Oregon
Department
Of Transportation

Transportation System Planning Guidelines 2008

Guidance for the preparation and update of Transportation System Plans required under the Transportation Planning Rule OAR 660-012-000 through 660-012-0070

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The Oregon Department of Transportation is pleased to introduce ***Transportation System Planning Guidelines 2008.*** This publication updates previous transportation system plan guidance provided by the Department in 2001.

The 2008 TSP Guidelines include four chapters:

- A System Planning Overview (Chapter 1)
- Guidance for the Preparation of Transportation System Plan (TSP) Updates (Chapter 2)
- Step-by-Step Guidance for (first-time) Plan Preparation (Chapter 3)
- Extensive appendices covering a wide range of policy guidance on transportation and land use issues (Chapter 4)

These new TSP Guidelines have an increased emphasis on TSP Updates, highlighted by the addition of a new chapter devoted specifically to updating transportation system plans. The step-by-step guidance for plan preparation has been refocused to place greater emphasis on the linkage between local needs and the availability of transportation funding. The appendices have been broadened to provide guidance covering Mobility Standards, Financing for TSP Projects and the Oregon Transportation Plan.

The addition of new electronic links throughout the Guidelines makes it easier for users to access additional resource information. To ensure continued timeliness, updated information will be made available on the internet.

We hope you will find the *TSP Guidelines 2008* helpful as you prepare or update local transportation system plans. Questions and comments are encouraged and should be directed to:

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Attention: Bob Sherman, Senior Transportation Planner

Thank you for your interest.

Jerri Bohard, Administrator
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Introduction

Transportation System Planning Guidelines 2008 (*TSP Guidelines)* is intended to assist local jurisdictions in the preparation and updating of transportation system plans. The guidelines will help jurisdictions develop plans that meet local needs and comply with state rules, requirements and regulations, including applicable elements of the Transportation Planning Rule (TPR) and the 2006 Oregon Transportation Plan (OTP).[1] Originally published in 1995 and updated in 2001, the revised *TSP Guidelines* provide up-to-date references and includes new information that focuses specifically on the needs of jurisdictions updating an existing TSP.

The TPR, OAR 660 Division 12 requires jurisdictions throughout Oregon to prepare and adopt regional or local transportation plans that serve as the transportation element for their comprehensive plans (660 012 0015(2) (4)). Cities with a population of less than 10,000 and counties with a population of less than 25,000 may qualify for a whole or partial exemption from the requirements of this Division (660 012 0015(6)) from DLCD.

Plan updates should respond to transportation, land use, environmental, population growth, economic and social changes that have occurred in the community since the TSP was last prepared. Updates should also attempt to anticipate emerging issues and upcoming policy initiatives. The *TSP Guidelines* highlights important issues jurisdictions should address as they scope a TSP update and provides information on recent regulatory and policy changes that may affect local transportation planning.

The guidelines in this document are tailored in particular to help smaller, non Metropolitan Planning Organization (MPO) jurisdictions prepare TSPs. At the same time, cities and counties located within MPOs should find the information in this document useful. Jurisdictions vary in size, the types of transportation facilities they plan for, location within the State, available funding sources, and community objectives. The *TSP Guidelines* suggests a logical sequence of planning steps but is not intended to foster a one size fits all approach to transportation system planning. The intent of the *TSP Guidelines* is to provide assistance to local governments as they develop or update a TSP so that their plan will meet local needs, help position the community to better compete for scarce transportation funds for projects, and ultimately, comply with the Transportation Planning Rule.

[1] The OTP is the policy element of the State Transportation Plan and as such addresses needs and investments. Modal/Topic elements of the state TSP currently include the Oregon Highway Plan, Oregon Public Transportation Plan, Oregon Rail Plan Oregon Bicycle and Pedestrian Plan, Aviation System Plan, and Transportation Safety Action Plan.

- **The *TSP Guidelines* contain four parts:**
  - Chapter 1 provides an overview of transportation system planning.
  - Chapter 2 provides information pertinent to updating a TSP.
  - Chapter 3 provides step-by-step guidance for plan preparation.
  - An Appendix provides updated policy guidance on several transportation and land use issues critical to the development of a viable plan.

Best Planning Practices

TSP Guidelines 2008 includes "Best Plannning Practices" that provide examples of strategies that communities can use to strengthen their plans. While some of these strategies may exceed the requirements of the TPR, the intent of their use is to prepare better TSPs and help position communities to compete for transportation funds for needed projects.

This document outlines the process needed to develop the technical information necessary to analyze a jurisdiction's current transportation system and anticipate future needs. The outcome of this analysis provides the rationale for a preferred transportation system, consisting of a network of transportation facilities adequate to serve local, regional, and state transportation needs. The transportation system plan should reflect transportation investment guidance found in Step 15 and should include the plan elements: road plan, the public transportation plan, and the bicycle and pedestrian plan required by OAR 660-012-0020.

A TSP identifies the need for and ability to finance transportation facilities, services and major improvements and their function, mode, and general location. In general, it serves as a resource for staff, policy makers, and the public. It is the principal document used for identifying the function, capacity, and location of future facilities, directing resources to transportation projects, and providing the community with the level of investment that will be needed for transportation facilities to support anticipated development impacting the community.

For cities and counties, the TSP serves as the transportation element of the local comprehensive plan. Transportation system goals, policies, and objectives are identified at an early stage of developing or updating a TSP. The goals, policies, and objectives become a jurisdiction's transportation policy upon adoption of the document. Typically, a jurisdiction will amend the comprehensive plan by adopting the TSP by reference. Jurisdictions should make it clear in the adopting ordinance which elements of the TSP are being adopted (e.g., policies, figures/maps, standards, etc.) to distinguish these elements from supporting information that does not have to be adopted by ordinance. To fully implement the recommendations in the TSP, a jurisdiction may need to make changes in the development and/or zoning ordinance and possibly make modifications to engineering standards.

Transportation System Planning Process

Chapter 1 is designed to provide a quick overview of the transportation system planning process. The issues identified in Chapter 1 are discussed in substantially greater detail in Chapters 2 and 3.

When reviewing the steps outlined below, it is important to be mindful that the level of analysis necessary for TSP preparation varies. Factors such as community size, complexity of the transportation issues, and the age of the existing plan help determine the extent of analysis needed for the TSP or TSP update. For TSP updates, communities should focus on changes that have occurred since the plan was last prepared.

System Planning Overview

- What is a Transportation System Plan?
- Who has to do a Transportation System Plan?
- Who has to Update a Transportation System Plan?
- Why are Transportation System Plans Important?
- What do Transportation System Plans Include?
- What Should a Transportation System Plan accomplish?
- What Steps Should be Followed to Develop or Update a Transportation System Plan?

What is a Transportation System Plan?

- Establishes a system of transportation facilities and services to meet state, regional, and local needs.
- Serves as the transportation element of a local comprehensive plan.
- Serves as a long range (typically 20 year) plan for Metropolitan Planning Organizations (MPOs), Counties and Cities.
- Needs to be consistent with the State Transportation System Plan (Oregon Transportation Plan and Modal/Topic Plans).
- Required by the Transportation Planning Rule (TPR) OAR 660-012-0015.

Best Planning Practices: Electing to Develop a TSP

Cities and counties with smaller populations that could apply for exemptions from the requirements of the TPR(see Section 0055(6)) may decide that preparation of a TSP is in the best interest of their community. A rapid population growth rate, location near growing population centers, and changes in employment forecasts are among the factors that a community could consider to determine if a TSP is needed. Preparation of a TSP in these situations may help communities better deal with growth and/or changing demographics, and help position them to compete for project funding.

Who has to do a Transportation System Plan?

- The State of Oregon.
- All Metropolitan Planning Organizations (MPOs).
- All Counties (Counties under 25,000 in population and areas within counties with less than 10,000 in population may qualify for a whole or partial exemption from DLCD).
- All Cities (Cities under 10,000 in population may qualify for a whole

or partial exemption from DLCD).

Note: TSPs for cities and counties located within an MPO area must be consistent with both the statewide Transportation Planning Rule and the MPO's Regional Transportation Plan (RTP), which is adopted to meet Federal requirements.

Who has to Update a Transportation System Plan?

- All MPOs.
- Cities in MPO areas, when the adopted local TSP and comprehensive plan are inconsistent with the applicable provisions of the federally required Regional Transportation Plan (RTP), as adopted or amended by the MPO.
- For cities in MPO areas, local TSP Updates must be adopted within one year from the adoption of the state component of an RTP.
- Jurisdictions that are required and scheduled to undertake a Periodic Review process through DLCD, where elements of the TSP have been identified as areas for review and possible updates (for DLCD Periodic Review policy and schedules, see http://www.leg.state.or.us/ors/197.html).
- Jurisdictions that are undertaking a major plan amendment that would "significantly affect" one or more transportation facilities to the extent that the performance of the currently adopted transportation network is impacted or changes to implementing ordinances, such as road classification standards, would result from the proposed change (see Address Regulatory and Statutory Changes section in Chapter 1 and TPR Section 0060).

Why is a Transportation System Plan Important?

- Provides long range direction for development of state, regional, and local transportation facilities and services for all modes.
- Ensures that planned transportation systems are adequate to meet the needs of planned land uses.
- Provides a rationale for making prudent transportation investments and land use decisions, consistent with the guidance found in Chapter 3, Step 15.
- Provides a linkage to the State Transportation Improvement Program (STIP) process. Identifies needed improvements and demonstrates project readiness. (See ODOT's STIP User's Guide website at: http://www.oregon.gov/ODOT/TD/TP/stipGuide.shtml).
- Demonstrates consistency with relevant federal, state, regional, and local planning.
- Allows for protection of right-of-way needed for planned transportation improvements.

What does a Transportation System Plan Include?

- Determination of transportation needs.
- Road Plan.
- Public Transportation Plan.
- Bicycle/Pedestrian Plan.
- Air, Rail, Water and Pipeline Plan.
- Transportation System Management and Transportation Demand Management Plans for urban areas over 25,000 population.
- Parking Plan for MPO areas.
- Policies and regulations for implementation of the transportation system plan.
- Transportation Financing Program for areas over 2,500 population, consistent with the guidance found in Chapter 3, Step 15.

What Should a Transportation System Plan Accomplish?

- Make decisions that are consistent with and support the community's vision and expectations for future, development and redevelopment.
- Reflect the characteristics of and address the existing and future transportation needs of the local jurisdiction.
- Comply with the Transportation Planning Rule: OAR 660-012-0015 "establish a system of transportation facilities and services adequate to meet identified local transportation needs consistent with regional TSPs, and adopted elements of the State TSP."
- Reflect the investment guidance found in Chapter 3, Step 15.
- Support the availability of a variety of transportation choices for moving people and goods that balance vehicular use with other transportation modes to avoid principal reliance on any one mode of transportation.
- Provide transportation options for all people including the transportation disadvantaged.
- Promote a safe and secure transportation system.
- Minimize conflicts between modes.
- Promote intermodal linkages for passengers and goods.
- Support the local and state economy.
- Minimize impacts to the natural and built environment that could result from needed transportation projects.
- Provide consistency with state transportation plans and with regional transportation plans prepared by metropolitan planning organizations (MPOs), for jurisdictions within MPO areas (TPR Section 660-012-0061.
- Ensure coordination among affected local governments and transportation service providers.

What *Must* a Transportation System Plan Accomplish?

- Establish a network of arterials/collectors that are interconnected, appropriately spaced and reasonably direct.
- Establish standards for the layout and connectivity of local streets.
- Protect transportation facilities and corridors for their intended functions.
- Provide public transportation services, including transit and ridesharing, that offer transportation options and meet the basic needs of the transportation disadvantaged.

- Provide a network of sidewalks and bikeways linking residential areas to activity centers.
- Include a transportation improvement program that identifies facilities and services that implement the plan and are feasible and can be constructed at a reasonable cost.
- Include a transportation finance program that identifies the funds that will be used to pay for projects identified in the transportation improvement program and reflects the guidance found in Chapter 3, Step 15.
- Include enabling ordinances that protect facilities and corridor function and encourage alternative modes.

What Steps Should be Followed to Develop or Update a Transportation System Plan?

- Determine that a TSP needs to be prepared or updated. See Chapter 2, Updating a Transportation System Plan, and Chapter 3, Plan Preparation.
- Identify project statement of work, timeline, staffing requirements, oversight responsibility and budget.
- Assign staff or hire consultant expertise.
- Develop a stakeholder/public involvement plan:
  - Establish a Technical Advisory Committee (TAC);
  - Develop a public involvement plan;
  - Develop a mechanism for insuring coordination of impacted agencies.
- Develop specific TSP goals and objectives.
- Develop criteria for evaluating project alternatives that are linked to project goals and objectives.
- Review plans, policies, regulations and standards.
- Inventory all elements of the existing transportation system.
- Identify current conditions and deficiencies.
- Identify existing funding mechanisms and projected revenues.
- Determine future deficiencies and needs.
- Develop and evaluate alternatives that address deficiencies and needs and can be constructed at a reasonable cost.
- Select a preferred transportation system.
- Prepare the TSP document.
- Begin plan review/adoption/implementation processes.
- Develop/adopt local and county ordinances that:
  - Enable plan implementation and project development;
  - Protect transportation facilities/corridor function;
  - Encourage and support alternative modes (transit, ridesharing, bicycling and walking).
- Develop a transportation improvement program (package of facility/service projects) that implements the plan.
- Develop a transportation finance program that will fund the projects identified in the transportation improvement program and reflects the guidance found in Chapter 3, Step 15.

Updating a Transportation System Plan

Most jurisdictions in Oregon now have an adopted TSP. Many jurisdictions used the 2001 *TSP Guidelines* as a resource during the development of their local TSPs. The *2008 TSP Guidelines* provides information for both creating a new TSP as well as guidance on how to approach a TSP update. This chapter of the *TSP Guidelines* is intended to assist jurisdictions that are preparing to update their TSP.

Jurisdictions will need to determine which sections of the *TSP Guidelines* are most applicable for their plan, based on the type of update envisioned. TSP updates should consider what has changed since the adoption date of the TSP. Changes in population growth beyond what was originally anticipated in the adopted TSP, new areas of development or redevelopment, new or modified transportation facilities, and regulatory changes at the state, regional and local level are all factors that will need to be considered at the beginning of a TSP update planning project. Jurisdictions should also review whether or not funding or the timing for developing significant projects has changed and if these projects still fall within the TSP's planning horizon. These factors will also provide an indication of how to scope the TSP update project – what areas of the TSP will need to be updated and what level of effort likely will be needed. A local government may continue to rely on its current, adopted TSP to the extent the types of changes anticipated do not significantly affect existing or planned facilities. However, a jurisdiction may find that a major project it is relying on for its future transportation system is no longer viable within the planning period due to funding or project development constraints. In this circumstance, the jurisdiction may want to evaluate its TSP without that transportation improvement assumed within the planning period to determine what the impact is and if there are other measures that may address the transportation need the project was intended to address.

This chapter of the *TSP Guidelines* provides guidance for conducting TSP updates. While the needs of jurisdictions updating TSPs are different than for those that are creating new TSPs, many of the steps necessary for an update process are similar to those that are undertaken in the development of a TSP. Jurisdictions updating their TSP need to review all the sections in Chapter 3 and address all the relevant sections of the *TSP Guidelines.*

As used in this chapter, "update" refers to amendments that apply broadly to a jurisdiction and typically entail changes that need to be considered in the context of the entire TSP, or a substantial geographic area, as opposed to targeted amendments with a more limited scope that may impact specific properties or an individual transportation facility.

While an update may focus on just one element of the TSP (e.g. Public Transportation Plan) changes to one section of the TSP will often require consideration of other plan elements (e.g. Road Plan). For example, an addition of a high-capacity transit corridor may necessitate an amendment to adopted

design standards or service levels for roadways that are along or connect to that transit corridor.

The guidance provided in Chapter 2, Updating a Transportation System Plan, is intended to prompt jurisdictions to ask relevant questions prior to undertaking work that will result in a TSP update. The answers to these questions should help frame the direction for the update issues and enable jurisdictions to direct appropriate resources to relevant tasks. Jurisdictions should:

- **Step 1 Determine if an update is needed and the scope of the project:** Identify changes in the community that may impact the transportation system and shifts in regulation, policy, or statute that would trigger an update to an adopted TSP. A list of factors that could trigger an update is included later in this chapter, under this heading.

- **Step 2 Prepare an assessment:** Conduct an assessment of the TSP to determine where it might be outdated and/or inconsistent with the direction provided in Chapter 3 of the *TSP Guidelines* and the Transportation Planning Rule. Outline the necessary elements for the assessment and develop a series of questions, the answers to which should begin to identify the scope of a TSP update.

- **Step 3 Address recent regulatory, policy, and statutory changes** that may impact the TSP: Plan updates must address and be consistent with changes to statute (e.g., federal transportation legislation), and to state regulation (e.g., the TPR) and policy (e.g., the 2006 Oregon Transportation Plan).

Best Planning Practices: Consider the Availability of Project Funding Early in the Planning Process

Jurisdictions are strongly encouraged to consider transportation funding early in the TSP process. The earlier in the process that this issue is addressed, the more realistic the system alternatives will be that are developed and considered during the transportation planning process. For additional guidance on this topic see Step 15 of these Guidelines.

STEP 1: Determine if an update is needed and the scope of the project

A jurisdiction's circumstances, characteristics, and guiding policies will determine the types of planning tools it requires to meet the needs of its population and community. Often population pressures spur transportation planning as land is designated to accommodate future growth and developed for employment, commercial, and housing needs. Programmatic updates are also common where a jurisdiction has a policy in place to update its plans on a schedule or when it is required to do so by the State's Periodic Review process. The following is a sample list of types of events or occurrences that can prompt a local government to update its TSP. While by no means exhaustive, these items are listed to reinforce the fact that changes to the TSP need to respond to changing conditions and address other planning work the jurisdiction is currently undertaking.

Factors that could "trigger" a TSP update:

- Rapid or unanticipated rate of population growth.
- Rapid or unanticipated rate of employment growth.
- Rapid or unanticipated rate of employment or population growth in unexpected areas (e.g., recently annexed areas).
- Current TSP was prepared prior to or is not consistent with the most current OHP/OTP.
- The need for new transportation projects based on updated future travel demand and a reassessment of capacity, deficiencies and needs.
- New economic development policies and programs that depend on adequate infrastructure to succeed.
- Proposed major projects that require Goal exceptions.
- The need to update a Capital Improvement Program (CIP).
- The need to update the Comprehensive Plan.
- Periodic Review is or will be occurring soon.
- Urban Growth Boundary (UGB) amendment(s).
- Designating Urban Reserves.
- Current TSP has a planning horizon that is less than 15 years from the present date.
- Plan amendments or zone changes that have had a significant impact on a community or transportation facility.
- Reevaluation of underlying conditions of roadways and reassessing capacity.
- Planning for the location or relocation of a major transportation facility.
- Adopting transportation refinement plans by reference into the TSP.
- Planning for major improvements on the state system (e.g., freeway interchanges or new bypasses).
- Improving connectivity with other transportation modes (e.g., light rail, transit).

- For jurisdictions with an MPO area, amendments to the MPO's regional transportation plan.[2]

Jurisdictions within an MPO are required to update their TSP to be consistent with the Regional TSP. For jurisdictions outside of an MPO, TSP updates are most often undertaken in response to local conditions and factors. This chapter provides guidance on how to approach a TSP update and includes a description of conditions under which a jurisdiction may elect to update the local TSP. This chapter also includes a list of possible deficiencies in adopted TSPs that can help jurisdictions articulate the need for an update.

Decide on the Scope/Scale of the TSP Update

Clearly, some of the issues and actions that trigger a TSP update have more extensive impacts than others and would require an update that is more complex and involved. For instance, a UGB amendment that is intended to address a jurisdiction's 20-year growth forecast often requires extensive analysis and public involvement in planning the supporting transportation network. By contrast, an update undertaken to incorporate or reference the results of other plans should be relatively straightforward.

The complexity of the transportation-related issues involved and the level of public interest are indicators of the length of time an update takes, the levels of staffing and public involvement required, the type of professional expertise needed, and, ultimately, the cost of the planning process. Generally, jurisdictions that find many of the factors identified above to be impacting their community are more likely to need a TSP update, while those that find fewer factors impacting the community may need planning work that does not reach the level of a TSP update. See Chapter 3, Steps 2 and 3 for assistance in drafting a project statement of work (SOW) and preparing timeline, staffing requirements, and budget.

Periodic Review

Updating a TSP may be a requirement of a local jurisdiction's Periodic Review with the State. Periodic Review is an evaluation and update of a local plan and land use regulations done in accordance with ORS 197.628-197.644. The cycle required for such Periodic Review is outlined in ORS 197.629. (http://www.leg.state.or.us/ors/197.html). A TSP update is a typical task in a Periodic Review work program.

[2] If a jurisdiction in an MPO area can not make findings that the proposed regional transportation plan amendment or update is consistent with the applicable provisions of adopted regional and local transportation system plan and comprehensive plan, then the local government must adopt amendments to the relevant regional or local transportation system plan that make the regional transportation plan and the applicable transportation system plans consistent with one another (TPR Section -0016).

Refinement Plans

The Transportation Planning Rule (TPR) defines a "refinement plan" as: "an amendment to the transportation system plan, which resolves, at a systems level, determinations on function, mode or general location which were deferred during transportation system planning because detailed information needed to make those determinations could not reasonably be obtained during that process (Section -0025)."

Refinement plans supplement a TSP where the adopted plan is generally adequate, but additional planning is needed for a specific area or facility. Refinement plans provide additional analysis to support the planning and development of specific facilities already identified in the TSP. Corridors or segments of corridors that require a more in-depth analysis to resolve particular land use, access management, design, or other issues are often the subject of refinement plans or facility plans.

Because refinement plans determine the mode, function or general location of needed transportation facilities, all of which must be identified in a TSP, they must be amended into and become a part of the TSP from which they were initiated. While refinement plans require TSP amendments, they typically do not trigger a TSP update. An exception may occur where a local government decides not to move forward with a project identified in its TSP for which a refinement plan was required. In this instance, the local government must demonstrate that the plan remains in compliance with TPR requirements without the project. Adoption of a refinement plan must be supported by findings of fact, including TPR findings (see TPR section 660-012-0025).

Interchange Area Management Plans

Interchange Area Management Plans (IAMPs) are joint ODOT/local government 20 year plans that are intended to balance and manage transportation and land uses for interchange areas. As such they are an important tool used to protect the function of the State Highway Interchange and the supporting local street network. IAMPs are typically prepared prior to the construction of a new interchange, or modification of an existing interchange See Policy 3C, Interchange Access Management Areas of the Oregon Highway Plan, http://www.oregon.gov/ODOT/TD/TP/docs/orhwyplan/hwyplan/PolicyElement.pdf.

Typically initiated by ODOT, these plans facilitate improved and safer access to and from State Highways to developed areas. IAMPs identify land use and access controls and, through this documentation, may provide a higher level of certainty for property owners and developers regarding the types of development that should be anticipated and the nature of future transportation improvements within the interchange area. IAMPs are adopted by the Oregon Transportation Commission as amendments to the Oregon Highway Plan and should be amended into a local TSP for effective implementation. For information on the elements of an IAMP, what an IAMP should accomplish, and how to meet ODOT expectations and objectives for such plans, see the *Guidelines for*

Interchange Area Management Plans,
http://www.oregon.gov/ODOT/TD/TP/docs/publications/iampGuidelines.pdf.

Access Management Plans
Access management plans (AMPs) are typically prepared for specific areas where land uses can directly affect how well a transportation facility functions. As such, they are required components of IAMPs, but they are often associated with other, non-interchange related state facility improvements as well. Components of an AMP can include raised medians, driveway consolidation, frontage roads, and access closures. Like IAMPs, AMPs typically require adoption by local jurisdictions as a condition of state investment in the transportation system. The local action of adopting an AMP will amend the local TSP and, depending on the recommendations in the AMP, may trigger a TSP update.

For state policy regarding AMPs, see Oregon Highway Plan Goal 3, Access Management,
http://www.oregon.gov/ODOT/TD/TP/docs/orhwyplan/hwyplan/PolicyElement.pdf, and Appendix C, Access Management Standards. ODOT also has a list of resources associated with access management available on the department's website,
http://www.oregon.gov/ODOT/HWY/ACCESSMGT/PlanningLinks.shtml. For assistance with access management planning, contact ODOT's Access Management Unit (AMU). The AMU is part of the Technical Services Branch of the Highway Division and is responsible for statewide development and administration of the Department's access management program statutes, rules, and policies.

STEP 2: Prepare an assessment

The current TSP should be assessed to determine where it is deficient or where conditions have changed. Generally, a TSP should reflect current population and employment projections, recent development patterns, and community vision and policy, including the plan elements identified under Section 0020 of the TPR, and be consistent with the guidance that appear in Chapter 3 of the *TSP Guidelines.* Prior to undertaking an update to a TSP, a local jurisdiction should answer a fundamental question: What is the TSP *not* doing that it should be doing? The answer to this question should frame the direction for the update and help shape the scope of work for the planning process. The jurisdiction should begin with a problem statement that identifies what should be addressed with an update to the TSP. Below is a list of sample "answers" that could be used to support an update.

What is the adopted TSP not doing that it should be doing? (Problem Statement to address the need for the update)

- **Examples include, but are not limited to:**
  - Does not plan for facilities that were identified as needing additional (refinement) planning.
  - One or more required system elements (under TPR Section 0020) are outdated due to a change in conditions (such as population growth occurring at a rate inconsistent with a previously adopted forecast, new industries, growth in or changes to tourism, new facilities not reflected as built in the plan, etc.)
  - The current TSP was prepared prior to the 1999 Oregon Highway Plan and/or is inconsistent with the policies in the most recently adopted version of that plan.
  - The current TSP was prepared prior to the Oregon Transportation Plan (including related Modal/Topic Plans) and/or is inconsistent with policies in that plan.
  - Goal and policy language does not articulate recent changes in local policy direction.
  - The current plan relies on a major improvement project for which funding within the planning horizon is uncertain (i.e., the improvement costs far exceed past funding levels).
  - The current TSP calls for a refinement plan that has not yet been completed.
  - A refinement plan or Comprehensive Plan amendment has been completed and the results have not yet been incorporated into the TSP.
  - The Financing Program (required under Section 0040 of the TPR) does not address investment priorities (such as the Investment Scenarios in the Oregon Transportation Plan), funding anticipated to be available during the planning period, or a strategy for securing needed revenues for construction of the projects included in the TSP. (See Chapter 3, Step 15, and Appendix 8, Guide to Transportation Finance for Transportation System Plans in Oregon.)

- The current plan does not reflect transportation needs associated with recently proposed or adopted subarea or concept plans.
- The current plan does not reflect recent UGB amendments or annexations into a city.
- The adopted TSP is not consistent with the Regional Transportation Plan (RTP).

What *does not* need to be addressed in the update planning process?
The assessment should identify the sections of the *TSP Guidelines* Chapter 3 (Steps for TSP Preparation) that are not pertinent to the current planning process and explain why. The assessment serves as an initial step in developing an update that contains all the required system elements, as listed in TPR Section 0020.

What needs to be accomplished to update the plan?
After preparing a general statement that identifies the need for and scope of an update, the assessment should provide more details on what must be accomplished in order to successfully complete and adopt a revised TSP.

- **Set general goals for the plan update.**
  - Identify elements of the plan to be updated.
  - Review and update, if needed, the general assumptions used to develop the current TSP.
  - *Has the rate of growth changed?*
  - *Have the boundaries of the jurisdiction's UGB changed?*
  - *Is funding uncertain for needed major improvements upon which the TSP relies to meet its transportation needs during the planning period?*
  - *Have zone changes been adopted that allow traffic volumes not anticipated in the current plan? (e.g. changes that allow higher densities in residential districts, converting industrial zoning to commercial, etc.)*
  - Respond to identified deficiencies and needs stemming from the current TSP.
  - Comply with the Transportation Planning Rule.
  - Be consistent with the Oregon Transportation Plan, the State modal/topic plans, and regional plans.

- **Summarize tasks critical to the development of a TSP update.**
  - Develop a stakeholder/public involvement strategy that is tailored to and appropriate for the types of amendments anticipated. *(See Chapter 3, Step 6 of the TSP Guidelines.)*
  - Review plans, policies, statutes, regulations and standards.
    Jurisdictions undertaking updates need to be particularly cognizant of changes that have taken place since the adoption date of their TSP. Local, regional and service provider regulations and standards should be reviewed for applicability to the TSP update. For updates to State standards, refer to the next section, Address Regulatory, Policy, and Statutory Changes.

- Identify/update current conditions and deficiencies.
  To the extent necessary and consistent with the scope of the TSP update, this step will entail an update to the inventory of the existing transportation system, either in its entirety or for specific elements (e.g., roadways, bicycle routes, etc.).
- If the TSP update will result in physical improvements to the transportation system, develop and evaluate alternative solutions.
- If the TSP update will result in physical improvements to the transportation system, select a preferred transportation system.
  Based on the preferred transportation system, it is advisable for jurisdictions to identify a project list that identifies realistic funding sources. As discussed in Chapter 3, Step 15, projects should be prioritized within the package of transportation projects and constrained to revenue likely to be available within the timeframe identified for the needed project. If existing funding sources are found to be inadequate, local jurisdictions should explore other funding options (see Appendix 8, Guide to Transportation Finance for Transportation System Plans in Oregon).
- Prepare (write) the TSP update.
- Review, adopt and implement the updated TSP.
- Develop and adopt supporting ordinances to implement the updated TSP.

Identify project management responsibilities.

Here, the jurisdiction should refer to elements in Chapter 3, Step 5 "Clearly define what the contractor (or staff if the TSP is prepared in house) needs to do to prepare the plan." The project management responsibilities for the staff, consultant (if applicable), the contract manager, the project management team, and the technical advisory committee are similar for TSP updates as they are for creating new TSPs. Jurisdictions undergoing a TSP update should tailor the make-up of the project management team and technical advisory committee to the scope of the update. The type of expertise needed and the appropriate level of public involvement to accomplish the update are important considerations when compiling the list of participants in these two groups.

STEP 3: Address regulatory, policy, and statutory changes

Jurisdictions should incorporate into the project scope of work (see Chapter 3, Step 2) tasks that ensure that the planning project addresses new regulations, policies and statutes that have been adopted since the TSP was adopted (or last amended). Like locally adopted TSPs, federal, state and regional regulatory documents are updated periodically and relevant federal or state statutes (such as the federal transportation bill) may be adopted or amended. Some, if not all, of the documents listed in Chapter 3, Step 8, of the *TSP Guidelines* are relevant to a TSP update. Particularly for State regulatory documents, which are regularly updated electronically, jurisdictions are advised to access relevant transportation planning resources on-line, whenever possible, to ensure that the most up-to-date information is referenced. Links to relevant State transportation policy and regulatory documents, including the Oregon Transportation Plan, Oregon Highway Plan and the Transportation Planning Rule, are included in Appendix 2 of the *TSP Guidelines.*

Significant changes have been made to the Oregon Transportation Plan, the Oregon Highway Plan, the Transportation Planning Rule, and the federal transportation bill since 2000. Because of the impact these documents have on transportation planning, a brief summary of some of the changes is included below.

Oregon Transportation Plan

The Oregon Transportation Plan (OTP) is the State's comprehensive long-range plan for a multi-modal transportation system. The OTP was updated in 2006 and emphasizes maintaining facilities, optimizing existing system performance through technology and better system integration, creating sustainable funding, and investing in strategic capacity enhancements.

The OTP recognizes that transportation funding is scarce and difficult to forecast. The Implementation section of the OTP describes three investment levels, examples of the investment priorities for each level of investment, and their impacts on the State's transportation system, economy, and livability. These levels are:

- Investment Scenario Level 1 - Response to Flat Funding (no additional funding becomes available; declining purchasing power due to inflation).
- Investment Scenario Level 2 - Maintaining and Improving Existing Infrastructure and Services (future funding keeps up with inflation).
- Investment Scenario Level 3 - Expanding Facilities and Services (future funding allows improvements on a more optimal level than current levels).

The project workscope for a TSP update should ensure that the local planning process results in a TSP that is consistent with the OTP's goals, policies, and strategies. As a reflection of funding realities, non-MPO communities should develop a transportation funding scenario that is based on realistic revenue

projections as an element of the TSP update.[3] See Chapter 3, Step 15, Develop a transportation improvement program and a transportation finance program.

Oregon Highway Plan

The Oregon Transportation Commission adopted the Highway Plan on March 18, 1999. In July 2006, ODOT published an update that includes amendments made from November 1999 through January 2006. Links to Oregon Highway Plan policies are included in Appendix 4. Significant changes were made to:

- Policy 1B Land Use and Transportation: Amendments clarify that a Special Transportation Area (STA) management plan will be required when the STA designated segment is on a Statewide Highway that is also classified a State Freight Route. Additional amendments state that Urban Business Areas (UBAs) no longer require designation by the OTC; on state facilities where the posted speed is 35mph or lower the UBA access and mobility standards may be applied.
- Policy 1F Mobility Standards: Alternative mobility standards may be adopted in metropolitan areas or portions thereof to support an integrated land use and transportation plan. Alternative mobility standards have been adopted for the Portland Metro Area and have also been adopted for some specific facilities in other parts of the state (typically interchanges) through the adoption of facility plans.
- Appendix C Access Management Spacing Standards: Tables in Appendix C were updated in 2004 for consistency with the amended Access Management Rule, OAR 734-051. There were minor changes to the Tables in 2005 to make the terminology for UBA and STA areas consistent with the amended Policy 1B.
- Policy 1H Bypasses: New policy (2003) recommends that cities proposing a bypass project use a refinement plan or NEPA process to select alternative designs and locations. ODOT will establish joint agreements (interchange management plans, access management plans, master plans and/or interchange overlay zones) with the local and/or regional governments to plan for major bypass facility elements. The local and/or regional governments are expected to amend the local and/or regional transportation system plans consistent with the transportation facility plan and the and the Oregon Transportation Commission is expected to adopt the transportation facility plan. The ODOT Transportation Facility Plan Adoption Procedure may be obtained through the Transportation Development Division at: http://www.oregon.gov/ODOT/TD/TP.

[3] MPO jurisdictions are required to develop a "constrained" transportation improvement list.

Transportation Planning Rule (OAR 660, Division 12)
Several sections of the Transportation Planning Rule (TPR) OAR 660-012-0000 through 660-012-0070 were updated through an amendment process in 2005-06. Key changes impacting TSPs were made to sections addressing:

- Purpose of the TPR (OAR 660-012-0000).
- MPO Requirements (OAR 660-012-0016).
- Project Development (OAR 660-012-0050).
- Plan/Zone Amendments (OAR 660-012-0060).
- Goal Exceptions (OAR 660-012-0070).

- **Purpose of the Transportation Planning Rule (Section 0000)**
  - More clearly states the overall intent and objectives of the TPR.
  - Addresses the "one-size-fits-all" concern by more clearly distinguishing planning guidance for communities based on population size.
  - Encourages transportation choices and better focuses "reduced reliance" on the use of single occupant vehicles.
  - More clearly recognizes the importance of freight mobility.
  - Addresses coordination between local TSPs and RTPs (Regional Transportation Plans) within MPO areas.
- **Metropolitan Area (MPO) Requirements (Section 0016)**
  - Addresses coordination between local TSPs and RTPs (Regional Transportation Plans) within MPO areas.
  - Defines amendments for regional (RTP) plans.
  - Specifies conditions under which RTP planning periods may be extended.
  - Addresses alternative standards.
- **Project Development (Section 0050)**
  - Lends more certainty to planning decisions addressing need, mode, function and general location by reducing the likelihood that those decisions would need to be revisited.
- **Plan/Zone Amendments (Section 0060)**

Also see ODOT's guidance on this topic on line at: *http://www.oregon.gov/ODOT/TD/TP/docs/TPR/tprGuidelines.pdf*

- Requires local jurisdictions to balance the need for development with the need for transportation improvements.
- Addresses "significant effect" by establishing the end of the planning period as the measure for determining whether proposed amendments would cause an imbalance between development and the transportation network serving that development.
- Identifies methods for local jurisdictions to determine whether or not a needed transportation facility is reasonably likely to be provided within the planning horizon.
- Identifies the transportation improvements that a local government can consider in determining whether a proposed amendment will significantly affect transportation facilities.
- Addresses planning considerations and establishes procedures for amendments that are proposed around interstate interchanges.

- **Goal Exceptions (Section 0070)**
  - Clarifies the requirements for obtaining an exception by combining similar rule language found in other administrative rules.

Federal Transportation Planning Guidance

Signed into law in August 2005, SAFETEA-LU (23CFR450) replaced the expired Transportation Equity Act for the 21st Century (TEA-21). This federal legislation emphasizes:

- Enhancement of the public participation process. Legislation includes examples such as conducting public meetings at convenient times and in accessible locations, employing visualization techniques to describe plans, and making public information available in an electronically accessible format.
- Increased coordination. SAFETEA-LU requires that metropolitan planning organizations (MPOs) coordinate their transportation planning with other activities in the area including economic development, environmental protection, airport operations and freight movement.
- Adoption of operational and management strategies. State and MPO plans need to include strategies to improve performance of transportation facilities to relieve congestion and maximize the safety and mobility of people and goods.
- Enhancement of the integration and connectivity of the transportation system across and between modes.

Note: Communities may find it useful to review Oregon Statewide Goal 14 and the associated administrative rules addressing urban growth boundaries that stem from Goal 14.

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Preparing a Transportation System Plan

Chapter 3 of the *TSP Guidelines* provides steps for preparing a TSP. These steps follow a logical progression in a planning process, but they are not necessarily sequential. For example, developing a finance program, as detailed in Step 15, should actually be started and considered as part of developing and evaluating system alternatives (Step 12). The earlier in the process that existing or probable sources of funding are identified, the more realistic the system alternatives will be that are developed and considered during the transportation planning process. The *TSP Guidelines* notes where it is advisable to undertake steps simultaneously.

Also keep in mind that these steps are not necessarily intended to mirror the structure for the actual TSP document format. See Step 14, Prepare the TSP, for a Best Planning Practice addressing the format of the TSP document. The steps in Chapter 3 are intended to guide the development of new TSPs and may be applicable as well to updating existing TSPs, depending on the objectives and scope of the update. See Chapter 2, Updating a Transportation System Plan, for factors to consider prior to undertaking a TSP update.

- **Step 1: Determine if preparing a new TSP or updating an existing TSP is necessary.**
- **Step 2: Draft a project statement of work (SOW).**
- **Step 3: Based on the statement of work prepare/identify timeline, staffing requirements, oversight responsibility and budget.**
- **Step 4: Assign staff or hire a consultant with necessary expertise.**
- **Step 5: Clearly define what needs to be done to prepare the plan.**
- **Step 6: Develop a stakeholder/public involvement program (plan/strategy).**
- **Step 7: Develop goals and objectives and evaluation criteria.**
- **Step 8: Review plans, policies, regulations and standards.**
- **Step 9: Inventory the Transportation System.**
- **Step 10: Describe current conditions and identify deficiencies.**
- **Step 11: Determine future travel demand, capacity, deficiencies and needs.**
- **Step 12: Develop and evaluate transportation system alternatives that address deficiencies and meet needs.**
- **Step 13: Select a Preferred Transportation System.**
- **Step 14: Prepare the TSP.**
- **Step 15: Develop a transportation improvement program and a transportation finance program.**
- **Step 16: Adopt the TSP.**

STEP 1: Determine if preparing a new TSP or updating an existing TSP is necessary.

The Transportation Planning Rule (TPR) requires that all Metropolitan Planning Organizations (MPOs), counties with populations over 25,000, and cities with populations over 10,000 in Oregon prepare a TSP. While smaller communities and counties may be eligible for an exemption from the requirements of the TPR, they may find preparation of a plan to be in the best interests of their community under circumstances which could include:

- Rapid population growth.
- Location near growing populations and/or employment centers.
- Location near destinations/vacation areas.
- Changes in employment forecasts.
- Major public facility improvements that have changed a community's circumstance.
- Changes in UGB boundaries.

Defining a statement of work or in the case of TSP updates, preparing an assessment, will help jurisdictions determine the scope of work for their planning project. Guidance for taking this initial planning step in the preparation of new TSPs is described below in Step 2; additional guidance for TSP updates may be found in Chapter 2, Step 2.

STEP 2: Draft a project statement of work (SOW).

Once a jurisdiction has identified a need to prepare or update a transportation system plan, it should carefully prepare a project statement of work to insure the plan/update will meet the needs of the jurisdiction and comply with the requirements of the Transportation Planning Rule (TPR) in OAR Chapter 660, Division 12. For a TSP update project, the statement of work should include an assessment of the existing transportation system plan (see Chapter 2, Step 2). A well written statement of work will provide clear direction to staff or consultants and increase the likelihood that the final planning product will meet local and state expectations. The statement of work should identify issues that are to be addressed as part of the planning process and should identify all affected agencies. Step 2 is not intended to be a detailed scope of work; see Step 5 for specific tasks to be accomplished. Development of the project statement of work should be coordinated with:

- ODOT Region Planning, Environmental and other Technical Staff.
- ODOT Transportation Development Division (Planning).
- ODOT Region Traffic staff or Transportation Planning and Analysis Unit (TPAU) (Salem).
- Department of Land Conservation and Development (DLCD) Field Representative or Salem staff.

Locally, development of the project statement of work should be coordinated with city/county public works departments, planning departments, and transportation service providers. If a consultant is used to prepare the TSP, refine the SOW with input from the selected consultant (see Steps 4 and 5).

Step 3: Based on the statement of work, prepare/identify timelines, staffing requirements, oversight responsibility and budget.

A jurisdiction will need to determine the following when scoping the initial preparation or updating of a TSP.

- Establish timelines that clearly state when each step in the planning process is to be completed.
- Based on the project statement of work and the agreed upon timelines, identify necessary staff/consultant resources and qualifications required to complete the plan.
- Establish project oversight responsibilities that clearly indicate lines of authority for project management, staff and consultant relationships and identify necessary reporting requirements needed to keep the planning process on task, on schedule, and on budget.
- Estimate a budget for the project based on the project statement of work, timelines, and staffing requirements.
- Based on the availability of funding for the project budget, adjust (if necessary) the statement of work, timelines and staffing requirements before assigning staff or advertising for a consultant. If ODOT funding is sought, the adjusted statement of work, timelines, staffing requirements and budget must be agreed to by the ODOT Region and/or the Transportation Development Division (Salem), depending on the funding source for the plan.
- Incorporate into the statement of work the need for coordinating planning efforts with neighboring cities and/or counties, as applicable. Outline how this coordination will be accomplished and account for the effort in the project timelines, staffing, and budget.

STEP 4: Assign staff or hire a consultant with necessary expertise.

Before assigning staff or hiring a consultant with the necessary expertise, a jurisdiction should:

- Assess available resources to determine the level of in-house expertise.
- Evaluate staffing options:
  - Use existing staff expertise/add staff expertise.
  - Use a combination of staff/consultant expertise.
  - Use consultant expertise.
- Determine the appropriate mix of staff/consultant expertise.
- Identify and secure sufficient funding for staff/consultant expertise to develop and complete the TSP.
- Issue an RFP and select the consultant.
- Execute a Contract or Work Order.
- Issue Notice to Proceed.

ODOT Funding For TSPs

The Oregon Department of Transportation has limited funding to assist local jurisdictions with transportation planning projects through the Transportation and Growth Management (TGM) Program. Generally, ODOT considers funding requests for transportation system planning projects that are:

- Located in critical transportation areas or non-exempt locations, or have unique transportation circumstances.
- Staffed by a project team (local jurisdiction staff or consultant) that may be comprised of individuals with necessary expertise in:
  - Traffic engineering
  - Public transportation planning
  - Land use planning as it impacts the transportation system
  - Bicycle/pedestrian planning
  - Public involvement
  - Natural resources

For additional funding criteria associated with the TGM program, go to http://www.oregon.gov/LCD/TGM/index.shtml. ODOT funding may also be available through each Region's planning program.

Typically, an intergovernmental agreement (IGA) between ODOT and the local jurisdiction is required. As a condition of funding, the IGA and the scope of work must be approved by the Department. The Department may require project team members to possess specific licenses or certifications as a demonstration of necessary expertise. An ODOT Project Manager, typically a Region or Transportation Development Division (TDD) planner, can provide

technical assistance in the development of the IGA and SOW. ODOT has several contracts in place that can be used for expedited consultant selection for ODOT-funded TSP development or updates.

STEP 5: Clearly define what needs to be done to prepare the plan.

Jurisdictions should clearly define what needs to be accomplished to prepare or update a plan. The following provides a suggested way of managing the project:

- **Set general goals for the plan or plan update.**
  - Identify existing transportation facilities and services.
  - Determine current and future deficiencies and needs.
  - Prepare a plan that meets identified deficiencies and needs.
  - Prepare necessary ordinances to implement the plan.
  - Comply with the Transportation Planning Rule.

- **Summarize tasks critical to the development of a TSP or TSP update.**
  - Develop a stakeholder/public involvement plan.
  - Develop specific goals and objectives for the TSP.
  - Develop criteria by which to evaluate transportation system alternatives.
  - Review plans, policies, regulations and standards.
  - Inventory the existing transportation system.
  - Identify current conditions, deficiencies, and transportation needs.
  - Develop and evaluate alternative solutions.
  - Select a preferred transportation system.
  - Prepare (write) the plan.
  - Review, adopt and implement the plan.
  - Develop supporting ordinances to implement the plan.
  - Develop a transportation improvement program (projects) to implement the plan.
  - Develop a finance program (funding) to pay for the projects.
  - Develop a project schedule for the Project Management Team, Citizen's Advisory Committee, Technical Advisory Committee and public involvement activities.

- **Identify project management responsibilities**
  - Project staff (municipal employees or consultant) typically is responsible for:
    - Day-to-day project oversight and coordination.
    - Satisfactory completion of project deliverables as scheduled.
    - Leading the Project Management Team, Citizen's Advisory Committee and the Technical Advisory Committee.
    - Ensuring that documents are produced in a format acceptable to the project manager.
    - Accuracy of project billings.
    - Developing and providing meeting agendas and materials.
    - Providing meeting minutes and summaries.

- City/County staff should be responsible for:
  - Project contract management and administration.
  - Communication between the consultant and funding agencies.
  - Scheduling meeting facilities and distributing meeting notices.
  - Producing copies of meeting materials.
  - Ensuring ongoing communication with the Planning Commission and local elected officials.
  - Providing existing information.

- The Project Manager should:
  - Develop a statement of work.
  - Carefully track project progress.
  - Be sure deliverables and billings are acceptable.
  - Monitor project costs.
  - Serve as the communication link between the consultant/fund source.
  - Recommend approval of consultant payments.

- The Project Management Team should:
  - Include city/county staff and the Project Manager.
  - Meet regularly (probably monthly).
  - Provide project direction and oversight.

- The Technical Advisory Committee should:
  - Include local officials, regional and state stakeholders (including ODOT representatives and, when applicable, Area Commissions for Transportation (ACT) representatives), resource agency representatives, and transportation providers.
  - Refine project goals and objectives.
  - Develop measures of effectiveness (see Step 12).
  - Confirm consistency with applicable plans, policies, and standards of other agencies.
  - Confirm existing and forecasted conditions.
  - Evaluate transportation alternatives/recommend a preferred alternative.
  - Support the public involvement plan.

- The Citizens' Advisory Committee should:
  - Include interested citizens and traditionally under-served groups including minorities, seniors, the disabled, low income and youth.
  - Refine project goals and objectives.
  - Review and refine evaluation factors.
  - Review and confirm consistency with applicable plans, policies, and standards of other agencies.
  - Review existing and forecasted conditions.
  - Evaluate transportation system alternatives/recommend a preferred transportation system alternative.

STEP 6: Develop a stakeholder/public involvement plan.

A key feature in developing or updating a transportation system plan is a public involvement effort that brings citizens, transportation interest groups, community economic interests, and others into the planning process. Special effort should be made to involve non-traditional and traditional transportation interests. Non-traditional interests may include low income and minority households and businesses, youth, the elderly and other transportation disadvantaged populations.
The level and type of public involvement plan will depend on the jurisdiction, the available planning project budget, and the type and scale of planning process being undertaken. Jurisdictions are encouraged to consider the scope of the project and anticipate the level of public interest it will generate when developing a public involvement plan. The number of meetings, open houses, mailings, and other events should be tailored to match public interest in the project.
Early and continued public and agency (including ODOT) involvement can lend support throughout the process. A good public involvement process can help identify important community goals and issues, develop community understanding and confidence in the planning process, and, ideally, bring about broad local support for the plan.

- **The development or update of a TSP should include an inclusive planning process that fosters public agency coordination and ensures broad-based community involvement by:**
  - Interested citizens.
  - Transportation interest groups (e.g., road advisory committees, traffic safety groups, freight, bicycle and pedestrian).
  - Transportation providers (e.g., transit operators, rideshare programs, ports, railroads).
  - Community economic interests (e.g., chambers of commerce, local real estate boards).
  - Federal and state transportation and planning agencies (e.g., FHWA, FTA, ODOT, DLCD).
  - Federal and state natural resource and environmental agencies (e.g., United States Fish & Wildlife Services (USFWS), Oregon Department of Fish & Wildlife (ODFW), Department of State Lands (DSL), Department of Environmental Quality (DEQ).
  - Other jurisdictions (e.g., councils of governments, city councils, county commissions, tribal governments).
  - Traditionally under-served groups (e.g., seniors and the disabled, low income, youth).
  - Elected officials (e.g., mayors, state legislators).

- **A Technical Advisory Committee should be convened to help establish plan goals and objectives and helps guide plan development. TAC membership should include:**
  - County/city transportation and planning officials (e.g., public works, community development).
  - County/city elected officials.
  - Transportation providers (e.g., transit operators, rideshare programs).
  - Key stakeholders (e.g., transit users, chambers of commerce).

- **Project staff should communicate with and seek input from the public on a regularly scheduled basis during the course of plan development by:**
  - Developing informational materials about proposed plan policies and projects.
  - Disseminating information materials and obtaining citizen input.
  - Utilizing the print and electronic media to inform the public about plan development, including developing project website/webpage.
  - Appearing before local community groups and clubs to provide status reports.

- **Other responsibilities related to the public involvement process include:**
  - Development of a draft citizen involvement strategy/program.
  - Involvement of citizens throughout the life of the planning process.
  - Documentation of meetings/telephone discussions.
  - Documentation of how stakeholder input was utilized.
  - Development of meeting agendas.
  - Advertising for public meetings.
  - Preparation of informational newsletters for public meetings.
  - Preparation and distribution of meeting handouts and exhibits.
  - Leading the meetings, including those with the Citizen's Advisory Committee.

- **The Public Involvement Plan should be approved by the Project Management Team.**

- **Public meetings/open houses should be held in the community at critical points in the planning process such as:**
  - Completion of the Existing Conditions/Deficiencies Report.
  - Development of Transportation Alternatives.
  - Development of a Preferred Transportation System.
  - Development and release of a draft TSP.
  - Development and release of the final TSP.

- **Drafts of documents emanating from these critical points in the planning process should be sent to ODOT Region staff and the Transportation Development Division for review and comment.**

State and Federal Guidance on Public Involvement

Statewide Planning Goal 1, Citizen Involvement, requires that all jurisdictions conduct planning in a way that involves citizens in all phases of the planning process. Goal 1 should guide the development of a public involvement plan for the development or update of a TSP. A local public involvement process also must be consistent with the Oregon Transportation Plan (OTP), which calls for early coordination, communication, and cooperation among public and private transportation providers and those most affected by transportation activities. Goal 7 of the OTP contains policies that guide the State's public involvement efforts, including involving Oregonians to the fullest practical extent in transportation planning and implementation and providing all Oregonians equal access to transportation decision-making.

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: a Legacy for Users, or SAFETEA-LU (23CFR450), replaces the Transportation Equity Act for the 21st Century (TEA-21). SAFETEA-LU requires coordination between State DOT's and MPO's for transportation planning and consultation with affected agencies, including those responsible for land use management, natural resources, environmental protection and historic preservation. Both State and MPO plans are to include operational and management strategies to improve performance of transportation facilities to relieve congestion and maximize the safety and mobility of people and goods. SAFETEA-LU encourages enhancement of the public participation process though the use of visualization techniques in electronically accessible formats. For more information on this federal legislation, go to following sources:

- SAFETEA-LU Legislation.
  http://www.fhwa.dot.gov/safetealu/legis.htm

- ODOT SAFETEA-LU information.
  http://www.oregon.gov/ODOT/HWY/SAFETEA-LU.shtml

- FHWA Fact Sheets on SAFETEA-LU.
  http://www.fhwa.dot.gov/safetealu/factsheets.htm

Executive Order (EO) 12898, Federal Actions to Address Environmental Justice (February 11, 1994), requires that agencies involved in projects receiving federal funding identify low-income and minority populations in the project area, analyze the potential adverse human health or environmental impacts associated with the project that may proportionately affect these populations, and gear the project's public outreach to expressly address these populations and issues. Jurisdictions should identify protected populations and use this information to develop appropriate public involvement strategies. (See http://www.dotcr.ost.dot.gov/documents/ycr/eo12898.pdf)

In Order 6640.23 (December 2, 1998. See http://www.fhwa.dot.gov/legsregs/directives/orders/6640_23.htm), the Federal Highway Administration established the following direction to implement EO 12898.

- To ensure involvement of low-income and minority populations in decision-making;
- To prevent "disproportionately high and adverse" impacts of decisions on these populations; and
- To ensure that low-income and minority populations receive a proportionate share of the benefits.

The order defines low-income as households whose income is at or below the poverty levels determined by the U.S. Department of Health and Human Services. Further, the order defines populations of interest in Environmental Justice as "any readily identifiable groups of minority/low-income persons who live in geographic proximity, and if circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be similarly affected by a proposed activity."

STEP 7: Develop Goals and Objectives and Evaluation Criteria.

Project staff (consultant and/or in-house staff), in consultation with the Technical Advisory Committee and the Citizen's Advisory Committee, should identify specific goals and objectives for the transportation system. These goals and objectives should:

- Articulate how the transportation system should ideally function.
- Guide the planning project that will result in developing or updating a TSP.
- Be developed with the input of the citizen advisory committee to ensure that they reflect the character and vision of the community and are consistent with the Comprehensive Plan.
- Articulate a jurisdiction's transportation priorities, especially in the event of limited transportation funding.
- Form the basis for developing factors to evaluate plan alternatives and for selecting the preferred plan.
- Become part of the transportation policy section of the Comprehensive Plan.

Associated with goal setting is the development of a set of evaluation factors. Evaluation factors are used to assess and compare the suitability of transportation system alternatives to address the community's identified transportation needs. In developing evaluation factors, jurisdictions should include project costs and available or likely funding sources. Evaluation criteria may be somewhat general and subjective, similar to goal statements or objectives, or may be more specific and quantitative in anticipation of evaluating the performance of different transportation system alternatives. Evaluation factors will ultimately be used to select a preferred transportation system alternative (see Step 12).

STEP 8: Review plans, policies, regulations and standards.

Project staff should conduct a comprehensive review and analysis of all state, regional and local planning documents relevant to the planning area. For TSP updates, this step may have been partially or completely addressed as part of an earlier assessment, as outlined in Chapter 2, Step 2.

- **The product of this review should be a technical memo or TSP chapter that:**
  - Identifies relationships, conflicts and discrepancies within and between these documents.
  - Identifies inconsistencies between existing plans and the TPR.
  - Reviews existing cross-section standards for private and public streets.
  - Reviews proposed improvements to state, county or local facilities.
  - Reviews relevant traffic and modal studies.
  - Reviews relevant environmental studies (e.g., local Goal 5 inventory, Oregon Conservation Strategy, http://www.dfw.state.or.us/conservationstrategy/contents.asp, and Oregon Plan for Salmon and Watersheds, http://www.oregon-plan.org/) and baseline environmental data.
  - Reviews existing sources for funding transportation facilities and services.
  - Reviews land use policies and regulations that guide the relationships between land uses and transportation facilities and their impacts on each other.
  - Reviews demographic and economic data, forecasts and plans as they relate to transportation and land development.
  - Identifies how these plans, policies, regulations and standards impact the transportation system.

- **State documents to be reviewed may be obtained through the Governor's office, ODOT Region offices or the Transportation Development Division:**
  - Transportation Planning Rule (OAR 660-012). Web Site: http://arcweb.sos.state.or.us/rules/OARS 600/OAR 660/660_012.html
  - Access Management Rules (OAR 734-051). Web Site: http://arcweb.sos.state.or.us/rules/OARS 700/OAR 734/734 051 .html
  - Oregon Transportation Plan (2006). Web Site: http://egov.oregon.gov/ODOT/TD/TP/ortransplanupdate.shtml#Oregon Transportation Plan Adopted September 20 2006
  - 1999 Oregon Highway Plan. Web Site: http://www.oregon.gov/ODOT/TD/TP/orhwyplan.shtml
  - 1997 Oregon Public Transportation Plan. Web Site: http://www.oregon.gov/ODOT/TD/TP/OPTP.shtml

- 1995 Oregon Bicycle and Pedestrian Plan. Web Site: http://www.oregon.gov/ODOT/HWY/BIKEPED/planproc.shtml

- 2004 Oregon Transportation Safety Action Plan. Web Site: http://www.oregon.gov/ODOT/TS/tsap.shtml

- 2000 Oregon Aviation Plan. Web Site: http://www.oregon.gov/Aviation/docs/resources/OregonAviationPlan.pdf

- 2001 Oregon Rail Freight Plan. Web Site: http://www.oregon.gov/ODOT/RAIL/docs/railplan01.pdf

- Willamette Valley Livability Forum: Alternative Transportation Futures Web Site: http://www.lcog.org/wvlf/atf.html

- 1999 Freight Moves the Oregon Economy. Web Site: http://www.oregon.gov/ODOT/TD/TP/FME.shtml#Freight Moves the Economy

- 2000 Intercity Passenger Policy and Program Web Site: http://www.oregon.gov/ODOT/PT/PROGRAMS/intercity program.shtml

- Sustainability (Executive Orders EO-00-07, EO-03-03, and EO-06-02) Web Site: http://www.sustainableoregon.net/sust act/2006 exec order.cfm

- Governors' Climate Change Initiative http://www.wstc.wa.gov/AgendasMinutes/agendas/2007/March20/Mar20BP7_a ClimateChangeMemo.pdf *NOTE: The Governors' Climate Change Initiative is not an Oregon Governor's Executive Order but certain policy documents may result from the initiative.*

- **Regional documents to be reviewed include:**
  - Regional transportation plans (e.g., TransPlan or RTP).
  - Regional modal plans (e.g., Tri-Met Strategic Plan).
  - Relevant corridor plans/refinement plans.
  - County transportation plans.
  - Other regional planning documents affecting transportation.

- **Local documents/data to be reviewed include:**
  - Local comprehensive plans.
  - Existing local transportation plans/sub-area plans.
  - Zoning ordinances.
  - Subdivision standards and development ordinances.
  - Local street standards.
  - Local land use inventories.
  - Goal 5 inventory and program.
  - Local modal plans (e.g., transit, bicycle/pedestrian).
  - GIS maps and supporting data.
  - Proposed major developments.

- **Baseline environmental data gathered from:**
  - Local comprehensive plan inventory of Goal 5 resources.
  - Oregon Natural Heritage Program database. Web Site: http://oregonstate.edu/ornhic/data.html
  - SHPO cultural resource inventories. Web Site: http://www.oregon.gov/OPRD/HCD/SHPO/
  - Oregon Department of Environmental Qualities hazardous materials lists. Web Site: http://www.oregon.gov/DEQ/
  - ODFW (local office). Web Site: http://www.oregon.gov/ODFW/
  - USFWS Pacific Region. Web Site: http://www.fws.gov/pacific/
  - National Wetlands inventory maps. Web Site: http://www.fws.gov/nwi/
- **Transportation Improvement Programs:**
  - State Transportation Improvement Program (STIP) Web Site: http://www.oregon.gov/ODOT/TD/TP/Background.shtml
  - County Transportation Improvement Program (TIP)
  - MPO/local Transportation Improvement Program (TIP)

STEP 9: Inventory the Transportation System.

A critical early step in the development of a transportation system plan is to conduct a thorough inventory of the existing transportation system. This will provide the baseline data needed to initiate the planning process. The inventory provides a "snapshot" of the system as it currently operates and serves as the basis for looking forward to determine how the system should look in the future. For TSP updates, the inventory should focus on any changes to the system that have occurred since the TSP was last prepared and may be more or less extensive depending on local circumstances (see Chapter 2 of the *TSP Guidelines).* A TSP update should begin with an assessment of the adequacy of the existing inventory information, with the assumption that revisions to this inventory will be one of the results of the planning process.

Project staff should carefully inventory all key elements of the transportation system: streets, public transportation, bicycle and pedestrian facilities, rail, air, pipeline and water facilities. The inventory effort should also identify intermodal connections, freight routes and land uses.

The product of the inventory should be a technical memo or TSP chapter that includes the inventories listed below and maps of local transportation facilities at levels of detail adequate to represent the inventory information. Under each heading, elements appropriate to include in the respective transportation system inventory are listed. Where specific elements are not applicable, the TSP should document what is not relevant to the current transportation planning process and why. ***For smaller jurisdictions <u>it may not be</u> necessary to inventory all of the elements listed under each heading. An inventory should address all of the items below – either by conducting the specific inventory or indicating how a specific element does not apply to the TSP project. Some local governments may lack the staff or financial resources needed to prepare an inventory containing this level of detail. Where that is so, jurisdictions are advised to inventory those items most critical to their existing transportation network. In determining the scope of the inventory, local jurisdictions are strongly advised to consider the way in which the data will be used to generate alternatives in a preferred system and to reference the preferred methodology in Step 15.***

- **The street inventory should identify:**
  - Transportation facility classifications and function for state and local roads.
  - Jurisdictional responsibility for state and local roads.
  - State highway log data.
  - Geometry for study area intersections.
  - Number and width of lanes.
  - Signal locations.
  - Transportation facility capacity.
  - Speed limits.
  - Pavement types and conditions.

- Number and locations of points of access to state facilities.
- Street locations on the local system (map).
- On street parking locations.
- Park and ride locations.
- Bridges.
- Right of way widths.
- Intelligent Transportation Systems facilities.
- Culverts.
- Providers of public transportation services.
- Intermodal connections and facilities (e.g., park-and-ride lots, highway to rail transfer facilities, etc.).
- State and local freight and motor carrier routes.
- National Highway System facilities.
- Highways that are part of the National Network for freight. (see http://ops.fhwa.dot.gov/freight/sw/overview/)

The public transportation inventory should identify:

- Providers of public transportation services.
- Services such as light rail, fixed route bus, dial-a-ride-intercity bus, carpool and vanpool.
- Service characteristics such as routes, general description of schedules, days of operation, number, age and condition of capital equipment and facilities, locations of terminals, park and ride facilities, locations of employer-based commute programs, carpools and vanpools.
- Use of services such as transit ridership, percentage of transit ridership that is "choice" riders, percentage of transit ridership that is "dependent" riders, carpoolers, vanpoolers, employees participating in employer-based commute programs.
- Provider goals, policies and plans.
- Oregon Public Transportation Plan (OPTP) Service Level Standards
- Public transportation elements of local plans.
- Location of transportation disadvantaged populations.

The rail inventory should identify:

- Type of service (passenger or freight or both).
- Owner/operator of the rail line and classification (I, II, III) of each operating entity.[4]
- Location of the rail line and key support facilities such as, yards, maintenance compounds, offices, fueling locations, and terminals.
- Proximity to the highway (parallel/crosses).
- Approximate number of trains daily and timing if they operate on schedules.
- Industries served and commodities handled.
- Passengers served.

[4] Note: Many Oregon line segments are owned by Class I railroads but leased to short lines for operation. More than one railroad may operate over track in a jurisdiction, so all users need to be identified.

- Track conditions and numerical Federal Railroad Administration standard(s) to which maintained (Excepted, 1, 2, 3, 4, 5).
- Train speeds.[5]
- Crossings and associated problems.
- Road impact if service is discontinued.
- Potential for rail banking, trail use or public use if line were to become a candidate for abandonment.
- Future railroad operations/long range planning for railroad infrastructure.
- Adjacent land uses, existing and planned.

The bicycle/pedestrian inventory should identify:
- Bicycle facility types, locations, geometry, conditions and use.
- Pedestrian facility types, locations, geometry, conditions and use.
- Crosswalk locations, conditions and use.
- Wheelchair ramp locations, conditions and use.
- Consistency of facilities with state/regional standards.
- Commute/recreational use of bicycle facilities.
- Commute/recreational use of pedestrian facilities.
- Location/trip characteristics of major pedestrian generators.

The air transportation inventory should identify:
- Airport location and use.
- Airport imaginary surfaces.
- Airport protected surface area (e.g., Runway Protection Zone).
- Runway length/condition.
- Surrounding land uses/zoning.
- Types of service (passenger/freight). (Note: See the Oregon State Aviation Plan for background on aviation issues.)

The pipeline inventory should identify:
- Owner/operator.
- Pipeline type.
- Pipeline location.
- Terminals.

The water transportation inventory should identify:
- Port location.
- Port usage.

Additional inventory items should include:
- Land uses that significantly impact state highways.
- Neighborhood activity centers (e.g., schools, shopping centers, major transit stops).
- Schools.
- Growth patterns.

[5] Note: Speeds may vary for different segments of track through a jurisdiction.

- Locations and characteristics of minority and low-income populations.
- Natural resources. (Note that natural resource issues can impact the viability of a proposed project.)

STEP 10: Describe current conditions and identify existing deficiencies.

Once the transportation system inventory is completed, the next step in the planning process is to analyze the data that the inventory provides. Typically, this step involves comparing the existing conditions to certain standards of adequacy. The inventory provides a "snapshot" of the transportation system as it presently looks. Project staff will use the inventory data as a basis for describing the current condition of the transportation system and determining where the system is currently deficient.

The product of this analysis is a technical memo/TSP chapter that describes the current condition of the transportation system and identifies where the system is deficient. Like the inventory memo/chapter, the Current Conditions and Deficiency memo/chapter should cover streets, public transportation, bicycle/pedestrian facilities, rail, air, pipeline and water transportation. It should also address intermodal connections, freight routes, land use and access to major activity centers within, and adjacent to, the jurisdiction.

Information should be presented in tabular and narrative form with maps and tables showing traffic volumes, peak volumes, deficiency locations, commuting routes and volumes, key segment and intersection accident histories, freight routes, transit routes, bicycle routes, sidewalk systems and other transportation services necessary to clearly describe current conditions and identify deficiencies. Again, it is recognized that some jurisdictions may not need to, or may lack the planning or financial resources necessary to, complete all of the steps listed below to the level of detail suggested. In this circumstance, their scope of work should identify those items that will, and will not, be addressed.

- **Streets (review related appendix materials and consult with ODOT Transportation Planning and Analysis Unit and local public works officials).**
  - Pavement condition on state highways, relevant county roads, city arterials and collectors (use the Pavement Management System).
  - Lane configurations and widths.
  - Geometric design deficiencies.
  - Signal locations.
  - Average Daily Traffic. (ADT)/Peak ADT for streets identified using Design Hour Volumes. (This information may be available from existing sources such as traffic volume tables or manual counts, but should not be used if it is more than three years old. New manual traffic counts can be done if budgeted for. Some relevant information may be available through ODOT's GIS system at: http://www.oregon.gov/ODOT/TD/TDATA/gis/odotgis.shtml.

- Truck traffic volumes.
- Locations that exhibit the characteristics of pedestrian-oriented environments.
- Volume to Capacity (V/C) ratio required for state highways and suggested for local streets, in particular, those that connect to state highways; using 30th highest hour traffic movements. (Use the Transportation Research Board's Highway Capacity Manual methodology to determine V/C ratios for roadway segments and non-signalized intersections.) Use SIGCAP or TPAU approved alternative or progression analysis if appropriate for signalized intersections. Refer to the ODOT TPAU Analysis Procedures Manual for ODOT facilities. http://www.oregon.gov/ODOT/TD/TP/Analysis.shtml
- Crash rates. (Collect crash data and traffic volumes to determine the crash rate for study area intersections and roadway segments. Perform accident analysis based on this data. Summarize accident crash rates and accidents by severity, property damage, injury or fatality. Identify the worst intersections and segments based on accident history.) Categorize and analyze crash patterns and high accident locations; evaluate causes and propose countermeasures.
- Journey to work and work distribution data (see census). Perform an origin/destination analysis if necessary.
- Local street connectivity and consistency with TPR street connectivity requirements.
- Bridge condition. (Use the ODOT Bridge Management System http://www.oregon.gov/ODOT/TD/TDATA/otms/OTMS system description_s.shtml#Bridge Management System
- Generally describe property access conditions along major transportation corridors. (Use the Access Management Oregon Administrative Rule; for assistance contact ODOT Access Management Program; http://www.oregon.gov/ODOT/HWY/ACCESSMGT/
- Consistency with Oregon Highway Plan (OHP) standards. (For assistance contact ODOT Region Planner or Transportation Development Division - Planning http://www.oregon.gov/ODOT/TD/TP

☐ **Public Transportation. (Review related appendix materials and consult with ODOT Public Transit Division and the Transportation Development Division - Planning.)**

- Fixed Route Transit vehicles (age, condition, useful life, capacity, fleet size), facilities (age, condition, useful life, system needs), services (routes, schedules, headways, unmet demand, connectivity) and consistency with the Oregon Public Transportation Plan (OPTP) Service Level Standards.
- Dial-a-Ride vehicles (age, condition, useful life, capacity, fleet size), facilities (age, condition, useful life, system needs), services (schedules, unmet demand, connectivity) and consistency with OPTP Service Level Standards.
- Intercity transit vehicles (age, condition, useful life, capacity, fleet

size), facilities (age, condition, useful life, system needs), services (schedules, unmet demands, connectivity) and consistency with the 2000 Intercity Passenger Policy.

- Transportation Demand Management (TDM)/rideshare vehicles (carpools, vanpools, shuttles, express buses), facilities (dedicated or shared-use park and rides), services (TDM/Rideshare Programs, ridematching, employer commute programs, marketing, connectivity) and consistency with OPTP Service Level Standards. Consult with the ODOT Public Transit Division.

- **Bicycle/Pedestrian Transportation (consult with Region Bicycle/Pedestrian coordinator or Salem ODOT Bicycle/Pedestrian Program).**
  - Bicycle facilities (location/where missing, condition, useful life, capacity, ADA compliance), services (bicycle programs, connectivity) and consistency with local and/or Oregon Bicycle/Pedestrian Plan standards.
  - Pedestrian facilities (location/where missing, condition, useful life, capacity, American with Disabilities Act (ADA) compliance), services (pedestrian programs, connectivity) and consistency with local and/or Oregon Bicycle/Pedestrian Plan standards.

- **Air, Rail, Pipeline and Water Transportation. (Consult with ODOT Transportation Planning and Analysis Unit, Oregon Department of Aviation, ODOT Rail Division, and appropriate airport, railroad, and port officials.)**
  - Facilities, services and consistency with relevant state, regional or local plans as applicable.

- **Additional Transportation Considerations. (Consult with ODOT Region Planner, Transportation Planning and Analysis Unit, Transportation Development Division (Planning), and local public works officials.)**
  - Land uses that significantly impact state highways and major local transportation facilities.
  - Major activity centers and how they are served by modes.
  - Access to and parking and safety around schools.
  - Growth patterns (population/demographic analysis).
  - Intermodal connections.
  - Freight routes/freight mobility and reliability.
  - Impact on minority and low-income populations. (See information on Executive Order (EO) 12898, Federal Actions to Address Environmental Justice, in Step 6 of Chapter 3 and http://www.dotcr.ost.dot.gov/documents/ycr/eo12898.pdf
  - Environmental constraints.

STEP 11: Determine future travel demand, capacity, deficiencies and needs.

Using the transportation inventory and the description of current conditions and deficiencies as a starting point, the next step in the planning process is to analyze future travel demand, capacity, deficiencies and needs. Deficiencies are defined as the difference between an existing or future transportation system characteristic and the adopted standard for that characteristic. Needs are defined as the general type of transportation or planning measures required to resolve or mitigate the deficiency. In order to develop a realistic picture of transportation demand, capacity, and needs for all modes of transportation, it is important that this step be accomplished in coordination with state, regional, and local transportation providers. Communities are reminded that the identification of demand, capacity, deficiencies, and needs should be done consistently with the guidance on investment scenarios found in Step 15 of *TSP Guidelines 2008*.

TPR Sections 0030 and 0005(22) require that the TSP planning horizon for population and employment forecasts and distributions must be at least 20 years from the date the TSP is adopted. Depending on the scope of the project, developing or updating a TSP can take one or more years to complete. Accordingly, jurisdictions should set a longer time period for analysis. For example a 22- or 23-year forecast may be needed, in order to provide extra time to complete the planning and adoption process and to ensure that the plan horizon, or forecast year for the TSP is at least 20 years from the point of adoption.

Best Planning Practices:
Relying on the State Transportation System to Meet Future Demand

Local jurisdictions may rely on the state transportation system to provide access to land uses, to move traffic through the community and connect to other communities, and to carry a portion of local traffic. It is not uncommon for local TSPs to include improvements to a state facility as a component of the adopted, preferred transportation system. However, local jurisdictions should look for opportunities to improve the local system in part so that it can relieve pressures on state facilities. It is important to remember that state and local facilities contribute to the "system" and accordingly should not be viewed separately. In cases where the local TSP relies upon state transportation improvements, TSP updates should examine the likelihood of these improvements being funded within the planning horizon, as determined by the update planning process. Given the current financially constrained environment for state transportation funding, it is recommended that local TSPs that rely on improvements to state facilities as part of the preferred local transportation alternative also include a transportation alternative that does not solely rely on such improvements. Jurisdictions are encouraged to develop an alternative that relies on committed state improvements and local system improvements that have the ability to meet the expected transportation demand that would otherwise be met by the state improvement for which future funding is uncertain.

Planning for a transportation system that emphasizes local improvements – and those that are funded with local money – may be more realistically achievable and will ensure that a local jurisdiction will retain the opportunity to secure right-of-way and development-generated funding for dedicated improvements.

The product of this analysis is a technical memo or TSP chapter that:

- Describes the demands on the transportation system through the planning horizon;
- Compares those demands to available system capacity and identified deficiencies in that system;
- Describes overall transportation system needs.

Information should be presented in tabular and narrative form with maps showing where gaps between capacity and demands on the system are likely to be the greatest.

Determine Future Travel Demand

Future travel demand is based on the adopted Comprehensive Plan land uses and population and employment forecasts. Forecasts should be made for all elements of the transportation system as appropriate (streets, public transportation, bicycle, pedestrian, rail, air, pipeline and water transportation) and scaled to community size. The impact of anticipated changes in land uses and/or the addition of significant traffic generators should be considered for all modes.

- Project population through the planning horizon - source: county data. These projections need to be consistent with the Office of Economic Analysis (OEA) projections in accordance with Executive Order 97-22.
- Project wage and salary employment through the planning horizon (base data available from U.S. Census; also see Oregon Employment Department).
- Anticipated average annual growth rates in population, wage and salary employment, and traffic volumes should be applied to current demand to produce a forecast of future demand.
- Define the objectives for all modes under consideration:
  - Mobility, e.g., the movement of people or goods and how to accommodate non-auto transportation.
  - Choices, i.e., provide for a range of transportation choices including auto and alternatives to the auto.
  - Reduce environmental degradation, i.e., air quality conformity.

Best Planning Practices: Going Beyond the Required Planning Horizon

The TPR (660-012-0030) calls for a planning horizon of at least 20 years. Factors that may prompt jurisdictions to expand the planning horizon beyond 20 years from the date of plan adoption may include:

- *A need to direct growth to specific areas within an existing UGB.*
- *Planning for urban reserves (ORS 660 Division 51 http://arcweb.sos.state.or.us/rules/OARS_600/OAR_660/660_021.html).*
- *Sequencing the timing of system expansion.*
- *expansion.*
- *Planning for large transportation projects that address a need but that are beyond a 20-year planning horizon.*

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- Maximize capacity, i.e., demand management, access management, signal progression.
- Add capacity, e.g., highway lanes, additional bus or commuter rail.

▪ ODOT Region Planners, the Transportation Development Division (Planning), and the Transportation Planning Analysis Unit should be consulted for information and recommendations.

Determine Future Capacity

▪ Future capacity should be determined for all elements of the transportation system as appropriate (streets, public transportation, bicycle, pedestrian, rail, air, pipeline and water transportation).

▪ Add committed capacity to current capacity to determine baseline capacity through the planning horizon.

▪ Committed capacity may include system improvements identified in the State Transportation Improvement Program (STIP) or other improvements that have a committed funding source that can be expected to be built before the end of the planning horizon. See TPR Section 005(6) for the definition of "Committed Transportation Facilities."

Determine Future Deficiencies

Future deficiencies should be determined for all elements of the transportation system as appropriate (streets, public transportation, bicycle, pedestrian, rail, air, pipeline and water transportation).

▪ Compare future travel demand to future capacity through the planning horizon.

▪ Transportation deficiencies occur

Best Planning Practices:
Going Beyond the Required Planning Horizon
(Continued from previous page.)

The methodology for determining the future travel demand, capacity, deficiencies, and needs will not significantly change to incorporate a longer time period beyond the standard 20-year planning horizon or forecast year. However, assumptions regarding population, employment, land use, etc., may be different for the extended time period than those that were made for the 20-year planning horizon. Jurisdictions should also be aware that over time unexpected changes to population and land use designations, for example, can erode the predictive power of the modeling. The longer the planning horizon, the greater the possibility the determination of need will be inaccurate.

Jurisdictions that plan for a time period beyond 20 years should:

- *Clearly state the assumptions for the time period beyond 20 years.*
- *Indicate if the assumptions are the same as those that form the basis of the 20-year planning horizon, or if they change for the longer planning time period.*
- *Consult with ODOT staff regarding the assumptions and review forecasting methodology for the 20+year planning horizon.*
- *Modify the public involvement process so that there is broad understanding of the type of analysis to be undertaken and the possible outcomes.*

A benefit of looking beyond a 20-year planning horizon is that the future size of transportation facilities can be estimated. While projects associated with the identified improvements may not be programmed beyond the 20-year forecast (e.g., additional land use decision-making may be required) right-of-way can be planned for so that expansion of identified facilities is not precluded in the future.

where future travel demand exceeds future capacity.

- The deficiencies should be clearly described and the year in which they are likely to occur should be noted. For example, some intersections may not fail until the 20th year of the planning horizon while others may fail within five (5) years.
- Non-capacity deficiencies may include areas of high accident rates or deferred maintenance for facilities or equipment as well as absence of future connectivity for all modes.

Determine Future Needs

Future needs (the demand not met by future capacity) should be determined for all elements of the transportation system as appropriate (streets, public transportation, bicycle, pedestrian, rail, air, pipeline and water transportation).

- Needs include future deficiencies determined in the previous step.
- Needs also include the difference between future capacity and transportation system goals as identified in the State Transportation System Plan (OTP) and State Modal/Topic Plans.
- Roadway and road facility needs may be expressed as Level of Service standards (LOS) or as volume to capacity ratios (v/c). Performance standards for state highway facilities must use v/c for consistency with the 1999 Oregon Highway Plan. Performance standards for public transportation may be drawn from the 1997 Oregon Public Transportation Plan.

Traffic Volume Forecasting Methodologies

In most cases, a travel demand forecasting model should be used for estimating future traffic volumes. The forecasting methodology should be appropriate to the questions being asked and the complexity of the issues. There are four levels of methodology that range from simple, straightforward trending analyses to more complex and sophisticated regional transportation modeling:

- Level 1 Trending Forecast or similar forecasting methodology should be used in areas where there is not enough data available to perform a cumulative analysis.
- Level 2 Cumulative Analysis or a similar forecasting methodology is preferred over the trend analysis when adequate data is available.
- For jurisdictions with a population greater than 15,000, a Level 3 Transportation Model or similar forecasting methodology is preferable.
- Metropolitan areas require a Level 4 Regional Transportation Model or similar forecasting methodology.

A more detailed discussion of these modeling levels can be found in Appendix 8. Communities currently preparing or updating a TSP are strongly advised to consult with the ODOT Transportation Planning Analysis Unit (TPAU) to determine the appropriate methodology to use to estimate future traffic volumes for their particular community. Note: ODOT Public Transit Division, Bicycle/Pedestrian Program, Rail Division, Freight Mobility

Section or the Department of Aviation should be contacted for guidance in estimating future demand, capacity, deficiencies and needs for their respective modes.

STEP 12: Develop and evaluate system alternatives that address deficiencies and meet needs.

In developing a TSP, a jurisdiction needs to evaluate system alternatives that can be reasonably expected to meet the community's future transportation needs, consistent with the investment scenarios found in Chapter 3, Step 15 of the *TSP Guidelines*. Alternatives should meet transportation needs in a safe manner, at a reasonable cost, and with available technology (OAR 660-012-0035). Jurisdictions' transportation needs vary depending on size, growth rate, proximity to/reliance on State facilities, location relative to metropolitan areas (MPO vs. non-MPO jurisdictions, etc.). The level of analysis and the character and complexity of the system alternatives developed should be tailored to the community.

Large communities and metropolitan planning areas should carefully adhere to the level of detail called for below. In addition to the requirements in TPR section -0035, jurisdictions within metropolitan planning organization (MPO) areas must ensure that the local TSP is consistent with regional transportation plans prepared by MPOs (TPR Section 660-012-0016). ***Smaller communities with less complex transportation issues may find an abbreviated analysis adequate to meet their needs.*** For many communities, both large and small, updating an existing TSP, Step 12 will consist of considering incremental additions to the existing system (e.g., identifying improvements to address growth not currently addressed in the existing TSP). Consequently, the broad evaluation of system alternatives called for in Section 0035 of the TPR may not be necessary.

Communities that are considering major highway improvements on the State Highway System are strongly advised to develop alternatives that reflect the ODOT Major Improvements Policy (Policy 1G1) that is addressed in the 1999 OHP and in the 2006 OTP (Strategy 1.14). Specifically, they are required to consider alternatives called for in the Major Improvements Policy and strongly advised to implement this Oregon Highway Plan policy. Communities are also strongly encouraged to develop alternatives that reflect the investment scenarios discussed in Step 15. Policy 1 G1 and the OTP emphasize maintaining the current transportation system and improving system efficiency of existing state highways in lieu of adding new facilities to the system.

Communities also are strongly advised to develop alternatives that consider environmental constraints to ensure that projects in a TSP can be implemented. For major projects that are likely to involve federal funding, local governments should also consider whether or not, and how NEPA requirements would apply. (See Appendix 13, Environmental Considerations for TSPs,) Elements of a TSP that are likely to result in a major construction project[6] should consider NEPA requirements and be

[6] Typically "major projects" are bypasses and new interchanges.

developed under the guidance of a purpose and needs statement or the TSP should include a statement that describes the objective for planned project to ensure that future project development is consistent with the original intent of the project.

Components of System Alternatives

Evaluation of transportation system alternatives should begin with a baseline alternative that illustrates the impact of not changing the current transportation system beyond constructing improvements for which funding is already committed. This is an alternative against which other alternatives are compared. In itself the baseline alternative may not be a viable planning option, but it is an important tool for meaningful transportation planning. Typical components of a baseline alternative include the existing road, transit, TDM, and bicycle/pedestrian systems, including all the committed projects associated with each system.

The following are components of transportation system alternatives that may be evaluated against the baseline alternative:

- Improvements to existing facilities or services that may include:
  - Additional lanes.
  - Intersection realignments.
  - Signals.
  - Shoulder. widening/bicycle lanes.
  - Sidewalks.
  - Increased transit or rideshare service.
  - Bus pullouts.

Best Planning Practices:
Other Tools to Address Deficiencies and Meet System Needs

There are many approaches to achieving the balance between land use/development needs and the transportation system that the TPR requires.

Jurisdictions are encouraged to identify transportation corridors or areas that are critical for mobility and where further capacity improvements are not practical or are not likely to be funded and where more intensive land uses would worsen mobility. Where over-capacity facilities that are not meeting mobility standards (either currently or sometime during the planning horizon), jurisdictions should consider adopting measures that would have the effect of preserving capacity or improving operations. Measures could include:

- *Implementing Transportation Demand Management tools or programs.*
- *Implementing access management.*
- *Allowing only those uses that do not result in an increase in trips over permitted uses, subject to standards that require mitigation roughly proportional to the additional development allowed.*

One approach to achieving a balance between land use and the transportation system that a jurisdiction could consider is adopting trip caps or trip allocation ordinances to ensure that a specific transportation facility's capacity is not used up by unintended uses or by a "first come, first served" development approach. Two examples are the Highway 99W Capacity Allocation Program administered by the City of Sherwood (Chapter 16, 108 Streets, of the City of Sherwood's Municipal Code, http://municipalcodes.lexisnexis.com/codes/sherwood/) and the Interchange Area Management Plan for the Woodburn I-5 interchange (http://www.oregon.gov/ODOT/TD/TP/docs/orhwyplan/registry/0621.pdf).

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- New facilities and services including different modes or combination of modes that could reasonably meet identified transportation needs that may include:
  - Street extensions.
  - Bypasses.
  - New transit or rideshare facilities and services.
  - Intermodal stations.

- Transportation System Management (TSM) measures that may include:
  - Ramp metering.
  - Reversible lanes.
  - Signal synchronization.
  - Access management.
  - Signal retiming.
  - Channelization improvements.
  - Turn bays.
  - Parking prohibitions.
  - One-way streets.
  - Turn prohibitions.
  - Intelligent Transportation Systems (ITS).

- Transportation Demand Management (TDM) measures (see Appendix 9) may include:
  - Carpool or vanpool services.
  - Park and ride lots.
  - Parking charges.
  - HOV lanes.

- Local governments in MPO areas of 1,000,000 must, and other governments may, evaluate alternative land use designations, densities and design standards to meet local and regional transportation needs using strategies that may include:
  - Increased or minimum densities.
  - Changing the mix of land uses.
  - Neighborhood shopping or service districts.
  - Improved jobs-housing balance.
  - Parking limits.
  - Comprehensive plan policies for infill/redevelopment of urbanizable land.
  - Connectivity.

Best Planning Practices: Other Tools to Address Deficiencies and Meet System Needs
(Continued from previous page.)

Sherwood (Chapter 16.108 Streets, of the City of Sherwood's Municipal Code. http://municipalcodes.lexisnexis.com/codes/sherwood/) and the Interchange Area Management Plan for the Woodburn I-5 Interchange (http://www.oregon.gov/ODOT/TD/TP/docs/orhwyplan/registry/0621.pdf).

Another method a jurisdiction may wish to consider is to adopt a policy that reserves the vehicle capacity of state highway improvements for future mobility or for specific uses (e.g., industrial uses). This is particularly relevant where a proposed major improvement – such as a grade-separated interchange – has the capacity to serve transportation needs beyond those that are expected within the 20-year planning horizon and there is a state, regional, and/or local interest in preserving that capacity to support future long term growth or economic development opportunities. An example where this approach was taken is in The Dalles, where special mobility standards were adopted to support industrial

The following modal and management (e.g., TSM, TDM) system elements should be developed and evaluated as potential components of an overall comprehensive transportation system plan. Typically the resulting preferred system will reflect an optimal combination of these different elements.

- A Roadway Improvement element that would improve all roadways necessary to meet the jurisdiction's mobility, level of service and safety standards and protect the state system. Typical components of this element include the existing system (arterials and collectors), committed road projects, new TSM projects that improve system capacity and safety and other road projects necessary to meet anticipated needs, and existing TDM infrastructure and service and committed improvements. Jurisdictions considering major improvements on the State highway system are again strongly advised to reflect the Oregon Highway Plan Major Improvements Policy 1G1. (See Appendix 4).

- A Transportation System Management element that would maximize system efficiency by managing traffic through the use of traffic control devises such as ramp meters, median barriers and access management controls to close or consolidate accesses to properties along congested corridors and re-routing traffic to other facilities. Typical components of a TSM element include the existing road system, committed road projects, new TSM projects that improve capacity and safety of the system, existing transit infrastructure and service, improved transit service through scheduling and routing efficiency, existing TDM infrastructure, service and committed improvements, existing bicycle and pedestrian infrastructure and service, and improvements to minimize conflicts with other modes.

- A Transportation Demand Management (TDM) element that would help manage demands on the system by reducing single occupant vehicle traffic, moving traffic away from the peak period and improving traffic flow. TDM projects that help make the transportation system operate more efficiently through better management of traffic demand include rideshare services (e.g., carpool and vanpool ride-matching), development of employer site based commuter projects, park and ride facilities and High Occupancy Vehicle (HOV) lanes.

- A Transit System element that would provide transit service where none currently exists or increase routes and/or frequencies where a transit system does exist. The transit system element may demonstrate the possibility of reducing automobile trips by providing travel options and would provide basic mobility for those lacking access to automobile travel. One typical component of transit is a dial-a-ride service that focuses on service to the senior, disabled, youth and low income population. In smaller communities and rural areas where fixed route

service is not practical, dial-a-ride may be the only form of public transportation. Typical components of a transit element include the existing and committed transit system and transit system infrastructure and service expansion, and existing and committed demand management infrastructure and services.

- For metropolitan planning areas, a Land Use strategy that would reduce automobile trip generation, shorten trip lengths, change mode choices and potentially reduce the level of single occupancy vehicle trips while enhancing community livability.

  - For all metropolitan planning areas, the TPR anticipates that local jurisdictions will accomplish reduced reliance on the automobile by changing land use patterns and transportation systems so that walking, cycling and the use of transit are highly convenient and people are likely to drive less than they do today. For Portland metropolitan area jurisdictions, because they are in an MPO with a population of over 1 million, the Transportation Planning Rule directs that they evaluate alternative land use designations, densities and design standards to meet local and regional transportation needs. This includes increasing residential densities and establishing minimum residential densities, increasing allowed densities in new commercial office and retail centers and providing housing in close proximity to jobs, and the like.

  - Other cities and counties could also derive broad benefits through land use planning in the context of their TSPs. At the community level, land use planning should focus on both residential areas and employment centers and their impact on trip generation, length and mode choice. Density, location and size of residential areas and employment centers influence these measures of transportation performance. In addition, the balance between jobs and housing may impact travel. At the smaller neighborhood or project level, the diversity of land uses within walking or bicycling distance and the design of the built environment may influence mode choice and trip length. In this context, mode choice refers to the ability and willingness of travelers to make trips using non-motorized modes, thus reducing the number of trips on local streets and arterials. Design refers to the directness, attractiveness and sense of safety and security afforded pedestrians and bicyclists, and the orientation of buildings toward the street and toward transit stops. Additionally, the connectivity of the local street system (and associated sidewalks and bicycle lanes) can play an important role in changing travel choice.

Evaluating and Selecting Alternatives

The standards used to evaluate and select transportation alternatives are identified in OAR 660-012-0035 (3) and must:

- Support urban and rural development by providing types and levels of transportation facilities and services appropriate to serve land uses identified in the acknowledged comprehensive plan.
- Be consistent with state and federal standards for protection of air, land and water quality including the State Implementation Plan under the Federal Clean Air Act and the State Water Quality Management Plan.
- Minimize adverse economic, social, environmental and energy consequences.
- Minimize conflicts and facilitate connections between modes of transportation.
- Avoid principal reliance on any one mode of transportation by increasing transportation choices to reduce principal reliance on the automobile.
- Achieve adopted standards for increasing transportation choices and reducing reliance on the automobile in MPO areas (TPR 660-012-0035(4). Subsection (5) lists the condition that MPO adopted standards must accomplish in order to demonstrate progress towards increasing transportation choices and reducing automobile reliance.) Local jurisdictions may have additional local evaluation standards. Regional Transportation Plans may identify standards with which local TSPs must comply.

Alternatives should be evaluated based on factors such as:

- Consistency with major improvement policy (state highways).
- Ratio of volume to capacity or “v/c” (state highways).
- Ridership (transit).
- Safety.
- Connectivity.
- Reductions in VMT or SOV use (alternate modes).
- Cost effectiveness.
- Impacts on disadvantaged populations.
- Impacts on the environment.
- Mobility for the transportation disadvantaged.

The product of this analysis is a technical paper/TSP chapter that identifies solutions, develops transportation system alternatives and evaluates those alternatives. Included should be a written description of the alternatives, evaluation process, potential impacts, cost estimates for the proposed improvements (projects), maps depicting the locations of projects within the alternatives, and a table comparing the alternatives against the evaluation factor. Solutions with obvious environmental "fatal flaws" should be rejected or revised to eliminate or minimize the environmental concerns. [7]

[7] Where proposed solutions would likely involve federal funding and be subject to NEPA analysis, alternatives considered but rejected and the reasons for eliminating them from further consideration should be documented to minimize the likelihood of having to reconsider them as part of future NEPA analysis.

STEP 13: Select a Preferred Transportation System.

Based on the evaluation of the transportation system alternatives developed in the last section, and with the guidance of the technical and citizen advisory groups, project staff should develop a preferred transportation system. The preferred transportation system may involve combining various solutions drawn from the system alternatives that were considered and evaluated in the previous step.

The preferred transportation system should incorporate solutions from system alternatives that have a positive impact on the transportation system, or whose net effect minimizes impacts on the transportation system. The preferred transportation system must be consistent with the Transportation Planning Rule and it should be technically, environmentally, politically and financially implementable. The preferred system should be developed consistent with the guidance on investment scenarios found in Step 15 of the *TSP Guidelines*.

The transportation system plan should carry out the TSP goals and objectives established early in the planning process by the Project Management Team and the TAC. It should include solutions that have been evaluated using the factors established by the Project Management Team and the TAC and it should have the support of the Project Management Team, the TAC, and the general public. Overall, the preferred transportation system should provide the local government with a viable package of solutions for the transportation problems facing the community over the 20 year planning horizon.

The preferred transportation system should maintain the mobility of the state highway system in part by providing for a system of local streets for local, short distance trips and incorporating the use of alternative transportation modes. The preferred transportation system may include amendments to previously identified local performance standards or requests to the OTC to consider alternative performance standards for State Highways consistent with OHP Action 1F3.

It is important that the planning process documents the steps taken and agreements made during the development and adoption of the preferred transportation system. Decisions should be recorded at the time they are made and the basis for the decision should be clearly described. Similarly, agreements and commitments on the part of the governmental agencies involved should be described in the TSP's background information, particularly if they are critical to implementing the TSP.

The elements of the preferred transportation system form the essence of the TSP. Because it is in part a policy document, not every aspect of the TSP will come to fruition exactly as planned. Built projects will sometimes differ from planned projects in the adopted TSP. For example, the TSP will

identify general road locations for a planned arterial and collector street network, but actual alignments may be modified through the development approval process or subsequent facility planning to respond to topographical or environmental constraints or to meet urban design goals, while still meeting a jurisdiction's connectivity standard. (See Best Planning Practice: Define Location of Planned Transportation Improvement, in Step 14).

Generally, TSP projects anticipated for construction in the near term will be described more precisely than those slated for construction later in the planning horizon. For additional guidance on this topic see Appendix 18, Degree of Project Readiness Preferred for Project Funding.

STEP 14: Prepare the TSP (write the plan).

Project staff will prepare a technical memo/draft TSP chapter that uses the solutions included in the preferred transportation system as the basis for preparing the plan elements required by OAR 660-012-0020. Local adoption of a TSP constitutes a land use decision that authorizes transportation facilities, services, and major improvements so the preparation of the TSP is an important, detail oriented step. In addition to the inventory and general assessment of existing and committed transportation facilities and services by function, type, capacity and condition, and the identification of needs, the TSP must also identify:

- A system of planned transportation facilities, services and major improvements that includes a description of the type or function classification of planned facilities and services and their planned capacities and mobility standards.
- A description of the location of planned facilities, services and major improvements, establishing the general corridor within which the facilities, services or improvements are expected to be sited, including a map showing the general location of proposed transportation improvements, a description of facility parameters such as minimum and maximum road right-of-way width and the number and size of lanes, and any other additional description that is appropriate.
- Identification of the provider of each transportation facility or service.

Best Planning Practices: TSP Format

"One size does not fit all" when it comes to formatting the final TSP. While the final TSP needs to include the various elements discussed in the TSP Guidelines, Jurisdictions are advised to organize the TSP to reflect portions of the document that will receive the most attention or use by the public. A jurisdiction may decide to put policy related and other relevant sections of the plan in the front of the final document or have an Executive Summary that highlights these sections in order to make the document more user friendly. For a summary of what must be included in a TSP, refer to "What Must a Transportation System Plan Accomplish" in Chapter 1.

- **Required plan elements include:**[8]
  - Road Plan (must be consistent with 1999 Oregon Highway Plan, as most recently updated).
  - Public Transportation Plan (must be consistent with 1997 Oregon Public Transportation Plan and the 2000 Intercity Passenger Policy).
  - Bicycle and Pedestrian Plan Plan (must be consistent with 1995 Oregon Bicycle/Pedestrian plan).
  - Air, Rail, Water and Pipeline Plan.

[8] If a jurisdiction is within an MPO, the local plan must be consistent with the Regional Transportation Plan.

- Plan for Transportation System Management and Transportation Demand Management for areas within an urban area containing a population of greater than 25,000.
- Parking Plan in MPO areas.
- Policies and land use regulations for implementing the TSP (See OAR 660-012- 0045 and Step 16).
- Transportation financing program for areas within an urban growth boundary containing a population of greater than 2,500 (See OAR 660-012-0040 and Step 15).

- **Road Plan Element**
  - System of arterials and collectors and standards for layout of local streets and other important non-collector street connections.
  - Functional and other classifications of roads consistent with functional and other classification of roads in state and regional TSPs and provision of continuity between jurisdictions.
  - Standards for the layout of local streets that provide for safe and convenient bike and pedestrian circulation and address the use of cul-de-sacs consistent with TPR requirements.
  - New connections to arterials and state highways consistent with designated access management categories in the OHP.
  - Standards for the layout of local streets that addresses extensions of existing streets, connections to existing or planned streets, including arterials and collectors and connections to neighborhood destinations.
  - Must be consistent with 1999 Oregon Highway Plan, as most recently updated.

- **Public Transportation Plan Element**
  - Describes public transportation services for the transportation disadvantaged and identifies service inadequacies.
  - Describes intercity bus and passenger rail service and identifies the location of terminals.
  - For areas within an urban growth boundary which have public transit service, identifies existing and planned transit trunk routes, exclusive transit ways, terminal and major transfer stations, major transit stops, and park-and-ride station.
  - For areas within an urban area containing a population greater than 25,000 persons, not currently served by transit, evaluates the feasibility of developing a public transit system in buildout. Where a transit system is determined to be feasible, the plan identifies appropriate infrastructures including existing and planned transit trunk routes, exclusive transit ways, terminals and major transfer stations, major transfer stops, and park-and-ride stations.
  - Must be consistent with 1997 Oregon Public Transportation Plan and the 2000 Intercity Passenger Policy.

- **Bicycle and Pedestrian Plan Element**
  - Plan for a network of bicycle and pedestrian routes throughout the planning area.
  - A network and list of bicycle facility improvements consistent with the requirements of ORS 366.514.
  - Must be consistent with the 1995 Oregon Bicycle/Pedestrian plan.

- **Air, Rail, Water and Pipeline Transportation Plan Element**
  - Identifies where public uses airports, mainline and branchline railroads and railroad facilities including at-grade and grade-separated crossings, port facilities, and major regional pipelines and terminals are located or planned within the planning area.
  - For airports, the planning area includes all areas within airport imaginary surfaces and other areas covered by state or federal regulations. Note additional guidance on air and rail issues in appendix 15 and 16.

- **Transportation System Management and Demand Management Plan Element**
  - For areas within an urban area containing a population greater than 25,000 persons, a plan for Transportation System Management and Demand Management.

- **Parking Plan Element**
  - For MPO areas, a Parking Plan as provided in OAR 660-012-0045.

Best Planning Practices:
Define Location of Planned Transportation Improvements

TSPs typically discuss the general location of planned transportation improvements through graphics on maps. It is important that TSPs also include guidance on how these maps are to be interpreted in the context of land use decisions so conflicting land uses will not be allowed and development will accommodate sufficient right-of-way. It is also good practice for local TSPs to include policy language that makes clear the outer boundaries of the "general location" of a transportation facility. Such policy language can assist public agencies, property owners, and decision makers to determine when a proposed project is consistent with what is depicted on the map and when it is outside the identified general location and consequently requires a TSP amendment. Having this type of policy language will offer public agencies more flexibility when responding to questions regarding the ultimate location of a transportation facility.

An example of policy language that defines the general location of transportation improvements can be found in the Metro 2004 Regional Transportation Plan (RTP). (See Chapter 6, Implementation, ttp://www.metro-region.org/index.cfm/go/by.web/id=236.)

- **The TSP must also include policies, ordinances and a transportation financing program needed to implement the plan:**
  - Policies and land use regulations for implementing the Transportation System Plan as provided for in OAR 660-012-0045.

- For areas within an Urban Growth Boundary containing a population greater than 10,000 persons, a transportation financing program as provided for in OAR 660-012-0040. This finance program should be consistent with the investment approach described in Step 15 of this Chapter.

Refinement Plans

Pursuant to the TPR, adoption of a TSP constitutes the land use decision regarding the need for transportation facilities, services and major improvements and their function, mode, and general location. In the course of developing or updating a TSP, it might not always be possible for a local government to determine (e.g. make final land use decisions on) function, mode or general location for a needed project. In such cases the TPR allows a local government or MPO to defer decisions regarding function, general location and mode to a refinement plan provided that certain findings are adopted. These findings must:

- Identify the transportation need for the facility;
- Demonstrate why information needed to make final determinations regarding function, general location, or mode cannot reasonably be made available within the time allowed for preparation of the TSP;
- Explain how deferral does not invalidate the TSP assumptions or preclude implementation of the remainder of the TSP;
- Describe the nature of the findings which will be needed to resolve issues deferred to a refinement plan; and
- Set a deadline for adoption of a refinement plan.

STEP 15: Develop a transportation improvement program and a transportation finance program.

Project staff should develop a transportation improvement program (package of projects involving facilities/services) that implements the TSP and then also prepare a transportation finance program that explains how the projects identified in the transportation improvement program will be funded. Because the availability of funding will inform and influence the evaluation of transportation system alternatives, the finance program should begin to be formulated during the development of system alternatives (see Step 12). The product of this analysis is a technical memo or TSP chapter that:

- Identifies a list of planned transportation programs and major improvements and documents why each project was selected
- Identifies the timing for planned transportation facilities and major improvements
- Identifies the environmental impacts of proposed transportation facilities and/or describes the status of necessary environmental work. (See Appendix 13 for more specific guidance).
- Identifies or estimates the cost for all the transportation programs and major improvements (on the state and local system) identified in the TSP. Cost estimates are firmer and more precise (e.g., Construction, Design, Right-of Way or land costs) for near-term projects than for long-term projects.
- Discusses existing and anticipated funding mechanisms and the ability of these mechanisms to finance the projects identified in the transportation improvement program; identifies the use of system development charges (SDCs) if applicable, or other local funding mechanisms.
- Discuss assumptions to determine phasing and costs for improvements on and off the state transportation system.

Preparation of TSP Project Lists

To the greatest extent possible, projects should be prioritized within the transportation improvement program and constrained to state and local revenues anticipated to be available. Sample project lists are included at the end of Appendix 8 of the TSP guidelines.

- **Basic Assumptions**
  - All sources of transportation funding are likely to be scarce and difficult to obtain.
  - Funding for large capacity related projects (bypasses/interchanges) will be even more difficult to obtain. Demand for transportation funding far exceeds the availability of revenue for these projects. Funding for large capacity projects may require a combination of local, state and federal revenue commitments to assemble a sufficient funding package to construct the project.

- Project lists should be based on realistic funding expectations.
- Base year funding should be based on funding typically (excluding major projects) received in prior years.
- Improvements to state facilities that are identified in a TSP are subject to ODOT approval. Listing a potential funding source in a transportation funding program does not constitute commitment on ODOT's part to provide the funding needed for the project.

"Illustrative" or "Preferred Plan" Scenario

Though funding for this scenario may not become available, the TPR requires an illustrative or preferred system that will "establish a coordinated network of transportation facilities adequate to serve state, regional and local transportation".

Jurisdictions should develop and determine the costs of a project list for the transportation facilities and improvements identified in the TSP (see TPR Section 0040). This project list is often referred to as the Illustrative or Preferred Plan and represents those projects that a jurisdiction deems desirable and identifies in its TSP as necessary to fully meet the plan's adopted performance measures, and which could be funded if unanticipated revenue became available.

Transportation "Revenue Forecast" Scenario

In addition to the scenario required by the TPR, jurisdictions should develop a transportation funding scenario that assumes revenues will keep pace with inflation. Using historic trends, the forecast should project present revenues into the future using an inflation rate. For projects that will be funded with State money through the STIP, or for local projects that may be eligible for Federal funds, jurisdictions should use the current STIP inflation rate. Jurisdictions are advised to consult with ODOT Regional Planners to review what state projects can be assumed under this scenario within the TSP's stated planning horizon.

In developing lists, jurisdictions should:

- Estimate the cost of each individual project and the overall cost of each package of projects by funding scenario.
- Match the type of project with revenue likely to be available; consider restrictions/limitations on use of revenues. Jurisdictions should coordinate with transportation service providers to understand the types and levels of funding available over the course of the planning period.
- Match the timing for receipt of revenues with the timing for project construction/implementation.
- Account for the cost of projects and the buying power of revenues at the anticipated time of construction/implementation.
- Use the most flexible revenues on the most difficult to fund types of projects (e.g.transit).
- Use the more restricted revenues on the more easily funded projects (e.g. roads).

Discussion on Project Readiness

ODOT has been moving to establish better linkages between transportation planning and the funding for transportation projects on state highways. These improved linkages should lead to better plans, better projects and better use of transportation dollars. Local projects on state highways or other projects that require state or federal funding must be selected and approved in the state Transportation Improvement Program (STIP) before they may be constructed. Selection to the STIP requires the application of specific criteria that projects must meet. To help local jurisdictions understand the STIP Criteria and how they are applied, ODOT has developed a Project Readiness Matrix (Appendix 185) that lists the preferred characteristics for STIP projects coming from local TSPs. The matrix covers various programs that are commonly used to fund the project types included in the STIP.

The Project Readiness Matrix may help local jurisdictions identify projects during the TSP development process that should be considered for STIP funding, including projects that may be eligible for funding through the Development STIP (planning and design steps). Jurisdictions are encouraged to use the Project Readiness Matrix and companion documents in the STIP *Users Guide:* (http://www.oregon.gov/ODOT/TD/TP/stipGuide.shtml) to help cities and counties better position their projects to compete for scarce state resources and at the same time ensure the quality of the analysis that goes in to the identification of TSP projects. An important result of using this matrix is that jurisdictions can better anticipate when funding for a specific project might be available – near, medium, or long term.

Best Planning Practices:
Project Development/Project Readiness

When developing the list of projects that implement the preferred transportation system, where possible, there should be sufficient planning associated with the projects to ensure that they are ready for the project development step. This should include a general, planning-level feasibility analysis of projects identified on the project list to determine if any project may be "fatally flawed." This analysis should identify the potential impact of improvements that will be required to implement the preferred transportation system. A sufficient level of planning could include the following:

- *Environmental reconnaissance to identify environmental issues that may become factors in alternatives selection.*
- *Inventory of adjacent existing and planned land uses.*
- *Identification of design issues, opportunities, or constraints.*
- *Clear statement of project purpose, including a project description that states the need, mode(s), function and general location, OR a description of refinement planning that will be done to determine one or more of the elements in a project description.*

It is not always possible to address all relevant issues regarding the mode, function or general location of a needed transportation improvement at the time of TSP adoption. In these circumstances, the TPR allows local governments to develop "refinement plans" (see TPR Section 0023(3)). Refinement plans provide additional analysis to support the planning and development of specific facilities for which a need has been identified in the TSP but for which important detailed information relating to function,, mode or general location had been lacking. See Chapter 3, Step 1 for guidance on this subject.

The degree of project readiness varies based on the type of project and the anticipated timetable for building the project. The matrix identifies preferred characteristics for projects based on including: Highway Modernization, Enhancement, Transit, TDM, ITS, Signals and Signs, Bridge, and Bicycle and Pedestrian. While there are unique characteristics that distinguish the project types, there also are similarities that need to be present in order for a project to be "ready" for funding, such as:

- Projects should demonstrate consistency with key policy documents such as the 2006 OTP, 1999 Oregon Highway Plan and other modal topic plans.
- Projects should be permitted by local ordinances or the TSP should direct that those local ordinances be updated to allow for transportation projects. (For more information on TSP implementation, see Step 16).
- Necessary environmental work should be identified. If projects are to be implemented in the short term, environmental work needs to be at least underway, and in some cases near completion or completed (See Appendix 13).
- Costs should be estimated and, if the project is to be implemented in the short term, those costs estimates should be current and more detailed (e.g., Construction, Design, Right-of-Way or land costs).
- Projects to be funded with state/federal dollars should be consistent with state priorities for the STIP (see STIP Criteria).
- Projects with a long-term implementation timetable may be more conceptual than those with a short-term implementation timetable (e.g. projects that could begin construction within the four-year STIP are considered to be more "project ready" than those with many remaining steps).

Project Readiness and ODOT Funding through the STIP

Projects for which ODOT funding through the STIP will be sought should be consistent with the preferred characteristics for Project Readiness, as described in Appendix 18. Not all eligible projects will be included in the STIP and projects may be modified during the STIP development process. For example, projects included in the STIP may not include all elements listed in the TSP due to STIP priorities or funding availability and/or allowable uses of transportation funding. Projects may be modified during the project development process. For more information on the STIP, go to ODOT's STIP Users Guide, http://www.oregon.gov/ODOT/TD/TP/stipGuide.shtml.

STEP 16: Adopt the TSP.

The final step to be taken before a TSP or TSP Update can be relied upon for making transportation decisions is adoption by the local jurisdiction. As an element of the local jurisdiction's comprehensive plan, the TSP must go through a legislative adoption process.[9] Because the document will likely include many elements, it is preferable for the final TSP to clearly distinguish between the elements that constitute the plan amendment and the elements that are considered as background or supporting documents, chapters, or sections (see Chapter 1, *What* Must *a Transportation System Plan Accomplish).* At this final step, the TSP should consist of adoption ready language.

Develop/adopt implementing ordinances

As a component of the TSP development or update process, jurisdictions develop/adopt and gain acknowledgment for local and county ordinances that enable plan implementation, protect facility/corridor function and encourage alternative modes (transit, ridesharing, bicycling and walking) and land uses consistent with the functions of the highway. While this step is listed last in the sequence of necessary steps to compile or update a transportation system plan, a more integrated planning approach is to develop implementing ordinances as the transportation system alternatives are being developed. A vital step to achieving the intended goals, objectives and policies of the transportation system plan is to develop and adopt implementing ordinances and programs that require specific actions. These ordinances should be specifically designed to carry out the requirements of the plan and be considered an integral part of the comprehensive plan for the community.

Implementing ordinances fall into three primary categories:

- Enable TSP implementation (allow construction of planned transportation facilities).
- Protect planned transportation facilities/corridor function.
- Provide for alternative modes.

[9] Acknowledged local plans can be amended in two ways: through "periodic review" or through a "post-acknowledgment plan amendment" (PAPA). Periodic review is an evaluation and update of a local plan and land use regulations done in accordance with ORS 197.628-197.644. The cycle required for such periodic review is outlined in ORS 197.629.. Procedures for PAPAs are set forth in ORS 197.610 –197.625. A PAPA requires notification to DLCD at least 45 days before the first local evidentiary hearing on the proposal. For more information on the two amendment processes, access the Oregon Revised Statute (http://www.leg.state.or.us/ors/197.html), contact DLCD, or access publications posted the Department's webpage: http://www.lcd.state.or.us/LCD/publications.shtml.

Ordinances that Enable TSP Implementation

The TPR requires each jurisdiction to adopt land use regulations to implement its TSP. Depending on the nature of the transportation improvement, additional land use decision-making may or may not be required. Section -0045(1) of the TPR lists improvements that, under ordinary circumstances, need not be subject to land use regulations. It also identifies types of improvements that will require further land use decision-making. For these improvements, local governments must provide a review and approval process that is consistent with Section -0050 (Transportation Project Development). Such a process need not be complex. Examples of model language include Washington County's Community Development Code, Article VII, Public Transportation Facilities (http://washtech.co.washington.or.us/LDS/index.cfm?id=7) and Chapter 6.2, Implementation, of the Metro Regional Transportation System Plan (http://www.metro-region.org/article.cfm?ArticleID=236).

Project development implements a TSP by determining the precise location, alignment, and preliminary design of transportation facilities or improvements authorized in a TSP. As explained in Section 0050(3), this may or may not require additional land use decision-making. Additional land use decision-making typically is required where the facility or improvement impacts farm or forest lands, Goal 5 resources, floodways or other hazard areas, estuarine or coastal shoreland areas, or the Willamette River Greenway.

Best Planning Practices: Protection of Identified Transportation Corridors

Jurisdictions should plan for urbanizing areas in a way that preserves the opportunity to provide for future transportation connections. One way local jurisdictions can do this is by adopting local comprehensive plan and land use regulations that require new developmentto be setb transportation connections. Local ordinances should enable land use and development review that ensures that:

- *Site layout of streets, buildings and other permitted development is planned in a way that leaves the corridor available for roadway or transportation connection.*
- *Proposals reflect the scope and design of likely improvements (arterial, collector, local street, pathway) and minimum engineering requirements,*
- *To the extent possible, proposals avoid corridors that would cross sensitive lands (e.g. wetlands, habitat).*

Examples from jurisdictions that have adopted policy language and corridor management ordinances are found in Corridor Preservation Best Practices, 2003, Center for Urban Transportation Research, http://www.cutr.usf.edu/pdf/BestPractices Report.pdf. An Oregon example of model language is Washington County's Article VII, Public Transportation Facilities (http://washtech. co. washington.or. us/LDS /index.cfm?id=7) and Chapter 6.2, Implementation, of the Metro Regional Transportation System Plan (http://www.metro-region.org/article.cfm?ArticleID=236).

- **Ordinances that Protect Transportation Facility and Corridor Function**

The efficient management of a jurisdiction's transportation system should be a major concern in developing a plan because it can substantially lengthen the useful life of a facility without needing to make costly capacity improvements. To achieve this efficiency the local land development ordinances should contain requirements that will protect transportation facilities for their identified functions as described in the transportation plan. Sub-section -0045 (2) of the TPR indicates the types of management issues that need to be included in the local ordinances.

- **Ordinances that Provide for Alternative Modes**

TPR subsections -0045 (3), (4) and (6) require that local land use or land development ordinances contain standards to ensure that new developments provide for safe and convenient vehicular, transit, pedestrian and bicycle access and circulation. This will be important to reduce reliance on the single occupant auto and provide safe, convenient mode choices. TPR subsections -0045 (3), (4) and (5) include requirements for implementing the TSP. Subsection -0045(5) requires that local governments in MPO areas adopt ordinances to implement demand management and parking plans and to require all major industrial, institutional, retail and office developments to facilitate transit usage along transit trunk routes when required by the transit operator.

Other Implementation Considerations

Other considerations when adopting the TSP or a TSP update include:

- **Consistency with Adopted Plans and Regulations**

  TSP updates must include new, or be consistent with existing, comprehensive plan policies and land use regulations and include a transportation financing program to implement the plan. Ensuring consistency with other local policy and regulatory documents may entail reviewing and drafting modifications to the comprehensive plan, community development code, engineering or design standards, and other adopted documents.

- **Transportation Planning Rule (TPR) Compliance**

  Findings of compliance with applicable statewide planning goals generally and OAR 660 Division 12 (the TPR) in particular must be developed in conjunction with the adoption or amendment of the TSP. Where a proposed plan or land use regulation amendment would "significantly affect" an existing or planned transportation facility, such as by changing a facility's functional classification or the standards implementing a functional classification system, or by reducing the performance of a transportation facility below the minimum acceptable performance level identified in the TSP, findings are required under Section -0060 to demonstrate that measures put in place will assure that

the proposed land uses are consistent with the identified function, capacity and performance standards of the transportation facility.

- **Notice Requirements**
  Jurisdictions must follow their locally adopted notice requirements for a plan amendment. In addition to local notice requirements, jurisdictions may also have to prepare a notice that complies with Measure 56, a ballot measure approved by Oregon voters in the November 1998 general election. The measure requires cities and counties to provide affected property owners with notice when adopting or amending a comprehensive plan if the proposed amendment may limit or prohibit otherwise permissible land uses. Implementation of a TSP amendment also requires notice to the State. In accordance with State law, the Department of Land Conservation and Development must be notified of a plan amendment 45-days prior to the first evidentiary hearing (ORS 197.610, OAR Chapter 660, Division 18).