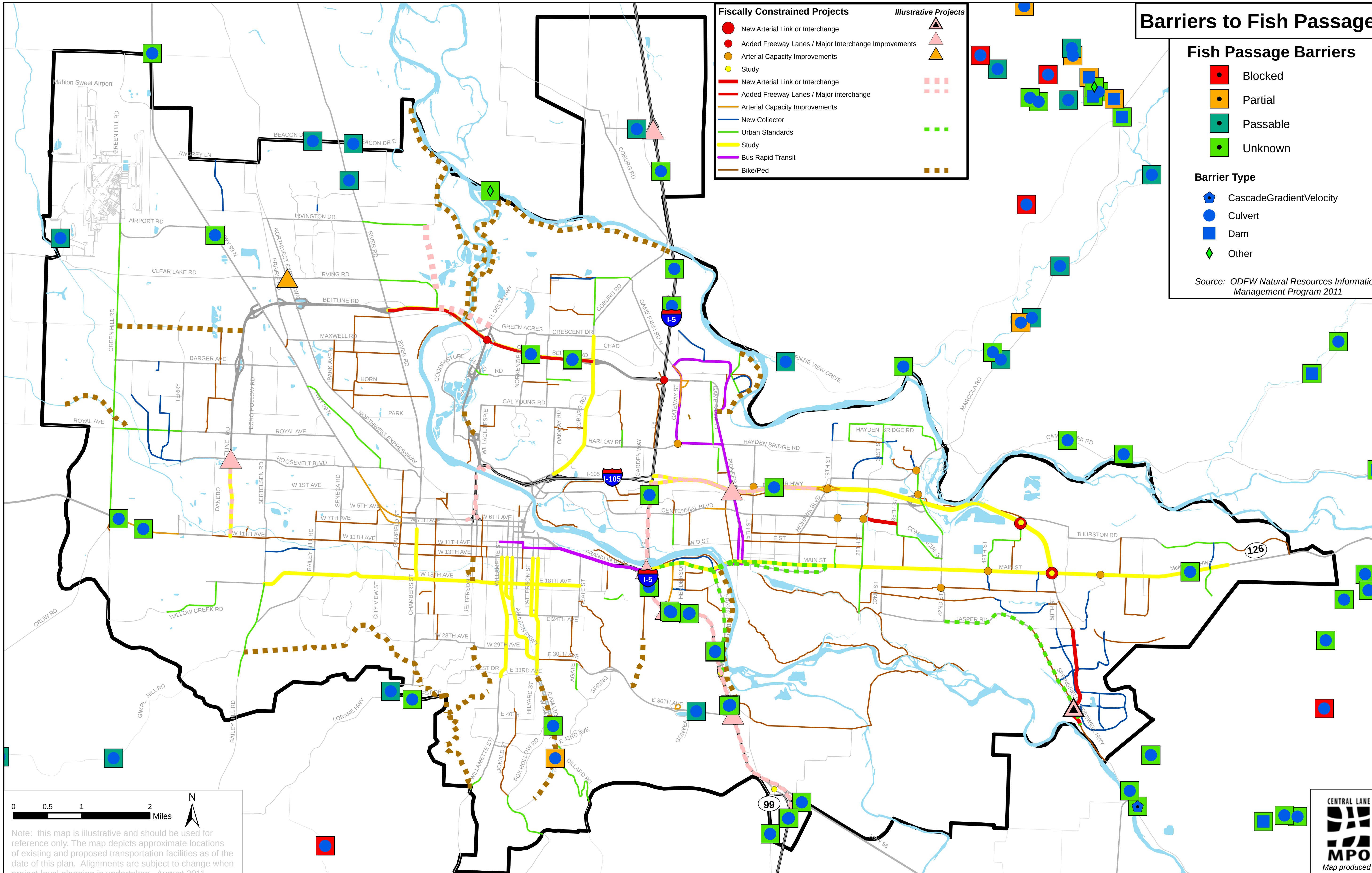
T:\MPO\RTP\FY11 2035 Update\Maps\Updated\F27_Goal15Greenway_RecreationConservationLands.mxd


Goal 5 Significant Natural Resources
Legend
Significant Goal 5 Wetlands (Coburg, Eugene, Springfield)
West Eugene Wetlands
Significant Goal 5 Uplands (Eugene, Springfield)
Significant Goal 5 Riparian Resources (Eugene)
Lane County National Wetland Inventory
Significant Goal 5 Riparian (Lane Co)
Sources: Lane County NWI, Ciities of Eugene, Springfield, Coburg
Urban Growth Boundaries
Central Lane MPO Boundary
Fiscally Constrained Projects
Illustrative Projects
New Arterial Link or Interchange
Added Freeway Lanes / Major Interchange Improvements
Arterial Capacity Improvements
Study
New Arterial Link or Interchange
Added Freeway Lanes / Major interchange
Arterial Capacity Improvements
New Collector
Urban Standards
Study
Bus Rapid Transit
Bike/Ped
0 0.5 1 2
Miles
N
Note: this map is illustrative and should be used for reference only. The map depicts approximate locations of existing and proposed transportation facilities as of the date of this plan. Alignments are subject to change when project-level planning is undertaken. August 2011.
CENTRAL LANE MPO
Map produced by LCOG

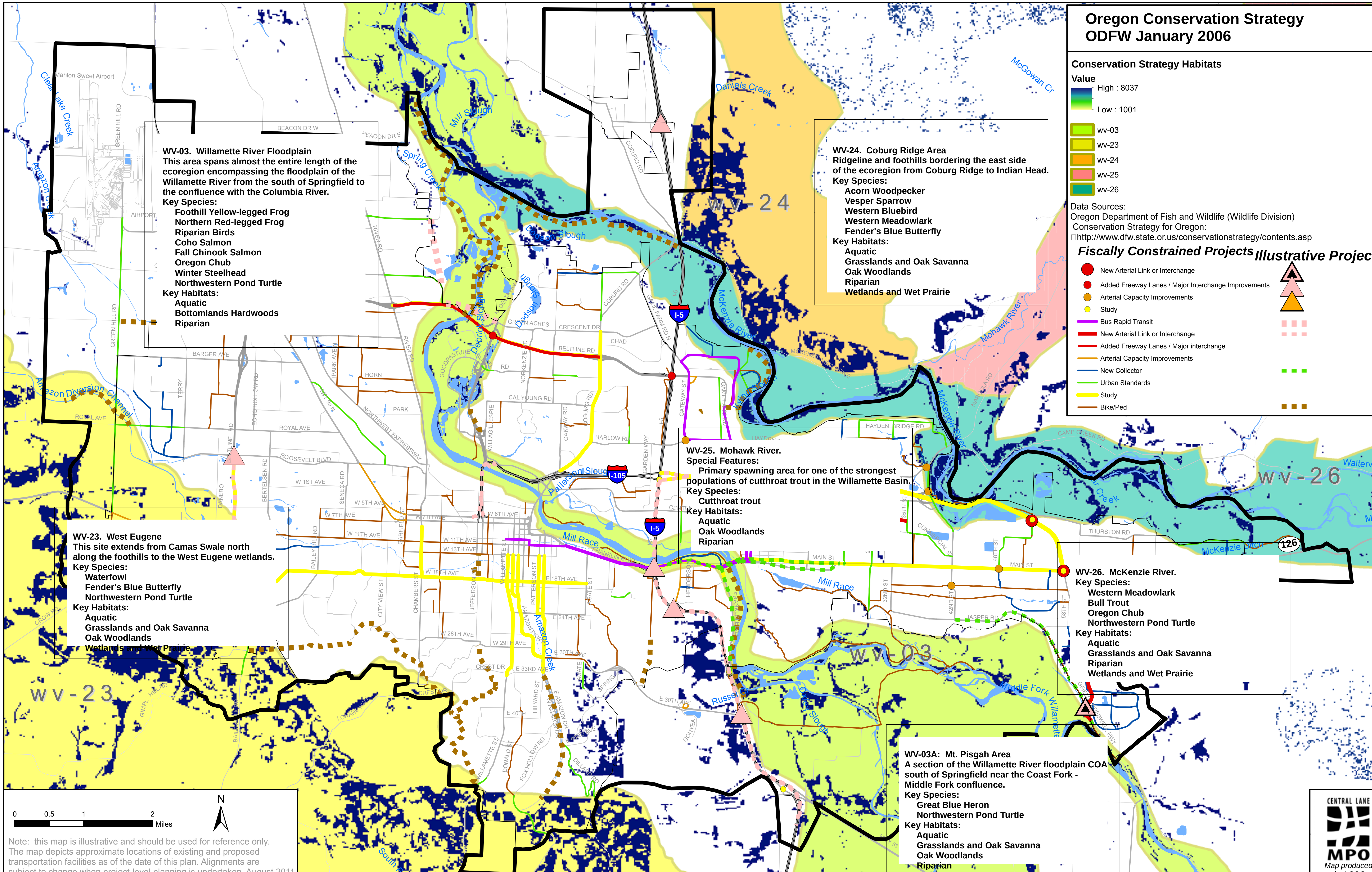

Goal 3 Farm Land and Goal 4 Forest Land
Legend
Lane County and Metro Plan Designations
Agriculture - Goal 3
Forest - Goal 4
Sources: Eugene/Springfield Metro Plan, Lane County Comprehensive Plan
Central Lane MPO
Urban Growth Boundaries
Fiscally Constrained Projects
Illustrative Projects
New Arterial Link or Interchange
Added Freeway Lanes / Major Interchange Improvements
Arterial Capacity Improvements
Study
New Arterial Link or Interchange
Added Freeway Lanes / Major interchange
Arterial Capacity Improvements
New Collector
Urban Standards
Study
Bus Rapid Transit
Bike/Ped
Mahlon Sweet Airport
BEACON DR W
BEACON DR E
IRVING RD
BELTLINE RD
MAXWELL RD
BARGER AVE
ROYAL AVE
ROOSEVELT BLVD
W 1ST AVE
W 5TH AVE
W 7TH AVE
W 11TH AVE
W 13TH AVE
W 18TH AVE
W 28TH AVE
NORTHWEST EXPRESSWAY
GREEN ACRES
CRESCENT DR
CAL YOUNG RD
HARLOW RD
HAYDEN BRIDGE RD
MCKENZIE VIEW DRIVE
CAMP CREEK RD
THURSTON RD
MAIN ST
McKENZIE HWY
CENTENNIAL BLVD
FRANKLIN BLVD
E 18TH AVE
E 24TH AVE
E 30TH AVE
E 43RD AVE
WILLOW CREEK RD
LORANE HWY
CROW RD
0 0.5 1 2 Miles
N
Note: This map is illustrative and should be used for reference only. The map depicts approximate locations of existing and proposed transportation facilities as of the date of this plan. Alignments are subject to change when project-level planning is undertaken. August 2011.
CENTRAL LANE MPO
Map produced by LCOG



Comprehensive Plan Designations
Coburg, Eugene/Springfield Metropolitan Area, Lane County
Sources: Comprehensive Plans of Coburg, Eugene/Springfield Metro Area, Lane County
Legend
Metro Plan Designation
Agriculture
Airport Reserve
Campus Industrial
Commercial
Commercial Mixed Use
Forest Land
Government & Education
Heavy Industrial
High Density Res Mixed Us
High Density Residential
Light Med Ind Mixed Use
Light Medium Industrial
Low Density Residential
Major Retail Center
Medium Density Res Mixed
Medium Density Residentia
Mixed Use
Natural Resource
Nodal Development
Nodal Development/Mixed U
Parks and Open Space
Parks/OpenSpace Mixed Use
Rural Commercial
Rural Industrial
Rural Residential
Sand and Gravel
Special Heavy Industrial
University Research
Coburg Plan Designation
CENTRAL BUSINESS DISTRICT
HWY COMMERCIAL
LIGHT INDUSTRIAL
PARK/RECREATION
PUBLIC FACILITY
TRADITIONAL RESIDENTIAL
Lane County Plan Designation
A - Agricultural
C - Commercial
F - Forest
I - Industrial
ML - Marginal
NR - Natural Resource
PF - Public Facility
P - Parks
R - Residential
Central Lane MPO Boundary
Urban Growth Boundaries
Fiscally Constrained Projects
Illustrative Projects
New Arterial Link or Interchange
Added Freeway Lanes / Major Interchange Improvements
Arterial Capacity Improvements
Study
New Arterial Link or Interchange
Added Freeway Lanes / Major interchange
Arterial Capacity Improvements
New Collector
Urban Standards
Study
Bus Rapid Transit
Bike/Ped
0 0.5 1 2 Miles
N
Note: This map is illustrative and should be used for reference only. The map depicts approximate locations of existing and proposed transportation facilities as of the date of this plan. Alignments are subject to change when project-level planning is undertaken. August 2011.
CENTRAL LANE MPO
Map produced by LCOG



T:\MPO\RTP\FY11 2035 Update\Maps\Updated\F23_BarriersToFishPassage.mxd



Oregon Conservation Strategy
ODFW January 2006
Conservation Strategy Habitats
Value
High : 8037
Low : 1001
wv-03
wv-23
wv-24
wv-25
wv-26
Data Sources:
Oregon Department of Fish and Wildlife (Wildlife Division)
Conservation Strategy for Oregon:
http://www.dfw.state.or.us/conservationstrategy/contents.asp
Fiscally Constrained Projects
Illustrative Projects
New Arterial Link or Interchange
Added Freeway Lanes / Major Interchange Improvements
Arterial Capacity Improvements
Study
Bus Rapid Transit
New Arterial Link or Interchange
Added Freeway Lanes / Major interchange
Arterial Capacity Improvements
New Collector
Urban Standards
Study
Bike/Ped
WV-03. Willamette River Floodplain
This area spans almost the entire length of the ecoregion encompassing the floodplain of the Willamette River from the south of Springfield to the confluence with the Columbia River.
Key Species:
Foothill Yellow-legged Frog
Northern Red-legged Frog
Riparian Birds
Coho Salmon
Fall Chinook Salmon
Oregon Chub
Winter Steelhead
Northwestern Pond Turtle
Key Habitats:
Aquatic
Bottomlands Hardwoods
Riparian
WV-24. Coburg Ridge Area
Ridgeline and foothills bordering the east side of the ecoregion from Coburg Ridge to Indian Head.
Key Species:
Acorn Woodpecker
Vesper Sparrow
Western Bluebird
Western Meadowlark
Fender's Blue Butterfly
Key Habitats:
Aquatic
Grasslands and Oak Savanna
Oak Woodlands
Riparian
Wetlands and Wet Prairie
WV-25. Mohawk River.
Special Features:
Primary spawning area for one of the strongest populations of cutthroat trout in the Willamette Basin.
Key Species:
Cutthroat trout
Key Habitats:
Aquatic
Oak Woodlands
Riparian
WV-23. West Eugene
This site extends from Camas Swale north along the foothills to the West Eugene wetlands.
Key Species:
Waterfowl
Fender's Blue Butterfly
Northwestern Pond Turtle
Key Habitats:
Aquatic
Grasslands and Oak Savanna
Oak Woodlands
Wetlands and Wet Prairie
WV-26. McKenzie River.
Key Species:
Western Meadowlark
Bull Trout
Oregon Chub
Northwestern Pond Turtle
Key Habitats:
Aquatic
Grasslands and Oak Savanna
Riparian
Wetlands and Wet Prairie
WV-03A: Mt. Pisgah Area
A section of the Willamette River floodplain COA south of Springfield near the Coast Fork - Middle Fork confluence.
Key Species:
Great Blue Heron
Northwestern Pond Turtle
Key Habitats:
Aquatic
Grasslands and Oak Savanna
Oak Woodlands
Riparian
wv-24
wv-26
wv-03
wv-23
0 0.5 1 2 Miles
N
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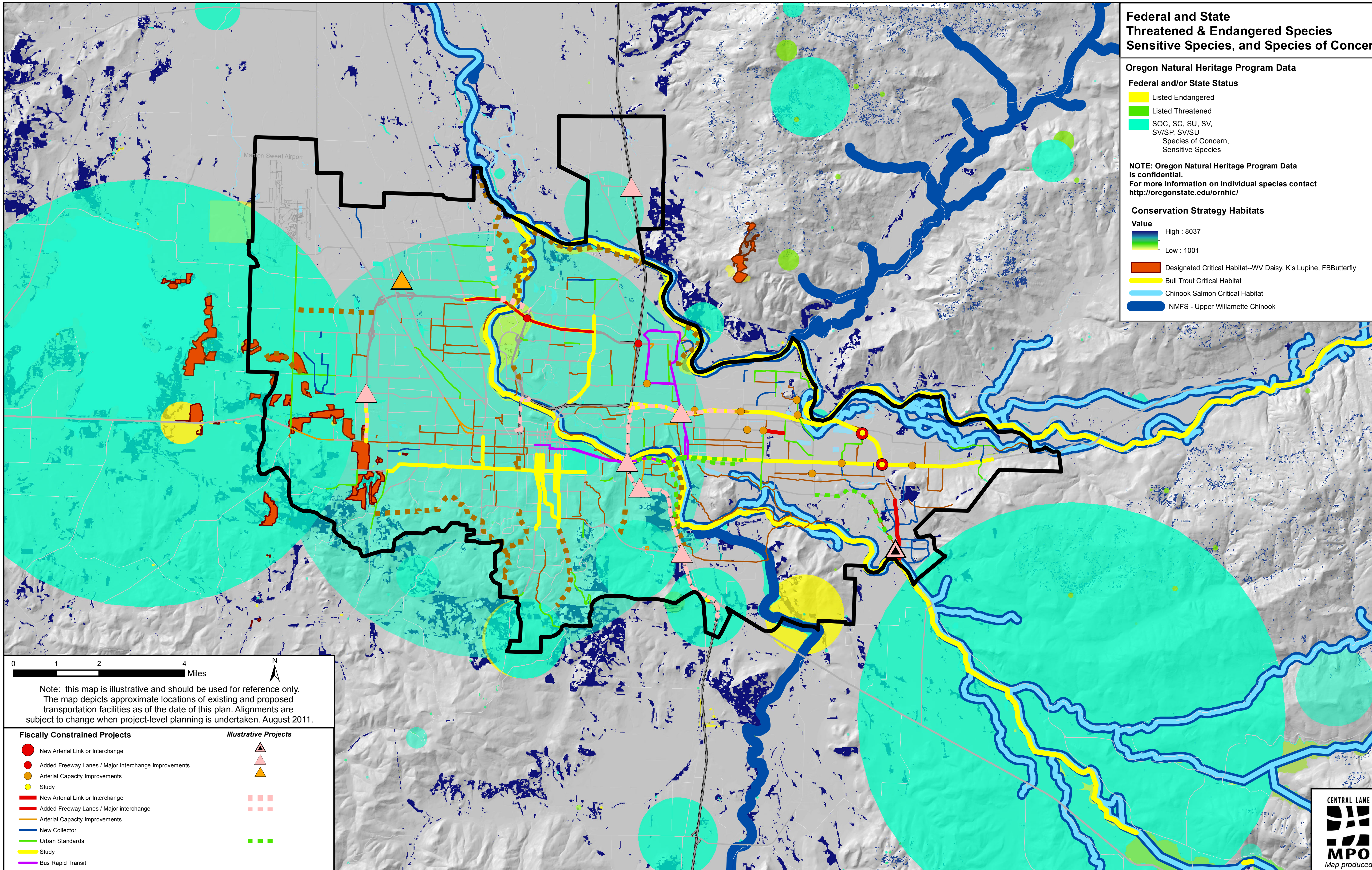
CENTRAL LANE MPO
Map produced by LCOG



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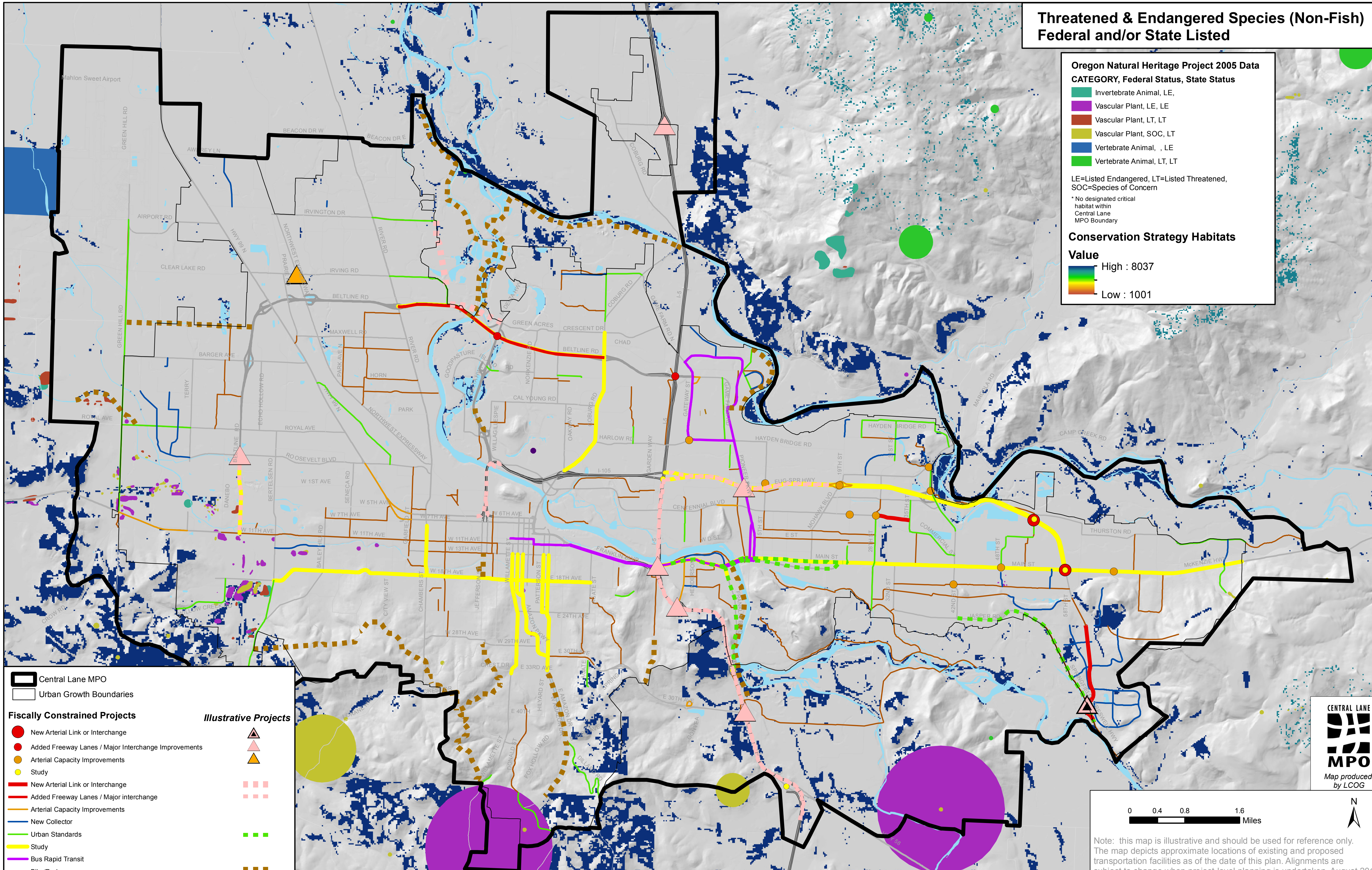
Sensitive Data Not for Public Distribution



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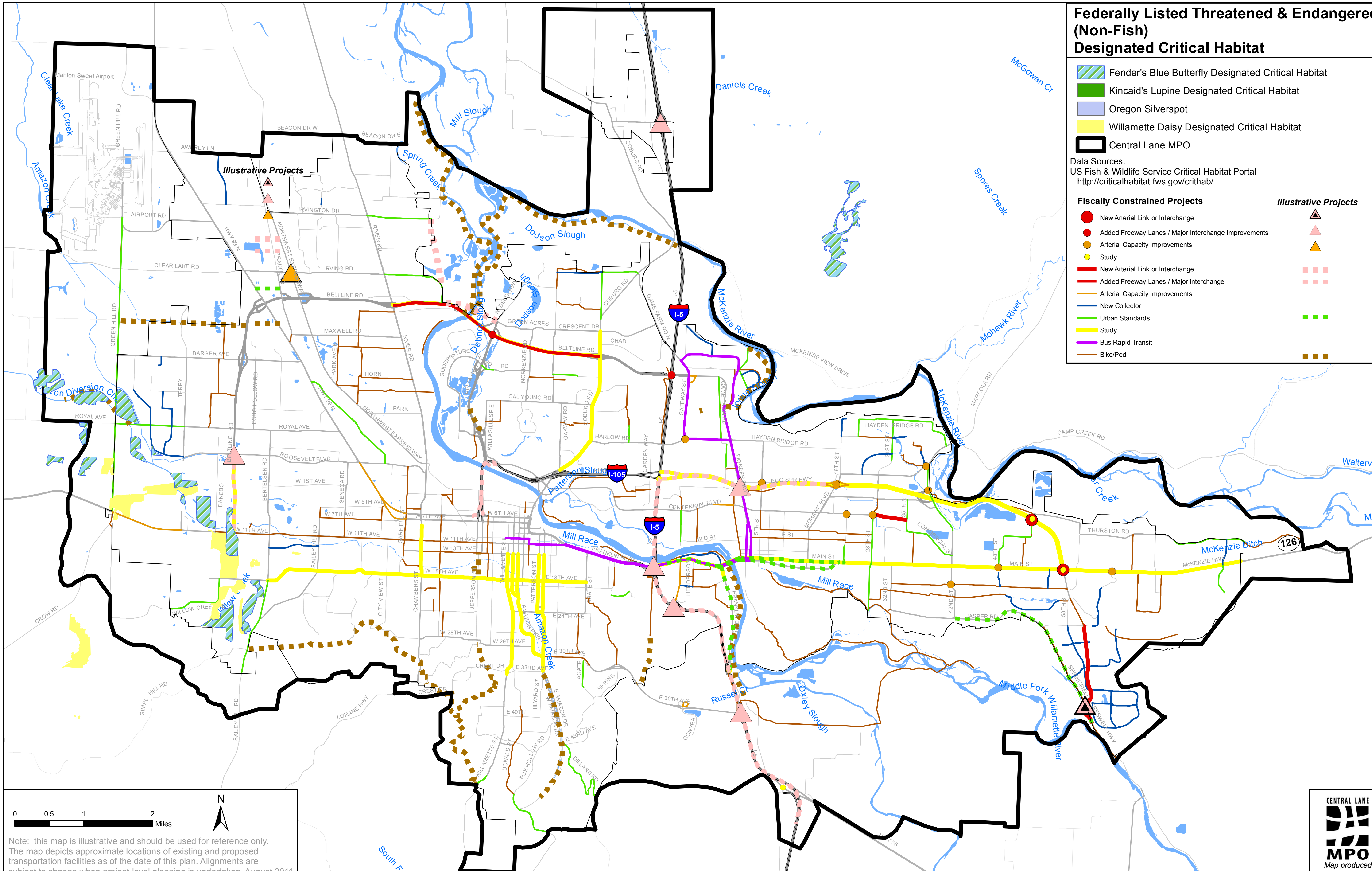
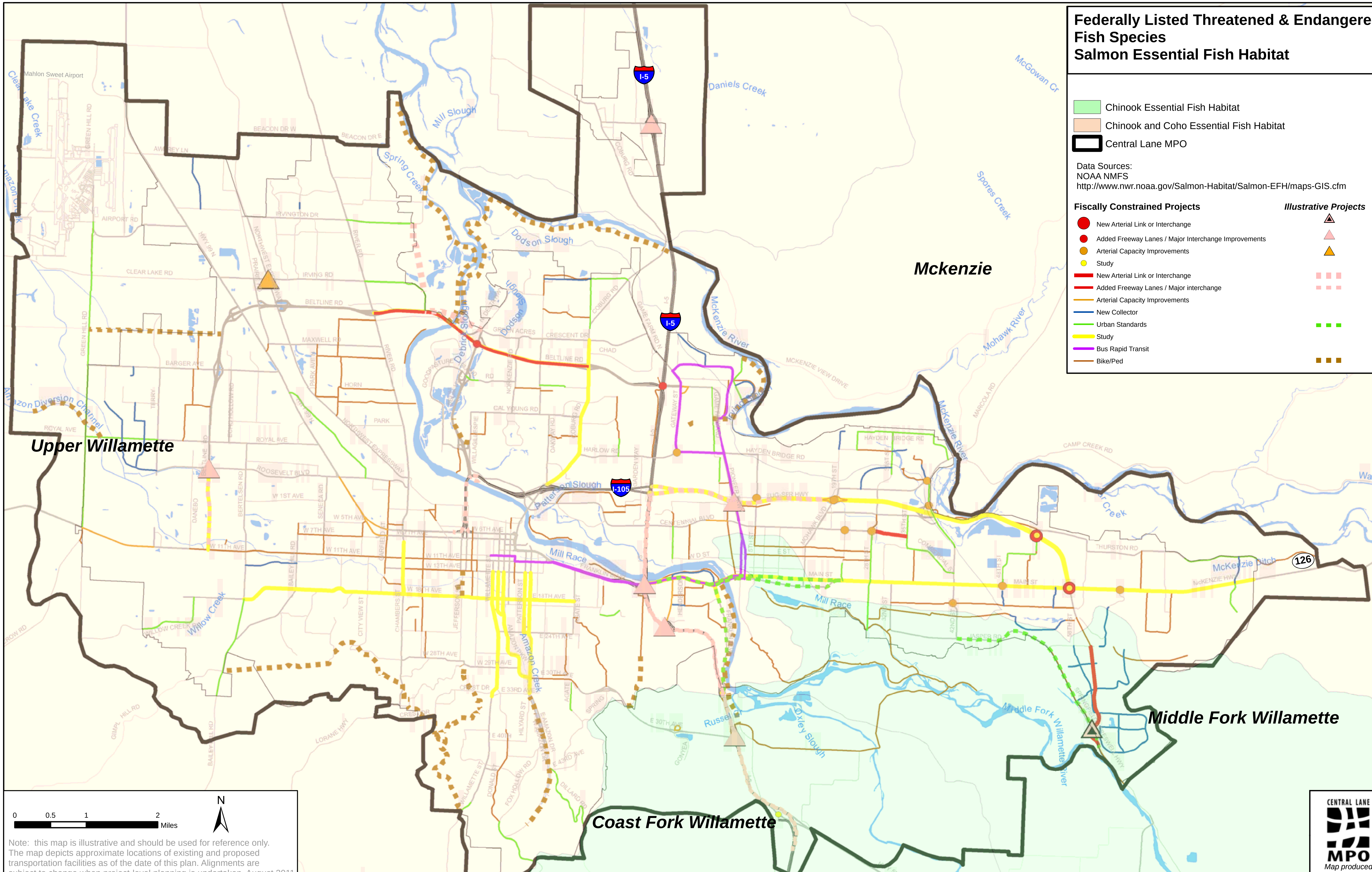


T:\MPO\RTP\FY11 2035 Update\Maps\Updated\F20.1_FederallyListedThreatened&Endangered_Non-Fish_DCH.mxd



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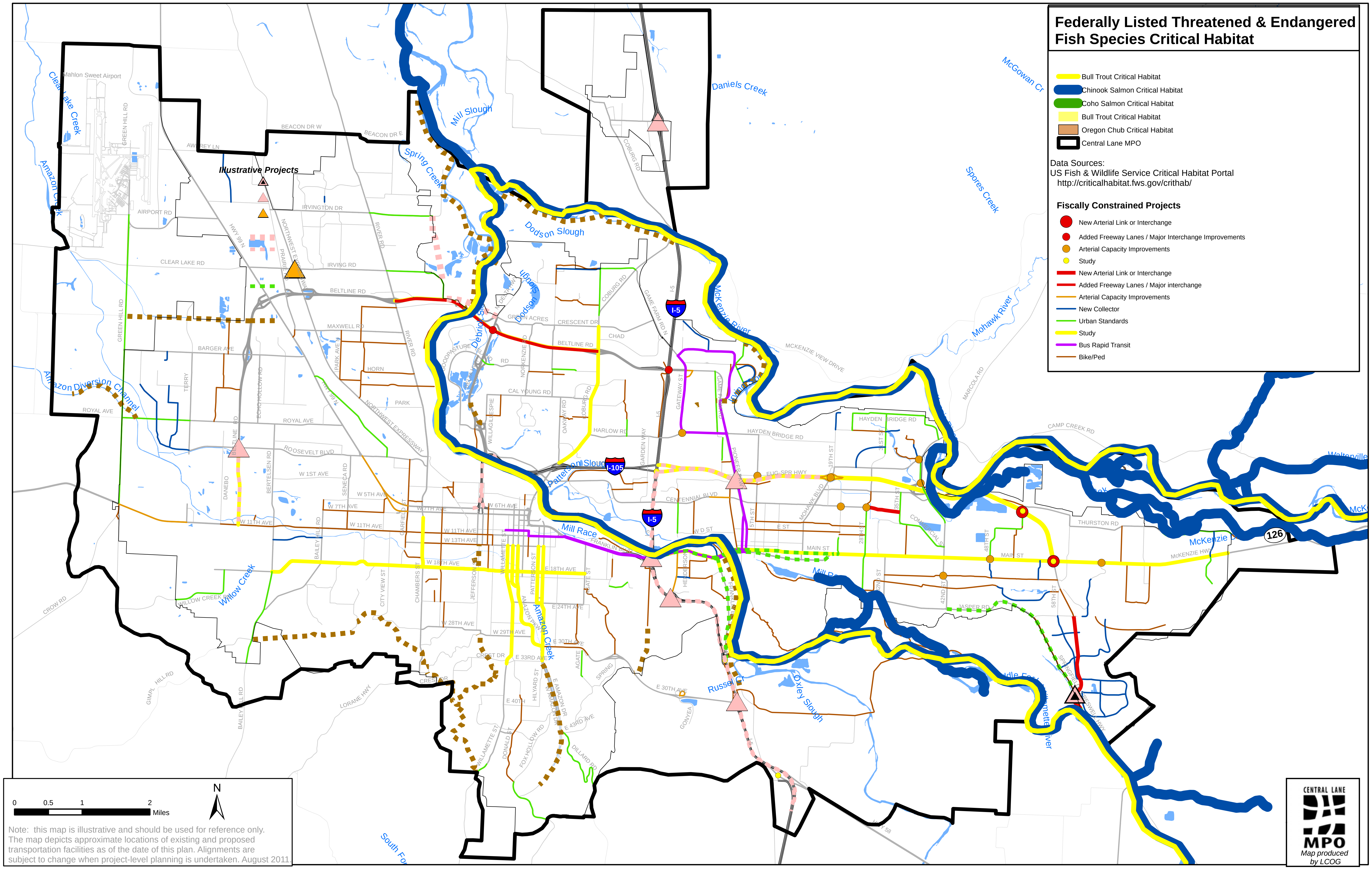
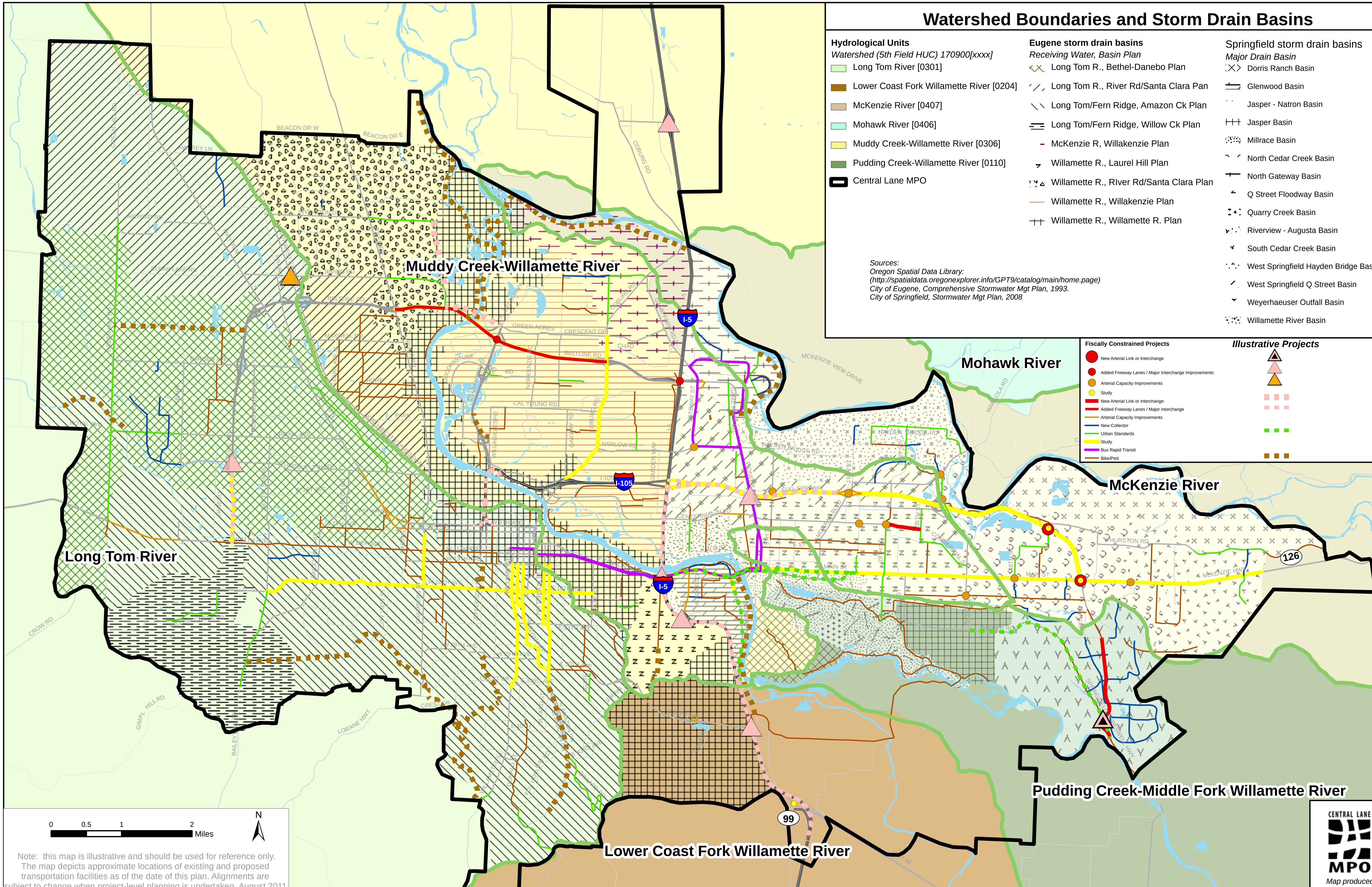
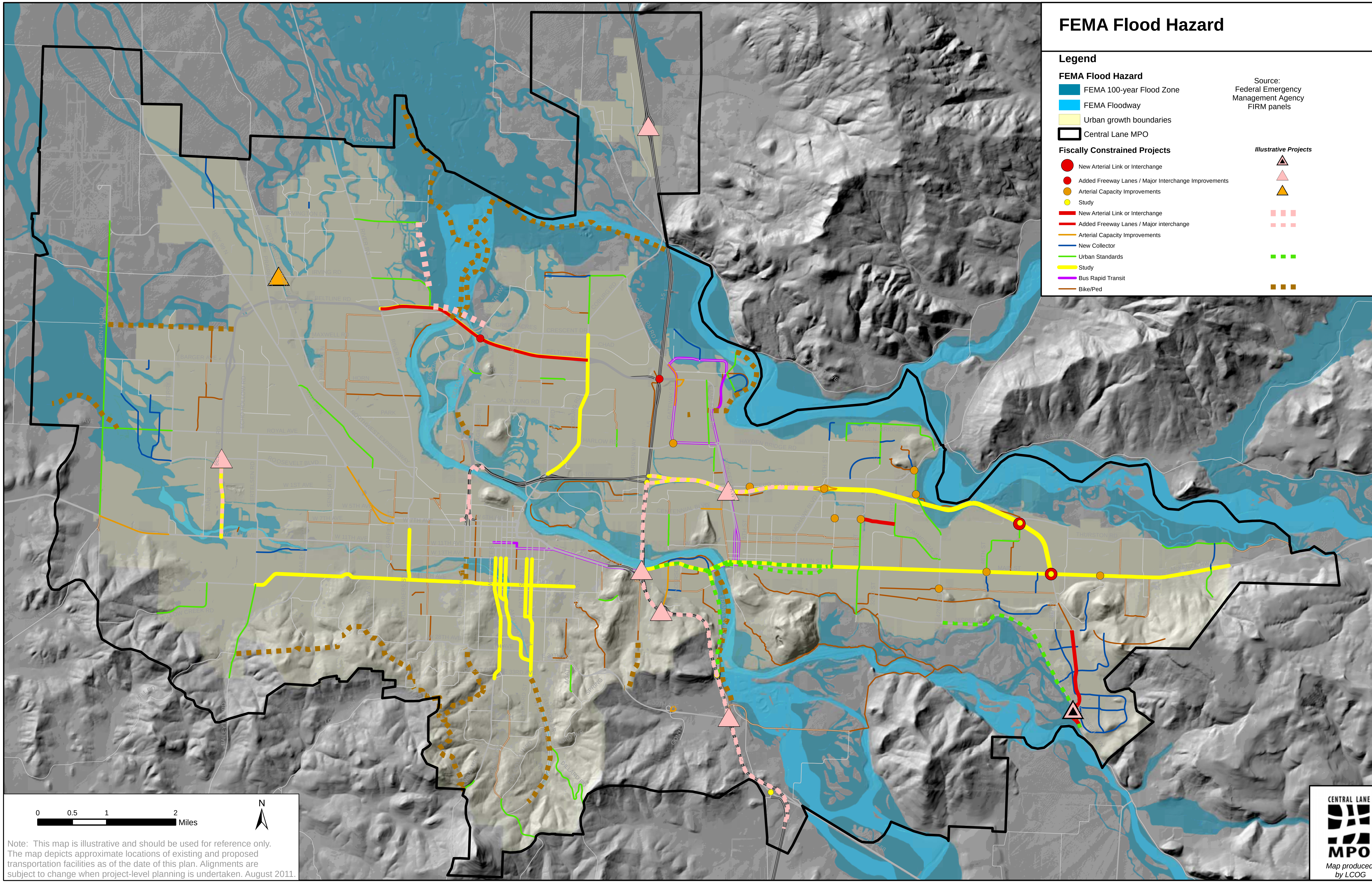


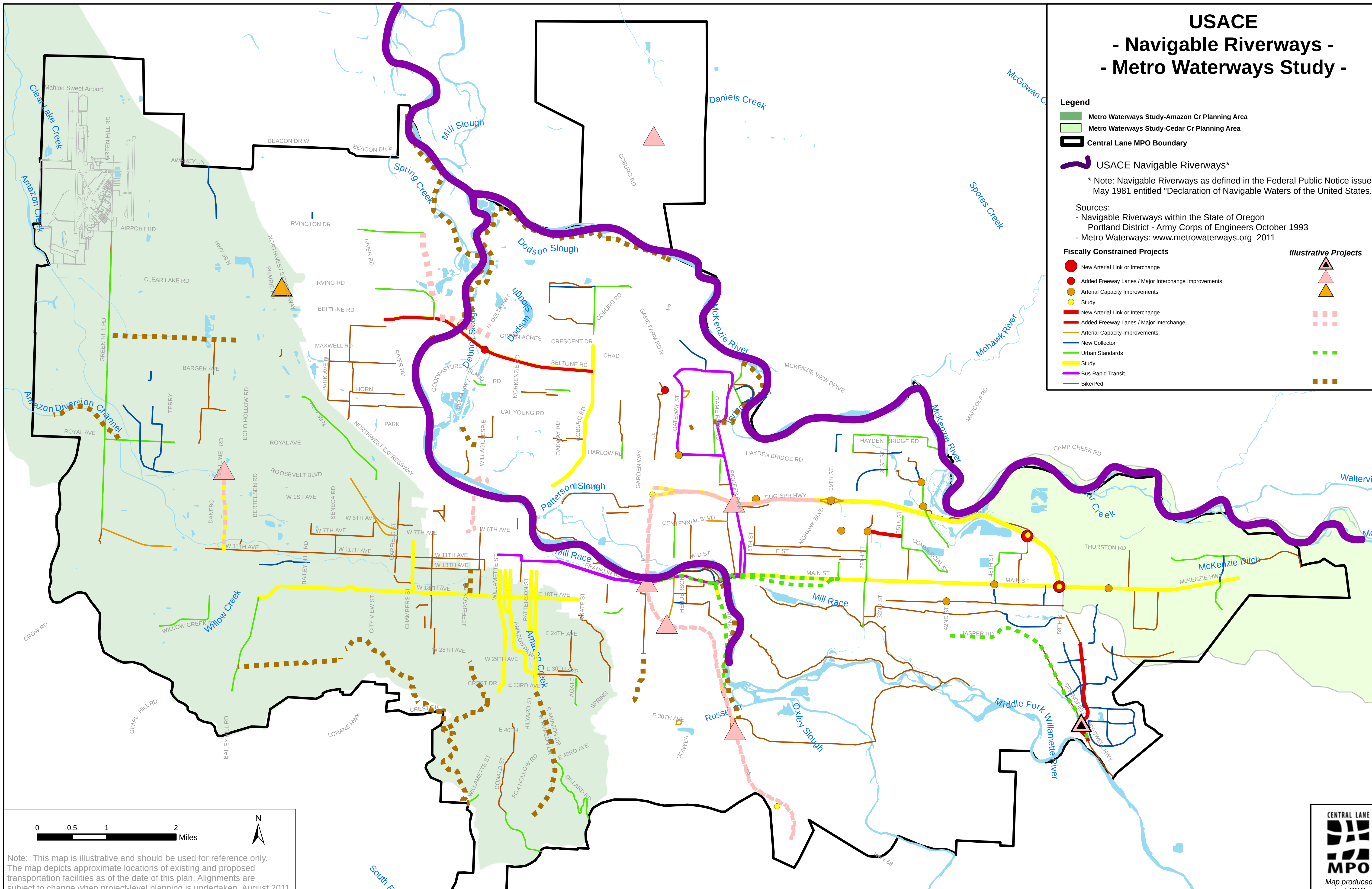
Federally Listed Threatened & Endangered Fish Species Critical Habitat
Bull Trout Critical Habitat
Chinook Salmon Critical Habitat
Coho Salmon Critical Habitat
Bull Trout Critical Habitat
Oregon Chub Critical Habitat
Central Lane MPO
Data Sources:
US Fish & Wildlife Service Critical Habitat Portal
http://criticalhabitat.fws.gov/crithab/
Fiscally Constrained Projects
New Arterial Link or Interchange
Added Freeway Lanes / Major Interchange Improvements
Arterial Capacity Improvements
Study
New Arterial Link or Interchange
Added Freeway Lanes / Major interchange
Arterial Capacity Improvements
New Collector
Urban Standards
Study
Bus Rapid Transit
Bike/Ped
Illustrative Projects
0 0.5 1 2
Miles
N
Note: this map is illustrative and should be used for reference only. The map depicts approximate locations of existing and proposed transportation facilities as of the date of this plan. Alignments are subject to change when project-level planning is undertaken. August 2011
CENTRAL LANE MPO
Map produced by LCOG

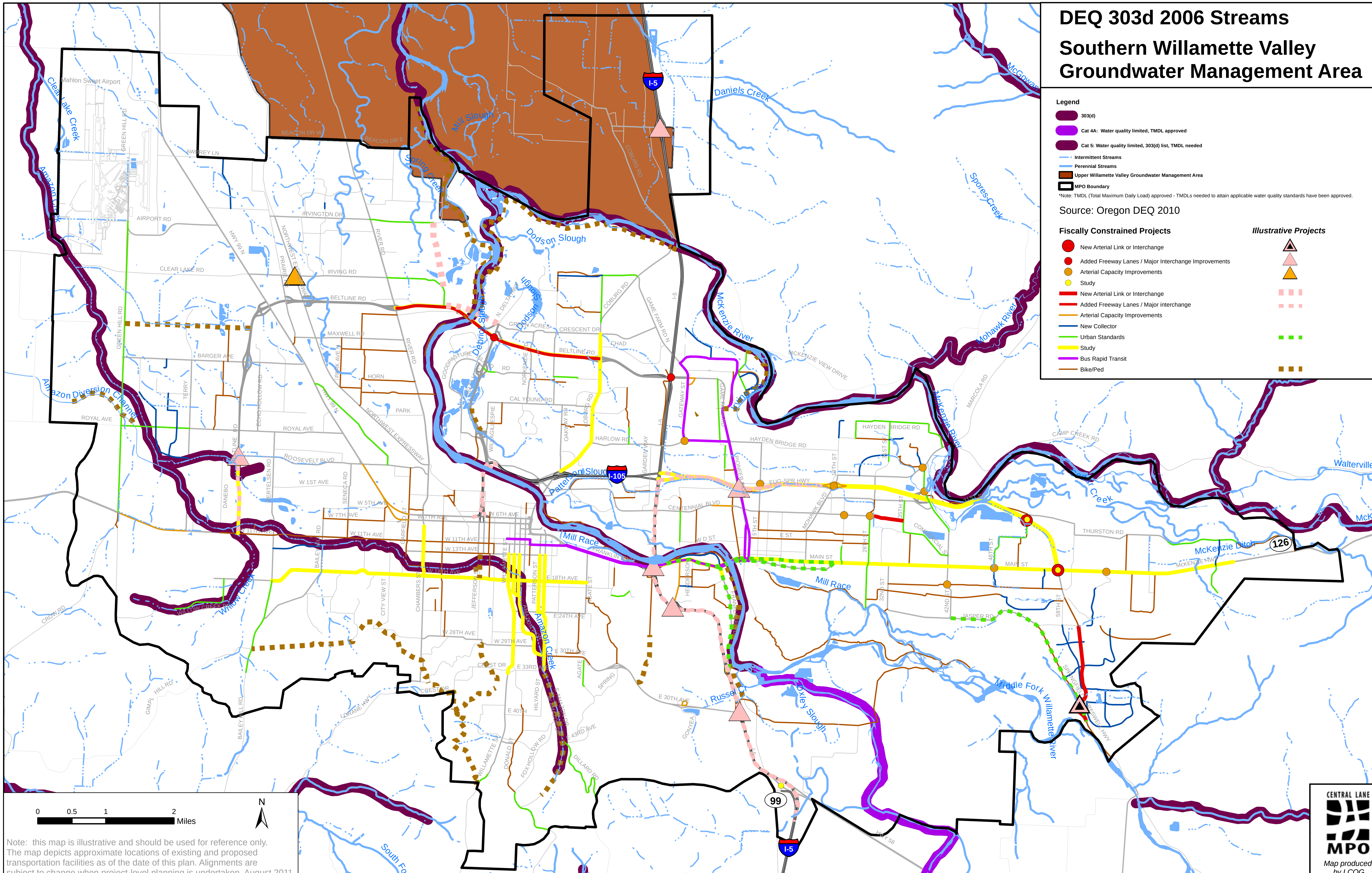


T:\MPO\RTP\FY11 2035 Update\Maps\Updated\F18_Watersheds_StmBas.mxd

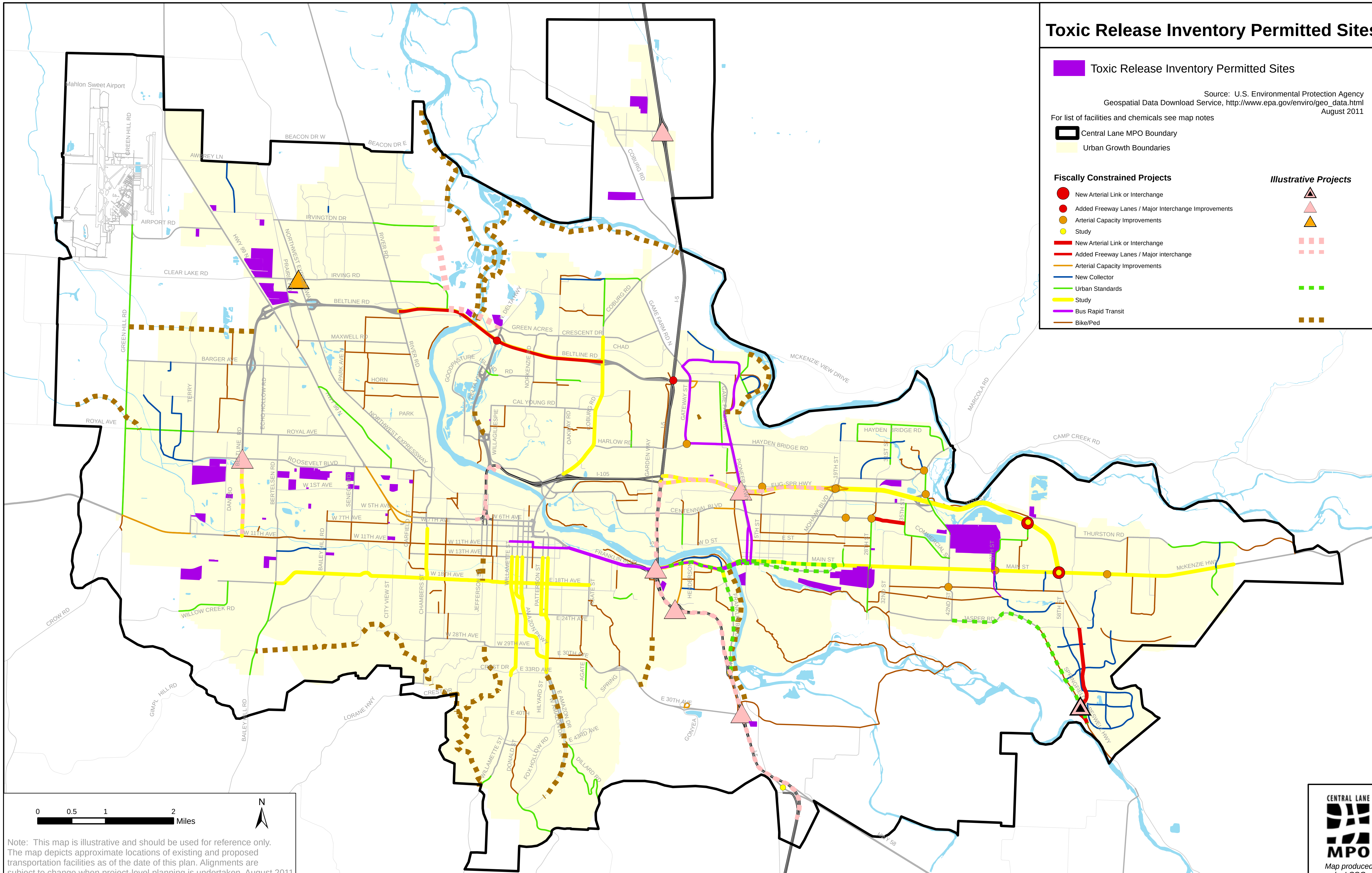


T:\MPO\RTP\FY11 2035 Update\Maps\Updated\F17_FEMAFloodHazard.mxd

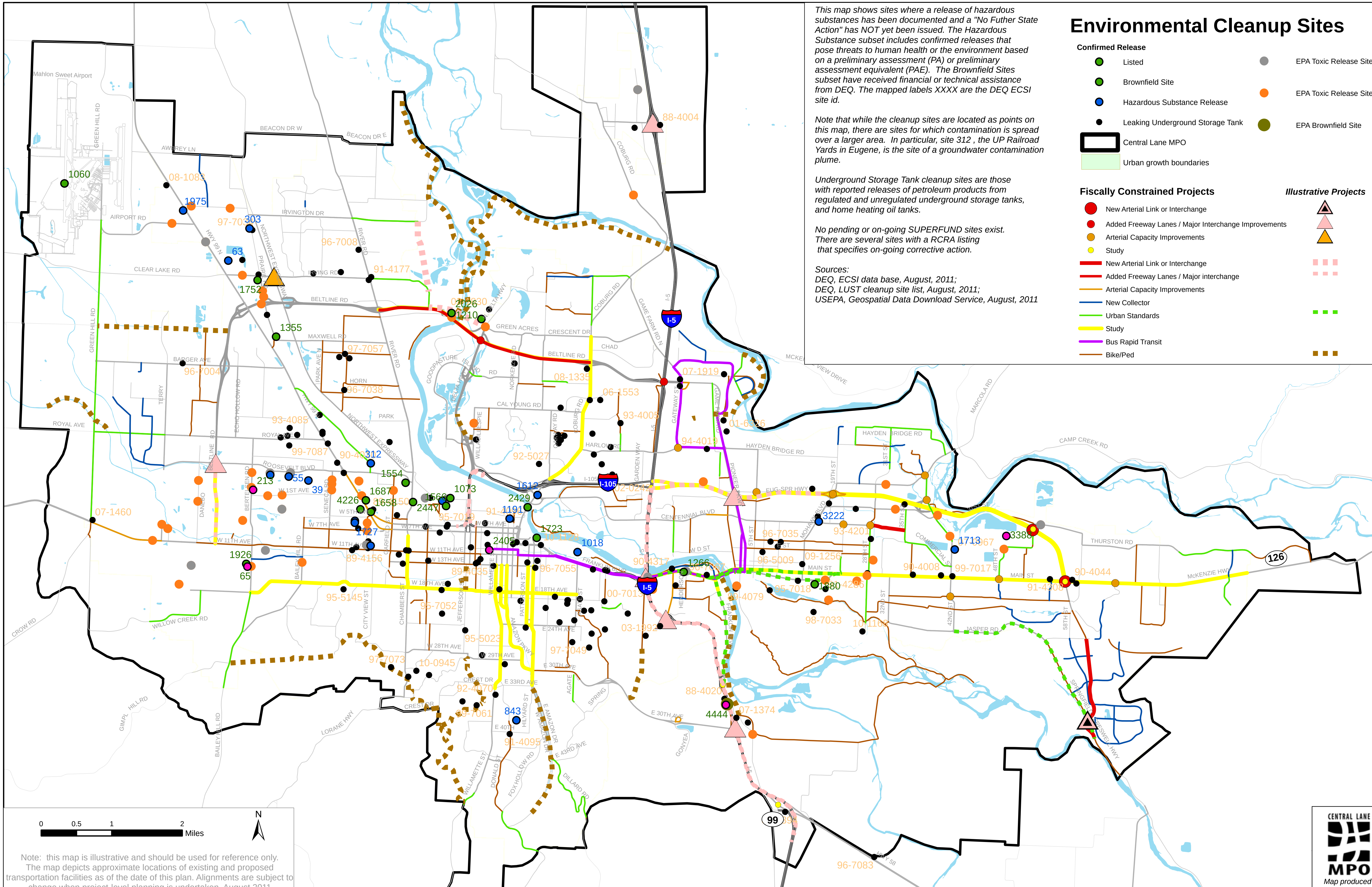

USACE
- Navigable Riverways -
- Metro Waterways Study -
Legend
Metro Waterways Study-Amazon Cr Planning Area
Metro Waterways Study-Cedar Cr Planning Area
Central Lane MPO Boundary
USACE Navigable Riverways*
* Note: Navigable Riverways as defined in the Federal Public Notice issued May 1981 entitled "Declaration of Navigable Waters of the United States."
Sources:
- Navigable Riverways within the State of Oregon
Portland District - Army Corps of Engineers October 1993
- Metro Waterways: www.metrowaterways.org 2011
Fiscally Constrained Projects
Illustrative Projects
New Arterial Link or Interchange
Added Freeway Lanes / Major Interchange Improvements
Arterial Capacity Improvements
Study
New Arterial Link or Interchange
Added Freeway Lanes / Major interchange
Arterial Capacity Improvements
New Collector
Urban Standards
Study
Bus Rapid Transit
Bike/Ped
Mahlon Sweet Airport
Clear Lake Creek
Amazon Creek
Amazon Diversion Channel
Mill Slough
Spring Creek
Daniels Creek
McGowan C
Spores Creek
Dodson Slough
Debrick Slough
McKenzie River
Mohawk River
Patterson Slough
Mill Race
Willow Creek
Amazon Creek
Russel Cr
Oxley Slough
Middle Fork Willamette River
McKenzie Ditch
Cedar Creek
Walterville
South Fo
0 0.5 1 2
Miles
N
Note: This map is illustrative and should be used for reference only. The map depicts approximate locations of existing and proposed transportation facilities as of the date of this plan. Alignments are subject to change when project-level planning is undertaken. August 2011.
CENTRAL LANE MPO
Map produced by LCOG

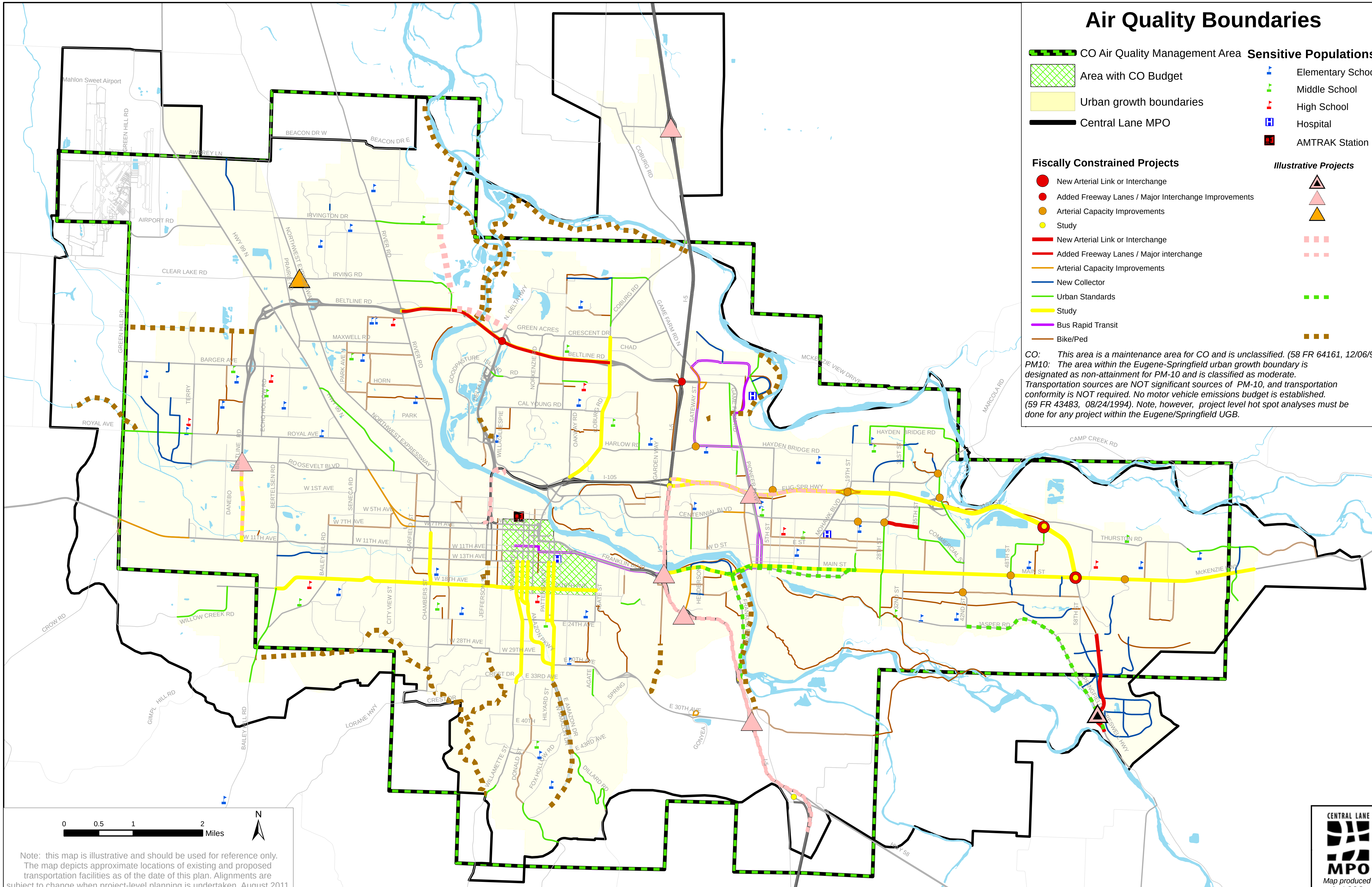


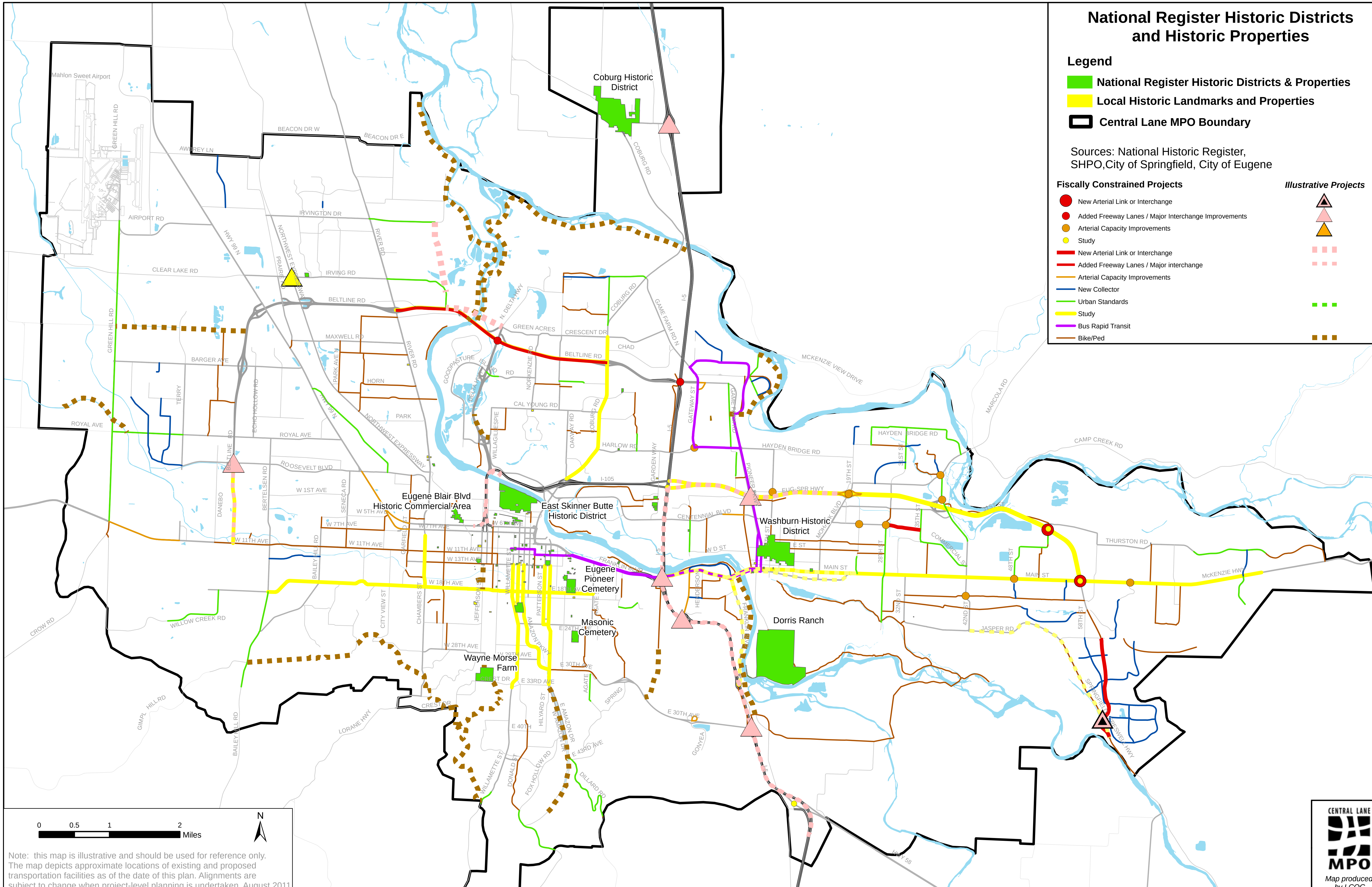
DEQ 303d 2006 Streams
Southern Willamette Valley Groundwater Management Area
Legend
303(d)
Cat 4A: Water quality limited, TMDL approved
Cat 5: Water quality limited, 303(d) list, TMDL needed
Intermittent Streams
Perennial Streams
Upper Willamette Valley Groundwater Management Area
MPO Boundary
*Note: TMDL (Total Maximum Daily Load) approved - TMDLs needed to attain applicable water quality standards have been approved.
Source: Oregon DEQ 2010
Fiscally Constrained Projects
Illustrative Projects
New Arterial Link or Interchange
Added Freeway Lanes / Major Interchange Improvements
Arterial Capacity Improvements
Study
New Arterial Link or Interchange
Added Freeway Lanes / Major interchange
Arterial Capacity Improvements
New Collector
Urban Standards
Study
Bus Rapid Transit
Bike/Ped
McKenzie River
Willamette River
Amazon Creek
Mill Race
Dodson Slough
Daniels Creek
Spores Creek
Mohawk River
Clear Lake Creek
Amazon Diversion Channel
Willow Creek
Middle Fork Willamette River
Oxley Slough
Russel Creek
South Fork
McKenzie Ditch
Walterville Canal
I-5
I-105
99
126
0 0.5 1 2 Miles
N
Note: this map is illustrative and should be used for reference only. The map depicts approximate locations of existing and proposed transportation facilities as of the date of this plan. Alignments are subject to change when project-level planning is undertaken. August 2011.
CENTRAL LANE MPO
Map produced by LCOG



T:\MPO\RTP\FY11 2035 Update\Maps\Updated\F14_ToxicReleaseInventoryPermittedSites.mxd


Environmental Cleanup Sites
This map shows sites where a release of hazardous substances has been documented and a "No Futher State Action" has NOT yet been issued. The Hazardous Substance subset includes confirmed releases that pose threats to human health or the environment based on a preliminary assessment (PA) or preliminary assessment equivalent (PAE). The Brownfield Sites subset have received financial or technical assistance from DEQ. The mapped labels XXXX are the DEQ ECSI site id.
Note that while the cleanup sites are located as points on this map, there are sites for which contamination is spread over a larger area. In particular, site 312 , the UP Railroad Yards in Eugene, is the site of a groundwater contamination plume.
Underground Storage Tank cleanup sites are those with reported releases of petroleum products from regulated and unregulated underground storage tanks, and home heating oil tanks.
No pending or on-going SUPERFUND sites exist. There are several sites with a RCRA listing that specifies on-going corrective action.
Sources:
DEQ, ECSI data base, August, 2011;
DEQ, LUST cleanup site list, August, 2011;
USEPA, Geospatial Data Download Service, August, 2011
Confirmed Release
Listed
Brownfield Site
Hazardous Substance Release
Leaking Underground Storage Tank
Central Lane MPO
Urban growth boundaries
EPA Toxic Release Sites
EPA Toxic Release Sites
EPA Brownfield Site
Fiscally Constrained Projects
Illustrative Projects
New Arterial Link or Interchange
Added Freeway Lanes / Major Interchange Improvements
Arterial Capacity Improvements
Study
New Arterial Link or Interchange
Added Freeway Lanes / Major interchange
Arterial Capacity Improvements
New Collector
Urban Standards
Study
Bus Rapid Transit
Bike/Ped
0 0.5 1 2 Miles
N
Note: this map is illustrative and should be used for reference only. The map depicts approximate locations of existing and proposed transportation facilities as of the date of this plan. Alignments are subject to change when project-level planning is undertaken. August 2011.
CENTRAL LANE MPO
Map produced by LCOG


Air Quality Boundaries
CO Air Quality Management Area
Area with CO Budget
Urban growth boundaries
Central Lane MPO
Sensitive Populations
Elementary School
Middle School
High School
Hospital
AMTRAK Station
Fiscally Constrained Projects
Illustrative Projects
New Arterial Link or Interchange
Added Freeway Lanes / Major Interchange Improvements
Arterial Capacity Improvements
Study
New Arterial Link or Interchange
Added Freeway Lanes / Major interchange
Arterial Capacity Improvements
New Collector
Urban Standards
Study
Bus Rapid Transit
Bike/Ped
CO: This area is a maintenance area for CO and is unclassified. (58 FR 64161, 12/06/93)
PM10: The area within the Eugene-Springfield urban growth boundary is designated as non-attainment for PM-10 and is classified as moderate. Transportation sources are NOT significant sources of PM-10, and transportation conformity is NOT required. No motor vehicle emissions budget is established. (59 FR 43483, 08/24/1994). Note, however, project level hot spot analyses must be done for any project within the Eugene/Springfield UGB.
0 0.5 1 2 Miles
N
Note: this map is illustrative and should be used for reference only. The map depicts approximate locations of existing and proposed transportation facilities as of the date of this plan. Alignments are subject to change when project-level planning is undertaken. August 2011.
CENTRAL LANE MPO
Map produced by LCOG



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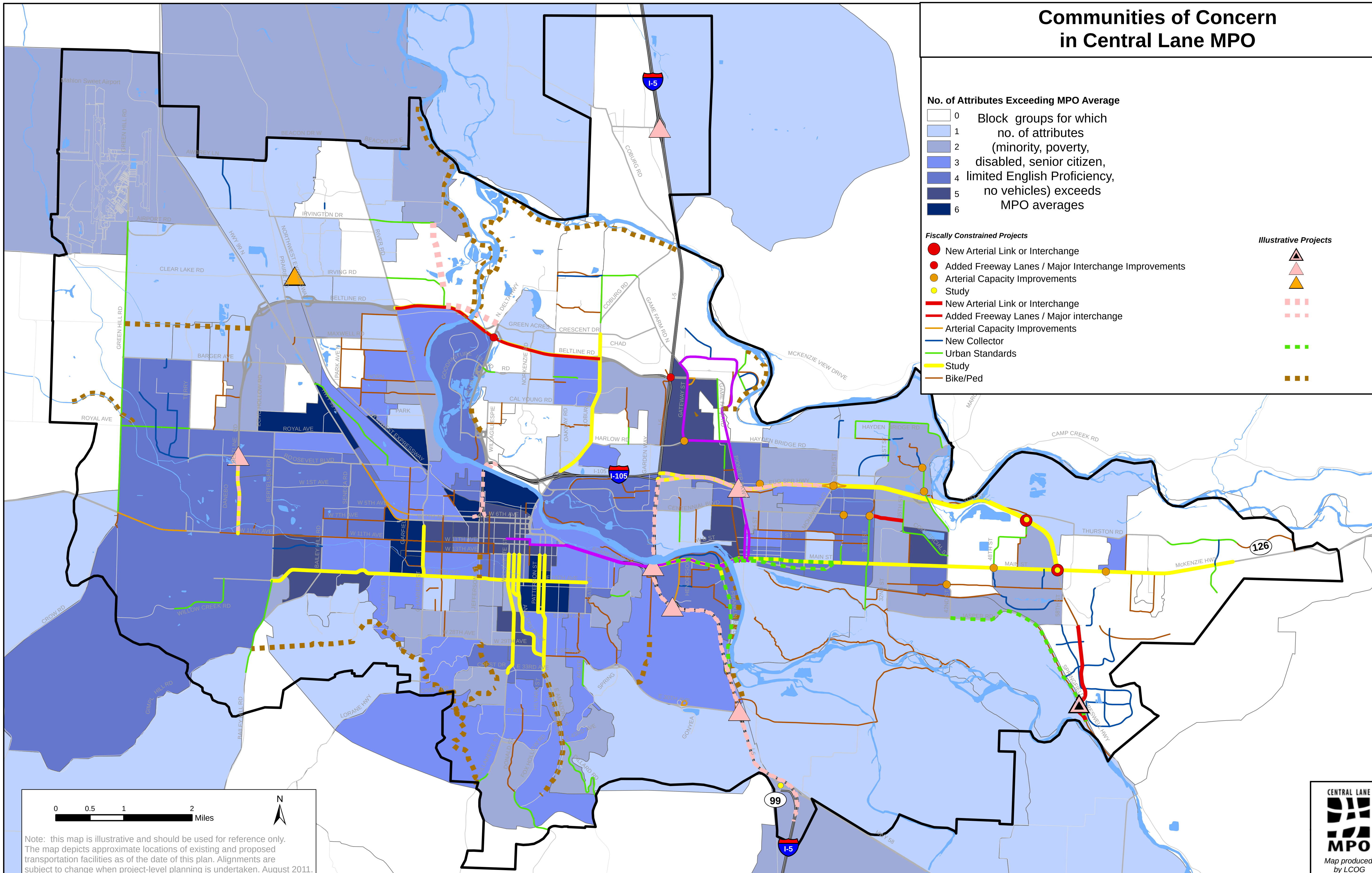

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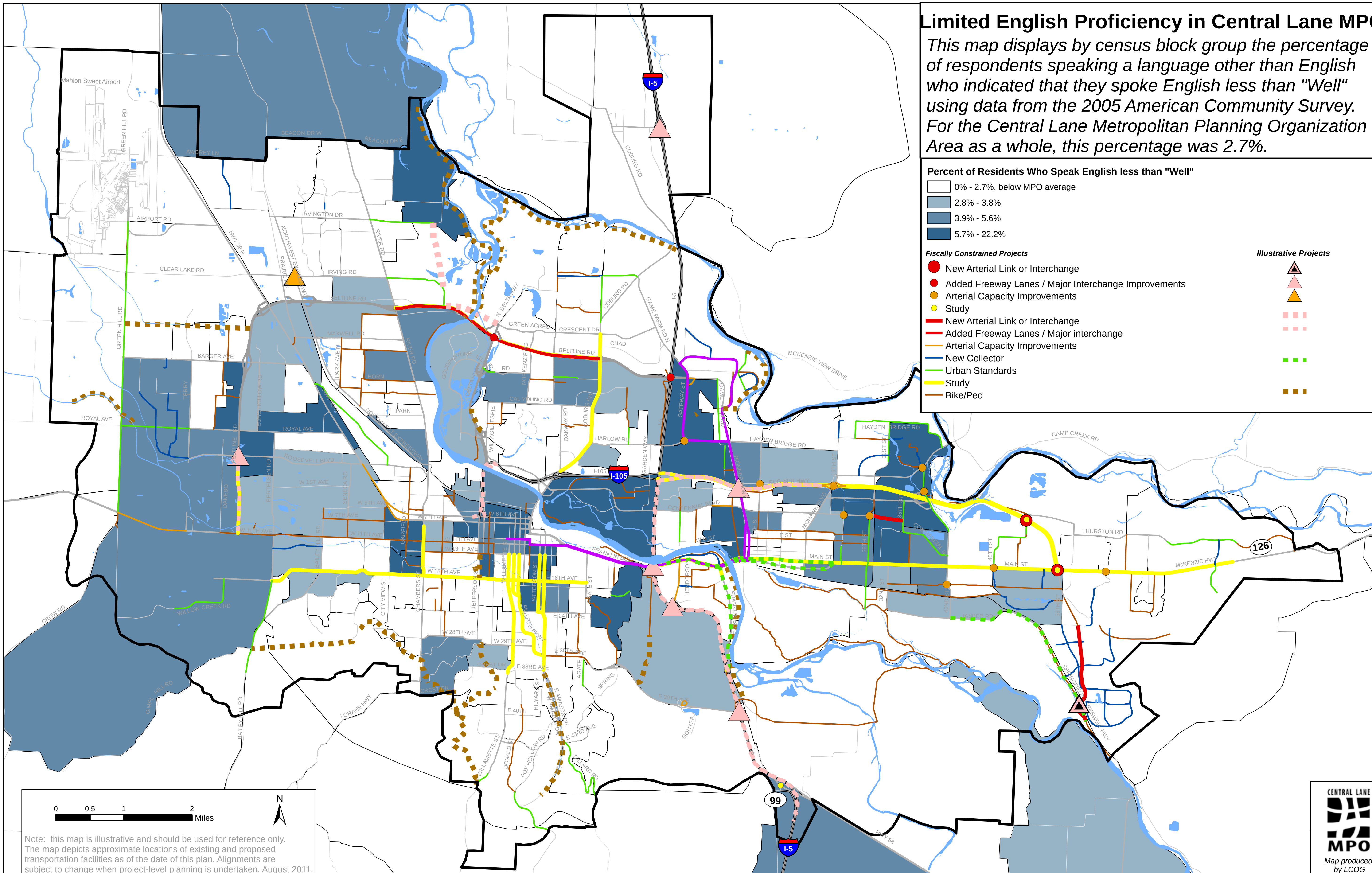

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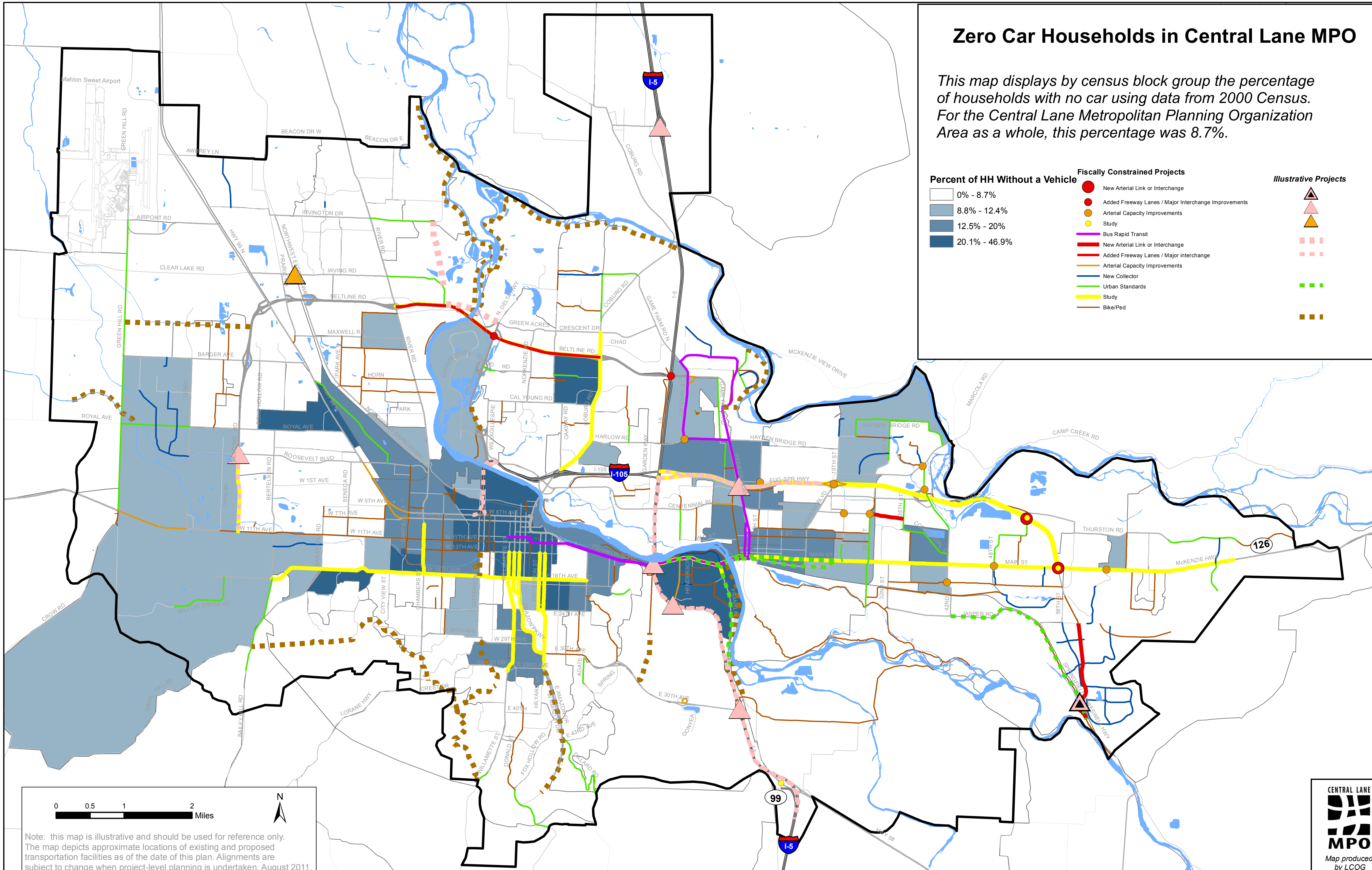
Zero Car Households in Central Lane MPO

This map displays by census block group the percentage of households with no car using data from 2000 Census. For the Central Lane Metropolitan Planning Organization Area as a whole, this percentage was 8.7%.



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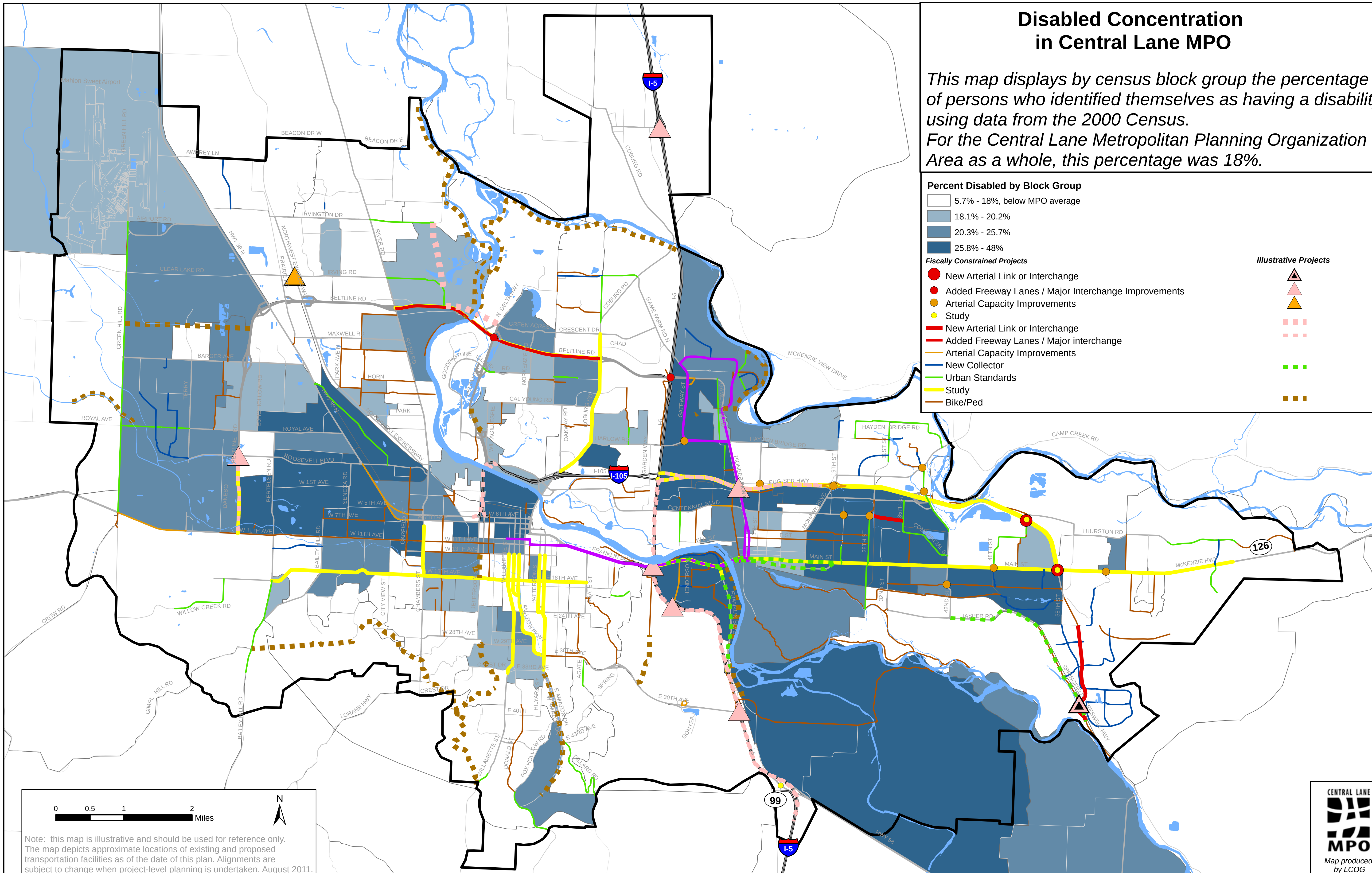

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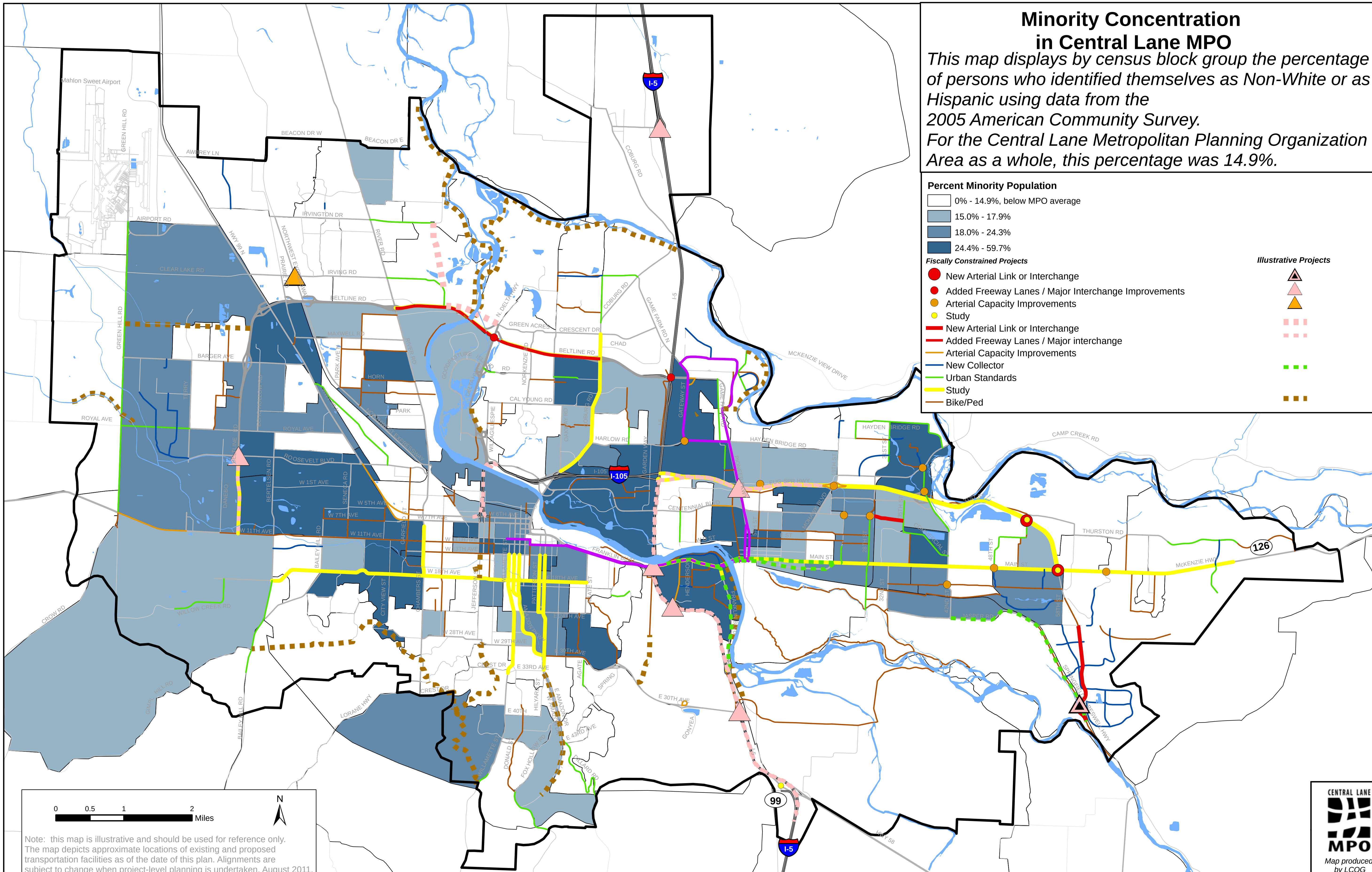

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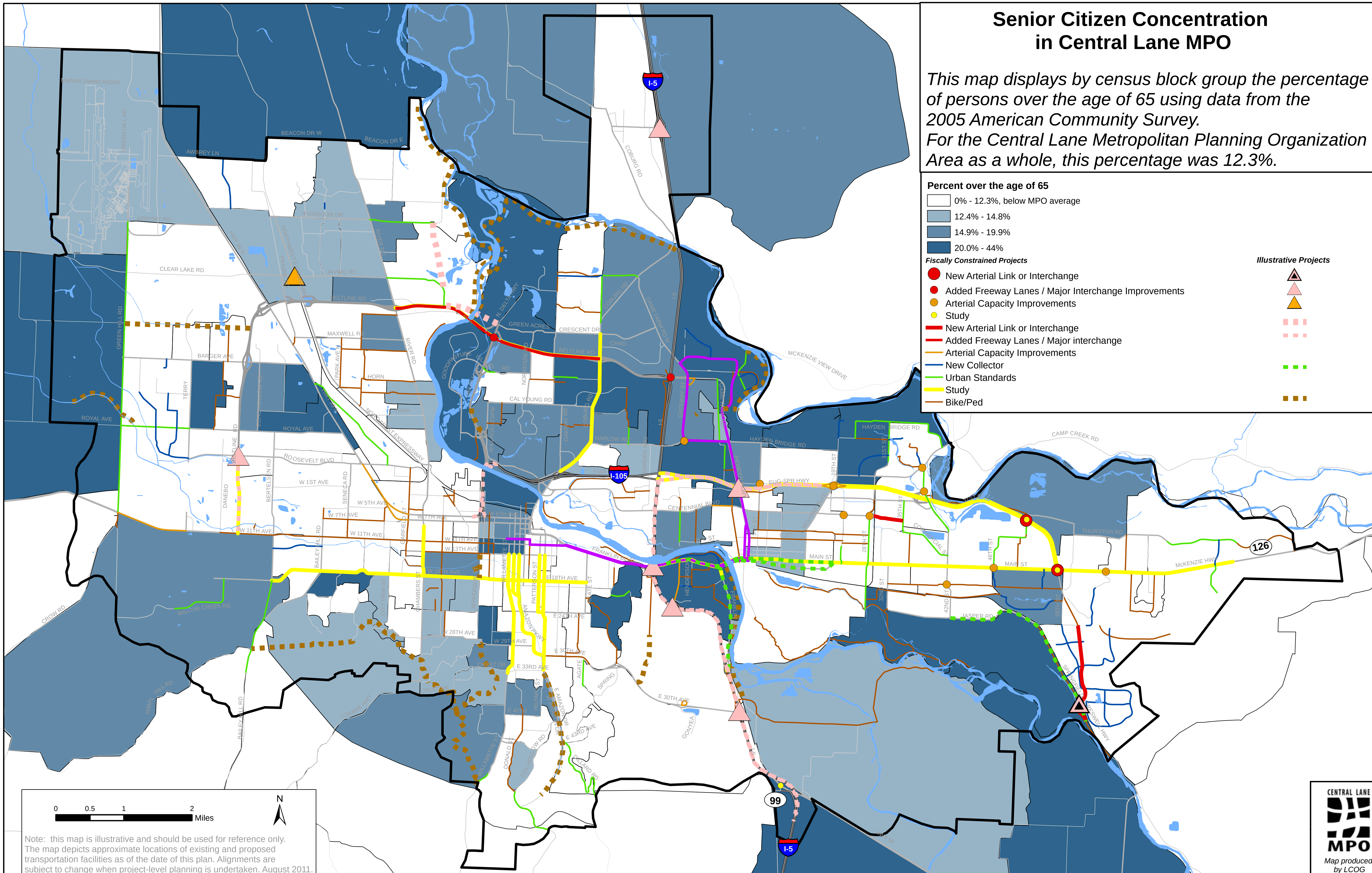
Senior Citizen Concentration in Central Lane MPO

This map displays by census block group the percentage of persons over the age of 65 using data from the 2005 American Community Survey.
For the Central Lane Metropolitan Planning Organization Area as a whole, this percentage was 12.3%.



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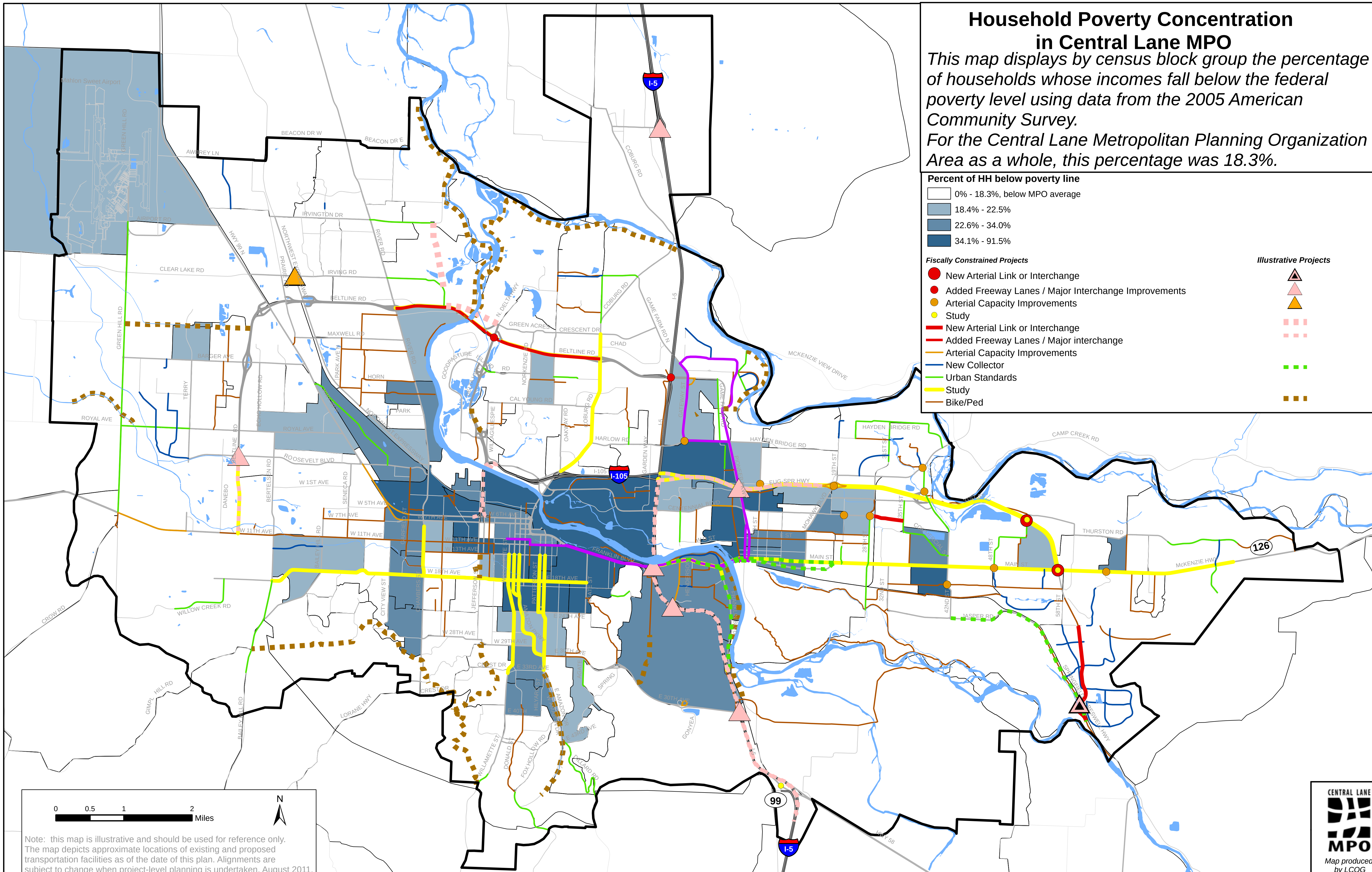
Household Poverty Concentration in Central Lane MPO

This map displays by census block group the percentage of households whose incomes fall below the federal poverty level using data from the 2005 American Community Survey.
For the Central Lane Metropolitan Planning Organization Area as a whole, this percentage was 18.3%.



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CENTRAL LANE

REGIONAL TRANSPORTATION PLAN

MPO

Moving Transportation into the Future

APPENDIX G

Congestion Management Process

CMP

Congestion Management Process

Prepared by:

Central Lane Metropolitan Planning Organization

May 2011

INTRODUCTION

As Eugene and Springfield and surrounding communities continue to grow, traffic congestion will need to be addressed and appropriately managed. Over the years the area has successfully employed a number of strategies to reduce overall demand on our highways and to efficiently manage our existing transportation system, reducing our need to rely solely upon expensive capacity building projects to alleviate traffic. The Central Lane MPO is committed to documenting these ongoing strategies and to implementing a congestion management process (CMP) for ensuring that the area continues to get the maximum benefit from both our existing and new transportation system.

This document describes the many elements of the Central Lane CMP – a comprehensive set of policies, performance measures, ongoing activities and recommended future actions designed to manage traffic congestion and to maintain high levels of transportation service in the Central Lane County metropolitan area.

Background

One of the eight planning factors that every Metropolitan Planning Organization must consider is the promotion of efficient system management and operations. Strategies to improve the performance of existing transportation facilities to relieve congestion and to maximize the safety and mobility must be included in the area's Regional Transportation Plan (RTP). To this end, a process has to be developed that provides a framework to recognize, track, address and monitor congested roadways and corridors. This is the Congestion Management Process.

Purpose

The purpose of the CMP is to identify and target congested areas and to bring an objective basis to the process of developing those strategies that will allow the region to achieve the greatest benefit for its investment. A CMP must:

- Measure multi-modal transportation system performance
- Identify the causes of congestion
- Assess alternative actions
- Implement cost-effective actions; and
- Evaluate the effectiveness of implemented actions.

To accomplish these objectives, the CMP features a significant component of data collection and monitoring activities and sets forward performance measures or criteria for identifying when action is needed and for identified management strategies that will be most effective.

Definition of Congestion

For the purposes of this document, congestion is defined as *the level at which transportation system performance is no longer acceptable due to traffic interference*. Determining what is ***acceptable*** system performance considers a number of factors, including the type of transportation facility, location within the region and time of day. Transportation and development goals for a region and public perception of traffic interference are also important considerations.

Regulations
The United States Safe, Accountable, Flexible, Efficient Transportation Equity Act, a Legacy for Users (SAFETEA-LU) requires the development, establishment and implementation of a Congestion Management Process which is fully integrated into the regional transportation planning process. The Federal Highway Administration defines the congestion management process as a systematic approach that provides for effective management and operation, based on a cooperatively developed and implemented metropolitan-wide strategy of new and existing transportation facilities and through the use of operational management strategies.

In 2008, the Federal Highways Administration conducted a certification review of the Central Lane MPO. It determined that the MPO had accomplished significant work toward developing a Congestion Management Process (CMP) for the Central Lane region. The MPO acknowledged that work was needed to more fully develop a CMP that is integrated into transportation decision making. This document, and subsequent regular updates of it, are a result of this determination, and demonstrate the MPO's commitment to enhance and refine the MPO's CMP, and continue to monitor its effectiveness in the MPO's overall work.

Document Overview
The CMP provides the MPO with the opportunity to compile a variety of ongoing strategies and activities already under way, and to present an expanded range of recommended actions within a formally recognized Congestion Management Process. The first section of the document describes progress to-date within four key MPO program areas, including long range planning, transportation system modeling and data maintenance, transportation options (also referred to as transportation demand management), and programming and implementation. Significant efforts relating to the Congestion Management Process include the Congestion Management System presented in the Regional Transportation Plan adopted in November 2007, the adopted Intelligent Transportation System Plan, and the Transportation Demand Management programs operated primarily through point2point Solutions.

In developing Recommended Actions, the CMP also looks at enhancing work elements of the four program areas to meet the following objectives:

- Improve regional and local collection and management of congestion-relevant data, including travel time, accident occurrence and duration, and traffic counts;
- Review and update performance measures to evaluate acceptable and unacceptable levels of congestion;
- Maintain an updated identification of roadways and corridors within the MPO that are negatively impacted by congestion;
- Review and update policies, criteria and procedures to address and manage congestion; and
- Evaluate the effectiveness of congestion management actions as well as specific transportation system improvement projects.

CMP Development Process
The CMP is a combined effort of the partner agencies of the Central Lane MPO, notably Lane Council of Governments, the Cities of Eugene, Springfield, and Coburg, Lane County, Lane

Transit District, and point2point Solutions. Staff has developed this document for review and acknowledgement by the MPO's Transportation Planning Committee and Citizens Advisory Committee. Based on their feedback, the document will be presented to the Metropolitan Policy Committee (the MPO Policy Board) for their review and consideration as a component of the next Regional Transportation Plan in 2011.

Part I CONGESTION MANAGEMENT PROCESS – CURRENT ELEMENTS

The CMP provides the MPO with the opportunity to compile a variety of ongoing strategies and activities already under way within the framework of a Congestion Management Process. Significant efforts relating to congestion management include the Congestion Management System report originally prepared and adopted in September, 2004 and updated in the Regional Transportation Plan (RTP) adopted in November 2007, the adopted Intelligent Transportation System Plan, and the Transportation Demand Management programs operated primarily through point2point Solutions.

In addition, the following are all major efforts under the umbrella of the CMP:

- Alternative Mobility Standards Report (2005) – Among other aspects of this report, the analysis of existing and future highway system performance at the corridor level, and of current and future congestion and mobility, are significant elements of the MPO's CMP.
- Developed *2005-2010 Strategic Plan* for the MPO's TDM program (then *Commuter Solutions*, now *point2point Solutions*).
- Identification of Key Transportation Demand Management Corridors – combining the results of the Congestion Managements System's identification of congested corridors with other analysis such as the location and concentration of employment centers, the regional TDM program identified and prioritized "Key TDM Corridors" where a focus on implementing demand management strategies would be most likely to produce the greatest positive outcomes.
- Obtained traffic crash data for Lane County.
- Successfully launched the travel data probe project with ODOT.
- Implemented process at the Oregon Modeling Steering Committee (OMSC) to determine a common database for storing traffic count data for region/state.
- Began development of a comprehensive traffic count plan effort.
- Organized and implemented ongoing ITS committee. Committee meets monthly and discusses ITS infrastructure and related issues as they can be applied to congestion, safety and other problems in the MPO.
- Started development of the MPO's Regional Transportation Options Plan (RTOP), a long-range plan that will result in updated TDM policies and strategies for the area, providing an effective approach to meeting mobility needs, prioritizing and evaluating projects, and meeting social and environmental targets in the region.

This first section of this document describes progress to-date within four of the key MPO program areas, including:

- Regional Transportation Plan and Long Range Planning
- Transportation System Modeling and Data Maintenance
- Transportation Options (also referred to as transportation demand management)
- Programming and Implementation.

Regional Transportation Plan (RTP) and Long Range Planning

The RTP guides planning and development of the transportation system within the Central Lane MPO. The federally-required RTP includes provisions for meeting the transportation demand of residents over at least a 20-year planning horizon while addressing transportation issues and making changes that can contribute to improvements in the region's quality of life and economic vitality. It includes consideration of all transportation modes, including roadways, transit, bikeways and pedestrian circulation, as well as freight movement and regional aspects of air, rail and inter-city bus service. The RTP must be updated at least every four years, and must include participation by the citizens of the region. The current Central Lane RTP was adopted in November 2007. It includes a number of Congestion Management Process components, including the following:

Congestion Management System
A Congestion Management System (CMS) Baseline Report was originally developed in September 2004 and represents the region's first product within the overall CMP. The purpose of a Congestion Management Process is to provide a framework for addressing congestion on the regional transportation system. While in some cases congestion may be eliminated or significantly reduced, a more realistic goal is to improve the way we *manage* congestion, now and in the future. A CMP is meant to aid in better understanding where the worst congestion is located and what the best mix of strategies is likely to be for each situation.

The 2004 Baseline CMS report was structured around three main concepts:

- Build on existing plans and capabilities. The CMS makes use of the adopted Regional Transportation Plan, adopted Goals, Objectives and Policies, adopted performance measures, and the regional traffic forecasting model to define the level of congestion on the system and evaluate alternative congestion management strategies.
- Focus on major corridors and a range of strategies. The CMS identifies major congested corridors and a set of strategies for each congested corridor. The strategies include both short range and longer term actions, and a wide array of options including operations, TDM, access management, land use measures, and adding new capacity.
- Improve the techniques for obtaining and analyzing information. The CMS incorporates a process for monitoring and evaluating transportation system performance on a more systematic basis. Future efforts will focus on improved data collection and analysis, better modeling tools, and ongoing coordination among individual agencies that operate different pieces of the overall system.

The CMS collects and organizes various pieces of the RTP that are related to congestion—in effect, providing a view of the RTP through a "congestion filter" to better define the different components and their connections with one another.

Using the most up-to-date inputs for land use allocation and network assumptions, the model was used to simulate traffic flow on the major roadway network and compare each roadway section with the level of service or volume-to-capacity measures discussed earlier. Based on a review of this information, nine roadways were identified as congestion management corridors for the initial CMS:

Table 1. CONGESTION MANAGEMENT CORRIDORS

CORRIDOR	SEGMENT
Interstate 5	OR 58 interchange at Goshen to north boundary of the MPO at Coburg
OR 126/I-105	Garfield Street in Eugene to Main Street/McKenzie Highway in Springfield
	• 6 -7th couplet from Garfield to Jefferson
	• Washington-Jefferson Bridge (I-105) from 7th to Delta Highway
	• I-105 from Delta Highway to Interstate 5
Eugene-Springfield Highway	I-5 to Main Street/McKenzie Highway
Beltline Highway	Highway 99 to Interstate 5
Main Street/McKenzie Highway	Mill Street in downtown Springfield to 70th Street
Broadway/Franklin Boulevard	Mill Street in Eugene to Springfield Bridge
	• Broadway from Mill Street to Alder Street
	• Franklin Boulevard from Alder Street to I-5
	• Franklin Boulevard from I-5 to Springfield Bridge
West 11 Avenue	Terry Street to Chambers Street
Ferry Street Bridge/Coburg Road	Broadway to Crescent Avenue
Southeast Eugene corridor	Hilyard, Patterson, Amazon Parkway, and Willamette from 13 to 33rd Avenue
18th Avenue	Bertelsen Road to Agate Street

The 2004 CMS report discussed a set of strategies for addressing congestion within each corridor, including land use strategies; transportation demand management (TDM); intelligent transportation system (ITS) techniques and operational tools; roadway projects to add capacity; transit strategies; and bicycle/pedestrian strategies. For each corridor, the list includes projects and actions from the adopted *TransPlan* as well as additional work being done in ongoing efforts, such as the ITS plan for the area.

In addition to specific corridors, the CMS also served the purpose of monitoring congestion on the overall network of major roadways.

For the 2031 RTP update adopted in November 2007, the regional travel model was utilized to produce updated values for four Key Performance Measures on all of the Congestion Management Corridors: congested miles of travel, roadway congestion index, network vehicle hours of delay, and percent transit mode share on congested corridors. The MPO will continue to use the Congestion Management System to update and analyze information related to the Congestion Management Corridors during each update of the MPO's RTP.

In addition to identification of the Congestion Management Corridors, the CMS report, and its subsequent updates, contains an assessment of each of the Corridors, including:

- The location and severity of congestion in the corridor
- The type(s) of congestion on each corridor

- The main factors contributing to the congestion
- A summary of proposed projects or major studies for the corridor
- A summary of other adopted strategies directed at addressing congestion in the corridor
- An assessment of the potential for additional strategies to address congestion in the corridor, including land use measures, transit, bike/pedestrian improvements/measures, transportation demand management, ITS or operational measures, or other tools.

Intelligent Transportation System Planning

In 2003 the *Regional Intelligent Transportation System (ITS) Operations & Implementation Plan for the Eugene-Springfield Metropolitan Area* was presented to MPC. The plan represents a collective effort by the Oregon Department of Transportation (ODOT), Lane County, the City of Eugene, the City of Springfield, Lane Council of Governments (LCOG), and the Lane Transit District (LTD). The plan outlines the deployment of ITS projects, which include advanced technologies and management techniques, to improve the safety and efficiency of the transportation system over the long term.

Intelligent Transportation Systems (ITS) involve the application of advanced technologies and proven management techniques to solve transportation problems, enhance safety, provide services to travelers, and assist transportation system operators in implementing suitable traffic management strategies. ITS focuses on increasing the efficiency of existing transportation infrastructure, which enhances the overall system performance and reduces the need to add capacity (e.g., travel lanes). Efficiency is achieved by providing services and information to travelers so they can (and will) make better travel decisions and to transportation system operators so they can better manage the system. ITS applications provide a viable opportunity for improving the safety and efficiency of the surface transportation system in the Eugene-Springfield metropolitan area. These applications help improve transportation system operations by performing a function more quickly or reliably or by providing a service that was not previously available. In effect, ITS improves the mobility of people and goods on the existing roadways and also provides the potential for substantial savings on future construction, particularly of highways. It is often easy to overlook the importance of investing in operations, but it is necessary to ensure that the traveling public makes safe and efficient use of existing roadways.

The ITS Operations and Implementation Plan identified several potential ITS projects to be implemented as part of existing projects or as funding becomes available. In addition, the plan identifies the following steps as necessary for successful ITS plan implementation:

- Continue the ITS Steering Committee. This action was identified as the most important item for the successful implementation of the ITS plan. This group includes the key stakeholders from the planning process and will be organized as a new subcommittee to the Transportation Planning Committee (TPC). This group has initiated the ITS Plan implementation, including planning projects that fit agency needs, and have successfully pursued funding opportunities for ITS projects. The group also is responsible for monitoring and report progress and effectiveness.
- Deploy "Early Winner" Projects. Another key to the success of ITS in Eugene-Springfield will depend on the deployment of successful projects within a short time

frame. A potential early winner project includes the deployment of field devices such as closed circuit television cameras, count stations, variable message signs, and ramp meters on Beltline Highway.

- Incorporate the ITS Plan in the RTP Update Process. The ITS Plan has been incorporated within the Regional Transportation Plan.

Performance and Monitoring

An important component of the Regional Transportation Plan relates to plan performance and implementation monitoring. Findings that result from analysis of these performance measures will allow for informed decisions to be made as to how best implement the plan. For example, priorities or emphasis for implementation actions may be adjusted, policies may be amended and additional policies or implementation actions may be recommended due to performance measure outcomes. Findings may also influence budgeting and the type and phasing of capital projects included in the region's TIP.

The RTP includes the following performance measures directly relating to traffic congestion:

- Congested miles of travel;
- Roadway congestion index;
- Daily vehicle hours of delay; and
- Percent transit mode share on congested corridors.

During each update of the RTP, in addition to assessing the RTP's on the full set of performance measures across the transportation system as a whole, the assessment will include specific analysis of the four congestion performance measures above on each of the Congestion Management Corridors.

Programming and Implementation

STP-U Fund Allocation Process

The Central Lane MPO is required to develop a process for allocating the MPO's Federal Surface Transportation Program Urban (STP-U) funds. STP-U funds are allocated and programmed for eligible projects at the discretion of the MPO, following federal guidelines. The MPO Policy Board has approved a process for the use of a set of screening or eligibility criteria and a set of evaluation criteria and guidelines to be applied to applications for STP-U funding. MPC approved the process and sets target funding levels for 3 categories of need. Transportation Demand Management (TDM) & Transportation Options (TO) programs receive a minimum of ten percent of the annual STP-U funds, to support TDM and TO efforts to address congestion management. Planning program activities receive twenty-five percent of the annual STP-U funds to address regional planning priorities including:

- Priorities established in the UPWP;
- Compliance with SAFETEA-LU including the Congestion Management Process;
- Planning for Public Outreach and Participation, including E-MPO development and coordination;
- State system regional project planning and NEPA activities;
- Coordinated public transit and human services planning;
- RTP implementation; and
- Local transportation planning and coordination as part of regional system.

The remaining 65% of STP-U annual allocations are programmed for Preservation, Project Development and Modernization Activities. Applications for funding of these activities are assessed and prioritized based on a set of eligibility factors and prioritization criteria approved by the MPO Policy Board. The four primary *Regional Priority Factors* include whether the proposed project:

- Preserves or Enhances Transit Services
- Reduces Greenhouse Gas Emissions by Reducing Congestion, Increasing Operational Efficiency, Supporting Alternative Modes, and Managing Transportation Demand
- Preserves Existing Transportation Assets
- Improves Safety

In addition, the STP-U application and prioritization process requires each jurisdiction to specifically describe how proposed projects address the following:

- Congestion Reduction
- Connectivity
- Benefits to Multiple Modes
- Benefits to the Freight System and Freight Movement
- Public Health

Metropolitan Transportation Improvement Program (MTIP)

The MTIP is a set of transportation improvements and projects which are scheduled to occur within the Central Lane MPO area over a four-year time period. The MTIP primarily lists projects for which application of certain federal funds will be made or which will require USDOT approval to proceed. Priorities for the use of STP-U funds administered by the MPO are established during the development of the MTIP. All MTIP projects are determined by the transportation needs identified in the Regional Transportation Plan (RTP). The MTIP project list itemizes for each project the anticipated year in which each phase will be undertaken, the funds source and amount, and the responsible agency.

Transportation System Modeling and Data Maintenance

The ability to acquire, maintain and analyze traffic data is critical to implementing a successful Congestion Management Process. Central Lane MPO staff are constantly obtaining and updating performance information and other characteristics of the regional transportation system. These include:

- Roadway network data
- Traffic counts
- Travel speed data
- VMT estimates
- Traffic safety data
- Transit passenger counts
- Route descriptions
- Vehicle operations data
- Data pertaining to the movement of freight within and through the region
- Bicycle and pedestrian network data and counts

Modeling and data activities specifically related to the Congestion Management Process include the following:

- Implementation of a 1500-household activity and travel survey
- Continual development and enhancement of the regional traffic count database
- Obtaining vehicle classification counts and travel time studies
- Implementation of a new commercial vehicle model for truck model calibration
- Travel time studies for forecasting network delay and reliability issues for the Congestion Management Process

LCOG continues to work with point2point Solutions and other partners on implementing and expanding the TMA's Congestion Management Process. The process draws together the relevant regional Goals, Objectives and Policies, and information on congested corridors, measures of congestion, various management alternatives, and ongoing data needs. The MPO is working to expand data, surveillance, and modeling element of the work program, specifically expanding data gathering to meet the needs identified in the CMP, and will continue to explore modeling software and methods to better represent queues, signal delays, and the effects of ITS projects in congested corridors. Results from the 2006 TGM-funded Alternative Mobility Standards continue to provide insight into feasible CMP analyses and data needs.

Working with Lane County, LCOG updated traffic counts at all external stations entering the TMA model area in FY07. We have continued to obtain traffic count data from our regional partners, and are continuing work to ultimately incorporate counts into a regional database. In FY08-09, ODOT conducted counts on all ramps of all limited-access highways in the TMA. Additional counts will be undertaken by the MPO at roadway locations identified through the regional model as being critical to the movement of people and goods.

Expansion of the bicycle and pedestrian networks within the MPO area and changes in the format of the GIS databases have resulted in an incomplete and geographically poor representation of these networks. These networks are important in supporting mode choice modeling, assessing alternate mode accessibility and mobility, identifying land use and infrastructure issues that may affect use, and in particular, for assisting in the Safe Routes to Schools program. The MPO has been working to review and update the current coverages so that an accurate network description is obtained. The MPO is also developing a process whereby future additions can be incorporated more seamlessly.

Transportation Options

Transportation Options (TO), otherwise known as Transportation Demand Management (TDM), is a set of strategies, plans, and programs that influence travel behavior for the purpose of reducing or redistributing the demand on roads. It also looks at strategies that improve the efficiency of the existing transportation system. The primary purpose of TO or TDM is to reduce the number of single-occupant vehicles using road facilities while providing a wide variety of mobility options. For example, an important way to reduce demand is to promote and implement projects that support bike, pedestrian, transit infrastructure and programs. Central Lane MPO contributes to and coordinates regional TO projects and programs by providing information, resources, and tools to help metro-area residents, employers, and employees make good choices about how to get around. The regional TO program, point2point Solutions, is a program of the Central Lane MPO. This program offers a coordinated menu of tools, encouragement, information, and activities to promote walking, biking, transit use, carpooling, and carsharing. point2point Solutions targets several populations including employers, commuters, schools, and bike/walk advocates through the following:

- Employer/Employee Transportation Benefits;
- Rideshare;
- Valley Vanpool; and
- Smart Ways to School.

Congestion Mitigation Program

Another component of the MPO's congestion management program is the website KeepUsMoving.info. The site includes an interactive map that highlights large transportation projects and events that are being constructed within a year and that have a large potential impact on the Eugene-Springfield Metro Area. KeepUsMoving.info provides user-friendly information about current road construction projects with anticipated congestion and provides direct access to transportation options resources.

Transportation Options Advisory Committee (TOAC)

Providing planning and leadership for the areas transportation options activities is the primary charge of the Transportation Options Advisory Committee. This Committee is comprised of individuals from the various MPO partner agencies and meets on a monthly basis.

Part 2 RECOMMENDED ADDITIONAL ELEMENTS

The following are currently being pursued, subject to funding, data availability, and staff capacity, to further integrate the ongoing congestion management process and activities into the planning operations of the Central Lane MPO.

Action 1 *Incorporate Congestion Management Process into the Next Update of the Regional Transportation Plan (RTP)*. As mentioned in Part 1 of this document, staff has developed the CMP for review and acknowledgement by the MPO's Transportation Planning Committee (TPC) and Citizens Advisory Committee (CAC). Prior iterations of the CMP and CMS Reports were provided as information items to the MPO Policy Board and utilized by staff throughout the MPO's planning processes. Based on the review and feedback from the TPC and CAC, this document will be revised and presented to the Metropolitan Policy Committee (the MPO Policy Board) for their review and consideration as a formal component of the next Regional Transportation Plan in 2011.

Action 2 *Conduct an Update of the ITS Plan*. The MPO is working with its ITS Committee to identify funding and other resources to conduct an update of the MPO's ITS Plan. A major focus of this update will be to improve the data collection, storage, and analysis to support the MPO's Congestion Management Process.

Action 3 *Review and Update CMP Performance Measures*.

Action 4 *Incorporate CMP Criteria into STP-U Process*. With the completion (April, 2010) of the MPO's FFY10-13 STP-U funding cycle, the MPO has overhauled the STP-U funding criteria in part to reflect the goals of the CMP. This is described in more detail in Part 1 of this document under *STP-U Fund Allocation Process*.

Action 5 *Incorporate CMP Criteria into MTIP project Assessment*. The MPO is working toward a more comprehensive analysis of the implementation of each MTIP. This will use not only the CMP Performance Measures, but also the full set of the RTP Performance Measures, as well as other criteria. The MPO Policy Board has directed the MPO to provide the Policy Board with metrics illustrating the impact the MPO's projects and programs are having toward achieving not only the performance measure outcomes, but also in achieving the *Regional Priority* factors used by the MPO to determine project funding priorities.

Action 6 *Coordinate Regional Traffic Counts*. Continue improving the regional traffic count program.

Action 7 *Update Transportation Options Strategic Plan*. This action is just getting under way with the start of the project to develop a *Regional Transportation Options Plan* (RTOP). This is discussed further in *Part I: Progress To-Date* and the RTOP work program is included as an Appendix to this document.

Action 8 *Develop Long-Range Transit Plan*. While a project of the Lane Transit District, the development of a *Long-Range Transit Plan* will provide a crucial element of the overall CMP planning framework.

Action 9 *Complete Household Activity and Travel Survey*. While as of February 2010 the survey itself is complete, work on the data resulting from the survey has just begun. As the first update of the survey in the MPO area since 1994-95, this data will provide crucial information necessary for the accurate modeling of the congested corridors and analysis of the performance measures.

APPENDICES

Congestion Management System Report (2004)
Updated Congestion Management System Analysis (2007)
Alternative Mobility Standards Report
Commuter Solutions Strategic Plan 2005-2010
ITS Strategic Plan Executive Summary
Regional Transportation Options Plan (RTOP) Work Program